

ORDER OF SHEETS

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

TOTAL SHEETS =172



PROJECT LOCATION

DESIGN DESIGNATION

A.A.D.T. 2013	= 1480
A.A.D.T. 2033	= 1800
D.H.V. 2033	= 26,640
D.D.	= 62/38
T.	= 6.3%
DESIGN SPEED	= 55 MPH
ESALS	= 226,300

BEGIN PROJECT 6844-00-71
STA -0+81.43
X = 533,448.44
Y = 299,908.93

CONVENTIONAL SYMBOLS

PLAN
CORPORATE LIMITS
PROPERTY LINE
LOT LINE
LIMITED HIGHWAY EASEMENT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE

SLOPE INTERCEPT
REFERENCE LINE

EXISTING CULVERT
PROPOSED CULVERT
(Box or Pipe)

COMBUSTIBLE FLUIDS

MARSH AREA

WOODED OR SHRUB AREA

PROFILE

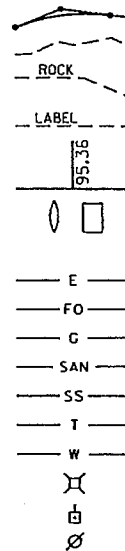
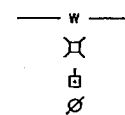
GRADE LINE
ORIGINAL GROUND
MARSH OR ROCK PROFILE
(To be noted as such)
SPECIAL DITCH

GRADE ELEVATION

CULVERT (Profile View)

UTILITIES

ELECTRIC
FIBER OPTIC
GAS
SANITARY SEWER
STORM SEWER
TELEPHONE
WATER
UTILITY PEDESTAL
POWER POLE
TELEPHONE POLE

LAYOUT
SCALE 0 1 MI.

GENERAL NOTES

UTILITY INSTALLATIONS ARE NOT SHOWN ON THE PLANS.

PAVEMENT REMOVAL WILL BE TO THE NEAREST JOINT OR A SAWED EDGE WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY ARE TO BE FERTILIZED, SEEDED AND TEMPORARILY SEEDED AS DIRECTED BY THE ENGINEER.

ALL WASTE MATERIAL RESULTING FROM THE VARIOUS CONSTRUCTION OPERATIONS ADJACENT TO PAVEMENT UNDER TRAFFIC SHALL BE ENTIRELY REMOVED AND PROPERLY DISPOSED OF IMMEDIATELY OR AS DIRECTED BY THE ENGINEER.

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATION SECTIONS EQUALS SUPERELEVATION WHEN SUPERELEVATION IS GREATER THAN 4.00%. IF SUPERELEVATION IS LESS THAN OR EQUAL TO 4.00%, THEN THE LOW SIDE SHOULDER SLOPE IS 4.00%. HIGH SIDE SHOULDER SLOPE ON SUPERELEVATION SECTIONS EQUALS SUPERELEVATION.

THE QUANTITY OF THE ITEMS FOR EROSION PROTECTION INCLUDES AN UNDISTRIBUTED AMOUNT FOR PROTECTION, CONTROL AND ABATEMENT OF WATER POLLUTION RESULTING FROM SOIL EROSION. THE DISTRIBUTION AND LOCATION OF THESE MATERAILS ARE TO BE DETERMINED BY THE ENGINEER.

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

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST.

HMA PAVEMENT TYPE E-1 SHALL BE PLACED IN TWO LIFTS. THE CONTRACTOR'S OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS. THE BOTTOM LAYER SHALL BE 2¾-INCHES WITH NOMINAL AGGREGATE SIZE OF 19MM AND THE TOP LAYER SHALL BE 1¾-INCH WITH NOMINAL AGGREGATE SIZE OF 12.5MM.

MILL DEPTH OVER THE BOX CULVERTS AT STA 17+09 AND 116+49 SHALL BE 2-INCHES. REPLACE WITH 2-INCHES HMA PAVEMENT TYPE E-1 IN ONE LIFT.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS.

HMA PAVEMENT CALCULATED BY USING 113 LB/SY/IN.

ABBREVIATIONS

AC	ACRES	G.V.	GAS VALVE
AC	ASPHALT CEMENT	INV	INVERT
ASPH	ASPHALT	IP	IRON PIPE
AVG	AVERAGE	JCT	JUNCTION
ADT	AVERAGE DAILY TRAFFIC	LHF	LEFT HAND FORWARD
BAD	BASE AGGREGATE DENSE	L	LENGTH
BM	BENCHMARK	LS	LUMP SUM
CL	CENTERLINE	NC	NORMAL CROWN
CC	CENTER TO CENTER	N	NORTH
CONC	CONCRETE	Y	NORTH GRID COORDINATE
CSCP	CORRUGATED STEEL CULVERT PIPE	PC	POINT OF CURVATURE
CSM	CERTIFIED SURVEY MAP	PI	POINT OF INTERSECTION
CTH	COUNTY TRUNK HIGHWAY	PT	POINT OF TANGENCY
CULV	CULVERT	PL	PROPERTY LINE
CP	CULVERT PIPE	PE	PRIVATE ENTRANCE
C&G	CURB & GUTTER	R	RADIUS
D	DEGREE OF CURVE	REQD	REQUIRED
DHV	DESIGN HOURLY VOLUME	R/W	RIGHT-OF-WAY
DIA	DIAMETER	RHF	RIGHT HAND FORWARD
DWY	DRIVEWAY	SALV	SALVAGED
E	EAST	SHLDR	SHOULDER
X	EAST GRID COORDINATE	SDD	STANDARD DETAIL DRAWINGS
ELEV	ELEVATION	STA	STATION
EW	ENDWALL	SE	SUPERELEVATION
ENT	ENTRANCE	TAN	TANGENT
ESALS	EQUIVALENT SINGLE AXLE LOADS	TLE	TEMPORARY LIMITED EASEMENT
EXC	EXCAVATION	T	TRUCKS
EBS	EXCAVATION BELOW SUBGRADE	TYP	TYPICAL
EXIST	EXISTING	VERT	VERTICAL
FF	FACE TO FACE	VC	VERTICAL CURVE
FERT	FERTILIZER	VOL	VOLUME
FE	FIELD ENTRANCE	WV	WATER VALVE
FG	FINISHED GRADE	W	WELL
FT	FOOT		

ORDER OF TYPICAL SECTIONS AND DETAILS

1. PROJECT OVERVIEW
2. TYPICAL SECTIONS
3. CONSTRUCTION DETAILS
4. STEEL RAILING TYPE W
5. INTERSECTION DETAILS
6. PERMANENT SIGNING
7. SUPERELEVATION DIAGRAM

UTILITIES

FIBER OPTIC
CHARTER COMMUNICATION
ATTN: RUDIRUDIGER
5024 HEFFRON STREET
STEVENS POINT, WI 54481
715-302-1550
EMAIL: RUDIRUDIGER@CHARTER.COM

TELEPHONE
AT&T
ATTN: MIKE HAHN
OSP DESIGN ENGINEERING
221 WEST WASHINGTON STREET, 4TH FLOOR
APPLETON, WI 54911-4742
920-735-3358
EMAIL: MH5151@ATT.COM

GAS
WE ENERGIES
ATTN: BILL GARSKI
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
715-421-7259
EMAIL: BILL.GARSKI@WE-ENERGIES.COM

CITY OF WAUPACA
ATTN: JOHN EDLEBECK
DIRECTOR OF PUBLIC WORKS
111 S. MAIN STREET
WAUPACA, WI 54981
715-258-4420
CELL: 715-496-3080
EMAIL: JEDLEBEC@CITYOFWAUPACA.ORG

ELECTRIC
WE ENERGIES
ATTN: STEVEN ARMSTRONG
P.O. BOX 1699
APPLETON, WI 54912-1699
920-380-3563
EMAIL: STEVEN.ARMSTRONG@WE-ENERGIES.COM

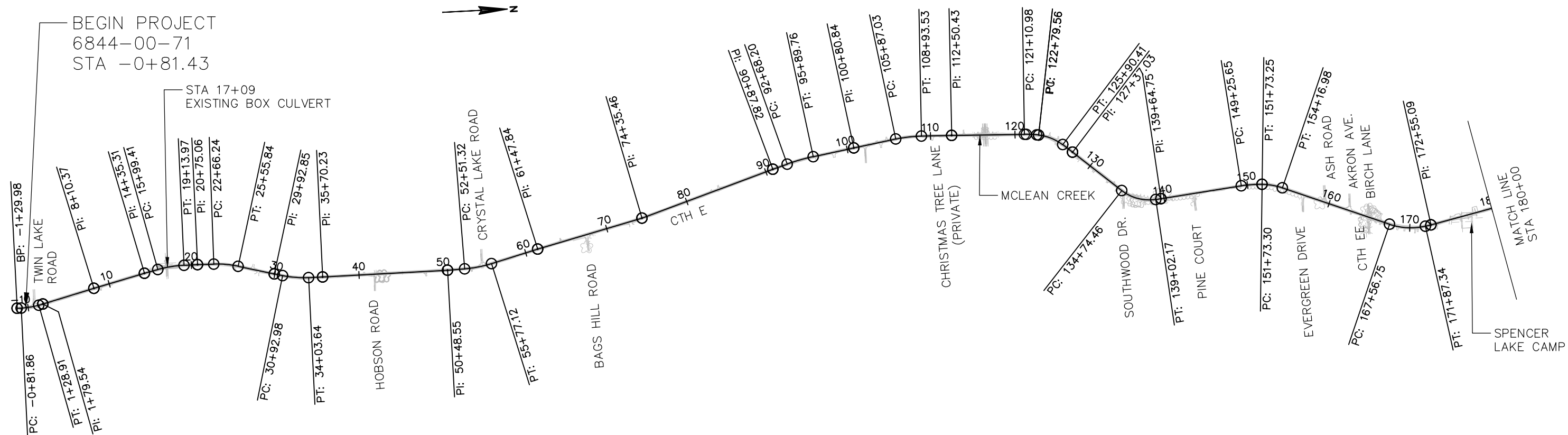
DESIGN CONTACT

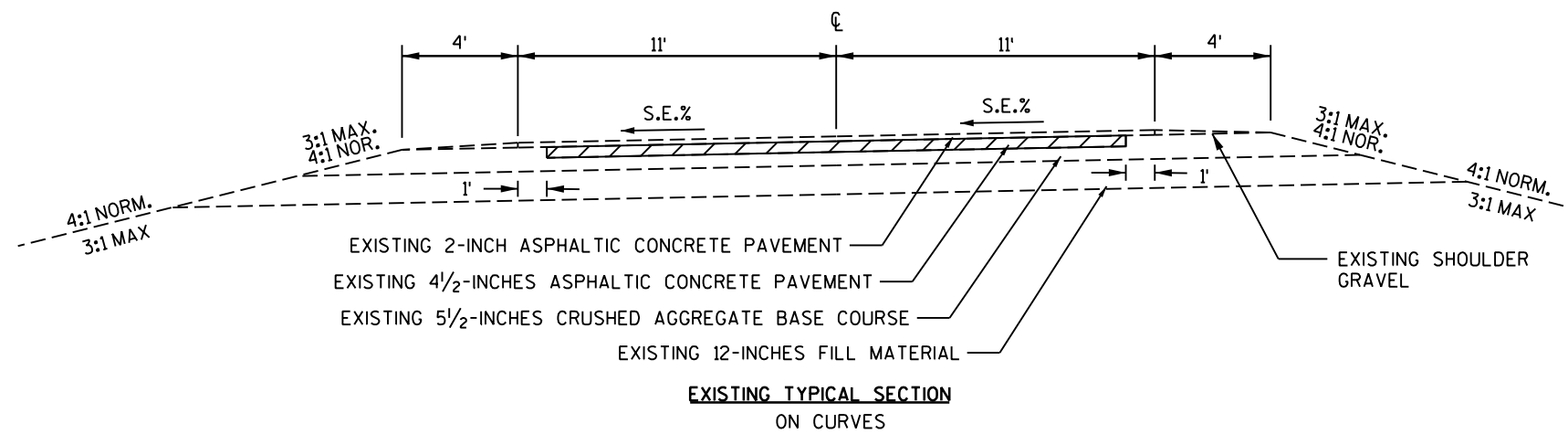
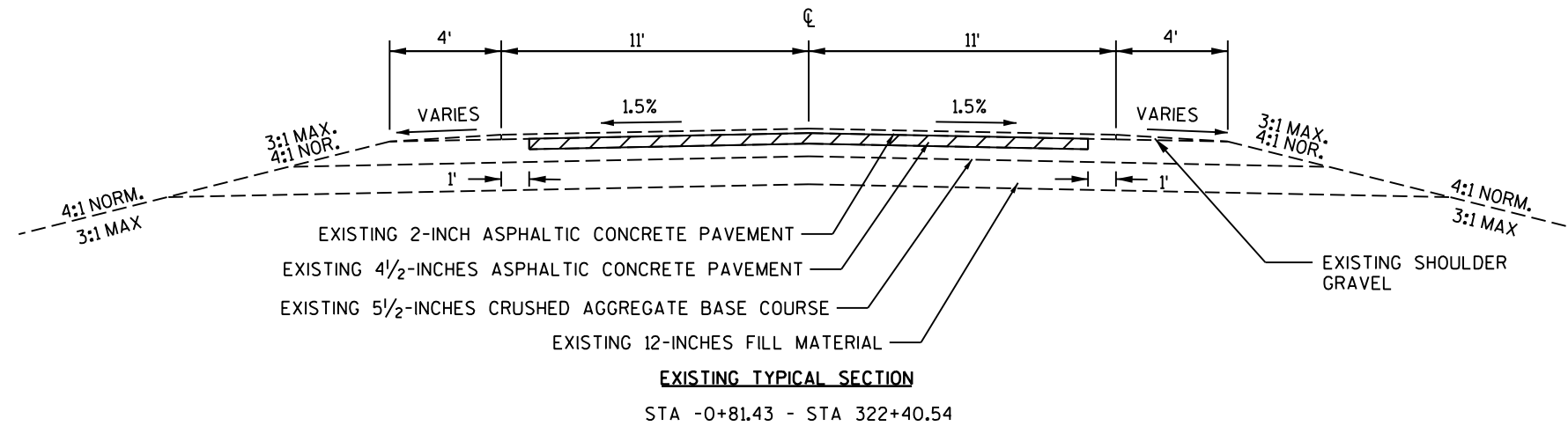
MSA PROFESSIONAL SERVICES, INC.
ATTN: MS. BOBBIL MAXWELL
1230 SOUTH BOULEVARD
BARABOO, WI 53913
TELEPHONE: 608-355-8861
EMAIL: BMAXWELL@MSA-PS.COM

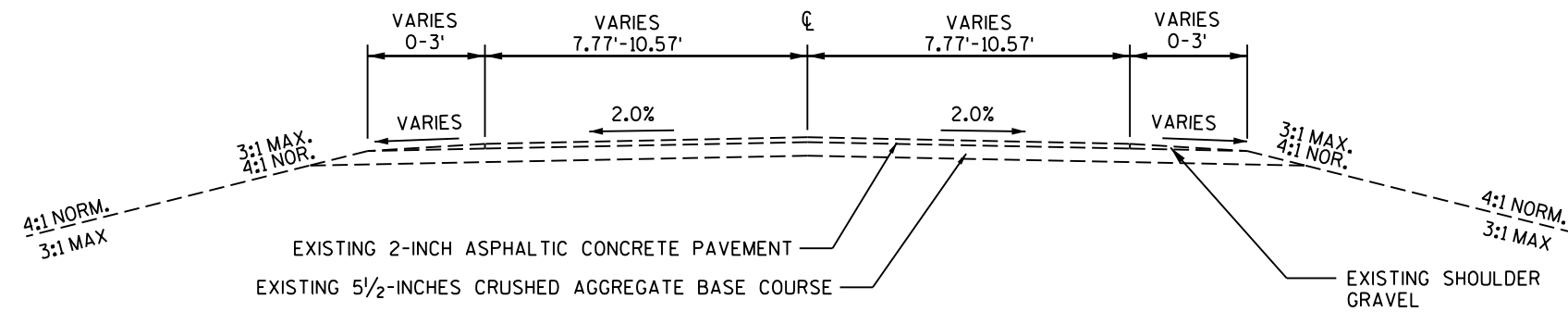
DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
DNR NORTHEAST REGIONAL HO
ATTN: MATTHEW SCHAEVE
2984 SHAWANO AVE.
GREEN BAY, WI 54313
TELEPHONE: 920-662-5472
EMAIL: MATTHEW.SCHAEVE@WISCONSIN.GOV



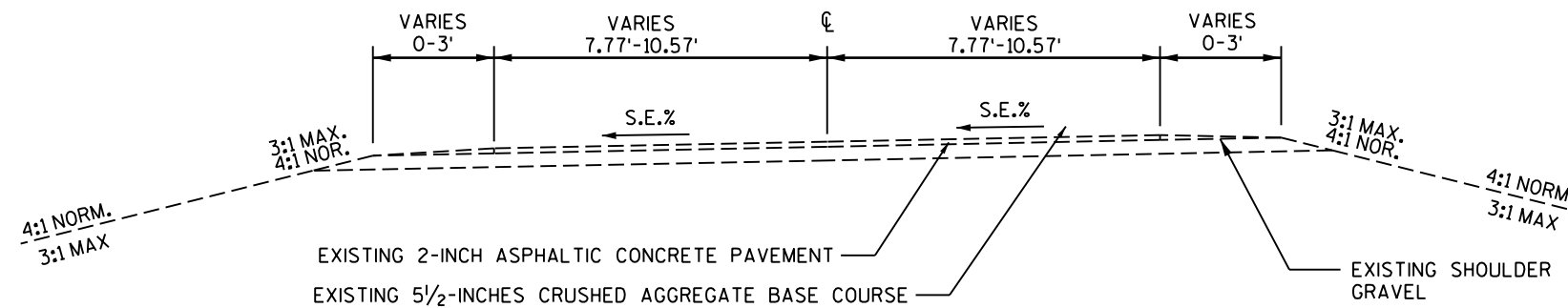






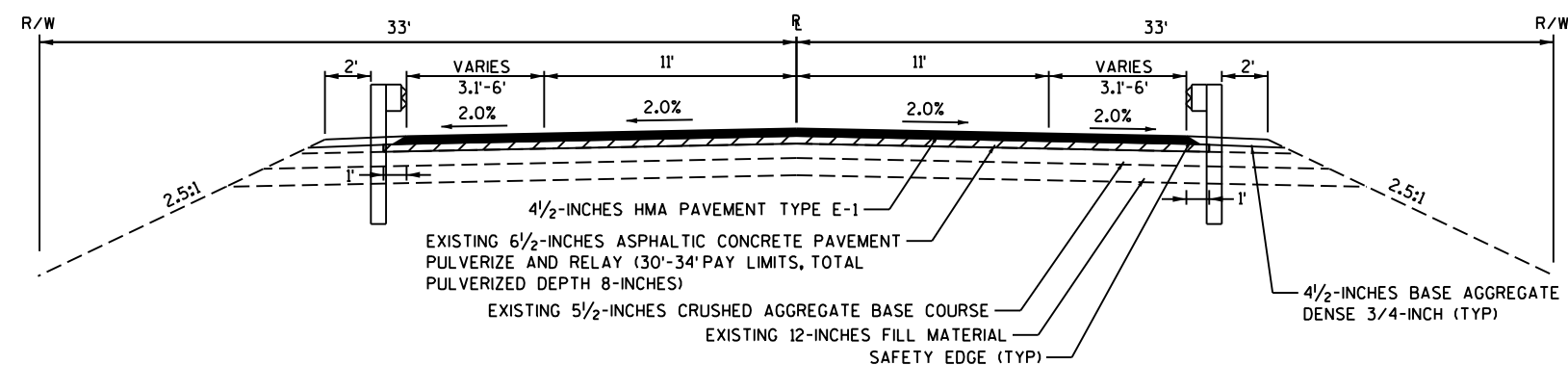
EXISTING TYPICAL SECTION

TWIN LAKE ROAD	AKRON AVE.
HOBSON ROAD	CTH EE
CRYSTAL LAKE ROAD	SPENCER LAKE ROAD
BAGS HILL ROAD	LINDEE LANE
SOUTHWOOD DRIVE	MARION LANE
PINE COURT	NELSEN ROAD
EVERGREEN DRIVE	CRYSTAL ROAD
ASH ROAD	LIND CENTER ROAD

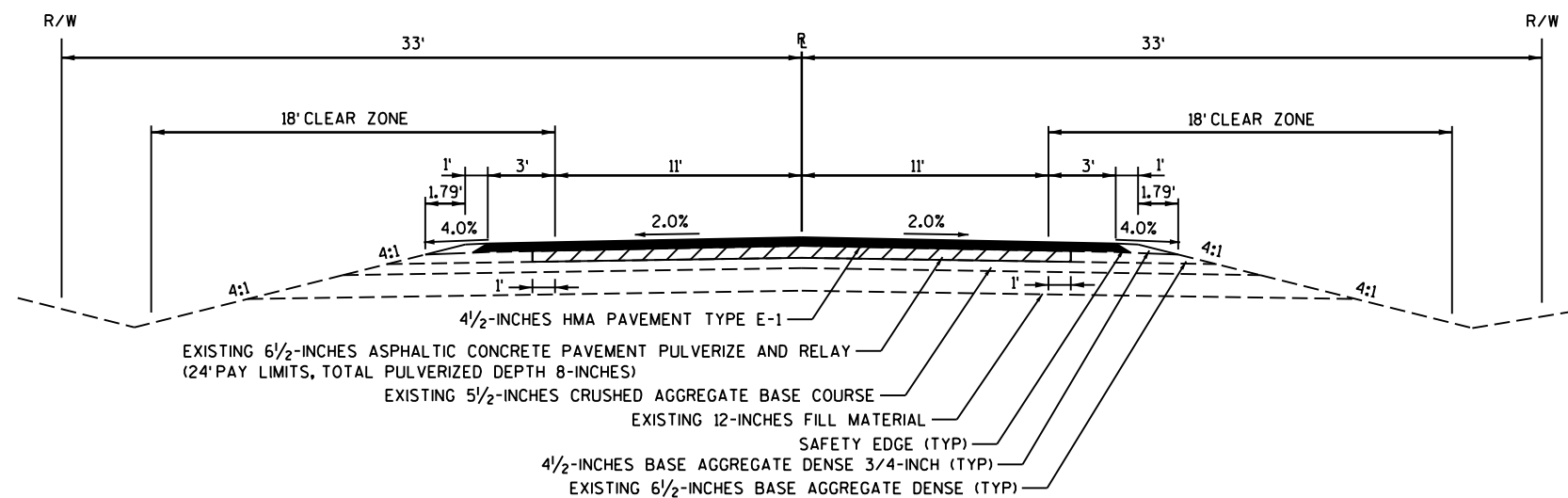


EXISTING SUPERELEVATED TYPICAL SECTION

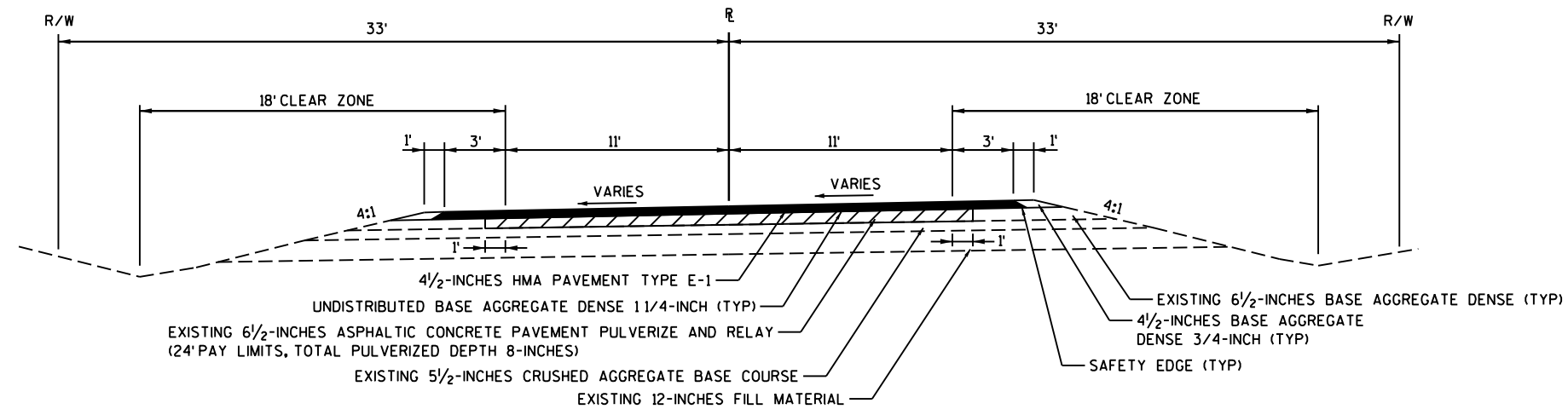
TWIN LAKE ROAD
CRYSTAL LAKE ROAD
SOUTHWOOD DRIVE

**FINISHED TYPICAL SECTION WITH BEAM GUARD**

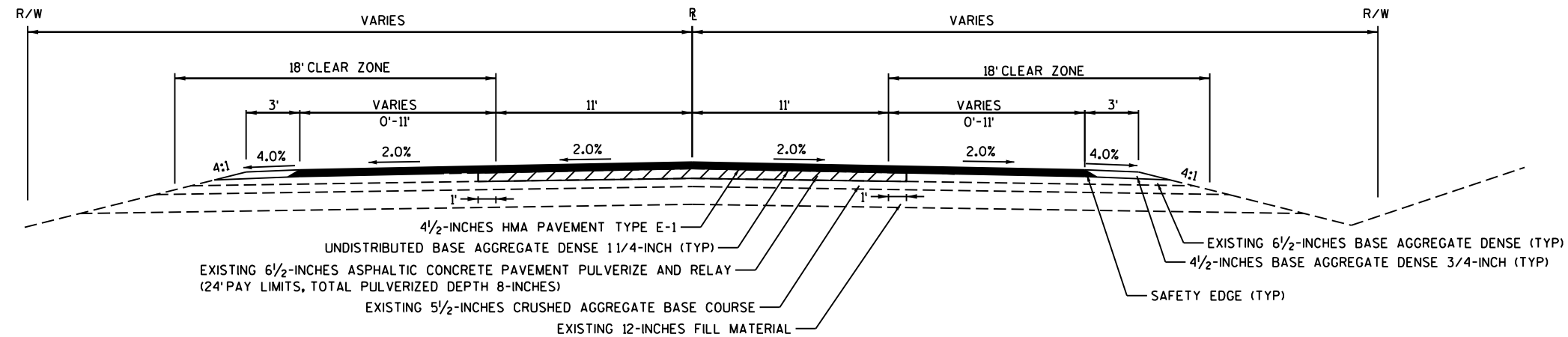
STA 16+37.79 - STA 17+05.01 LT STA 15+91.16 - STA 17+06.59 RT
STA 17+12.09 - STA 18+25.03 LT STA 17+13.80 - STA 18+29.08 RT
STA 115+13.67 - STA 116+40 LT STA 115+72.87 - STA 116+40.13 RT
STA 116+57.73 - STA 117+84.07 LT STA 116+58.25 - STA 117+84.63 RT

**FINISHED TYPICAL SECTION**

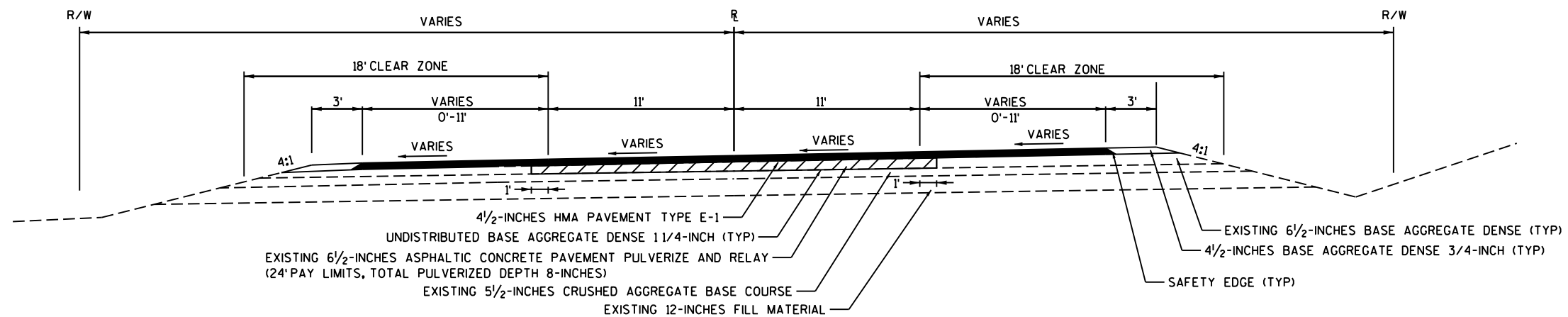
STA 5+05.07 - STA 14+80.41 STA 58+82.11 - STA 63+34.18 STA 144+65.84 - STA 147+77.09 STA 234+61.25 - STA 263+92.13
STA 20+32.97 - STA 21+55.57 STA 69+10.05 - STA 91+61.20 STA 157+94.30 - STA 158+24.18 STA 242+64.87 - STA 274+32.42
STA 26+66.51 - STA 29+73.97 STA 96+96.76 - STA 104+71.31 STA 173+18.68 - STA 184+39.85 STA 282+16.28 - STA 301+74.19
STA 35+22.65 - STA 40+43.23 STA 110+09.25 - STA 119+61.30 STA 194+19.97 - STA 221+85.72 STA 307+95.92 - STA 311+64.57
STA 42+99.85 - STA 51+32.31 STA 127+14.08 - STA 131+24.98 STA 227+52.56 - STA 228+94.55 STA 320+25.68 - STA 322+40.54

**FINISHED SUPERELEVATED TYPICAL SECTION**

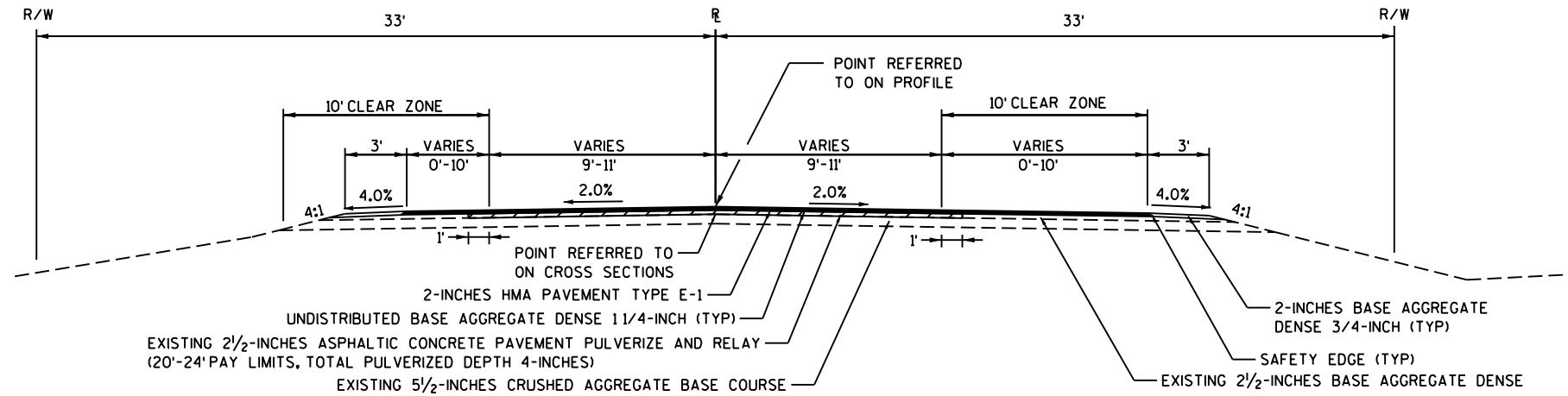
STA 14+80.41 - STA 20+32.97	STA 147+77.09 - STA 155+40.96
STA 21+55.57 - STA 26+66.51	STA 166+25.41 - STA 173+18.68
STA 29+73.97 - STA 35+22.65	STA 184+39.85 - STA 188+53.02
STA 51+32.31 - STA 53+05.10	STA 301+74.19 - STA 307+95.92
STA 91+61.20 - STA 96+96.76	STA 311+64.57 - STA 311+81.06
STA 104+71.31 - STA 110+09.25	STA 317+38.57 - STA 320+25.68
STA 119+61.30 - STA 127+14.08	

**FINISHED TYPICAL SECTION WITH WIDENING**

STA 2+40.91 - STA 5+05.07	STA 155+48.31 - STA 157+94.30
STA 40+43.23 - STA 42+99.85	STA 158+24.18 - STA 166+25.41
STA 56+96.12 - STA 58+82.11	STA 188+53.02 - STA 192+56.77
STA 63+34.18 - STA 69+10.05	STA 221+85.72 - STA 227+52.56
STA 131+24.98 - STA 133+51.12	STA 228+94.55 - STA 234+61.25
STA 140+25.51 - STA 144+65.84	STA 236+92.13 - STA 242+64.87
	STA 274+32.42 - STA 282+16.28

**FINISHED SUPERELEVATED TYPICAL SECTION WITH WIDENING**

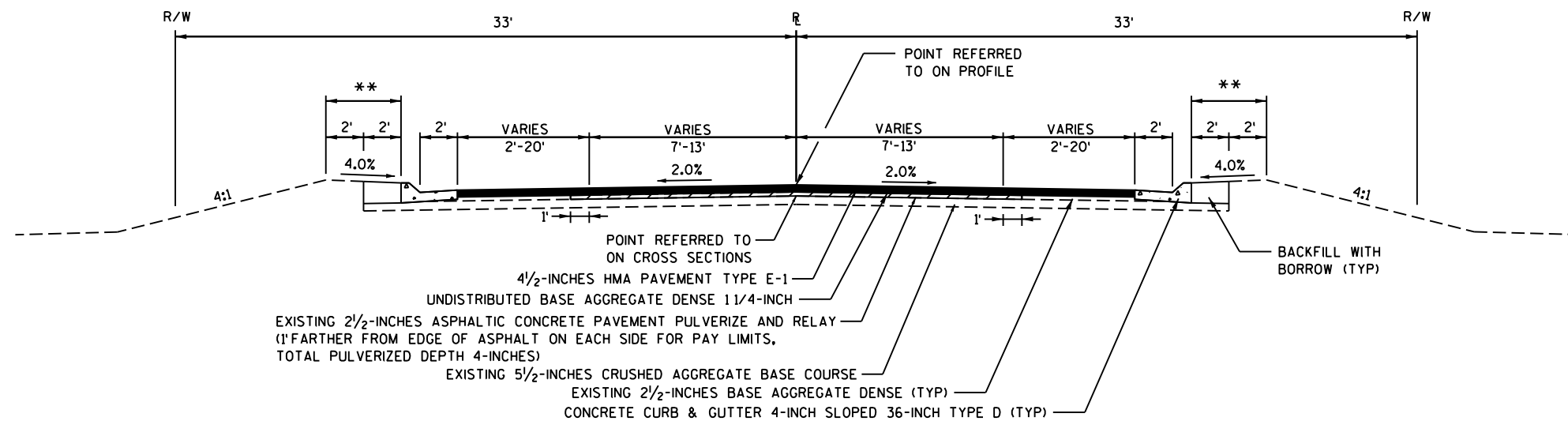
STA -0+81.43 - STA 2+40.91
STA 53+05.10 - STA 56+96.12
STA 133+51.12 - STA 140+25.51
STA 155+40.96 - STA 155+48.31
STA 166+25.41 - STA 166+73.46
STA 192+56.77 - STA 194+19.97
STA 311+81.06 - STA 317+38.57



SIDE ROAD FINISHED TYPICAL SECTION

TWIN LAKE ROAD
HOBSON ROAD
CRYSTAL LAKE ROAD
BAGS HILL ROAD
SOUTHWOOD DRIVE
PINE COURT
EVERGREEN DRIVE
ASH RD

AKRON AVE.
CTH EE
SPENCER LAKE ROAD
LINDEE LANE
MARION LANE
NELSEN ROAD
CRYSTAL ROAD



SIDE ROAD FINISHED TYPICAL SECTION WITH CURB & GUTTER

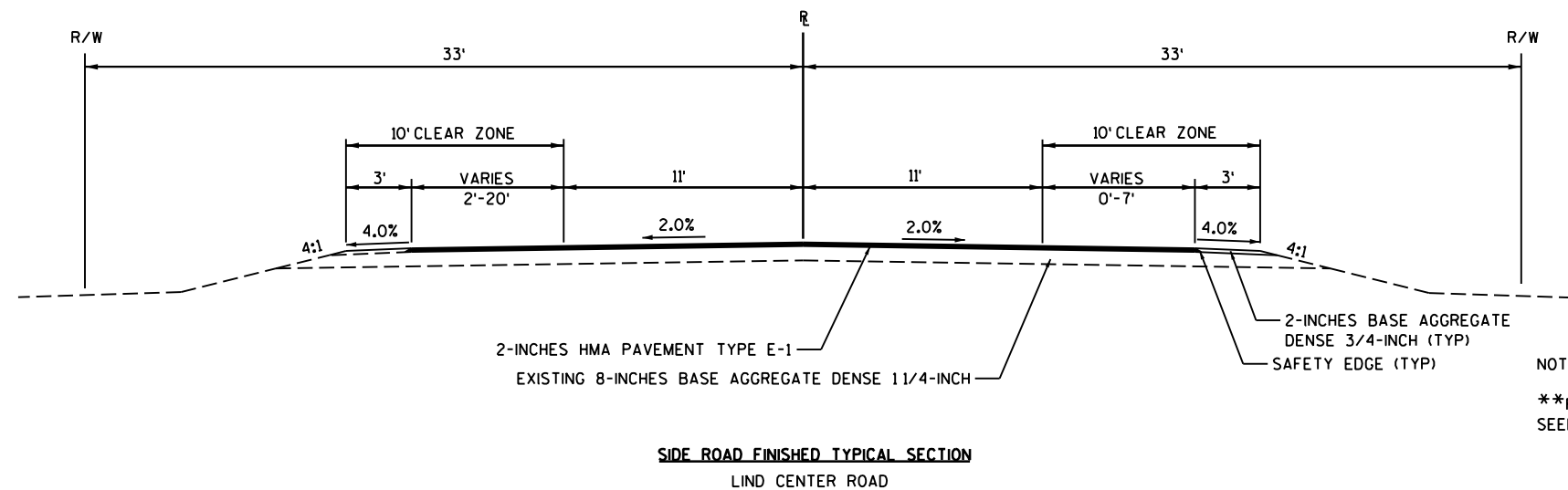
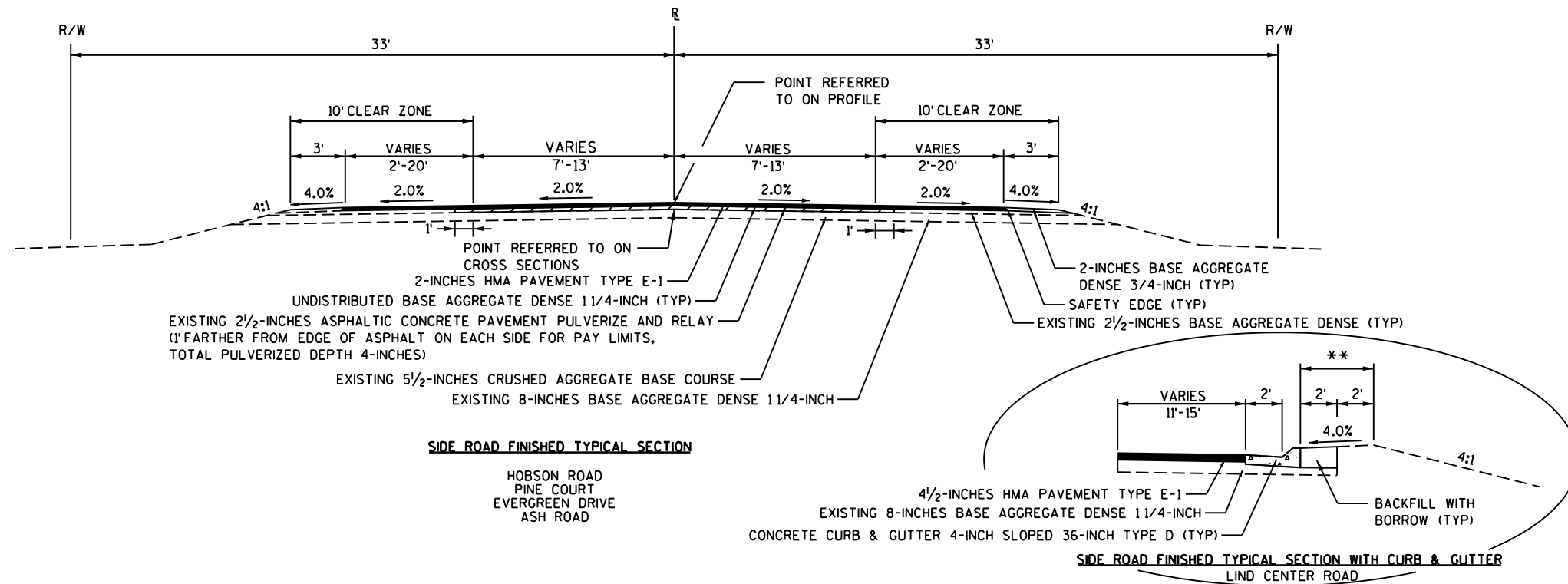
TWIN LAKE ROAD
CRYSTAL LAKE ROAD
BAGS HILL ROAD
SOUTHWOOD DRIVE

AKRON AVE.
CTH EE
SPENCER LAKE ROAD
LINDEE LANE

MARION LANE
NELSEN ROAD
CRYSTAL ROAD

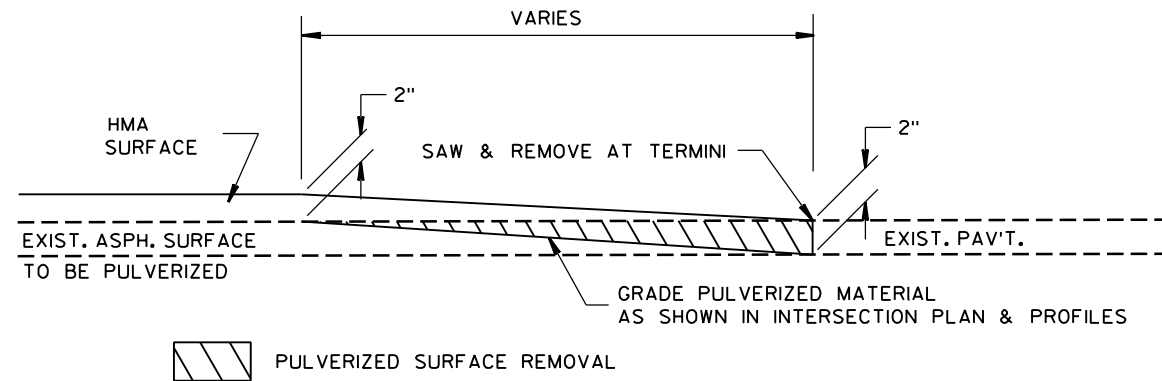
NOTE:

**FERTILIZER, SEED & TEMPORARY SEEDING
TOPSOIL & MULCH



NOTE:

**FERTILIZER, SEED & TEMPORARY
SEEDING, TOPSOIL & MULCH

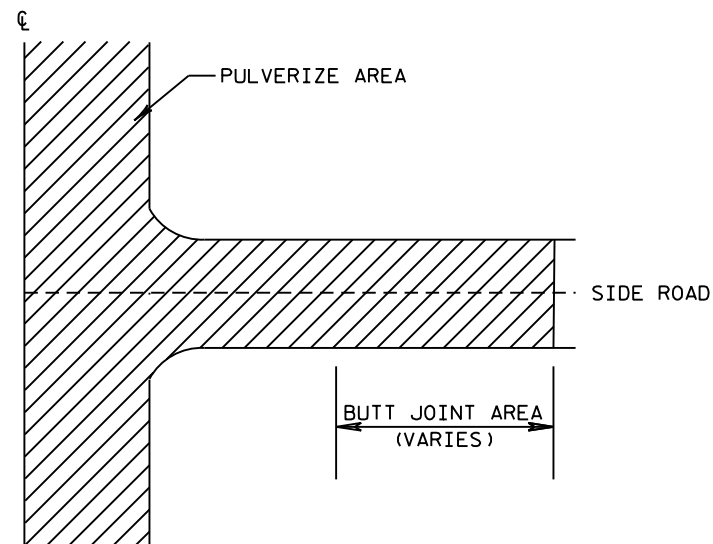


* REMOVE EXISTING BASE AS NECESSARY TO ACHIEVE PLACEMENT OF 2" HMA BUTT JOINT

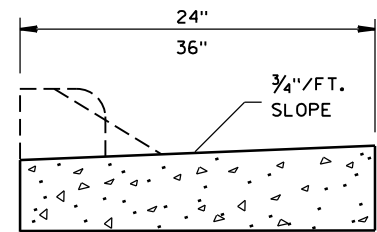
BUTT JOINT DETAIL

SIDEROADS

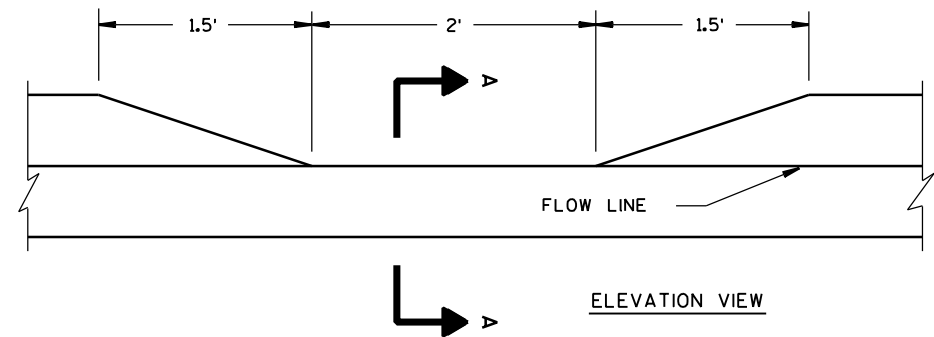
REQUIRED AT BEGIN AND END PAVING LOCATIONS



NOT TO SCALE



SECTION A-A



DETAIL OF CURB HEAD DEPRESSION FOR DRAINAGE AT CURB & GUTTER SECTION

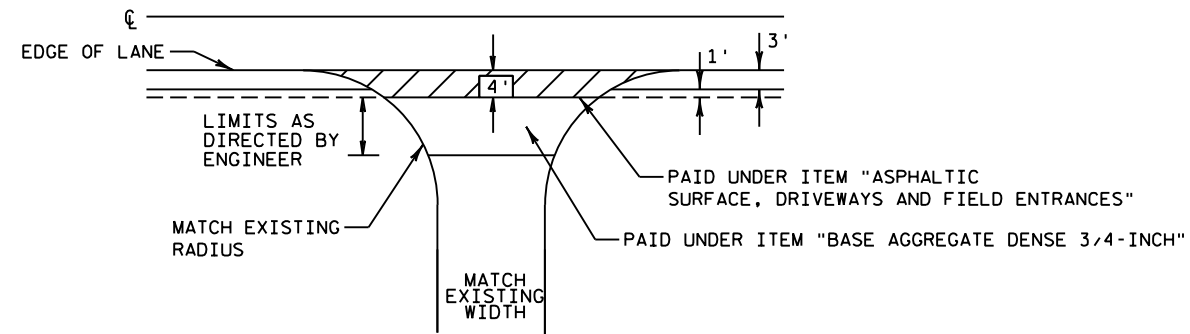
(AT LOW POINTS, WITH ASPHALTIC FLUMES)

RUNOFF COEFFICIENT TABLE

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

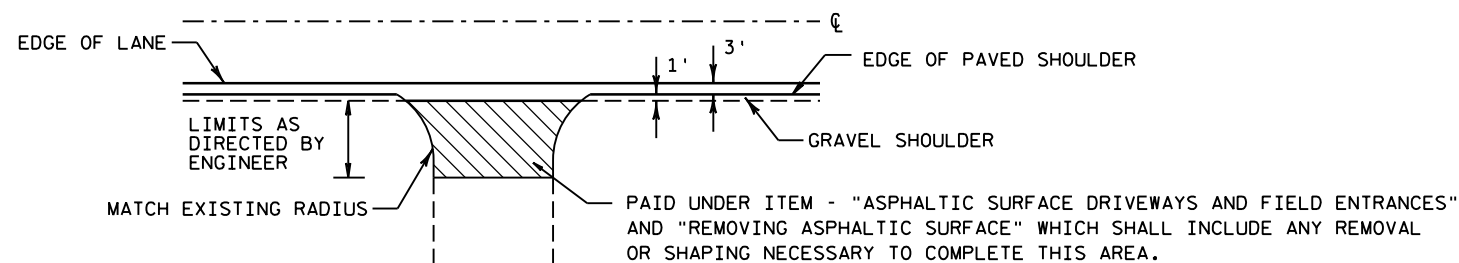
TOTAL PROJECT AREA = 50.4 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 50.4 ACRES

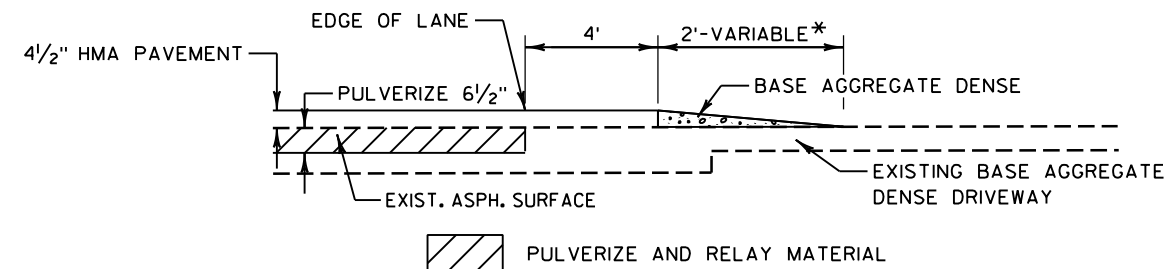


TYPICAL BASE AGGREGATE DRIVEWAY DETAIL
(RURAL)

RURAL DRIVEWAY DETAIL - ASPHALT

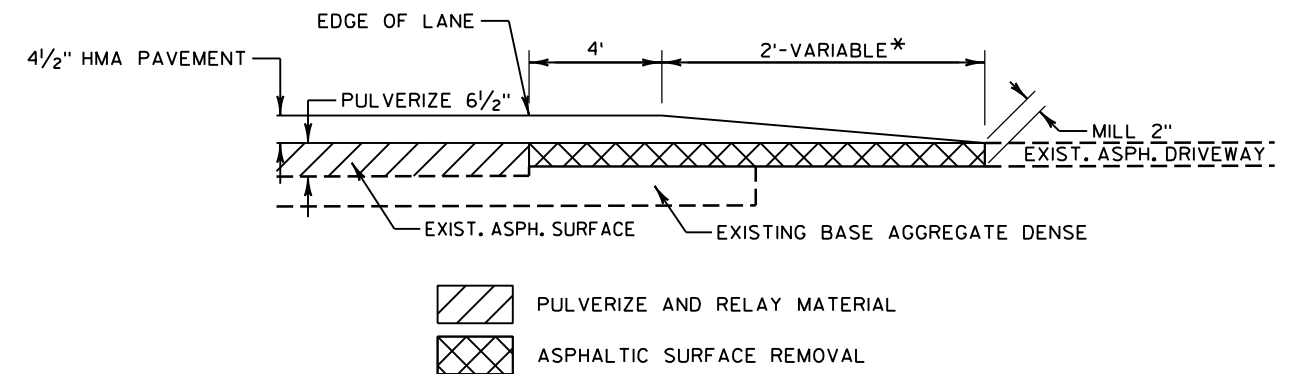


ANY ADDITIONAL BASE AGG. DENSE REQ'D. SHALL BE PAID UNDER ITEM - "BASE AGGREGATE DENSE 3/4-INCH"



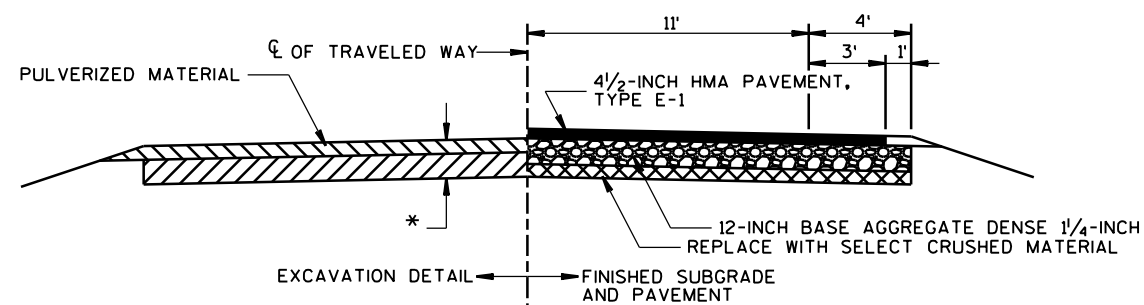
BASE AGGREGATE DRIVEWAY DETAIL

*EXACT DIMENSIONS TO BE DETERMINED BY ENGINEER IN THE FIELD



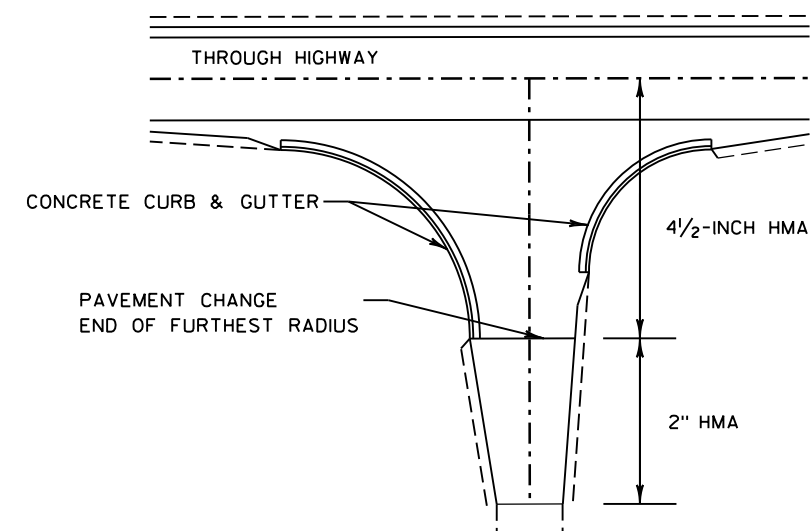
ASPHALTIC DRIVEWAY DETAIL

*EXACT DIMENSIONS TO BE DETERMINED BY ENGINEER IN THE FIELD



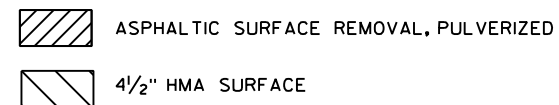
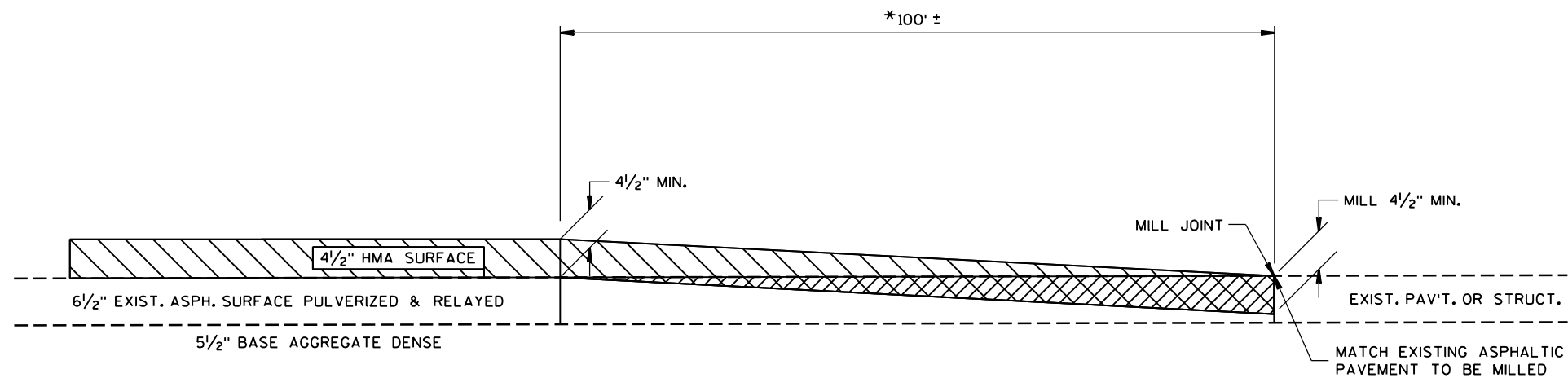
DETAIL FOR EXCAVATION BELOW SUBGRADE (EBS)

*=EBS, THICKNESS, LOCATION, & DEPTH VARIES AS DESIGNATED BY THE ENGINEER. QUANTITIES ASSUMED AVERAGE THICKNESS OF 18".



PAVEMENT DEPTHS AT RURAL INTERSECTIONS

* FOR INTERSECTIONS WITHOUT CURB AND GUTTER, THE PAVEMENT CHANGE IS TO THE SAME RADIUS POINT



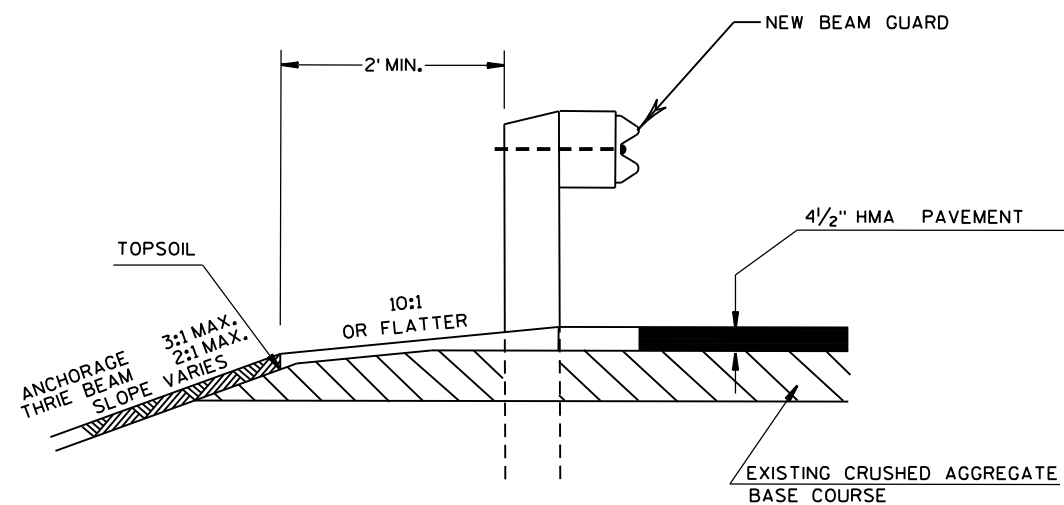
NOTE: ANY SAW CUTS USED IN THIS OPERATION SHALL BE PAID FOR SEPARATELY UNDER SAWING ASPHALT OR SAWING CONCRETE

TYPICAL TRANSITION BUTT JOINT DETAIL

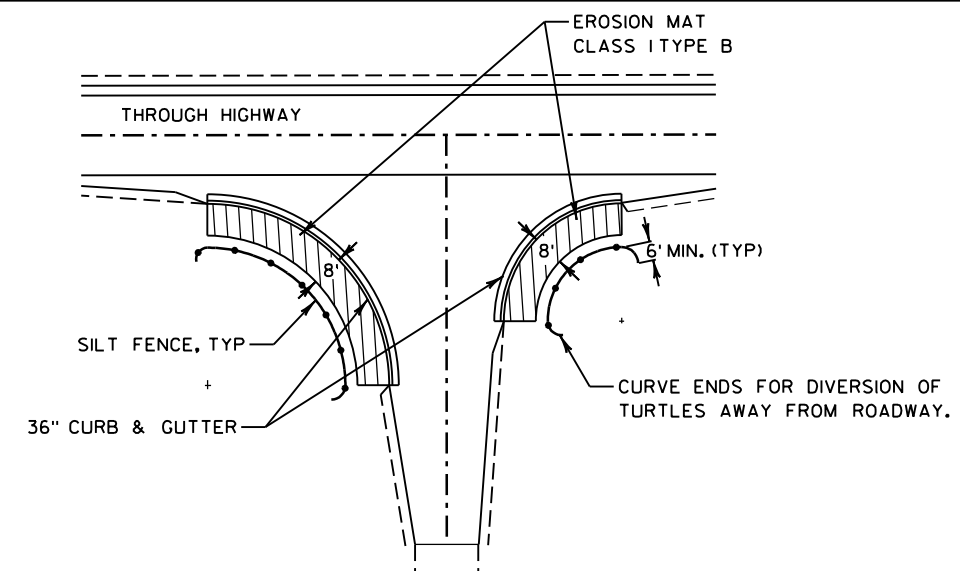
PAID AS: REMOVING ASPHALTIC SURFACE BUTT JOINTS

100' TRANSITIONS

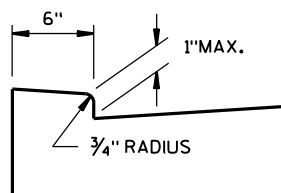
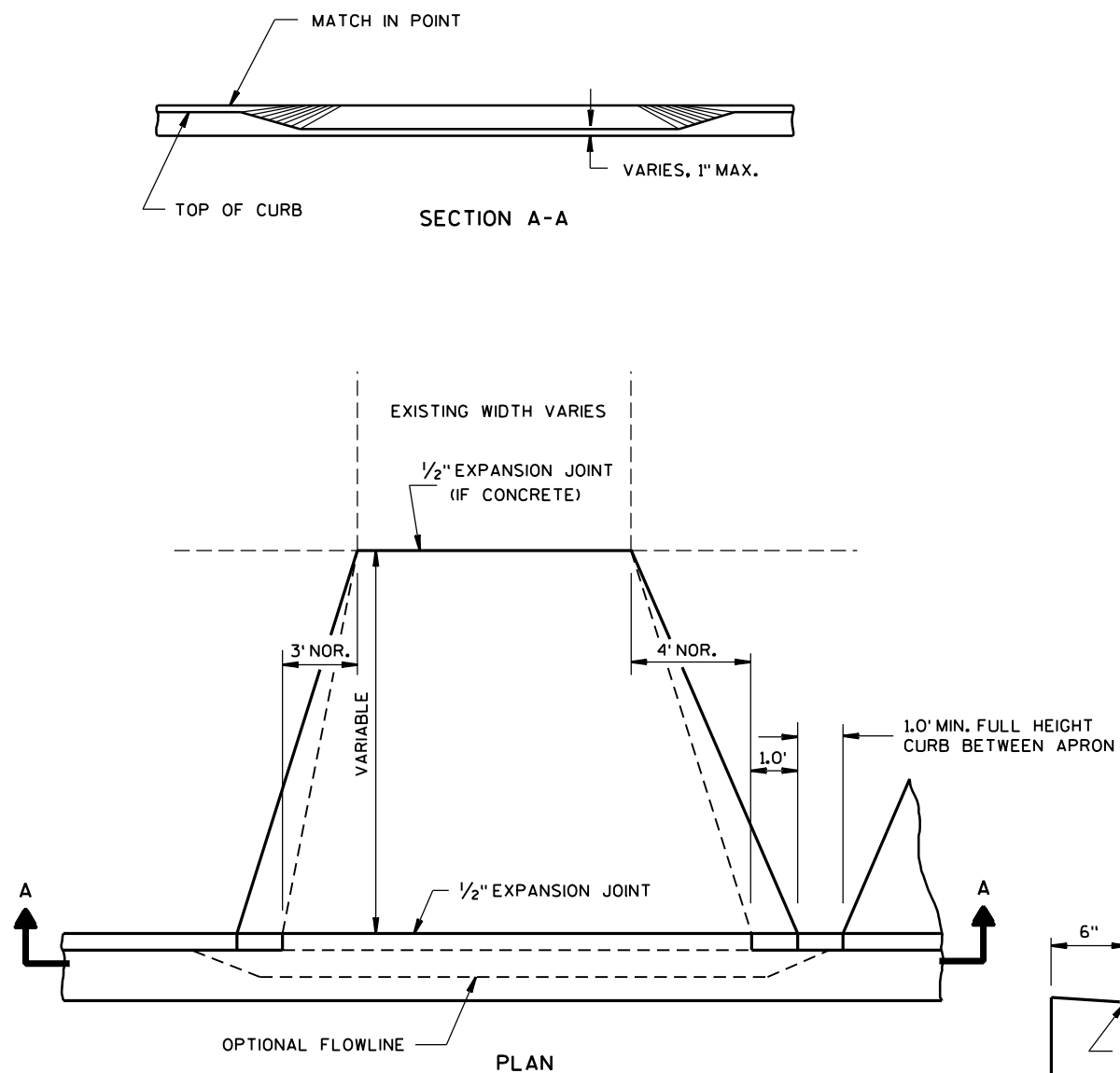
STA -0+81.43 - STA 0+18.57
 STA 16+05.81 - STA 17+05.81
 STA 17+12.97 - STA 18+12.97
 STA 115+40 - STA 116+40
 STA 116+58 - STA 117+58
 STA 321+40.54 - STA 322+40.54



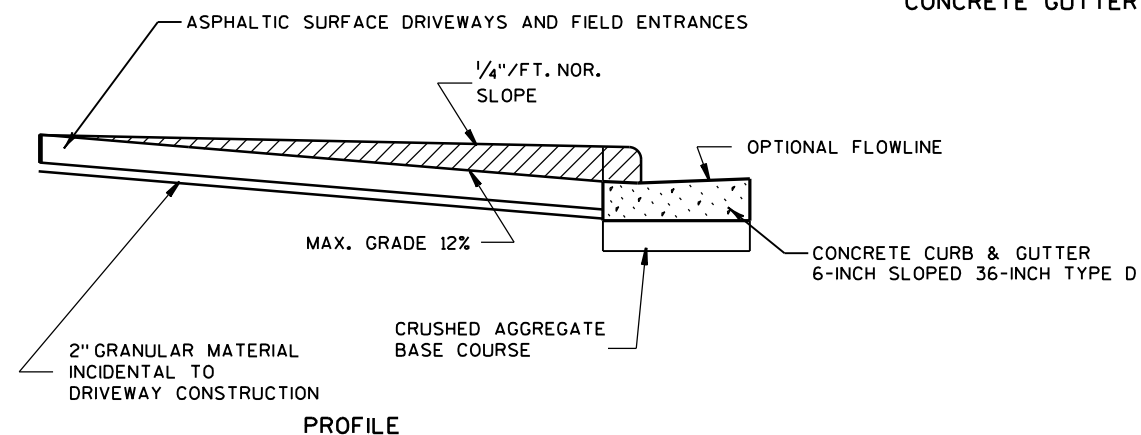
ASPHALTIC SHOULDER AT GUARD RAIL



EROSION MAT & SILT FENCE DETAIL AT RURAL INTERSECTIONS

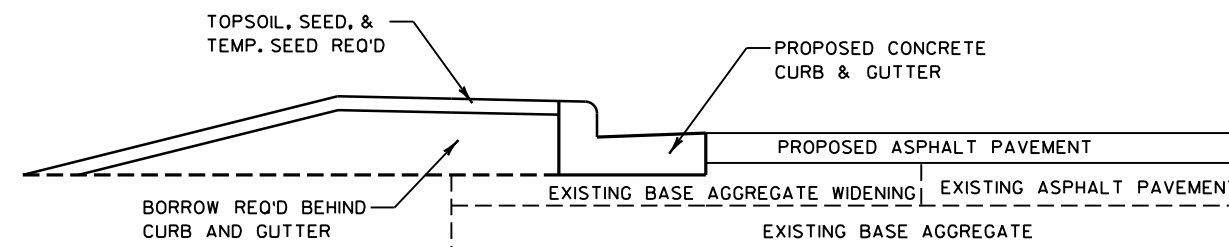


OPTIONAL METHOD
FOR
CONCRETE GUTTER



URBAN DRIVEWAY DETAIL

STA 162+85, RT
STA 164+05, RT



CURB AND GUTTER FINISHING DETAIL

ALL LOCATIONS WHERE THERE IS CURB & GUTTER

LEGEND

- ① W 6 x 25 WITH 2 - $\frac{3}{4}$ " x $2\frac{1}{2}$ " VERT. SLOTS IN FLG. (SLOT ON OTHER SIDE OF WEB IS OPTIONAL) FOR NO. 7, CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POSTS VERTICAL AND NORMAL TO GRADE LINE.
- ② C 8 x 11.5 WITH $\frac{1}{8}$ " DIA. HOLES FOR NO. 8.
- ③ BASE PLATE 1" x $9\frac{1}{2}$ " x 10" WITH $\frac{1}{16}$ " x $\frac{1}{2}$ " SLOTTED HOLES FOR ANCHOR BOLTS NO. 4. WELD TO NO. 1 AS SHOWN.
- ④ A325 - $\frac{3}{8}$ " HEX BOLTS (GALVANIZED) WITH A325 NUT AND WASHER. USE 14" LONG AT ALL POSTS. 4 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 3. CHAMFER TOP OF BOLTS BEFORE THREADING.
- ⑤ $\frac{1}{4}$ " x 8" x 8" FLAT BAR, WITH $\frac{1}{8}$ " DIA. HOLES FOR ANCHOR BOLTS NO. 4.
- ⑥ $1\frac{3}{4}$ " x 3" MOUNTING BOLT WASHER (GALVANIZED).
- ⑦ $\frac{5}{8}$ " DIA. BUTTON HEAD POST MOUNTING BOLT WITH ROUND WASHER AND NUT.
- ⑧ $\frac{5}{8}$ " DIA. x 2" HEX BOLTS WITH NUT AND TWO WASHERS EACH.
- ⑨ PLATE $\frac{1}{2}$ " x $5\frac{3}{4}$ " x 6" AT BASIC POST CONNECTION. $\frac{1}{4}$ " DIA. HOLES IN PLATE. $\frac{1}{8}$ " DIA. HOLES IN CHANNEL.
- ⑩ PLATE $\frac{1}{2}$ " x $5\frac{3}{4}$ " x $1-2\frac{1}{2}$ ". $\frac{1}{4}$ " DIA. HOLES IN PLATE. $\frac{1}{8}$ " DIA. HOLES IN CHANNEL. EXPANSION SLOTS ON JOINT SIDE OF POST. $\frac{1}{16}$ " x $2\frac{1}{4}$ " IN PLATE. $\frac{1}{16}$ " x $2\frac{1}{4}$ " IN CHANNEL. (AT EXPANSION SPLICE.)
- ⑪ PLATE $\frac{1}{2}$ " x $5\frac{3}{4}$ " x $11\frac{1}{2}$ ". $\frac{1}{4}$ " DIA. HOLES IN PLATE. $\frac{1}{8}$ " DIA. HOLES IN CHANNEL. (AT TYPICAL SPLICE.)

GENERAL NOTES

SPV BID ITEMS SHALL BE "RAILING STEEL TYPE W STA. 17+09" AND "RAILING STEEL TYPE W STA. 116+49". WHICH INCLUDES ALL ITEMS SHOWN, INCLUDING CURB REPAIR.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 5) SHALL BE GALVANIZED AFTER FABRICATION.

PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS AND CHANNELS SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY S.S.P.C. SPECS.

ALL MATERIAL USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO A.S.T.M. DESIGNATION A709 GRADE 36 UNLESS NOTED OTHERWISE.

FILL BOLT SLOT OPENINGS IN POST SHIMS & PLATE NO. 3 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

SEE STANDARD SPECIFICATIONS FOR RAIL TYPE.

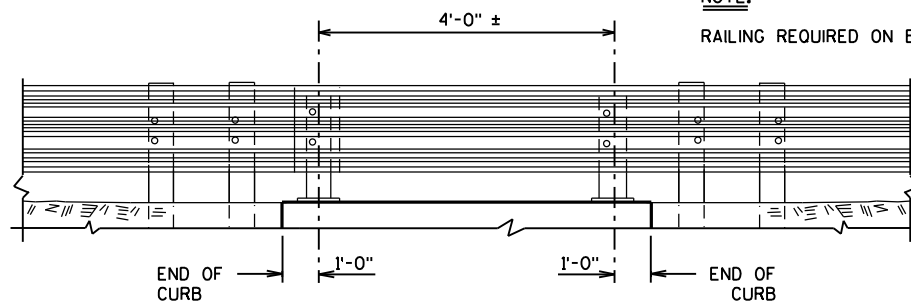
CHANNEL MEMBER NO. 2 SHALL BE ATTACHED CONTINUOUSLY OVER THE STRUCTURE TO THE RAIL POSTS NO. 1.

AT EXPANSION SLOTS IN RAIL AND CHANNEL MEMBERS, TIGHTEN BOLTS, BACK OFF ONE HALF TURN AND BURR THREADS. RAIL MEMBERS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC AND THE UPPER RAIL SHALL LAP THE LOWER RAIL.

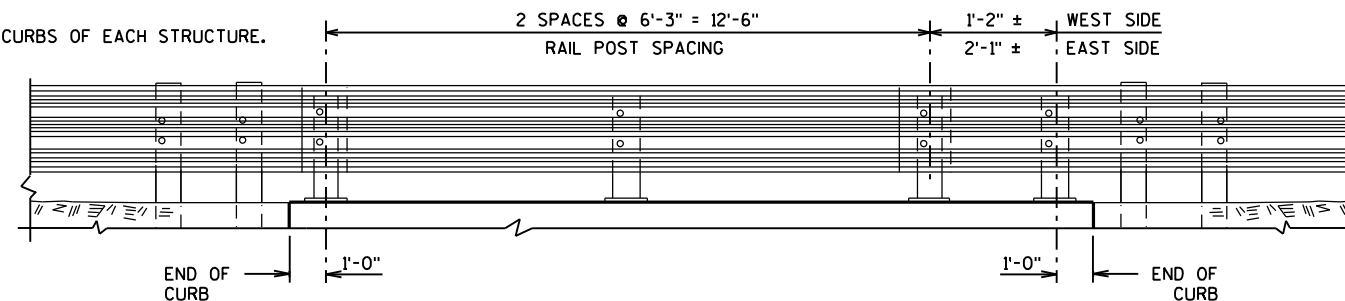
STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.

NOTE:

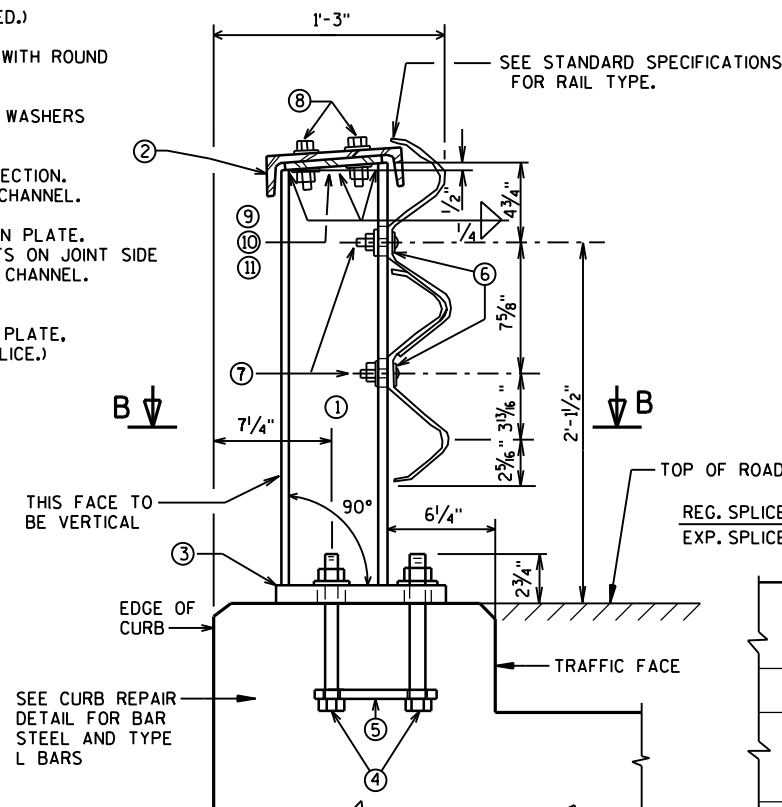
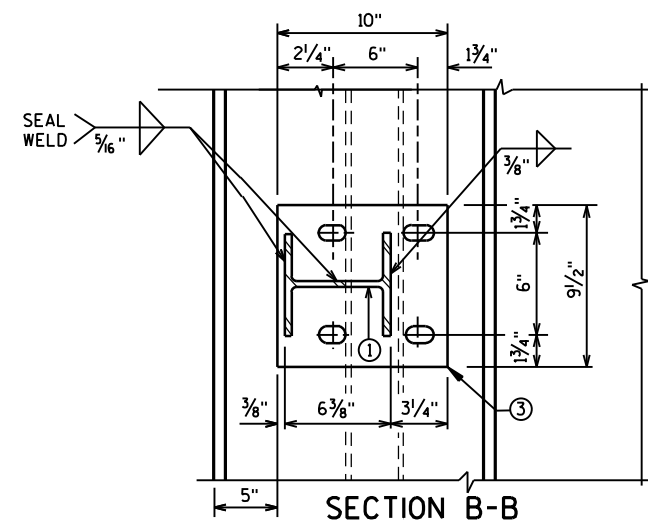
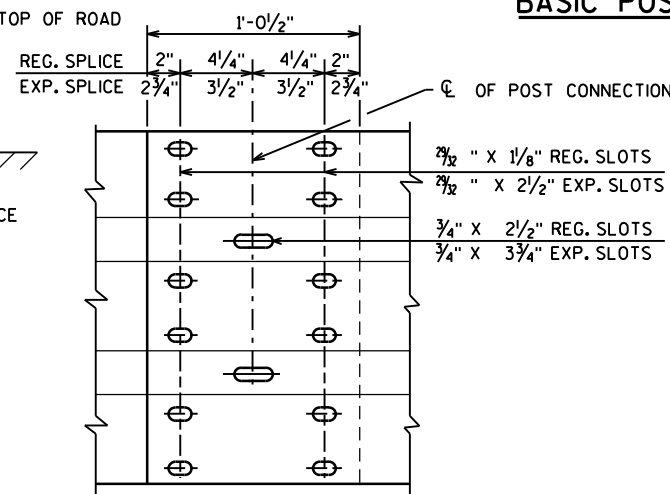
RAILING REQUIRED ON BOTH CURBS OF EACH STRUCTURE.

**ELEVATION OF RAILING**

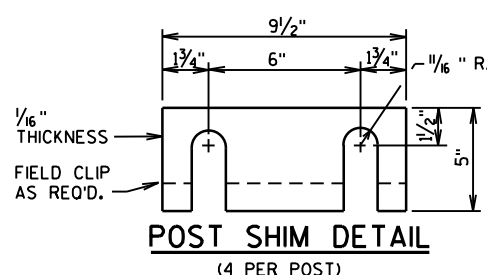
BOX CULVERT @ STA. 17+09

**ELEVATION OF RAILING**

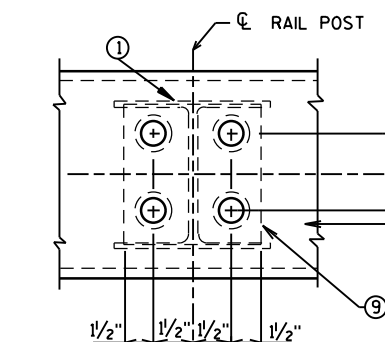
BOX CULVERT @ STA. 116+49

**SECTION THRU RAILING****SECTION B-B****RAIL MEMBER SPLICE**

$\frac{5}{8}$ " DIA. BUTTON HEAD OVAL SHOULDER BOLTS WITH HEX NUTS AT ALL SLOTS.

**POST SHIM DETAIL**

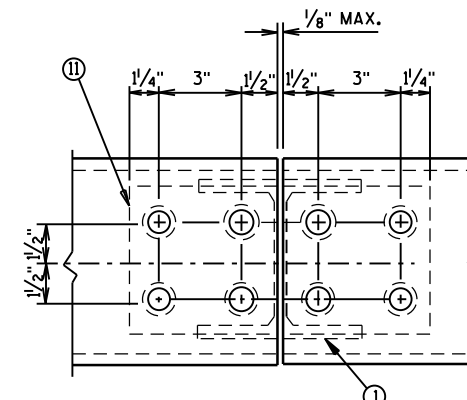
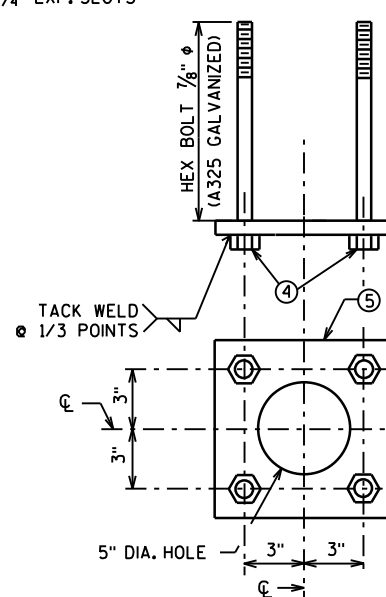
(4 PER POST)

**BASIC POST CONNECTION****OPTIONAL SPLICE**

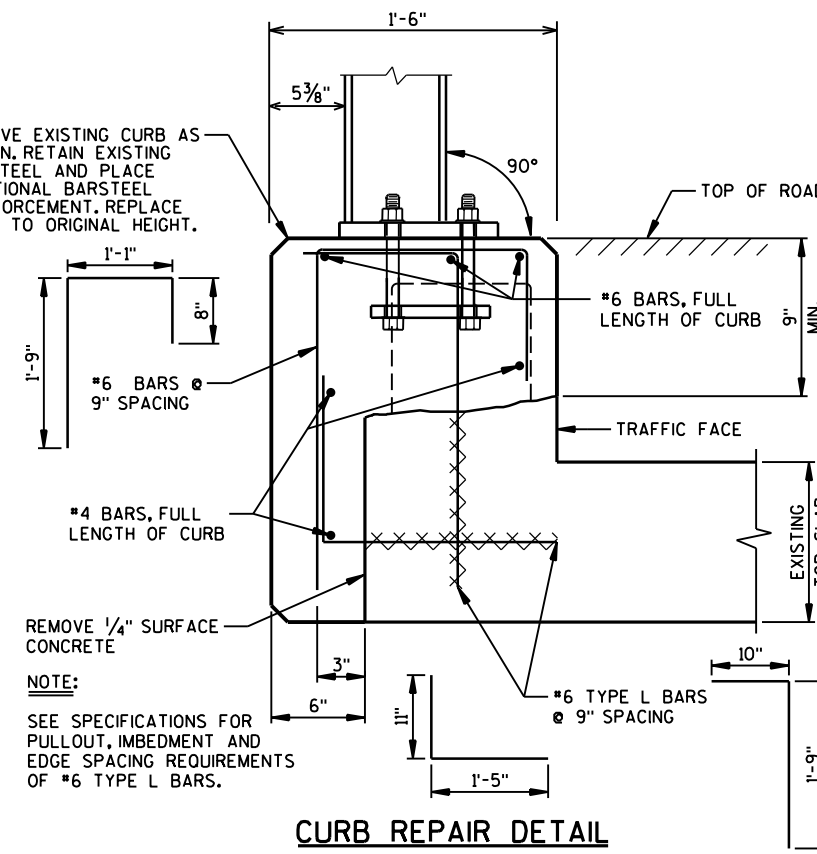
(SHOP)

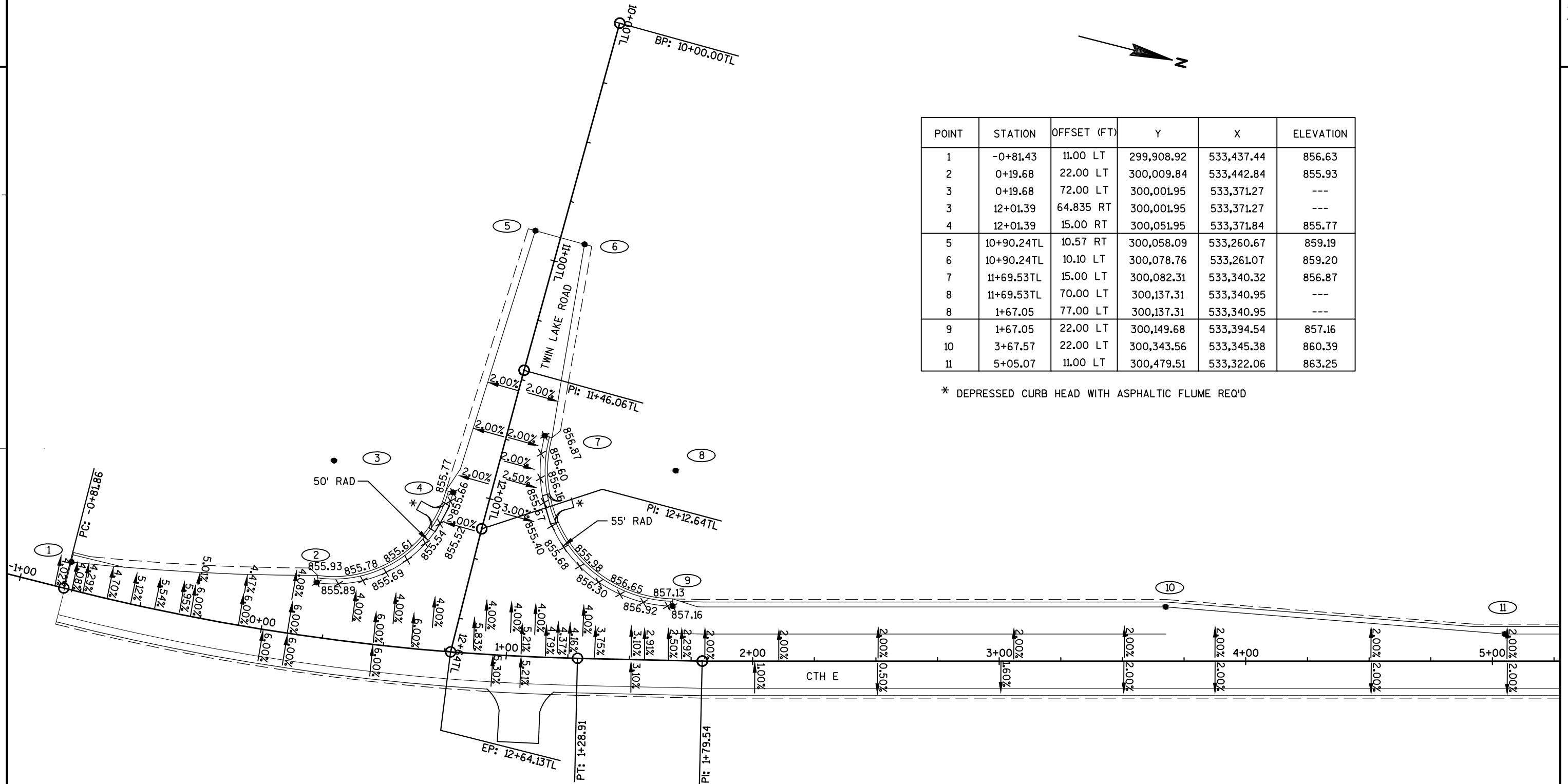
CHANNEL MEMBER DETAILS

(SHIM PLATES 6" x $\frac{1}{16}$ " x 6" MAY BE USED BETWEEN TOP OF POST AND CHANNEL MEMBER TO ACHIEVE VERT. ALIGNMENT.)

**TYPICAL SPLICE****ANCHORAGE DETAIL**

REMOVE EXISTING CURB AS SHOWN. RETAIN EXISTING BARSTEEL AND PLACE ADDITIONAL BARSTEEL REINFORCEMENT. REPLACE CURB TO ORIGINAL HEIGHT.

**CURB REPAIR DETAIL**

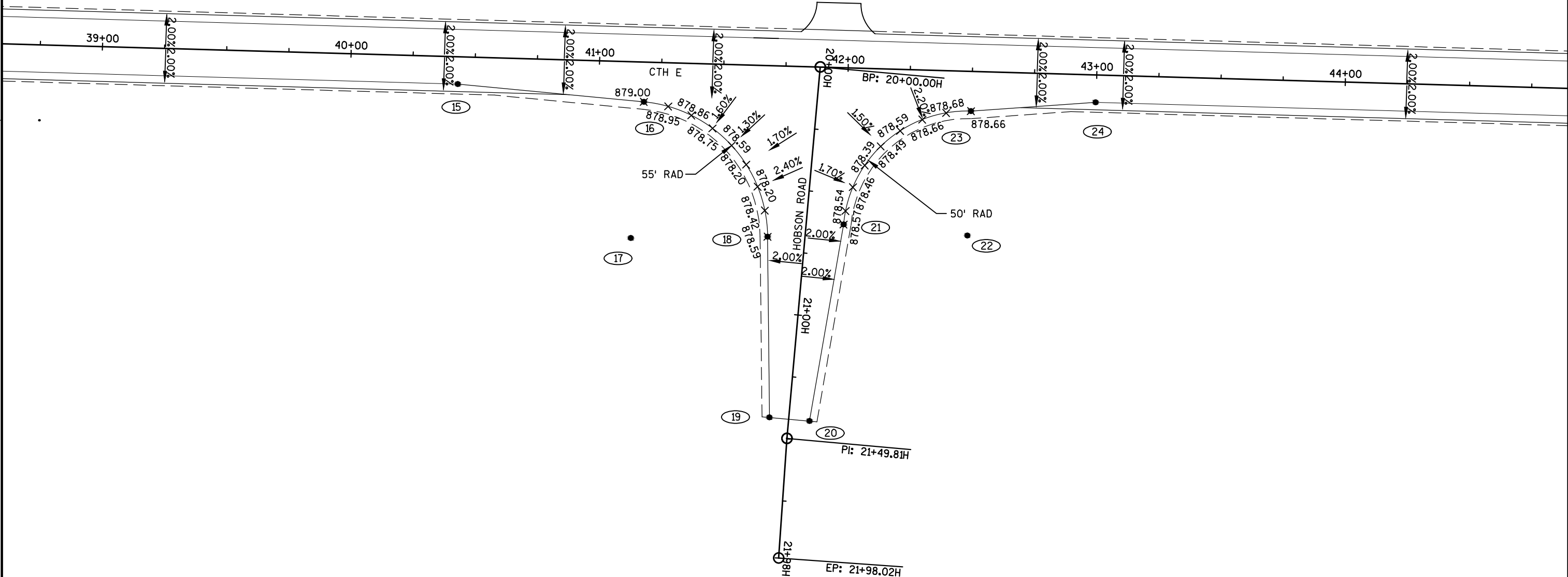


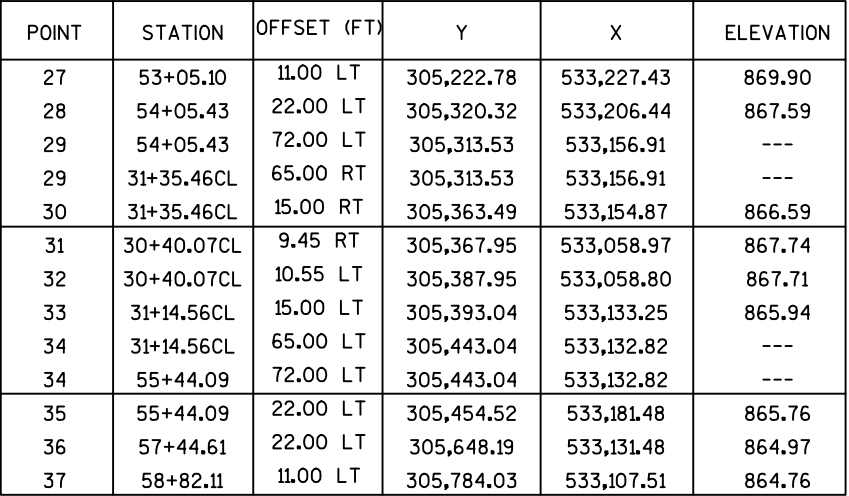
POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
1	-0+81.43	11.00 LT	299,908.92	533,437.44	856.63
2	0+19.68	22.00 LT	300,009.84	533,442.84	855.93
3	0+19.68	72.00 LT	300,001.95	533,371.27	---
3	12+01.39	64.835 RT	300,001.95	533,371.27	---
4	12+01.39	15.00 RT	300,051.95	533,371.84	855.77
5	10+90.24TL	10.57 RT	300,058.09	533,260.67	859.19
6	10+90.24TL	10.10 LT	300,078.76	533,261.07	859.20
7	11+69.53TL	15.00 LT	300,082.31	533,340.32	856.87
8	11+69.53TL	70.00 LT	300,137.31	533,340.95	---
8	1+67.05	77.00 LT	300,137.31	533,340.95	---
9	1+67.05	22.00 LT	300,149.68	533,394.54	857.16
10	3+67.57	22.00 LT	300,343.56	533,345.38	860.39
11	5+05.07	11.00 LT	300,479.51	533,322.06	863.25

* DEPRESSED CURB HEAD WITH ASPHALTIC FLUME REQ'D



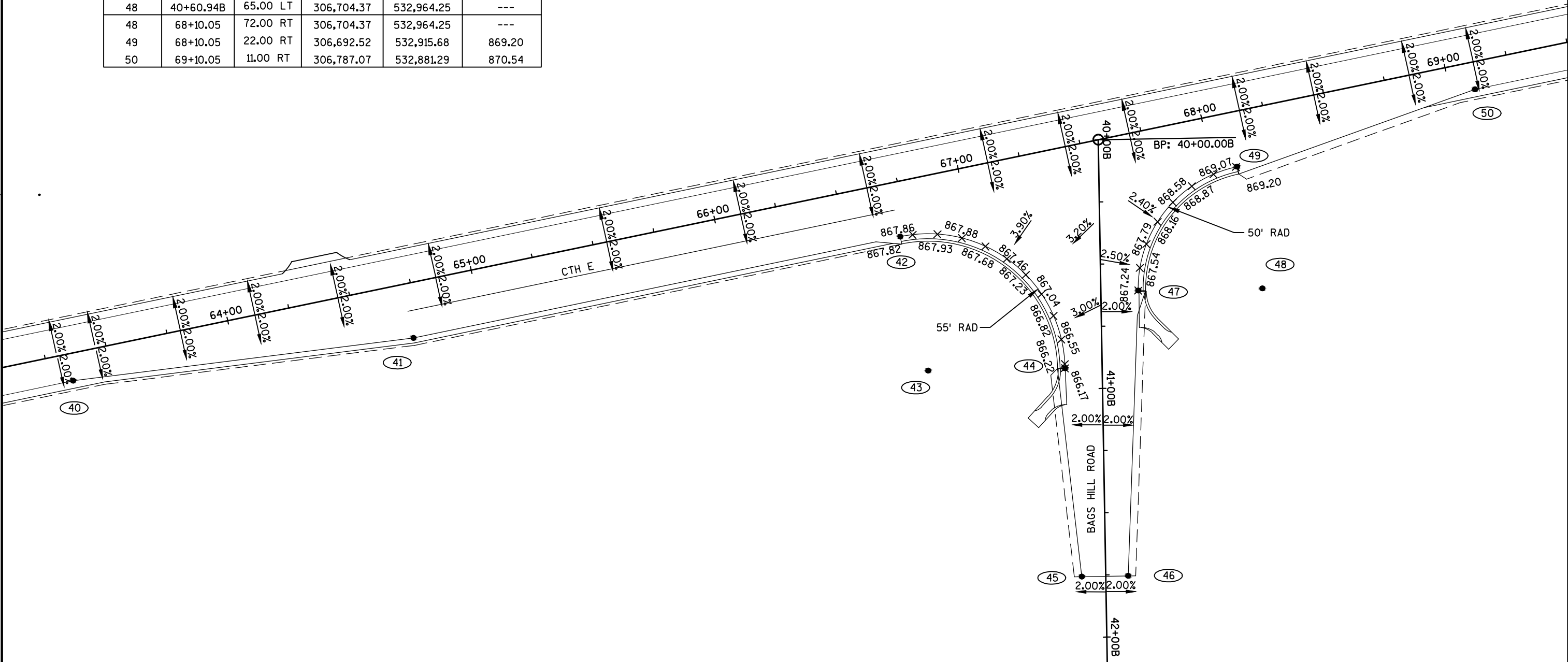
POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
15	40+43.23	11.00 RT	303,961.88	533,263.93	879.27
16	41+18.23	16.00 RT	304,036.91	533,268.50	879.00
17	41+14.57	70.88 RT	304,033.57	533,323.39	---
17	20+75.26H	69.73 RT	304,033.57	533,323.39	---
18	20+69.79H	15.00 RT	304,088.52	533,320.94	878.59
19	21+42.07H	7.77 RT	304,091.76	533,393.51	879.06
20	21+42.07H	8.38 LT	304,107.88	533,394.40	879.05
21	20+62.16H	15.00 LT	304,118.89	533,314.97	878.57
22	20+62.16H	65.00 LT	304,168.82	533,317.72	---
22	42+49.85	66.00 RT	304,168.82	533,317.72	---
23	42+49.85	16.00 RT	304,168.52	533,267.73	878.66
24	42+99.85	11.00 RT	304,218.49	533,262.43	878.48



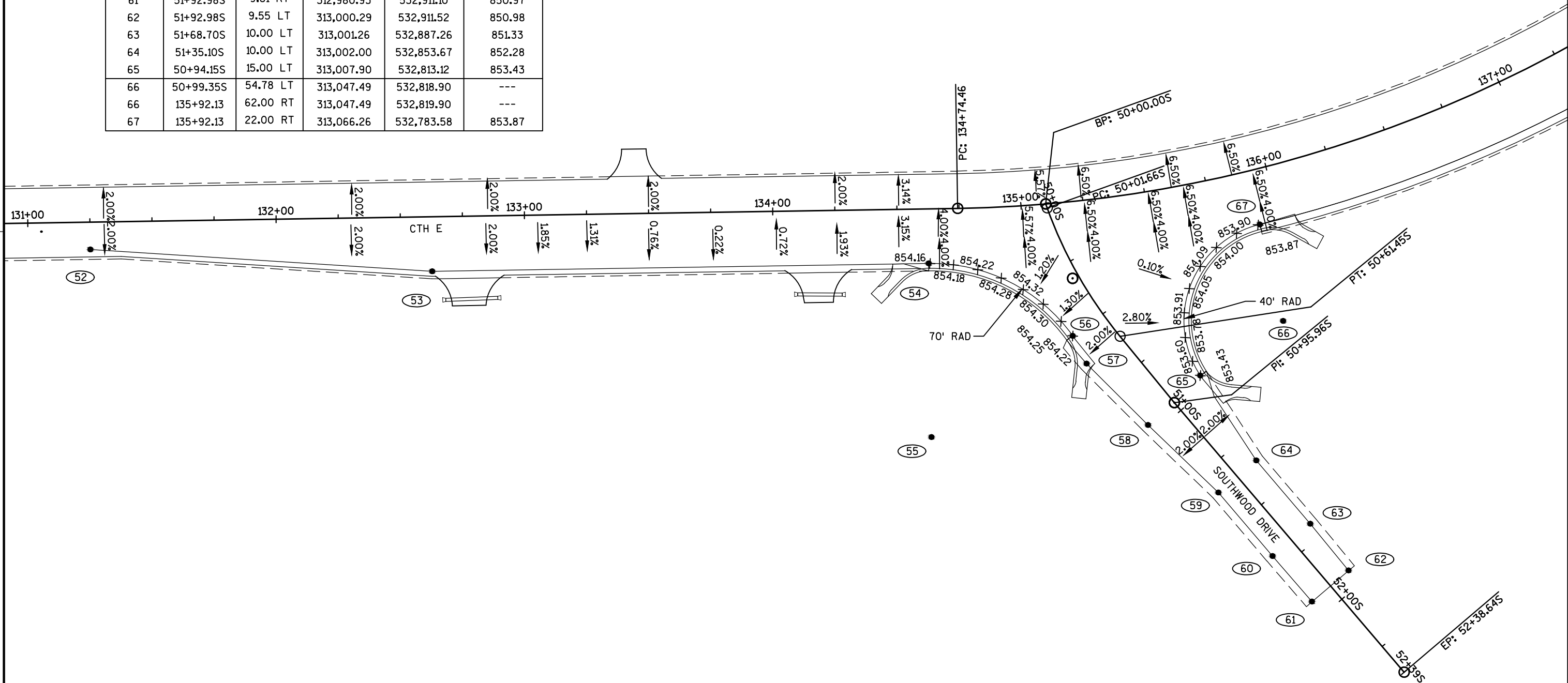
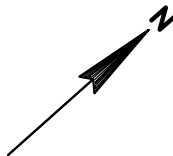


PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	INTERSECTION DETAILS - CRYSTAL LAKE ROAD	SHEET	E
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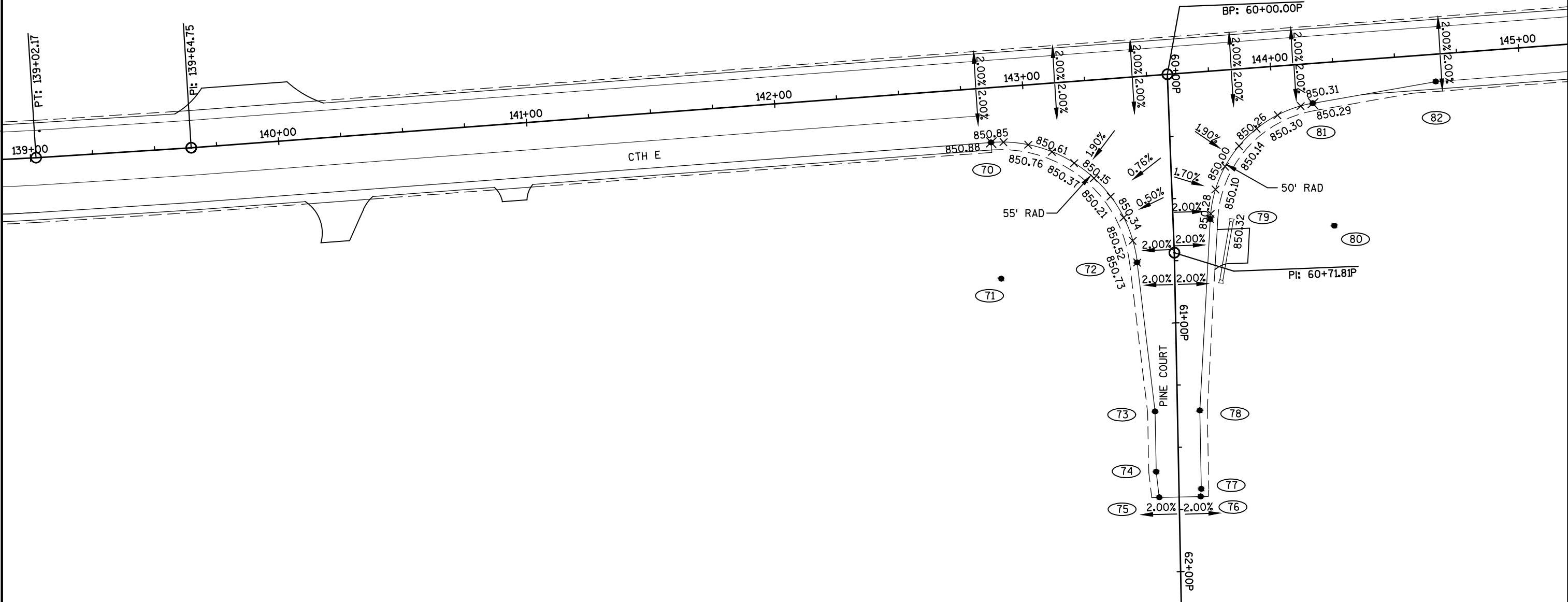
POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
40	63+34.18	11.00 RT	306,227.61	533,017.77	864.32
41	64+71.68	22.00 RT	306,363.80	532,995.87	865.77
42	66+71.68	22.00 RT	306,558.10	532,948.47	867.82
43	66+71.68	77.00 RT	306,751.14	533,001.90	---
43	40+91.68B	70.00 RT	306,751.14	533,001.90	---
44	40+91.68B	15.00 RT	306,626.06	532,999.07	866.17
45	41+75.59B	9.61 RT	306,635.76	533,082.59	864.33
46	41+75.59B	9.01 LT	306,654.36	533,081.64	864.34
47	40+60.94B	15.00 LT	306,654.44	532,966.83	867.24
48	40+60.94B	65.00 LT	306,704.37	532,964.25	---
48	68+10.05	72.00 RT	306,704.37	532,964.25	---
49	68+10.05	22.00 RT	306,692.52	532,915.68	869.20
50	69+10.05	11.00 RT	306,787.07	532,881.29	870.54



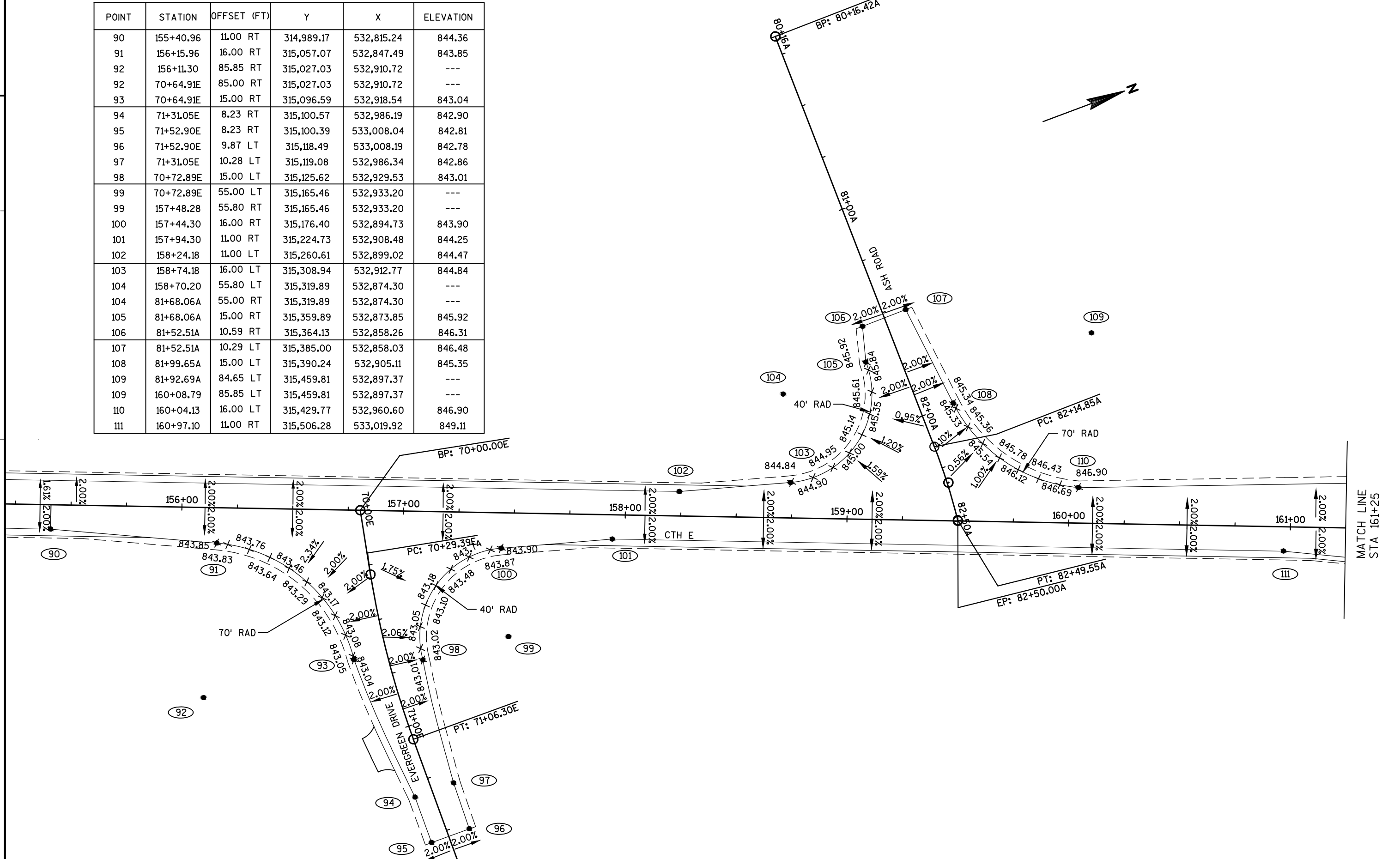
POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
52	131+24.98	11.00 RT	312,707.78	532,478.00	852.71
53	132+62.48	22.00 RT	312,804.75	532,576.10	853.58
54	134+62.48	22.00 RT	312,956.24	532,706.68	854.16
55	134+62.48	92.00 RT	312,910.53	532,759.70	---
55	50+50.19S	85.00 RT	312,910.53	532,759.70	---
56	50+50.19S	15.00 RT	312,980.15	532,767.04	854.22
57	50+61.45S	17.39 RT	312,976.87	532,779.14	854.13
58	50+95.96S	13.91 RT	312,978.93	532,814.02	853.40
59	51+35.10S	10.00 RT	312,982.00	532,853.23	852.27
60	51+68.70S	10.00 RT	312,981.27	532,886.83	851.33
61	51+92.98S	9.81 RT	312,980.93	532,911.10	850.97
62	51+92.98S	9.55 LT	313,000.29	532,911.52	850.98
63	51+68.70S	10.00 LT	313,001.26	532,887.26	851.33
64	51+35.10S	10.00 LT	313,002.00	532,853.67	852.28
65	50+94.15S	15.00 LT	313,007.90	532,813.12	853.43
66	50+99.35S	54.78 LT	313,047.49	532,818.90	---
66	135+92.13	62.00 RT	313,047.49	532,819.90	---
67	135+92.13	22.00 RT	313,066.26	532,783.58	853.87

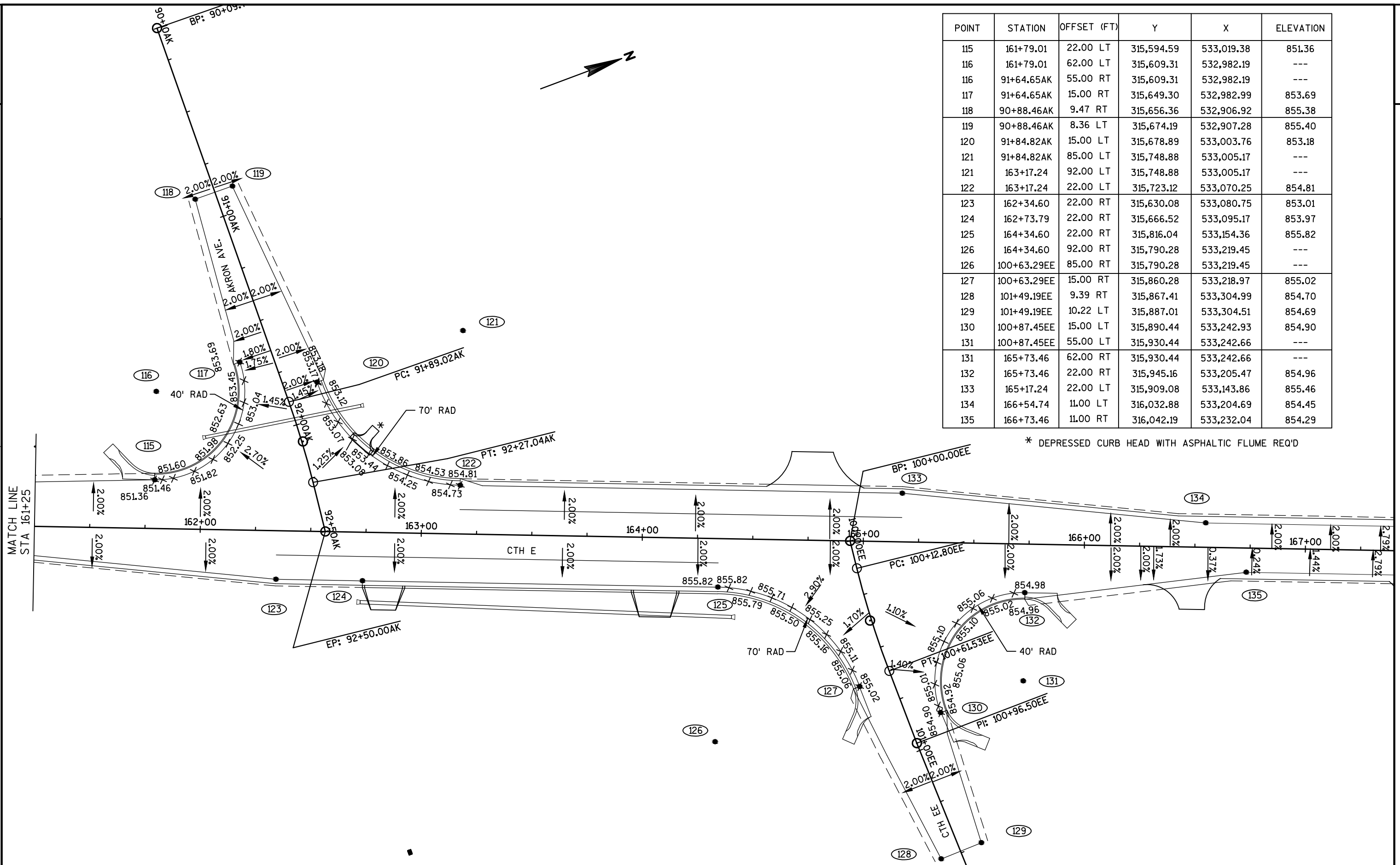


POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
70	142+85.65	22.00 RT	313,760.06	532,804.13	850.88
71	143+85.65	77.00 RT	313,766.06	532,858.80	---
71	60+80.91P	69.73 RT	313,766.06	532,858.80	---
72	60+75.43P	15.00 RT	313,820.41	532,850.37	850.73
73	61+35.43P	9.00 RT	313,829.66	532,909.95	851.91
74	61+59.71P	9.00 RT	313,830.98	532,934.19	851.86
75	61+70P	7.97 RT	313,832.56	532,944.41	851.78
76	61+70P	8.70 LT	313,849.21	532,943.51	851.76
77	61+66.96P	9.00 LT	313,849.34	532,940.45	851.79
78	61+35.43P	9.00 LT	313,847.63	532,908.97	851.91
79	60+58.78P	15.00 LT	313,849.20	532,831.84	850.32
80	60+63.45P	64.78 LT	313,899.19	532,832.85	---
80	144+20.82	65.75 RT	313,899.19	532,832.85	---
81	144+15.84	16.00 RT	313,888.81	532,783.94	850.29
82	144+65.84	11.00 RT	313,837.96	532,773.51	850.10

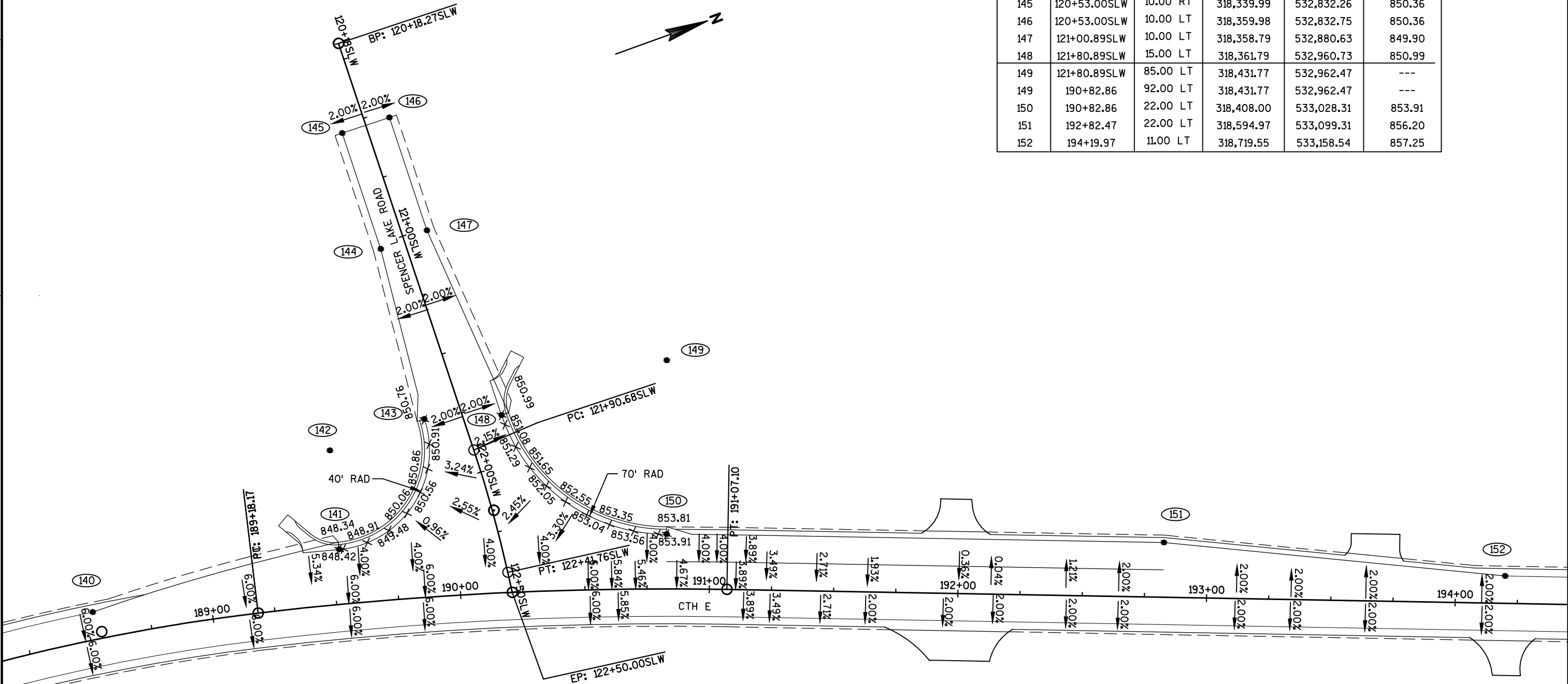


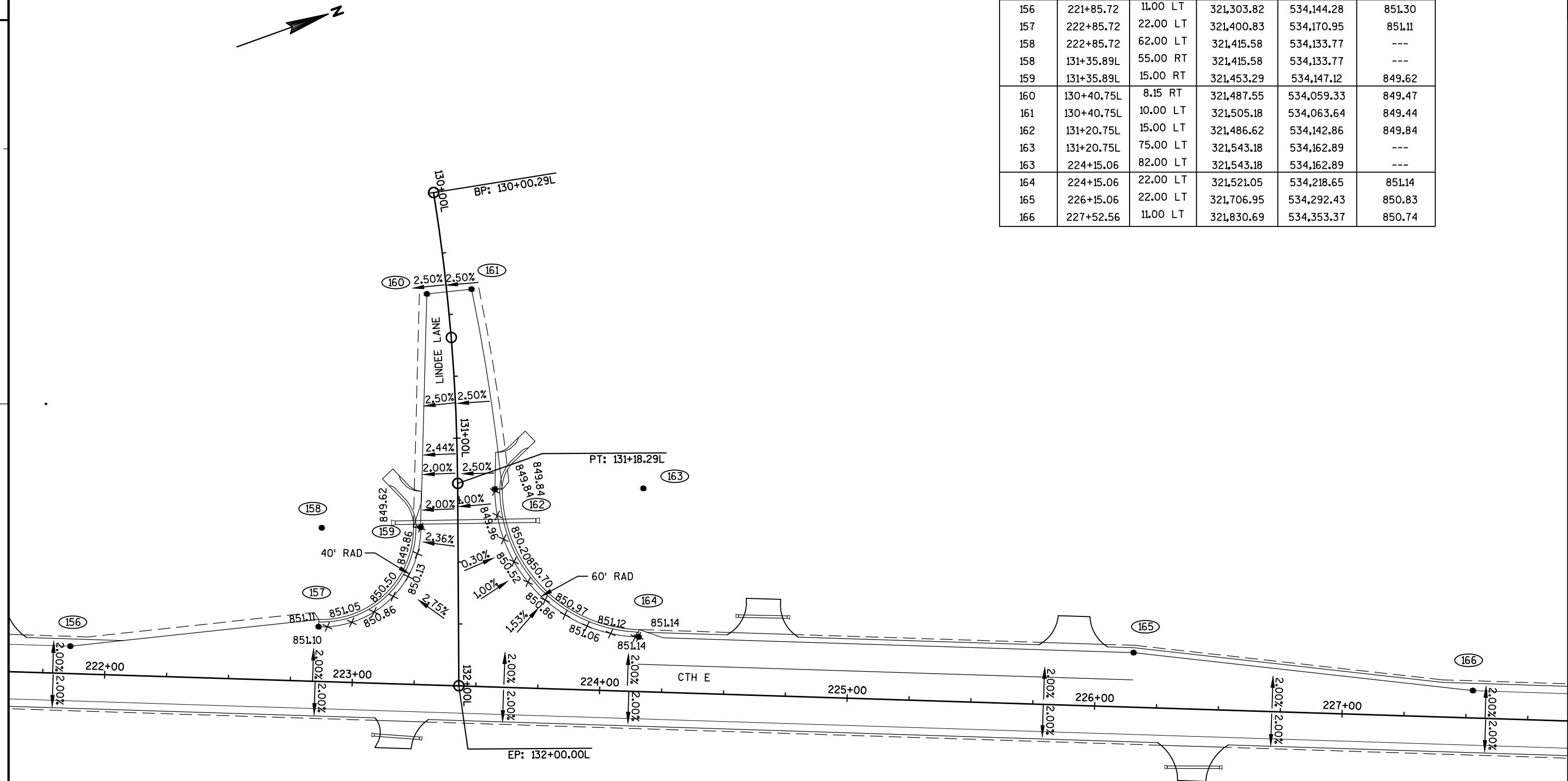
POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
90	155+40.96	11.00 RT	314,989.17	532,815.24	844.36
91	156+15.96	16.00 RT	315,057.07	532,847.49	843.85
92	156+11.30	85.85 RT	315,027.03	532,910.72	---
92	70+64.91E	85.00 RT	315,027.03	532,910.72	---
93	70+64.91E	15.00 RT	315,096.59	532,918.54	843.04
94	71+31.05E	8.23 RT	315,100.57	532,986.19	842.90
95	71+52.90E	8.23 RT	315,100.39	533,008.04	842.81
96	71+52.90E	9.87 LT	315,118.49	533,008.19	842.78
97	71+31.05E	10.28 LT	315,119.08	532,986.34	842.86
98	70+72.89E	15.00 LT	315,125.62	532,929.53	843.01
99	70+72.89E	55.00 LT	315,165.46	532,933.20	---
99	157+48.28	55.80 RT	315,165.46	532,933.20	---
100	157+44.30	16.00 RT	315,176.40	532,894.73	843.90
101	157+94.30	11.00 RT	315,224.73	532,908.48	844.25
102	158+24.18	11.00 LT	315,260.61	532,899.02	844.47
103	158+74.18	16.00 LT	315,308.94	532,912.77	844.84
104	158+70.20	55.80 LT	315,319.89	532,874.30	---
104	81+68.06A	55.00 RT	315,319.89	532,874.30	---
105	81+68.06A	15.00 RT	315,359.89	532,873.85	845.92
106	81+52.51A	10.59 RT	315,364.13	532,858.26	846.31
107	81+52.51A	10.29 LT	315,385.00	532,858.03	846.48
108	81+99.65A	15.00 LT	315,390.24	532,905.11	845.35
109	81+92.69A	84.65 LT	315,459.81	532,897.37	---
109	160+08.79	85.85 LT	315,459.81	532,897.37	---
110	160+04.13	16.00 LT	315,429.77	532,960.60	846.90
111	160+97.10	11.00 RT	315,506.28	533,019.92	849.11



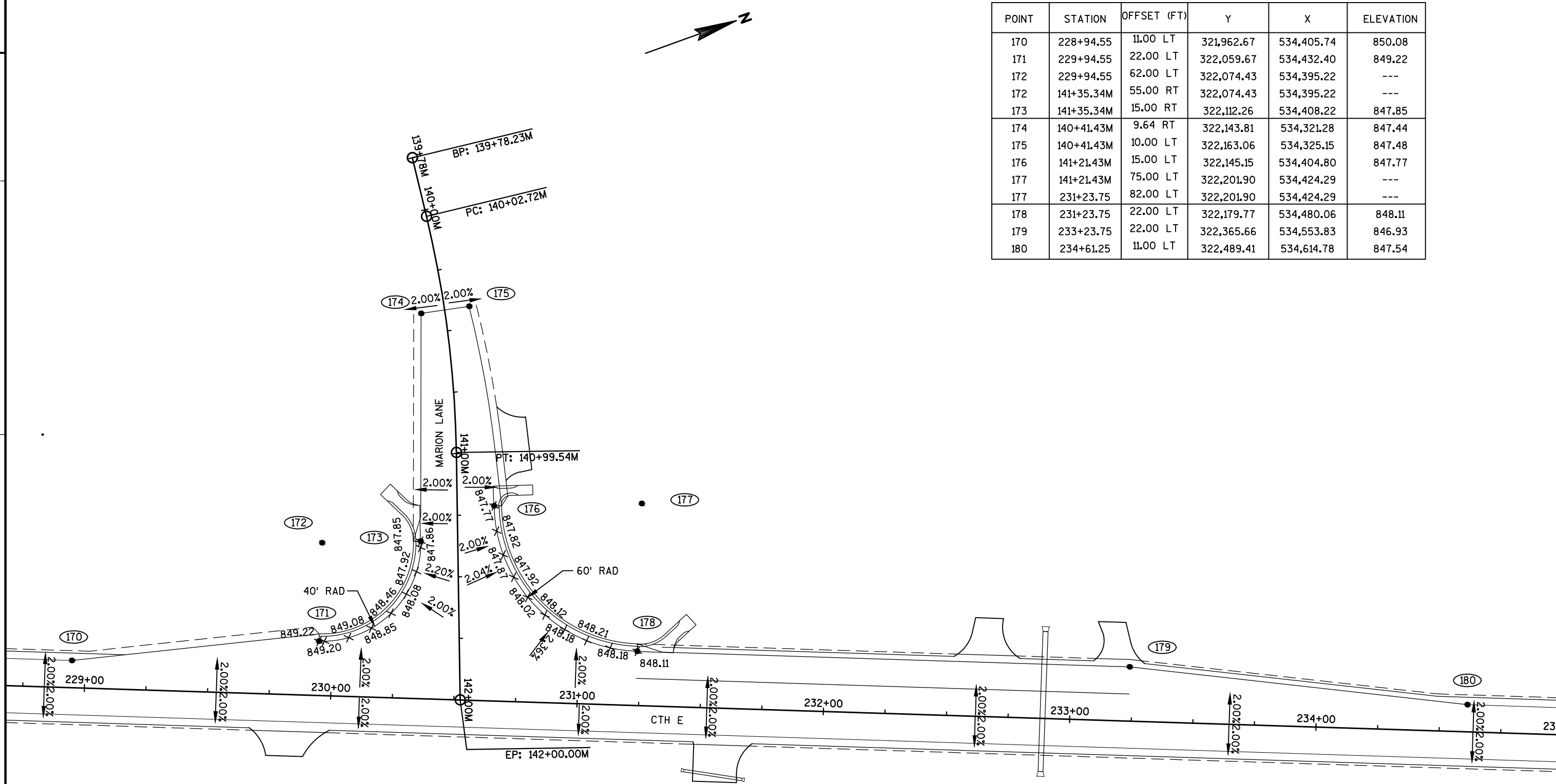


POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
140	188+53.02	11.00 LT	318,180.24	532,979.50	844.41
141	189+53.02	22.00 LT	318,282.02	532,989.40	848.34
142	189+53.02	62.00 LT	318,292.02	532,950.67	---
142	121+72.57SLW	55.00 RT	318,292.02	532,950.67	---
143	121+72.57SLW	15.00 RT	318,332.01	532,951.66	850.76
144	121+02.10SLW	10.00 RT	318,338.76	532,881.34	849.90
145	120+53.00SLW	10.00 RT	318,339.99	532,832.26	850.36
146	120+53.00SLW	10.00 LT	318,359.98	532,832.75	850.36
147	121+00.89SLW	10.00 LT	318,358.79	532,880.63	849.90
148	121+80.89SLW	15.00 LT	318,361.79	532,960.73	850.99
149	121+80.89SLW	85.00 LT	318,431.77	532,962.47	---
149	190+82.86	92.00 LT	318,431.77	532,962.47	---
150	190+82.86	22.00 LT	318,408.00	533,028.31	853.91
151	192+82.47	22.00 LT	318,594.97	533,099.31	856.20
152	194+19.97	11.00 LT	318,719.55	533,158.54	857.25





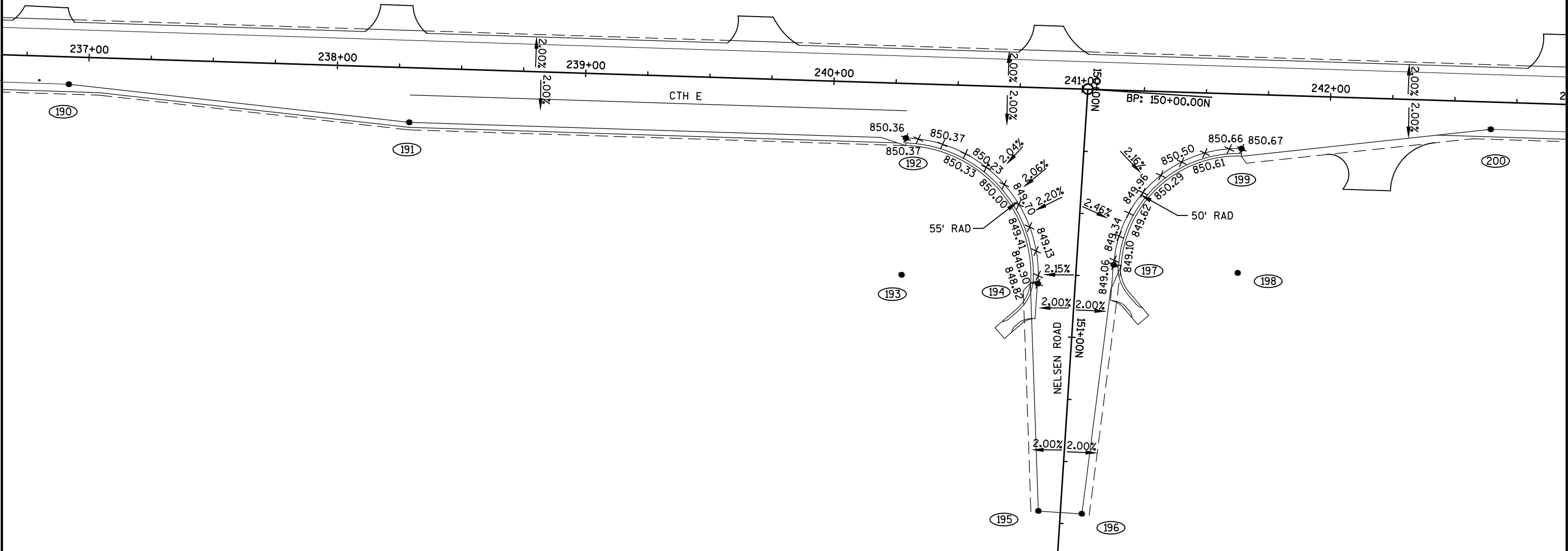
POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
156	221+85.72	11.00 LT	321,303.82	534,144.28	851.30
157	222+85.72	22.00 LT	321,400.83	534,170.95	851.11
158	222+85.72	62.00 LT	321,415.58	534,133.77	---
158	131+35.89L	55.00 RT	321,415.58	534,133.77	---
159	131+35.89L	15.00 RT	321,453.29	534,147.12	849.62
160	130+40.75L	8.15 RT	321,487.55	534,059.33	849.47
161	130+40.75L	10.00 LT	321,505.18	534,063.64	849.44
162	131+20.75L	15.00 LT	321,486.62	534,142.86	849.84
163	131+20.75L	75.00 LT	321,543.18	534,162.89	---
163	224+15.06	82.00 LT	321,543.18	534,162.89	---
164	224+15.06	22.00 LT	321,521.05	534,218.65	851.14
165	226+15.06	22.00 LT	321,706.95	534,292.43	850.83
166	227+52.56	11.00 LT	321,830.69	534,353.37	850.74



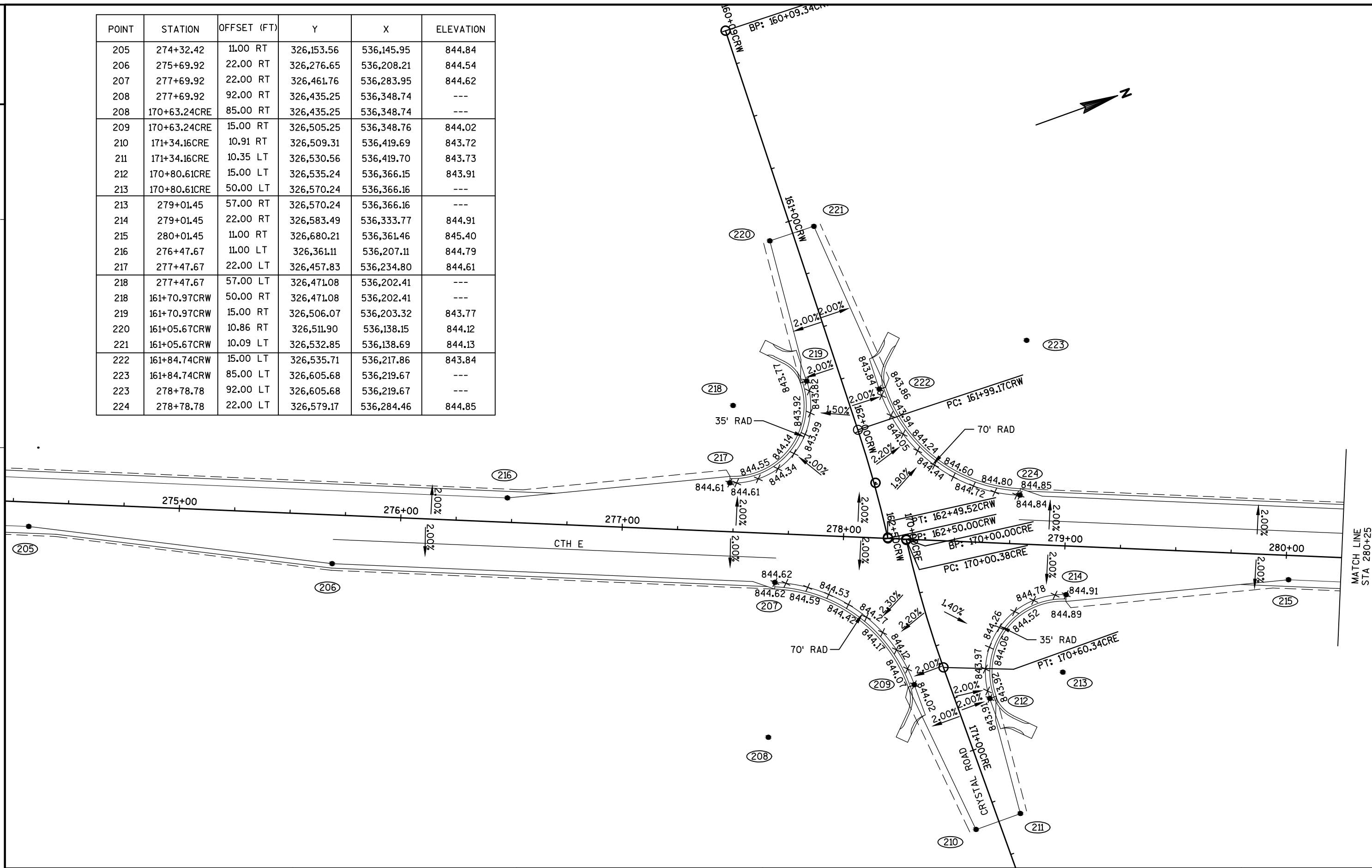
POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
170	228+94.55	11.00 LT	321,962.67	534,405.74	850.08
171	229+94.55	22.00 LT	322,059.67	534,432.40	849.22
172	229+94.55	62.00 LT	322,074.43	534,395.22	---
172	141+35.34M	55.00 RT	322,074.43	534,395.22	---
173	141+35.34M	15.00 RT	322,112.26	534,408.22	847.85
174	140+41.43M	9.64 RT	322,143.81	534,321.28	847.44
175	140+41.43M	10.00 LT	322,163.06	534,325.15	847.48
176	141+21.43M	15.00 LT	322,145.15	534,404.80	847.77
177	141+21.43M	75.00 LT	322,201.90	534,424.29	---
177	231+23.75	82.00 LT	322,201.90	534,424.29	---
178	231+23.75	22.00 LT	322,179.77	534,480.06	848.11
179	233+23.75	22.00 LT	322,365.66	534,553.83	846.93
180	234+61.25	11.00 LT	322,489.41	534,614.78	847.54



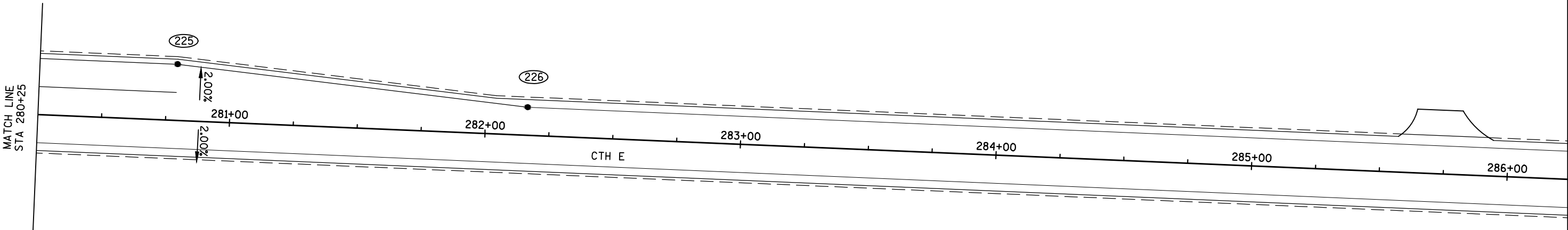
POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
190	236+92.13	11.00 RT	322,695.89	534,720.39	848.93
191	238+29.63	22.00 RT	322,819.63	534,781.33	849.41
192	240+29.63	22.00 RT	323,005.53	534,855.10	850.36
193	240+29.63	77.00 RT	322,985.24	534,906.22	---
193	150+79.37N	70.00 RT	322,985.24	534,906.22	---
194	150+79.37N	15.00 RT	323,035.66	534,928.20	848.82
195	151+70.64N	8.87 RT	323,004.81	535,014.32	847.76
196	151+70.64N	8.66 LT	323,020.88	535,021.32	847.77
197	150+69.88N	15.00 LT	323,066.96	534,931.48	849.06
198	150+69.88N	65.00 LT	323,112.79	534,951.46	---
198	241+64.87	72.00 RT	323,112.79	534,951.46	---
199	241+64.87	22.00 RT	323,131.24	534,904.99	850.67
200	242+64.87	11.00 RT	323,228.24	534,931.65	850.85






POINT	STATION	OFFSET (FT)	Y	X	ELEVATION
205	274+32.42	11.00 RT	326,153.56	536,145.95	844.84
206	275+69.92	22.00 RT	326,276.65	536,208.21	844.54
207	277+69.92	22.00 RT	326,461.76	536,283.95	844.62
208	277+69.92	92.00 RT	326,435.25	536,348.74	---
208	170+63.24CRE	85.00 RT	326,435.25	536,348.74	---
209	170+63.24CRE	15.00 RT	326,505.25	536,348.76	844.02
210	171+34.16CRE	10.91 RT	326,509.31	536,419.69	843.72
211	171+34.16CRE	10.35 LT	326,530.56	536,419.70	843.73
212	170+80.61CRE	15.00 LT	326,535.24	536,366.15	843.91
213	170+80.61CRE	50.00 LT	326,570.24	536,366.16	---
213	279+01.45	57.00 RT	326,570.24	536,366.16	---
214	279+01.45	22.00 RT	326,583.49	536,333.77	844.91
215	280+01.45	11.00 RT	326,680.21	536,361.46	845.40
216	276+47.67	11.00 LT	326,361.11	536,207.11	844.79
217	277+47.67	22.00 LT	326,457.83	536,234.80	844.61
218	277+47.67	57.00 LT	326,471.08	536,202.41	---
218	161+70.97CRW	50.00 RT	326,471.08	536,202.41	---
219	161+70.97CRW	15.00 RT	326,506.07	536,203.32	843.77
220	161+05.67CRW	10.86 RT	326,511.90	536,138.15	844.12
221	161+05.67CRW	10.09 LT	326,532.85	536,138.69	844.13
222	161+84.74CRW	15.00 LT	326,535.71	536,217.86	843.84
223	161+84.74CRW	85.00 LT	326,605.68	536,219.67	---
223	278+78.78	92.00 LT	326,605.68	536,219.67	---
224	278+78.78	22.00 LT	326,579.17	536,284.46	844.85

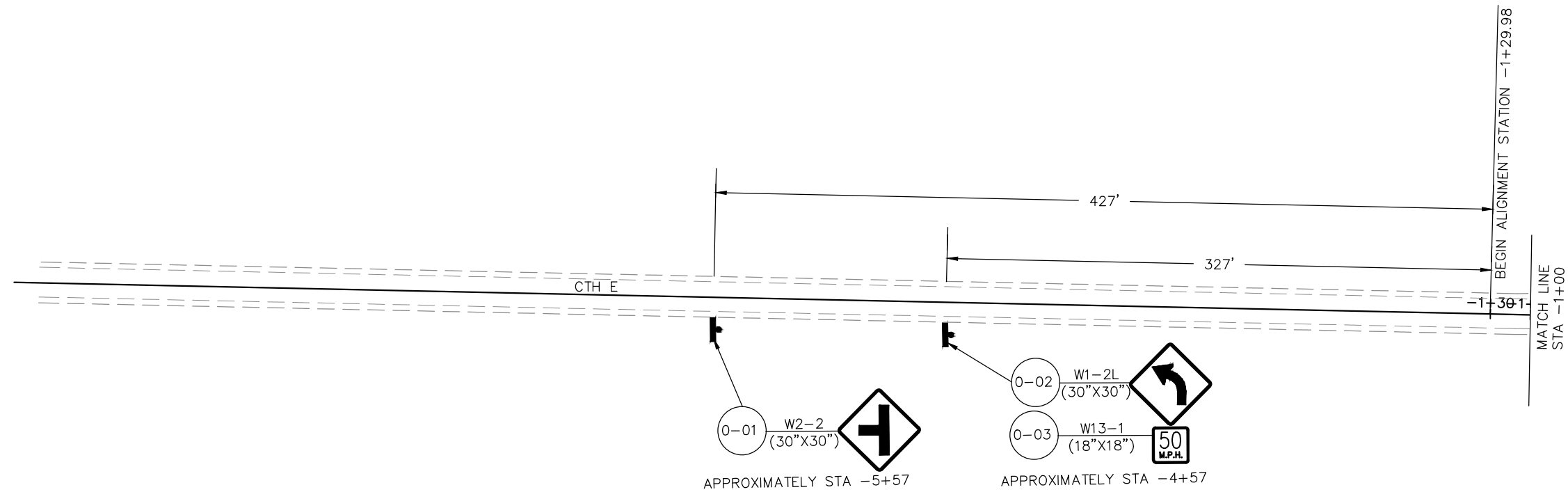


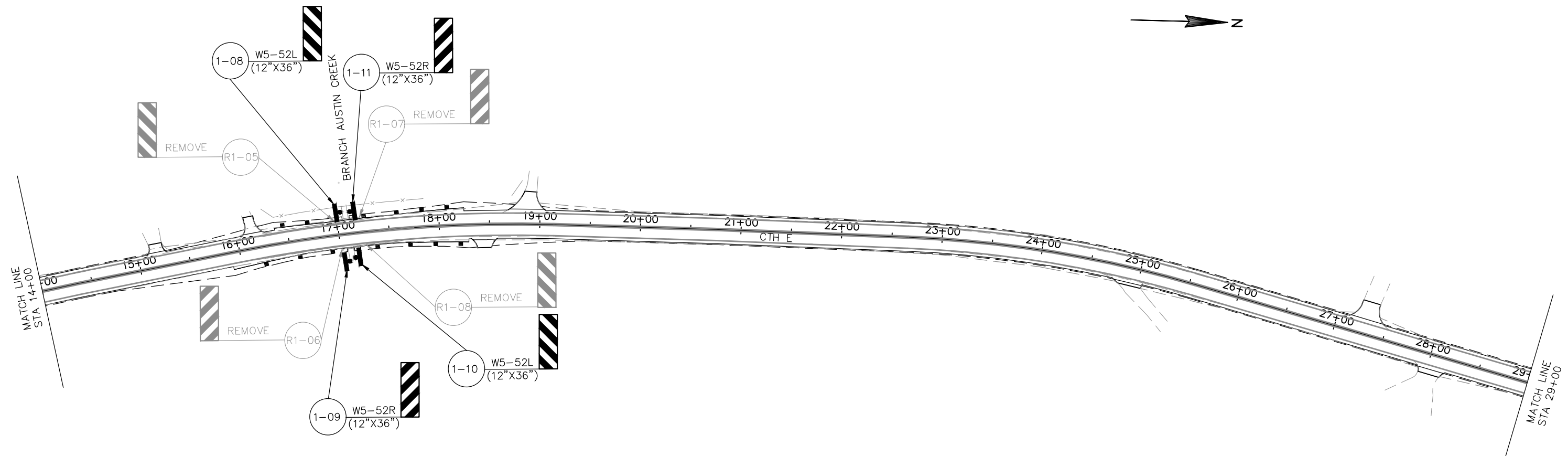
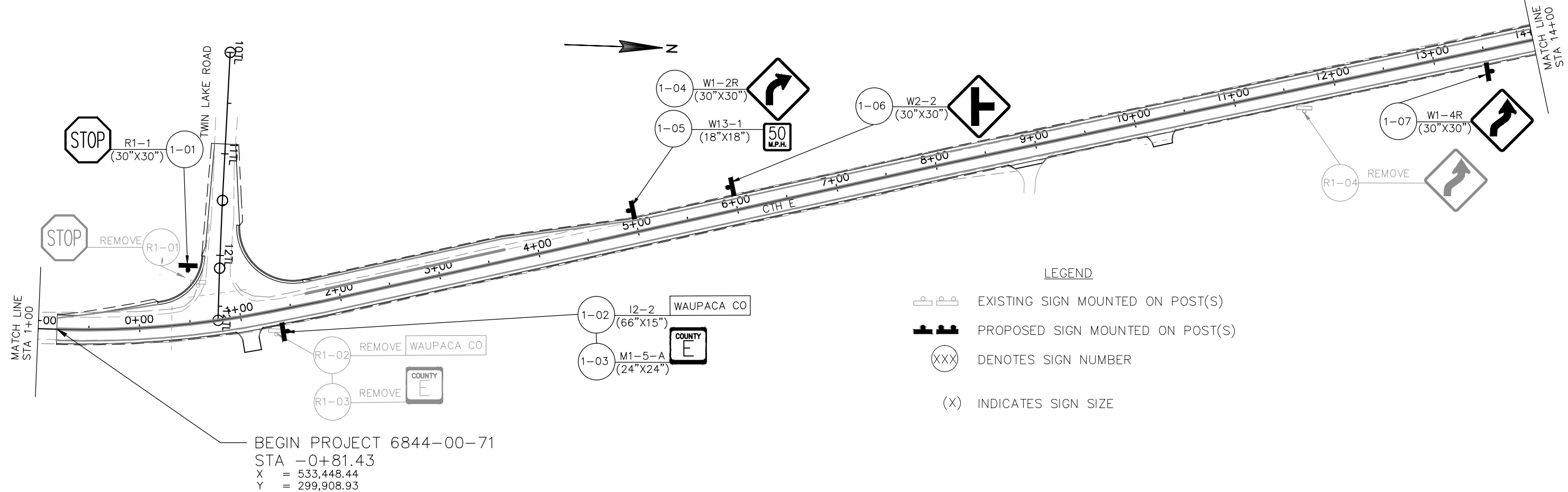
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225	280+78.78	22.00 LT	326,764.27	536,360.20	845.38
226	282+16.28	11.00 LT	326,887.36	536,422.46	845.68

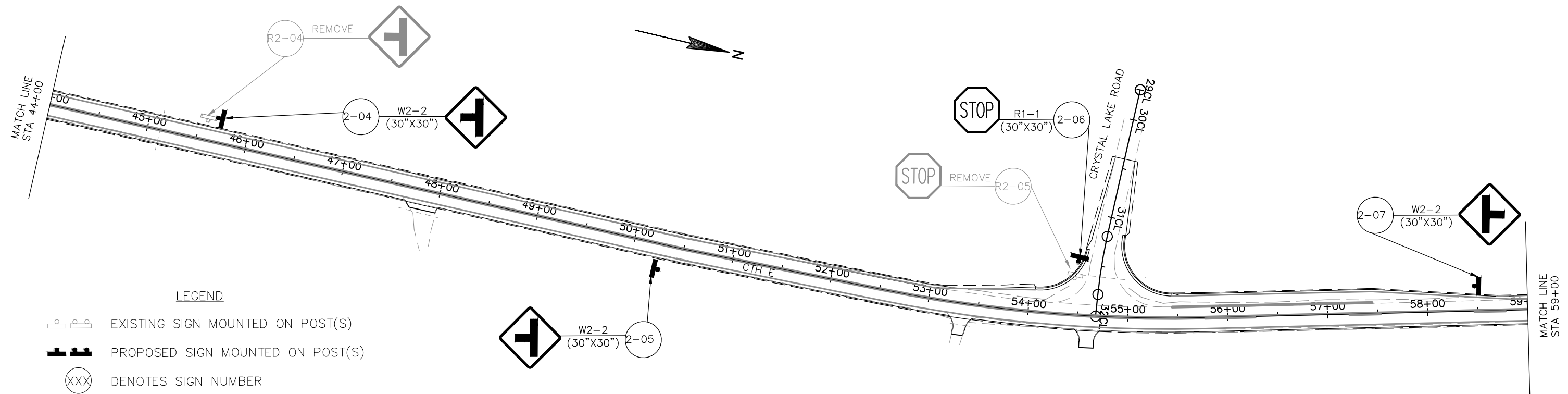
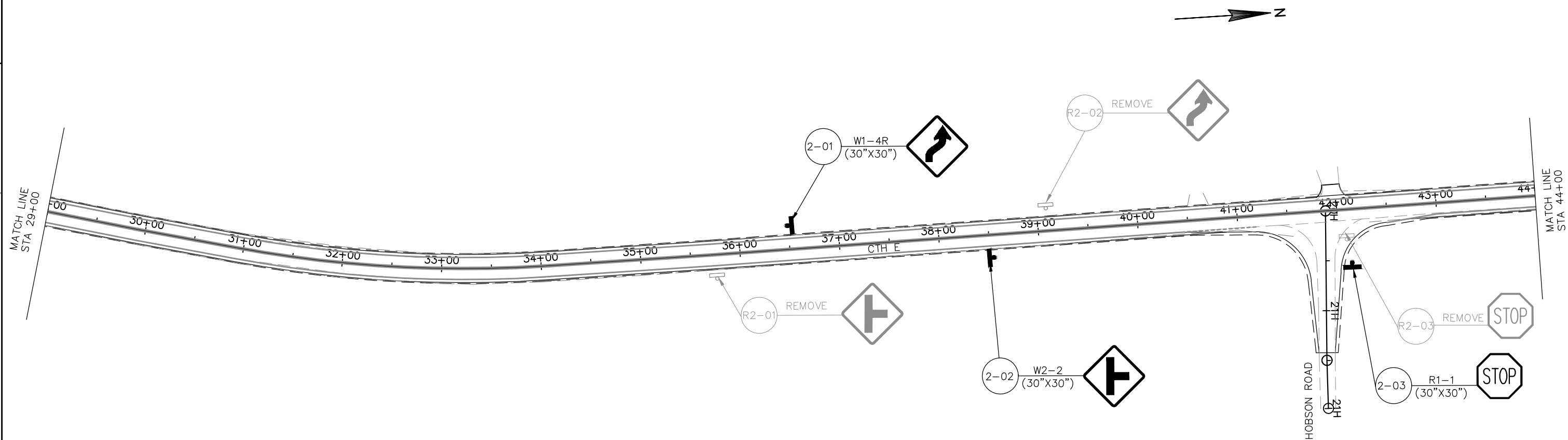


LEGEND

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-  PROPOSED SIGN MOUNTED ON POST(S)
-  DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



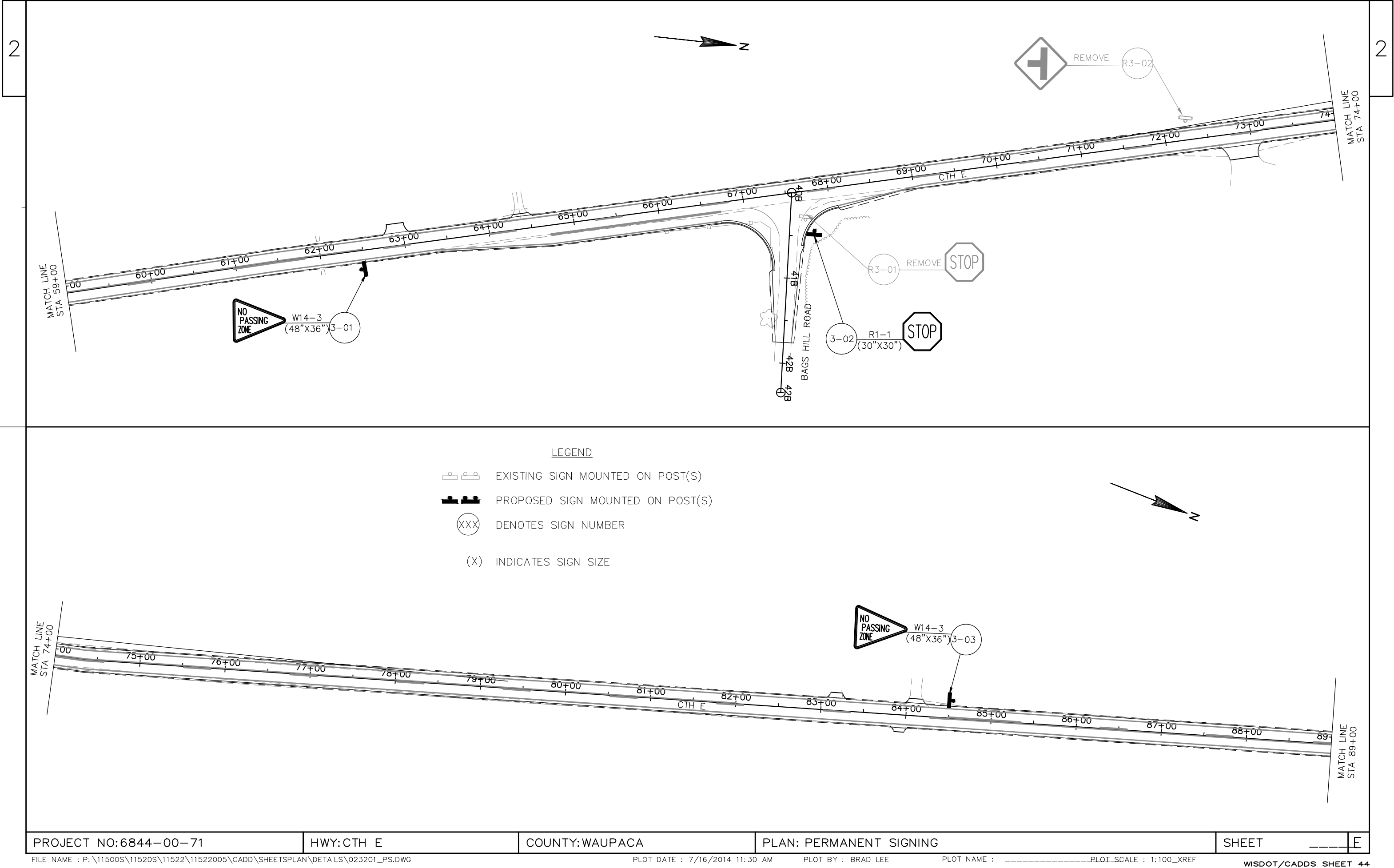







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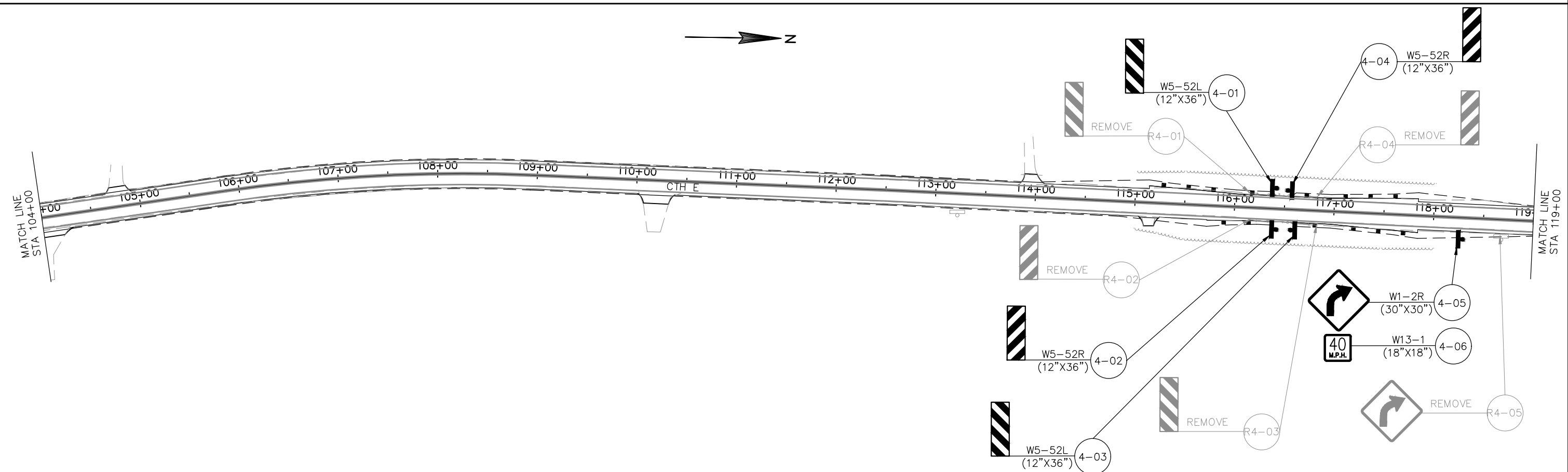
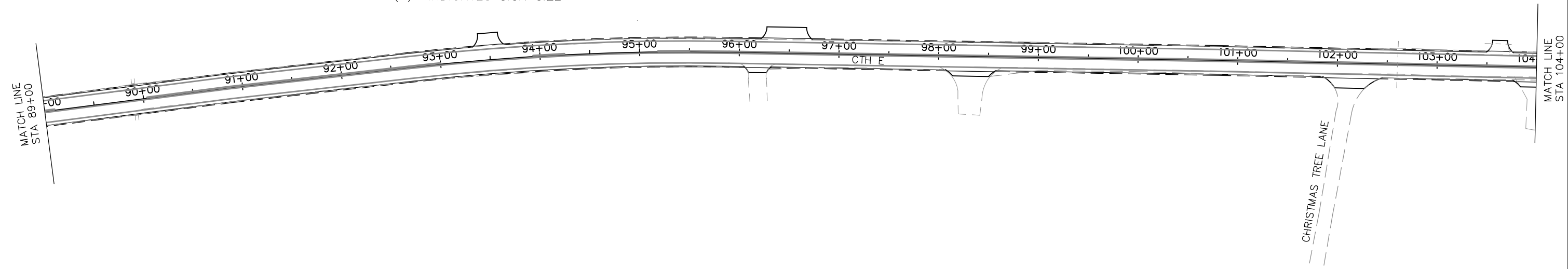
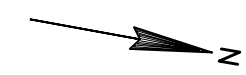
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(X) INDICATES SIGN SIZE

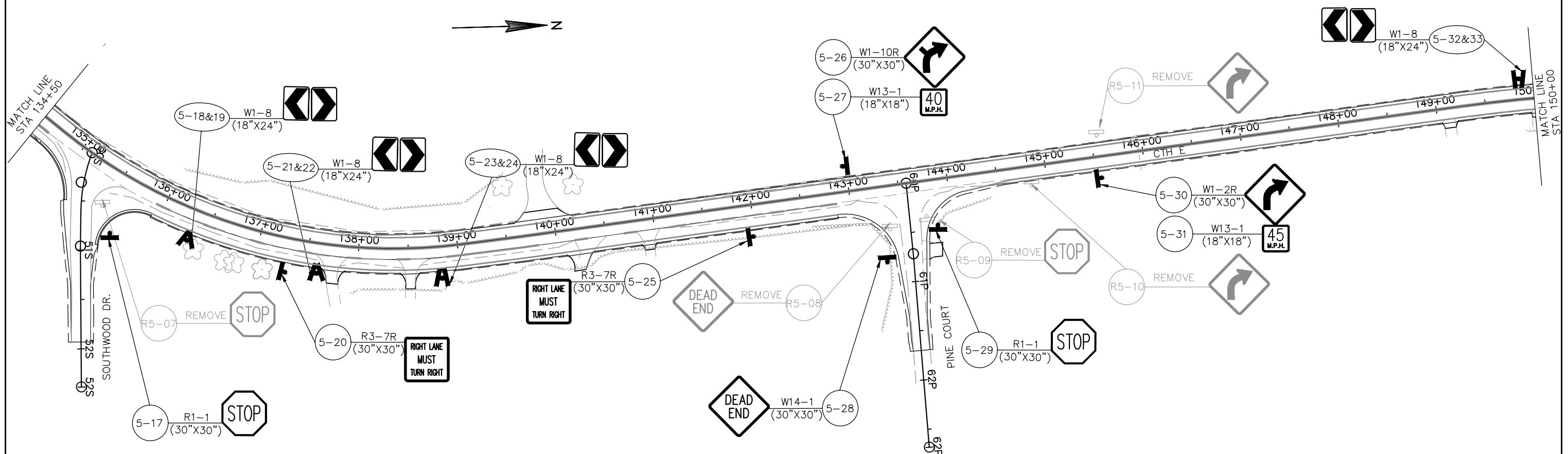
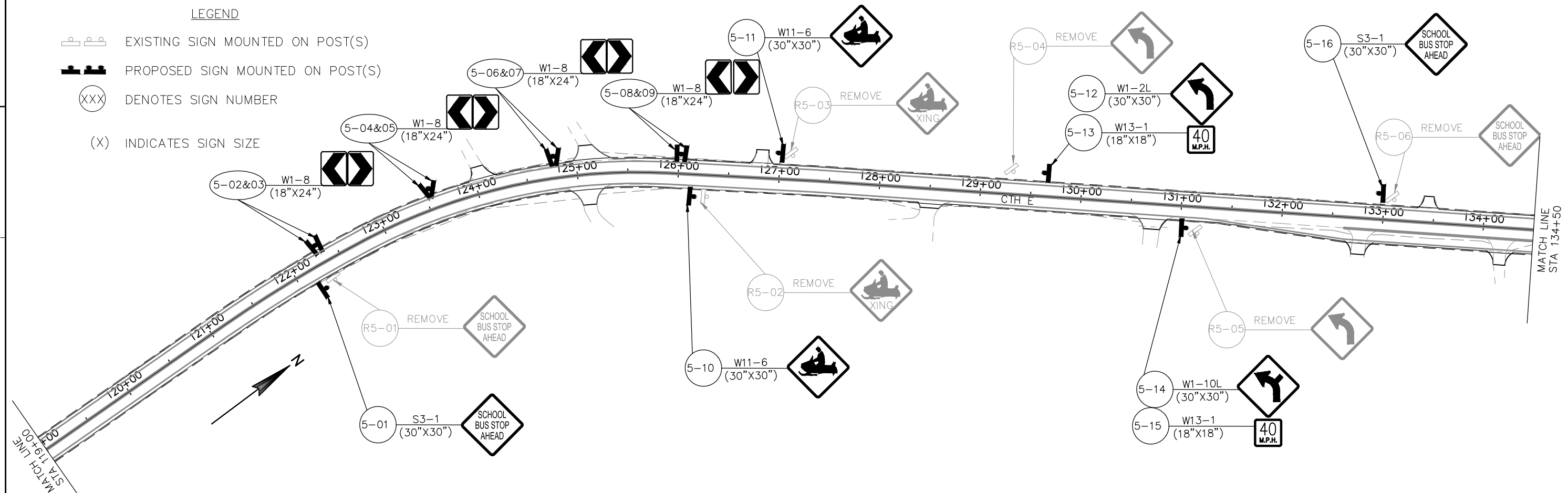


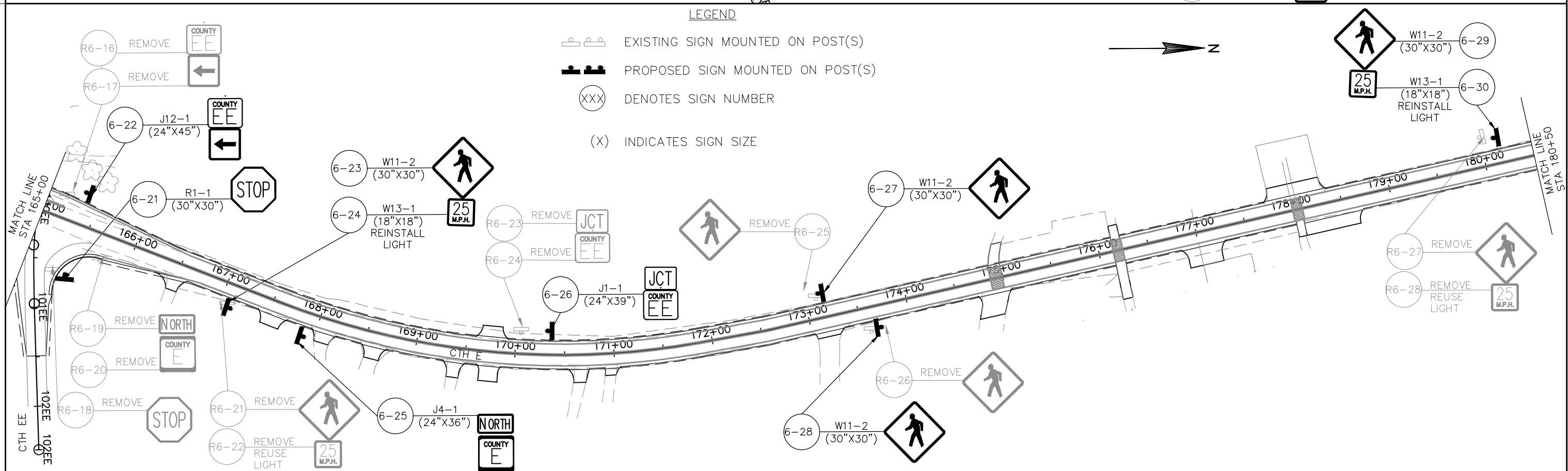
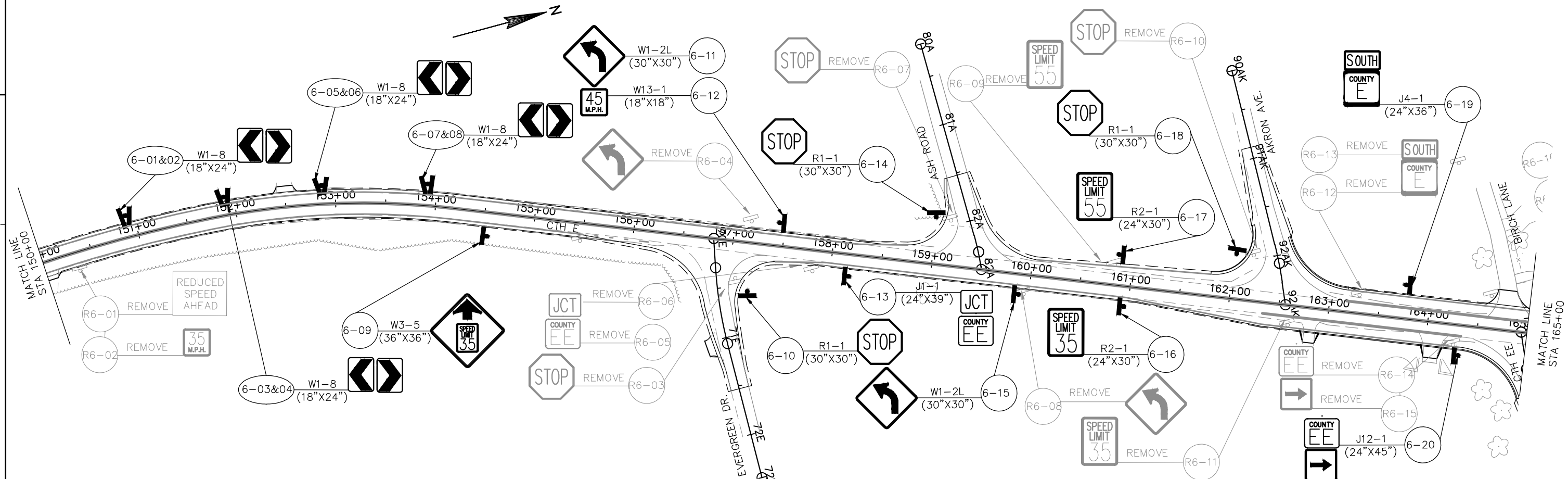
LEGEND

-  EXISTING SIGN MOUNTED ON POST(S)
-  PROPOSED SIGN MOUNTED ON POST(S)
-  DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



-  EXISTING SIGN MOUNTED ON POST(S)
 PROPOSED SIGN MOUNTED ON POST(S)
 DENOTES SIGN NUMBER
 (X) INDICATES SIGN SIZE





PROJECT NO: 6844-00-71

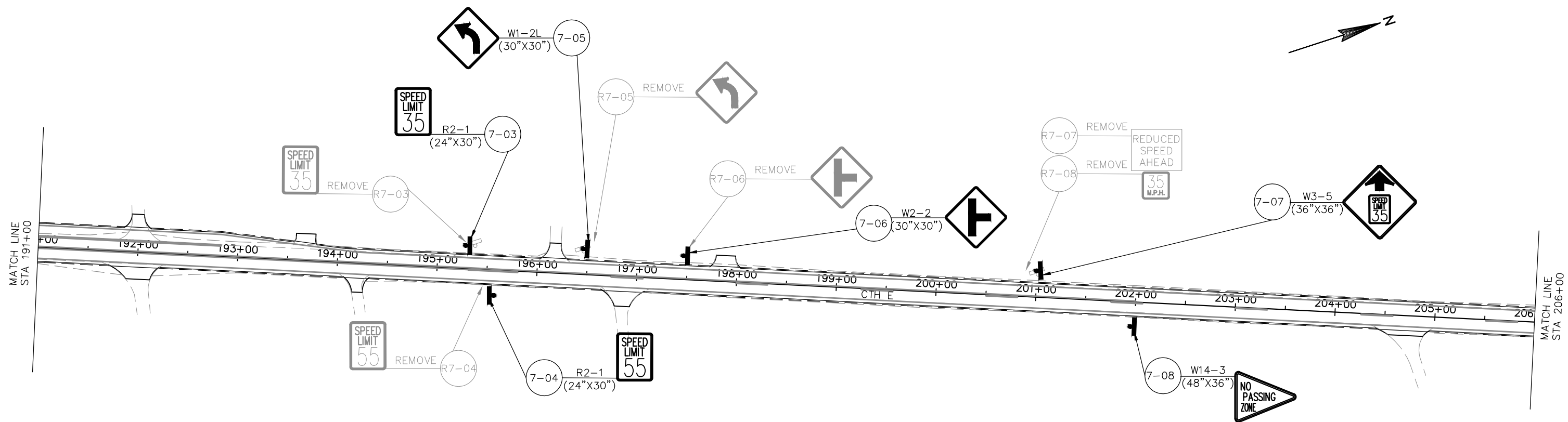
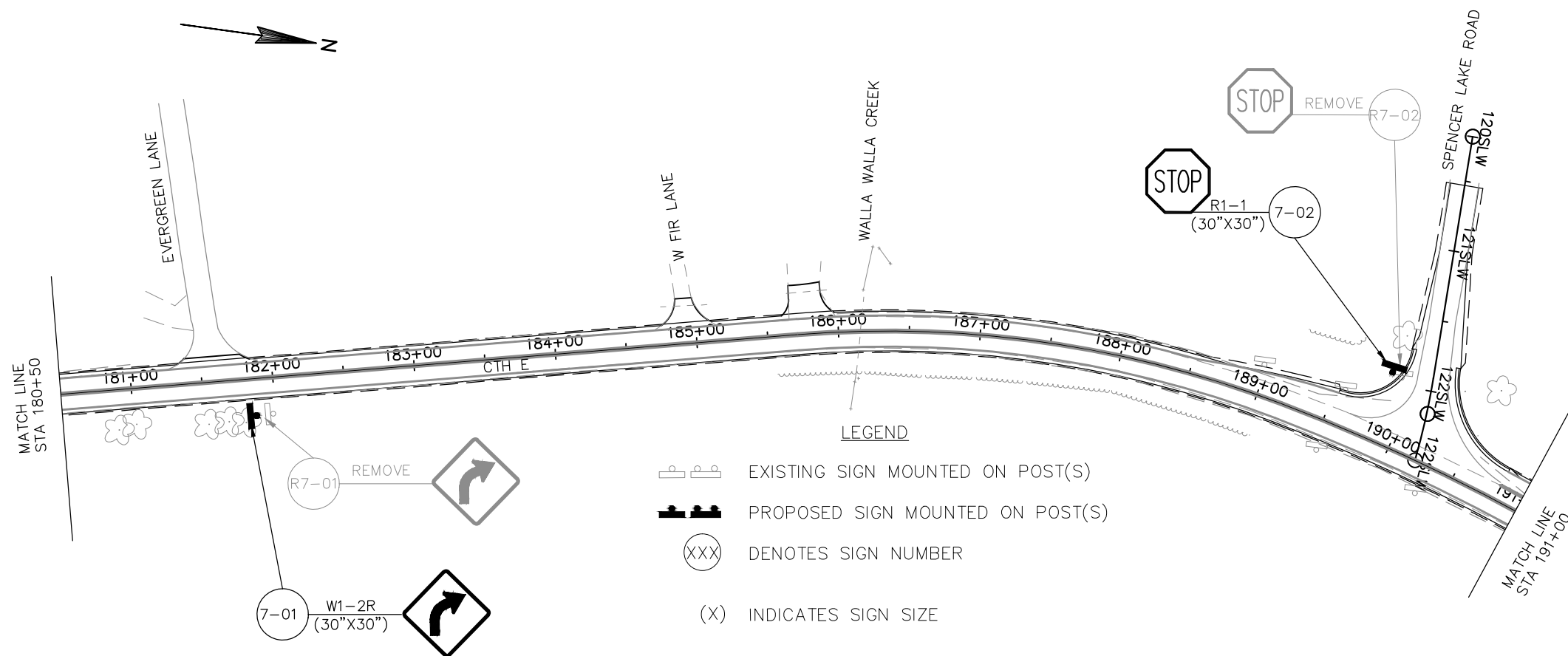
HWY: CTH E

COUNTY: WAUPACA





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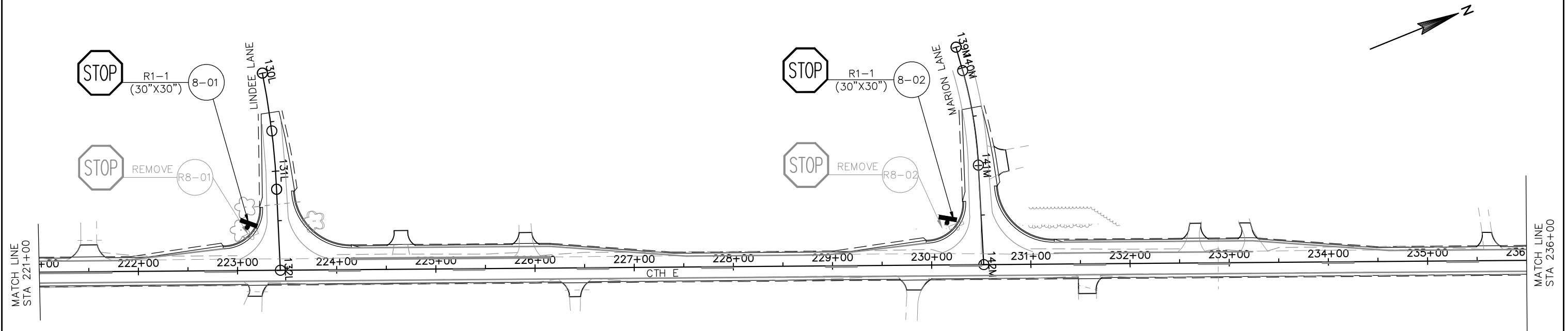
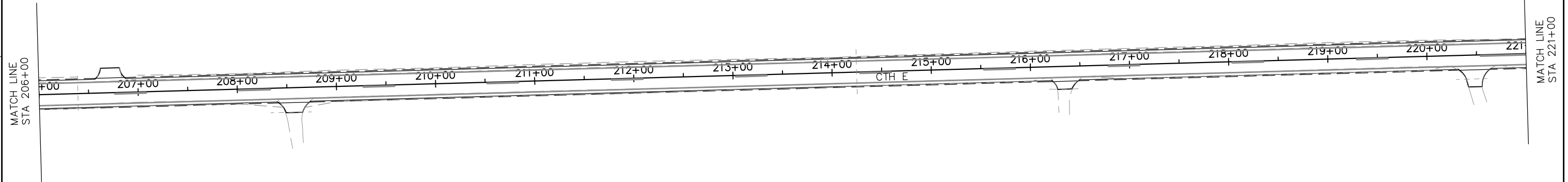
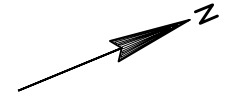
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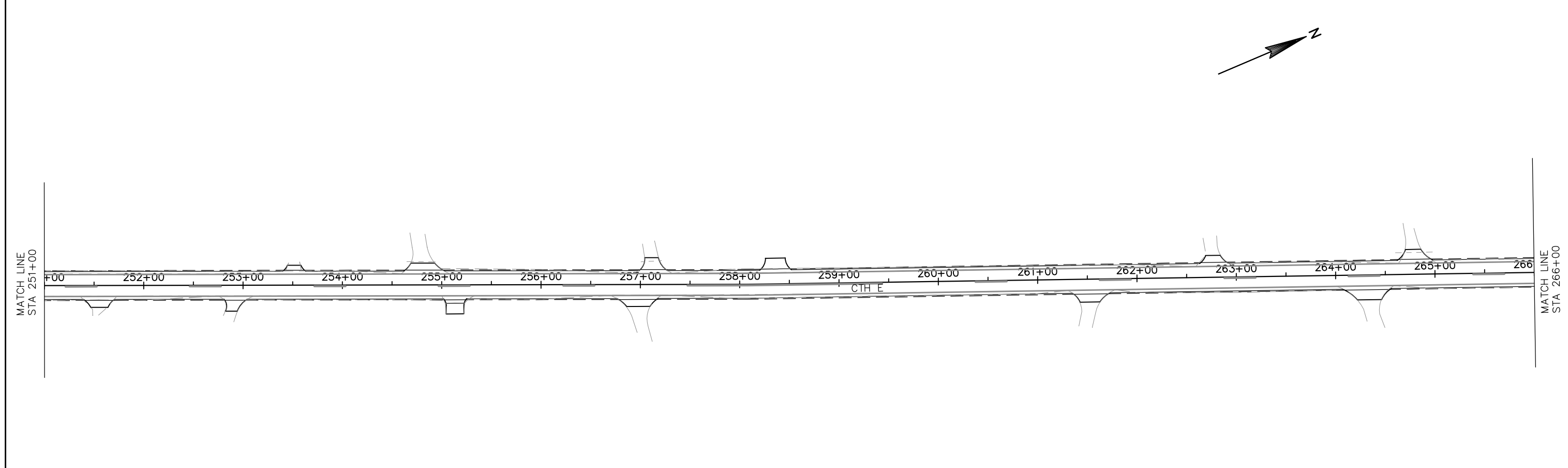
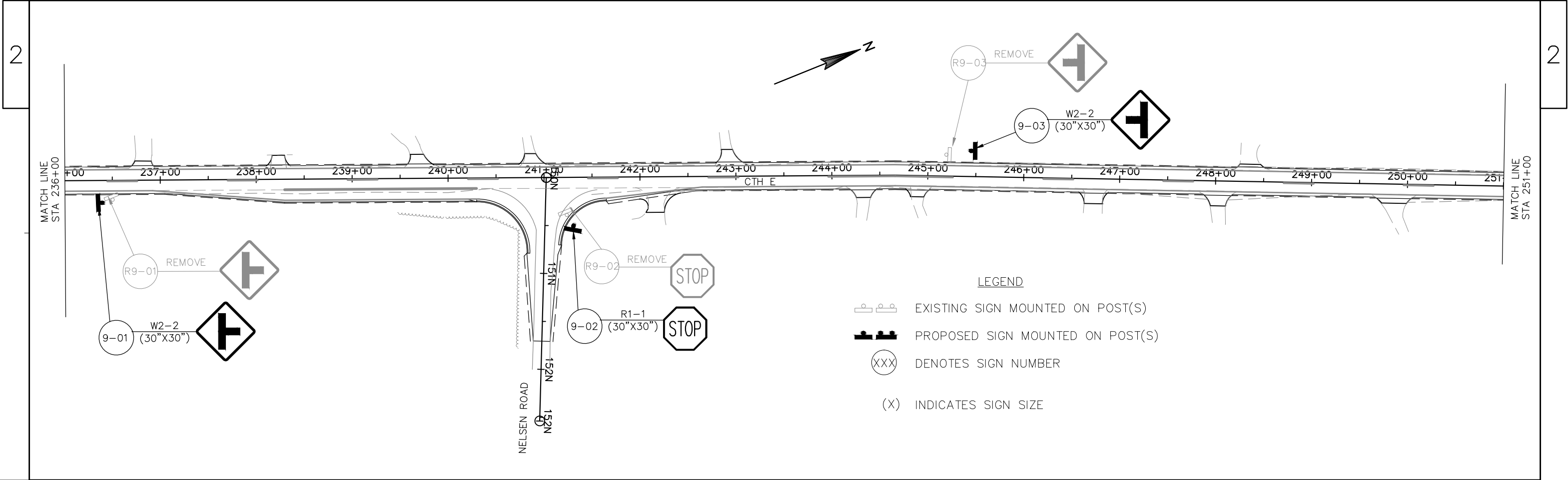
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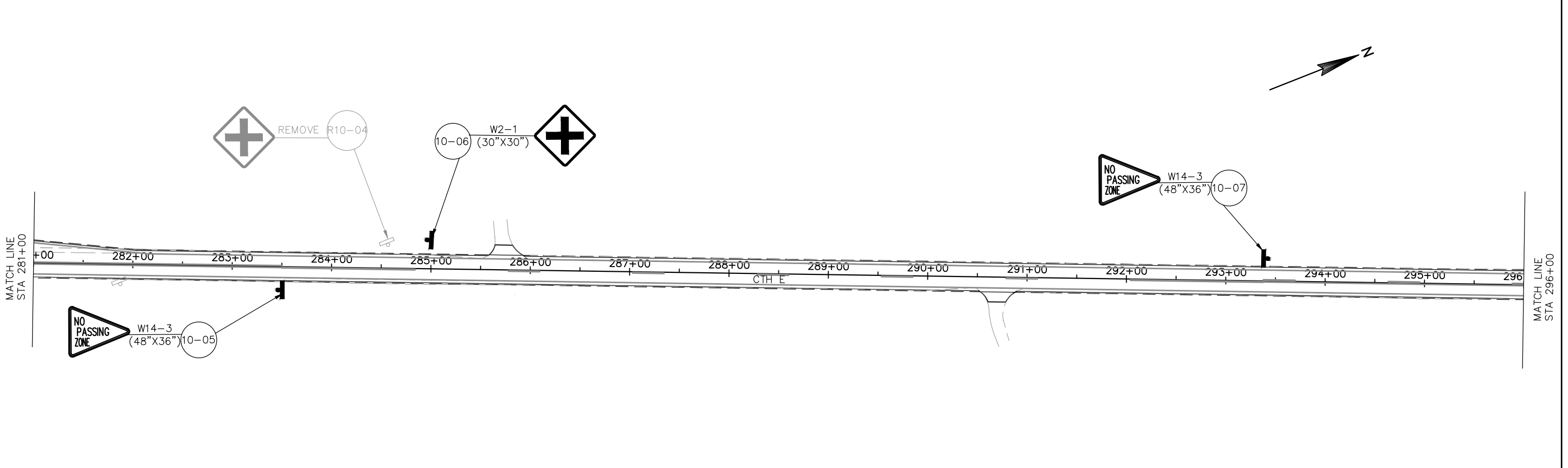


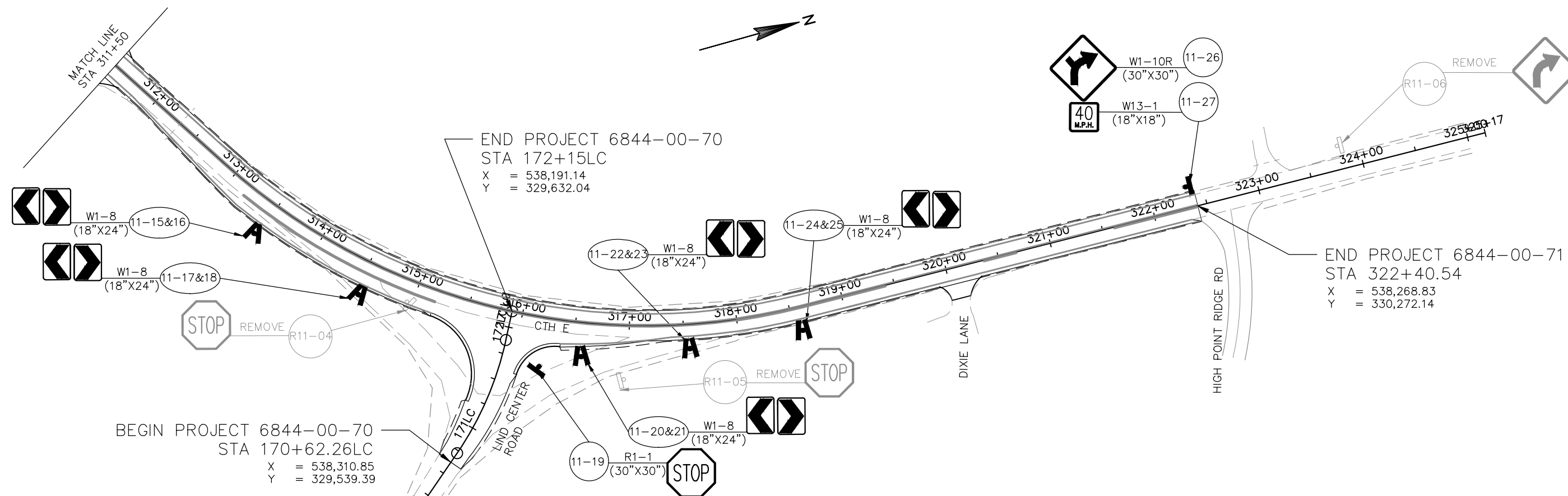
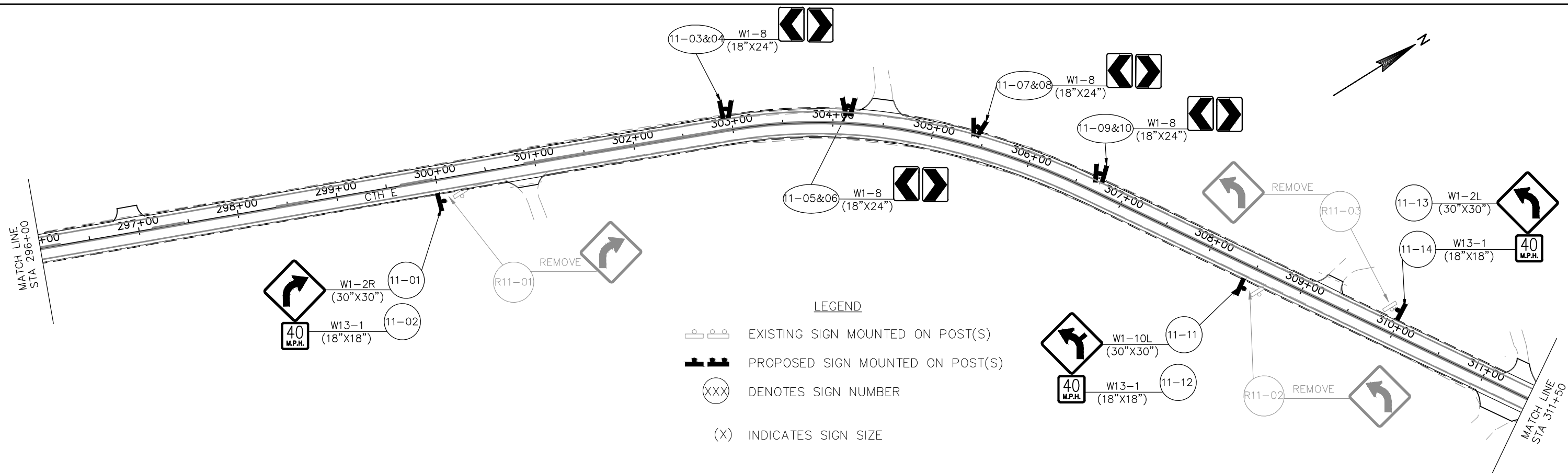
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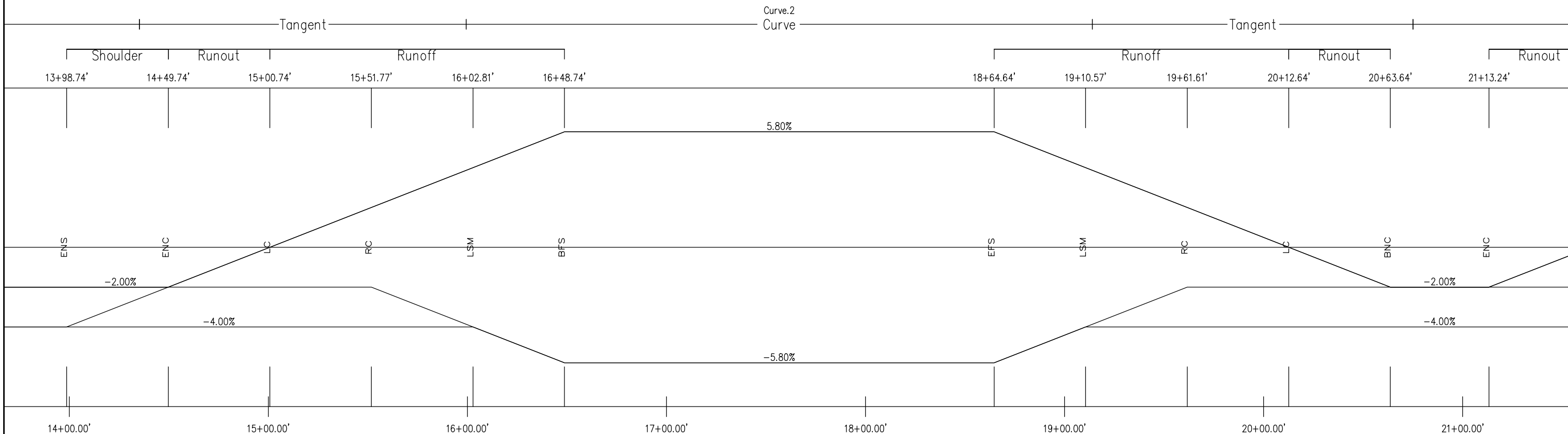
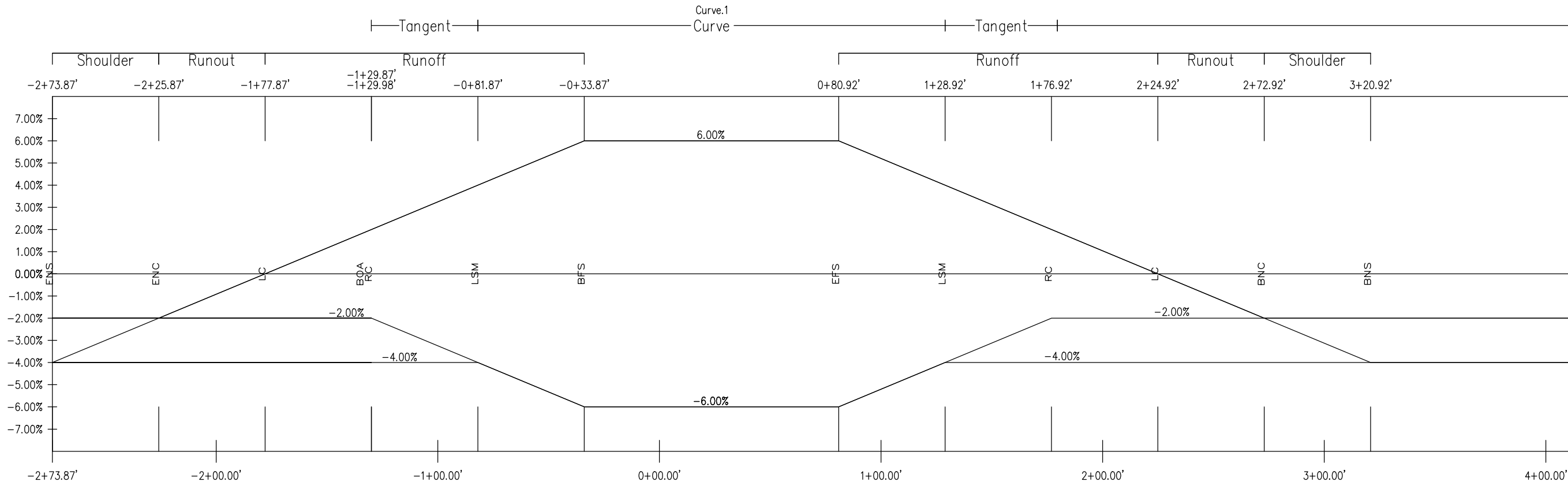
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-  PROPOSED SIGN MOUNTED ON POST(S)
-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE



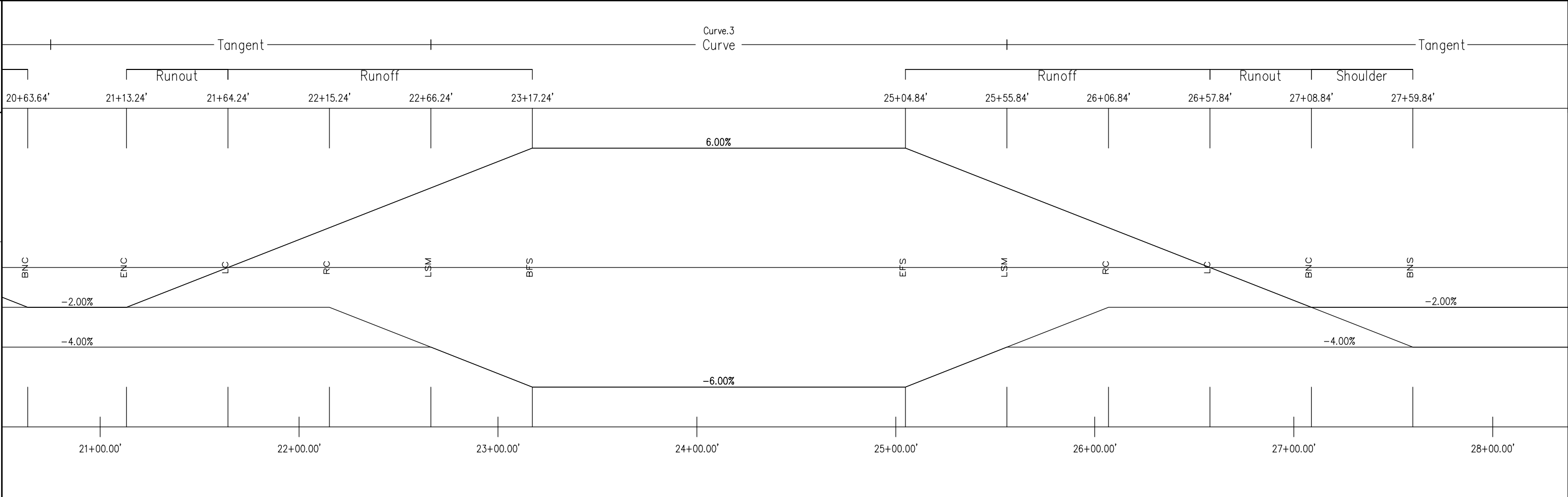




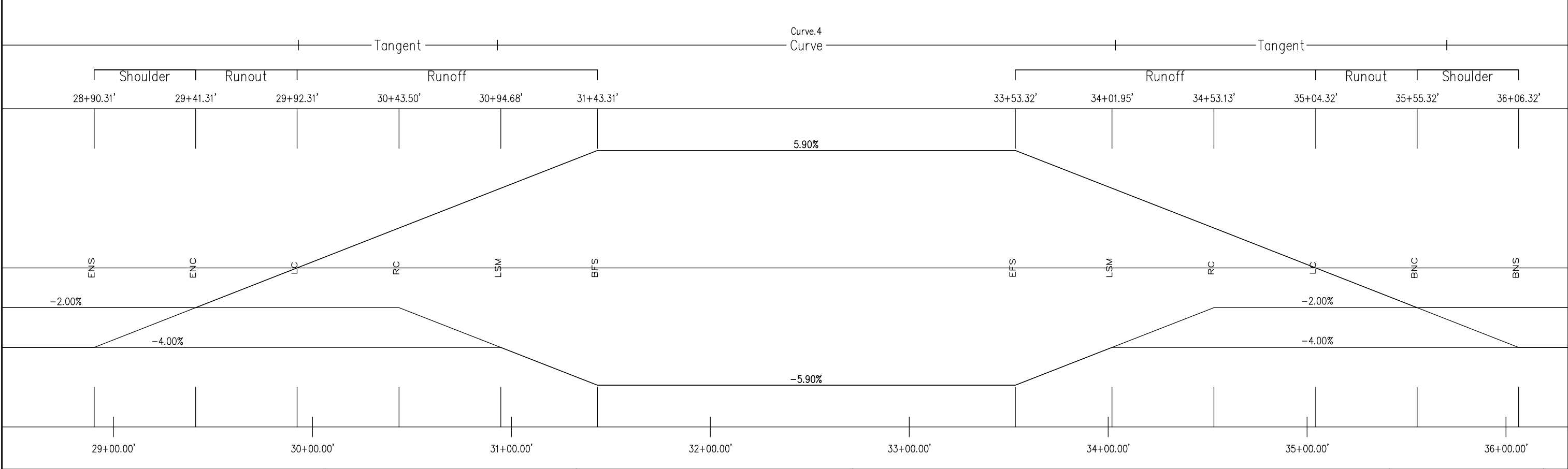




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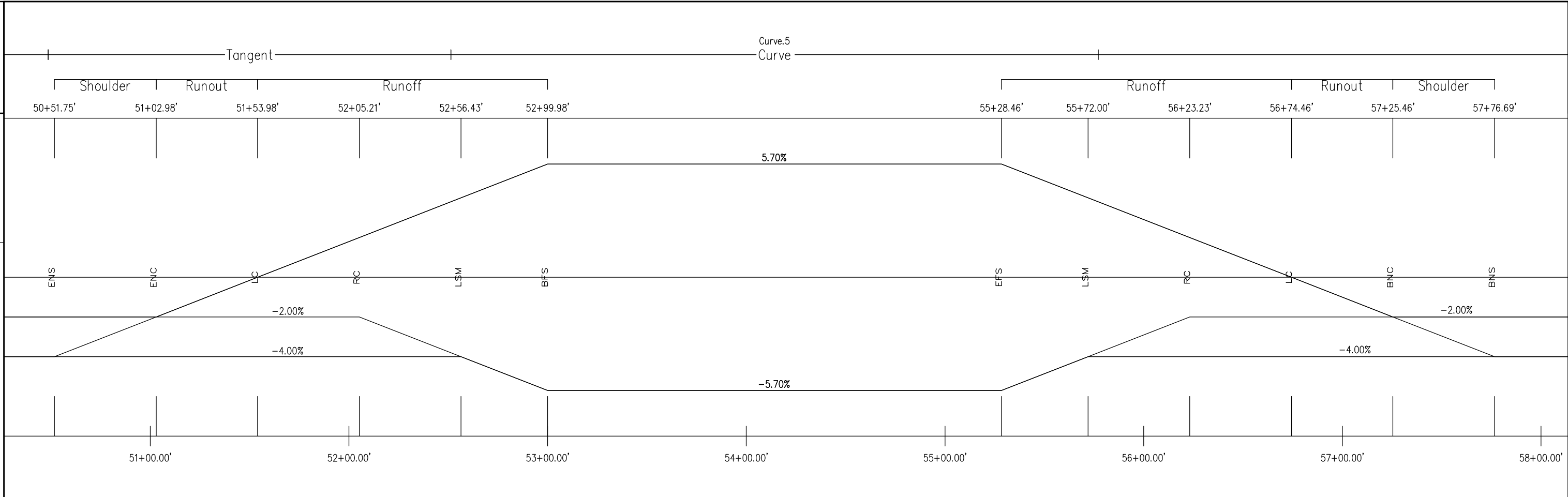


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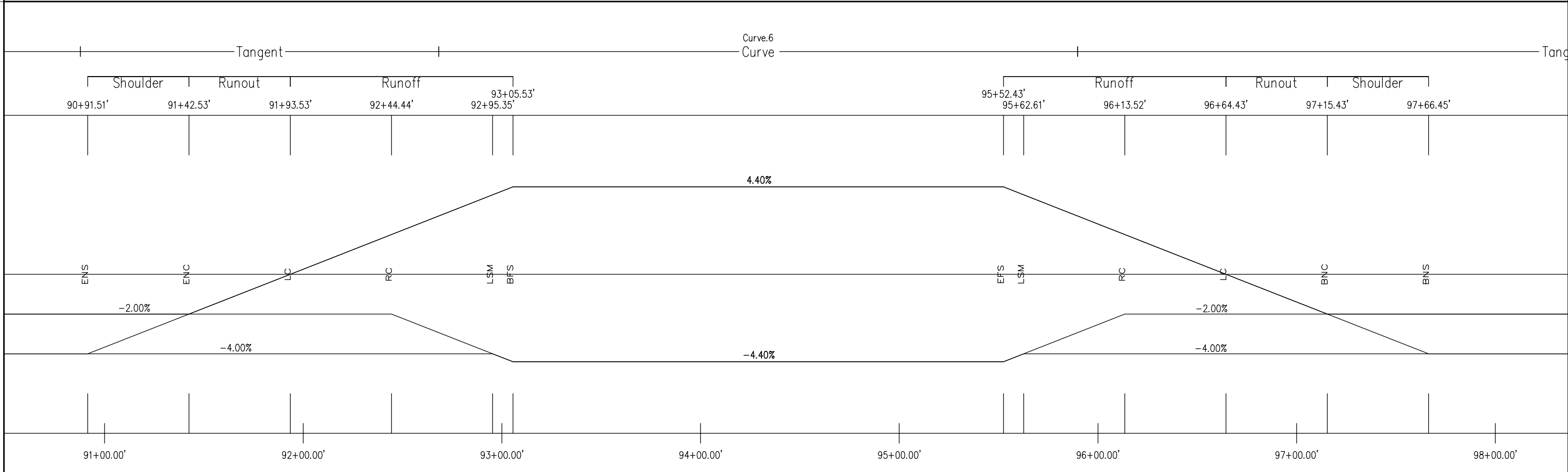


PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	PLAN: SUPERELEVATION DIAGRAM	SHEET	____E
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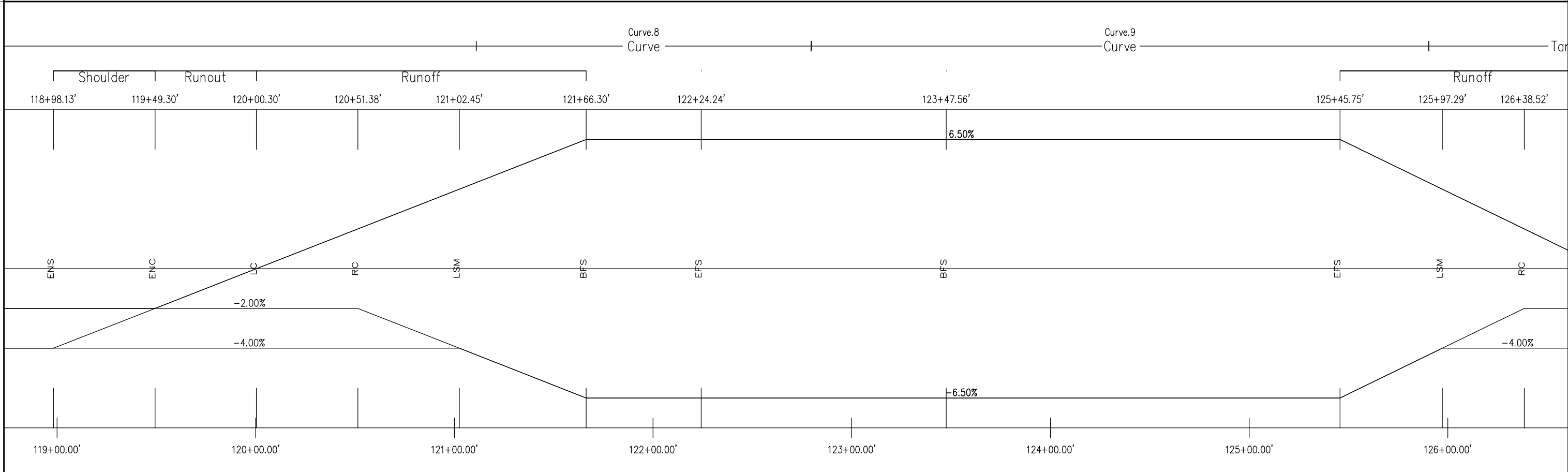
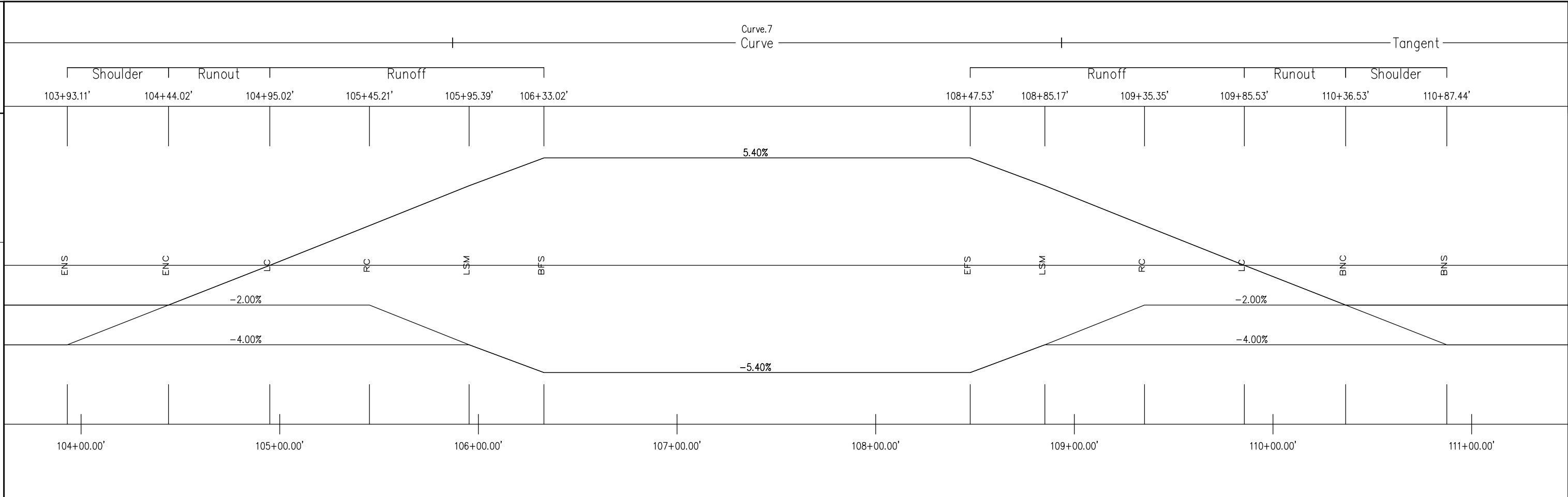
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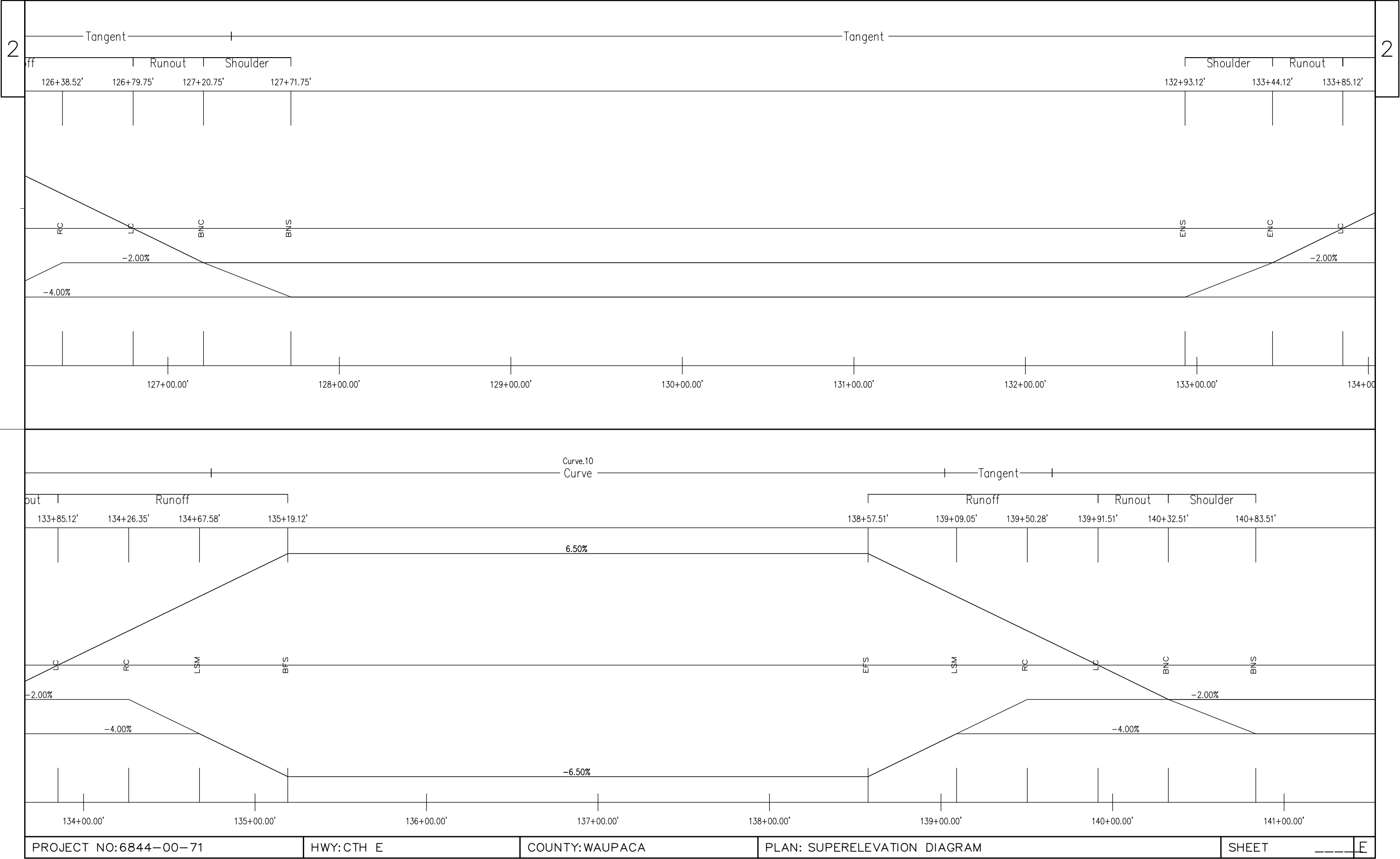


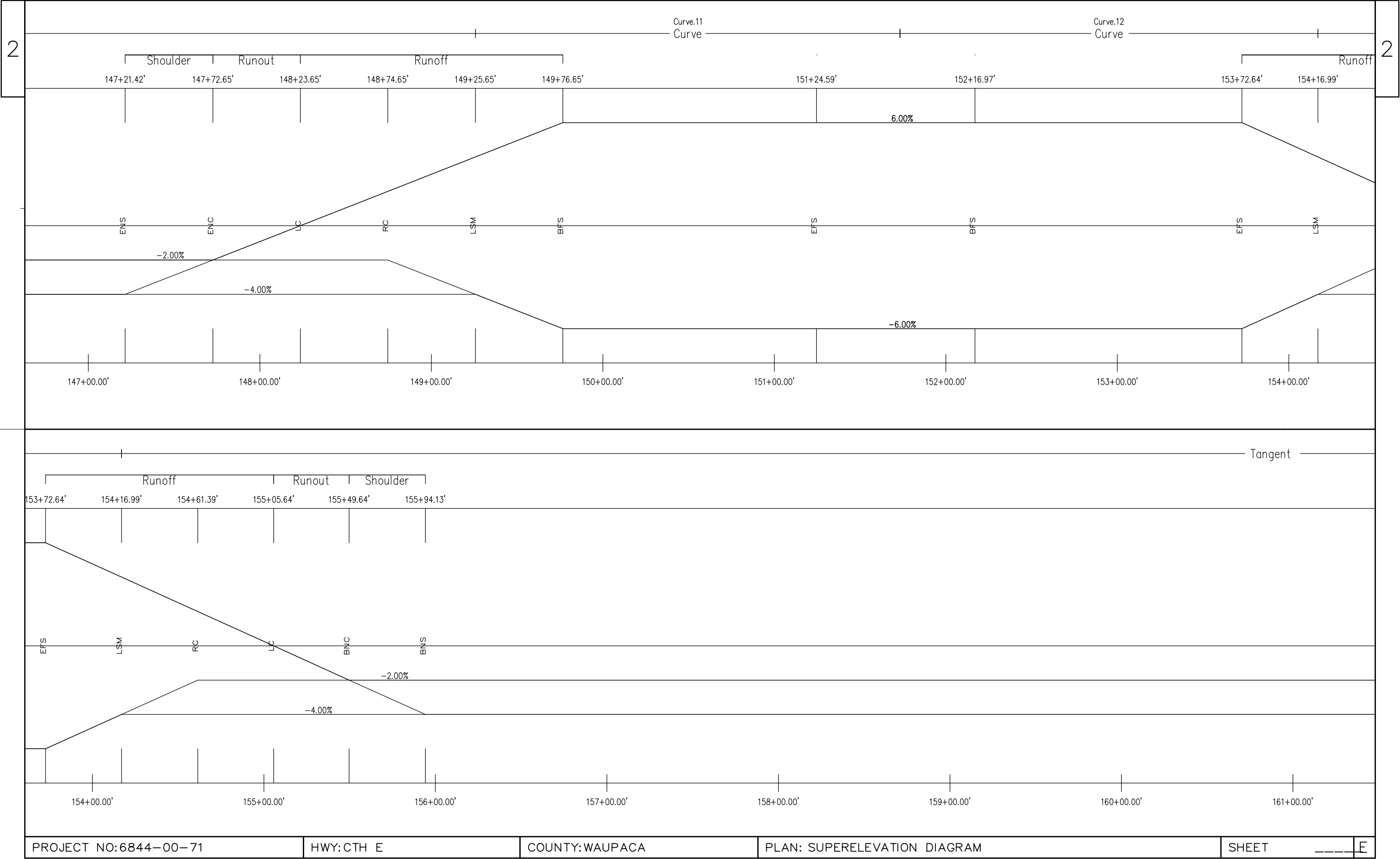
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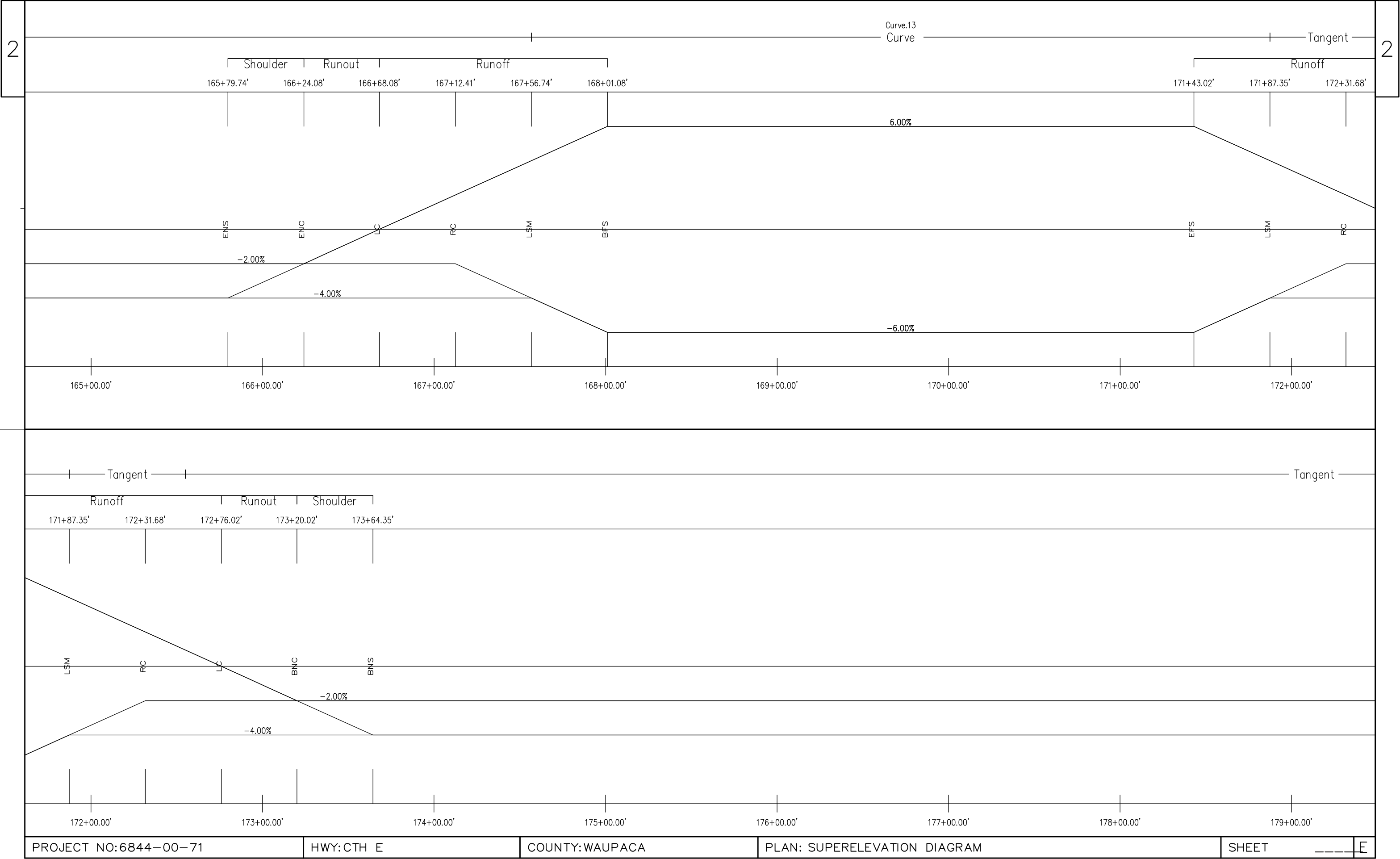


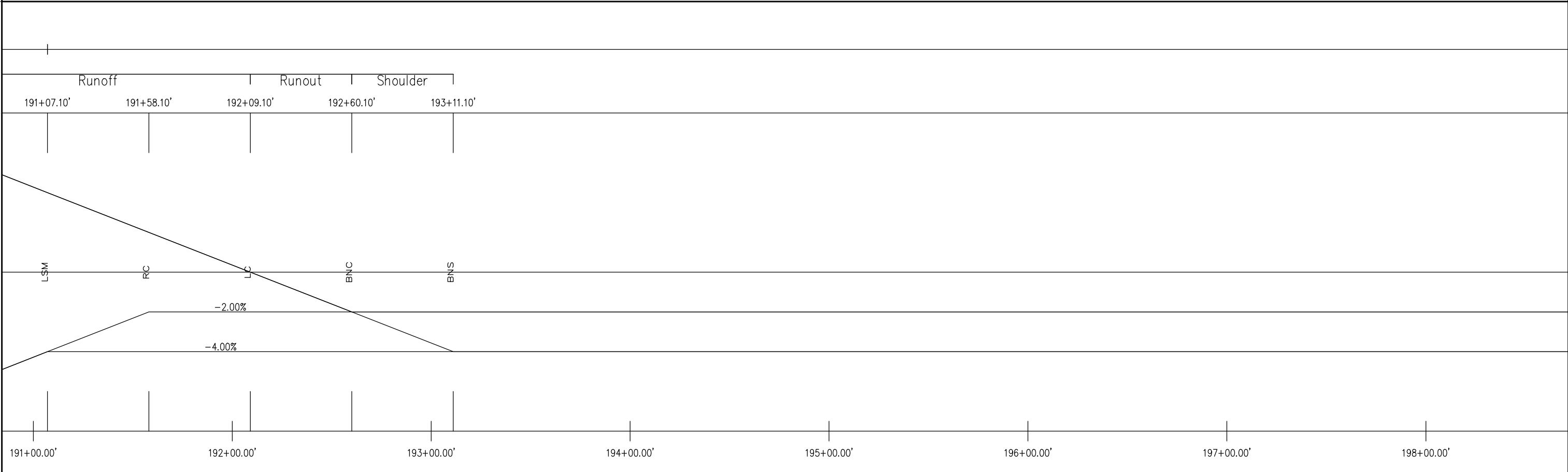
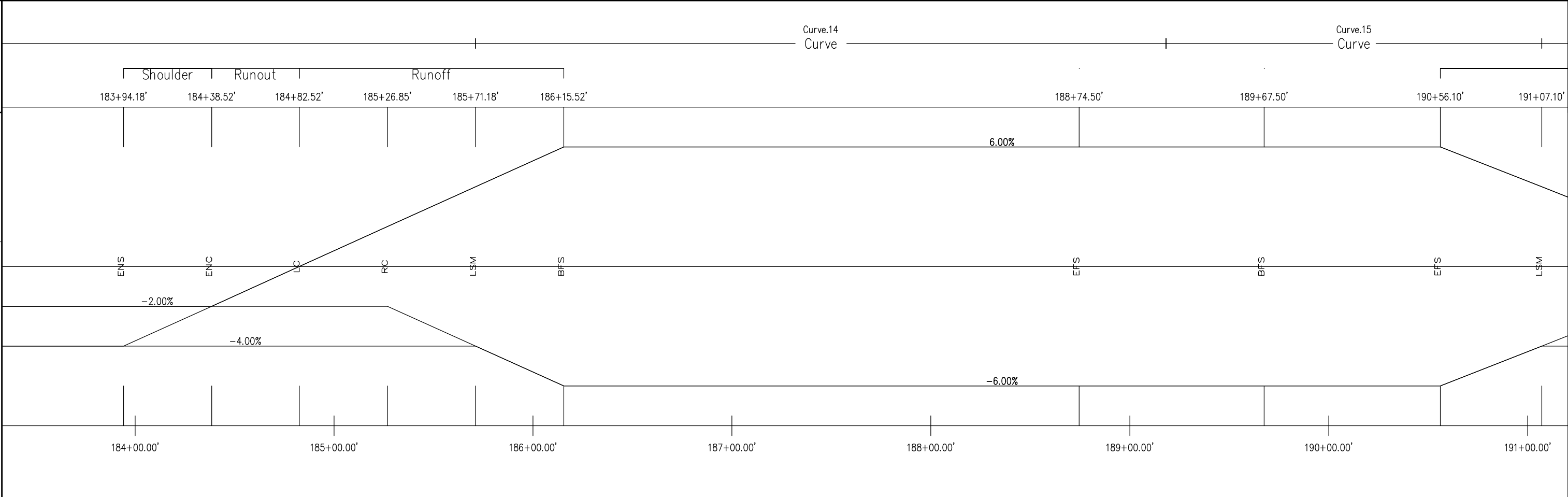
PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	PLAN: SUPERELEVATION DIAGRAM	SHEET	E
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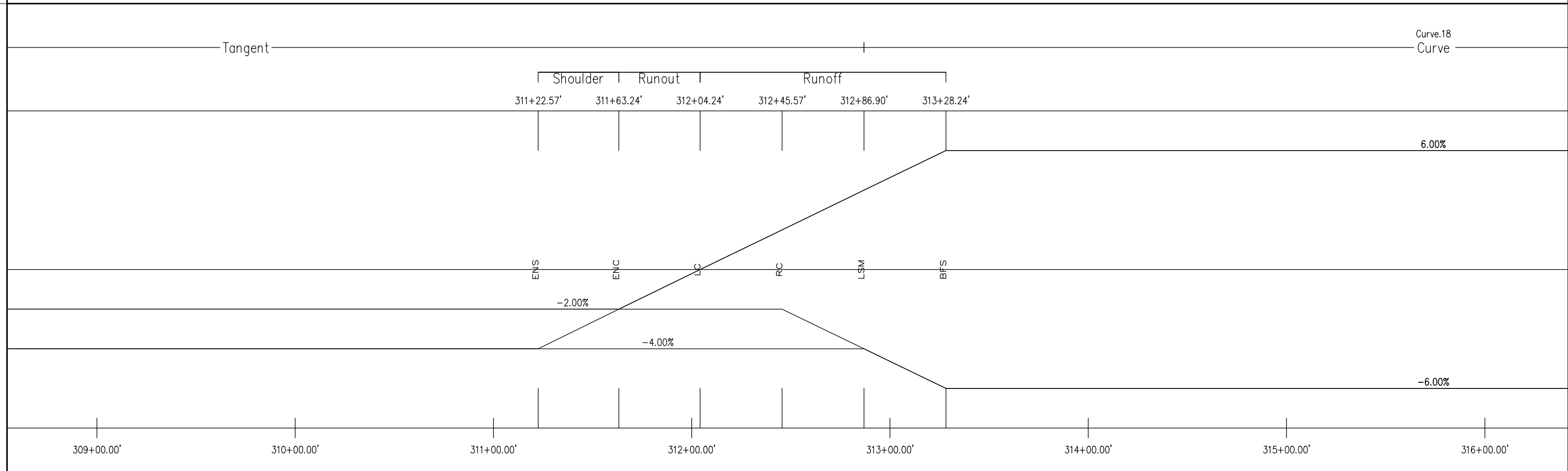
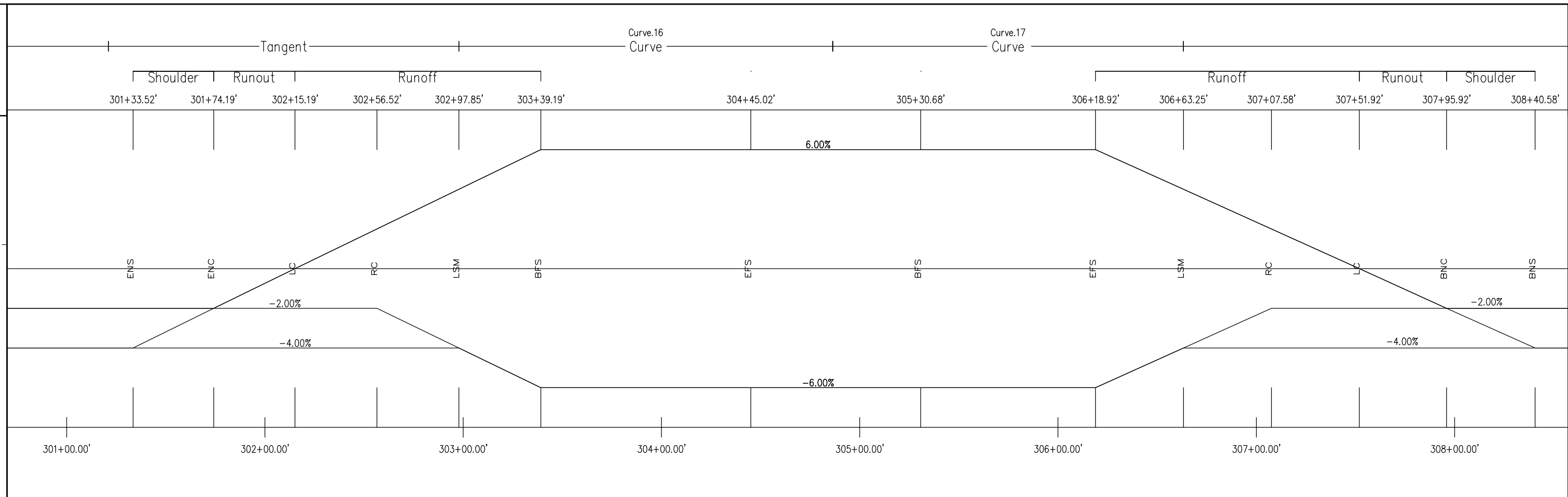






PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	PLAN: SUPERELEVATION DIAGRAM	SHEET	----	E
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2



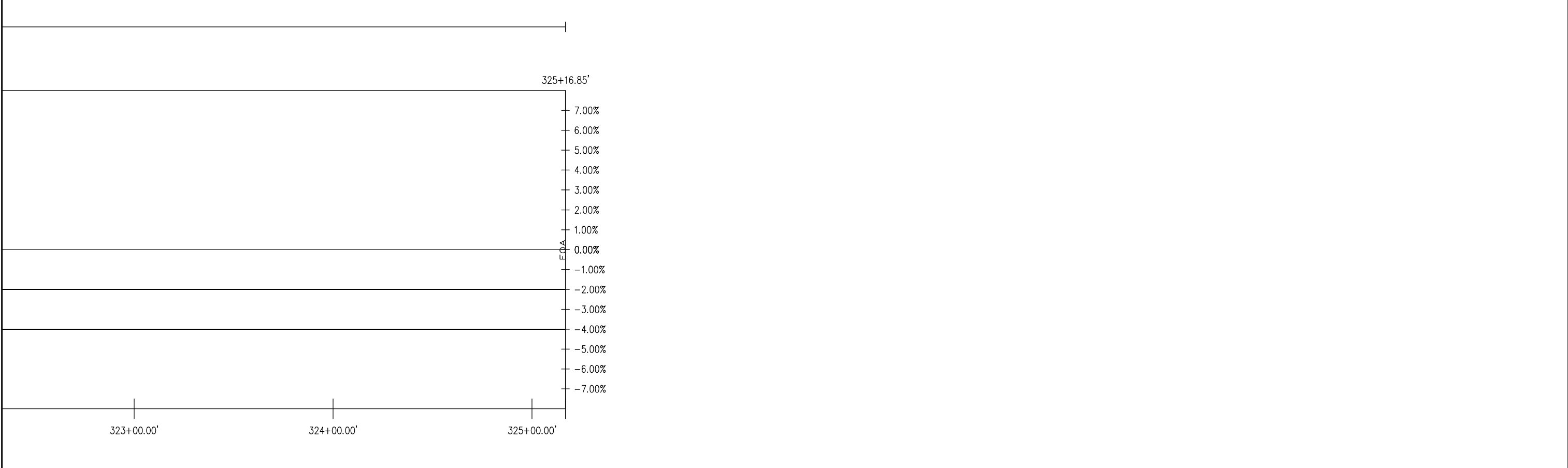
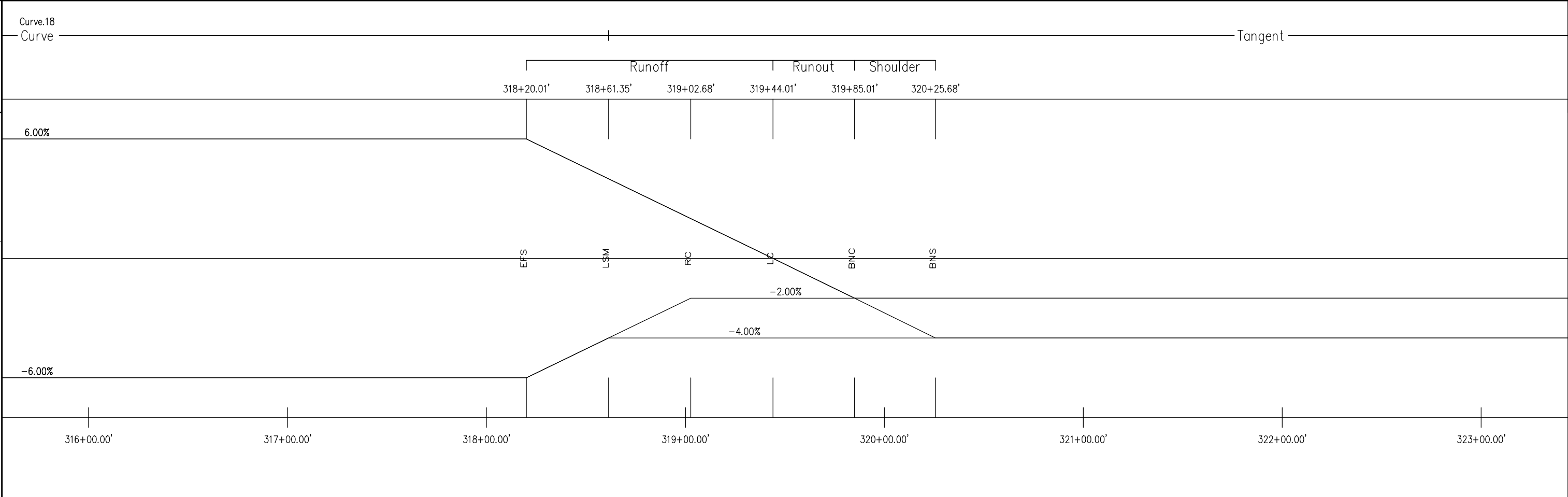
PROJECT NO:6844-00-71

HWY:CTH E

COUNTY:WAUPACA

PLAN: SUPERELEVATION DIAGRAM

SHEET	_____	E
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DATE 10FEB15		E S T I M A T E O F Q U A N T I T I E S				
LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	6844-00-70 QUANTITY	6844-00-71 QUANTITY
0010	204.0110	Removing Asphaltic Surface	SY	953.000		953.000
0020	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,679.000		1,679.000
0030	204.0120	Removing Asphaltic Surface Milling	SY	75.000		75.000
0040	204.0165	Removing Guardrail	LF	141.000		141.000
0050	205.0100	Excavation Common	CY	8,619.000		8,619.000
0060	208.0100	Borrow	CY	382.000	29.000	353.000
0070	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 6844-00-70	LS	1.000	1.000	
0080	211.0100	Prepare Foundation for Asphaltic Paving (project) 02. 6844-00-71	LS	1.000		1.000
0090	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	336.000	1.000	335.000
0100	213.0100	Finishing Roadway (project) 01. 6844-00-70	EACH	1.000	1.000	
0110	213.0100	Finishing Roadway (project) 02. 6844-00-71	EACH	1.000		1.000
0120	305.0110	Base Aggregate Dense 3/4-Inch	TON	10,308.000	18.000	10,290.000
0130	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	20,290.000	5.000	20,285.000
0140	312.0110	Select Crushed Material	TON	25,140.000		25,140.000
0150	325.0100	Pulverize and Relay	SY	92,448.000		92,448.000
0160	416.0160	Concrete Driveway 6-Inch	SY	47.000		47.000
0170	440.4410.S	Incentive IRI Ride	DOL	24,486.000		24,486.000
0180	455.0105	Asphaltic Material PG58-28	TON	1,645.000	8.000	1,637.000
0190	455.0605	Tack Coat	GAL	5,878.000	28.000	5,850.000
0200	460.1101	HMA Pavement Type E-1	TON	29,606.000	114.000	29,492.000
0210	460.2000	Incentive Density HMA Pavement	DOL	19,110.000	80.000	19,030.000
0220	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	78.000		78.000
0230	465.0315	Asphaltic Flumes	SY	459.500	32.600	426.900
0240	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	2,141.000	148.000	1,993.000
0250	614.0200	Steel Thrie Beam Structure Approach	LF	37.500		37.500
0260	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	2.000		2.000
0270	614.2300	MGS Guardrail 3	LF	187.500		187.500
0280	614.2500	MGS Thrie Beam Transition	LF	225.000		225.000
0290	614.2610	MGS Guardrail Terminal EAT	EACH	6.000		6.000
0300	619.1000	Mobilization	EACH	1.000	0.010	0.990
0310	624.0100	Water	MGAL	1,562.300	5.300	1,557.000
0320	625.0100	Topsoil	SY	2,971.000	171.000	2,800.000
0330	628.1504	Silt Fence	LF	2,830.000	200.000	2,630.000
0340	628.1520	Silt Fence Maintenance	LF	2,830.000	200.000	2,630.000
0350	628.2004	Erosion Mat Class I Type B	SY	1,904.000	132.000	1,772.000
0360	629.0210	Fertilizer Type B	CWT	13.230	0.150	13.080
0370	630.0120	Seeding Mixture No. 20	LB	566.000	6.000	560.000
0380	630.0200	Seeding Temporary	LB	566.000	6.000	560.000
0390	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	29.000		29.000
0400	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	75.000	1.000	74.000
0410	637.2210	Signs Type II Reflective H	SF	220.440	5.180	215.260
0420	637.2230	Signs Type II Reflective F	SF	417.750		417.750
0430	638.2602	Removing Signs Type II	EACH	82.000	2.000	80.000
0440	638.3000	Removing Small Sign Supports	EACH	71.000	2.000	69.000
0450	642.5001	Field Office Type B	EACH	1.000		1.000
0460	643.0100	Traffic Control (project) 02. 6844-00-71	EACH	1.000		1.000
0470	646.0106	Pavement Marking Epoxy 4-Inch	LF	62,465.000		62,465.000

DATE 10FEB15		E S T I M A T E O F Q U A N T I T I E S				
LINE					6844-00-70	6844-00-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
0480	646.0126	Pavement Marking Epoxy 8-Inch	LF	2,405.000		2,405.000
0490	646.0406	Pavement Marking Same Day Epoxy 4-Inch	LF	49,228.000		49,228.000
0500	647.0736	Pavement Marking Diagonal Epoxy 18-Inch	LF	203.000		203.000
0510	647.0786	Pavement Marking Crosswalk Epoxy 18-Inch	LF	132.000		132.000
0520	648.0100	Locating No-Passing Zones	MI	6.120		6.120
0530	649.0100	Temporary Pavement Marking 4-Inch	LF	49,178.000		49,178.000
0540	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,141.000	148.000	1,993.000
0550	650.8000	Construction Staking Resurfacing Reference	LF	34,552.000	123.000	34,429.000
0560	650.9910	Construction Staking Supplemental Control (project) 01. 6844-00-70	LS	1.000	1.000	
0570	650.9910	Construction Staking Supplemental Control (project) 02. 6844-00-71	LS	1.000		1.000
0580	690.0150	Sawing Asphalt	LF	805.000	24.000	781.000
0590	690.0250	Sawing Concrete	LF	42.000		42.000
0600	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000		2,000.000
0610	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,000.000		1,000.000
0620	SPV.0105	Special 01. Railing Steel Type W Sta. 17+09	LS	1.000		1.000
0630	SPV.0105	Special 02. Railing Steel Type W Sta. 116+49	LS	1.000		1.000
0640	SPV.0180	Special 01. OMP Mill/Pulverize and Relay Compacti on	SY	92,448.000		92,448.000

3

REMOVE ASPHALT SURFACE		
		204.0110 REMOVING ASPHALTIC SURFACE SY
STATION	LOCATION	
24+90	RT	19
64+40	LT	18
104+80	LT	21
137+75	RT	48
139+85	LT	69
140+20	RT	58
140+90	RT	32
162+85	RT	13
164+05	RT	19
164+75	LT	109
166+45	RT	30
173+20	RT	29
174+85	RT	80
174+90	LT	28
176+20	LT	14
176+20	RT	43
178+05	LT	99
181+55	LT	40
225+90	LT	46
229+80	RT	37
231+60	RT	44
246+73	RT	36
255+15	RT	21
TOTAL PROJECT 6844-00-71		953

REMOVING BUTT JOINTS	
204.0115	
REMOVING ASPHALTIC SURFACE BUTT JOINTS	
STATION - STATION	SY
-0+81.43 - 0+18.57	361
16+05.81 - 17+05.81	248
17+12.97 - 18+12.97	248
115+40 - 116+40	255
116+58 - 117+58	255
321+40.54 - 322+40.54	312
TOTAL PROJECT 6844-00-71	1,679

REMOVING ASPHALTIC SURFACE MILLING		
204.0120 REMOVING ASPHALTIC SURFACE MILLING SY		
STATION - STATION	LOCATION	
17+05.81 - 17+12.97	BOX CULVERT	22
116+40 - 116+58	BRIDGE	53
TOTAL PROJECT 6844-00-71		75

PREPARING FOUNDATION			
		211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (6844-00-71) LS	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA
STATION - STATION	LOCATION		
-0+81.43 - 16+05.81	CTH E	0.01	17
18+12.97 - 115+40	CTH E	0.08	97
117+58 - 322+40.54	CTH E	0.16	205
10+90.24TL - 12+00TL	TWIN LAKE	0.05	1
20+50H - 21+42.07H	HOBSON RD	0.05	1
30+40CL - 31+36CL	CRYSTAL LAKE	0.05	1
40+60B - 41+75.59B	BAGS HILL	0.05	1
50+50S - 51+92.98S	SOUTHWOOD	0.05	1
60+25P - 61+70P	PINE COURT	0.05	1
70+25E - 71+52.90E	EVERGREEN	0.05	1
81+52.51A - 82+25A	ASH	0.05	1
90+88.46AK - 91+85AK	AKRON AVE	0.05	1
100+60EE - 101+49.19EE	CTH EE	0.05	1
120+53SLW - 121+80SLW	SPENCER LAKE	0.05	1
130+40.75L - 131+20L	LINDEE	0.05	1
140+41.43M - 141+35M	MARION	0.05	1
150+70N - 151+70.64N	NELSEN	0.05	1
161+05.67CRW - 161+85CRW	CRYSTAL ROAD	0.025	1
170+65CRE - 171+34.16CRE	CRYSTAL ROAD	0.025	1
TOTAL PROJECT 6844-00-71		1	335
		211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (6844-00-70) LS	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA
STATION - STATION	LOCATION		
170+62.26LC - 171+60LC	LIND CENTER RD	1	1
TOTAL PROJECT 6844-00-70		1	1

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REMOVING GUARDRAIL		
204.0165 REMOVING GUARDRAIL LF		
STATION - STATION	LOCATION	
17+02 - 17+18	RT	17
17+00 - 17+16	LT	16
116+22 - 116+75.5	RT	54
116+22 - 116+75	LT	54
TOTAL PROJECT 6844-00-71		141
NOTE: INCLUDES GUARDRAIL AND POSTS OVER EXISTING STRUCTURES		

EXCAVATION COMMON					
		205.0100 EXCAVATION COMMON CY	*** FILL CY	208.0100 BORROW CY	*** WASTE CY
STATION - STATION	LOCATION				
-0+81.43 - 322+40.54	EBS ROADWAY	8619	---	---	8619
UNDISTRIBUTED	BEHIND C&G	---	271	353	---
TOTAL PROJECT 6844-00-71		8,619	271	353	8,619
		205.0100 EXCAVATION COMMON CY	*** FILL CY	208.0100 BORROW CY	*** WASTE CY
STATION - STATION	LOCATION				
LIND CENTER ROAD	BEHIND C&G	---	23	29	---
TOTAL PROJECT 6844-00-70		0	23	29	0
*** FOR INFORMATION ONLY					

BASE AGGREGATE					
		305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON	624.0100 WATER* MGAL
STATION - STATION	LOCATION				
-0+81.43 - 322+40.54	RT & LT	3,174	---	---	47.6
10+90.25TL - 12+00.25TL	RT & LT	8	---	---	0.1
20+25H - 21+42.07H	RT & LT	22	---	---	0.3
30+40CL - 31+34CL	RT & LT	7	---	---	0.1
40+61.39B - 41+75.55B	RT & LT	8	---	---	0.1
50+50.60S - 51+92.90S	RT & LT	10	---	---	0.2
60+25P - 61+70P	RT & LT	24	---	---	0.4
70+25E - 71+52.90E	RT & LT	23	---	---	0.3
81+52.51A - 82+25A	RT & LT	21	---	---	0.3
90+88.46AK - 91+84.27AK	RT & LT	9	---	---	0.1
100+63.80EE - 101+49.19EE	RT & LT	8	---	---	0.1
120+53SLW - 121+80SLW	RT & LT	11	---	---	0.2
130+40.75L - 131+34L	RT & LT	8	---	---	0.1
140+41.43M - 141+34M	RT & LT	7	---	---	0.1
150+72N - 151+70N	RT & LT	8	---	---	0.1
161+05.67CRW - 161+83.50CRW	RT & LT	7	---	---	0.1
170+64CRE - 171+34.15CRE	RT & LT	6	---	---	0.1
1+07	RT	13	---	---	---
8+90	RT	5	---	---	---
10+20	RT	9	---	---	---

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BASE AGGREGATE					
STATION - STATION	LOCATION	305.0110	305.0120	312.0110	624.0100
		BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	SELECT CRUSHED MATERIAL TON	WATER* MGAL
15+20	LT	4	---	---	---
16+15	LT	6	---	---	---
18+45	RT	5	---	---	---
18+85	LT	13	---	---	---
27+30	LT	15	---	---	---
28+05	RT	4	---	---	---
41+95	LT	8	---	---	---
47+90	RT	5	---	---	---
53+35	RT	9	---	---	---
54+60	RT	10	---	---	---
62+95	LT	9	---	---	---
72+90	RT	21	---	---	---
83+15	LT	4	---	---	---
83+90	RT	3	---	---	---
84+15	LT	4	---	---	---
93+50	LT	10	---	---	---
96+15	RT	4	---	---	---
96+50	LT	18	---	---	---
98+30	RT	8	---	---	---
102+15	RT	15	---	---	---
103+65	LT	7	---	---	---
104+00	RT	8	---	---	---
110+20	RT	9	---	---	---
113+95	LT	5	---	---	---
115+15	RT	4	---	---	---
124+05	LT	8	---	---	---
125+10	LT	12	---	---	---
125+10	RT	11	---	---	---
126+85	LT	7	---	---	---
128+50	RT	3	---	---	---
130+70	RT	8	---	---	---
132+75	RT	7	---	---	---
133+45	LT	5	---	---	---
134+15	RT	7	---	---	---
138+50	RT	7	---	---	---
60+70P	LT	7	---	---	---
149+15	RT	2	---	---	---
150+05	RT	2	---	---	---
152+50	LT	4	---	---	---
167+55	RT	9	---	---	---
168+10	RT	7	---	---	---
168+60	RT	8	---	---	---
169+35	RT	8	---	---	---
169+75	RT	11	---	---	---
169+75	LT	10	---	---	---
170+65	RT	7	---	---	---
170+95	RT	3	---	---	---
177+00	RT	25	---	---	---
178+30	RT	27	---	---	---
184+95	LT	12	---	---	---
185+80	LT	19	---	---	---
192+00	LT	8	---	---	---
192+00	RT	15	---	---	---
193+70	LT	6	---	---	---
194+20	RT	8	---	---	---
196+15	LT	9	---	---	---
196+85	RT	14	---	---	---
197+90	LT	9	---	---	---
204+70	RT	8	---	---	---
206+70	LT	8	---	---	---
CONTINUED IN NEXT COLUMN					

CONTINUED FROM PREVIOUS COLUMN					
BASE AGGREGATE					
STATION - STATION	LOCATION	305.0110	305.0120	312.0110	624.0100
		BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	SELECT CRUSHED MATERIAL TON	WATER* MGAL
208+55	RT	8	---	---	---
216+35	RT	6	---	---	---
220+50	RT	12	---	---	---
221+50	LT	10	---	---	---
223+20	RT	6	---	---	---
224+70	LT	9	---	---	---
226+40	RT	8	---	---	---
141+00M	LT	10	---	---	---
232+65	LT	8	---	---	---
233+20	LT	7	---	---	---
235+60	LT	7	---	---	---
236+80	LT	4	---	---	---
238+25	LT	6	---	---	---
239+70	LT	7	---	---	---
240+85	LT	6	---	---	---
242+20	RT	18	---	---	---
242+95	LT	8	---	---	---
244+30	RT	6	---	---	---
244+90	RT	5	---	---	---
248+05	RT	8	---	---	---
248+32	LT	3	---	---	---
249+90	RT	6	---	---	---
251+55	RT	6	---	---	---
252+95	RT	6	---	---	---
253+50	LT	3	---	---	---
254+80	LT	8	---	---	---
257+00	RT	8	---	---	---
257+10	LT	8	---	---	---
258+35	LT	9	---	---	---
261+50	RT	8	---	---	---
262+80	LT	5	---	---	---
264+30	RT	12	---	---	---
264+80	LT	8	---	---	---
267+90	RT	17	---	---	---
268+60	LT	11	---	---	---
273+80	LT	12	---	---	---
285+75	LT	9	---	---	---
290+70	RT	9	---	---	---
296+90	LT	9	---	---	---
300+90	RT	7	---	---	---
304+45	LT	13	---	---	---
309+25	LT	8	---	---	---
311+30	LT	14	---	---	---
311+30	RT	21	---	---	---
320+05	RT	13	---	---	---
EBS AREA	ROADWAY	4,905	18,200	25,140	347
UNDISTRIBUTED	INTERSECTIONS	---	85	---	1
UNDISTRIBUTED		1,077	2,000	---	46
TOTAL PROJECT 6844-00-71		10,290	20,285	25,140	444
STATION - STATION	LOCATION	3/4-INCH TON	1 1/4-INCH TON	SELECT TON	WATER* MGAL
170+62.25LC - 171+57LC	RT & LT	15	---	---	0.2
UNDISTRIBUTED		3	5	---	0.1
TOTAL PROJECT 6844-00-70		18	5	0	0.3
* ADDITIONAL QUANTITIES LISTED ELSEWHERE					

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PULVERIZE AND RELAY

STATION - STATION	325.0100	624.0100	SPV.0180.01
	PULVERIZE AND RELAY SY	WATER* ** MGAL	QMP PULVERIZE AND RELAY SY
-0+81.43 - 16+05.81	4499	31	4499
18+12.97 - 115+40	25939	182	25939
117+58 - 322+40.54	54620	382	54620
10+90.24TL - 12+25TL	485	3	485
20+25H - 21+42.07H	352	2	352
30+40CL - 31+75CL	487	3	487
40+25B - 41+75.59B	491	3	491
50+25S - 51+92.98S	536	4	536
60+25P - 61+70P	439	3	439
70+25E - 71+52.90E	415	3	415
81+52.51A - 82+25A	292	2	292
90+88.46AK - 92+25AK	481	3	481
100+25EE - 101+49.19EE	472	3	472
120+53SLW - 122+15SLW	601	4	601
130+40.75L - 131+70L	460	3	460
140+41.43M - 141+70M	490	3	490
150+25N - 151+70.64N	505	4	505
161+05.67CRW - 162+25CRW	472	3	472
170+25CRE - 171+34.16CRE	411	3	411
TOTAL PROJECT 6844-00-71	92448	647	92448

* ADDITIONAL QUANTITIES LISTED ELSEWHERE
**RATE OF 7 GALS/SY OF 8" THICK PULVERIZED MATERIAL

CONCRETE DRIVEWAYS

STATION	LOCATION	416.0160
		CONCRETE DRIVEWAY 6-INCH SY
71+05E	RT	14
178+02	RT	11
255+15	RT	21
TOTAL PROJECT 6844-00-71		47

HMA PAVEMENT

STATION - STATION	THICKNESS	455.0105	455.0605	460.1101
		ASPHALTIC MATERIAL PG58-28 TON	TACK* COAT GAL	HMA PAVEMENT TYPE E-1 TON
-0+81.43 - 322+40.54	4.5	1,510	5,396	27,438
10+90.24TL - 11+69.53TL	2	2	12	26
11+69.53TL - 12+40TL	4.5	6	21	103
20+16H - 21+42.07H	2	4	27	60
30+40.07CL - 31+14.56CL	2	2	11	25
31+14.56CL - 31+75CL	4.5	5	18	89
40+22B - 40+91.68B	4.5	6	19	97
40+91.68B - 41+75.59B	2	2	12	27
50+22S - 50+94.15S	4.5	6	19	97
50+94.15S - 51+92.98S	2	2	13	28
60+22P - 61+70P	2	8	28	141
70+16E - 71+52.90E	2	8	29	143
81+52.51A - 82+30A	2	6	20	102
90+88.46AK - 91+64.65AK	2	3	11	53
91+64.65AK - 92+25AK	4.5	5	18	89
100+22EE - 100+87.45EE	4.5	6	18	91
100+87.45EE - 101+49.19EE	2	3	9	45
120+53.00SLW - 121+72.57SLW	2	5	16	81
121+72.57SLW - 122+25SLW	4.5	5	16	78
130+40.75L - 131+20.75L	2	4	12	59
131+20.75L - 131+75L	4.5	5	16	80
140+41.43M - 141+21.43M	2	4	13	65
141+21.43M - 141+75M	4.5	5	16	79
150+22N - 150+79.37N	4.5	5	17	83
150+79.37N - 151+70.64N	2	4	13	65
161+05.67CRW - 161+70.97CRW	2	3	10	49
161+70.97CRW - 162+25CRW	4.5	5	16	78
170+22CRE - 170+80.61CRE	4.5	5	16	80
170+80.61CRE - 171+34.16CRE	2	3	8	41
TOTAL PROJECT 6844-00-71		1,637	5,850	29,492

STATION - STATION	THICKNESS	MATERIAL TON	TACK GAL	HMA TON
170+62.26LC - 171+20.77LC	2	2	9	21
171+20.77LC - 171+90LC	4.5	6	19	93
TOTAL PROJECT 6844-00-70		8	28	114

*TACK COAT CALCULATED USING 0.05 GAL/SY.

ASPHALTIC DRIVEWAYS

STATION	LOCATION	465.0120
		ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
24+90	RT	1
64+40	LT	1
104+80	LT	2
137+75	RT	3
139+85	LT	5
140+20	RT	4
140+90	RT	1
162+85	RT	2
164+05	RT	3
164+75	LT	7
166+45	RT	3
173+20	RT	2
174+85	RT	8
174+90	LT	3
176+20	LT	2
176+20	RT	5
178+05	LT	9
181+55	LT	2
225+90	LT	3
229+80	RT	3
231+60	RT	4
246+73	RT	4
255+15	RT	1
TOTAL PROJECT 6844-00-71		78

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FLUMES		
STATION	LOCATION	465.0315 ASPHALTIC FLUMES SY
12+12TL	RT	5.9
11+98TL	LT	9.2
31+30CL	RT	20.3
31+37CL	LT	9.7
41+00B	RT	14.1
40+68B	LT	17.5
134+58	RT	18.6
50+50S	RT	18.9
51+00S	LT	13.4
135+95	RT	25.0
161+79	LT	16.4
92+15AK	LT	8.1
100+65EE	RT	17.0
100+89EE	LT	11.1
165+73	RT	16.9
189+50	LT	20.6
121+89SLW	LT	22.1
131+34L	RT	12.3
131+20L	LT	16.2
141+34M	RT	13.5
141+20M	LT	10.5
231+25	LT	19.6
150+80N	RT	15.8
150+72N	LT	14.4
161+69CRW	RT	13.4
161+84CRW	LT	14.9
170+64CRE	RT	15.7
170+81CRE	LT	15.9
TOTAL PROJECT 6844-00-71		426.9
STATION	LOCATION	FLUMES SY
315+19	RT	15.4
171+20LC	LT	17.2
TOTAL PROJECT 6844-00-70		32.6

CONCRETE CURB & GUTTER				
		601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	
STATION - STATION	LOCATION	LF	LF	
12+01.39TL - 0+19.68	RT	70	70	
11+69.53TL - 1+67.05	LT	96	96	
31+35.46CL - 54+05.43	RT	71	71	
31+14.56CL - 55+44.09	LT	86	86	
66+71.68 - 40+91.68B	RT	93	93	
68+10.05 - 40+60.94B	LT	66	66	
134+62.48 - 50+50.19S	RT	66	66	
135+92.13 - 50+94.15S	LT	73	73	
91+64.65AK - 161+79.01	RT	72	72	
91+84.82AK - 163+17.24	LT	83	83	
162+73.79 - 164+34.60	RT	161	161	
164+34.60 - 100+63.29EE	RT	81	81	
165+73.46 - 100+87.45EE	LT	73	73	
121+72.57SLW - 189+53.02	RT	68	68	
121+80.89SLW - 190+82.86	LT	85	85	
131+35.89L - 222+85.72	RT	61	61	
131+20.75L - 224+15.06	LT	89	89	
141+35.34M - 229+94.55	RT	61	61	
141+21.43M - 231+23.75	LT	88	88	
240+29.63 - 150+79.37N	RT	85	85	
241+64.87 - 150+69.88N	LT	74	74	
161+70.97CRW - 277+47.67	RT	64	64	
161+84.74CRW - 278+78.78	LT	82	82	
277+69.92 - 170+63.24CRE	RT	80	80	
279+01.45 - 170+80.61CRE	LT	65	65	
TOTAL PROJECT 6844-00-71		1,993	1,993	
6-INCH SLOPED 36-INCH TYPE D				
STATION - STATION	LOCATION	LF	STAKING CURB & GUTTER LF	
171+20.77LC - 315+19.17	LT	96	96	
171+60.19LC - 316+38.45	RT	52	52	
TOTAL PROJECT 6844-00-70		148	148	

ROADWAY BARRIERS						
STATION - STATION	LOCATION	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH LF	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
15+91.16 - 16+44.74	RT	---	---	---	---	1
16+44.74 - 16+70.02	RT	---	---	25	---	---
16+70.02 - 17+07.90	RT	---	---	---	37.5	---
16+37.79 - 16+87.29	LT	---	1	---	---	---
16+87.29 - 17+06.46	LT	18.75	---	---	---	---
17+10.57 - 17+47.70	LT	---	---	---	37.5	---
17+47.70 - 17+75.23	LT	---	---	25	---	---
17+75.23 - 18+25.03	LT	---	---	---	---	1
17+12.25 - 17+50.13	RT	---	---	---	37.5	---
17+50.13 - 17+78.22	RT	---	---	25	---	---
17+78.22 - 18+29.08	RT	---	---	---	---	1
115+13.67 - 115+63.98	LT	---	---	---	---	1
115+63.98 - 116+04.30	LT	---	---	37.5	---	---
116+04.30 - 116+41.80	LT	---	---	---	37.5	---
115+72.87 - 116+22.87	RT	---	1	---	---	---
116+22.87 - 116+41.62	RT	18.75	---	---	---	---
116+56.51 - 116+94.01	RT	---	---	---	37.5	---
116+94.01 - 117+34.32	RT	---	---	37.5	---	---
117+34.32 - 117+84.63	RT	---	---	---	---	1
116+55.94 - 116+93.44	LT	---	---	---	37.5	---
116+93.44 - 117+33.76	LT	---	---	37.5	---	---
117+33.76 - 117+84.07	LT	---	---	---	---	1
TOTAL PROJECT 6844-00-71		37.5	2	187.5	225	6

FINISHING ITEMS						
STATION - STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO 20 LB	630.0200 SEEDING TEMPORARY LB	624.0100 WATER* MGAL
-0+81.43 - 322+41	LT & RT	---	9.05	388	388	323
INTERSECTIONS	BEHIND C&G	2,240	1.41	60	60	50
UNDISTRIBUTED		560	2.62	112	112	93
TOTAL PROJECT 6844-00-71		2,800	13.08	560	560	466

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO 20 LB	630.0200 SEEDING TEMPORARY LB	624.0100 WATER* MGAL
170+62LC - 171+62LC	LT & RT	---	0.04	2	2	1
LIND CENTER ROAD	BEHIND C&G	149	0.09	4	4	3
UNDISTRIBUTED		22	0.02	1	1	1
TOTAL PROJECT 6844-00-70		171	0.15	6	6	5

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

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EROSION CONTROL

		628.2004 EROSION MAT CLASS I TYPE B	628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE
STATION - STATION	LOCATION	SY	LF	LF
12+01.39TL - 0+19.68	RT	62	90	90
11+69.53TL - 1+67.05	LT	85	120	120
31+35.46CL - 54+05.43	RT	63	100	100
31+14.56CL - 55+44.09	LT	76	110	110
66+71.68 - 40+91.68B	RT	83	120	120
68+10.05 - 40+60.94B	LT	59	90	90
134+62.48 - 50+50.19S	RT	59	90	90
135+92.13 - 50+94.15S	LT	65	100	100
91+64.65AK - 161+79.01	RT	64	100	100
91+84.82AK - 163+17.24	LT	74	110	110
162+73.79 - 164+34.60	RT	143	190	190
164+34.60 - 100+63.29EE	RT	72	110	110
165+73.46 - 100+87.45EE	LT	65	100	100
121+72.57SLW - 189+53.02	RT	60	90	90
121+80.89SLW - 190+82.86	LT	76	110	110
131+35.89L - 222+85.72	RT	54	90	90
131+20.75L - 224+15.06	LT	79	110	110
141+35.34M - 229+94.55	RT	54	90	90
141+21.43M - 231+23.75	LT	78	110	110
240+29.63 - 150+79.37N	RT	76	110	110
241+64.87 - 150+69.88N	LT	66	100	100
161+70.97CRW - 277+47.67	RT	57	90	90
161+84.74CRW - 278+78.78	LT	73	110	110
277+69.92 - 170+63.24CRE	RT	71	100	100
279+01.45 - 170+80.61CRE	LT	58	90	90
TOTAL PROJECT 6844-00-71		1,772	2,630	2,630
		628.2004 EROSION MAT CLASS I TYPE B	628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE
STATION - STATION	LOCATION	SY	LF	LF
171+20.77LC - 315+19.17	LT	85	120	120
171+60.19LC - 316+38.45	RT	46	80	80
TOTAL PROJECT 6844-00-70		132	200	200

PERMANENT SIGNS

NUMBER	STATION	LOCATION	CODE	SIZE	637.2210	637.2230	634.0612	634.0614
					SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	POSTS WOOD 4X6-INCH X 12-FT EACH	POSTS WOOD 4X6-INCH X 14-FT EACH
0-01	-5+57	RT	W2-2	30" X 30"	---	6.25	---	1
0-02	-4+57	RT	W1-2L	30" X 30"	---	6.25	---	1
0-03	-4+57	RT	W13-1	18" X 18"	---	2.25	---	---
1-01	12+12TL	RT	R1-1	30" X 30"	5.18	---	---	1
1-02	1+40	RT	I2-2	66" X 15"	6.875	---	---	1
1-03	1+40	RT	M1-5-A	24" X 24"	4.00	---	---	---
1-04	5+00	LT	W1-2R	30" X 30"	---	6.25	---	1
1-05	5+00	LT	W13-1	18" X 18"	---	2.25	---	---
1-06	6+00	LT	W2-2	30" X 30"	---	6.25	---	1
1-07	13+50	RT	W1-4R	30" X 30"	---	6.25	---	1
1-08	17+00	LT	W5-52L	12" X 36"	3.00	---	1	---
1-09	17+00	RT	W5-52R	12" X 36"	3.00	---	1	---
1-10	17+09	RT	W5-52L	12" X 36"	3.00	---	1	---
1-11	17+09	LT	W5-52R	12" X 36"	3.00	---	1	---
2-01	36+50	LT	W1-4R	30" X 30"	---	6.25	---	1
2-02	38+50	RT	W2-2	30" X 30"	---	6.25	---	1
2-03	20+55	LT	R1-1	30" X 30"	5.18	---	---	1
2-04	45+75	LT	W2-2	30" X 30"	---	6.25	---	1
2-05	50+25	RT	W2-2	30" X 30"	---	6.25	---	1
2-06	31+45CL	RT	R1-1	30" X 30"	5.18	---	---	1
2-07	58+50	LT	W2-2	30" X 30"	---	6.25	---	1
3-01	62+50	RT	W14-3	48" X 36"	---	6	---	1
3-02	40+50B	LT	R1-1	30" X 30"	5.18	---	---	1
3-03	84+50	LT	W14-3	48" X 36"	---	6	---	1
4-01	116+40	LT	W5-52L	12" X 36"	3	---	1	---
4-02	116+40	RT	W5-52R	12" X 36"	3	---	1	---
4-03	116+60	RT	W5-52L	12" X 36"	3	---	1	---
4-04	116+60	LT	W5-52R	12" X 36"	3	---	1	---
4-05	118+25	RT	W1-2R	30" X 30"	---	6.25	---	1
4-06	118+25	RT	W13-1	18" X 18"	---	2.25	---	---
5-01	122+25	RT	S3-1	30" X 30"	6.25	---	---	1
5-02	122+30	LT	W1-8	18" X 24"	---	3	1	---
5-03	122+30	LT	W1-8	18" X 24"	---	3	---	---
5-04	123+55	LT	W1-8	18" X 24"	---	3	1	---
5-05	123+55	LT	W1-8	18" X 24"	---	3	---	---
5-06	124+80	LT	W1-8	18" X 24"	---	3	1	---
5-07	124+80	LT	W1-8	18" X 24"	---	3	---	---
5-08	126+00	LT	W1-8	18" X 24"	---	3	1	---
5-09	126+00	LT	W1-8	18" X 24"	---	3	---	---
5-10	126+15	RT	W1-6	30" X 30"	6.25	---	---	1
5-11	127+00	LT	W1-6	30" X 30"	6.25	---	---	1
5-12	129+70	LT	W1-2L	30" X 30"	---	6.25	---	1
5-13	129+70	LT	W13-1	18" X 18"	---	2.25	---	---
5-14	131+00	RT	W1-10L	30" X 30"	---	6.25	---	1
5-15	131+00	RT	W13-1	18" X 18"	---	2.25	---	---
5-16	133+00	LT	S3-1	30" X 30"	6.25	---	---	1
5-17	50+90S	LT	R1-1	30" X 30"	5.18	---	---	1
5-18	136+35	RT	W1-8	18" X 24"	---	3	1	---
5-19	136+35	RT	W1-8	18" X 24"	---	3	---	---
5-20	137+25	RT	R3-7R	30" X 30"	6.25	---	---	1
5-21	137+60	RT	W1-8	18" X 24"	---	3	1	---
5-22	137+60	RT	W1-8	18" X 24"	---	3	---	---
5-23	138+85	RT	W1-8	18" X 24"	---	3	1	---
5-24	138+85	RT	W1-8	18" X 24"	---	3	---	---
5-25	141+90	RT	R3-7R	30" X 30"	6.25	---	---	1
5-26	143+00	LT	W1-10R	30" X 30"	---	6.25	---	1
5-27	143+00	LT	W13-1	18" X 18"	---	2.25	---	---
5-28	60+75P	RT	W14-1	30" X 30"	---	6.25	---	1
5-29	60+50P	LT	R1-1	30" X 30"	5.18	---	---	1
5-30	145+50	RT	W1-2R	30" X 30"	---	6.25	---	1
5-31	145+50	RT	W13-1	18" X 18"	---	2.25	---	---
5-32	149+85	LT	W1-8	18" X 24"	---	3	1	---
5-33	149+85	LT	W1-8	18" X 24"	---	3	---	---
6-01	150+95	LT	W1-8	18" X 24"	---	3	1	---
6-02	150+95	LT	W1-8	18" X 24"	---	3	---	---

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PROJECT NO:6844-00-70/71

HWY:CTH E

COUNTY:WAUPACA

MISCELLANEOUS QUANTITIES

SHEET

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PERMANENT SIGNS

NUMBER	STATION	LOCATION	CODE	SIZE	637.2210	637.2230	634.0612	634.0614
					SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	POSTS WOOD 4X6-INCH X 12-FT EACH	POSTS WOOD 4X6-INCH X 14-FT EACH
6-03	151+95	LT	W1-8	18" X 24"	---	3	1	---
6-04	151+95	LT	W1-8	18" X 24"	---	3	---	---
6-05	152+95	LT	W1-8	18" X 24"	---	3	1	---
6-06	152+95	LT	W1-8	18" X 24"	---	3	---	---
6-07	154+95	LT	W1-8	18" X 24"	---	3	1	---
6-08	154+95	LT	W1-8	18" X 24"	---	3	---	---
6-09	154+50	RT	W3-5	36" X 36"	---	9	---	1
6-10	70+50E	LT	R1-1	30" X 30"	5.18	---	---	1
6-11	157+50	LT	W1-2L	30" X 30"	---	6.25	---	1
6-12	157+50	LT	W13-1	18" X 18"	---	2.25	---	---
6-13	158+20	RT	J1-1	24" X 39"	6.5	---	---	1
6-14	81+90A	RT	R1-1	30" X 30"	5.18	---	---	1
6-15	159+85	RT	W1-2L	30" X 30"	---	6.25	---	1
6-16	160+90	RT	R2-1	24" X 30"	5	---	---	1
6-17	160+90	LT	R2-1	24" X 30"	5	---	---	1
6-18	91+90AK	RT	R1-1	30" X 30"	5.18	---	---	1
6-19	163+75	LT	J4-1	24" X 36"	6	---	---	1
6-20	164+35	RT	J12-1	24" X 45"	7.5	---	---	1
6-21	100+75EE	LT	R1-1	30" X 30"	5.18	---	---	1
6-22	165+40	LT	J12-1	24" X 45"	7.5	---	---	1
6-23	167+00	RT	W11-2	30" X 30"	---	6.25	---	1
6-24	167+00	RT	W13-1	18" X 18"	---	2.25	---	---
6-25	167+90	RT	J4-1	24" X 36"	6	---	---	1
6-26	170+40	LT	J1-1	24" X 39"	6.5	---	---	1
6-27	173+25	LT	W11-2	30" X 30"	---	6.25	---	1
6-28	173+60	RT	W11-2	30" X 30"	---	6.25	---	1
6-29	180+20	LT	W11-2	30" X 30"	---	6.25	---	1
6-30	180+20	LT	W13-1	18" X 18"	---	2.25	---	---
7-01	181+80	RT	W1-2R	30" X 30"	---	6.25	---	1
7-02	121+90SLW	RT	R1-1	30" X 30"	5.18	---	---	1
7-03	195+30	LT	R2-1	24" X 30"	5	---	---	1
7-04	195+50	RT	R2-1	24" X 30"	5	---	---	1
7-05	196+50	LT	W1-2L	30" X 30"	---	6.25	---	1
7-06	197+50	LT	W2-2	30" X 30"	---	6.25	---	1
7-07	201+00	LT	W3-5	36" X 36"	---	9	---	1
7-08	202+00	RT	W14-3	48" X 36"	---	6	---	1
8-01	131+50L	RT	R1-1	30" X 30"	5.18	---	---	1
8-02	141+50M	RT	R1-1	30" X 30"	5.18	---	---	1
9-01	236+40	RT	W2-2	30" X 30"	---	6.25	---	1
9-02	150+50N	LT	R1-1	30" X 30"	5.18	---	---	1
9-03	245+25	LT	W2-2	30" X 30"	---	6.25	---	1
10-01	270+75	RT	W2-1	30" X 30"	---	6.25	---	1
10-02	273+00	LT	W14-3	48" X 36"	---	6	---	1
10-03	161+90CRW	RT	R1-1	30" X 30"	5.18	---	---	1
10-04	170+75CRE	LT	R1-1	30" X 30"	5.18	---	---	1
10-05	283+50	RT	W14-3	48" X 36"	---	6	---	1
10-06	285+00	LT	W2-1	30" X 30"	---	6.25	---	1
10-07	293+40	LT	W14-3	48" X 36"	---	6	---	1
11-01	300+00	RT	W1-2R	30" X 30"	---	6.25	---	1
11-02	300+00	RT	W13-1	18" X 18"	---	2.25	---	---
11-03	302+90	LT	W1-8	18" X 24"	---	3	1	---
11-04	302+90	LT	W1-8	18" X 24"	---	3	---	---
11-05	304+10	LT	W1-8	18" X 24"	---	3	1	---
11-06	304+10	LT	W1-8	18" X 24"	---	3	---	---
11-07	305+40	LT	W1-8	18" X 24"	---	3	1	---
11-08	305+40	LT	W1-8	18" X 24"	---	3	---	---
11-09	306+60	LT	W1-8	18" X 24"	---	3	1	---
11-10	306+60	LT	W1-8	18" X 24"	---	3	---	---
11-11	308+45	RT	W1-10L	30" X 30"	---	6.25	---	1
11-12	308+45	RT	W13-1	18" X 18"	---	2.25	---	---

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PERMANENT SIGNS

NUMBER	STATION	LOCATION	CODE	SIZE	637.2210	637.2230	634.0612	634.0614
					SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	POSTS WOOD 4X6-INCH X 12-FT EACH	POSTS WOOD 4X6-INCH X 14-FT EACH
11-13	310+00	LT	W1-2L	30" X 30"	---	6.25	---	1
11-14	310+00	LT	W13-1	18" X 18"	---	2.25	---	---
11-15	313+50	RT	W1-8	18" X 24"	---	3	1	---
11-16	313+50	RT	W1-8	18" X 24"	---	3	---	---
11-17	314+50	RT	W1-8	18" X 24"	---	3	1	---
11-18	314+50	RT	W1-8	18" X 24"	---	3	---	---
11-20	316+55	RT	W1-8	18" X 24"	---	3	1	---
11-21	316+55	RT	W1-8	18" X 24"	---	3	---	---
11-22	317+55	RT	W1-8	18" X 24"	---	3	1	---
11-23	317+55	RT	W1-8	18" X 24"	---	3	---	---
11-24	318+55	RT	W1-8	18" X 24"	---	3	1	---
11-25	318+55	RT	W1-8	18" X 24"	---	3	---	---
11-26	322+40	LT	W1-10R	30" X 30"	---	6.25	---	1
11-27	322+40	LT	W13-1	18" X 18"	---	2.25	---	---
TOTAL PROJECT 6844-00-71					215.26	417.75	29	74

NUMBER	STATION	LOCATION	CODE	SIZE	REFLECTIVE H SF	REFLECTIVE F SF	X 12-FT EACH	X 14-FT EACH
11-19	171+75LC	RT	R1-1	30" X 30"	5.18	---	---	1
TOTAL PROJECT 6844-00-70					5.18	0	0	1

REMOVING SIGNS

NUMBER	STATION	LOCATION	638.2602	638.3000	DESCRIPTION
			REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	
R1-01	12+30TL	RT	1	1	STOP
R1-02	1+30	RT	1	1	WAUPACA COUNTY
R1-03	1+30	RT	1	---	CTH E
R1-04	11+65	RT	1	1	REVERSE CURVE
R1-05	17+00	LT	1	1	OBJECT MARKER
R1-06	17+00	RT	1	1	OBJECT MARKER
R1-07	17+20	LT	1	1	OBJECT MARKER
R1-08	17+20	RT	1	1	OBJECT MARKER
R2-01	35+75	RT	1	1	INTERSECTION
R2-02	39+10	LT	1	1	REVERSE CURVE
R2-03	20+30H	LT	1	1	STOP
R2-04	45+60	LT	1	1	INTERSECTION
R2-05	31+65CL	RT	1	1	STOP
R3-01	40+30B	LT	1	1	STOP
R3-02	72+25	LT	1	1	INTERSECTION
R4-01	116+15	LT	1	1	OBJECT MARKER
R4-02	116+15	RT	1	1	OBJECT MARKER
R4-03	116+80	RT	1	1	OBJECT MARKER
R4-04	116+80	LT	1	1	OBJECT MARKER
R4-05	118+70	RT	1	1	CURVE
R5-01	122+30	RT	1	1	SCHOOL BUS STOP AHEAD
R5-02	126+28	RT	1	1	SNOWMOBILE XING
R5-03	127+10	LT	1	1	SNOWMOBILE XING
R5-04	129+30	LT	1	1	CURVE
R5-05	131+20	RT	1	1	CURVE
R5-06	133+10	LT	1	1	SCHOOL BUS STOP AHEAD
R5-07	50+50S	LT	1	1	STOP
R5-08	60+44P	RT	1	1	DEAD END
R5-09	60+35P	LT	1	1	STOP
R5-10	144+85	RT	1	1	CURVE

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REMOVING SIGNS

NUMBER	STATION	LOCATION	638.2602	638.3000	DESCRIPTION
			REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	
R5-11	145+55	LT	1	1	CURVE
R6-01	150+35	RT	1	1	REDUCED SPEED AHEAD
R6-02	150+35	RT	1	---	35 MPH
R6-03	70+40E	LT	1	1	STOP
R6-04	157+15	LT	1	1	CURVE
R6-05	157+80	RT	1	1	CTH EE
R6-06	157+80	RT	1	---	JCT
R6-07	81+95A	RT	1	1	STOP
R6-08	159+95	RT	1	1	CURVE
R6-09	160+82	LT	1	1	SPEED LIMIT 55
R6-10	91+95AK	RT	1	1	STOP
R6-11	162+60	RT	1	1	SPEED LIMIT 35 MPH
R6-12	163+30	LT	1	1	CTH E
R6-13	163+30	LT	1	---	SOUTH
R6-14	164+25	RT	1	1	COUNTY EE
R6-15	164+25	RT	1	---	ARROW
R6-16	165+20	LT	1	1	CTH EE
R6-17	165+20	LT	1	---	ARROW
R6-18	100+60EE	LT	1	1	STOP
R6-19	165+70	RT	1	1	NORTH
R6-20	165+70	RT	1	---	CTH E
R6-21	167+05	RT	1	1	PEDESTRIAN XING
R6-22	167+05	RT	1	---	25 MPH
R6-23	170+05	LT	1	1	JCT
R6-24	170+05	LT	1	---	CTH EE
R6-25	173+10	LT	1	1	PEDESTRIAN XING
R6-26	173+60	RT	1	1	PEDESTRIAN XING
R6-27	180+05	LT	1	1	PEDESTRIAN XING
R6-28	180+05	LT	1	---	25 MPH
R7-01	181+98	RT	1	1	CURVE
R7-02	121+95SLW	RT	1	1	STOP
R7-03	195+35	LT	1	1	SPEED LIMIT 35 MPH
R7-04	195+45	RT	1	1	SPEED LIMIT 55 MPH
R7-05	196+45	LT	1	1	CURVE
R7-06	197+50	LT	1	1	INTERSECTION
R7-07	201+00	LT	1	1	REDUCED SPEED AHEAD
R7-08	201+00	LT	1	---	35 MPH
R8-01	131+65L	RT	1	1	STOP
R8-02	141+60M	RT	1	1	STOP
R9-01	236+50	RT	1	1	INTERSECTION
R9-02	150+40N	LT	1	1	STOP
R9-03	245+25	LT	1	1	INTERSECTION
R10-01	270+90	RT	1	1	INTERSECTION
R10-02	162+05CRW	RT	1	1	STOP
R10-03	170+45CRE	LT	1	1	STOP
R10-04	284+55	LT	1	1	INTERSECTION
R11-01	300+25	RT	1	1	CURVE
R11-02	308+65	RT	1	1	CURVE
R11-03	309+85	LT	1	1	CURVE
R11-06	323+80	LT	1	1	CURVE
TOTAL PROJECT 6844-00-71			80	69	

NUMBER	STATION	LOCATION	TYPE II EACH	SUPPORTS EACH	DESCRIPTION
R11-04	314+95	RT	1	1	STOP
R11-05	316+95	RT	1	1	STOP
TOTAL PROJECT 6844-00-70			2	2	

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		PAVEMENT MARKING							
		646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE	646.0126 PAVEMENT MARKING EPOXY 8-INCH WHITE	646.0406 PAVEMENT MARKING SAME DAY EPOXY	649.0100 TEMPORARY* PAVEMENT MARKING 4-INCH	647.0736 PAVEMENT MARKING DIAGONAL EPOXY 18-INCH	647.0786 PAVEMENT MARKING CROSSWALK EPOXY 18-INCH		
STATION - STATION	LOCATION	LF	LF	LF	LF	LF	LF	DESCRIPTION	
-0+81.43 - 0+18	EDGE LINE, LT	100	---	---	---	---	---	UPPER LAYER	
-0+81.43 - 41+19	EDGE LINE, RT	4,144	---	---	---	---	---	UPPER LAYER	
1+67 - 54+06	EDGE LINE, LT	5,240	200	---	---	---	---	UPPER LAYER	
42+50 - 66+72	EDGE LINE, RT	2,425	200	---	---	---	---	UPPER LAYER	
55+43 - 158+75	EDGE LINE, LT	10,337	200	---	---	---	---	UPPER LAYER	
68+11 - 134+64	EDGE LINE, RT	6,643	200	---	---	---	---	UPPER LAYER	
135+90 - 142+86	SKIPS & EDGE LINE, RT	883	---	---	---	---	---	UPPER LAYER	
144+15 - 156+06	EDGE LINE, RT	1,139	---	---	---	---	---	UPPER LAYER	
157+44 - 164+34	EDGE LINE, RT	691	200	---	---	---	---	UPPER LAYER	
160+05 - 161+79	EDGE LINE, LT	175	---	---	---	---	---	UPPER LAYER	
163+16 - 189+54	EDGE LINE, LT	2,637	200	---	---	---	---	UPPER LAYER	
165+73 - 240+30	EDGE LINE, RT	7,457	---	---	---	---	---	UPPER LAYER	
190+82 - 222+85	EDGE LINE, LT	3,204	200	---	---	---	---	UPPER LAYER	
224+15 - 229+94	EDGE LINE, LT	581	200	---	---	---	---	UPPER LAYER	
241+65 - 277+70	EDGE LINE, RT	3,606	200	---	---	---	---	UPPER LAYER	
231+24 - 277+47	EDGE LINE, LT	4,625	200	---	---	---	---	UPPER LAYER	
278+79 - 322+41	EDGE LINE, LT	4,359	200	---	---	---	---	UPPER LAYER	
279+00 - 315+18	EDGE LINE, RT	3,621	205	---	---	---	---	UPPER LAYER	
316+39 - 322+41	EDGE LINE, RT	600	---	---	---	---	---	UPPER LAYER	
-0+81.43 - 55+77.12	DOUBLE YELLOW	---	---	11,317	---	---	---	UPPER LAYER	
55+77.12 - 95+50	SKIPS, NO PASSING	---	---	3,651	---	---	---	UPPER LAYER	
95+50 - 195+40	DOUBLE YELLOW	---	---	19,980	---	---	---	UPPER LAYER	
195+40 - 202+00	NO PASSING, SKIPS	---	---	825	---	---	---	UPPER LAYER	
202+00 - 273+00	SKIPS	---	---	6,352	---	---	---	UPPER LAYER	
273+00 - 283+50	DOUBLE YELLOW	---	---	2,100	---	---	---	UPPER LAYER	
283+50 - 293+40	SKIPS	---	---	248	---	---	---	UPPER LAYER	
293+40 - 302+97.86	SKIPS, NO PASSING	---	---	1200	---	---	---	UPPER LAYER	
302+97.86 - 318+00	DOUBLE YELLOW	---	---	3004	---	---	---	UPPER LAYER	
318+00 - 322+40.54	SKIPS, NO PASSING	---	---	551	---	---	---	UPPER LAYER	
-0+81.43 - 17+05.81	DOUBLE YELLOW	---	---	---	3,575	---	---	LOWER LAYER	
17+12.97 - 55+77.12	DOUBLE YELLOW	---	---	---	7,728	---	---	LOWER LAYER	
55+77.12 - 95+50	SKIPS, NO PASSING	---	---	---	3,651	---	---	LOWER LAYER	
95+50 - 116+40	DOUBLE YELLOW	---	---	---	4,180	---	---	LOWER LAYER	
116+58 - 195+40	DOUBLE YELLOW	---	---	---	15,764	---	---	LOWER LAYER	
195+40 - 202+00	NO PASSING, SKIPS	---	---	---	825	---	---	LOWER LAYER	
202+00 - 273+00	SKIPS	---	---	---	6,352	---	---	LOWER LAYER	
273+00 - 283+50	DOUBLE YELLOW	---	---	---	2,100	---	---	LOWER LAYER	
283+50 - 293+40	SKIPS	---	---	---	248	---	---	LOWER LAYER	
293+40 - 302+97.86	SKIPS, NO PASSING	---	---	---	1200	---	---	LOWER LAYER	
302+97.86 - 318+00	DOUBLE YELLOW	---	---	---	3004	---	---	LOWER LAYER	
318+00 - 322+40.54	SKIPS, NO PASSING	---	---	---	551	---	---	LOWER LAYER	
174+94	CROSSWALK**	---	---	---	---	77	44	2' SPACE BETWEEN DIAGONALS	
176+19	CROSSWALK**	---	---	---	---	63	44	2' SPACE BETWEEN DIAGONALS	
178+05	CROSSWALK**	---	---	---	---	63	44	2' SPACE BETWEEN DIAGONALS	
TOTAL PROJECT 6844-00-71		62,465	2,405	49,228	49,178	203	132		

* TEMPORARY PAVEMENT MARKING TO BE PLACED ON SAME DAY AS PAVING THE LOWER LAYER
**CROSSWALK HAS 12' SPACE BETWEEN LINES FOR STA 174+94 AND 10' SPACE BETWEEN LINES FOR STA 176+19 AND STA 178+05

LOCATING NO-PASSING ZONES	
	648.0100 LOCATING NO-PASSING ZONES MI
STATION - STATION	
-0+81.43 - 322+40.54	6.12
TOTAL PROJECT 6844-00-71	
6.12	

CONSTRUCTION STAKING	
	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE
STATION - STATION	LF
-0+81.43 - 322+40.54	32,322
10+90.24TL - 12+25TL	135
20+25H - 21+42.07H	117
30+40CL - 31+75CL	135
40+25B - 41+75.59B	151
50+25S - 51+92.98S	168
60+25P - 61+70P	145
70+25E - 71+52.90E	128
81+52.51A - 82+25A	73
90+88.46AK - 92+25AK	137
100+25EE - 101+49.19EE	124
120+53SLW - 122+15SLW	162
130+40.75L - 131+70L	129
140+41.43M - 141+70M	129
150+25N - 151+70.64N	146
161+05.67CRW - 162+25CRW	119
170+25CRE - 171+34.16CRE	109
TOTAL PROJECT 6844-00-71	
34,429	

REFERENCE	
STATION - STATION	LF
170+62.26LC - 171+85LC	123
TOTAL PROJECT 6844-00-70	
123	

SAWING			
STATION	LOCATION	690.0150	690.0250
		SAWING ASPHALT LF	SAWING CONCRETE LF
24+90	DRIVEWAY RT	17	---
64+40	DRIVEWAY LT	18	---
104+80	DRIVEWAY LT	17	---
137+75	DRIVEWAY RT	12	---
139+85	DRIVEWAY LT	34	---
140+20	DRIVEWAY RT	12	---
140+90	DRIVEWAY RT	10	---
71+05E	DRIVEWAY RT	---	16
162+85	DRIVEWAY RT	11	---
164+05	DRIVEWAY RT	14	---
164+75	DRIVEWAY LT	18	---
166+45	DRIVEWAY RT	12	---
173+20	DRIVEWAY RT	23	---
174+85	DRIVEWAY RT	26	---
174+90	DRIVEWAY LT	11	---
176+20	DRIVEWAY LT	9	---
176+20	DRIVEWAY RT	10	---
178+02	DRIVEWAY RT	---	8
178+05	DRIVEWAY LT	53	---
181+55	DRIVEWAY LT	39	---
225+90	DRIVEWAY LT	13	---
229+80	DRIVEWAY RT	15	---
231+60	DRIVEWAY RT	18	---
246+73	DRIVEWAY RT	19	---
255+15	DRIVEWAY RT	19	---
255+15	DRIVEWAY RT	---	18
-0+81.43	ROADWAY	22	---
10+90.24TL	ROADWAY	21	---
21+42.07H	ROADWAY	16	---
30+40.07CL	ROADWAY	20	---
41+75.59B	ROADWAY	19	---
51+92.98S	ROADWAY	19	---
61+70P	ROADWAY	17	---
71+52.90E	ROADWAY	18	---
81+52.51A	ROADWAY	21	---
90+88.46AK	ROADWAY	18	---
101+49.19EE	ROADWAY	20	---
120+53SLW	ROADWAY	20	---
130+40.75L	ROADWAY	18	---
140+41.43M	ROADWAY	20	---
151+70.64N	ROADWAY	18	---
161+05.67CRW	ROADWAY	21	---
171+34.16CRE	ROADWAY	21	---
322+40.54	ROADWAY	22	---
TOTAL PROJECT 6844-00-71		781	42
STATION	LOCATION	ASPHALT LF	CONCRETE LF
170+62.26LC	ROADWAY	24	---
TOTAL PROJECT 6844-00-70		24	0

R/W PROJECT NUMBER 6844-00-01	SHEET NUMBER	TOTAL SHEETS
FEDERAL PROJECT NUMBER	4.01	24
PLAT OF RIGHT-OF-WAY REQUIRED FOR WAUSHARA COUNTY LINE - WAUPACA (WAUSHARA CO. LINE - HIGH POINT RIDGE RD)		
CTH E WAUPACA COUNTY		
CONSTRUCTION PROJECT NUMBER 6844-00-70/71		

END RELOCATION ORDER
STA. 322+00.00

1,029.43' NORTH OF AND 839.73' EAST OF THE
SOUTHWEST CORNER OF SEC. 5, T-21-N, R-12-E

WAUPACA CO.

WAUSHARA CO.

BEGIN RELOCATION ORDER
STA. -0+81.86

170.55' SOUTH OF AND 1,584.68' EAST OF THE
SOUTHWEST CORNER OF SEC. 31, T-21-N, R-12-E

CONVENTIONAL ABBREVIATIONS			
ACCESS POINT	AP	REFERENCE LINE	R/L
ACCESS POINT LOCATION	APL	RELEASE OF RIGHTS	R/R
ACCESS RIGHTS	AR	REMAINING	REM.
ADJACENT	ADJ.	RIGHT-OF-WAY	R/W
AND OTHERS	ET AL.	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT TLE	TLE
CORNER	COR.	VOLUME	VOL.
CORNER MONUMENT	CM	CURVE DATA	
EASEMENT	EASE.	LONG CURVE	LCH
HIGHWAY EASEMENT	H.E.	LONG SHORT BEARING	LSB
LAND CONTRACT	LC	RADIUS	R
MONUMENT	MON.	DEGREE OF CURVE	D
PACE	P	CENTRAL ANGLE OR DELTA	DELTA
PERMANENT LIMITED EASEMENT PLE	PLE	LENGTH OF CURVE	L
PROPERTY LINE	PL	TANGENT	TAN
RECORDED AS	REA		

CONVENTIONAL SYMBOLS			
ROUND IRON PIPE-IRON	1/2" (1/2" DIA.)	PROPOSED R/W LINE	---
R/W MONUMENT	• (1/2" DIA.)	EXISTING H.E. LINE	---
R/W STAKE	• (1/2" DIA.)	PROPERTY LINE	---
SECTION CORNER MONUMENT	• (1/2" DIA.)	LOT & TIE LINE	---
SECTION CORNER SYMBOL	• (1/2" DIA.)	ADJ. INTERCEPT	---
FREE HATCH VARIATION	---	CORPORATE LIMITS	---
TEMPORARY LIMITED EASEMENT	---	NO ACCESS	---
PERMANENT LIMITED EASEMENT	---	BY PREVIOUS ACQUISITION	---
R/W BOUNDARY POINT	---	BY ACQUISITION	---
PARTIAL NUMBER	---	NO ACCESS	---
UTILITY PARTIAL NUMBER	---	BY STATUTORY AUTHORITY	---
MONUMENT	---	SECTION LINE	---
BUILDING	---	QUARTER LINE	---
		SIXTEENTH LINE	---
		EXISTING CENTERLINE	---
		PROPOSED REFERENCE LINE	---
		PARALLEL OFFSET	---

CONVENTIONAL UTILITY SYMBOLS

WATER	---
SEWER	---
TELEPHONE	---
OVERHEAD	---
TRANSMISSION LINE	---
ELECTRIC	---
CABLE TELEVISION	---
FIBER OPTIC	---
UTILITY TOWER	---
STORM SEWER	---
POWER POLE	---
TELEPHONE POLE	---
TELEPHONE PEDESTAL	---
ELECTRIC TOWER	---

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, WAUPACA COUNTY, NAD 83 (2007) IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" x 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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



LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 6.114 MI.

ACCEPTED FOR
WAUPACA COUNTY

6/24/14 *[Signature]*
DATE HIGHWAY COMMISSIONER

ORIGINAL PLAT PREPARED BY
MSA
PROFESSIONAL SERVICES
TRANSPORTATION - MUNICIPAL
DEVELOPMENT - ENVIRONMENTAL

1230 South Boulevard, Baraboo, WI 53913
608-356-2771 1-800-362-4505 Fax: 608-356-2779
MSA PROFESSIONAL SERVICES

WISCONSIN
GREGORY P. RHINEHART
S-1478
FRIENDSHIP, WI
LAND SURVEYOR

DATE 6/13/14 *[Signature]*
(Registered Land Surveyor)

E

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	NEW	R/W ACRES REQUIRED EXISTING	TOTAL	TLE ACRES
2	4.10	SCOTT F. & DAWN S. SEWARD	FEE & TLE	0.06	2.26	2.32	0.02
3	4.11	TODD R. WILCOX	FEE	0.04	0.52	0.56	---
4	4.11	RANDY B. & CHRISTINE T. LORRIGAN	FEE	0.07	0.72	0.79	---
5	4.11	BONNIE L. ANDERSON	TLE	---	---	---	0.01
6	4.12	JOHN A. & BONNIE L. ANDERSON	FEE	0.01	0.99	1.00	---
7	4.12 - 4.13	GATEWAY REAL ESTATE & CONSTRUCTION, LLP	FEE & TLE	0.04	1.45	1.49	0.03
8	4.13	ESTATE OF MARY GREENWOOD	FEE	0.02	---	0.02	---
9	4.13	JOHN T. GILLIGAN 1995 CONVERTIBLE TRUST & JANICE L. ERETH 1995 CONVERTIBLE TRUST	FEE	0.01	---	0.01	---
10	4.13	JOEL R. KEMPFERT	FEE	0.03	---	0.03	---
11	4.13	SUSAN T. MILLER	TLE	---	---	---	0.01
12	4.14	WILLIAM & MARILYN CARAMORE	FEE & TLE	0.14	2.28	2.42	0.06
13	4.15	FRANK E. MEATING & TERI L.R. MEATING	FEE	0.02	---	0.02	---
14	4.15	CATHERINE PAKALA, GLORIA C. WEDGE, & HARVEY E. WEDGE	TLE	---	---	---	0.08
15	4.16	MARTHA J. ATTOE	FEE	0.02	---	0.02	---
16	4.16	EMIL & JACQUELINE P. ROSANDICH	FEE	0.03	---	0.03	---
17	4.16	THIBAUDEAU REAL ESTATE, LLC	FEE	0.02	---	0.02	---
18	4.16	RICHARD E. & CAROLINE L. NAVIN	FEE	0.05	---	0.05	---
19	4.16 - 4.17	LAWRENCE GOHLKE & RICHARD GOHLKE	FEE & TLE	0.12	---	0.12	0.01
20	4.16 - 4.17	DEAN J. FISCHER	FEE	0.04	---	0.04	---
21	4.17	JOHN L. & GLORIA J. STEARNS	FEE	0.04	---	0.04	---
22	4.17	MARGARET J. HANSON	FEE	0.06	---	0.06	---
23	4.17	DONALD R. HANDRICH & SALLY MARCHEL-HANDRICH	FEE	0.06	---	0.06	---
24	4.17	LANA MARIE GRAHAM	FEE	0.04	---	0.04	---
25	4.17	FREDRICK K. MOSS & MARTIN E. SCHEIDER	FEE	0.09	---	0.09	---
26	4.17 - 4.18	THOMAS J. & LAVERNE J. PINKOWSKI	FEE	0.03	---	0.03	---
27	4.18	JEFFREY L. & NICOLE N. BARTON	FEE	0.28	---	0.28	---
29	4.18	DAVID A. & KARMI SUE BUCKLEY	FEE & TLE	0.03	---	0.03	0.01
30	4.18	TERRY J. & SHARILYN L. WILSON	FEE	0.06	---	0.06	---
31	4.18 - 4.20	WISCONSIN & NORTHERN MICHIGAN DISTRICT COUNCIL ASSEMBLIES OF GOD	FEE & TLE	0.25	---	0.25	0.13
32	4.20	MICHAEL J. & MARLENE T. YOGERST	FEE	0.01	---	0.01	---
33	4.20	TAMMY RAE WOLTER	FEE	0.11	---	0.11	---
34	4.20	KURT D. ENGLE	FEE	0.06	0.36	0.42	---
35	4.21	JUSTIN N. BECHARD	FEE	0.03	---	0.03	---

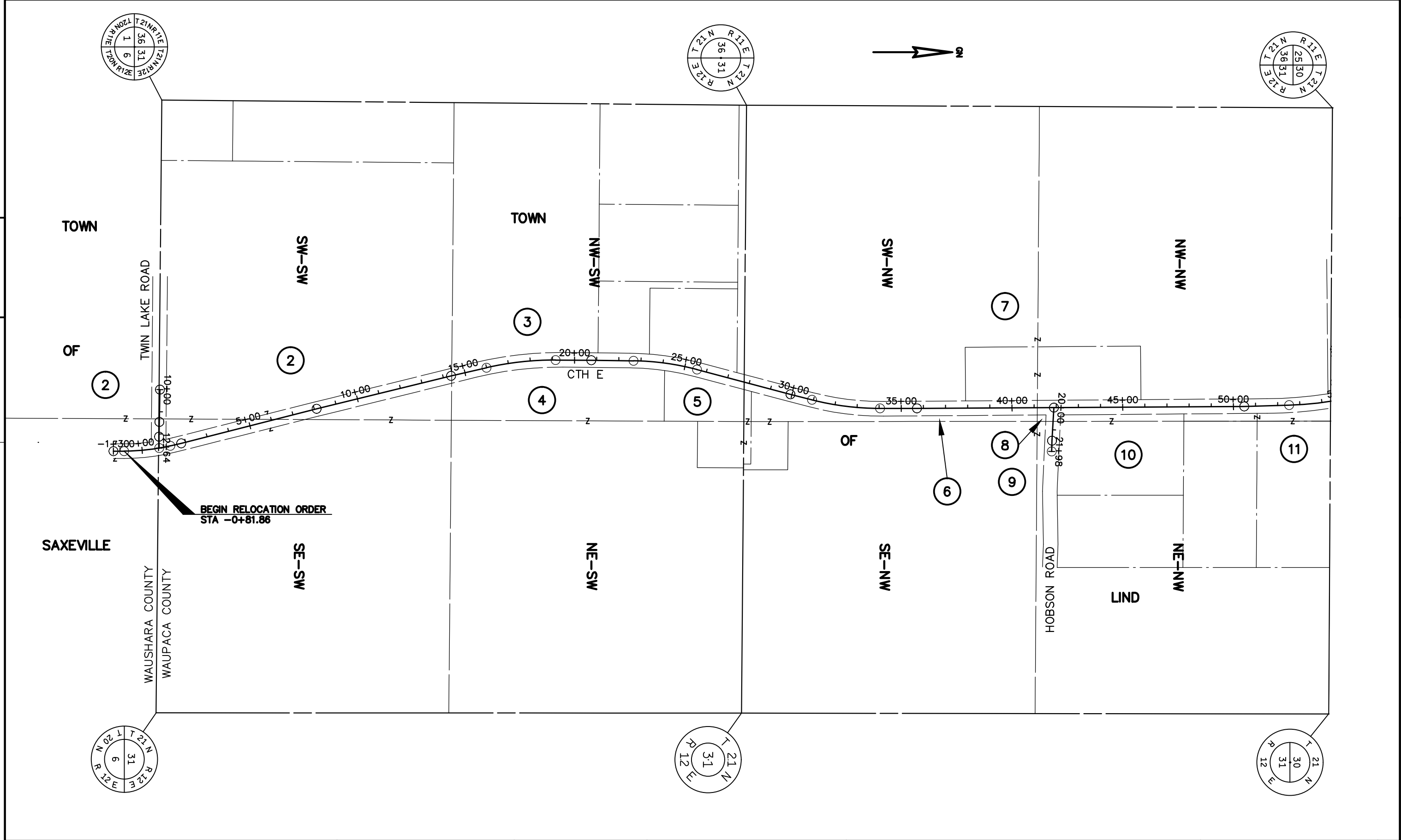
4

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	NEW	R/W ACRES REQUIRED EXISTING	TOTAL	TLE ACRES
36	4.21	JON DEE M. & JULIE L. GARCIA	FEE	0.05	---	0.05	---
37	4.21	MICHAEL J. & CINDY L. ZEMKE	FEE	0.03	---	0.03	---
39	4.21	RICHARD L. & DARLA A. WEST	FEE	0.03	---	0.03	---
40	4.21	BARTLEY A. & STACY A. BUHLER	FEE	0.05	---	0.05	---
41	4.21	NICHOLAS J. & MARGARET M WOZNIAK	FEE	0.03	---	0.03	---
42	4.21	LLOYD L. PELZER	FEE	0.01	---	0.01	---
43	4.22	PAUL G. & FRANCES L. JAHNKE	FEE	0.03	---	0.03	---
44	4.22	LANCE T. & KIM T. PENNEY	FEE	0.07	---	0.07	---
45	4.22	DANNY L. & BARBARA J. GUSTKE	FEE & TLE	0.03	0.25	0.28	0.01
46	4.23	EDWARD A. & HELEN A. MARKO	FEE	0.09	0.22	0.31	---
47	4.23	GREGORY D. DHEIN	FEE	0.03	---	0.03	---
48	4.23	DUANE P. ROGGOW	FEE	0.06	0.47	0.53	---
49	4.23	GARY L. WINTERS	FEE	0.03	---	0.03	---
50	4.24	EVELYN M. TOWNE	FEE	0.03	0.70	0.73	---
60	4.10, 4.14 - 4.16, 4.19, 4.21, & 4.23	AT&T	RELEASE OF RIGHTS	---	---	---	---
61	4.10, 4.11, & 4.16 - 4.21	WE ENERGIES	RELEASE OF RIGHTS	---	---	---	---
62	4.14, 4.17, 4.20, & 4.21	CHARTER COMMUNICATION	RELEASE OF RIGHTS	---	---	---	---

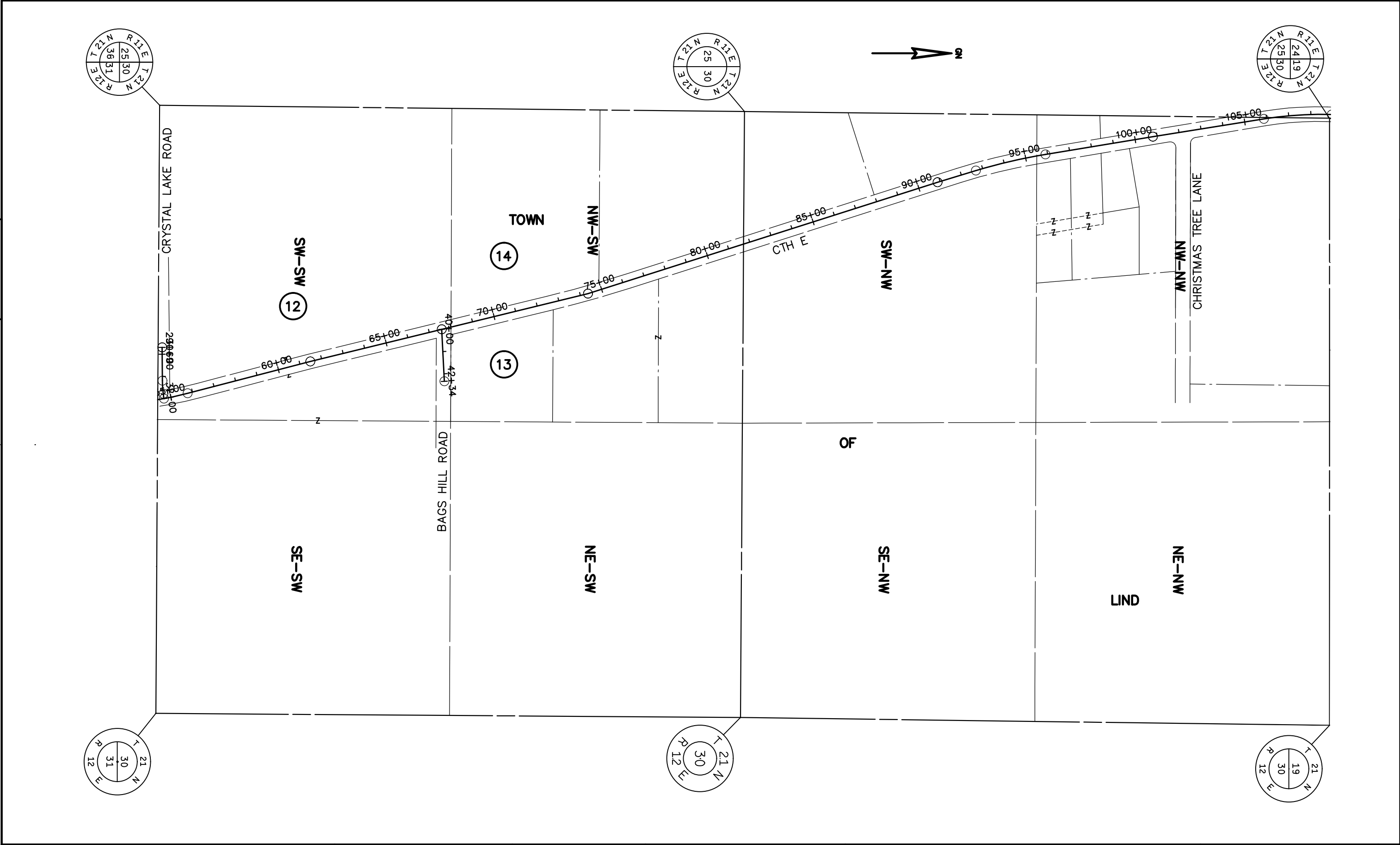
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REVISION DATE 5/9/14 N.C. 6/13/14 N.C. _____ _____ _____	DATE MAY 7, 2014	NOT TO SCALE	HWY: CTH E	STATE R/W PROJECT NUMBER 6844-00-01	PLAT SHEET 4.04	
			COUNTY: WAUPACA	CONSTRUCTION PROJECT NUMBER 6844-00-70/71	PS&E SHEET	E

4

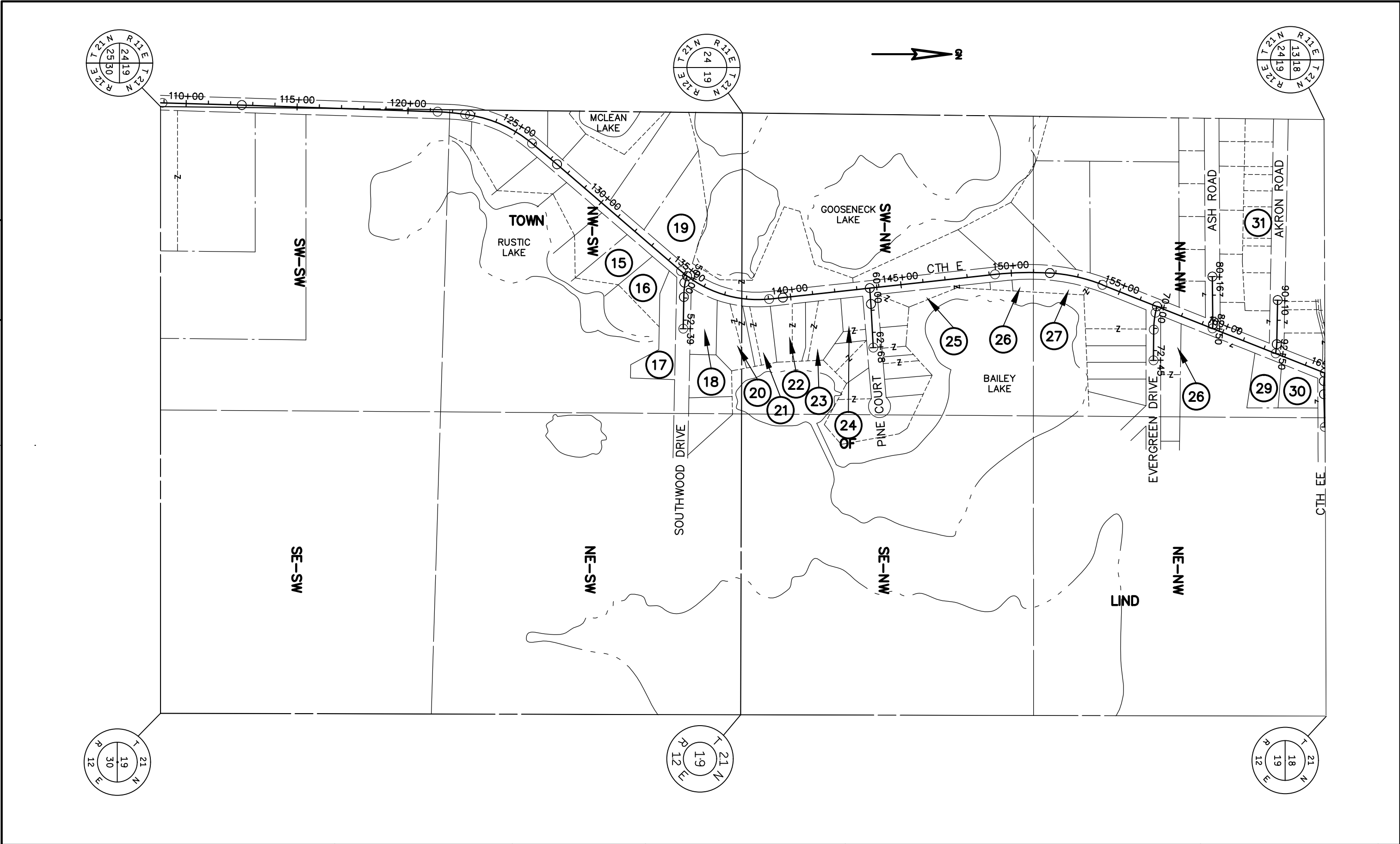
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REVISION DATE 5/9/14 N.C. 6/13/14 N.C.	DATE MAY 7, 2014	NOT TO SCALE	HWY: CTH E	STATE R/W PROJECT NUMBER 6844-00-01	PLAT SHEET 4.05	E
			COUNTY: WAUPACA	CONSTRUCTION PROJECT NUMBER 6844-00-70/71	PS&E SHEET	

4

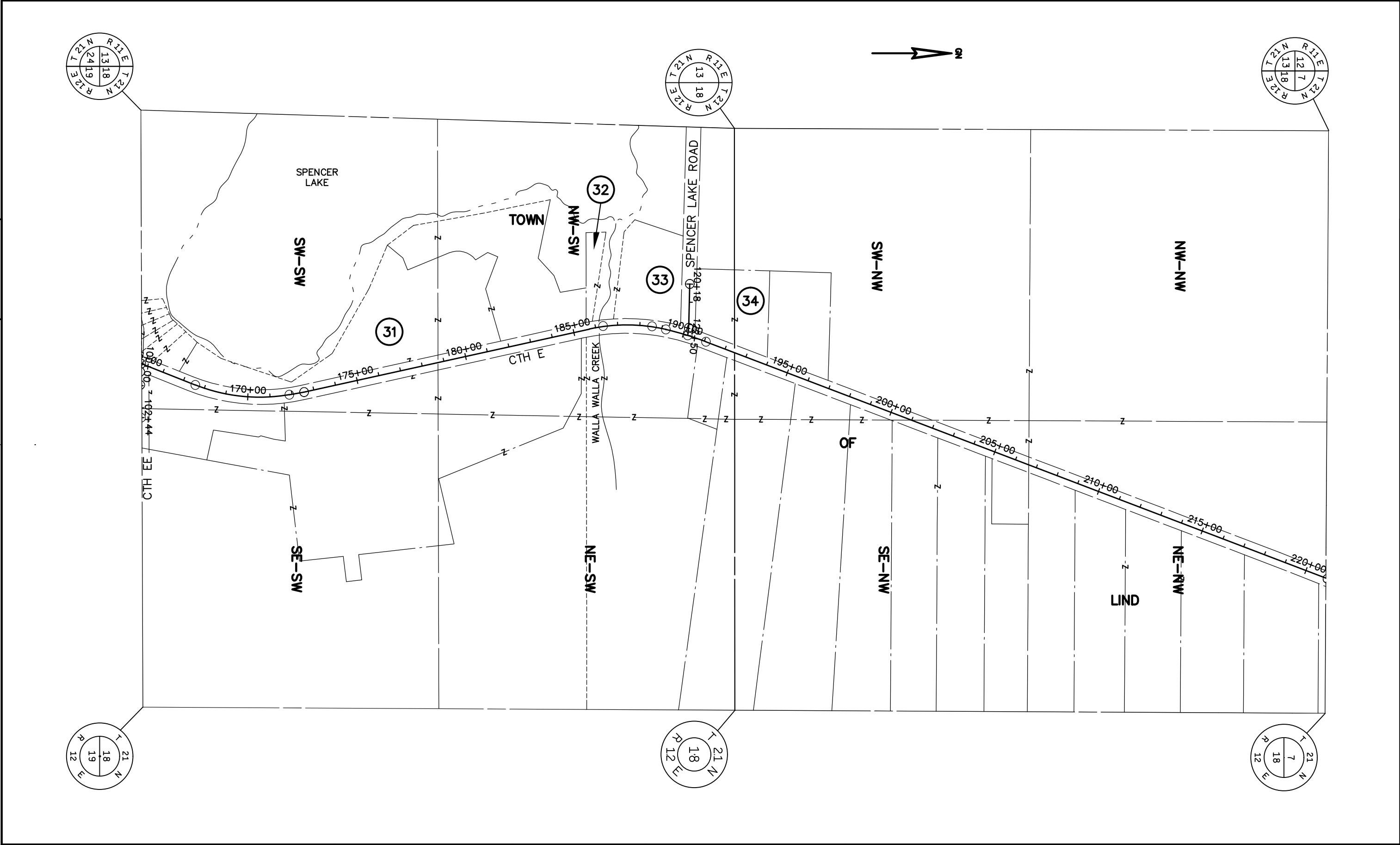
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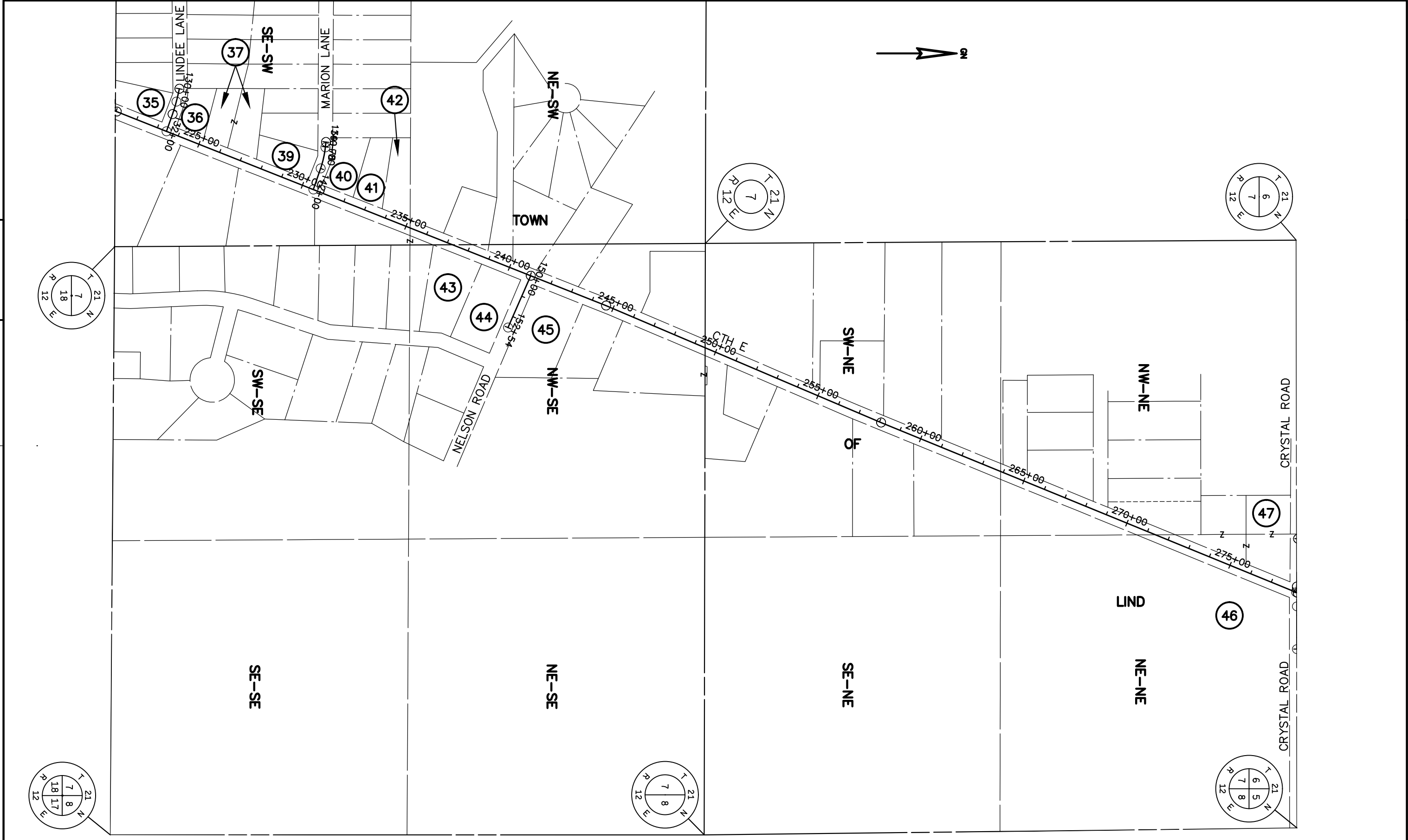
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	6/13/14 N.C.				COUNTY: WAUPACA	CONSTRUCTION PROJECT NUMBER 6844-00-70/71	PS&E SHEET	

4

4



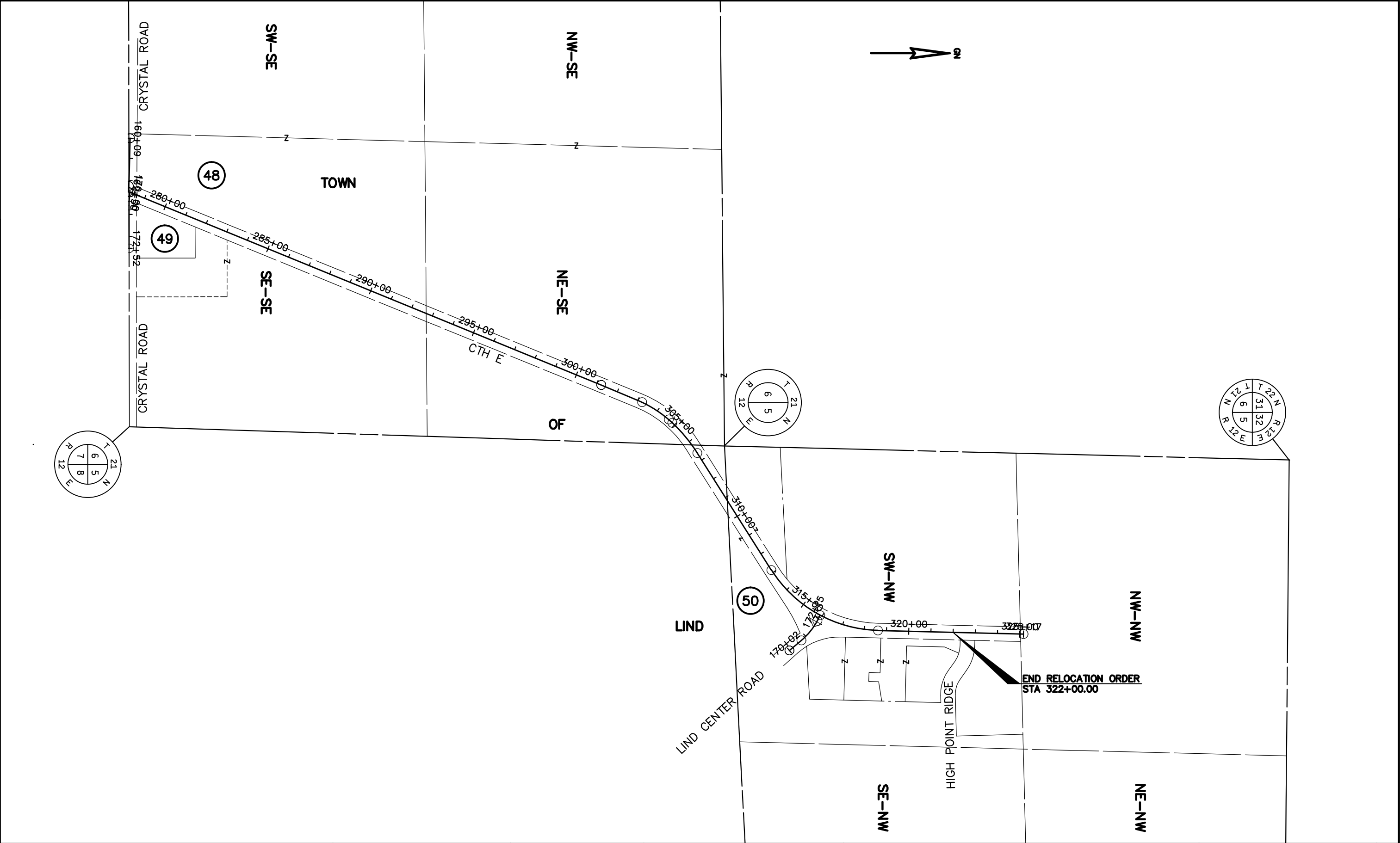
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			COUNTY: WAUPACA	CONSTRUCTION PROJECT NUMBER 6844-00-70/71	PS&E SHEET	E



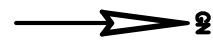
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	6/13/14 N.C.			COUNTY: WAUPACA	CONSTRUCTION PROJECT NUMBER 6844-00-70/71	PS&E SHEET	

4

4



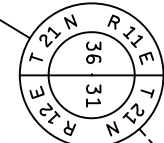
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			COUNTY: WAUPACA	CONSTRUCTION PROJECT NUMBER 6844-00-70/71	PS&E SHEET	



R/W COURSE TABLE		
COURSE	BEARING	DISTANCE
101 – 99	N15°-06'-45"W	60.50'
99 – 102	N53°-22'-46"W	35.29'
102 – 103	N89°-28'-10"W	100.28'
104 – 105	S89°-28'-10"E	74.76'
105 – 106	N59°-05'-10"E	23.47'
106 – 107	N12°-40'-38"E	33.13'
107 – 108	N10°-48'-48"W	184.33'
108 – 109	N14°-07'-24"W	461.48'
109 – 110	N13°-50'-40"W	734.98'
501 – 502	N14°-07'-24"W	663.91'
502 – 503	N13°-50'-40"W	688.05'

NOTE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH E AND SIDE ROADS
ESTABLISHED FROM THE CENTERLINE OF EXISTING PAVEMENTS,
RECORDED SURVEY PLATS, AND CERTIFIED SURVEY MAPS.

HARRISON MONUMENT
Y = 302,719.484
X = 531,885.972



CSM 5309
VOL. 17, PG. 293-294
LOT 3A

CSM 3637
VOL. 10, PG. 390-391
LOT 1

TODD R. WILCOX

CSM 5309
VOL. 17, PG. 293-294
LOT 3B

115 - 116
L = 74.07'
LC = 74.06'
LCB = N00°-43'-03"W
R = 1,628.63

110 - 111
L = 80.02'
LC = 80.01'
LCB = N12°-26'-12"W
R = 1,628.63

117 - 118
L = 315.29'
LC = 314.48'
LCB = N07°-41'-27"E
R = 1,271.16

508 - 509
L = 298.92'
LC = 298.15'
LCB = N07°-41'-27"E
R = 1,205.16

N14°-47'-47"E
211.68'

N14°-54'-04"E
228.53'

S75°-05'-56"E
5.35'

N14°-47'-47"E
228.53'

N14°-54'-04"E
55.00'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

S75°-05'-56"E
5.45'

R/W POINT COORDINATES

PT. NO.	Y	X
110	301,484.908	533,050.336
111	301,563.044	533,033.104
112	301,561.442	533,025.431
113	301,662.986	533,008.048
114	301,765.522	532,998.062
115	301,817.195	533,004.035
116	302,193.162	533,006.192
117	302,504.814	533,048.279
118	301,891.252	533,003.108
503	301,455.290	533,125.610
504	301,554.481	533,110.877
505	301,673.886	533,089.321
506	301,819.012	533,077.836
507	301,890.578	533,069.104
508	302,192.488	533,072.189
509	302,487.959	533,112.090

R/W COURSE TABLE

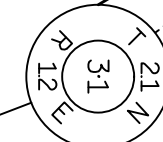
COURSE	BEARING	DISTANCE
111 - 112	S78°-12'-35"W	7.84'
112 - 113	N09°-42'-52"W	103.02'
113 - 114	N05°-33'-45"W	103.02'
114 - 115	N06°-35'-38"E	52.02'
116 - 117	N00°-35'-07"E	301.93'
118 - 119	N14°-47'-47"E	530.73'
503 - 504	N08°-26'-55"W	100.28'
504 - 505	N10°-14'-00"W	121.34'
505 - 506	N04°-31'-28"W	145.58'
506 - 507	N06°-43'-15"W	74.41'
507 - 508	N00°-35'-07"E	299.59'
509 - 510	N14°-47'-47"E	530.73'

PI STA = 17+57.37
Y = 301,699.031
X = 533,036.868
Δ = 13°03'35"R
D = 04°09'07"
T = 157.96
L = 314.55
R = 1,380.00
PC STA = 15+99.41
PT STA = 19+13.97

PI STA = 20+75.06
Y = 302,018.085
X = 533,038.022

PI STA = 24+11.78
Y = 302,354.770
X = 533,042.605
Δ = 14°07'17"R
D = 04°52'34"
T = 145.53
L = 289.59
R = 1,175.00
PC STA = 22+66.24
PT STA = 25+55.84

WAUPACA COUNTY
MONUMENT
Y = 302,696.893
X = 534,631.393



REVISION DATE 5/9/14 N.C.
6/13/14

DATE MAY 7, 2014

SCALE, FEET



HWY: CTH E

COUNTY: WAUPACA

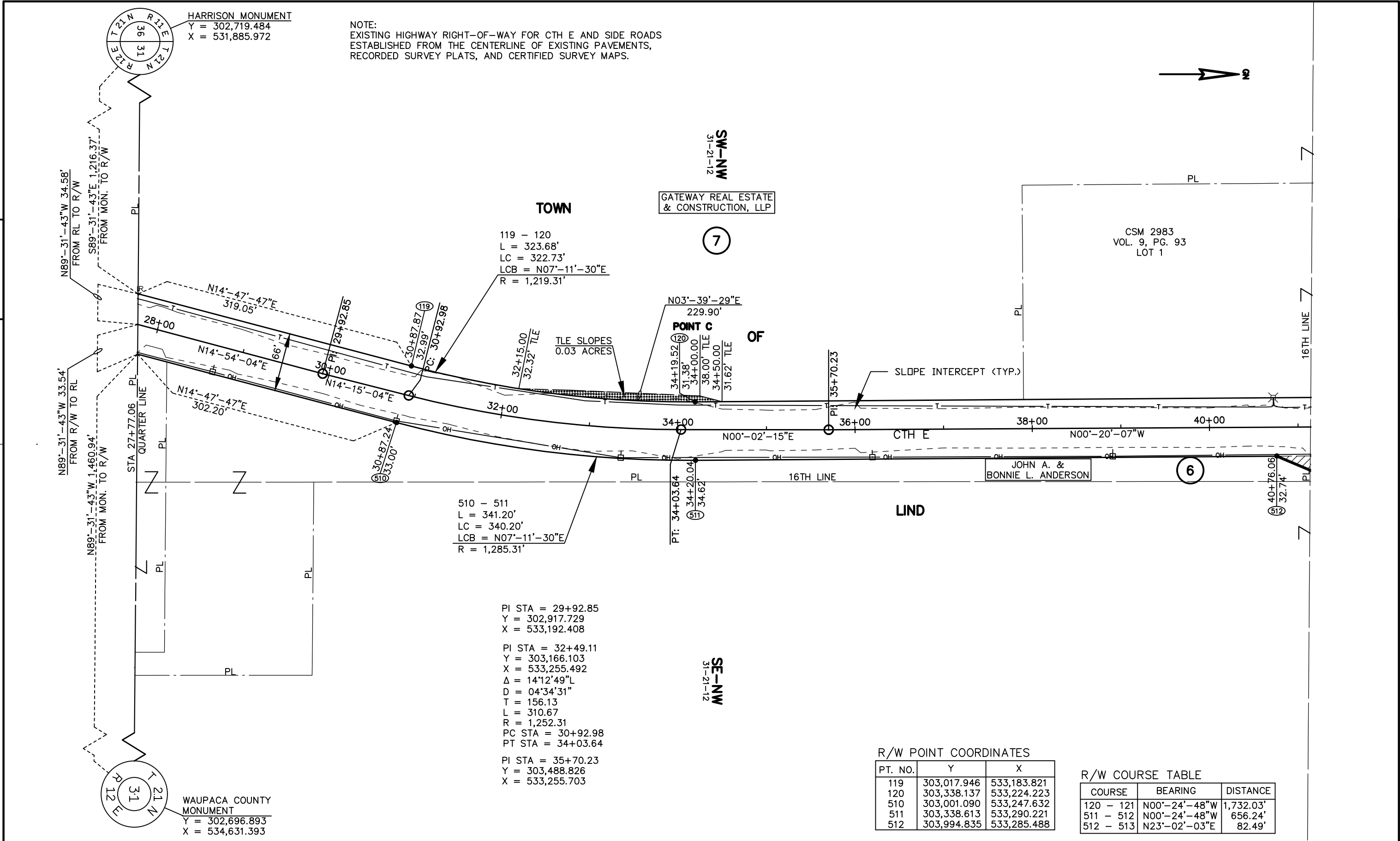
STATE R/W PROJECT NUMBER 6844-00-01

CONSTRUCTION PROJECT NUMBER 6844-00-70/71

PLAT SHEET 4.11

PS&E SHEET

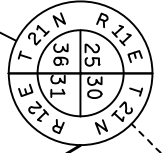
E



REVISION DATE 5/9/14 6/13/14 N.C.	DATE MAY 7, 2014	SCALE, FEET 0 50 100	HWY: CTH E COUNTY: WAUPACA	STATE R/W PROJECT NUMBER 6844-00-01 CONSTRUCTION PROJECT NUMBER 6844-00-70/71	PLAT SHEET 4.12 PS&E SHEET	E
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NOTE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH E AND SIDE ROADS
ESTABLISHED FROM THE CENTERLINE OF EXISTING PAVEMENTS,
RECORDED SURVEY PLATS, AND CERTIFIED SURVEY MAPS.

HARRISON MONUMENT
Y = 305,365.516
X = 531,898.099



4

4

ESTATE OF
MARY
GREENWOOD

CSM 2983
VOL. 9, PG. 93
LOT 1

TOWN

GATEWAY REAL ESTATE
& CONSTRUCTION, LLP

121 - 122
L = 195.17'
LC = 195.08'
LCB = N03°-23'-32"W
R = 1,877.00'

N00°-29'-40"W 13.03'
FROM R/W TO
SEC. LINE

CRYSTAL LAKE ROAD

S89°-38'-43"E 1,220.91'
FROM MON. TO SEC. LINE

S89°-38'-43"E 104.19'
FROM SEC. LINE TO RL

SLOPE INTERCEPT (TYP.)

OF

CTH E

CSM 5578
VOL. 18, PG. 433-434
OUTLOT 1

SUSAN T. MILLER

16TH LINE

LIND

L = 287.73'
LC = 287.46'
LCB = N04°-39'-20"W
R = 1,943.00'

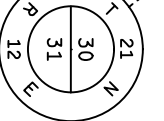
518 - 519
L = 483.81'
LC = 482.56'
LCB = N07°-32'-48"W
R = 1,943.00'

CSM 5578
VOL. 18, PG. 433-434
OUTLOT 2

PI STA = 50+48.55
Y = 304,967.117
X = 533,247.051

PI STA = 54+14.91
Y = 305,333.312
X = 533,236.128
Δ = 12°52'26"L
D = 05°57'05"
T = 163.59
L = 325.80
PC STA = 52+51.32
PT STA = 55+77.12

WAUPACA COUNTY
MONUMENT
Y = 305,348.566
X = 534,635.379



NW-NW
31-21-12

NE-NW
31-21-12

PI STA = 20+00.00
Y = 304,107.334
X = 533,252.083

PI STA = 21+49.81
Y = 304,099.091
X = 533,401.662

PI STA = 21+98.02
Y = 304,097.375
X = 533,449.843

R/W POINT COORDINATES

PT. NO.	Y	X
121	305,070.126	533,211.729
122	305,264.868	533,200.186
123	305,345.301	533,155.546
124	305,344.930	533,119.098
513	304,070.745	533,317.763
514	304,069.230	533,350.135
515	304,135.132	533,353.767
516	304,136.774	533,318.700
517	304,209.576	533,283.939
518	305,070.602	533,277.727

R/W COURSE TABLE

COURSE	BEARING	DISTANCE
122 - 123	N29°-01'-50"W	91.99'
123 - 124	S89°-25'-03"W	36.45'
513 - 514	S87°-19'-12"E	32.41'
515 - 516	N87°-19'-12"W	35.11'
516 - 517	N25°-31'-25"W	80.68'
517 - 518	N00°-24'-48"W	861.05'

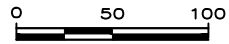
JOHN T. GILLIGAN 1995
CONVERTIBLE TRUST &
JANICE L. ERETH 1995
CONVERTIBLE TRUST

HOBSON ROAD

REVISION DATE 5/9/14 N.C.
6/13/14 N.C.

DATE MAY 7, 2014

SCALE, FEET



HWY: CTH E

COUNTY: WAUPACA

STATE R/W PROJECT NUMBER 6844-00-01

CONSTRUCTION PROJECT NUMBER 6844-00-70/71

PLAT SHEET 4.13

PS&E SHEET

E

NOTE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH E AND SIDE ROADS
ESTABLISHED FROM THE CENTERLINE OF EXISTING PAVEMENTS,
RECORDED SURVEY PLATS, AND CERTIFIED SURVEY MAPS.

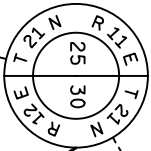
R/W POINT COORDINATES

PT. NO.	Y	X
131	307,109.378	532,757.975
132	307,468.320	532,657.234
133	307,996.224	532,488.658
525	306,677.471	533,054.821
526	306,677.822	532,961.393
527	306,738.033	532,916.038
528	307,124.948	532,822.113
529	307,488.397	532,720.106
530	307,995.769	532,558.087

R/W COURSE TABLE

COURSE	BEARING	DISTANCE
132 - 133	N17°-42'-36"W	554.17'
525 - 526	N89°-47'-06"W	93.43'
526 - 527	N36°-59'-22"W	75.38'
527 - 528	N13°-38'-42"W	398.15'
529 - 530	N17°-42'-36"W	532.61'

6"X6" STONE
W/DRILL HOLE
Y = 307,999.912
X = 531,926.168



S89°-37'-28"E 562.50'
FROM MON. TO R/W

S89°-37'-28"E 34.05'
FROM R/W TO RL
N89°-37'-28"W 35.38'
FROM R/W TO RL

CATHERINE PAKALA,
GLORIA C. WEDGE, &
HARVEY E. WEDGE

14

TOWN

131 - 132
L = 372.89'
LC = 372.81'
LCB = N15°-40'-39"W
R = 5,255.93'

60 AT&T

TLE SLOPES
0.08 ACRES

73+75.00
42.00' TLE
S76°-17'-25"W
8.28'
73+75.00
33.72' TLE
74+35.46

528 - 529
L = 377.57'
LC = 377.49'
LCB = N15°-40'-39"W
R = 5,321.93'

LIND

SLOPE INTERCEPT (TYP.)

FRANK E. MEATING &
TERI L.R. MEATING

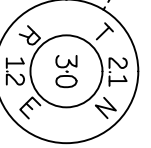
13

CSM 4154
VOL. 12, PG. 362-363
LOT 3

PI STA = 74+35.46
Y = 307,294.907
X = 532,746.080

PI STA = 90+87.82
Y = 308,869.286
X = 532,244.471

WAUPACA COUNTY
MONUMENT
Y = 307,982.027
X = 534,654.028

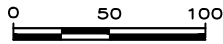


QUARTER LINE STA 81+71.28
N89°-37'-28"W 2,095.99'
FROM MON. TO R/W

REVISION DATE 5/9/14 N.C.
6/13/14 N.C.

DATE MAY 7, 2014

SCALE, FEET



HWY: CTH E

COUNTY: WAUPACA

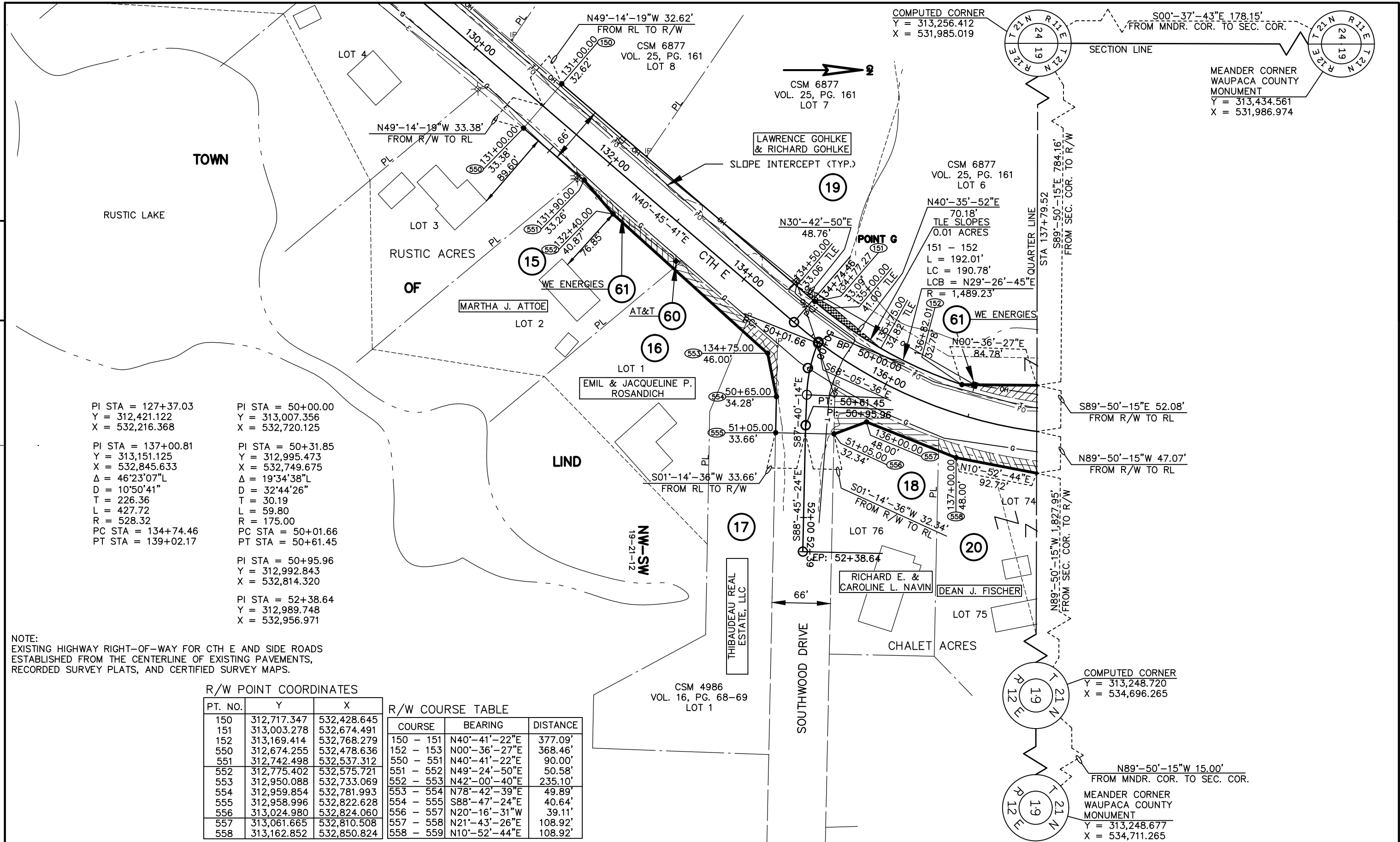
STATE R/W PROJECT NUMBER 6844-00-01

CONSTRUCTION PROJECT NUMBER 6844-00-70/71

PLAT SHEET 4.15

PS&E SHEET

E



PI STA = 127+37.03
Y = 312,421.122
X = 532,216.368

PI STA = 137+00.81
Y = 313,151.125
X = 532,845.633
Δ = 46°23'07"L
D = 10°50'41"
T = 226.36
L = 427.72
R = 528.32
PC STA = 134+74.46
PT STA = 139+02.17

PI STA = 50+00.00
Y = 313,007.356
X = 532,720.125

PI STA = 50+31.85
Y = 312,995.473
X = 532,749.675
Δ = 19°34'38"L
D = 32°44'26"
T = 30.19
L = 59.80
R = 175.00
PC STA = 50+01.66
PT STA = 50+61.45

PI STA = 50+95.96
Y = 312,992.843
X = 532,814.320

PI STA = 52+38.64
Y = 312,989.748
X = 532,956.971

NOTE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH E AND SIDE ROADS
ESTABLISHED FROM THE CENTERLINE OF EXISTING PAVEMENTS,
RECORDED SURVEY PLATS, AND CERTIFIED SURVEY MAPS.

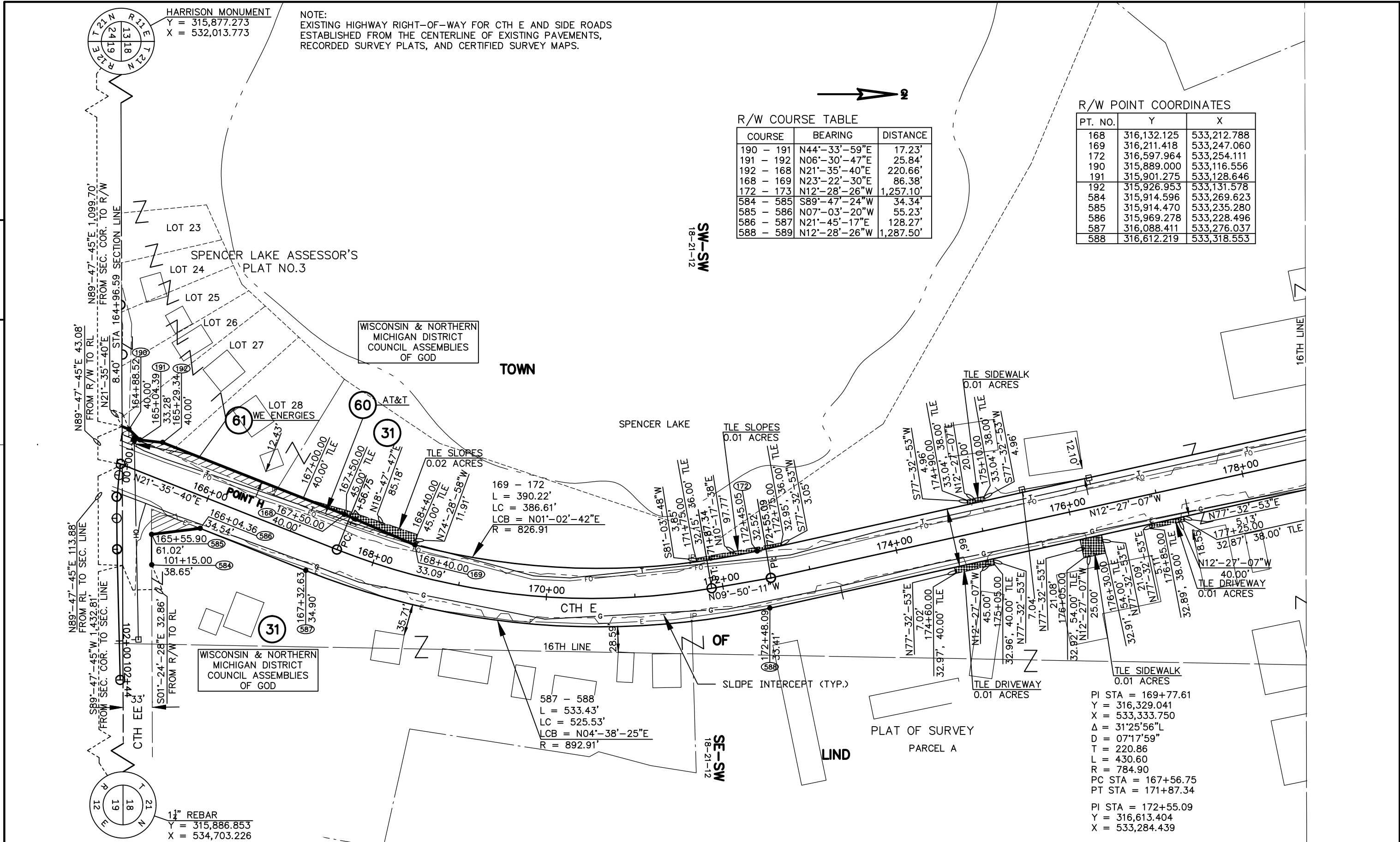
R/W POINT COORDINATES

PT. NO.	Y	X
150	312,717.347	532,428.645
151	313,003.278	532,674.491
152	313,169.414	532,768.279
550	312,674.255	532,478.636
551	312,742.498	532,537.312
552	312,775.402	532,575.721
553	312,950.088	532,733.069
554	312,959.854	532,781.993
555	312,958.996	532,822.628
556	313,024.980	532,824.060
557	313,061.665	532,810.508
558	313,162.852	532,850.824

R/W COURSE TABLE

COURSE	BEARING	DISTANCE
150 - 151	N40°-41'-22"E	377.09'
152 - 153	N00°-36'-27"E	368.46'
550 - 551	N40°-41'-22"E	90.00'
551 - 552	N49°-24'-50"E	50.58'
552 - 553	N42°-00'-40"E	235.10'
553 - 554	N78°-42'-39"E	49.89'
554 - 555	S88°-47'-24"E	40.64'
556 - 557	N20°-16'-31"W	39.11'
557 - 558	N21°-43'-26"E	108.92'
558 - 559	N10°-52'-44"E	108.92'

REVISION DATE 5/9/14 N.C. 6/13/14 N.C.	DATE MAY 7, 2014	SCALE, FEET 0 50 100	HWY: CTH E COUNTY: WAUPACA	STATE R/W PROJECT NUMBER 6844-00-01 CONSTRUCTION PROJECT NUMBER 6844-00-70/71	PLAT SHEET 4.16 PS&E SHEET	E
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REVISION DATE	5/9/14	DATE MAY 7, 2014	SCALE, FEET	HWY: CTH E	STATE R/W PROJECT NUMBER 6844-00-01	PLAT SHEET 4.19
	6/13/14 N.C.		0 50 100	COUNTY: WAUPACA	CONSTRUCTION PROJECT NUMBER 6844-00-70/71	PS&E SHEET
						E

NOTE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH E AND SIDE ROADS
ESTABLISHED FROM THE CENTERLINE OF EXISTING PAVEMENTS,
RECORDED SURVEY PLATS, AND CERTIFIED SURVEY MAPS.

WISCONSIN & NORTHERN
MICHIGAN DISTRICT
COUNCIL ASSEMBLIES
OF GOD

173 - 174
L = 15.96'
LC = 15.96'
LCB = N12'-00'-07"W
R = 968.60'

PARCEL C

SLOPE INTERCEPT (TYP.)

R/W POINT COORDINATES

PT. NO.	Y	X
173	317,855.067	532,976.017
174	317,870.675	532,972.699
175	317,944.358	532,943.403
176	318,129.161	532,942.684
177	318,274.797	532,963.595
178	318,297.690	532,957.773
179	318,310.664	532,943.559
180	318,311.827	532,903.576
181	318,377.807	532,905.220
182	318,387.464	532,984.485
183	318,423.791	533,014.834
184	318,594.398	533,079.830
185	318,662.056	533,112.902
186	318,708.785	533,130.691
589	317,869.323	533,040.459
590	317,886.490	533,036.836
591	318,098.562	533,019.804
592	318,385.398	533,078.206
593	318,685.289	533,192.367

PLAT OF SURVEY
PARCEL A

589 - 590
L = 17.54'
LC = 17.54'
LCB = N11'-55'-02"W
R = 902.60'

CSM 3134
VOL. 9, PG 359
OUTLOT 1
MICHAEL J. &
MARLENE T.
YOGERST

TOWN

MS-NW
18-2-12

CSM 2083
VOL. 6, PG 432-433
LOT 2

TAMMY RAE WOLTER

WE ENERGIES

61

33

N01'-25'-38"E 36.37'
FROM R/W TO RL
121+25.00
36.37'
121+65.00
36.54'
189+60.00
36.56'
189+40.00
45.24'

SPENCER LAKE ROAD

66'

BP: 120+18.27

N01'-25'-38"E 29.63'
FROM RL TO R/W
121+25.00
29.63'

N89'-56'-56"E 967.66'
FROM SEC. COR. TO R/W
QUARTER LINE
STA 192+45.72

CSM 6791
VOL. 25, PG 75
LOT 2

KURT D. ENGLE

34

N20'-51'-19"E
44.56'
192+75.00
40.00'

N89'-56'-56"E 42.82'
FROM R/W TO RL
194+00.00
33.19'

N20'-51'-19"E
192+00.00
33.19'

N89'-56'-56"E 35.16'
FROM RL TO R/W
141.73'

N20'-50'-26"E
179.16'

N20'-50'-26"E
194+00.00
33.19'

S69'-08'-41"E 33.19'
FROM R/W TO RL

S69'-08'-41"E 32.81'
FROM RL TO R/W

CSM 3252
VOL. 10, PG 74
LOT 1

S89'-56'-56"E 1,574.93'
FROM SEC. COR. TO R/W

S89'-56'-56"E 32.81'
FROM RL TO R/W

S69'-08'-41"E 32.81'
FROM RL TO R/W

S69'-08'-41"E 32.81'
FROM RL TO R/W

S69'-08'-41"E 32.81'
FROM RL TO R/W

S69'-08'-41"E 32.81'
FROM RL TO R/W

S69'-08'-41"E 32.81'
FROM RL TO R/W

S69'-08'-41"E 32.81'
FROM RL TO R/W

S69'-08'-41"E 32.81'
FROM RL TO R/W

S69'-08'-41"E 32.81'
FROM RL TO R/W

S69'-08'-41"E 32.81'
FROM RL TO R/W

S69'-08'-41"E 32.81'
FROM RL TO R/W

WAUPACA COUNTY
MONUMENT
Y = 318,554.229
X = 534,716.873

WAUPACA COUNTY
MONUMENT
Y = 318,554.229
X = 534,716.873

WAUPACA COUNTY
MONUMENT
Y = 318,554.229
X = 534,716.873

WAUPACA COUNTY
MONUMENT
Y = 318,554.229
X = 534,716.873

WAUPACA COUNTY
MONUMENT
Y = 318,554.229
X = 534,716.873

OF

31

WISCONSIN & NORTHERN
MICHIGAN DISTRICT
COUNCIL ASSEMBLIES
OF GOD

PARCEL B

CHARTER
COMMUNICATION

LIND

R/W COURSE TABLE

COURSE	BEARING	DISTANCE
174 - 175	N21'-40'-58"W	79.29'
175 - 176	N00'-13'-22"W	184.80'
176 - 177	N08'-10'-15"E	147.13'
177 - 178	N14'-16'-08"W	23.62'
178 - 179	N47'-36'-34"W	19.24'
179 - 180	N88'-20'-03"W	40.00'
181 - 182	N83'-03'-14"E	79.85'
182 - 183	N39'-52'-37"E	47.34'
183 - 184	N20'-51'-19"E	182.57'
184 - 185	N26'-03'-00"E	75.31'
185 - 186	N20'-50'-26"E	50.00'
590 - 591	N04'-35'-30"W	212.76'
592 - 593	N20'-50'-26"E	320.89'

PI STA = 120+18.27
Y = 318,350.847
X = 532,797.785

PI STA = 122+16.24
Y = 318,345.916
X = 532,995.695
Δ = 05°51'11"R
D = 11°27'33"
T = 25.56
L = 51.08
R = 500.00
PC STA = 121+90.68
PT STA = 122+41.76

PI STA = 122+50.00
Y = 318,341.633
X = 533,029.221

PI STA = 187+47.60
Y = 318,070.807
X = 532,962.620
Δ = 25°29'17"R
D = 07°20'44"
T = 176.41
L = 346.98
R = 780.00
PC STA = 185+71.19
PT STA = 189+18.17

PI STA = 190+12.78
Y = 318,334.843
X = 533,023.752
Δ = 07°49'10"R
D = 04°08'20"
T = 94.61
L = 188.93
R = 1,384.37
PC STA = 189+18.17
PT STA = 191+07.10

PI STA = 221+03.40
Y = 321,223.250
X = 534,124.144

REVISION DATE 5/9/14 N.C.
6/13/14 N.C.

DATE MAY 7, 2014

SCALE, FEET



HWY: CTH E

COUNTY: WAUPACA

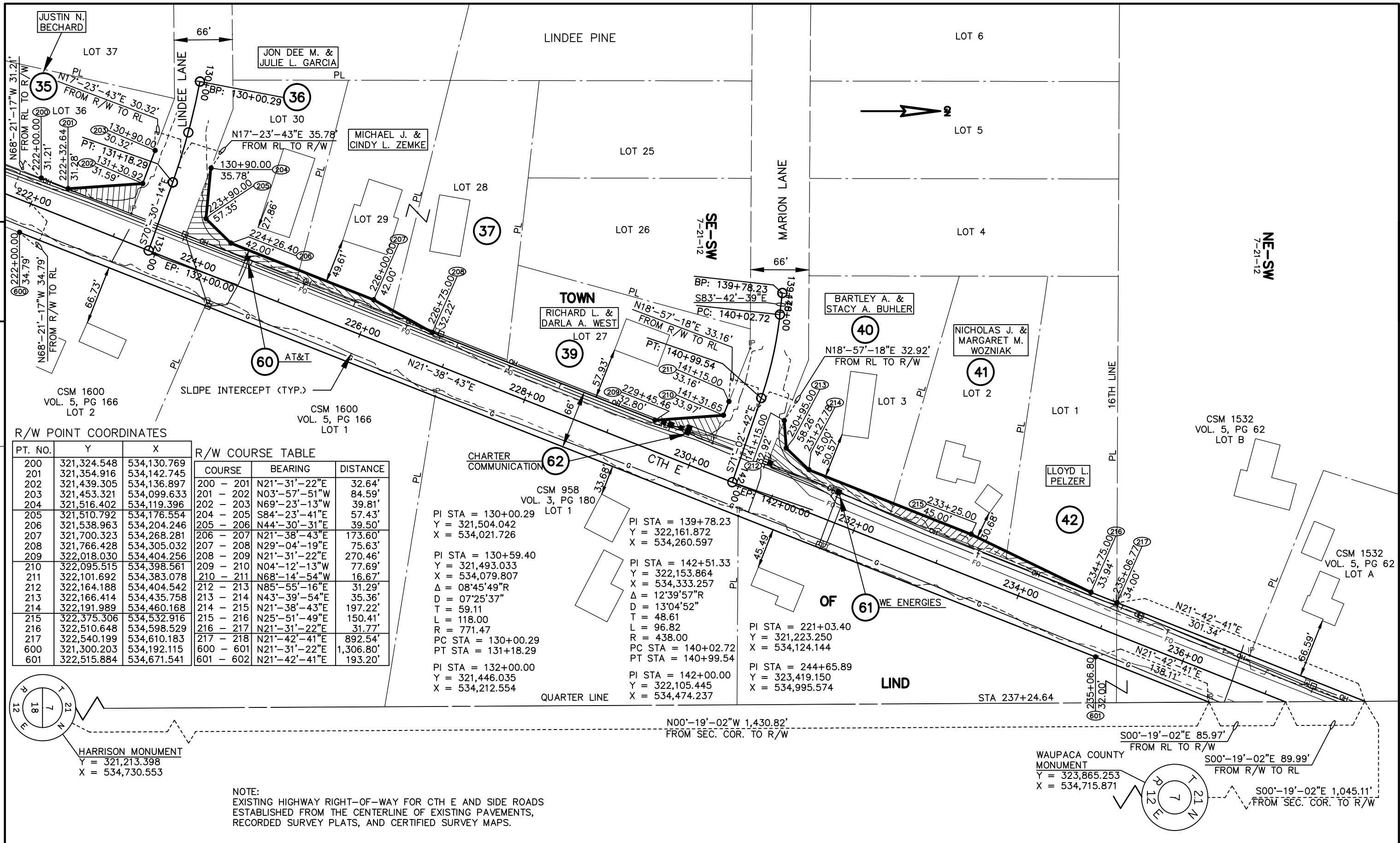
STATE R/W PROJECT NUMBER 6844-00-01

CONSTRUCTION PROJECT NUMBER 6844-00-70/71

PLAT SHEET 4.20

PS&E SHEET

E



R/W POINT COORDINATES

PT. NO.	Y	X
200	321,324.548	534,130.769
201	321,354.916	534,142.745
202	321,439.305	534,136.897
203	321,453.321	534,099.633
204	321,516.402	534,119.396
205	321,510.792	534,176.554
206	321,538.963	534,204.246
207	321,700.323	534,268.281
208	321,766.428	534,305.032
209	322,018.030	534,404.256
210	322,095.515	534,398.561
211	322,101.692	534,383.078
212	322,164.188	534,404.542
213	322,166.414	534,435.758
214	322,191.989	534,460.168
215	322,375.306	534,532.916
216	322,510.648	534,598.529
217	322,540.199	534,610.183
600	321,300.203	534,192.115
601	322,515.884	534,671.541

R/W COURSE TABLE

COURSE	BEARING	DISTANCE
200 - 201	N21°-31'-22"E	32.64'
201 - 202	N03°-57'-51"W	84.59'
202 - 203	N69°-23'-13"W	39.81'
204 - 205	S84°-23'-41"E	57.43'
205 - 206	N44°-30'-31"E	39.50'
206 - 207	N21°-38'-43"E	173.60'
207 - 208	N29°-04'-19"E	75.63'
208 - 209	N21°-31'-22"E	270.46'
209 - 210	N04°-12'-13"W	77.69'
210 - 211	N68°-14'-54"W	16.67'
212 - 213	N85°-55'-16"E	31.29'
213 - 214	N43°-39'-54"E	35.36'
214 - 215	N21°-38'-43"E	197.22'
215 - 216	N25°-51'-49"E	150.41'
216 - 217	N21°-31'-22"E	31.77'
217 - 218	N21°-42'-41"E	892.54'
600 - 601	N21°-31'-22"E	1,306.80'
601 - 602	N21°-42'-41"E	193.20'

PI STA = 130+00.29
Y = 321,504.042
X = 534,021.726

PI STA = 130+59.40
Y = 321,493.033
X = 534,079.807
Δ = 08°45'49"R
D = 07°25'37"
T = 59.11
L = 118.00
R = 771.47
PC STA = 130+00.29
PT STA = 131+18.29

PI STA = 132+00.00
Y = 321,446.035
X = 534,212.554

PI STA = 139+78.23
Y = 322,161.872
X = 534,260.597

PI STA = 142+51.33
Y = 322,153.864
X = 534,333.257
Δ = 12°39'57"R
D = 13°04'52"
T = 48.61
L = 96.82
R = 438.00
PC STA = 140+02.72
PT STA = 140+99.54

PI STA = 142+00.00
Y = 322,105.445
X = 534,474.237

PI STA = 221+03.40
Y = 321,223.250
X = 534,124.144

PI STA = 244+65.89
Y = 323,419.150
X = 534,995.574

HARRISON MONUMENT
Y = 321,213.398
X = 534,730.553

NOTE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH E AND SIDE ROADS
ESTABLISHED FROM THE CENTERLINE OF EXISTING PAVEMENTS,
RECORDED SURVEY PLATS, AND CERTIFIED SURVEY MAPS.

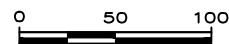
WAUPACA COUNTY
MONUMENT
Y = 323,865.253
X = 534,715.871

S00°-19'-02"E 1,045.11'
FROM SEC. COR. TO R/W

REVISION DATE 5/9/14 N.C.
6/13/14 N.C.

DATE MAY 7, 2014

SCALE, FEET



HWY: CTH E

COUNTY: WAUPACA

STATE R/W PROJECT NUMBER 6844-00-01

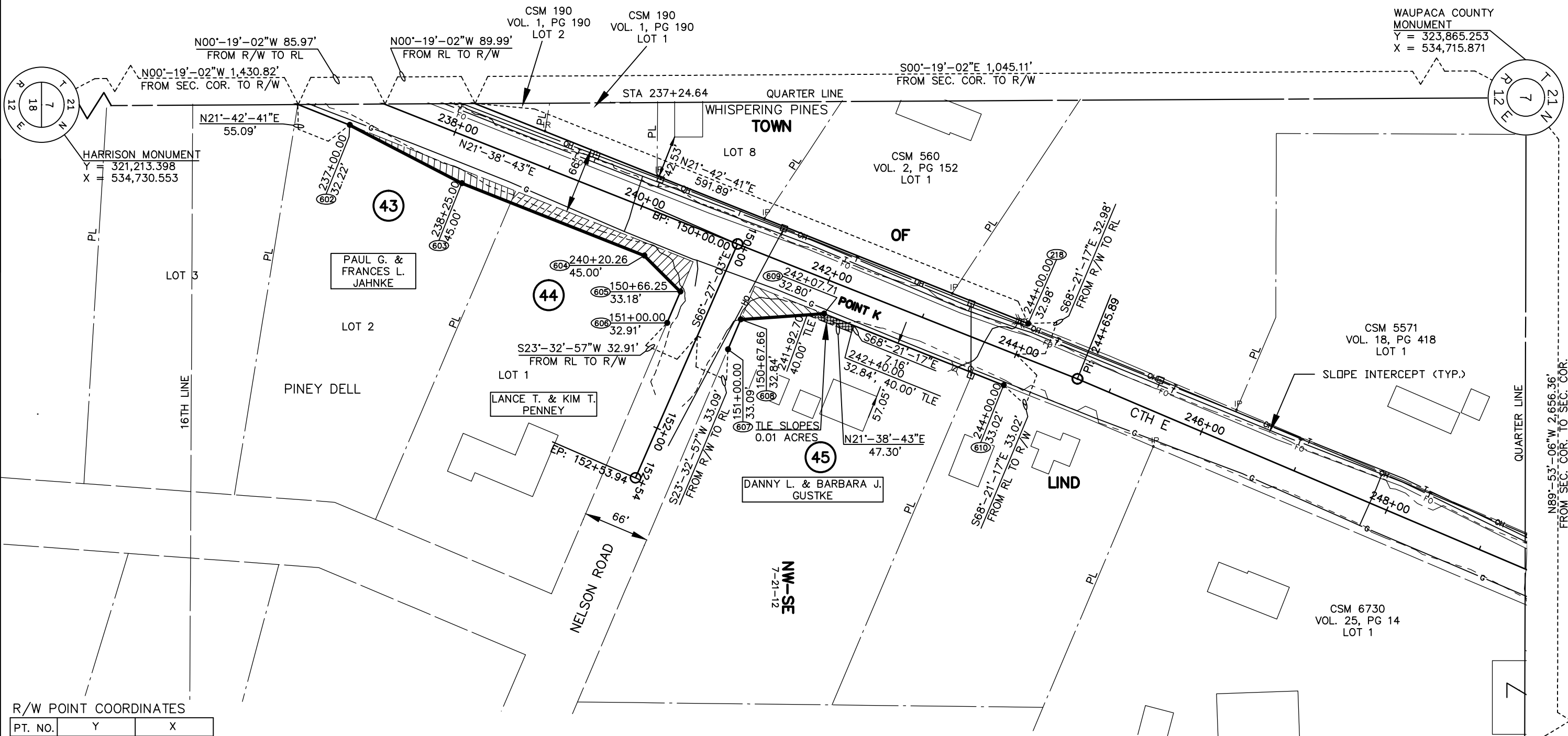
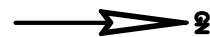
CONSTRUCTION PROJECT NUMBER 6844-00-70/71

PLAT SHEET 4.21

PS&E SHEET

E

NOTE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH E AND SIDE ROADS
ESTABLISHED FROM THE CENTERLINE OF EXISTING PAVEMENTS,
RECORDED SURVEY PLATS, AND CERTIFIED SURVEY MAPS.



R/W POINT COORDINATES

PT. NO.	Y	X
218	323,370.067	534,940.617
602	322,695.380	534,743.012
603	322,806.851	534,801.000
604	322,988.341	534,873.024
605	323,024.241	534,908.911
606	323,011.004	534,939.954
607	323,071.509	534,966.324
608	323,084.196	534,936.572
609	323,167.077	534,930.830
610	323,345.722	535,001.963

R/W COURSE TABLE

COURSE	BEARING	DISTANCE
602 - 603	N27°-29'-03"E	125.65'
603 - 604	N21°-38'-43"E	195.26'
604 - 605	N44°-59'-25"E	50.76'
605 - 606	S66°-54'-19"E	33.75'
607 - 608	N66°-54'-48"W	32.34'
608 - 609	N03°-57'-48"W	83.08'
609 - 610	N21°-42'-41"E	192.29'

PI STA = 150+00.00
Y = 323,081.125
X = 534,861.430

PI STA = 152+83.94
Y = 322,979.666
X = 535,094.222

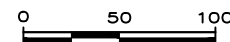
PI STA = 221+03.40
Y = 321,223.250
X = 534,124.144

PI STA = 244+65.89
Y = 323,419.150
X = 534,995.574

REVISION DATE 5/9/14 N.C.
6/13/14 N.C.

DATE MAY 7, 2014

SCALE, FEET



HWY: CTH E

COUNTY: WAUPACA

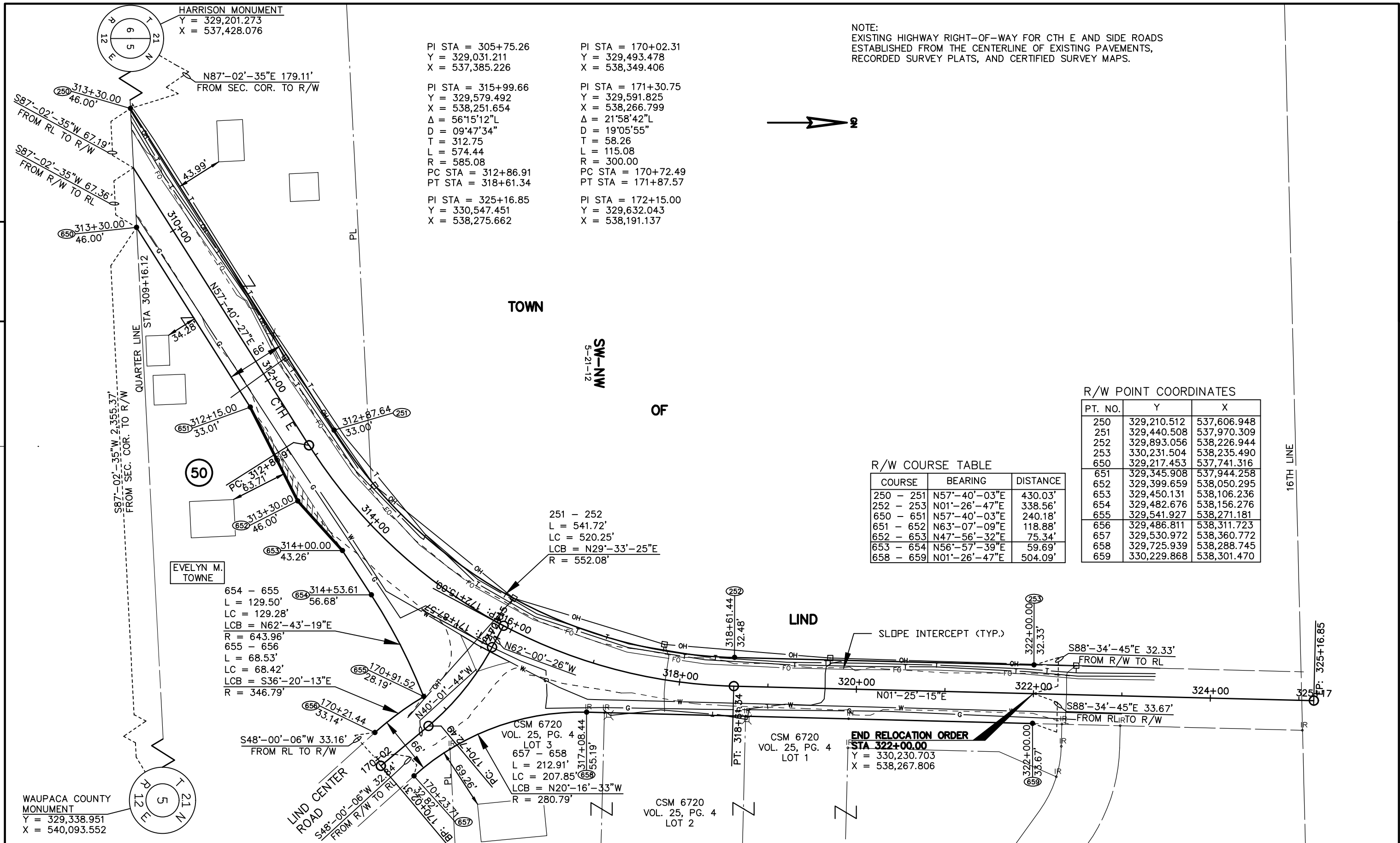
STATE R/W PROJECT NUMBER 6844-00-01

CONSTRUCTION PROJECT NUMBER 6844-00-70/71

PLAT SHEET 4.22

PS&E SHEET

E



NOTE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH E AND SIDE ROADS
ESTABLISHED FROM THE CENTERLINE OF EXISTING PAVEMENTS,
RECORDED SURVEY PLATS, AND CERTIFIED SURVEY MAPS.

PI STA = 305+75.26
Y = 329,031.211
X = 537,385.226

PI STA = 315+99.66
Y = 329,579.492
X = 538,251.654
Δ = 56°15'12"L
D = 09°47'34"
T = 312.75
L = 574.44
R = 585.08
PC STA = 312+86.91
PT STA = 318+61.34

PI STA = 325+16.85
Y = 330,547.451
X = 538,275.662

PI STA = 170+02.31
Y = 329,493.478
X = 538,349.406

PI STA = 171+30.75
Y = 329,591.825
X = 538,266.799
Δ = 21°58'42"L
D = 19°05'55"
T = 58.26
L = 115.08
R = 300.00
PC STA = 170+72.49
PT STA = 171+87.57

PI STA = 172+15.00
Y = 329,632.043
X = 538,191.137

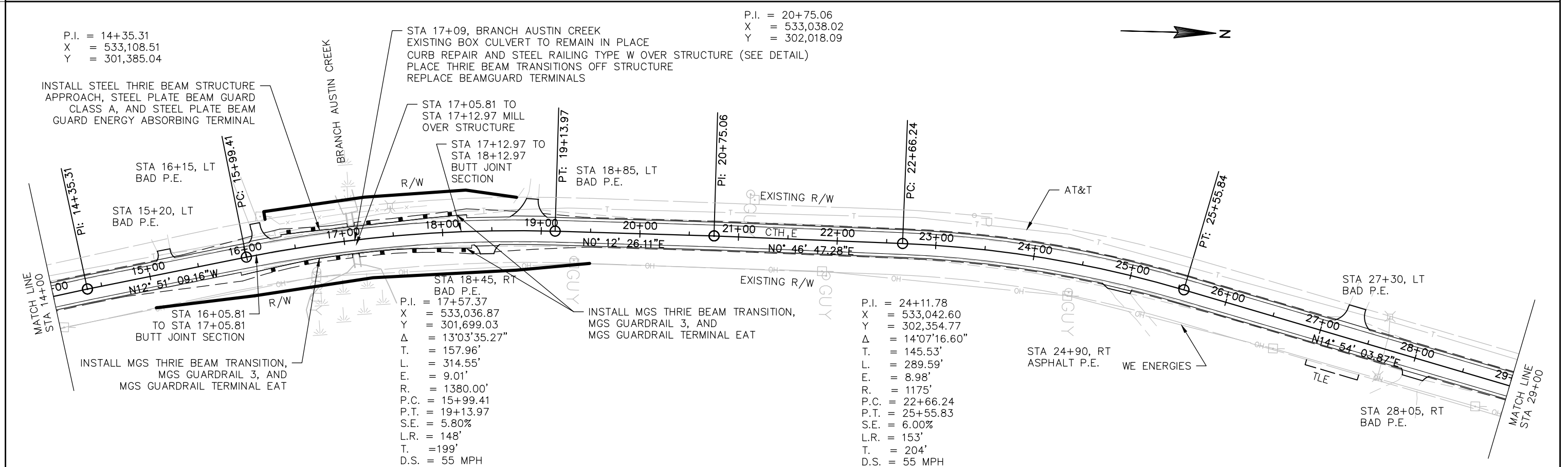
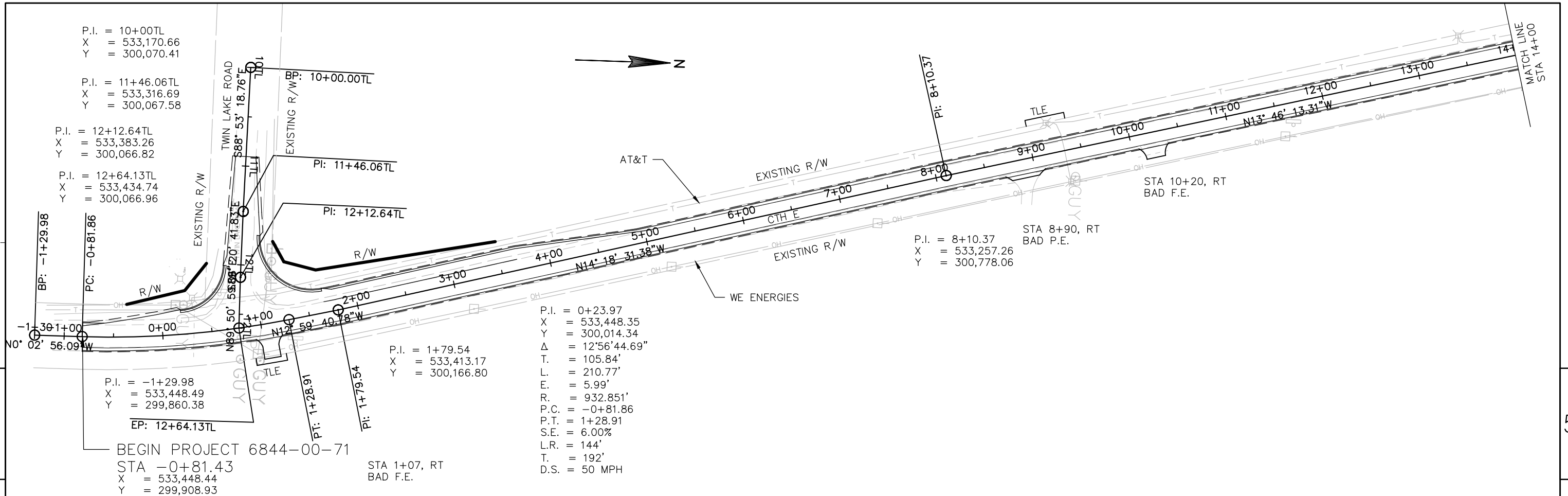
R/W COURSE TABLE

COURSE	BEARING	DISTANCE
250 - 251	N57°-40'-03"E	430.03'
252 - 253	N01°-26'-47"E	338.56'
650 - 651	N57°-40'-03"E	240.18'
651 - 652	N63°-07'-09"E	118.88'
652 - 653	N47°-56'-32"E	75.34'
653 - 654	N56°-57'-39"E	59.69'
658 - 659	N01°-26'-47"E	504.09'

R/W POINT COORDINATES

PT. NO.	Y	X
250	329,210.512	537,606.948
251	329,440.508	537,970.309
252	329,893.056	538,226.944
253	330,231.504	538,235.490
650	329,217.453	537,741.316
651	329,345.908	537,944.258
652	329,399.659	538,050.295
653	329,450.131	538,106.236
654	329,482.676	538,156.276
655	329,541.927	538,271.181
656	329,486.811	538,311.723
657	329,530.972	538,360.772
658	329,725.939	538,288.745
659	330,229.868	538,301.470

REVISION DATE 5/9/14 N.C. 6/13/14 N.C.	DATE MAY 7, 2014	SCALE, FEET 0 50 100	HWY: CTH E COUNTY: WAUPACA	STATE R/W PROJECT NUMBER 6844-00-01 CONSTRUCTION PROJECT NUMBER 6844-00-70/71	PLAT SHEET 4.24 PS&E SHEET	E
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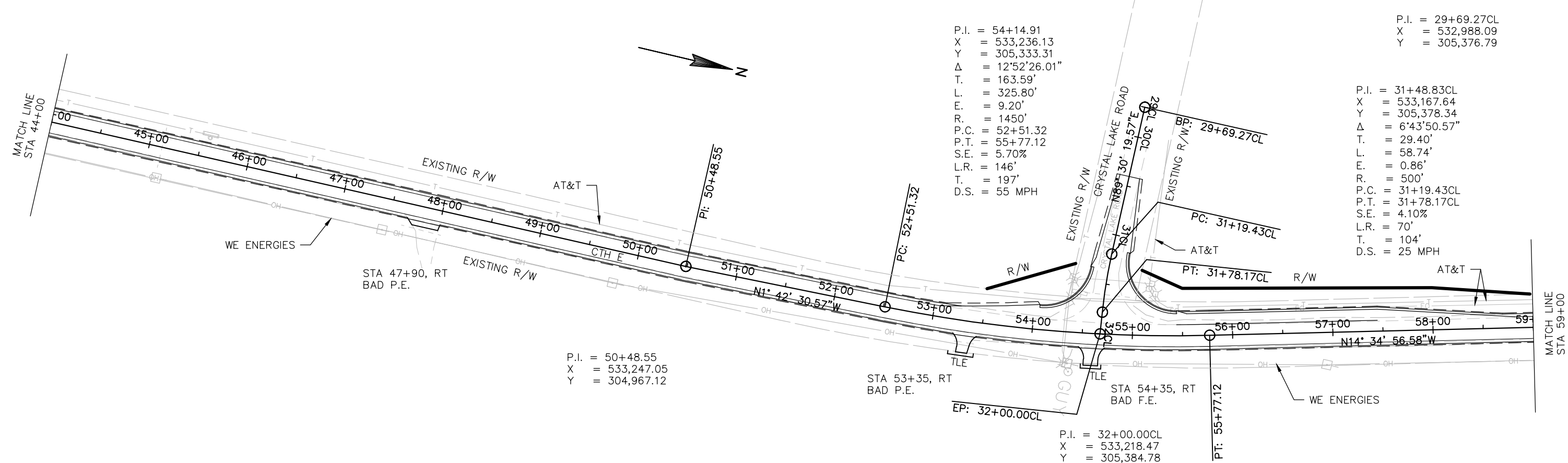
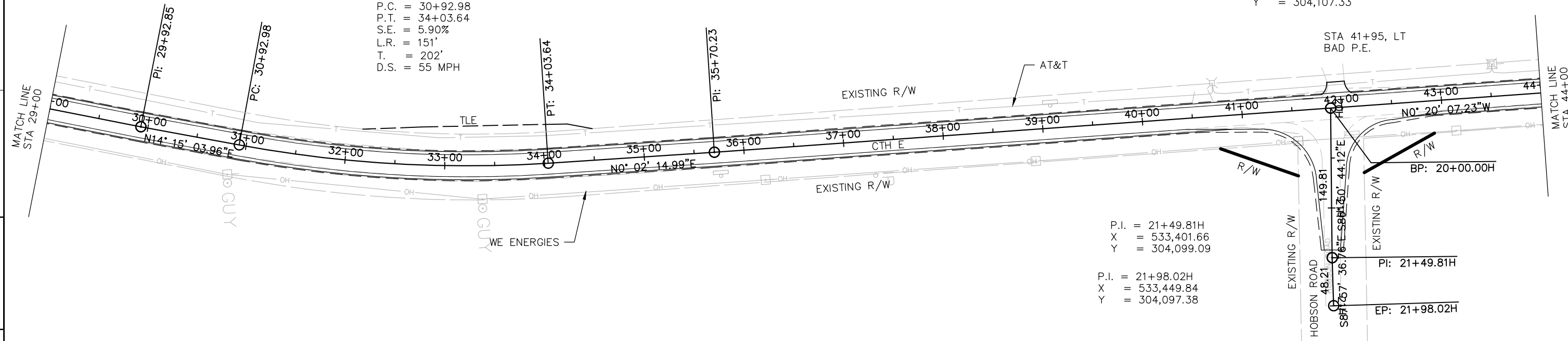
PROJECT NO: 6844-00-71	HWY: CTH E	COUNTY: WAUPACA	PLAN: DETAILS	SHEET	E
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P.I. = 29+92.85
X = 533,192.41
Y = 302,917.73

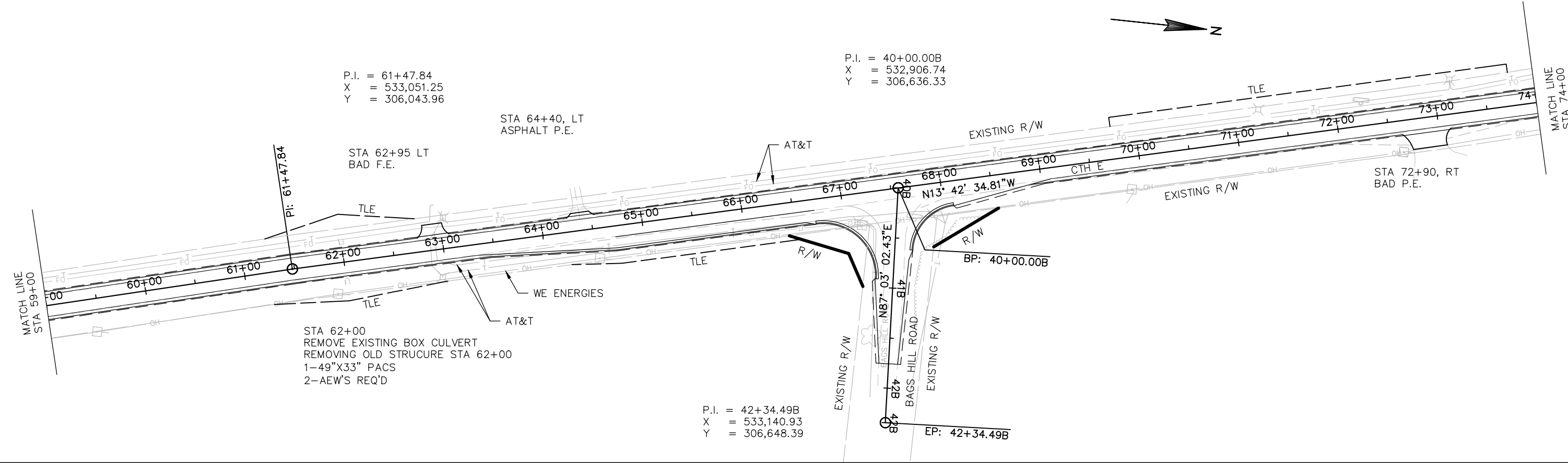
P.I. = 32+49.11
X = 533,255.49
Y = 303,166.10
 Δ = 14°12'48.97"
T. = 156.13'
L. = 310.67'
E. = 9.70'
R. = 1252.31'
P.C. = 30+92.98
P.T. = 34+03.64
S.E. = 5.90%
L.R. = 151'
T. = 202'
D.S. = 55 MPH

P.I. = 35+70.23
X = 533,255.71
Y = 303,488.83

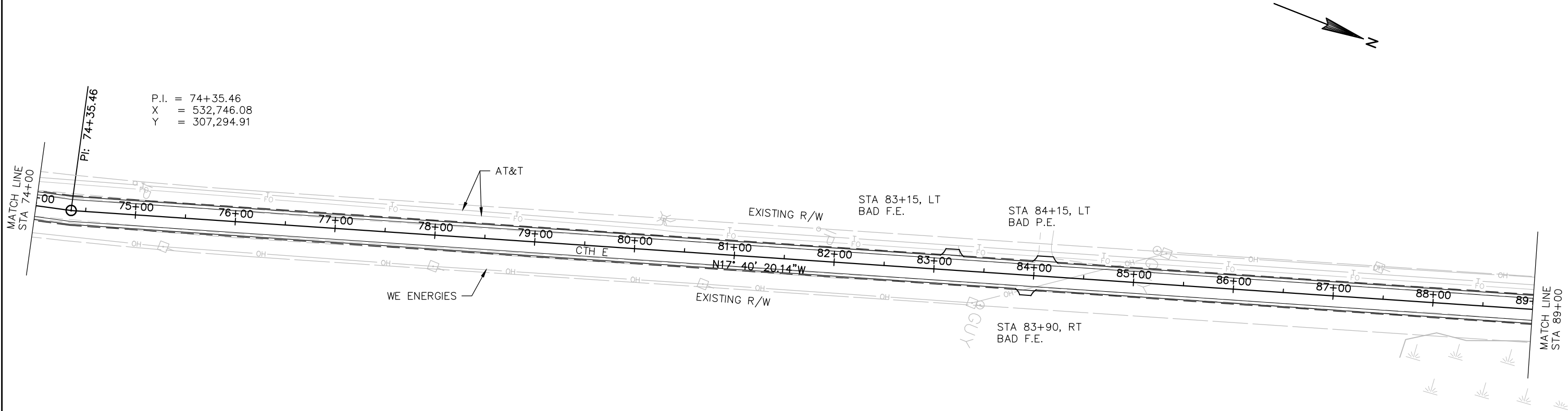
P.I. = 20+00.00H
X = 533,252.08
Y = 304,107.33



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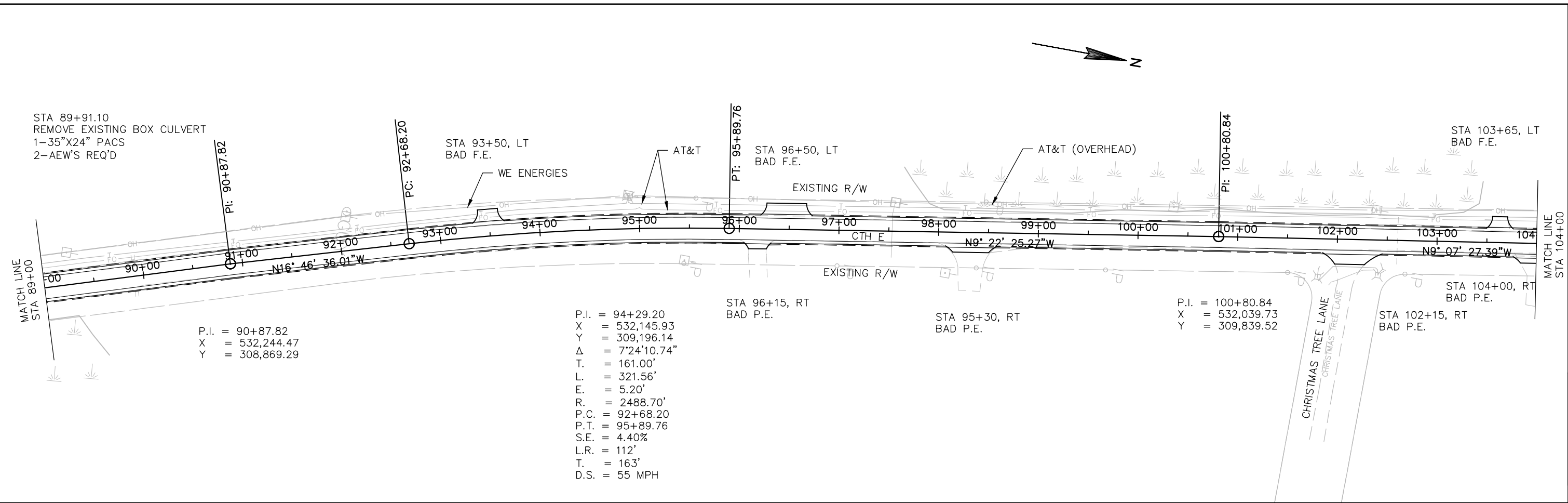


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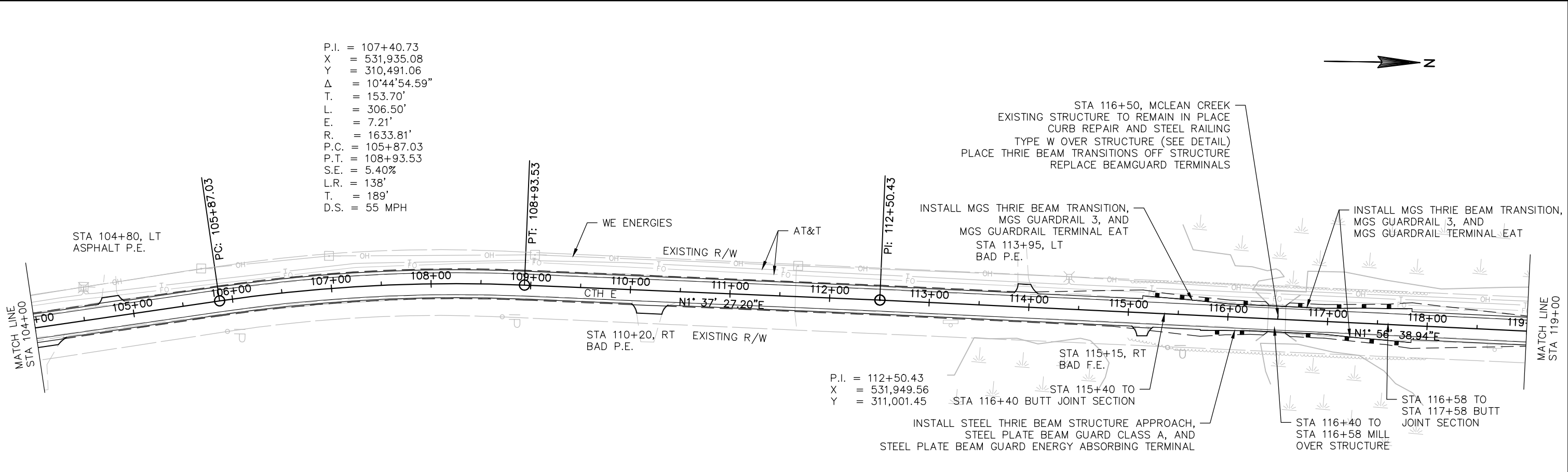


PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	PLAN: DETAILS	SHEET	E
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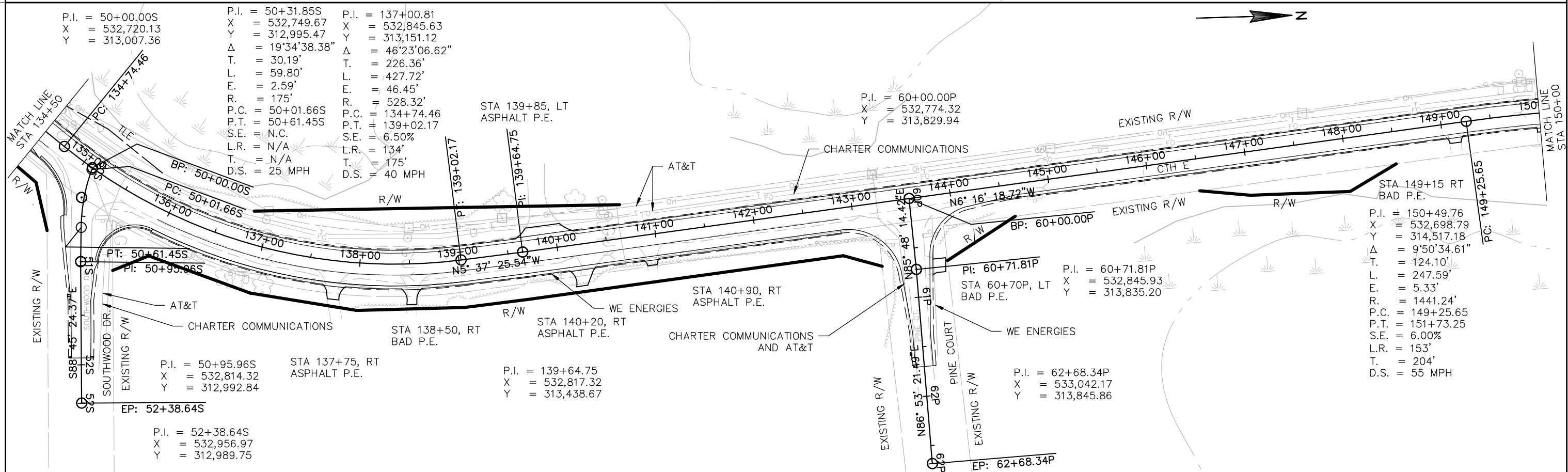
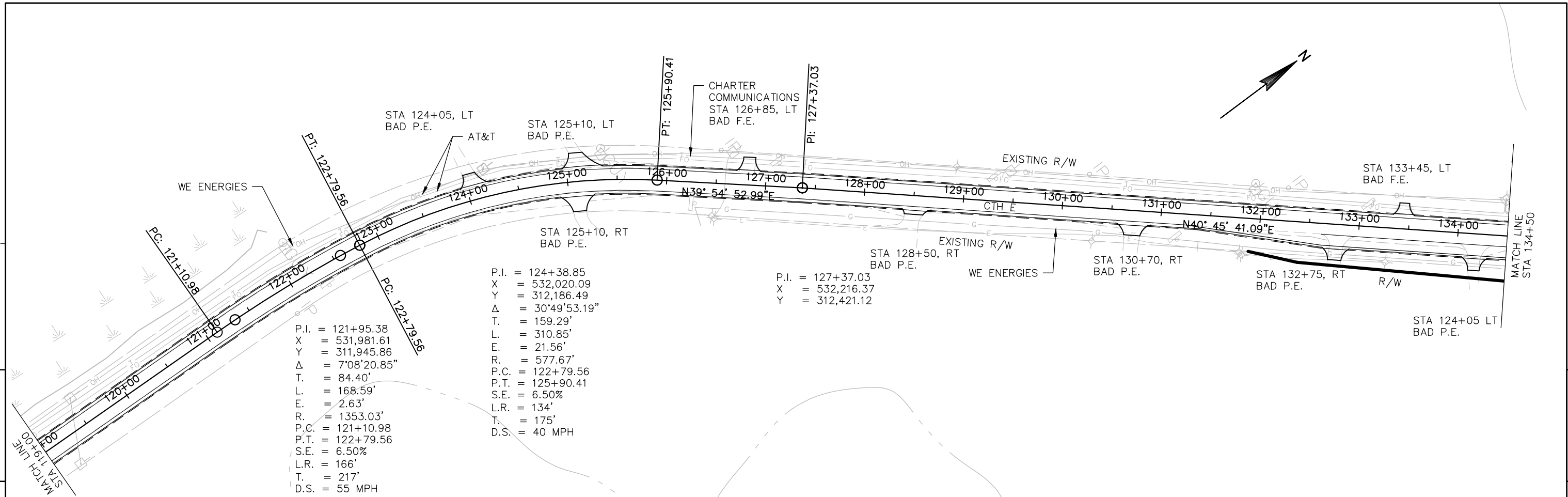
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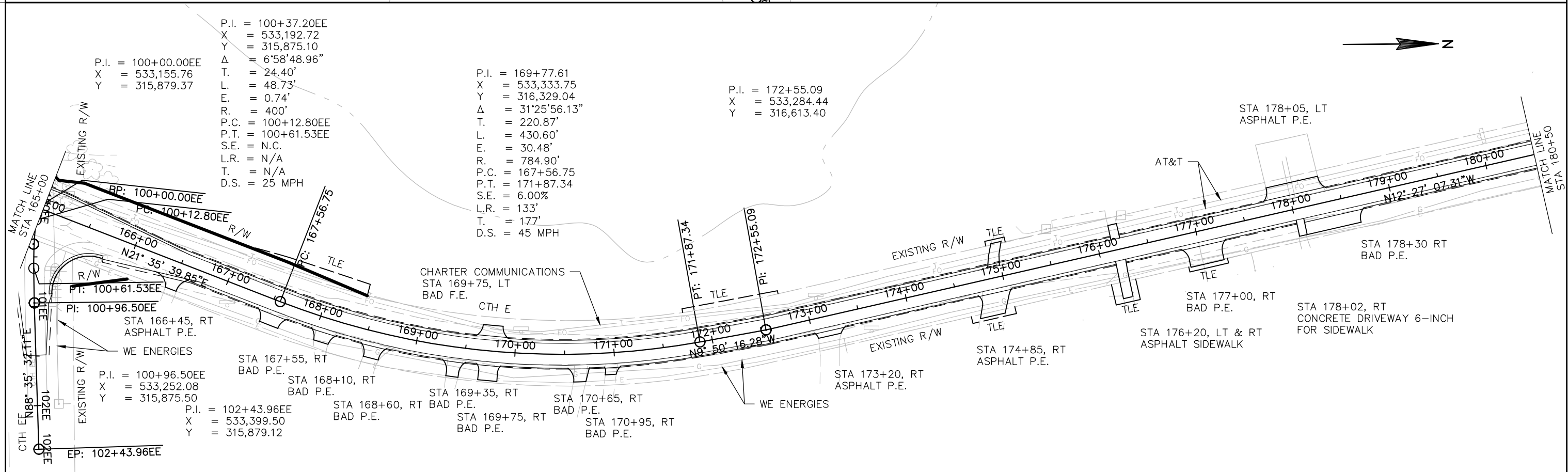
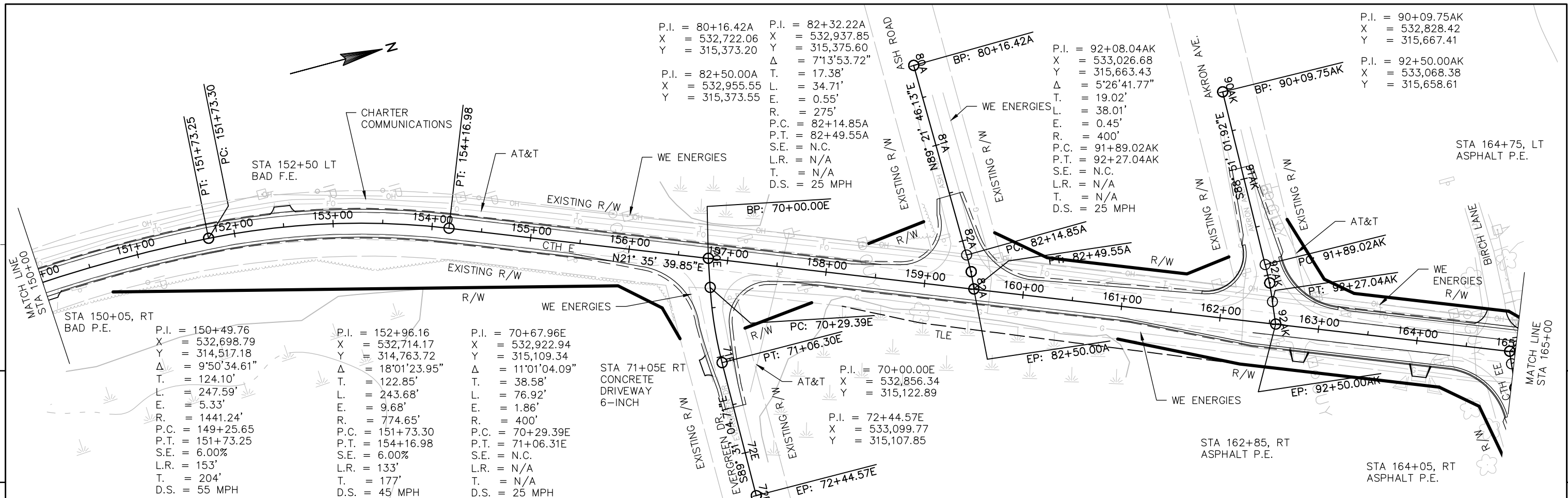


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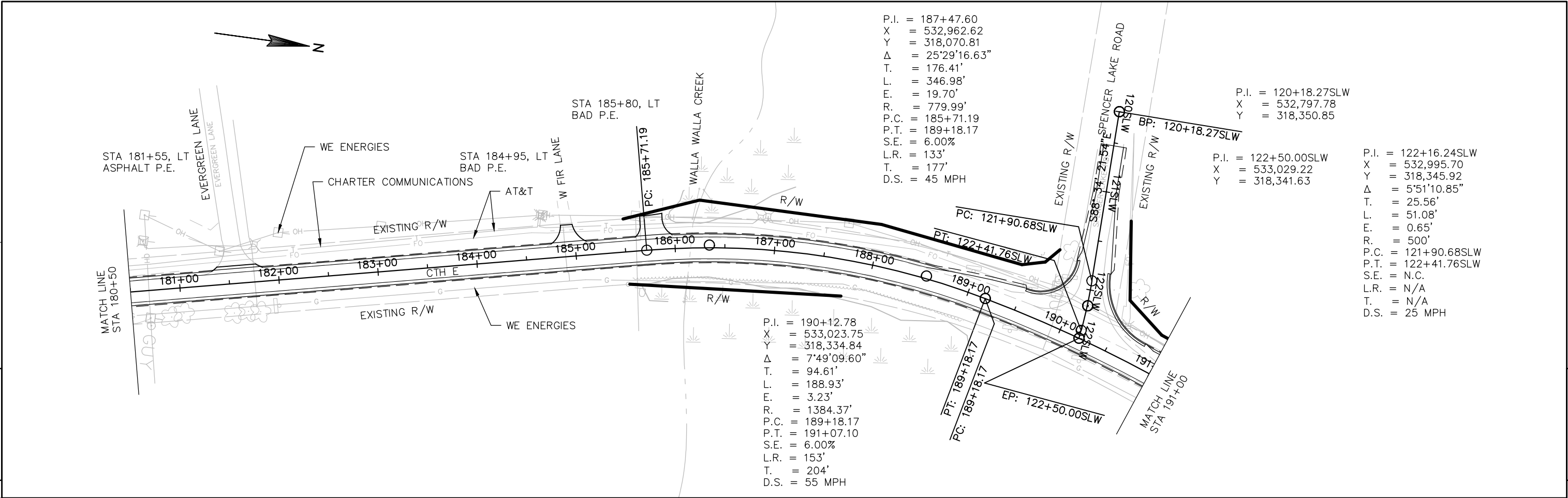
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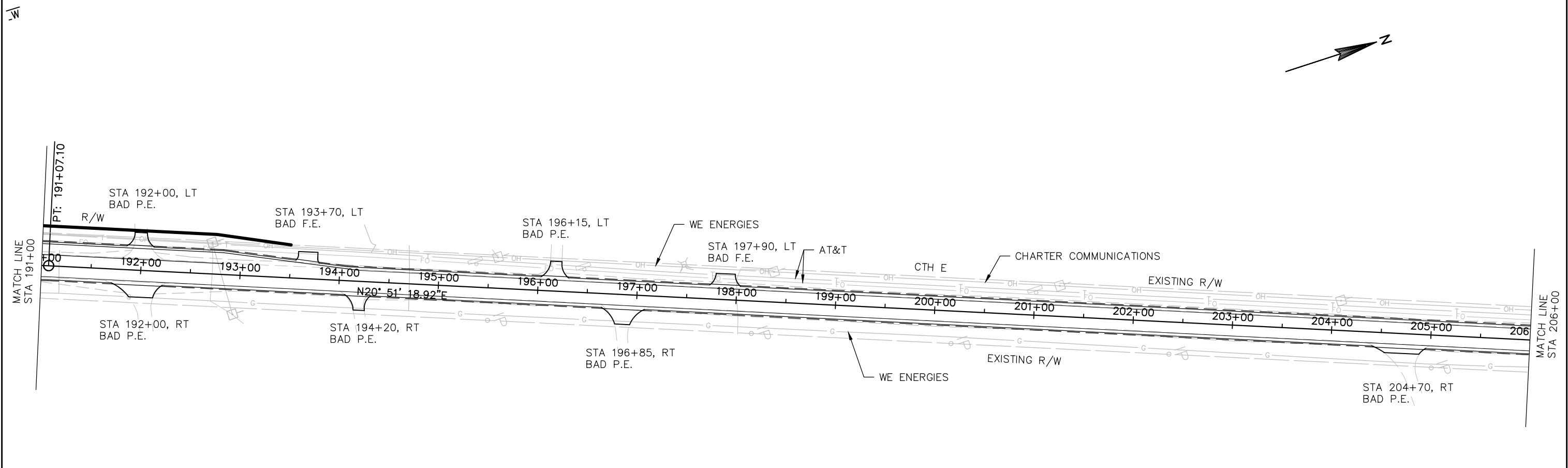
PROJECT NO: 6844-00-71	HWY: CTH E	COUNTY: WAUPACA	PLAN: DETAILS	SHEET
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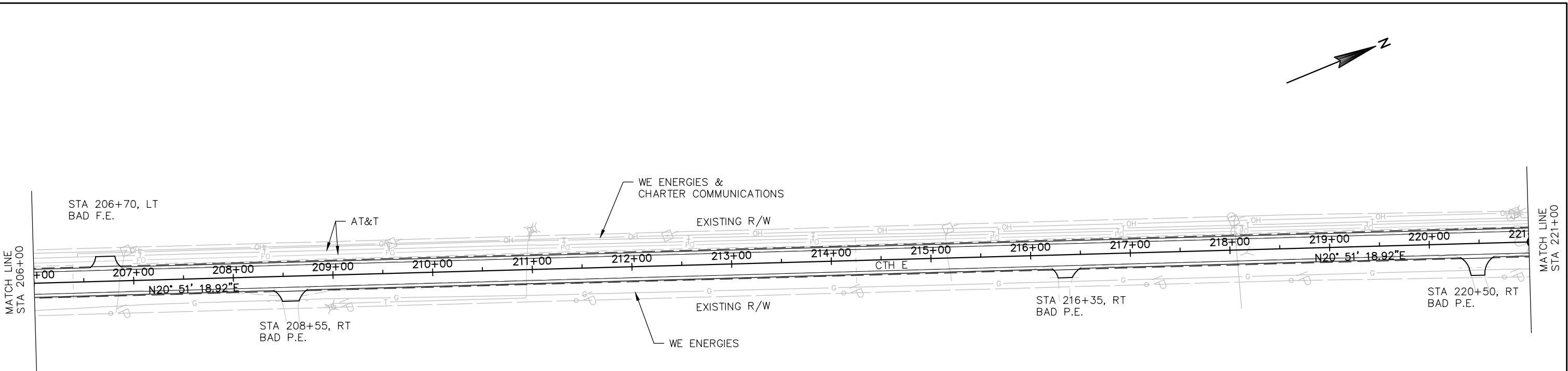
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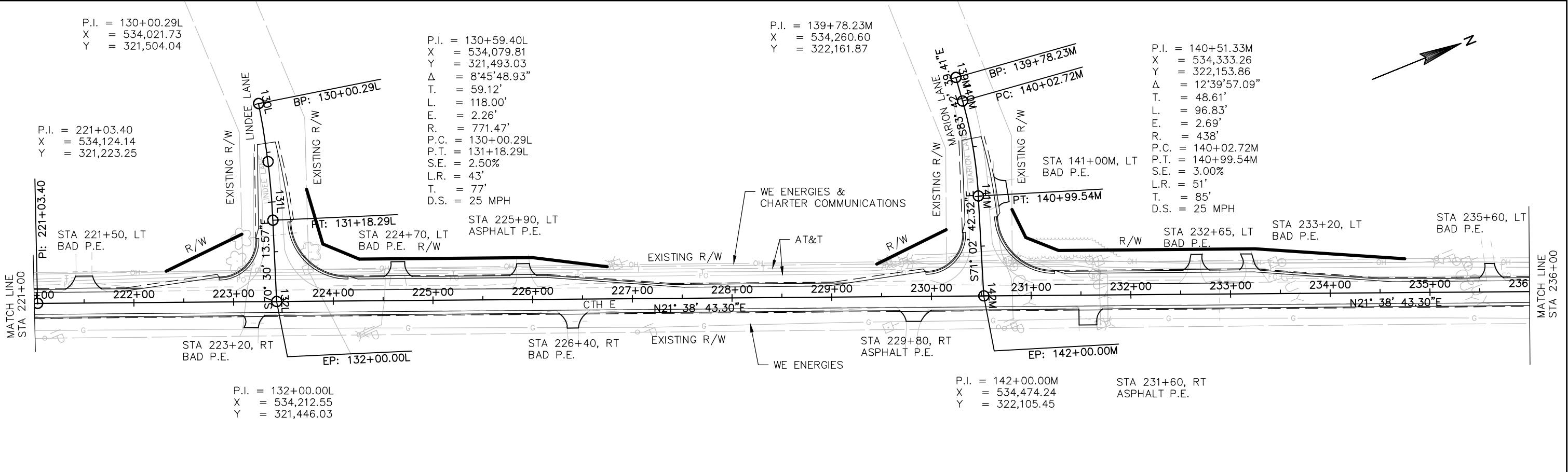


PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	PLAN: DETAILS	SHEET	E
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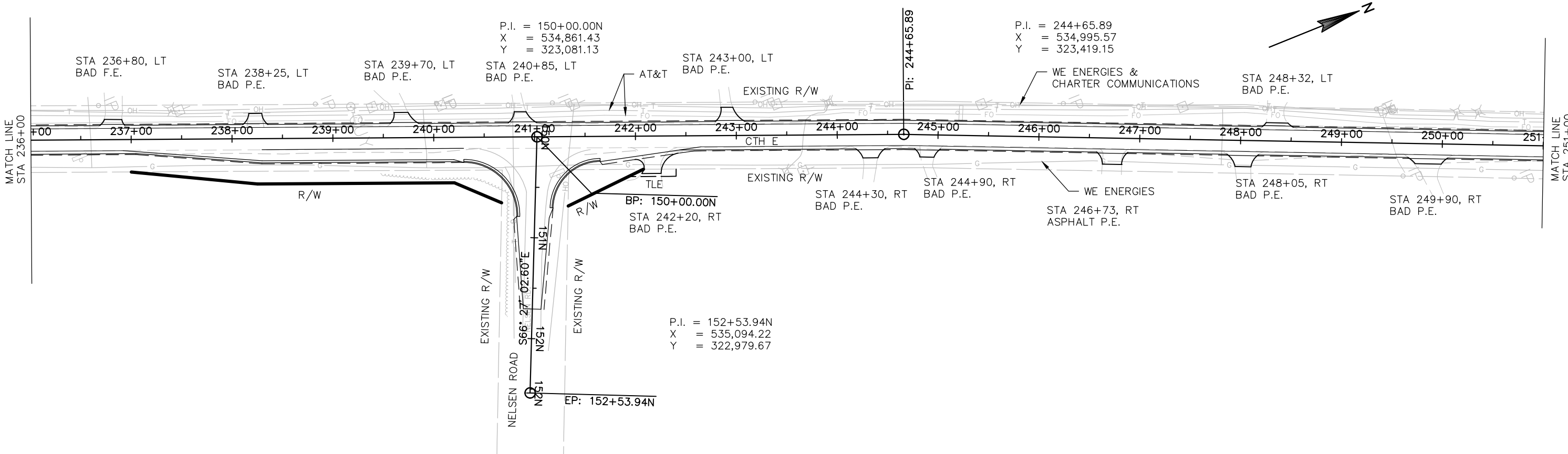


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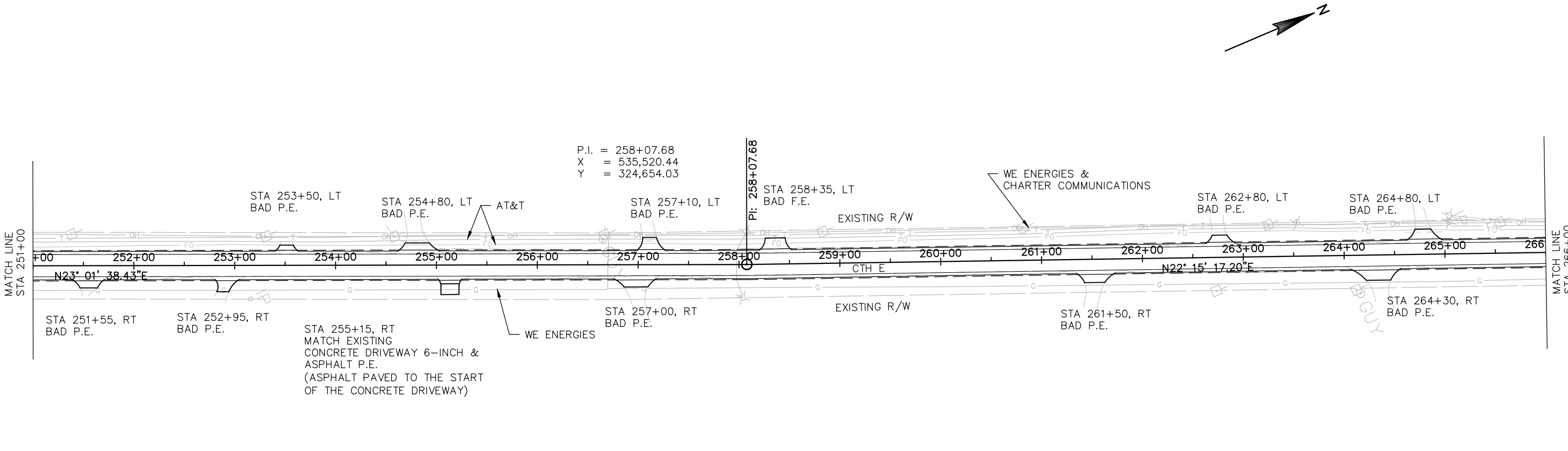


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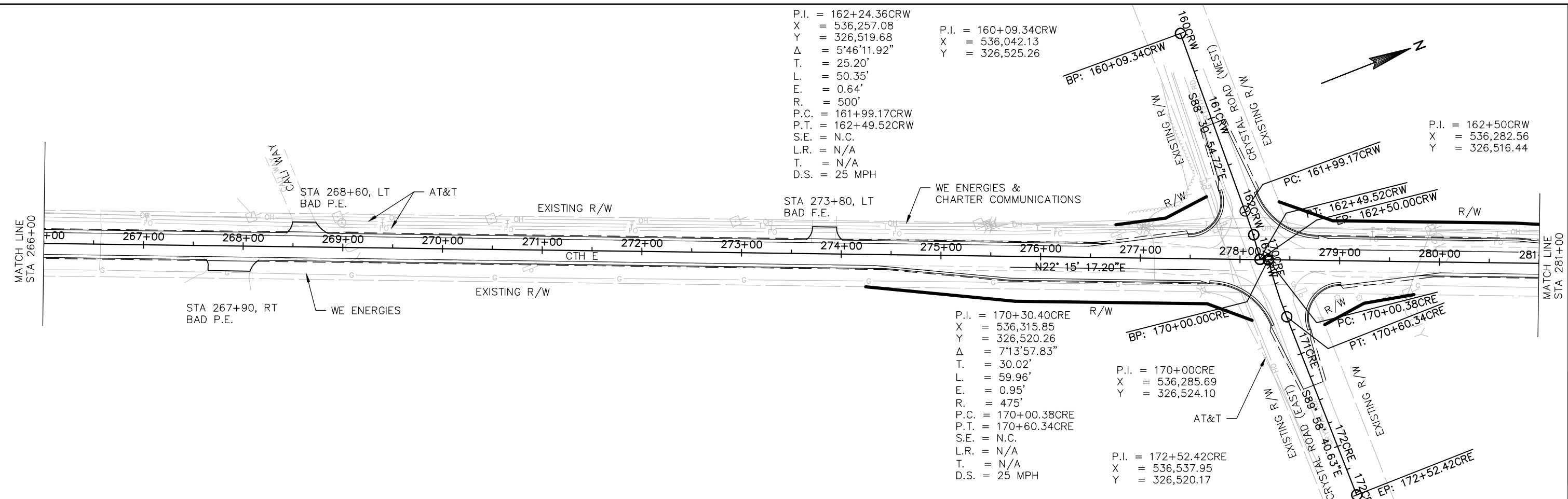


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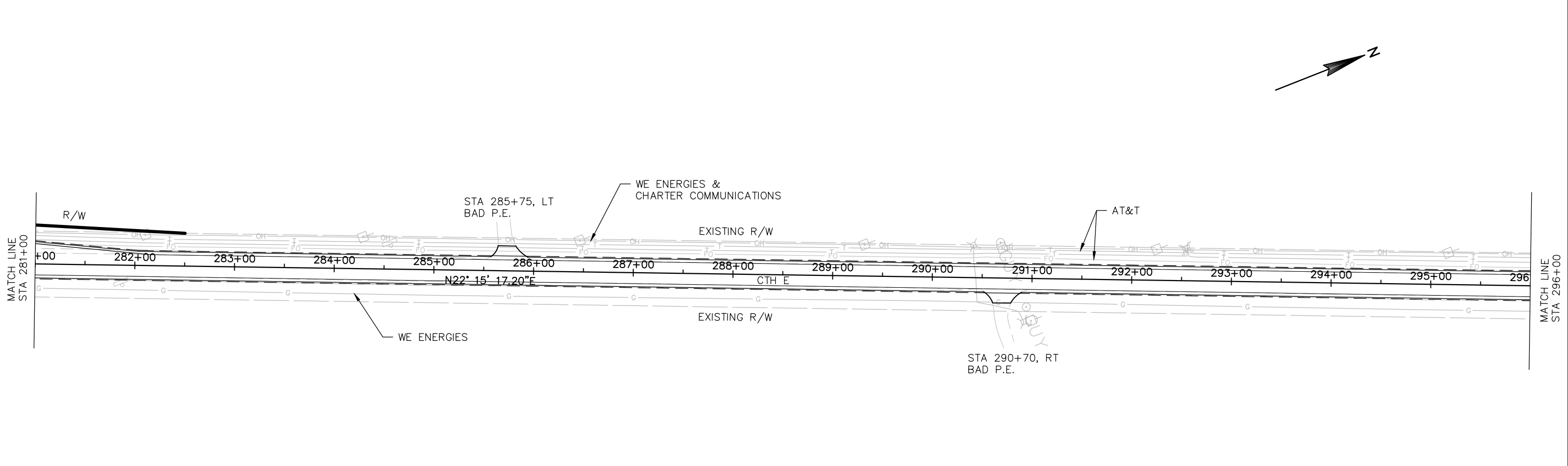


PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	PLAN: DETAILS	SHEET	E
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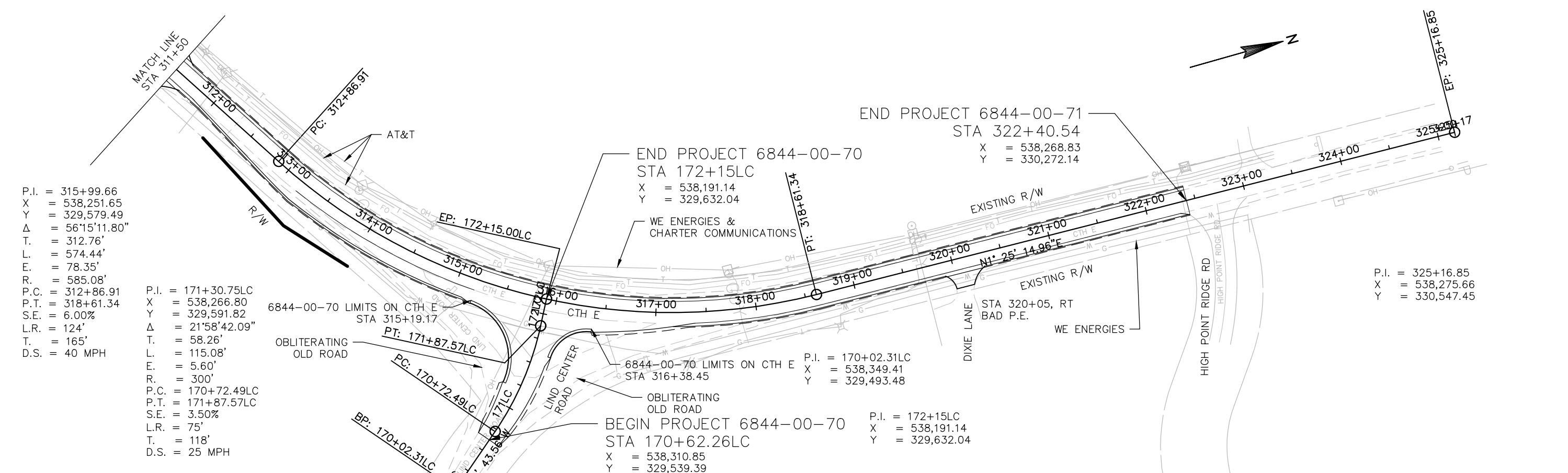
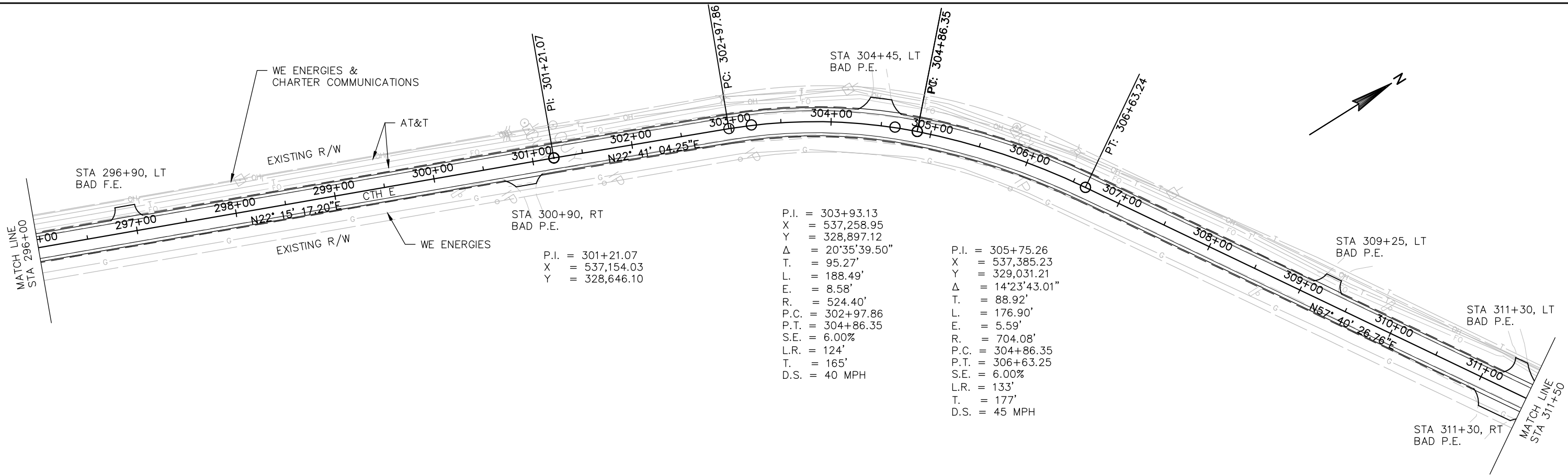
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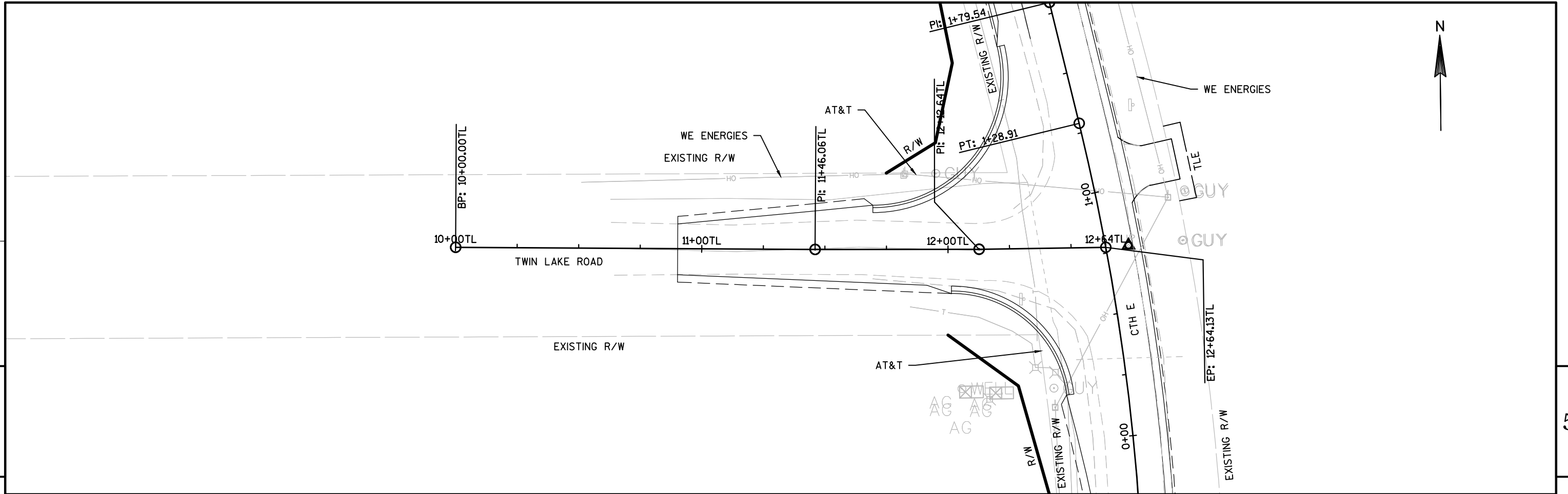
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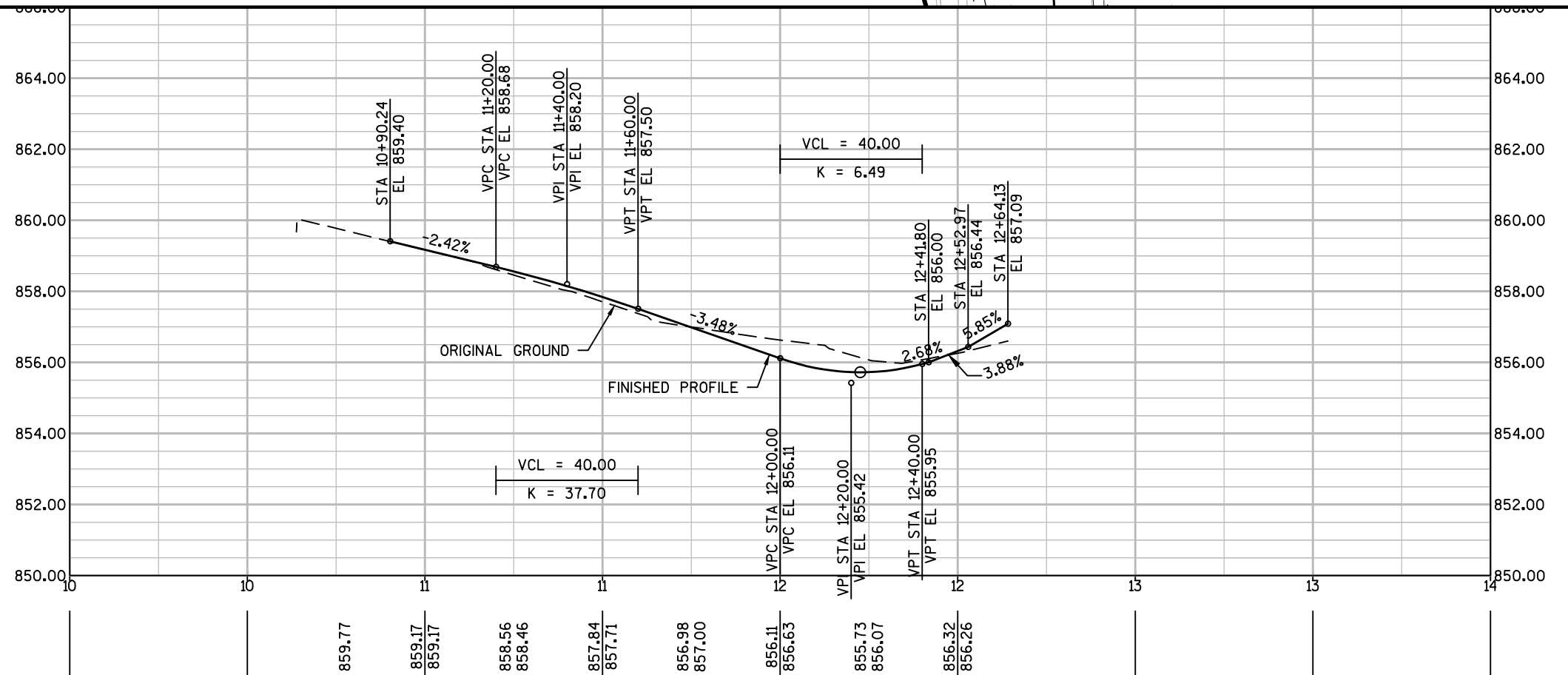
PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	PLAN: DETAILS	SHEET	E
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PROJECT NO: 6844-00-71

HWY: CTH E

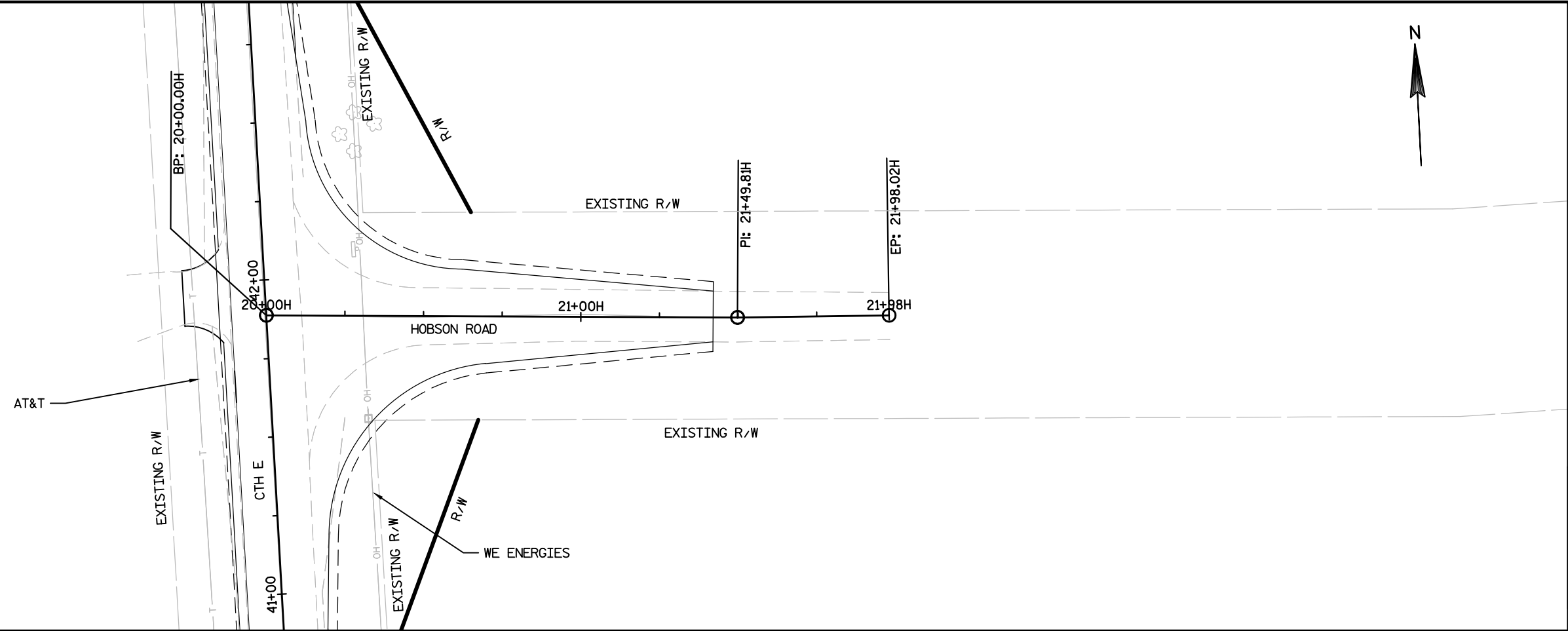
COUNTY: WAUPACA

PLAN AND PROFILE: TWIN LAKE ROAD

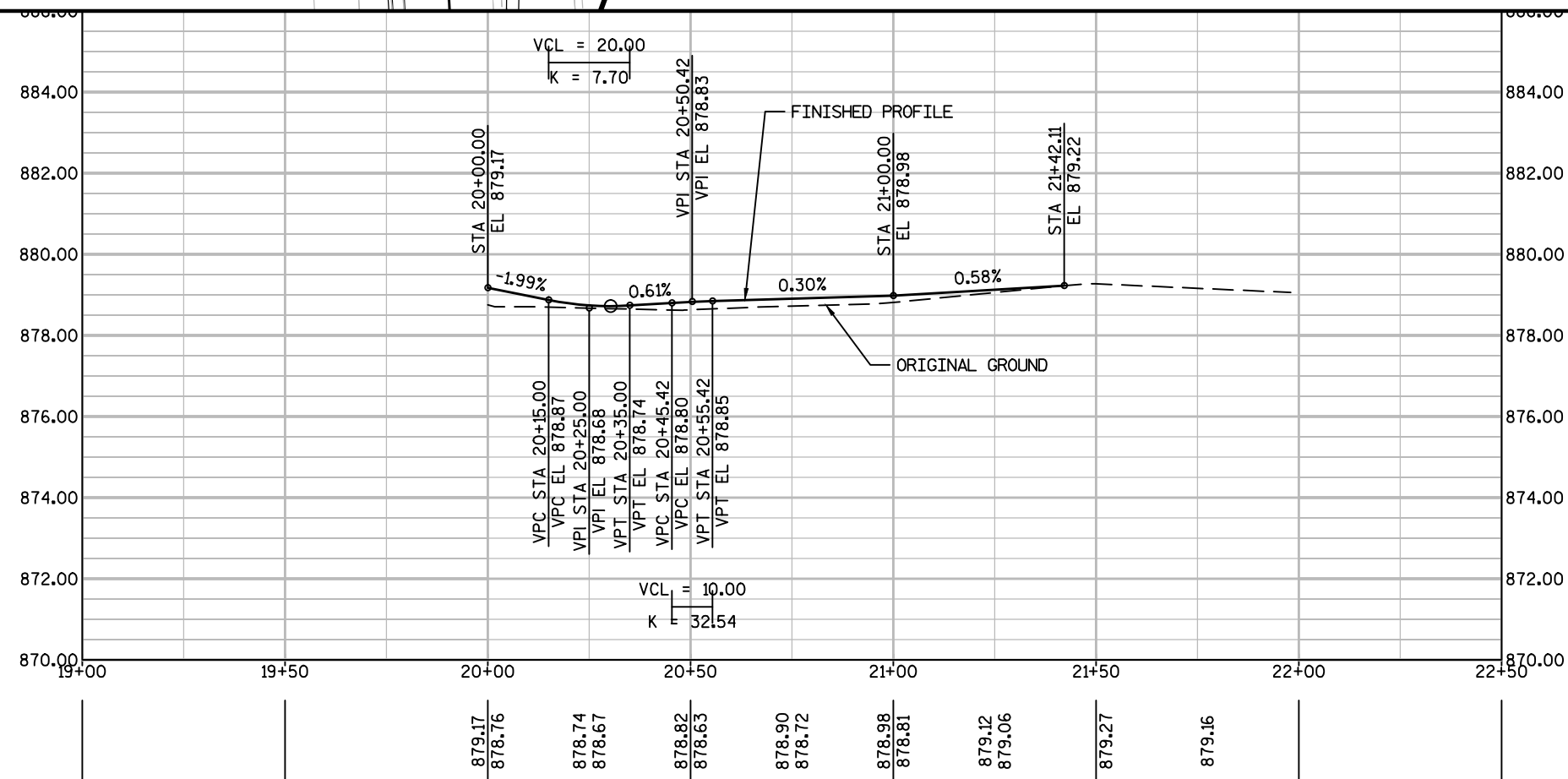
SHEET

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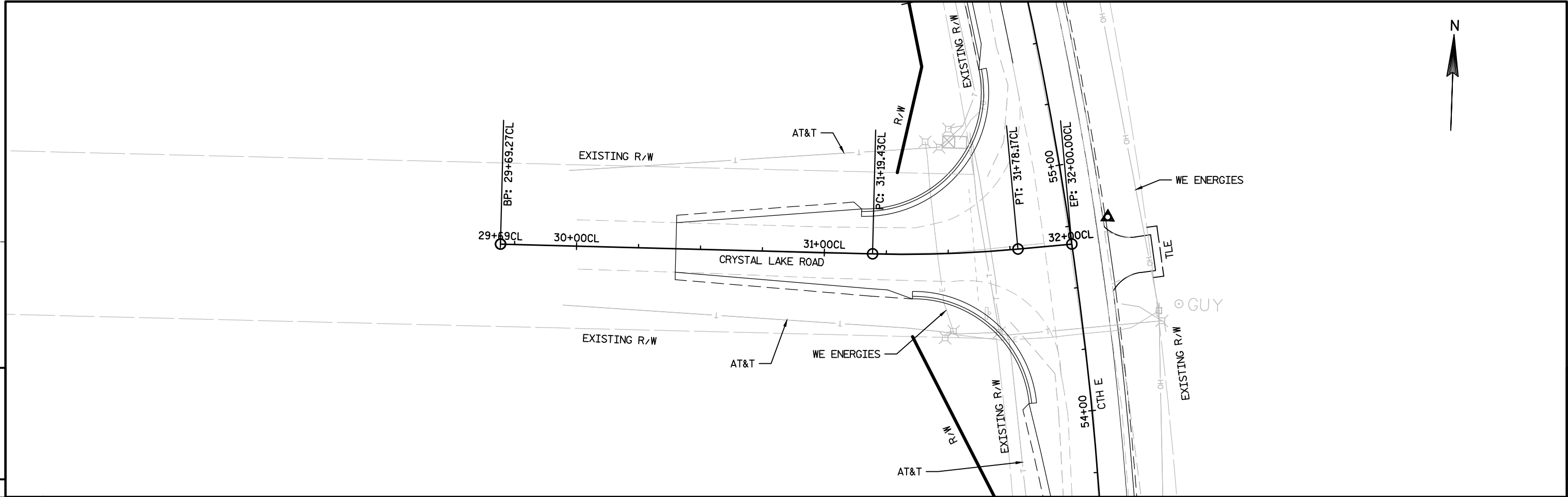
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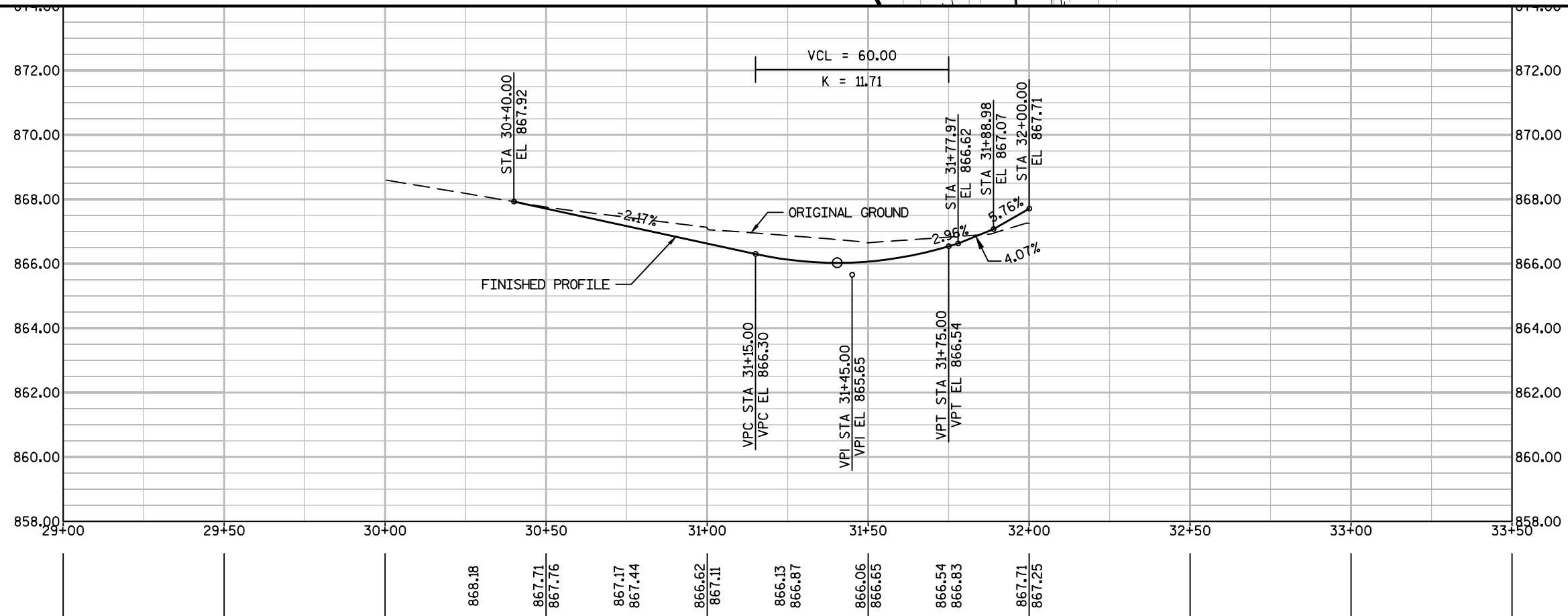
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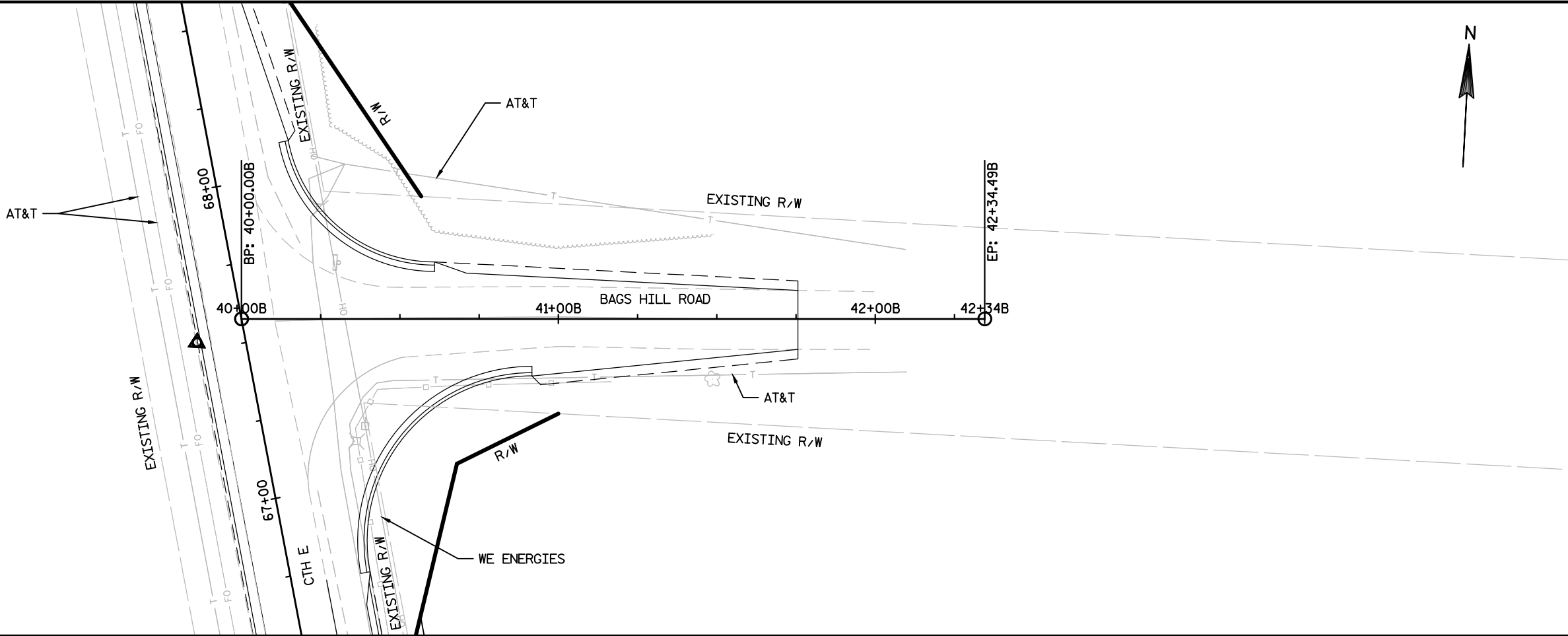


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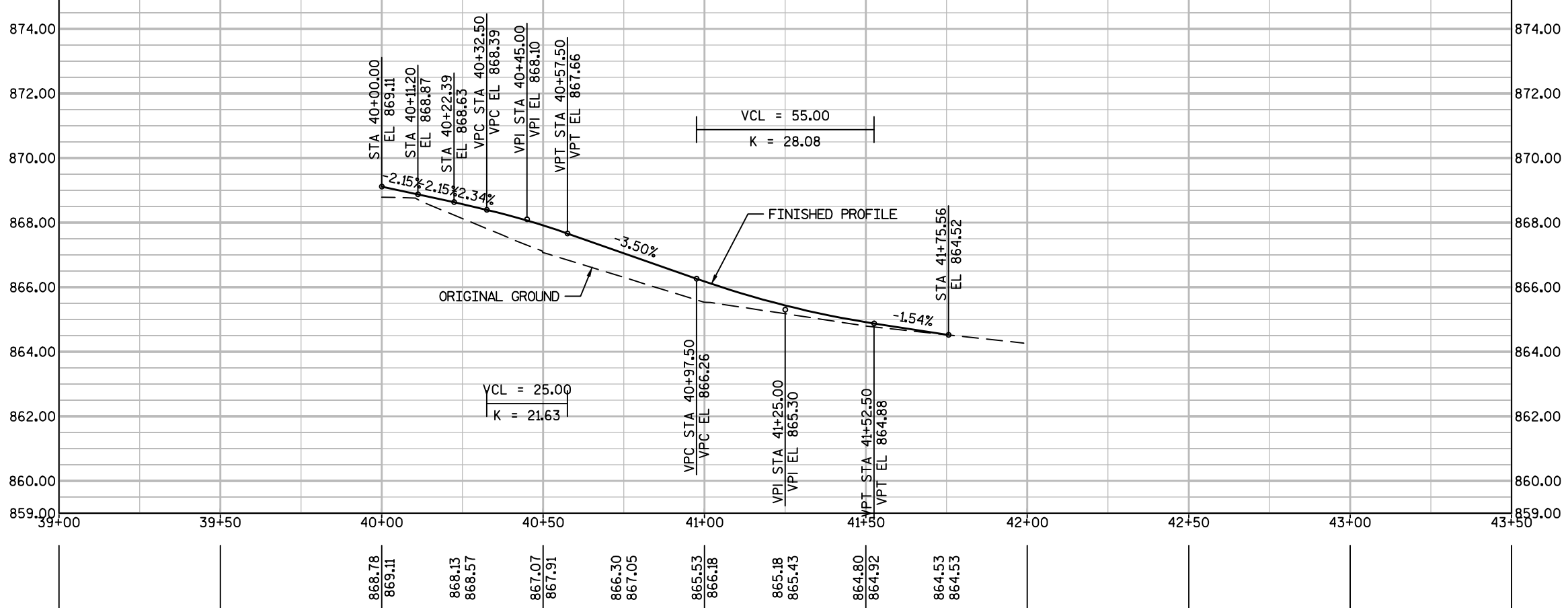


PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	PLAN AND PROFILE: CRYSTAL LAKE ROAD	SHEET	E
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PROJECT NO:6844-00-71

HWY:CTH E

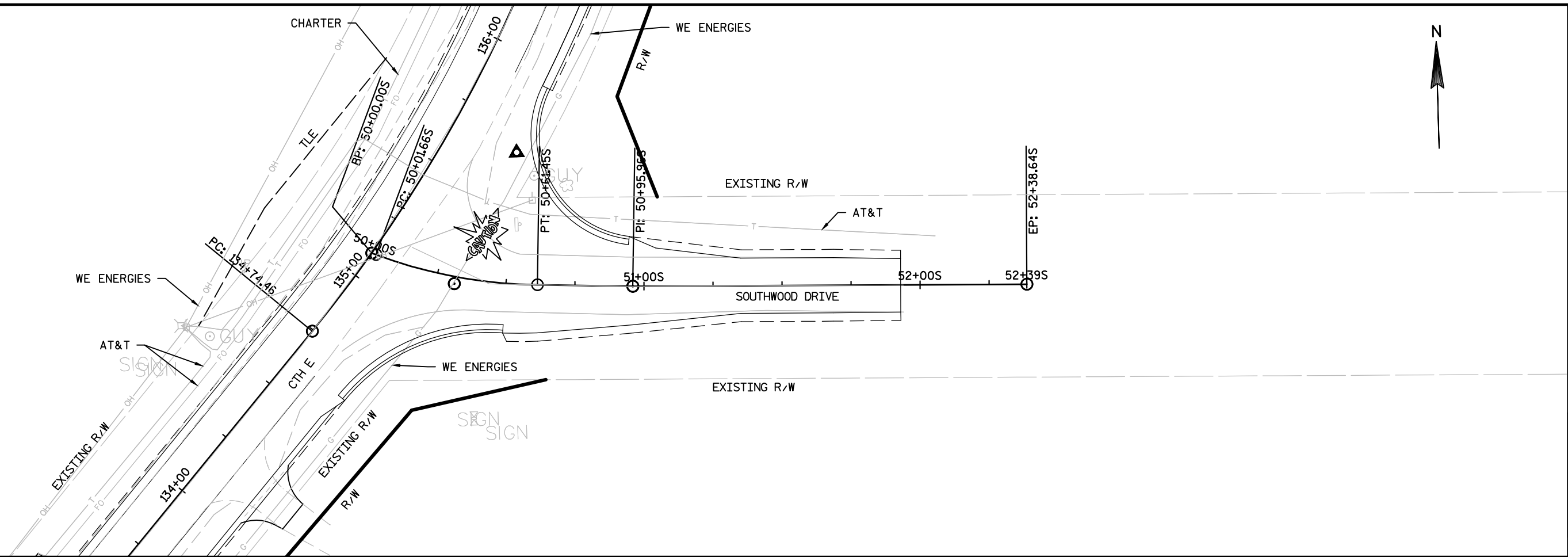
COUNTY:WAUPACA

PLAN AND PROFILE: BAGS HILL ROAD

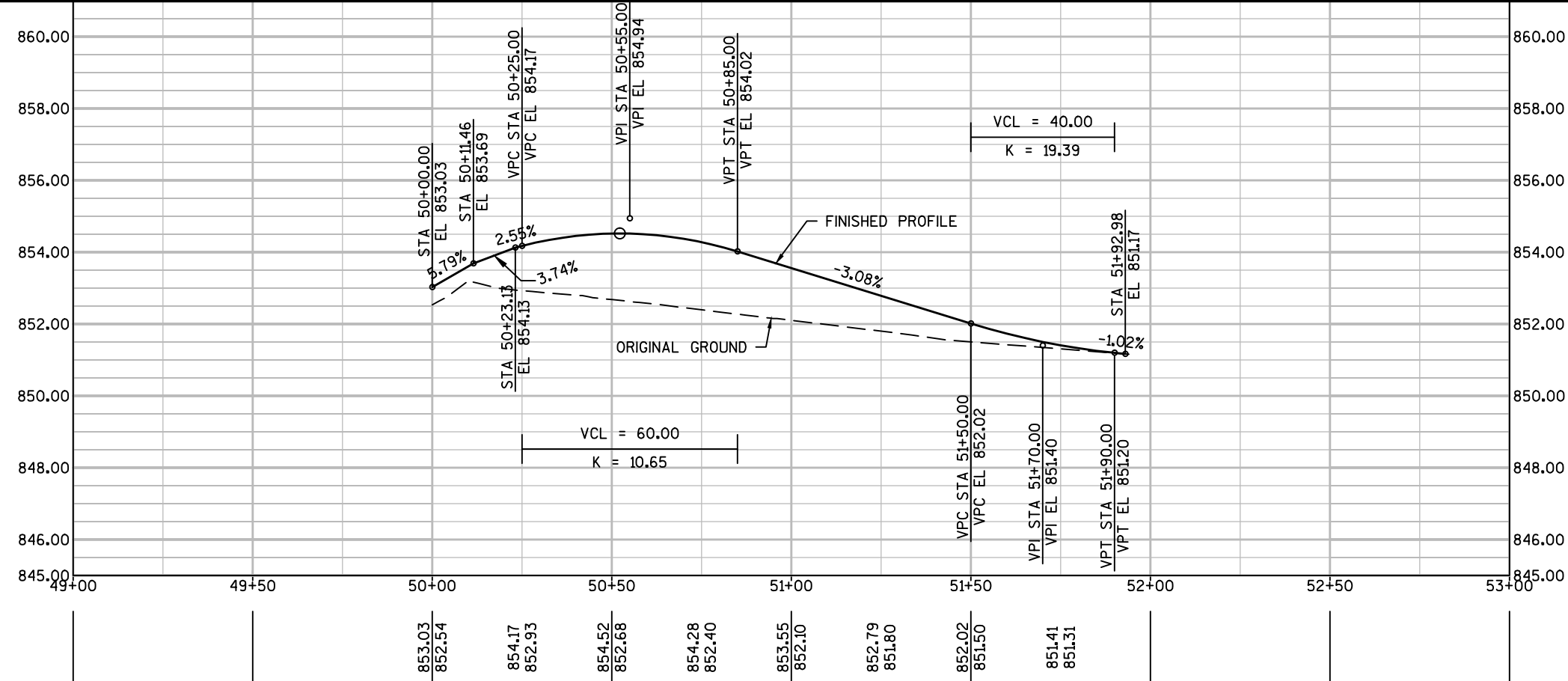
SHEET

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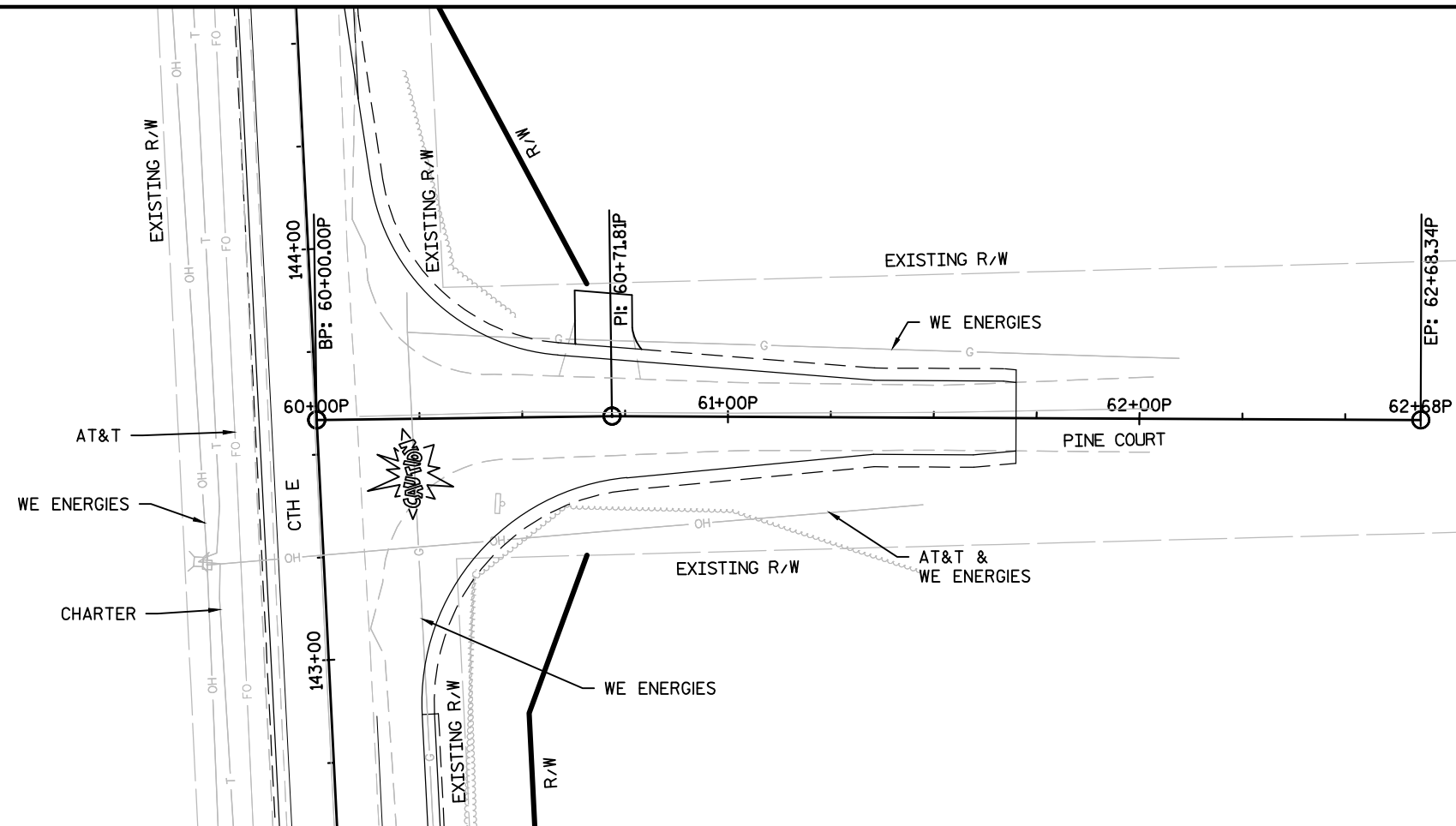
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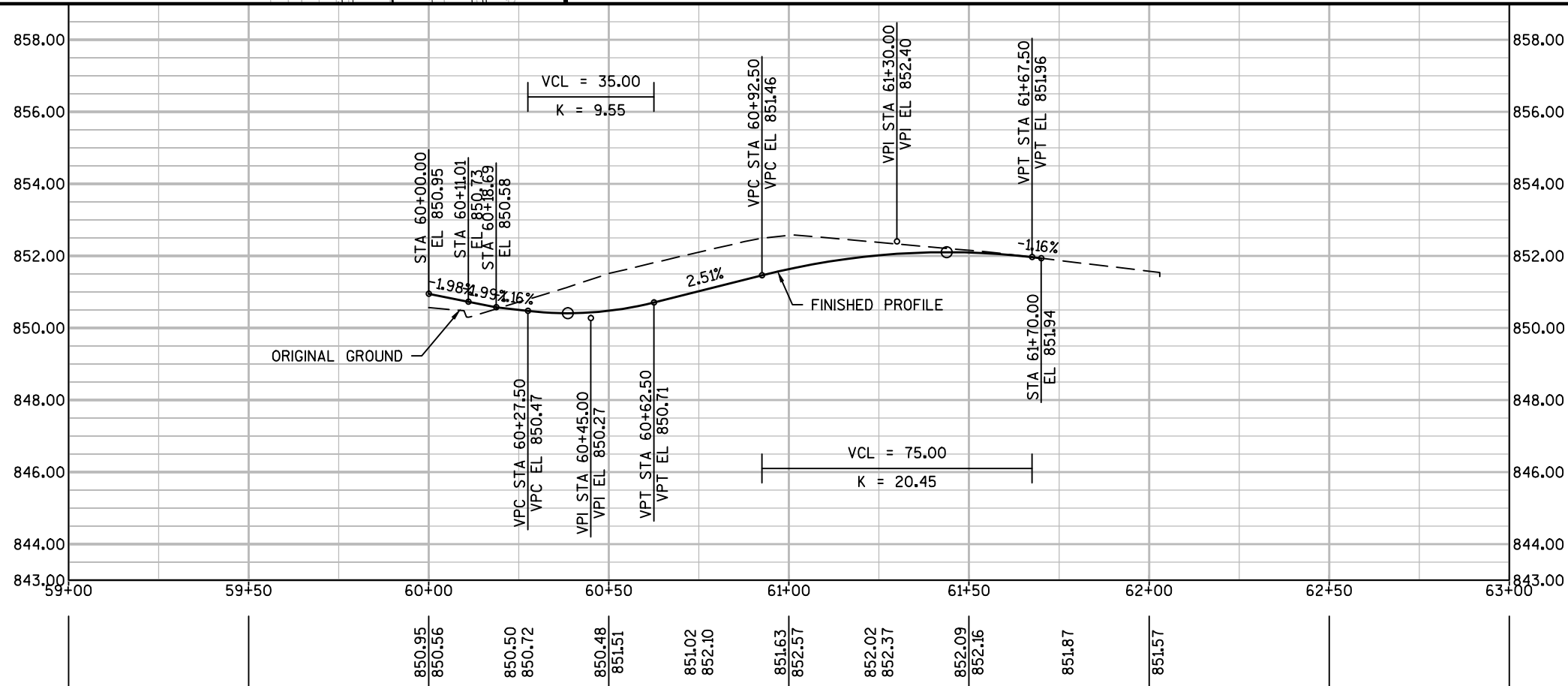
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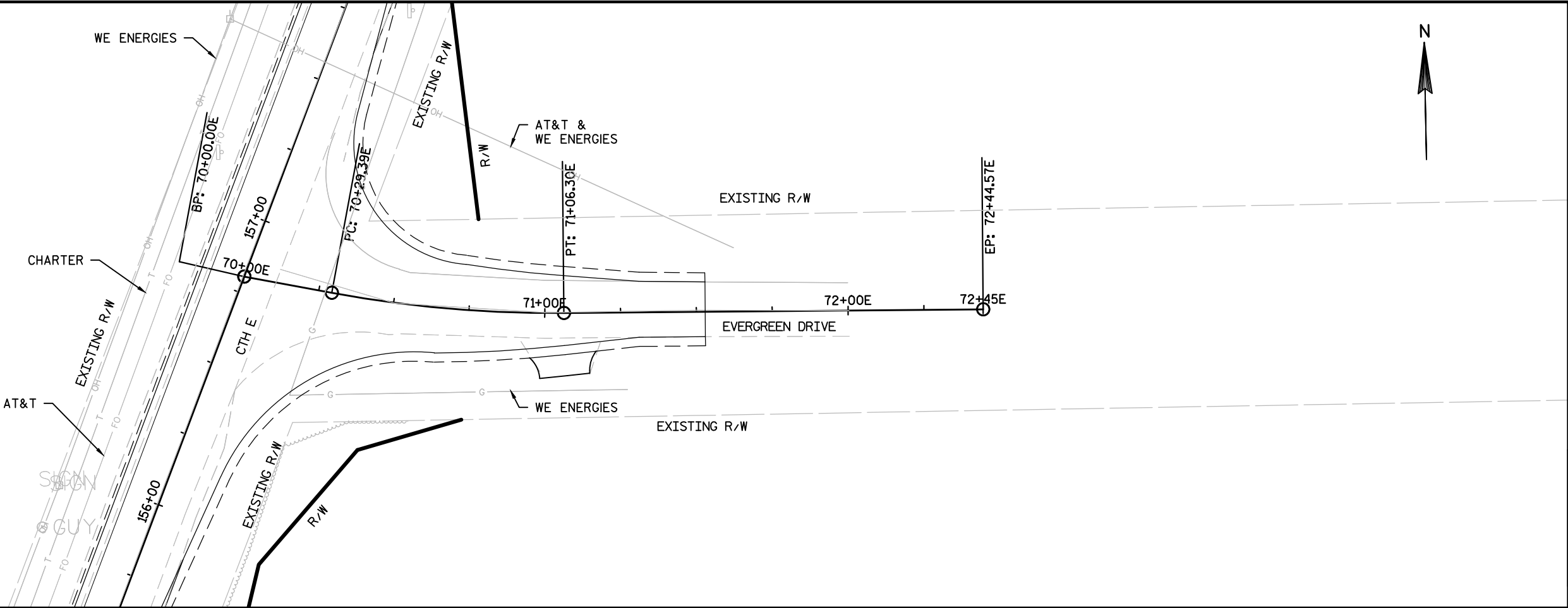
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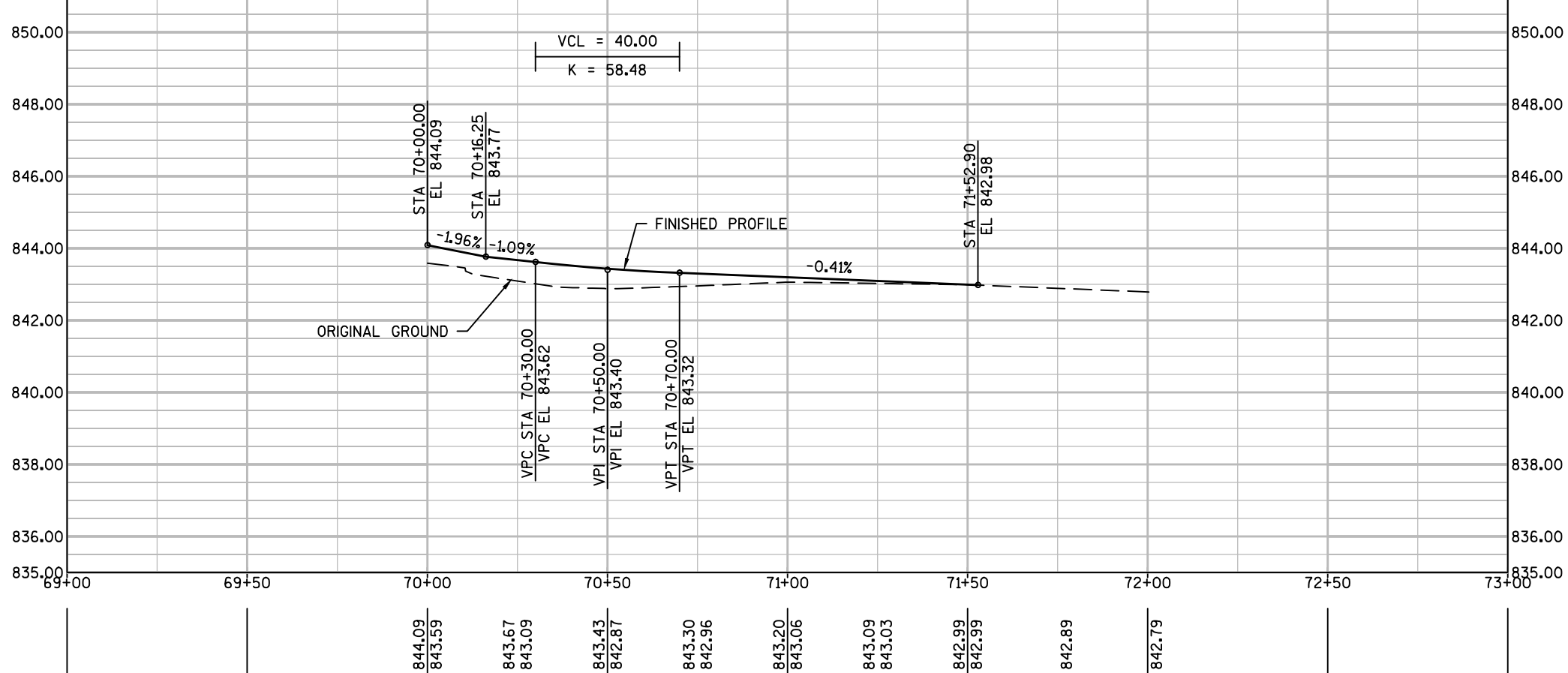
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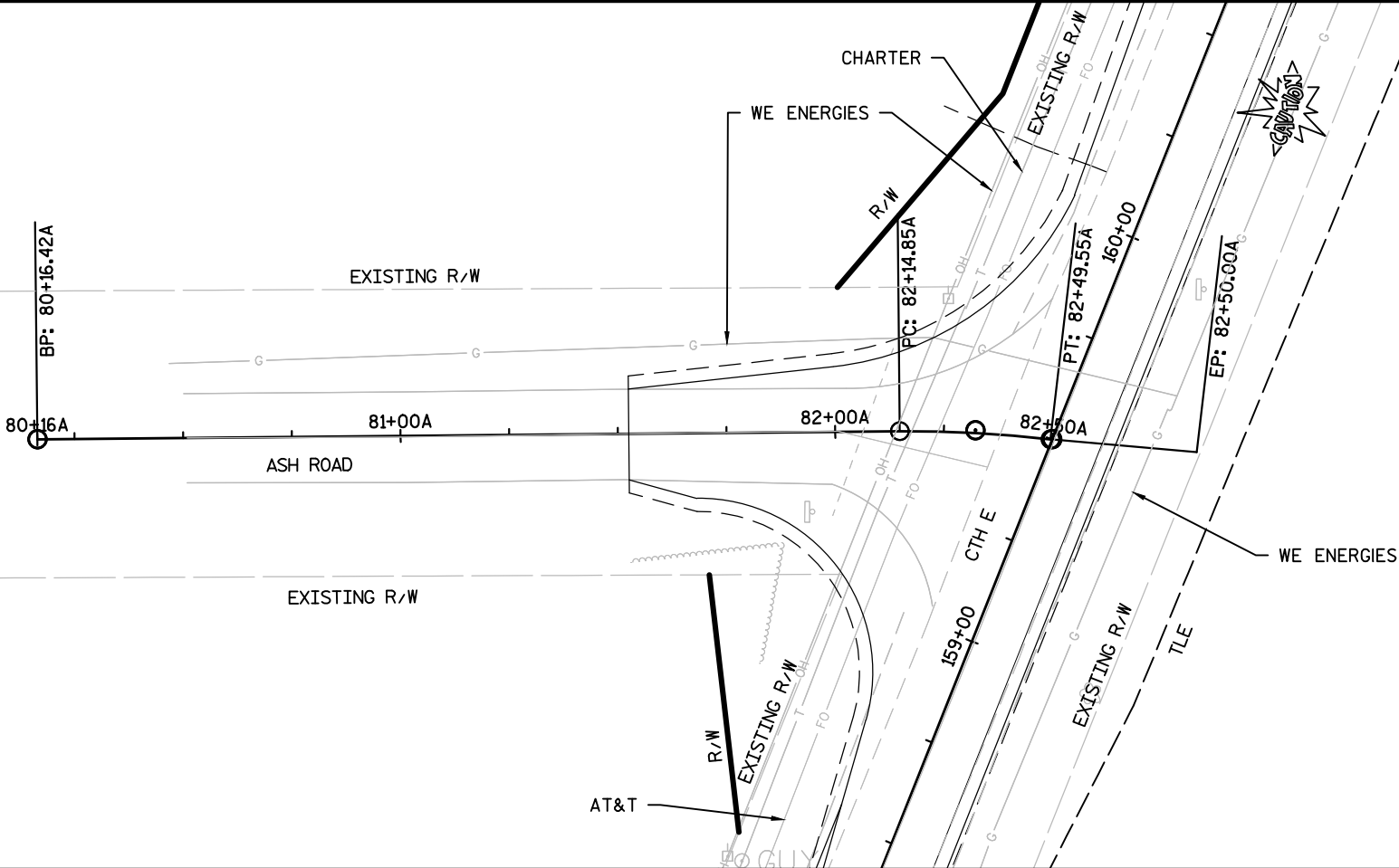
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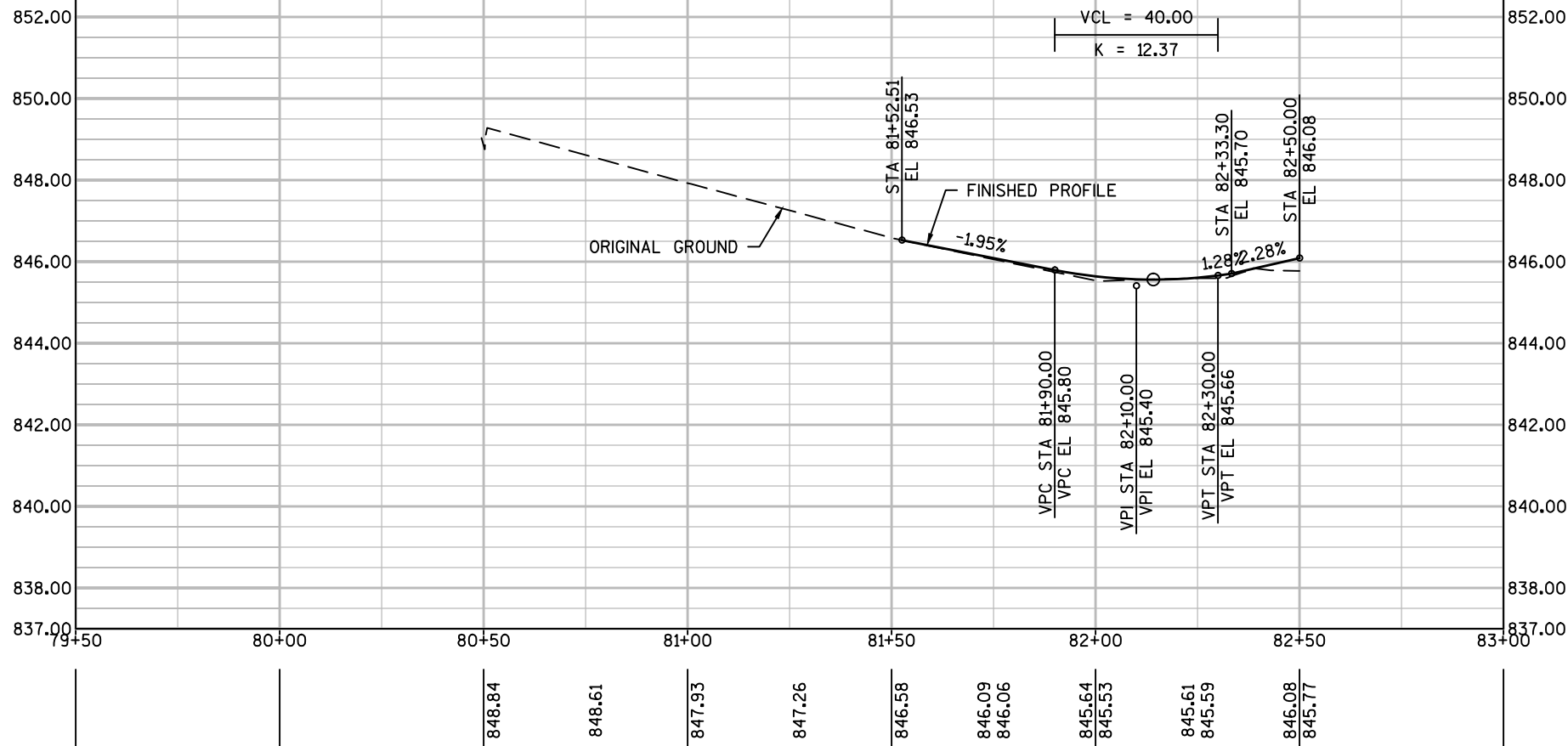
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PROJECT NO:6844-00-71

HWY: CTH E

COUNTY: WAUPACA

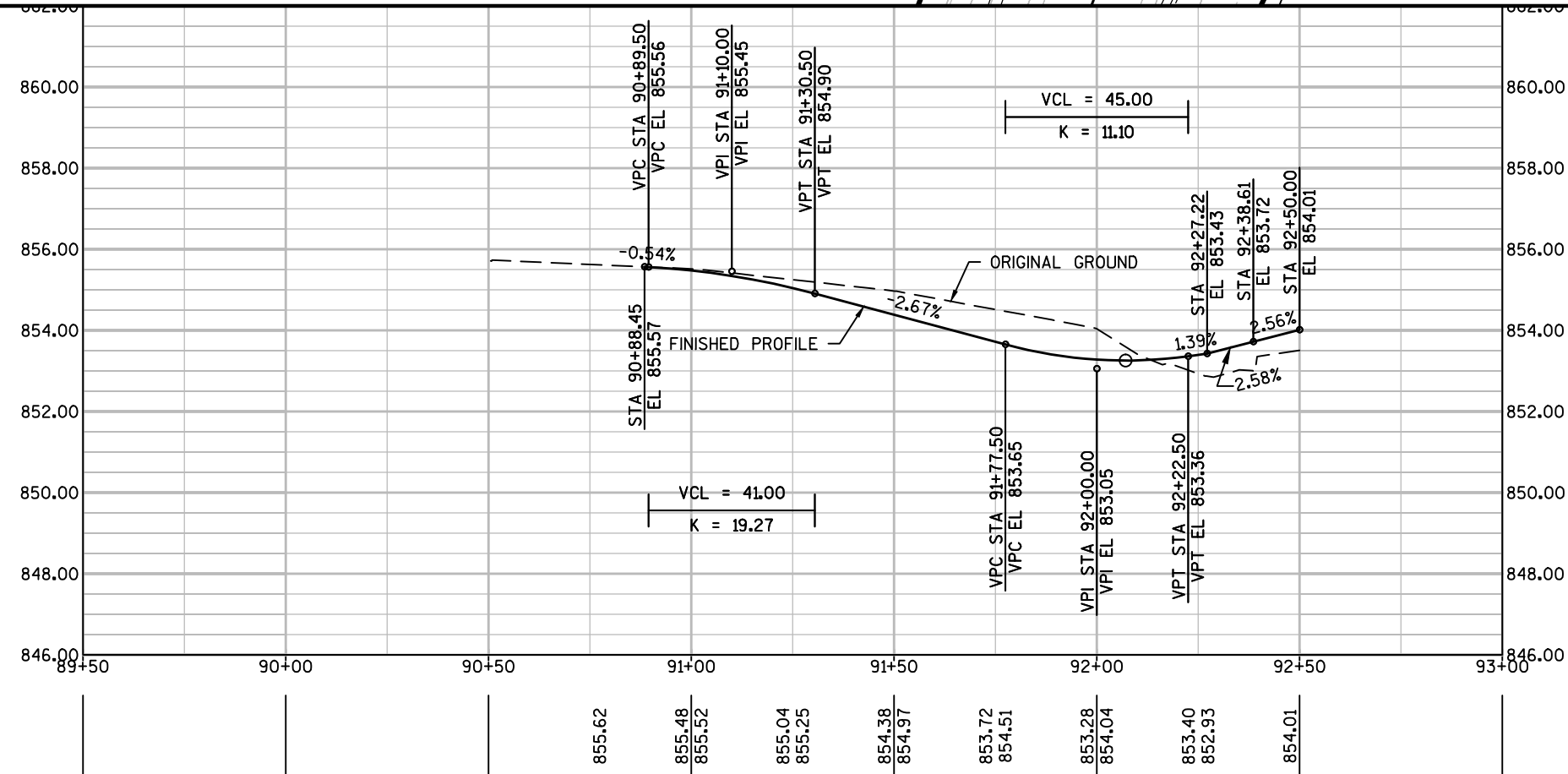
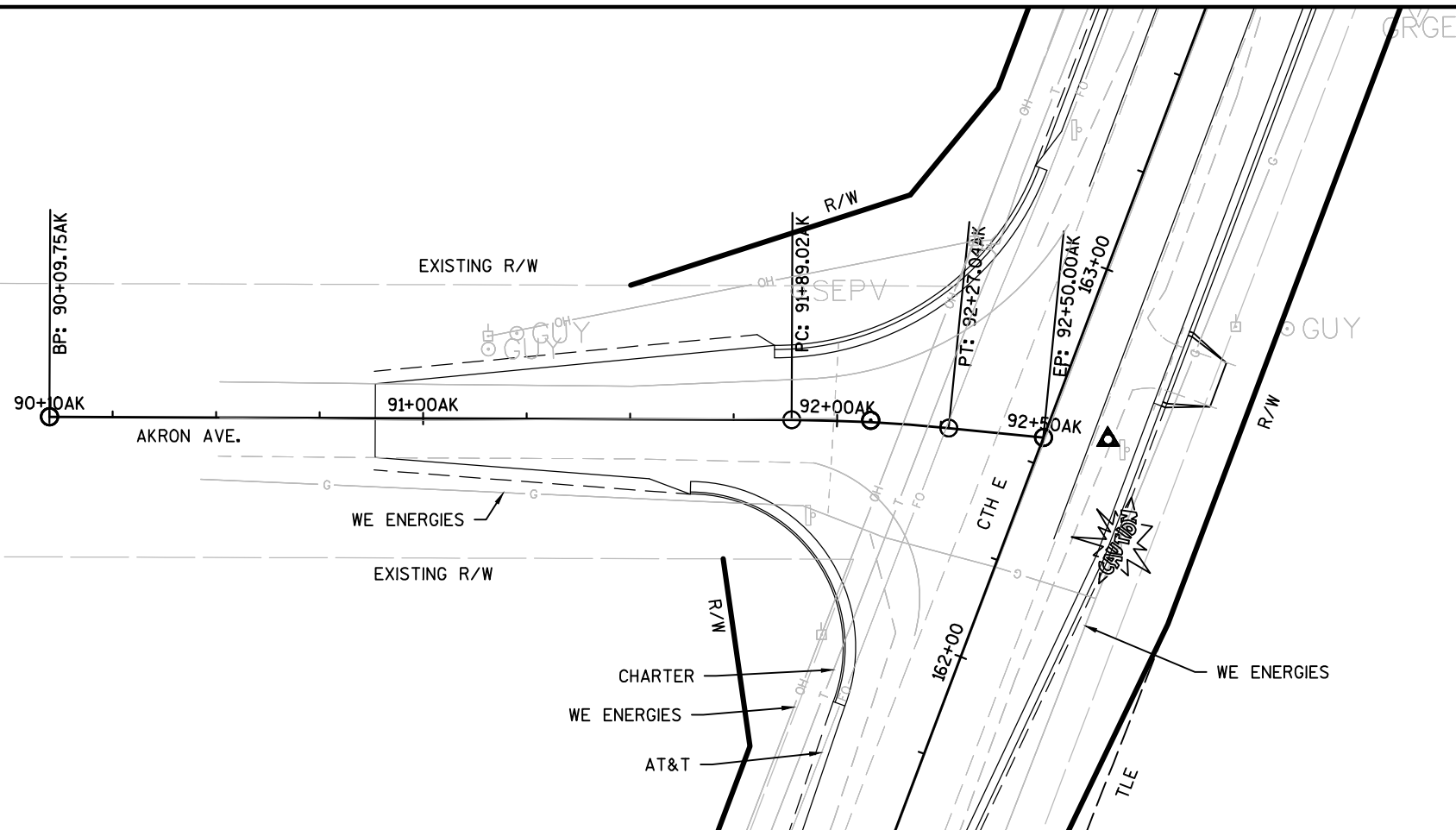
PLAN AND PROFILE: ASH ROAD

SHEET

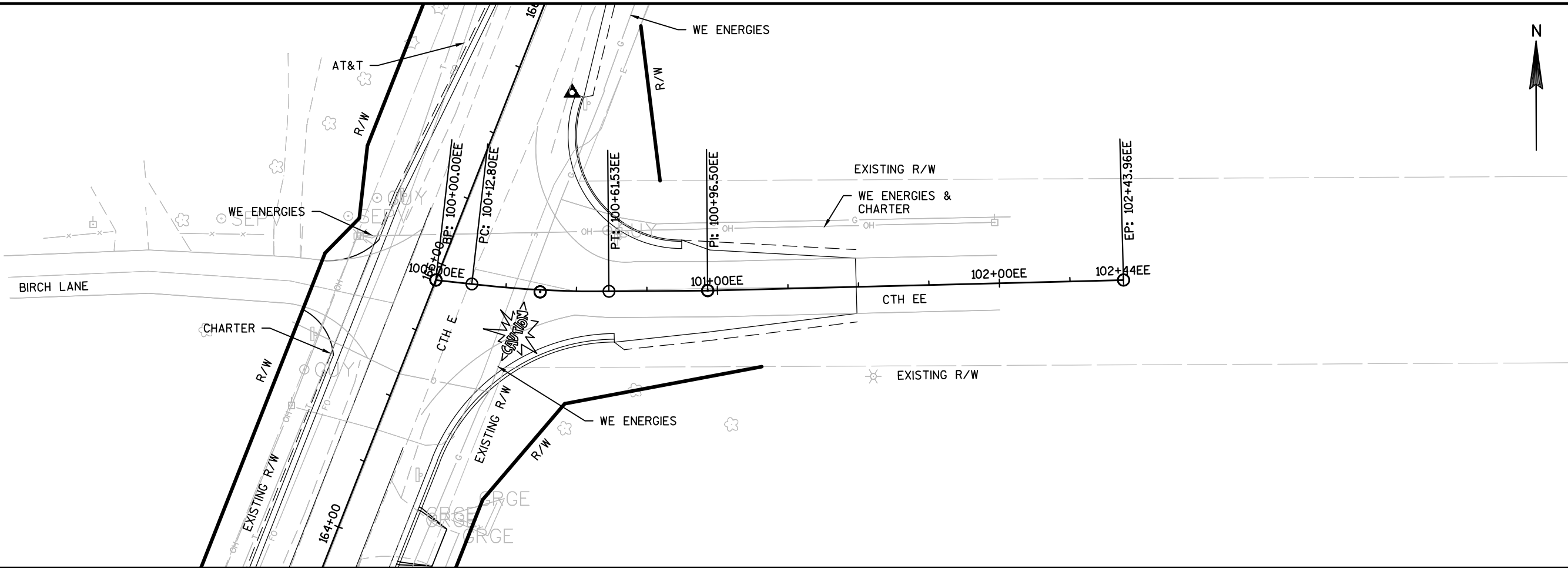
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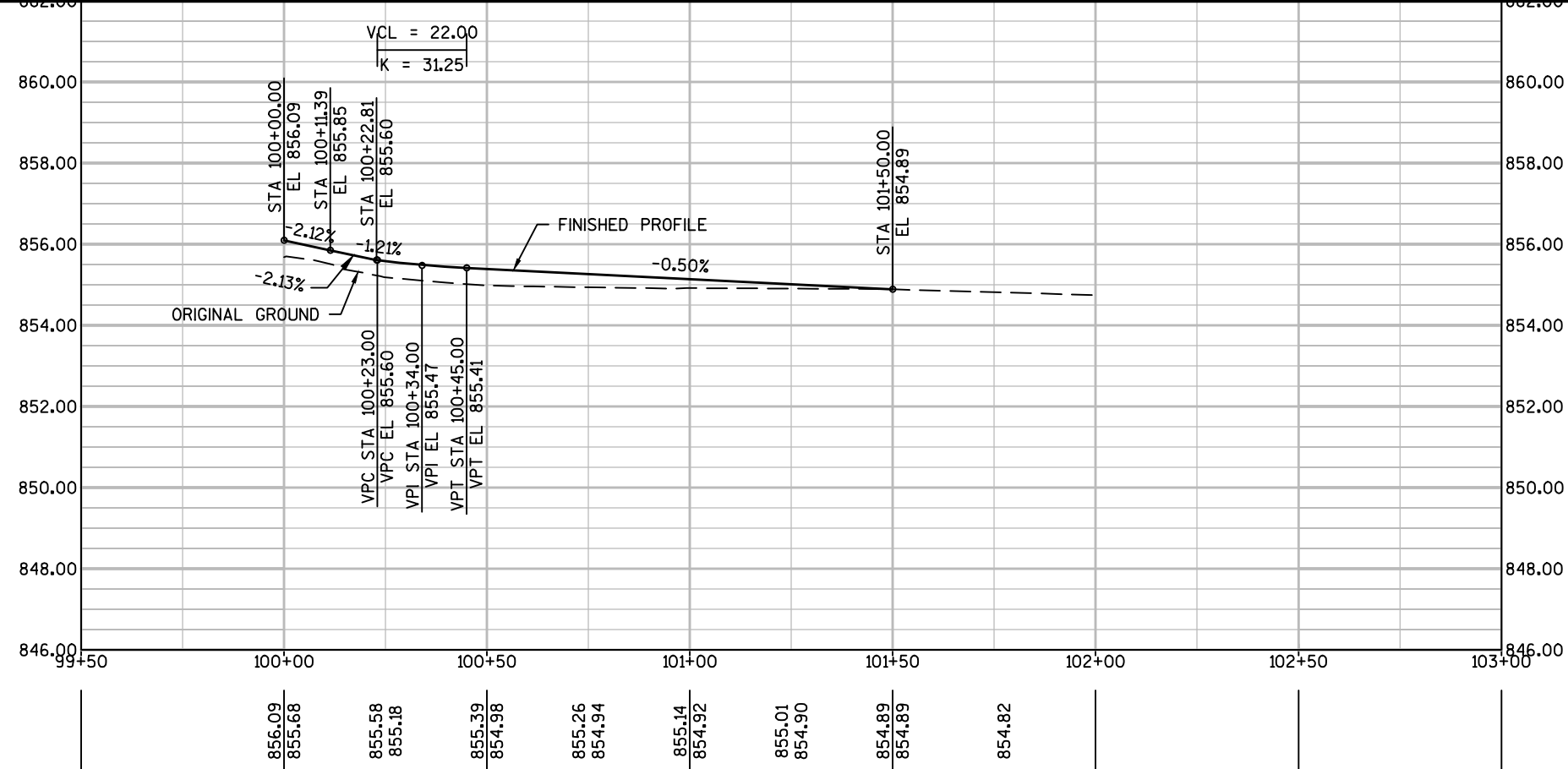
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PROJECT NO:6844-00-71

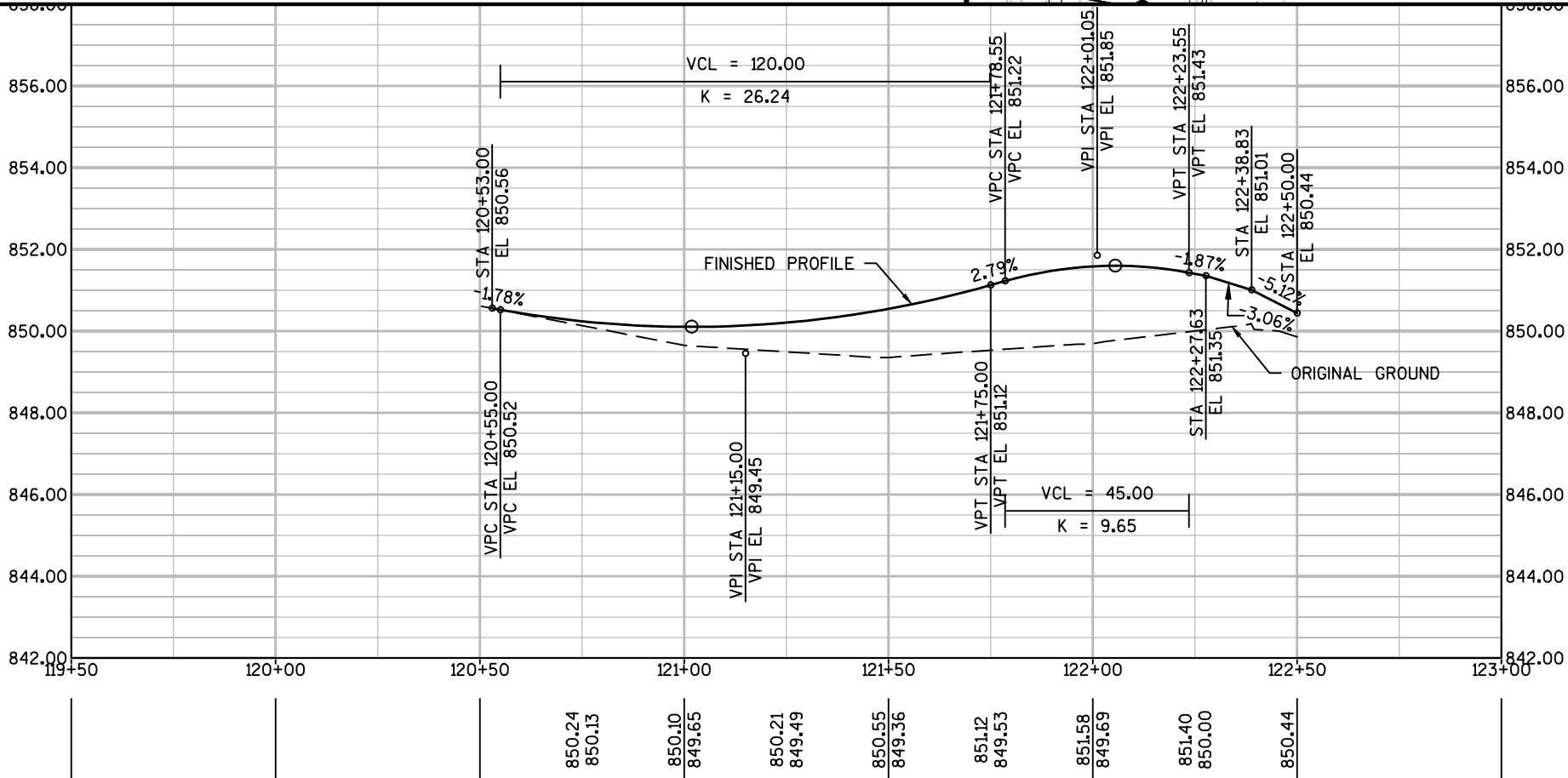
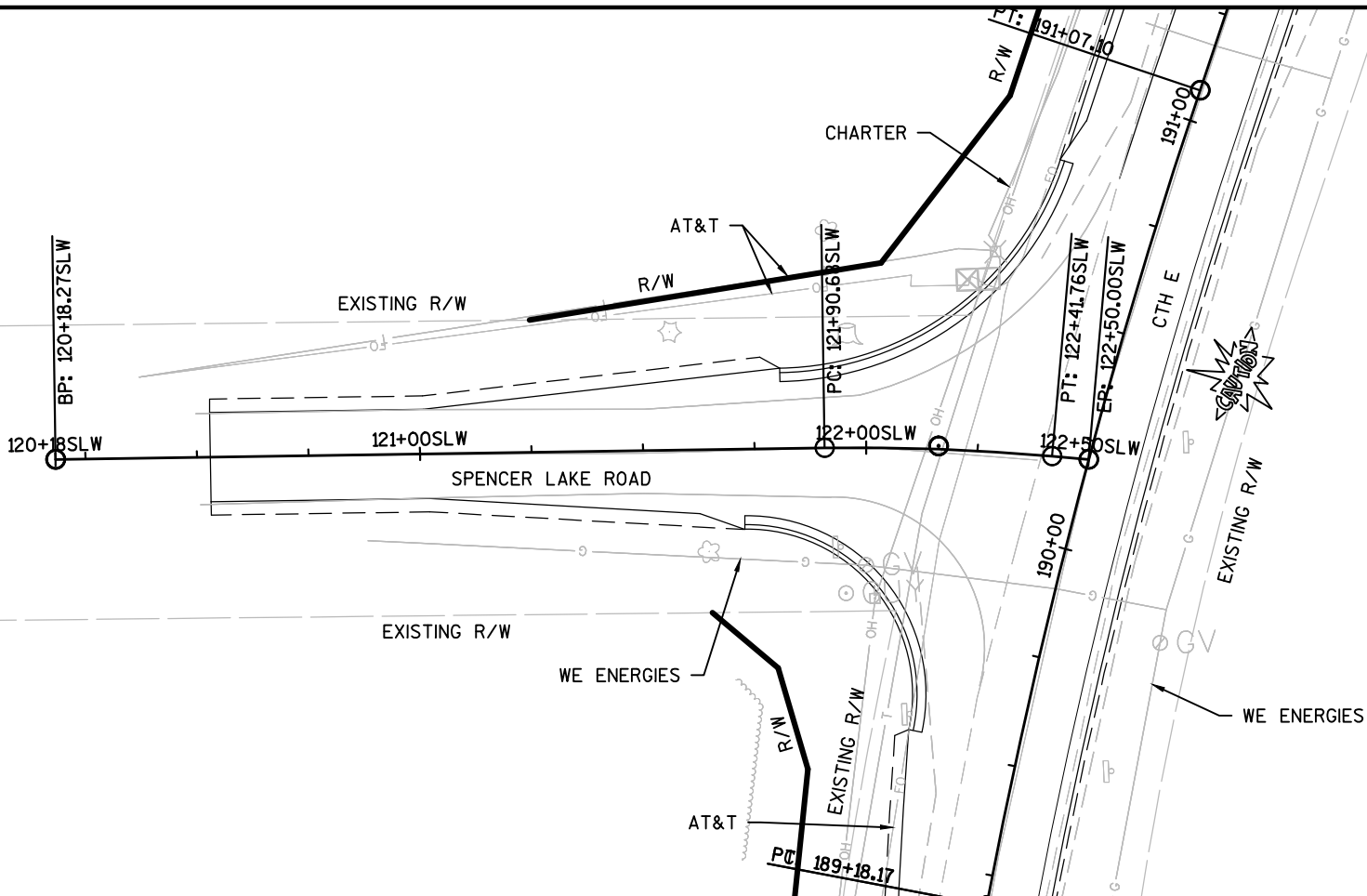
HWY: CTH E

COUNTY: WAUPACA

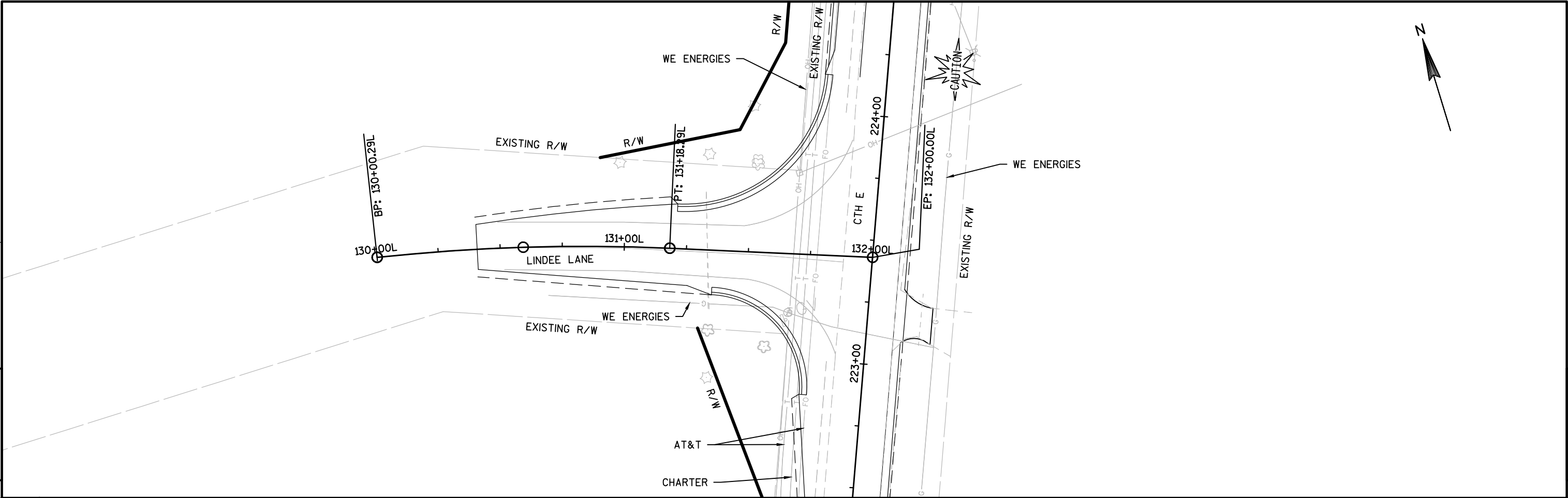
PLAN AND PROFILE: CTH EE

SHEET

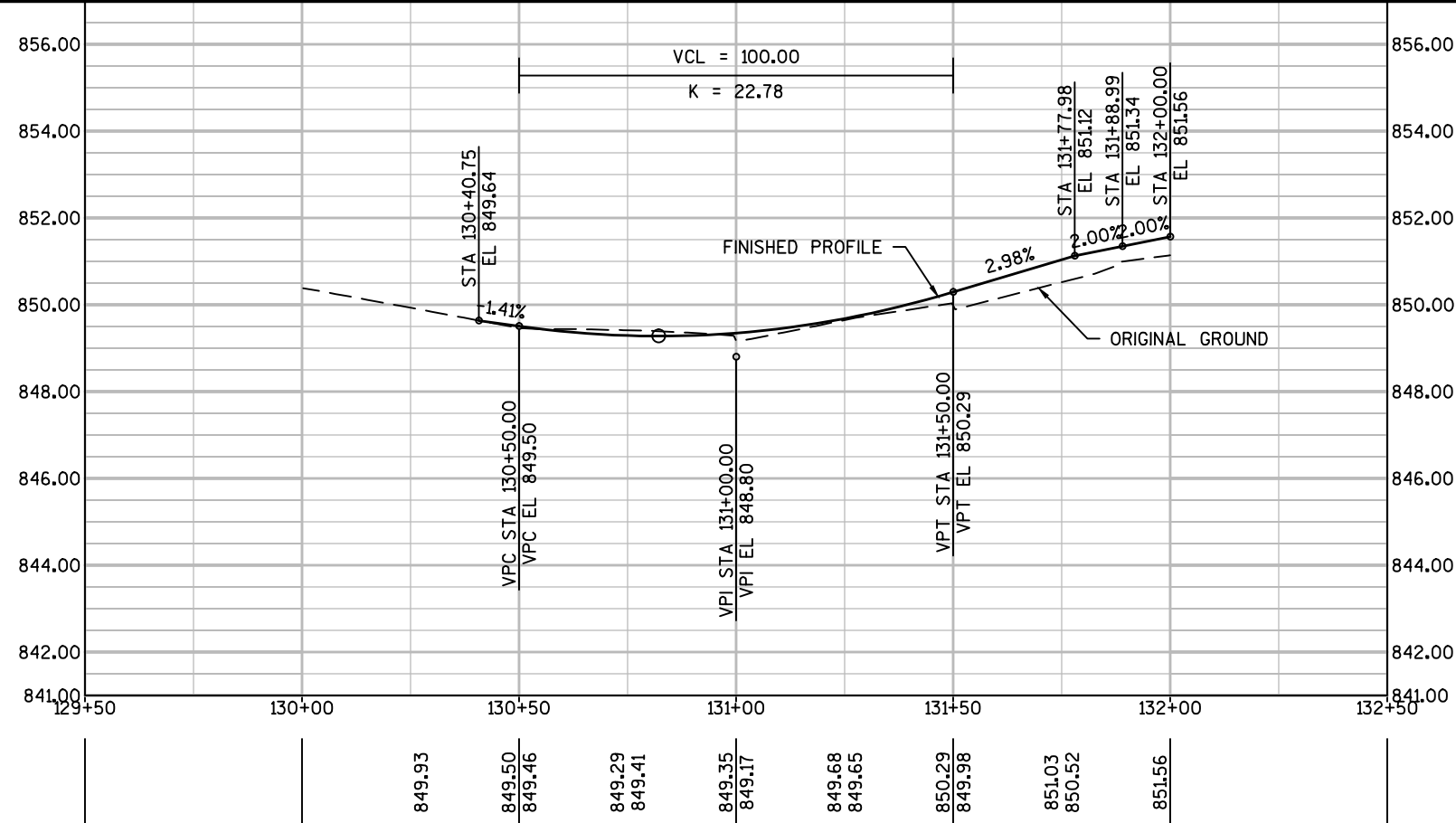
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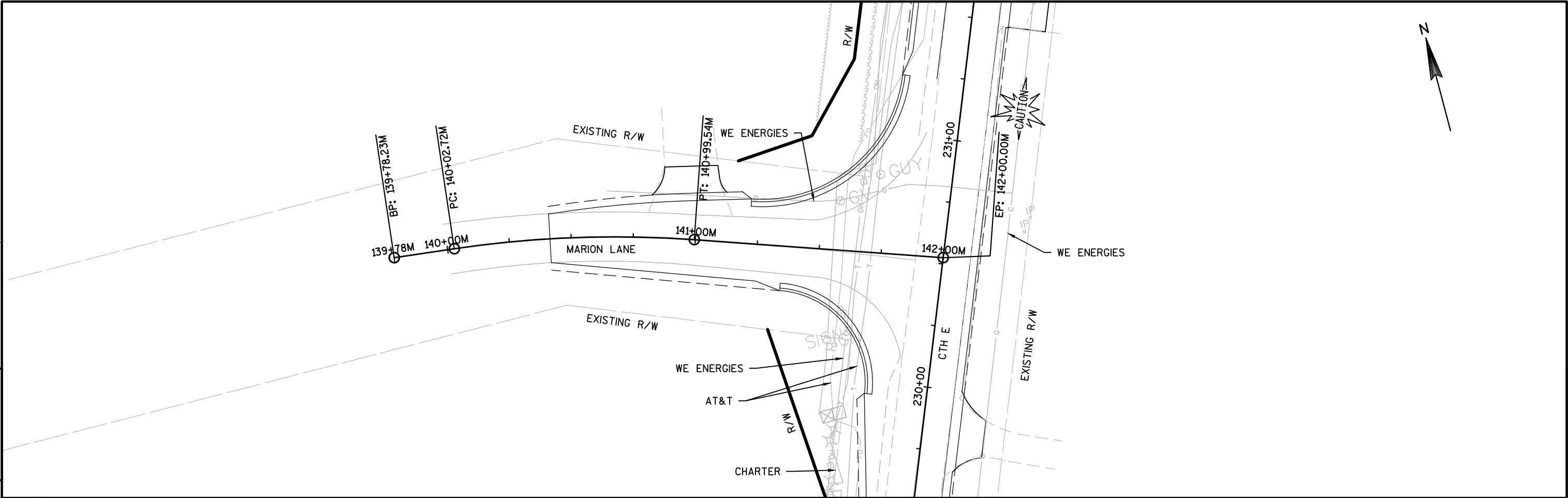


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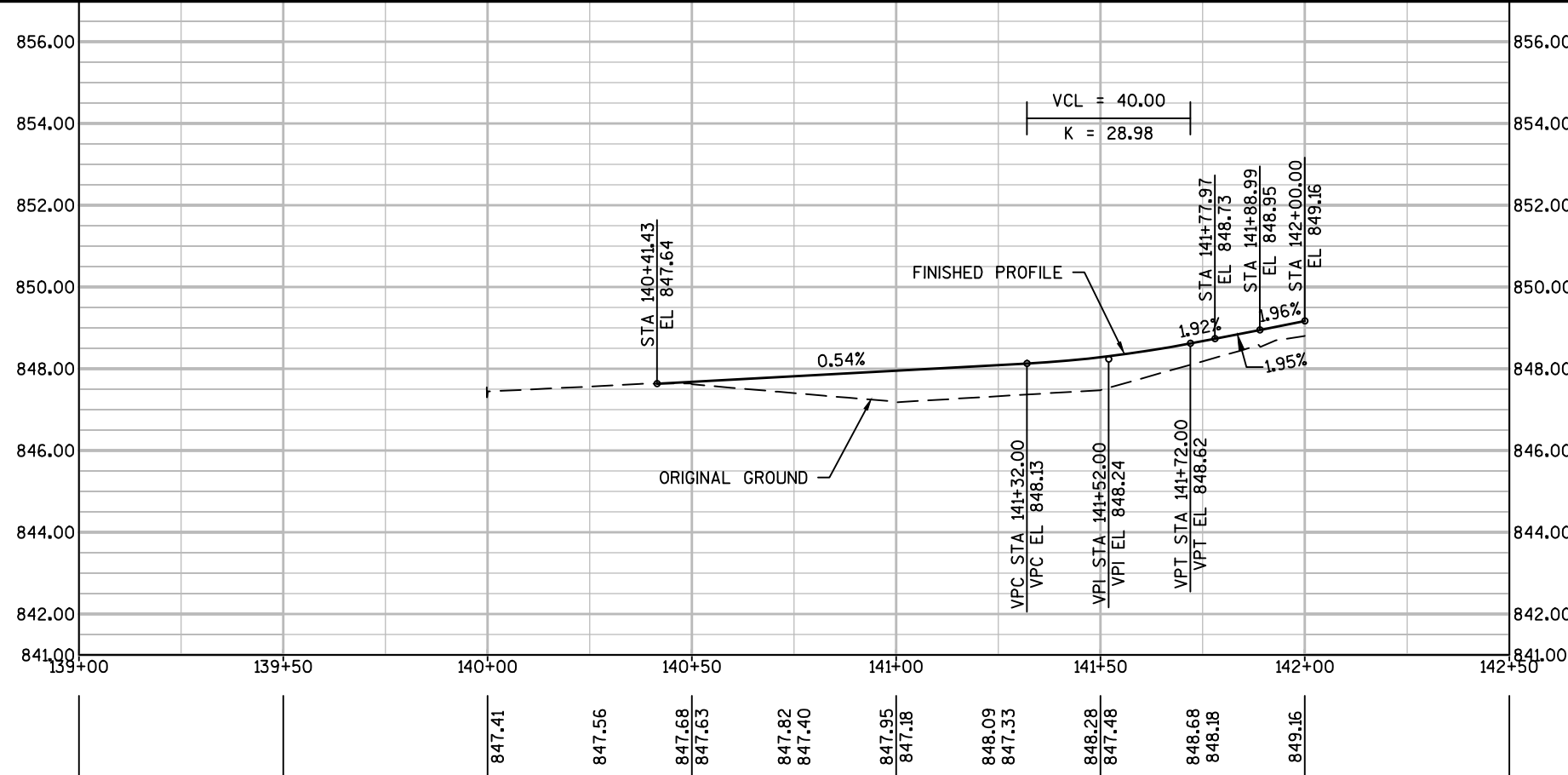


PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	PLAN AND PROFILE: LINDEE LANE	SHEET	E
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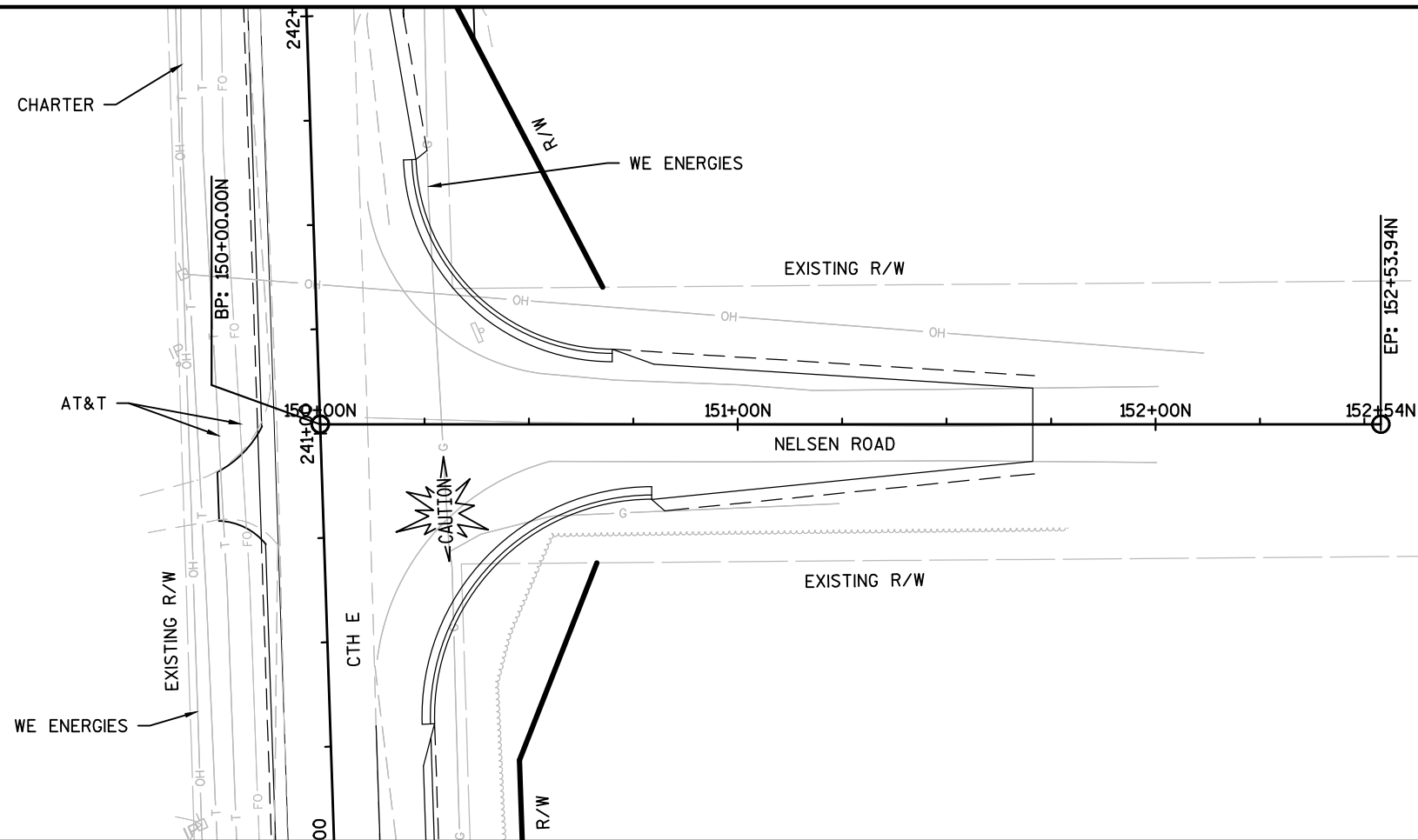


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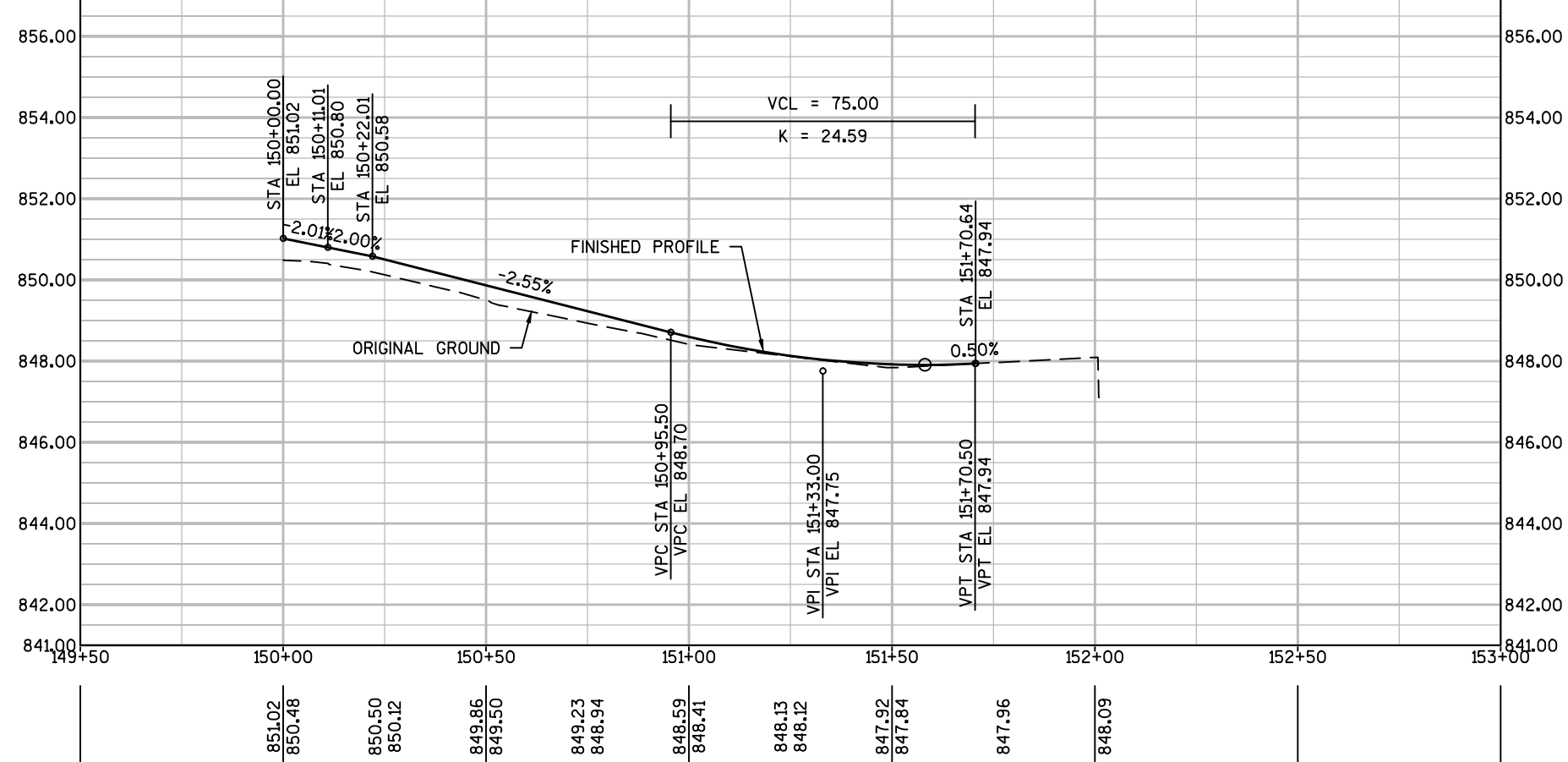


PROJECT NO:6844-00-71	HWY:CTH E	COUNTY:WAUPACA	PLAN AND PROFILE: MARION LANE	SHEET	E
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PROJECT NO:6844-00-71

HWY:CTH E

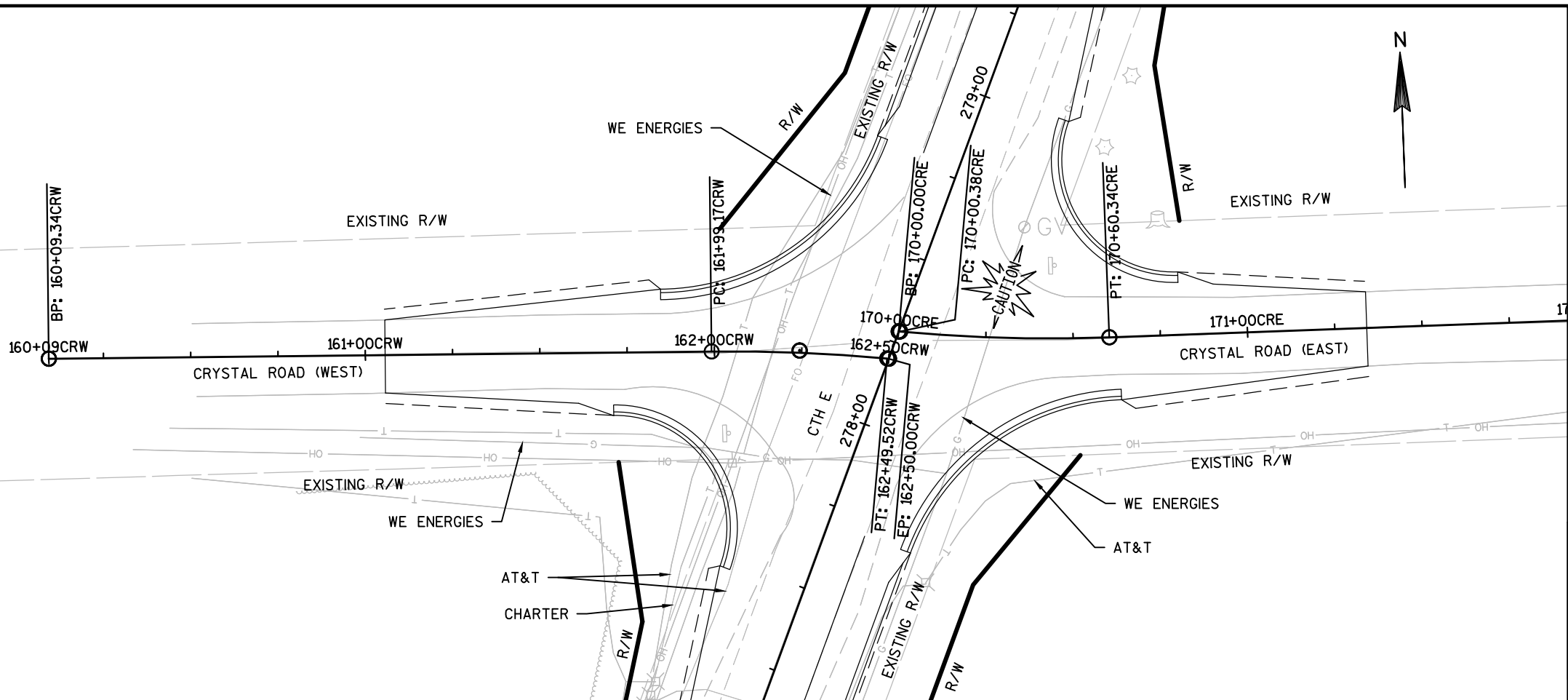
COUNTY:WAUPACA

PLAN AND PROFILE: NELSEN ROAD

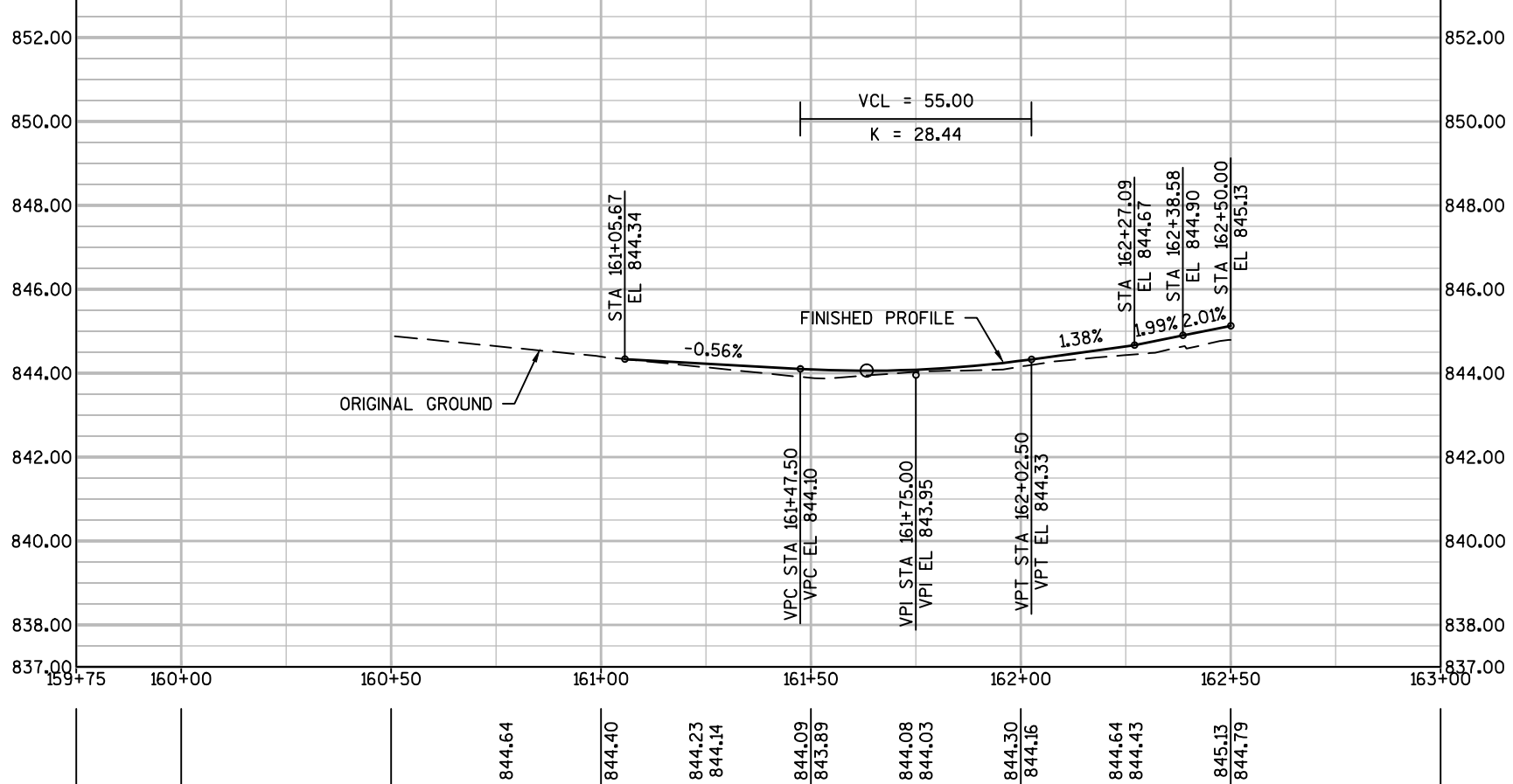
SHEET

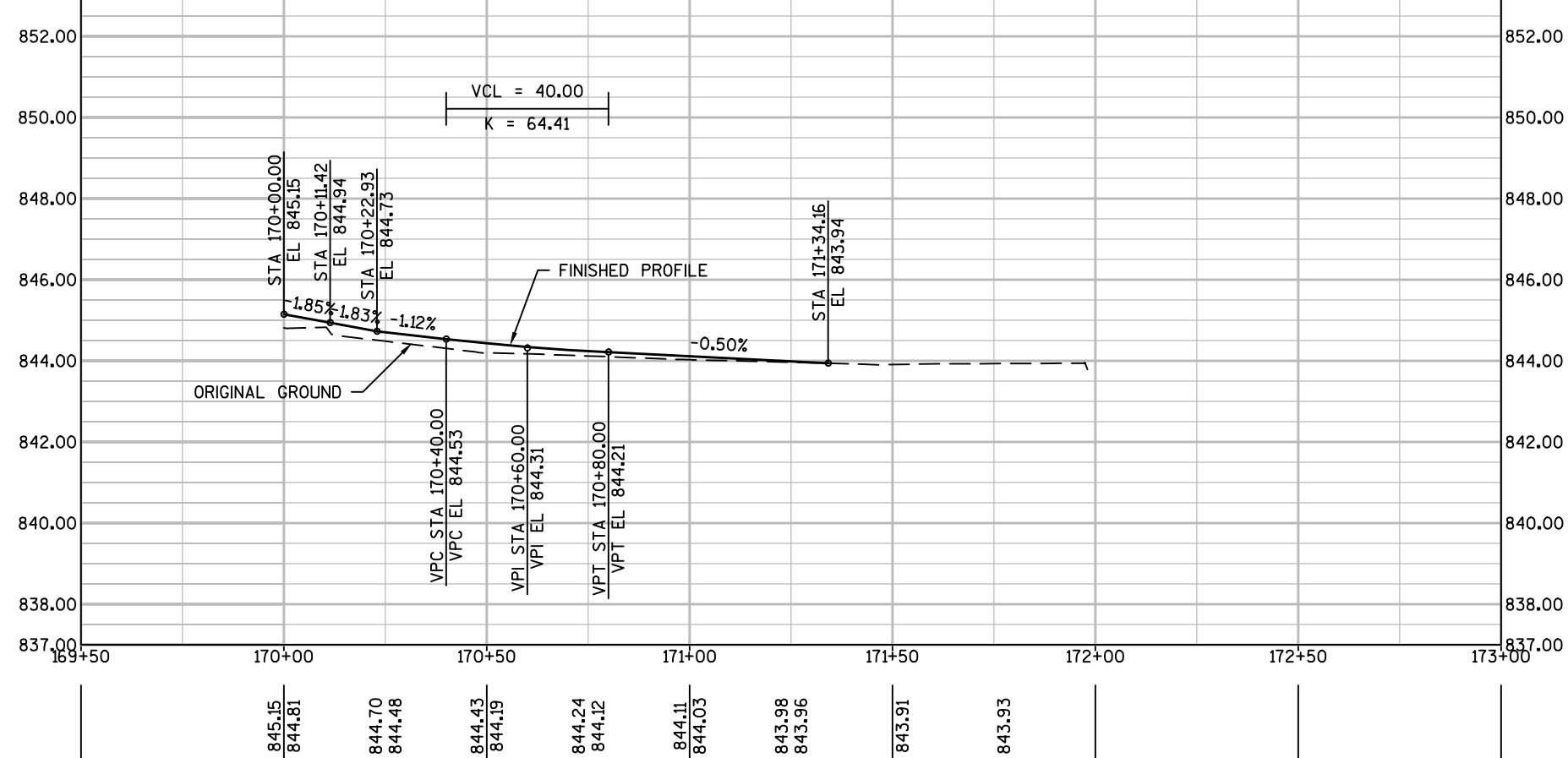
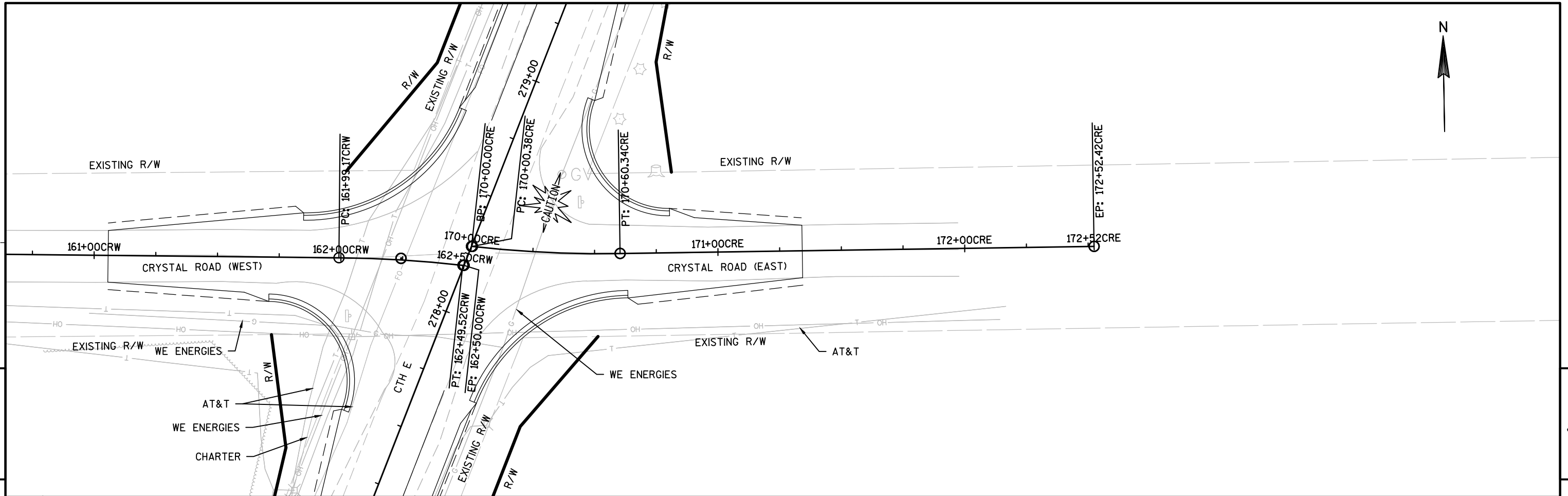
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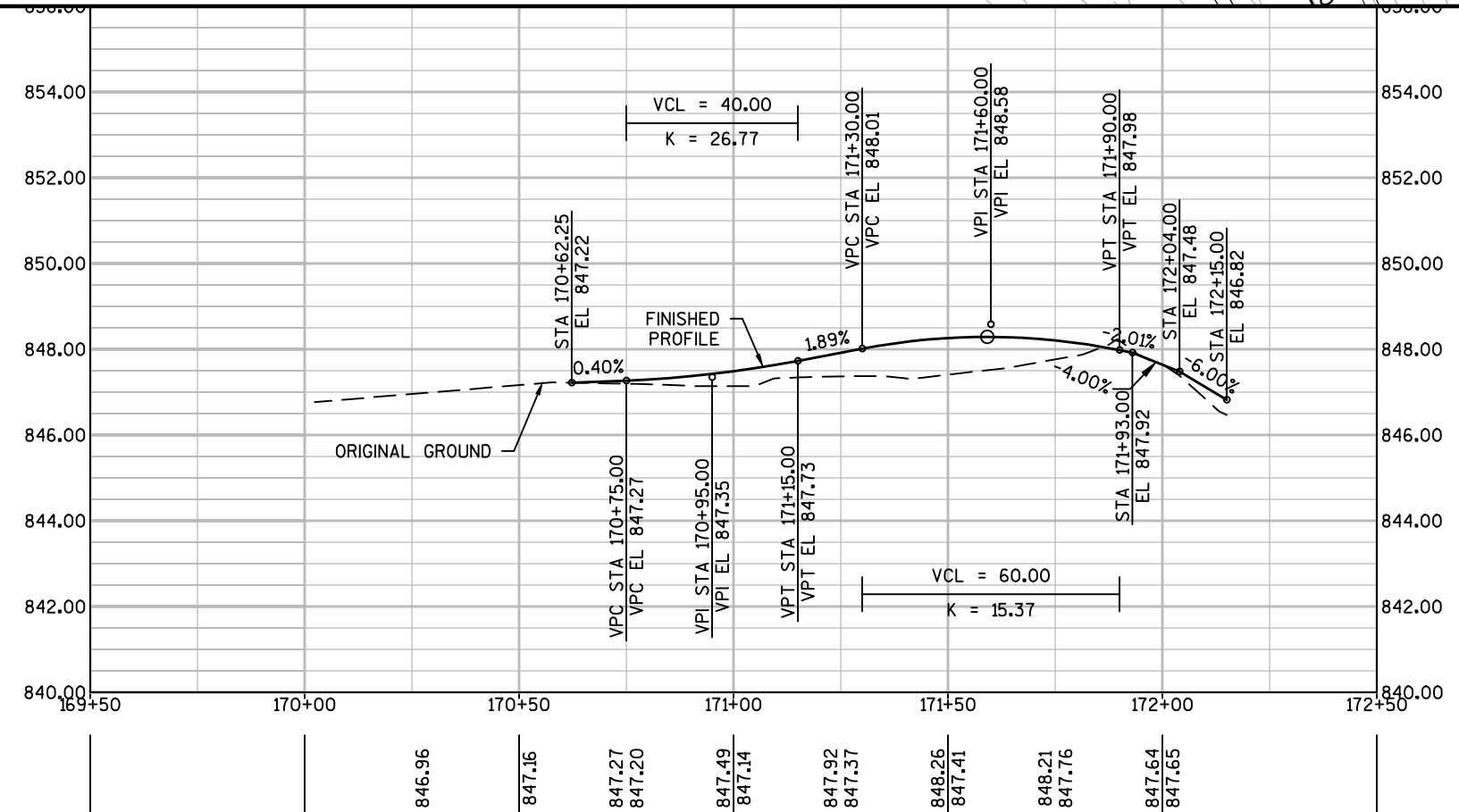
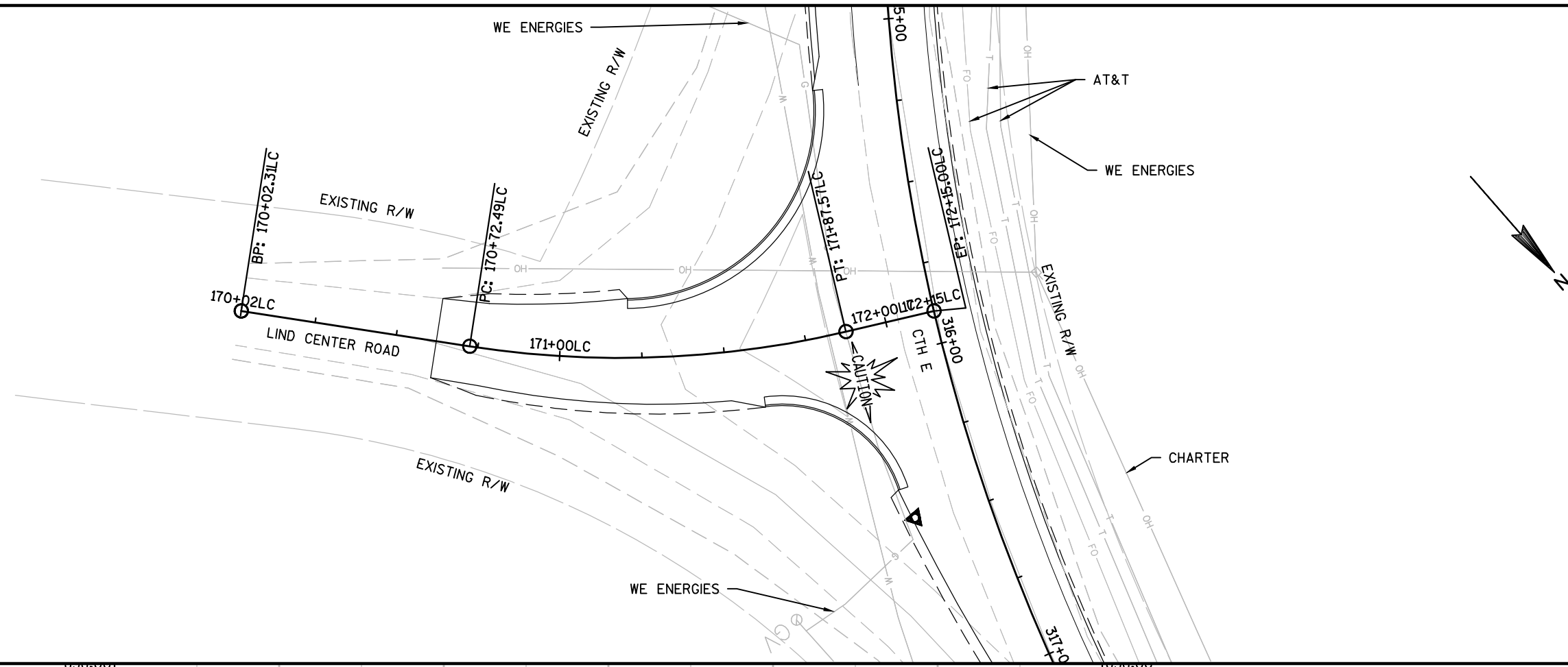
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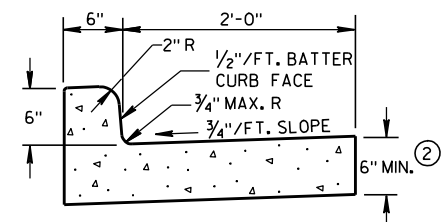




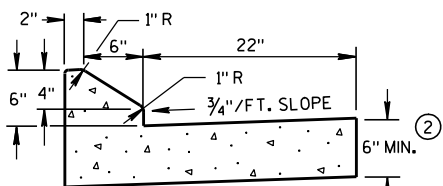


Standard Detail Drawing List

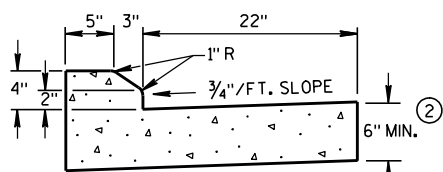
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
14B15-08A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B20-11A	STEEL THRI E BEAM STRUCTURE APPROACH
14B20-11E	STEEL THRI E BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B24-08A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B29-01	SAFETY EDGE
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRI E BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRI E BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRI E BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRI E BEAM TRANSITION (MGS)
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16C	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-16D	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING



TYPES A & D ①

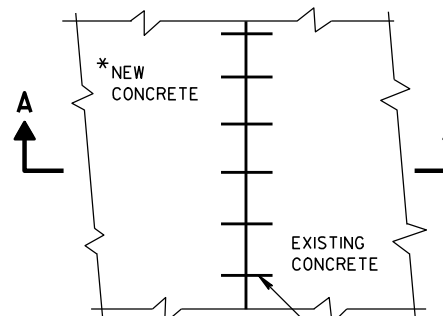


6" SLOPED CURB TYPES G & J ①



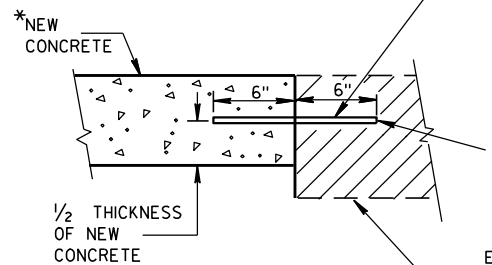
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



PLAN VIEW

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

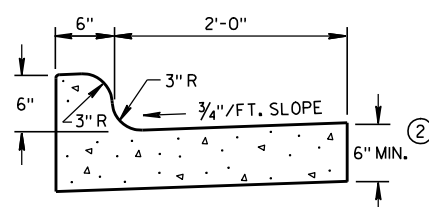


SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

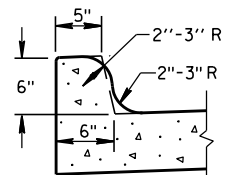
NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

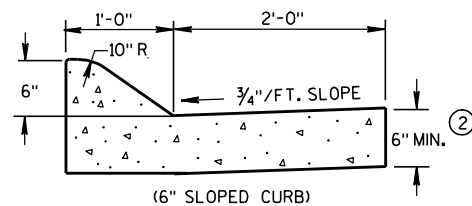
EXISTING
CONCRETE



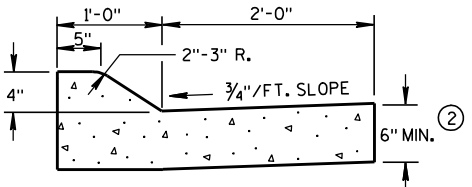
TYPES K & L ①



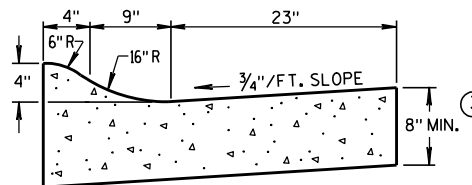
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



(6" SLOPED CURB)

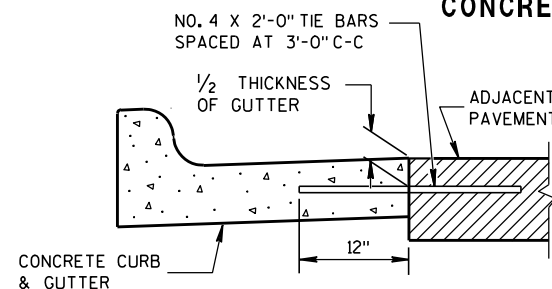


TYPES A & D ①

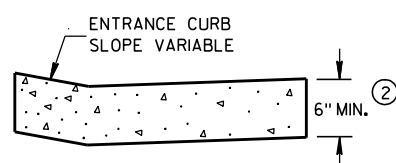


4" SLOPED CURB TYPES R & T ① ④

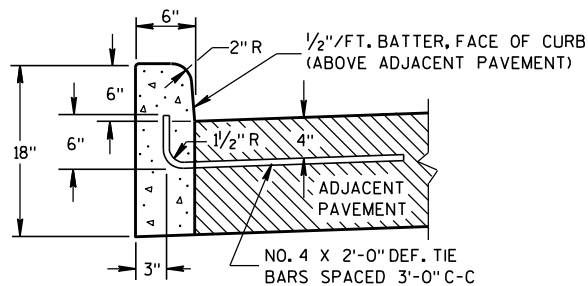
CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION ①

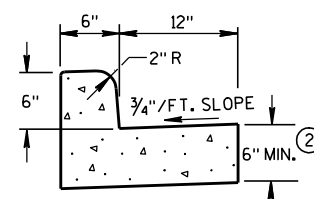


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

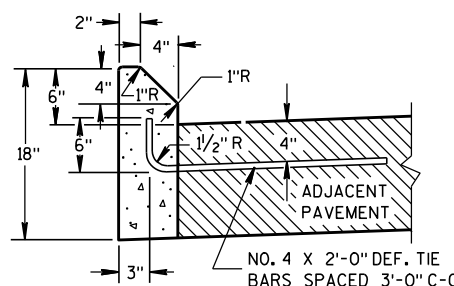


TYPES A & D ①

CONCRETE CURB



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

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

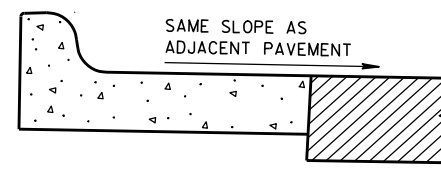
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

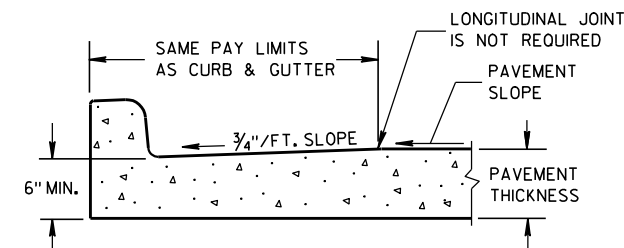
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

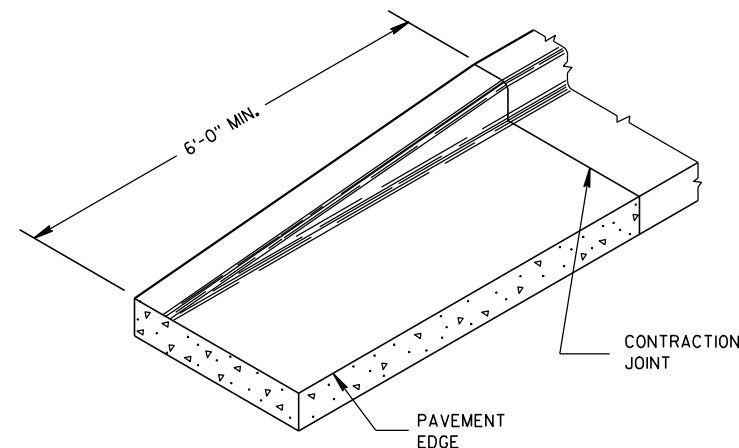
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/4/08

DATE

FHWA

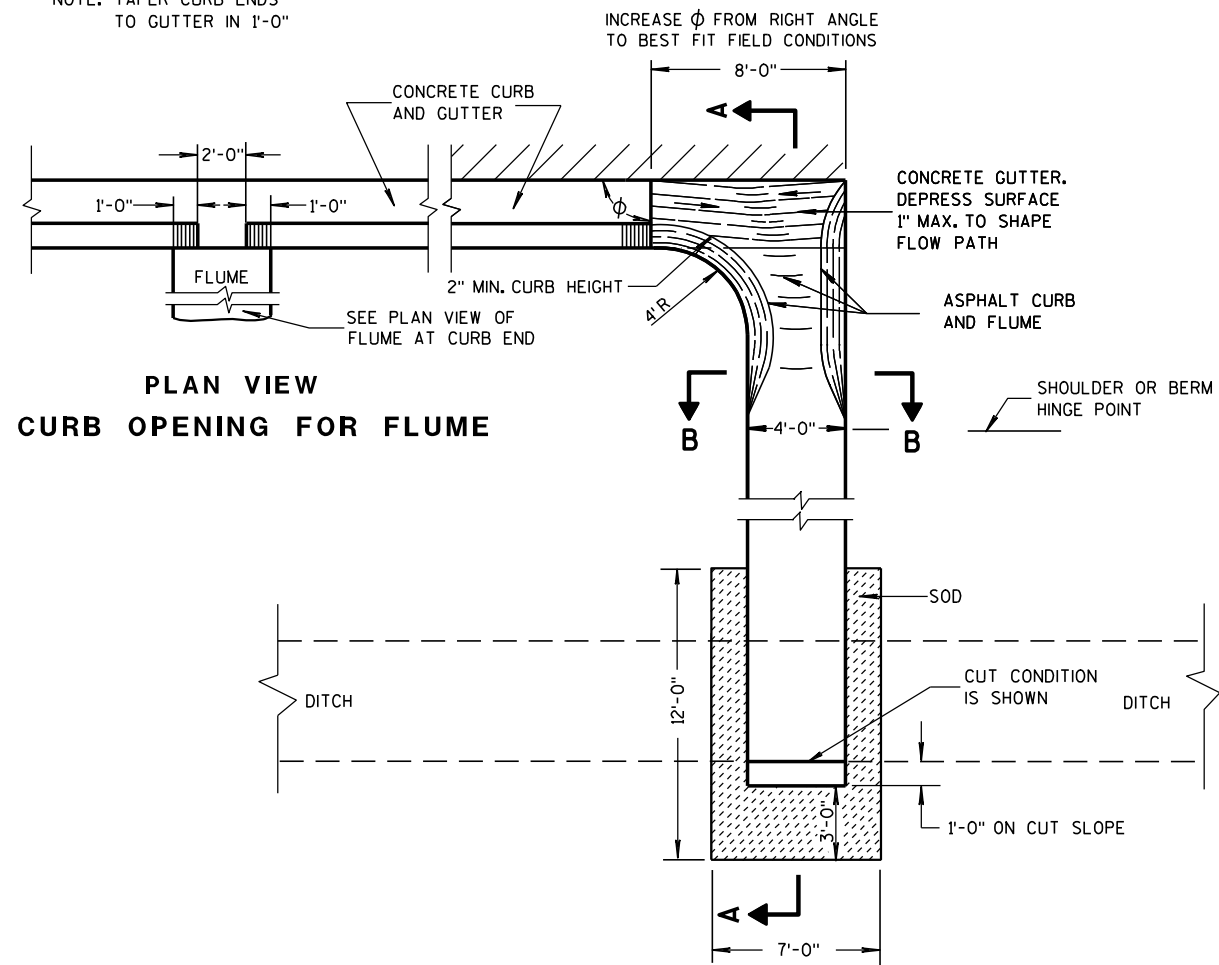
/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

ENGINEER

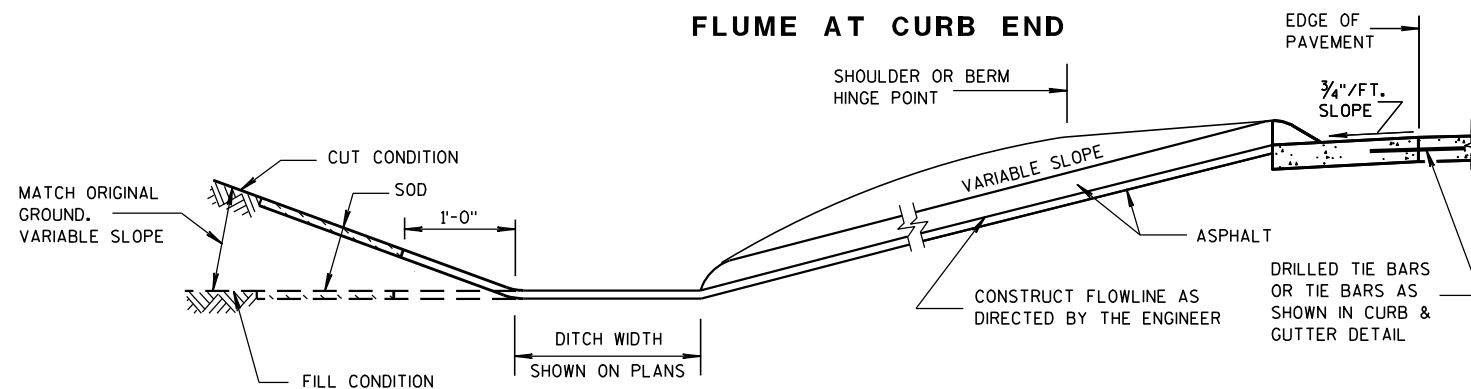
ASPHALTIC FLUME

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

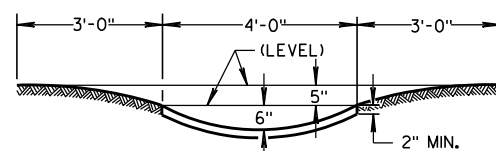


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

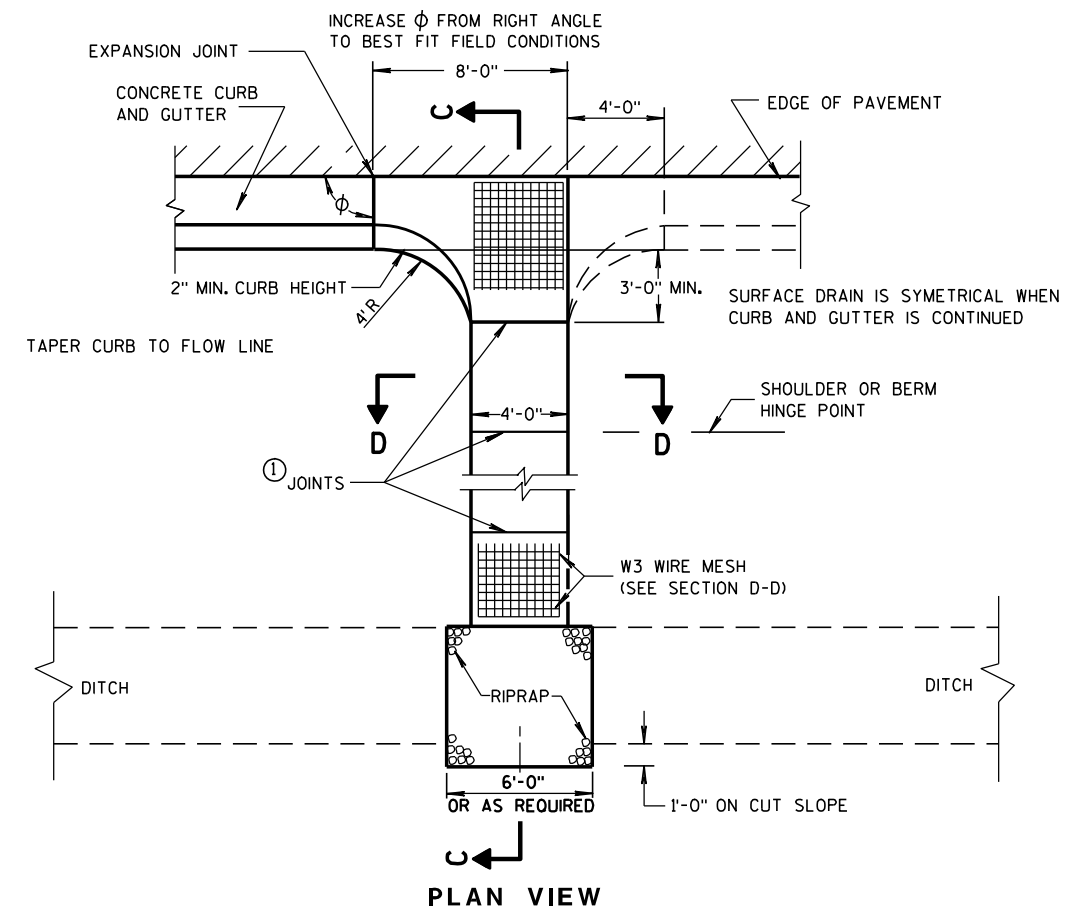
GENERAL NOTES

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

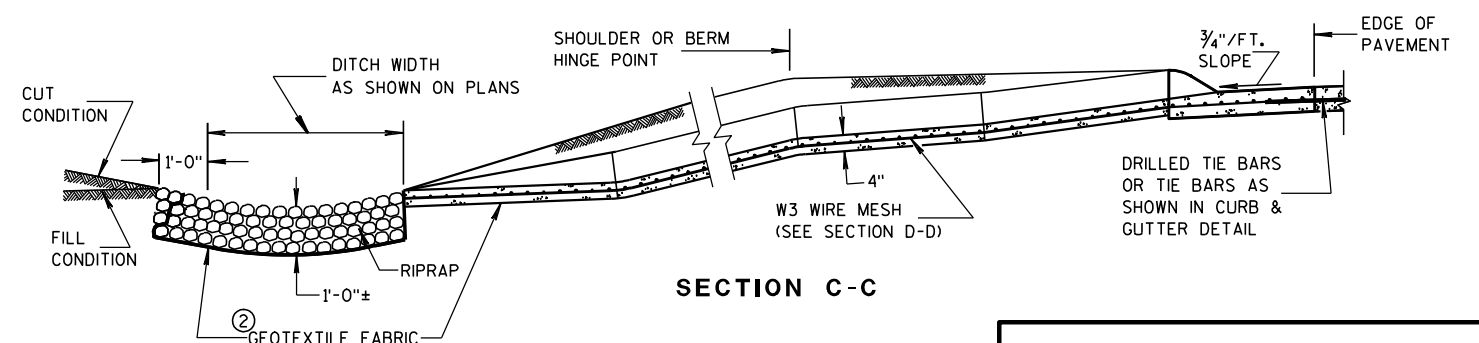
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

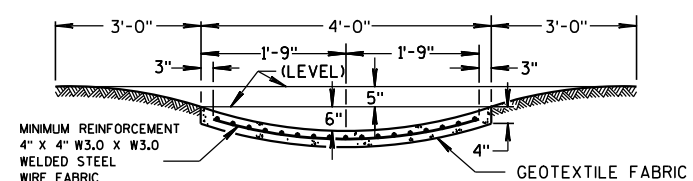
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-4-08

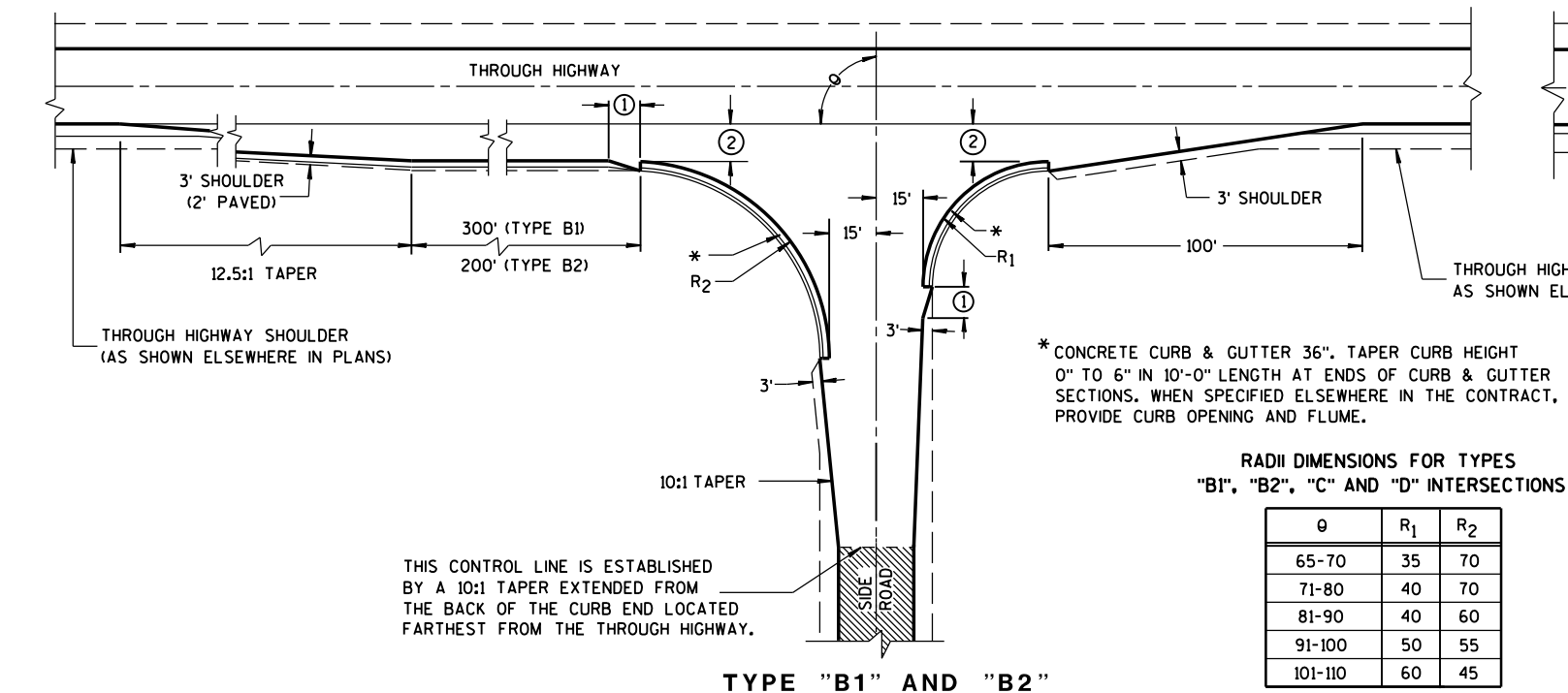
DATE

FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

ENGINEER



GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

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

EXISTING PAVED SURFACE

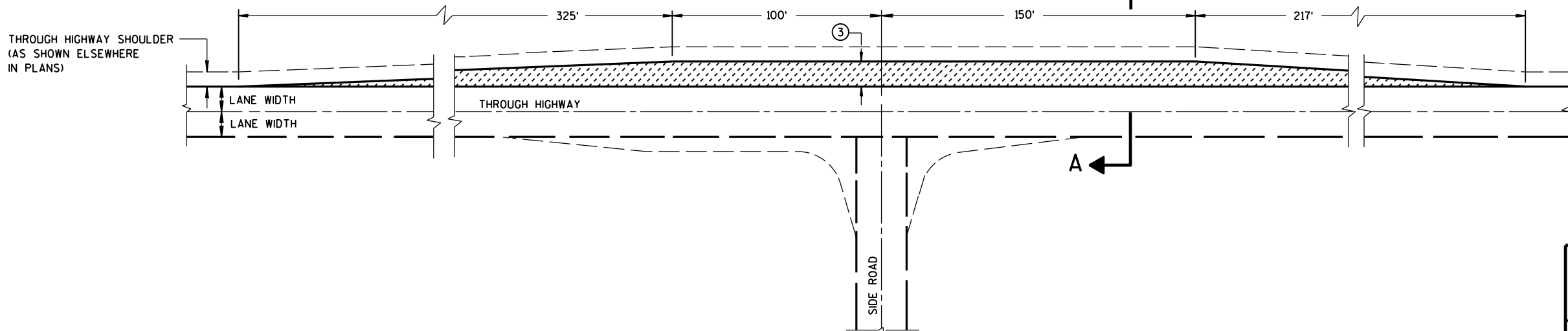
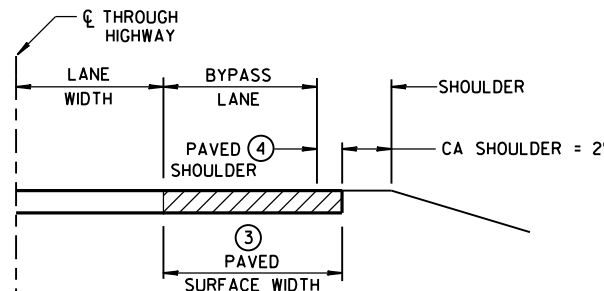
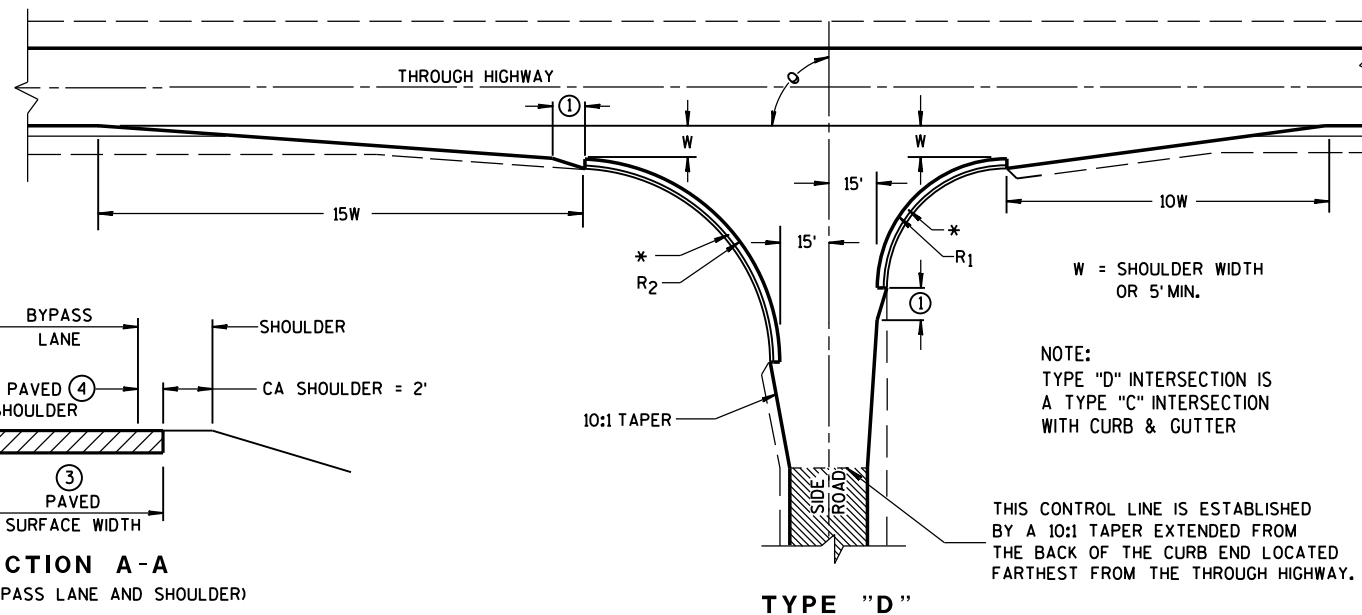
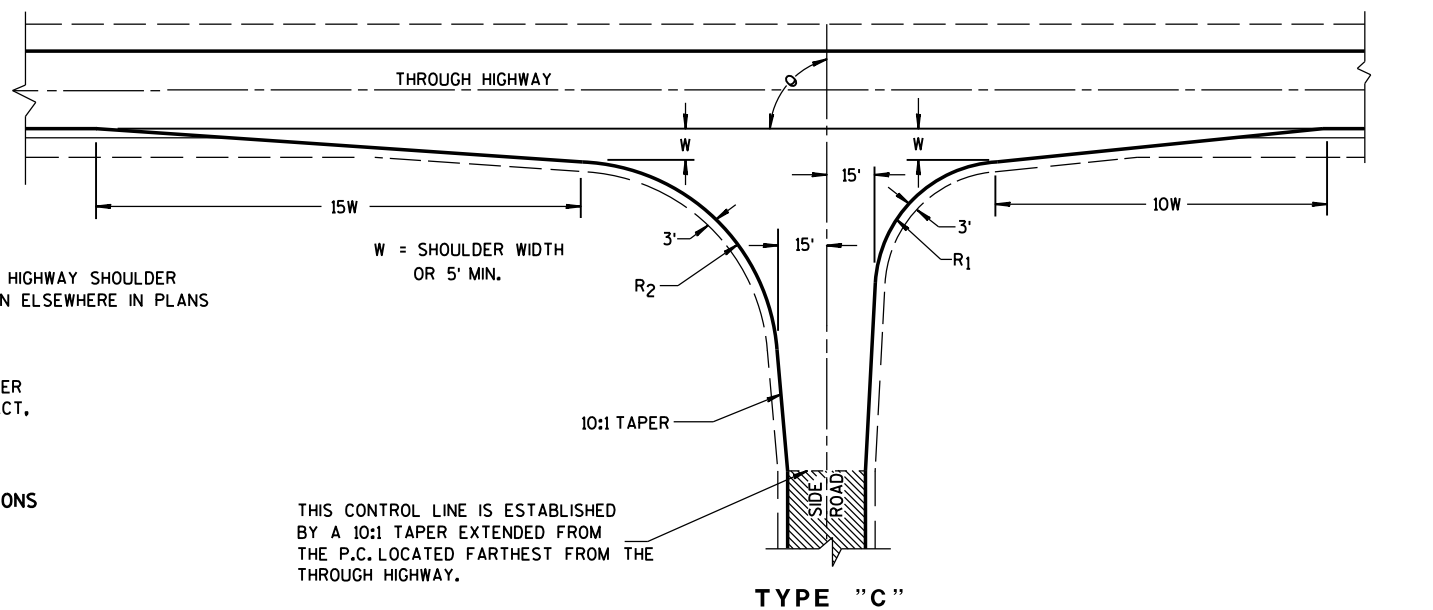
BYPASS LANE

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

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

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

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



TEE INTERSECTION BYPASS LANE DETAIL

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

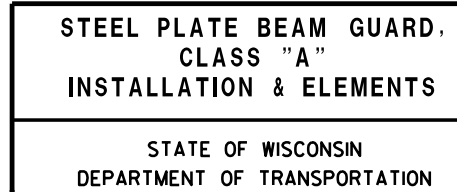
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

- 6

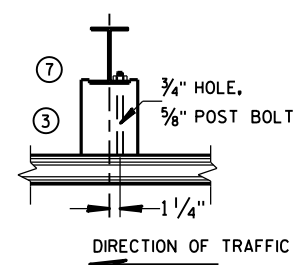
S.D.D. 14 B 15-8a



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

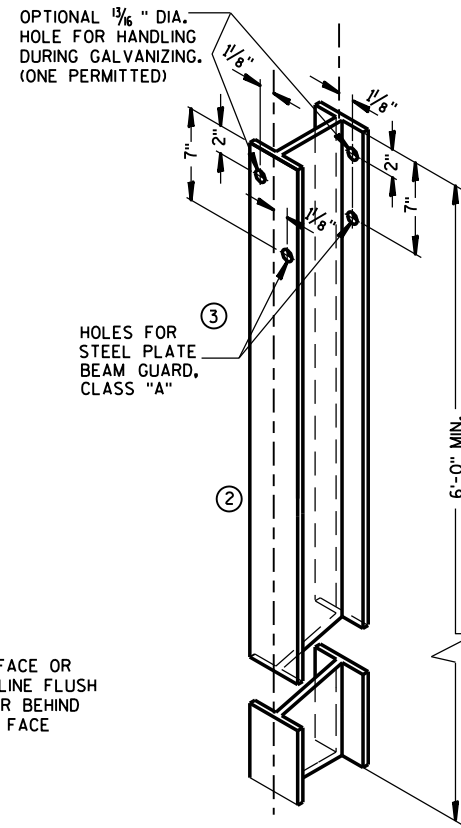


PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



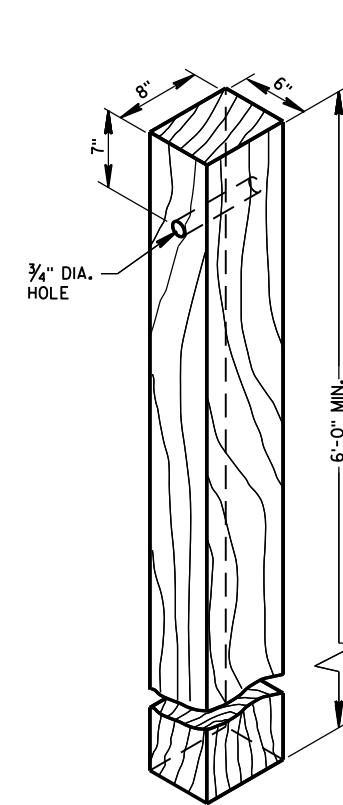
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

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

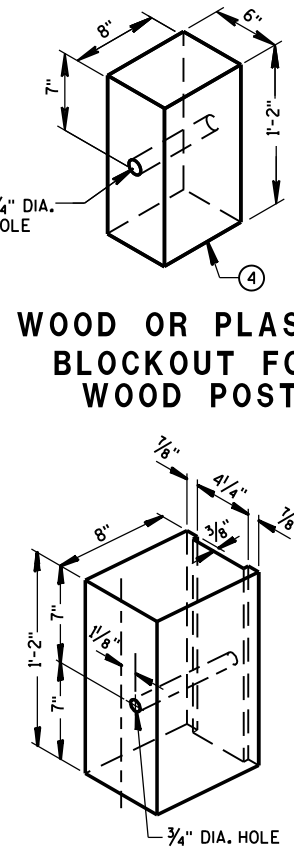


**STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①**

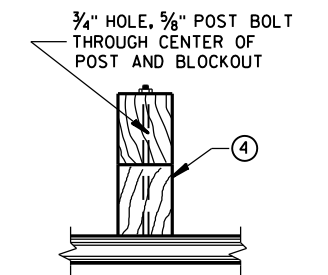
ALL HOLES $1\frac{3}{16}$ " DIAMETER EXCEPT AS NOTED



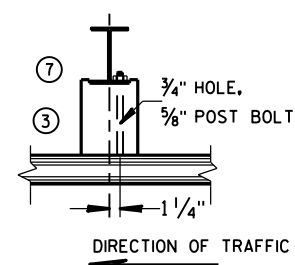
**TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS** ^①



**TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS** ^①



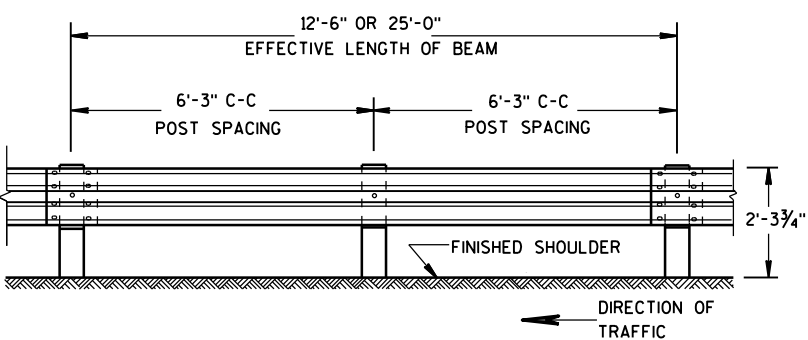
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

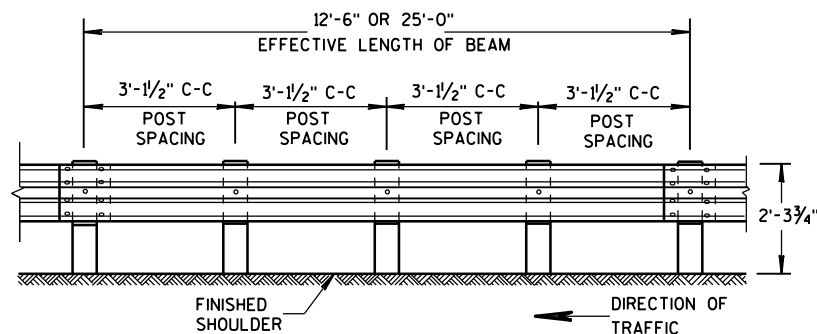
STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



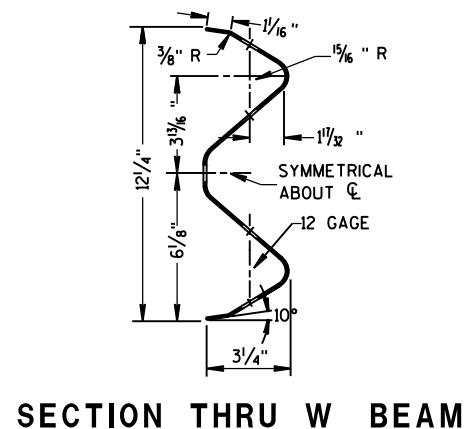
FRONT VIEW

POST SPACING STANDARD INSTALLATION

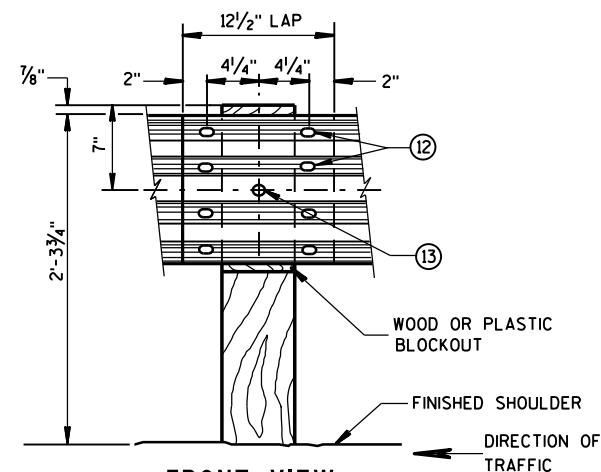


FRONT VIEW

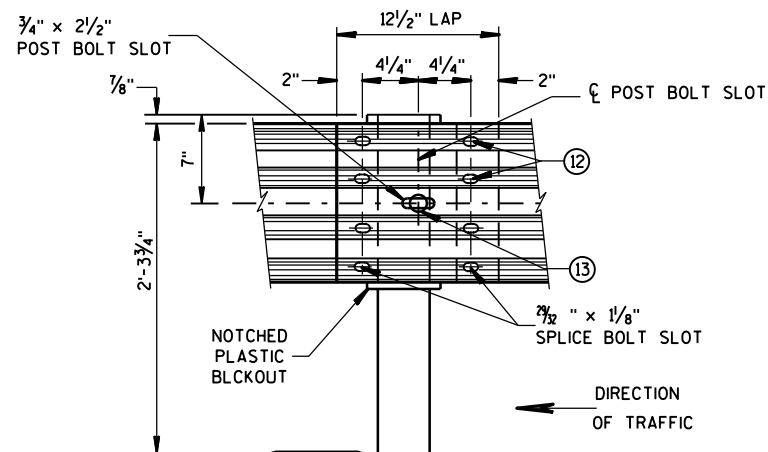
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



SECTION THRU W BEAM



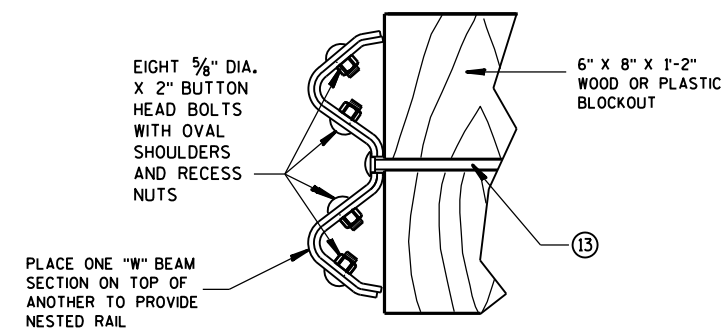
FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL



FRONT VIEW
BEAM SPLICE AT STEEL POST
TYPICAL SPLICING DETAILS
OF STEEL PLATE BEAM GUARD

GENERAL NOTES

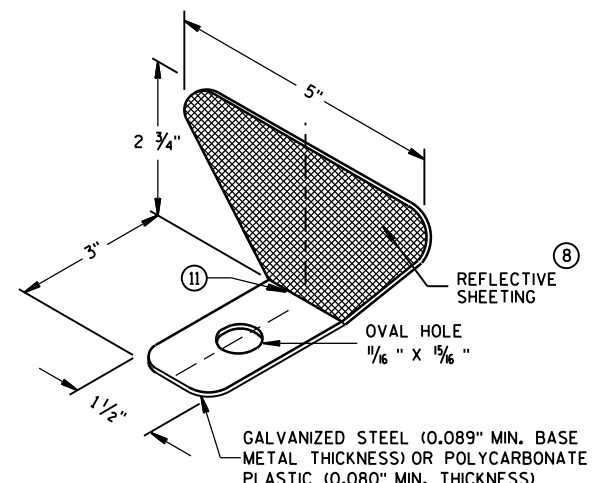
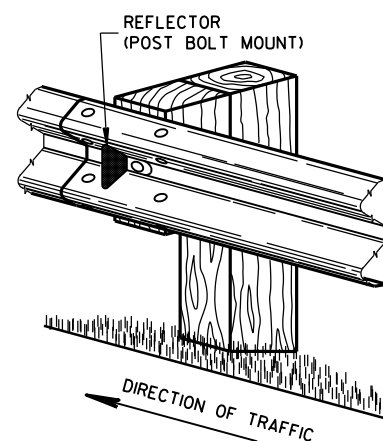
- ⑧ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- ⑩ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- ⑪ PROVIDE AN ANGLE OF BEND OF $90^\circ \pm 1^\circ$ FOR TWO-SIDED REFLECTORS.
- ⑫ 8 - 5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑬ 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



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

REFLECTOR SPACING ⑨

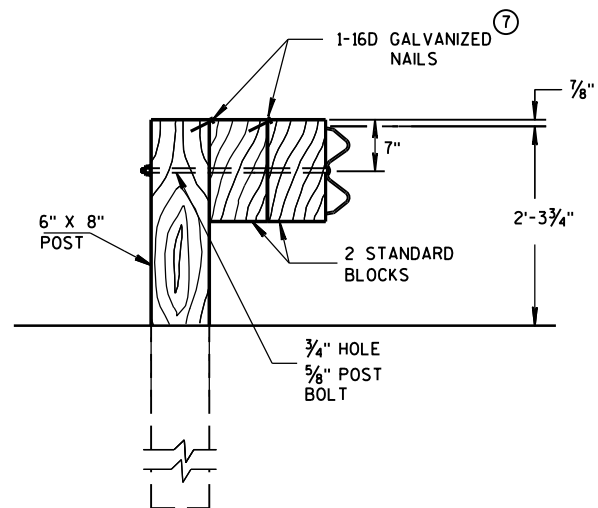
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ⑩	6
	> 200'	50' C-C	1 ⑩	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ⑪	3
	> 200'	100' C-C	2 ⑪	



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

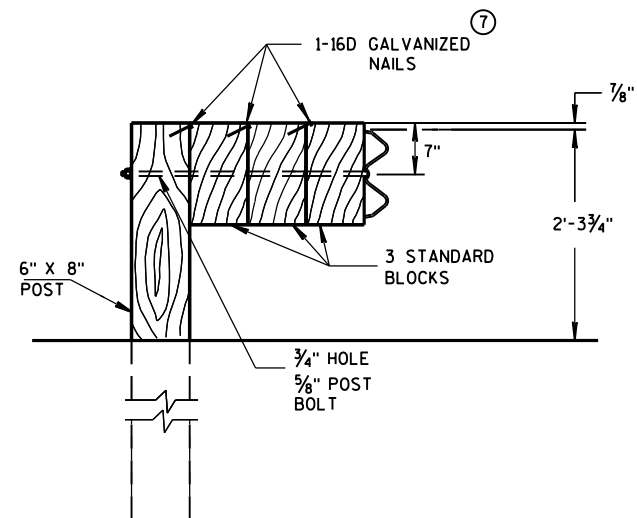
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

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

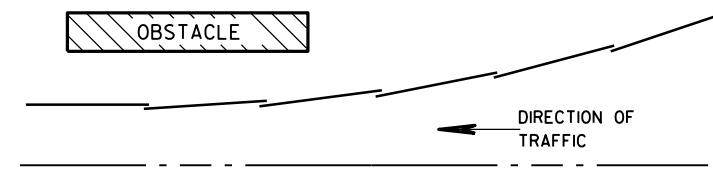


DETAIL FOR TRIPLE BLOCKS

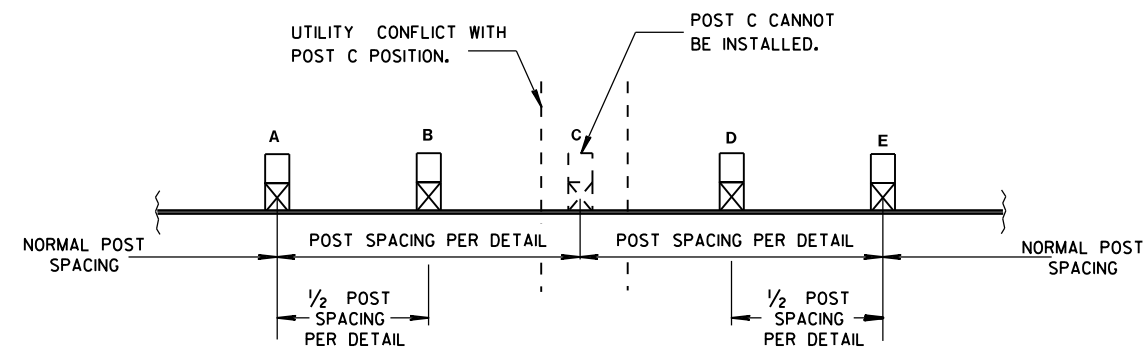
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES
PREVENT THE POST FROM BEING INSTALLED.

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



PLAN VIEW BEAM LAPPING DETAIL



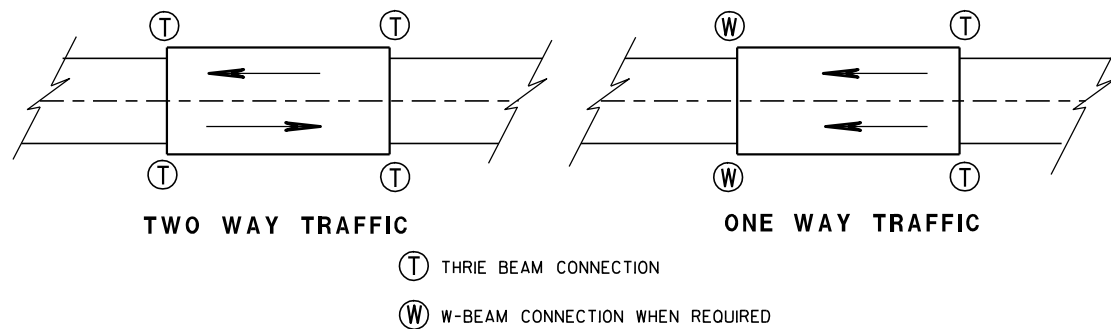
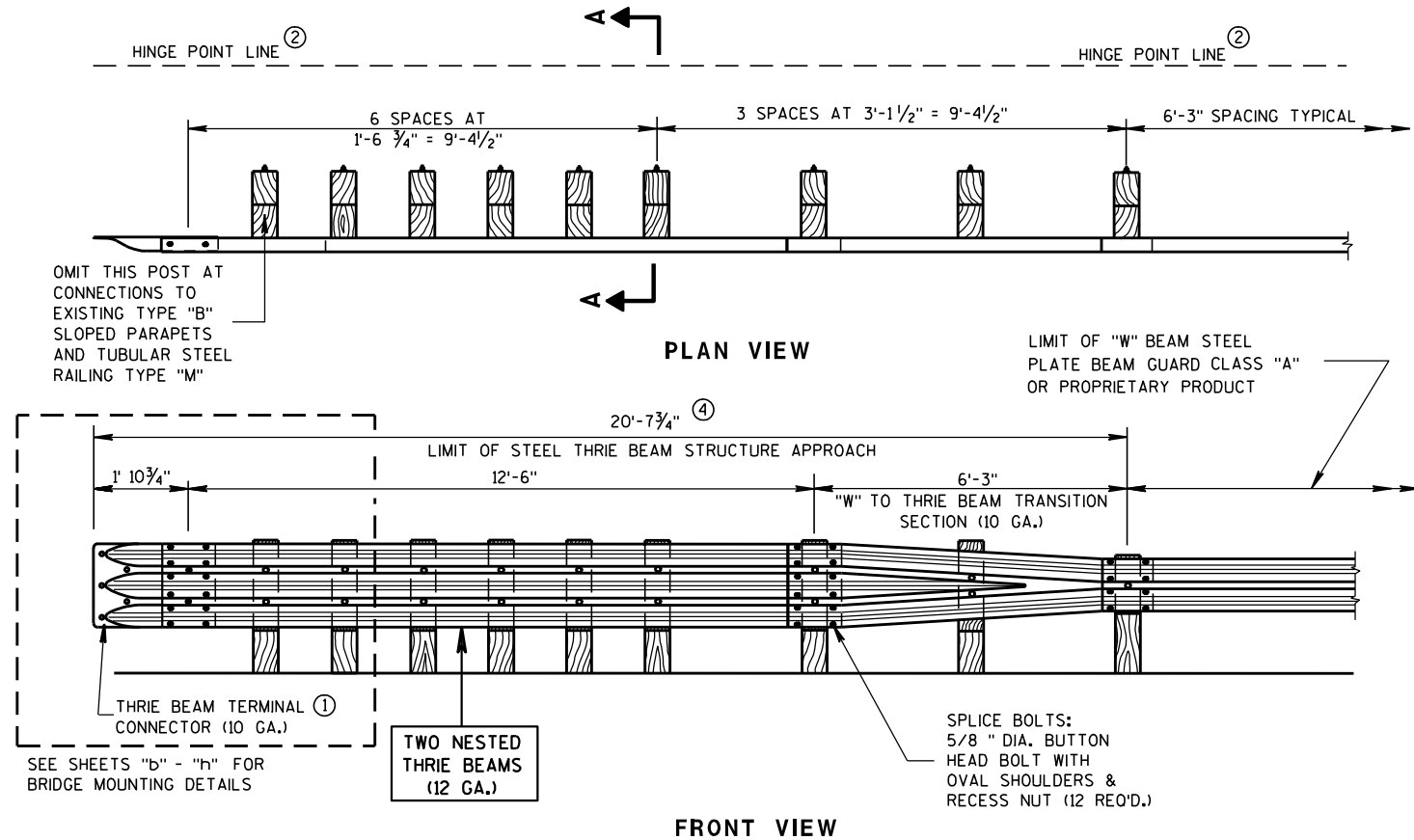
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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

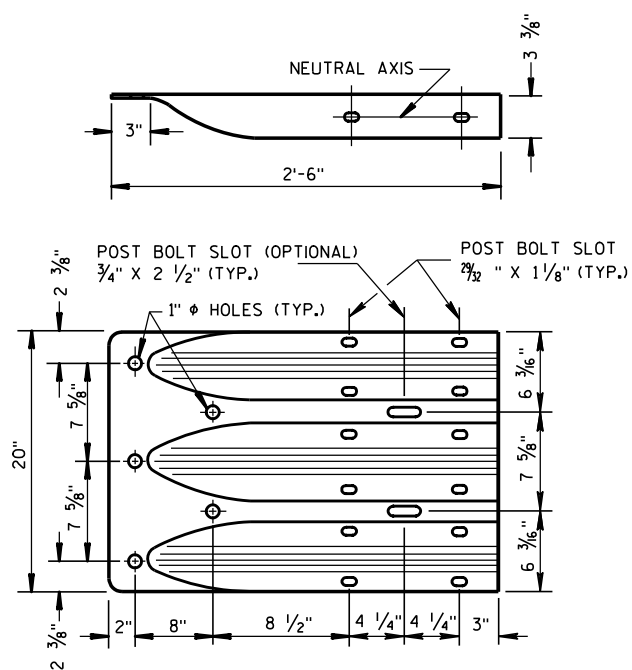
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
FHWA

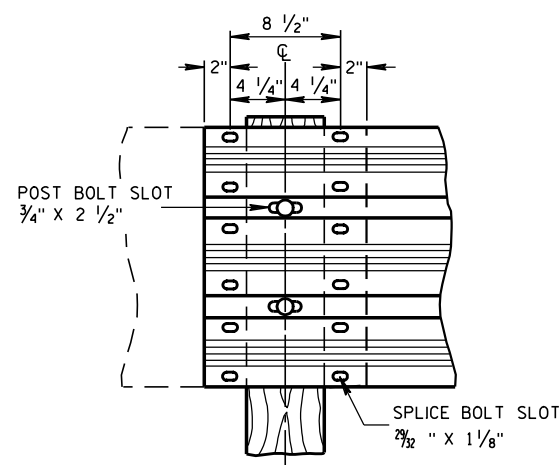
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



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



THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

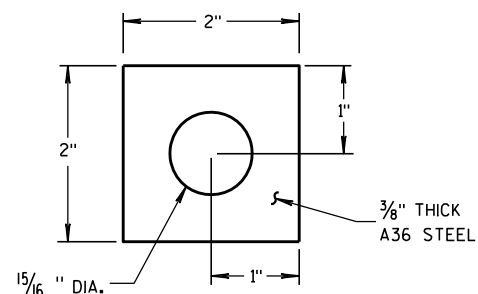
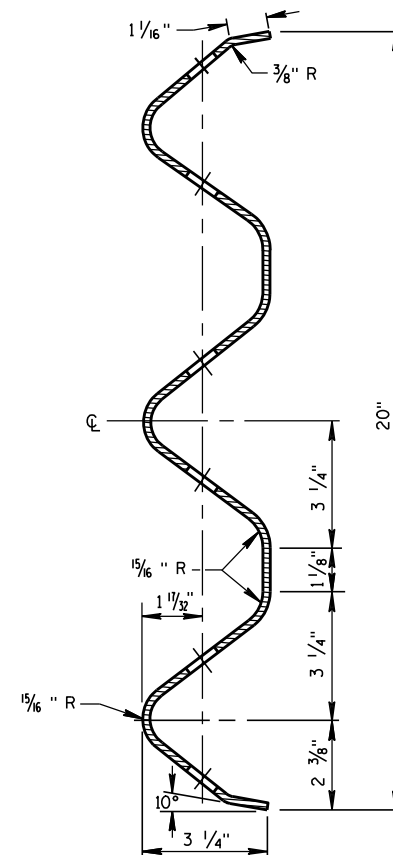


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

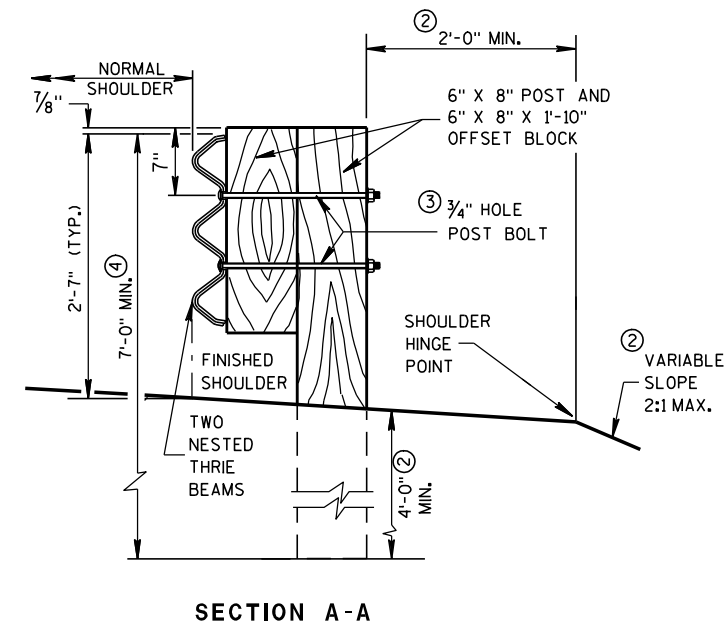
GENERAL NOTES

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

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.
- ③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.
- ④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



STEEL THRIE BEAM STRUCTURE APPROACH

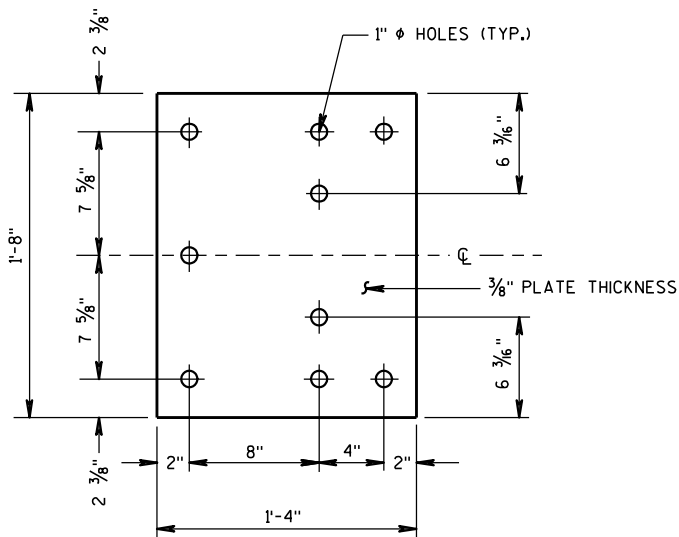
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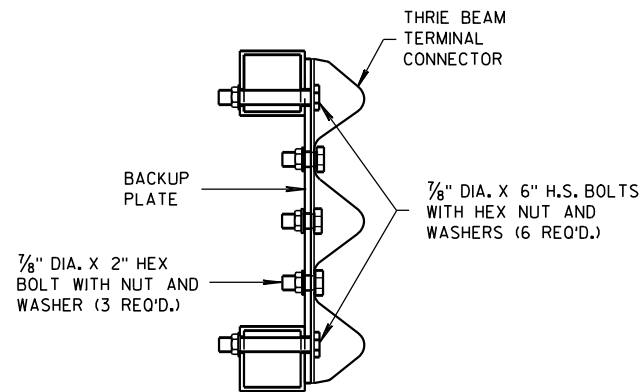
8/31/2012
DATE

FHWA

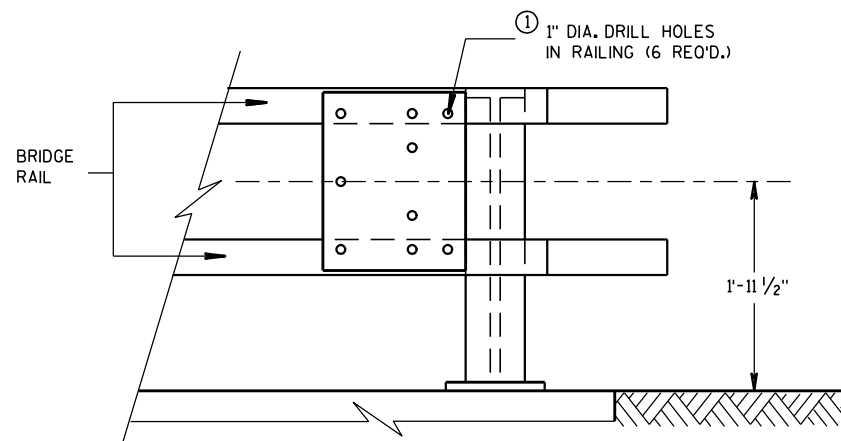
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



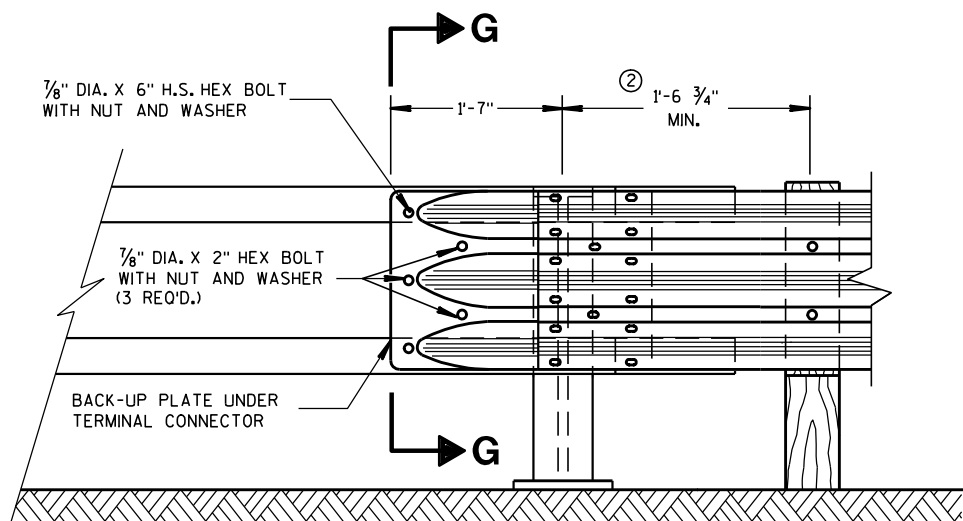
BACK-UP PLATE DETAIL



SECTION G-G

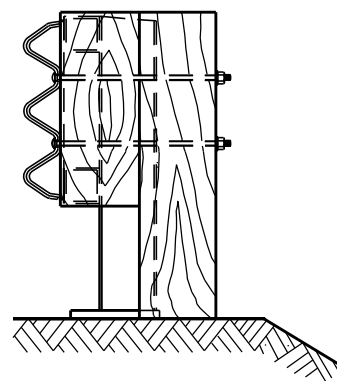


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

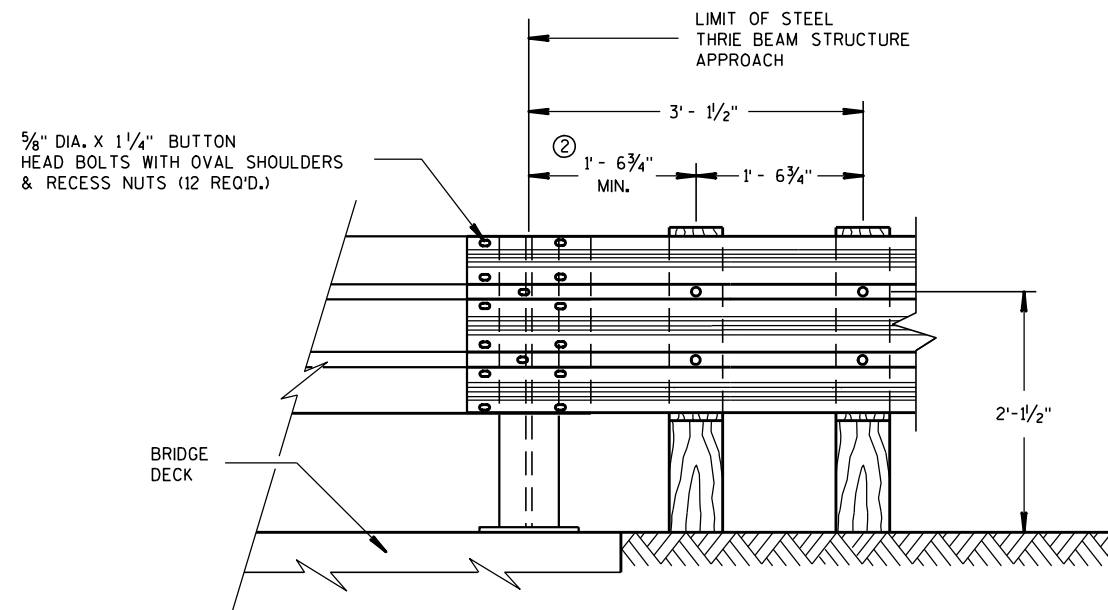


END VIEW

GENERAL NOTES

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.



FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"

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8/31/2012
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
①	4	WOOD BREAKAWAY TERMINAL POST: 5 1/2" X 7 1/2" X 3'-9"
②	**	STEEL TUBE: OPTION 1 - QUANTITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANTITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
③	2	SOIL PLATE: 2'-0" X 1'-6" X 1/4" **
④	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	1	PIPE SLEEVE: 2" X 5 1/2" STANDARD PIPE
⑦	1	BEARING PLATE
⑧	1	BCT CABLE ASSEMBLY
⑨	1	CABLE ANCHOR BOX
⑩	1	STRUT & YOKE
⑪	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6 1/2" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
⑫	3	STEEL PLATE BEAM: 12 GA. 13'-6 1/2"
⑬	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
⑭	1	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
⑮	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS, IF NONE ARE AVAILABLE, INSTALL 3/8" ϕ X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

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

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

(C) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE 3/4" ABOVE THE FINISHED GROUND LINE.

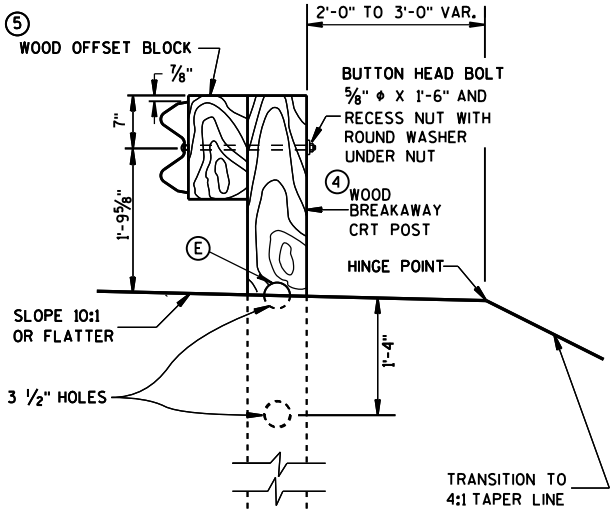
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.

STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

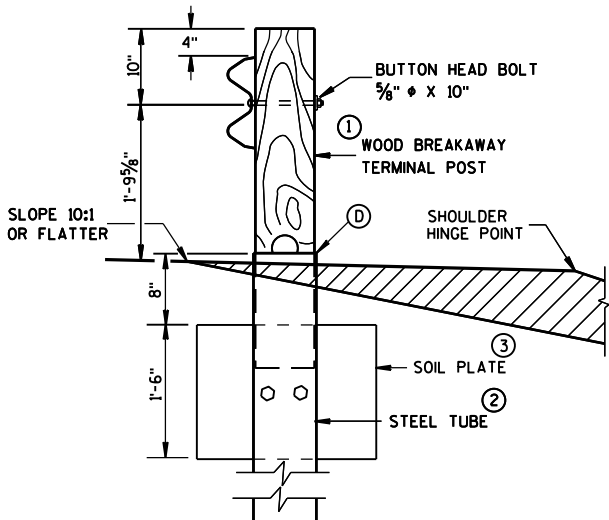
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

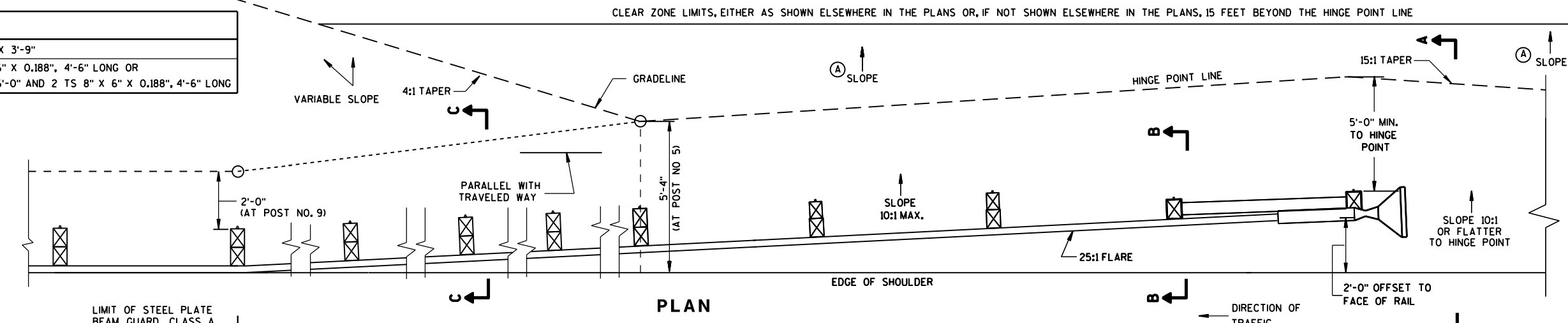
** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.



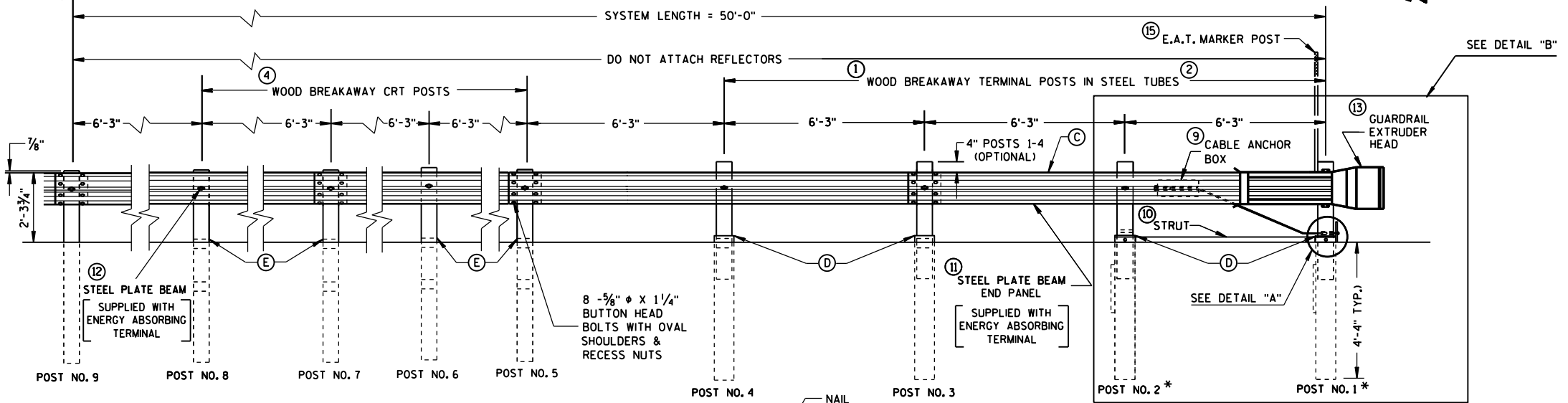
SECTION C-C
TYPICAL AT POST NOS. 6, 8



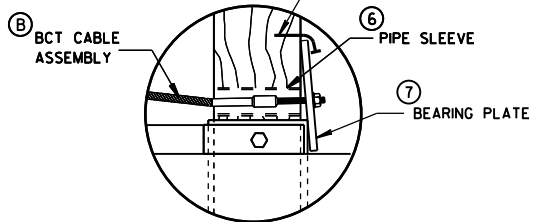
SECTION B-B
TYPICAL AT POST NO. 2 *



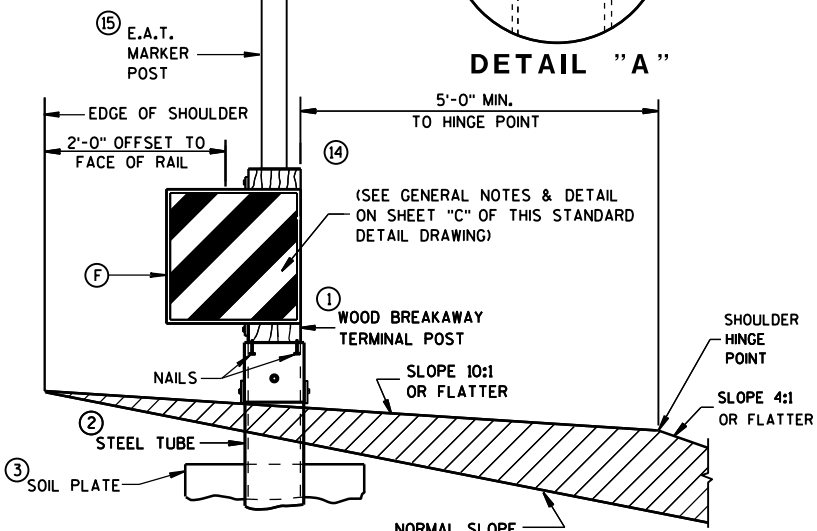
PLAN



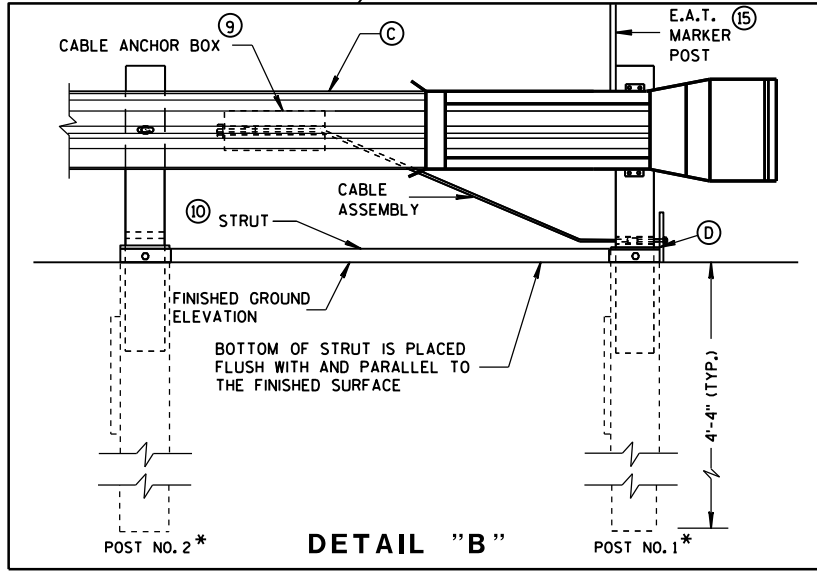
ELEVATION



DETAIL "A"



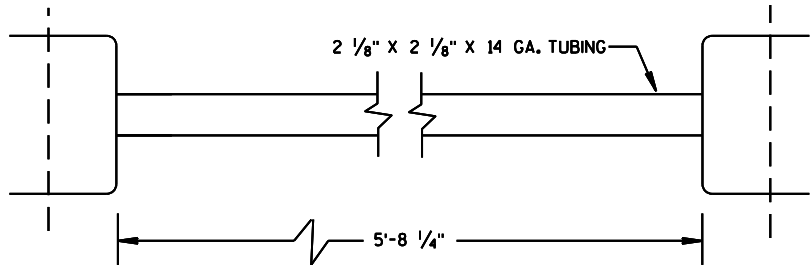
SECTION A-A
TYPICAL AT POST NO. 1 *



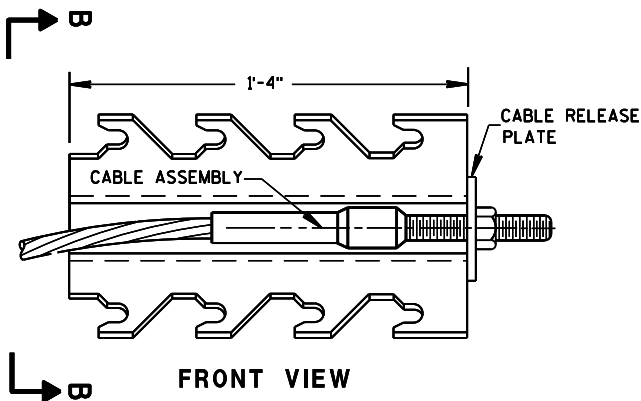
DETAIL "B"

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

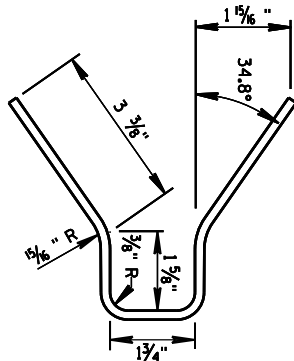
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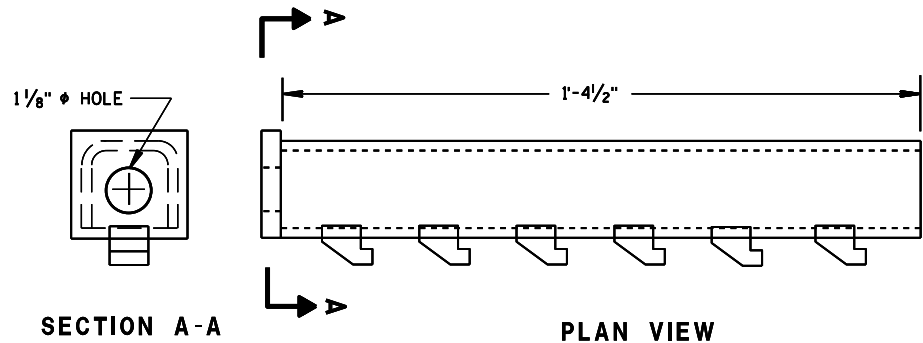
⑩ STRUT DETAIL (SKT-350)



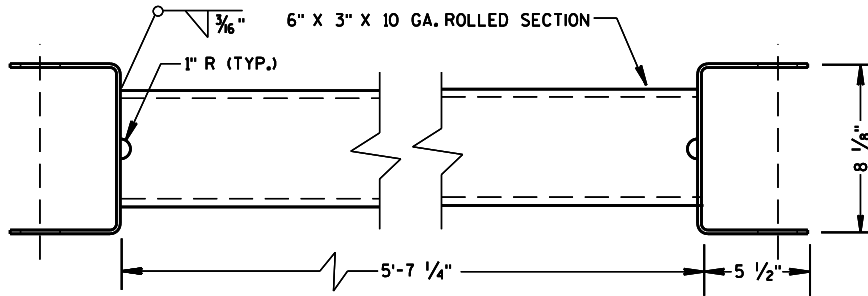
⑨ CABLE ANCHOR BOX (SKT-350)
(SKT-350)



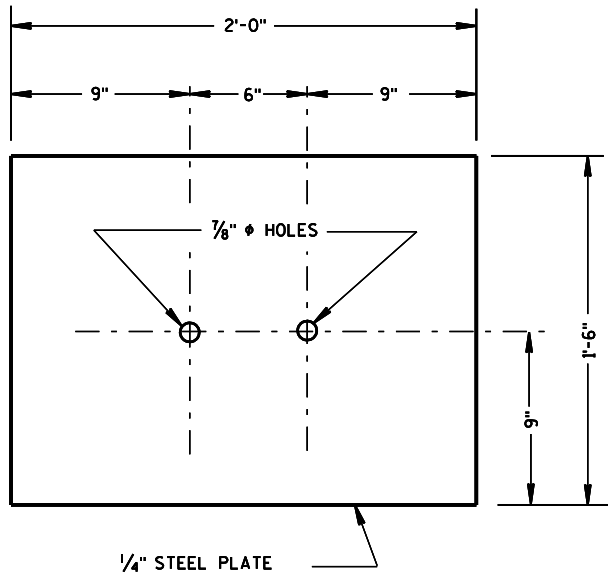
SECTION B-B



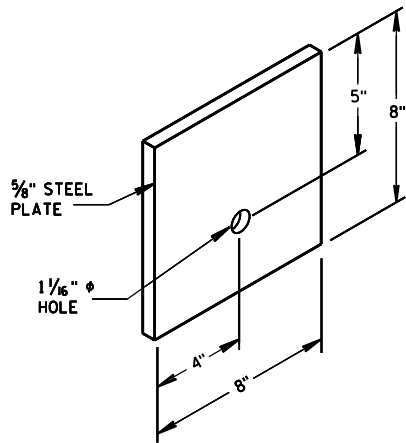
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)
(ET-2000/ET-2000 PLUS)



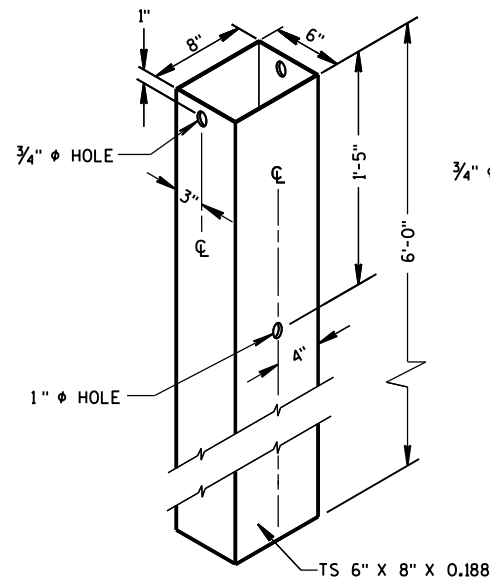
③ SOIL PLATE
(SKT-350, ET-2000/ET-2000 PLUS)



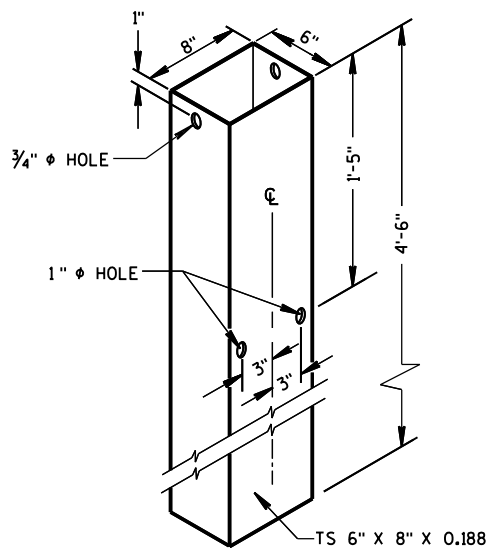
⑦ STEEL BEARING PLATE
(SKT-350, ET-2000/ET-2000 PLUS)

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

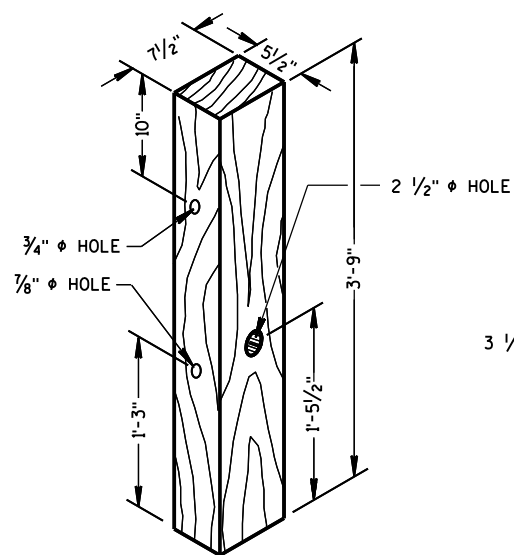
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② **72" STEEL TUBE**
(POSTS NO. 1-4)

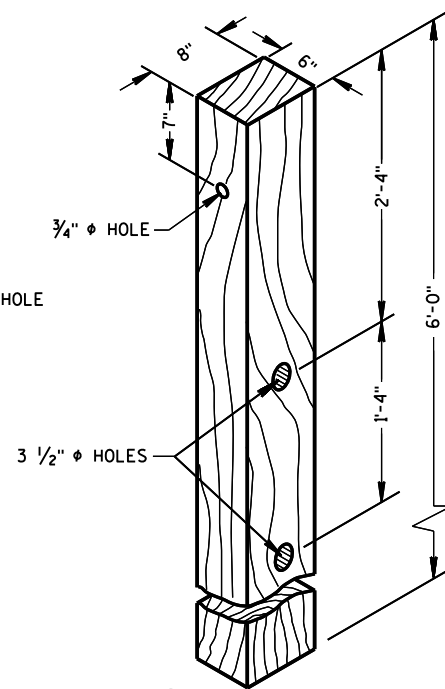


② **54" STEEL TUBE**
(POSTS NO. 1-4)



① **TERMINAL POST**
(POSTS NO. 1-4)

WOOD BREAKAWAY POSTS



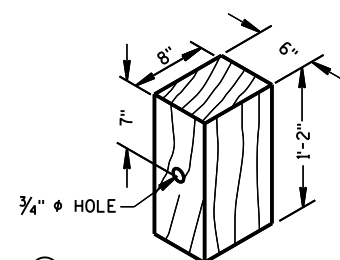
④ **CRT POST**
(POSTS NO'S 5-8)

GENERAL NOTES

WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

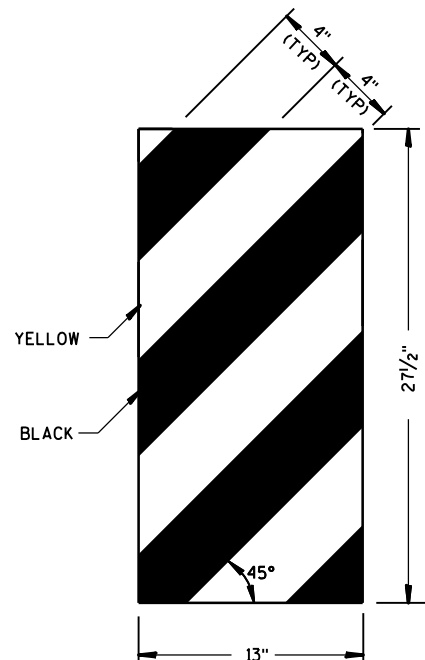
SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

ⓐ 1/2" DIA. X 3" LAG BOLT WITH WASHER.

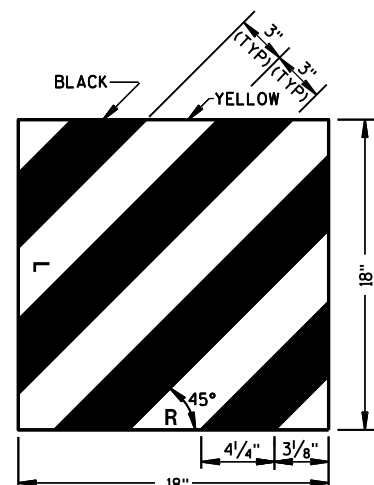


⑤ **WOOD OFFSET BLOCK**
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9"
SEE STANDARD
SPECIFICATION 637

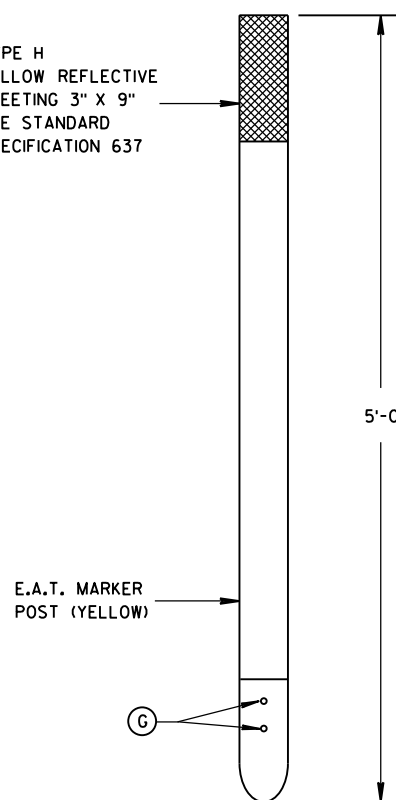


ET-2000 PLUS ONLY

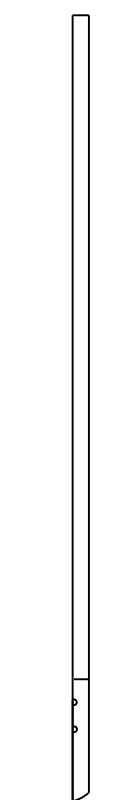


ET-2000 AND SKT-350

⑭ **REFLECTIVE SHEETING DETAILS**

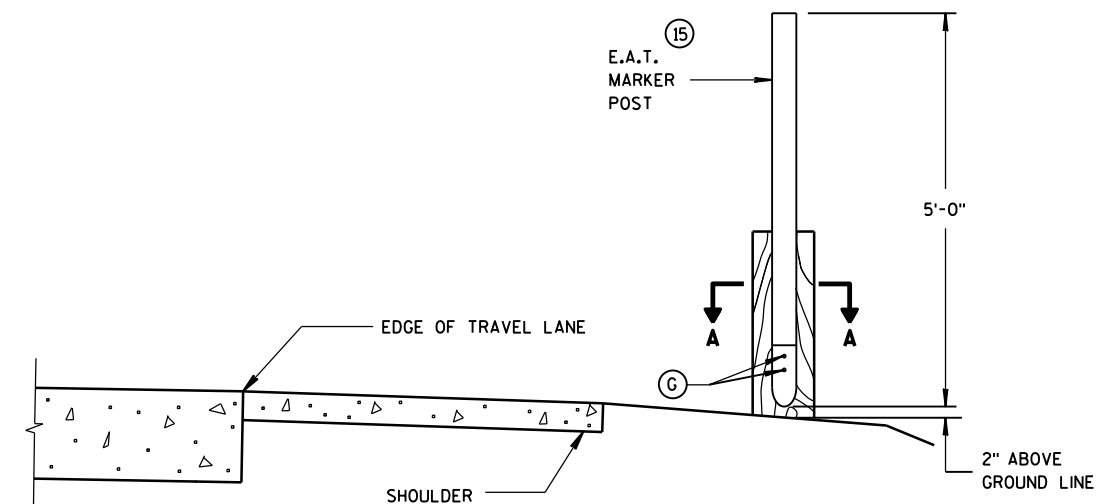


FRONT VIEW

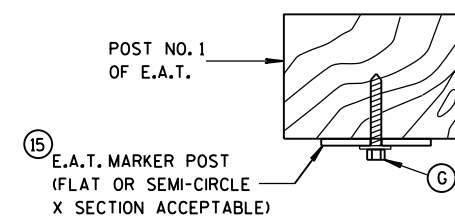


SIDE VIEW

⑮ **E.A.T. MARKER POST**



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



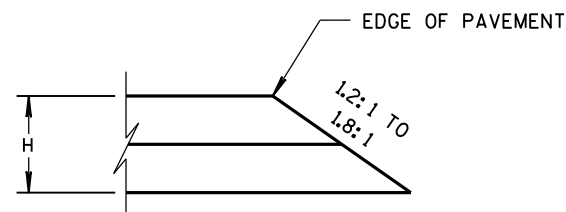
SECTION A-A

**STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL**

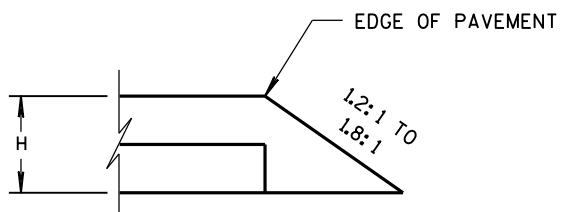
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APPROVED
June 2014
DATE
FHWA

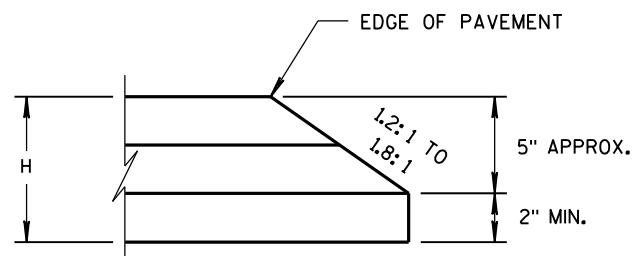
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



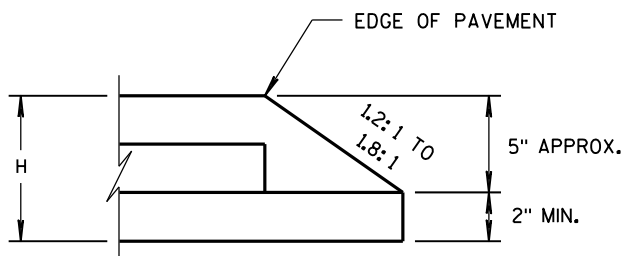
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

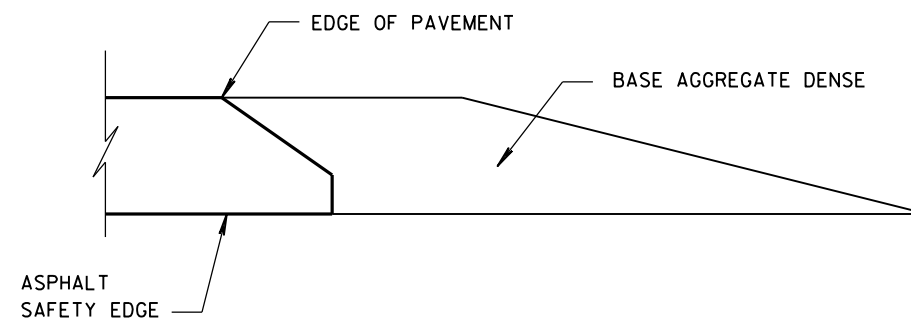


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

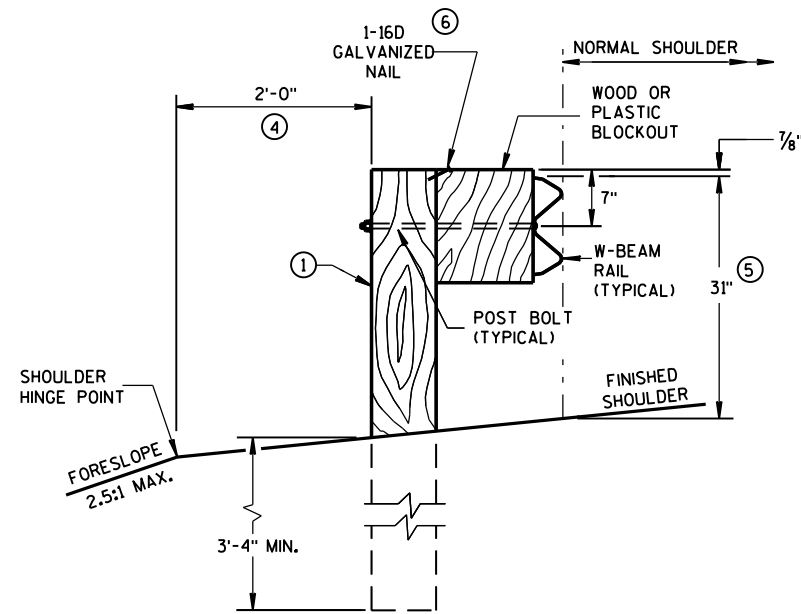
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11/30/2012
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FHWA

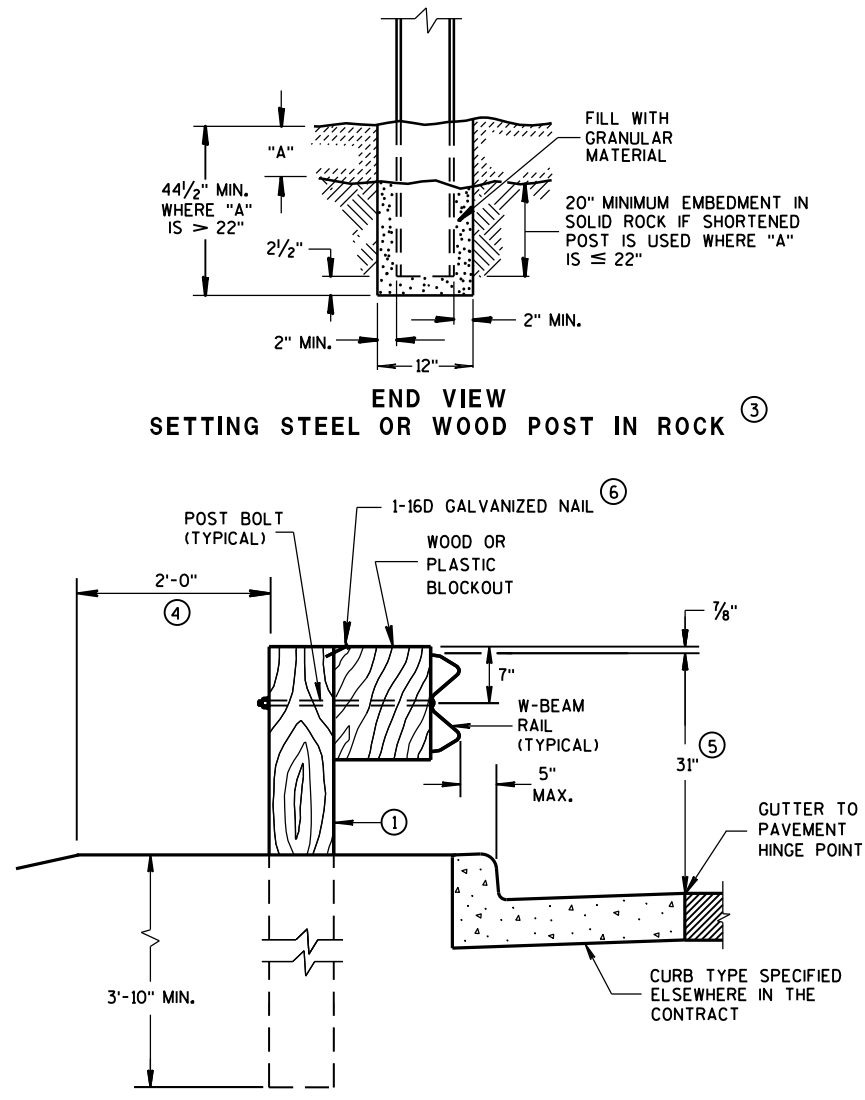
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

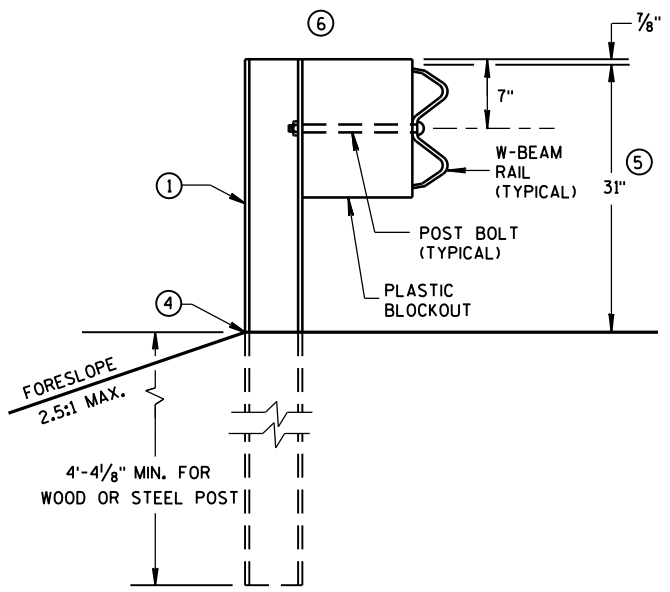
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL.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



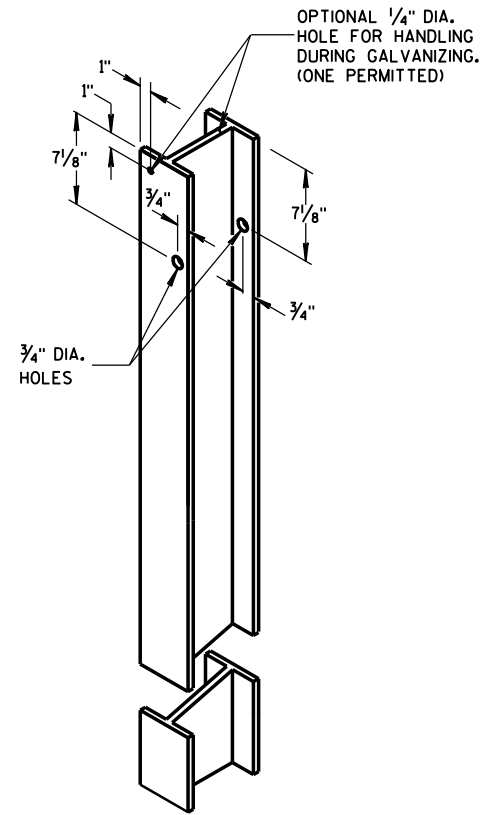
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



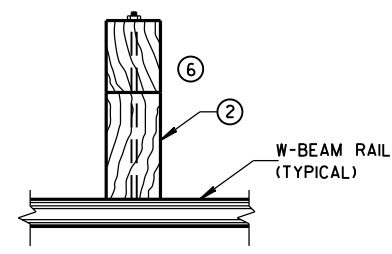
END VIEW
LOCATED ALONG A CURBED ROADWAY



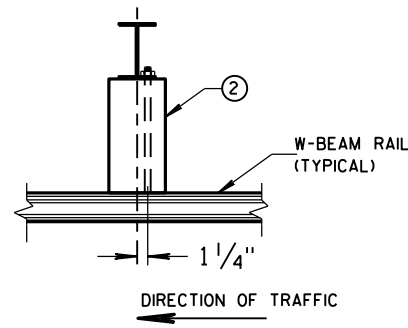
END VIEW
MGS LONGER POST AT HALFPST SPACING W BEAM (K)



STEEL POST &
HOLE PUNCHING DETAIL
(w6X9)



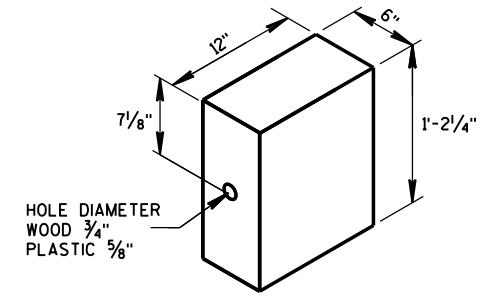
PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



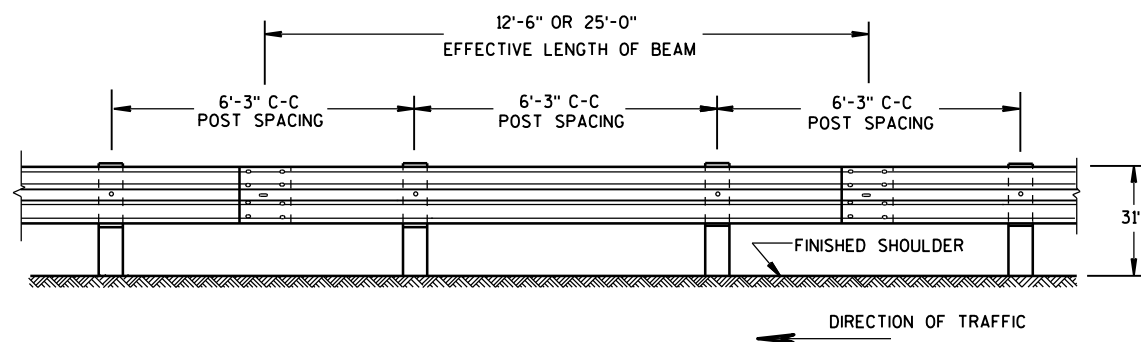
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM



WOOD POST
(6" X 8") NOMINAL

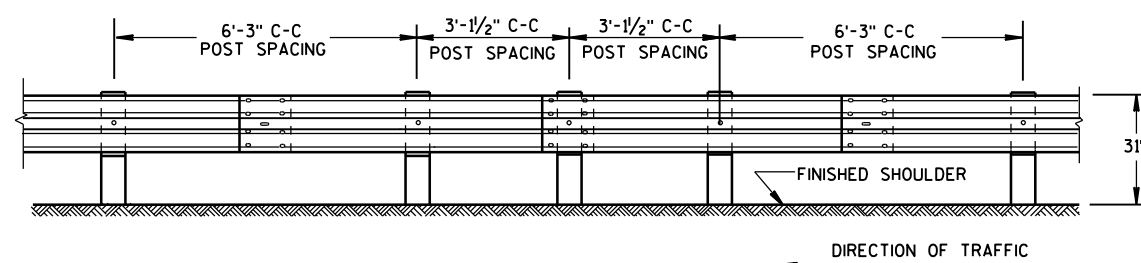


WOOD OR
PLASTIC BLOCKOUT



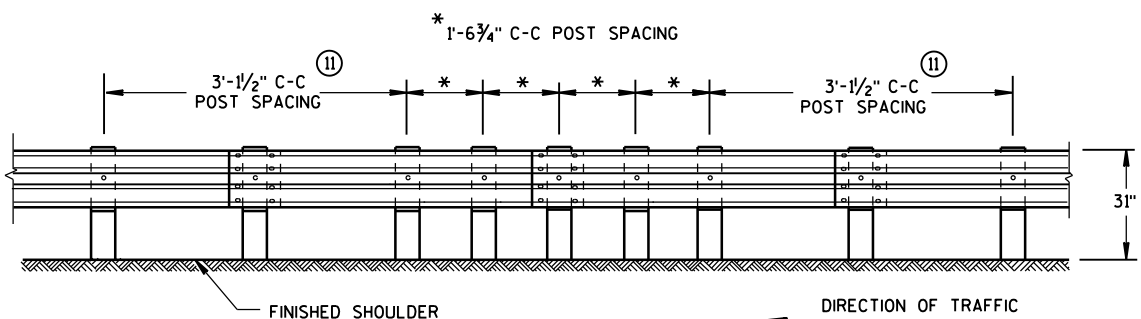
FRONT VIEW

POST SPACING STANDARD INSTALLATION



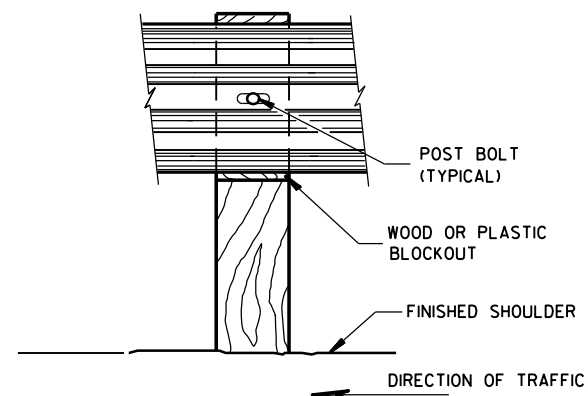
FRONT VIEW

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

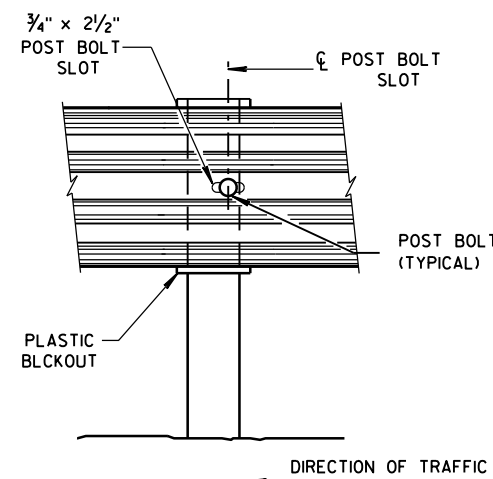


FRONT VIEW

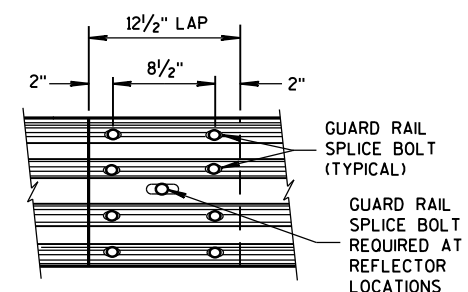
QUARTER POST SPACING (QS)



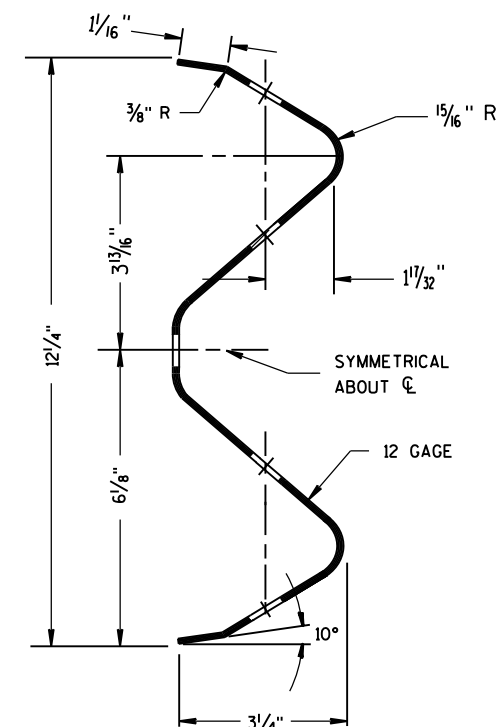
FRONT VIEW AT WOOD POST



FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL

REFLECTOR SPACING

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTOR
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 1 ⑨	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

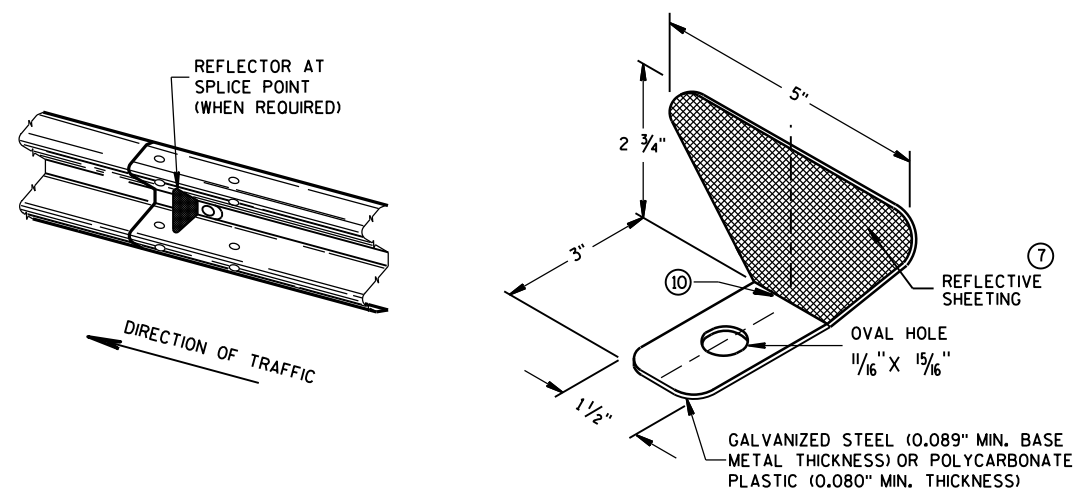
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DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

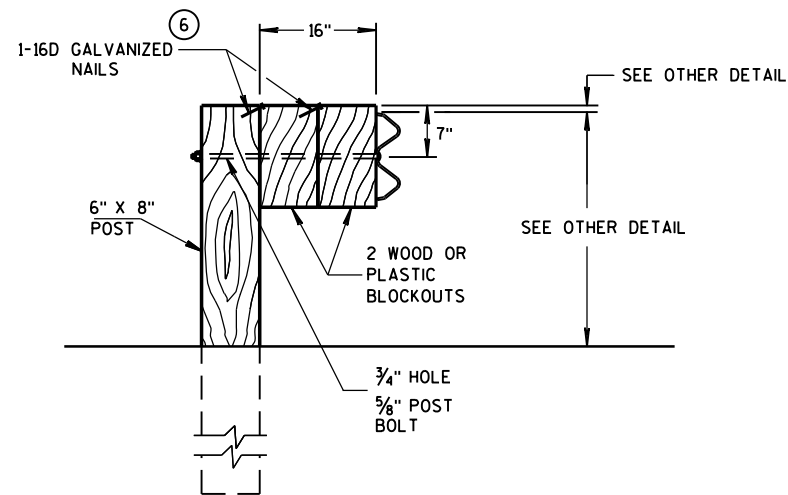
- ⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
- ⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- ⑩ PROVIDE AN ANGLE OF BEND OF $90^\circ \pm 1^\circ$ FOR TWO-SIDED REFLECTORS.
- ⑪ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT
REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8"
DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS
ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL
HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE
RECESSED (DR) HEAVY HEX NUT.

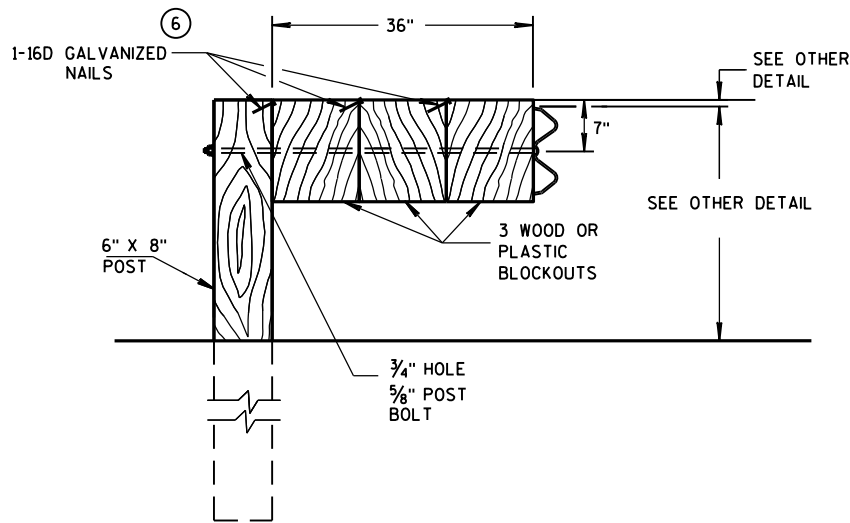


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION



DETAIL FOR 16" BLOCKOUT DEPTH

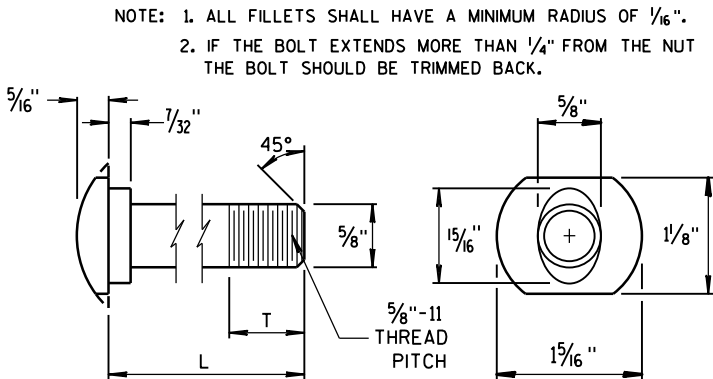
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

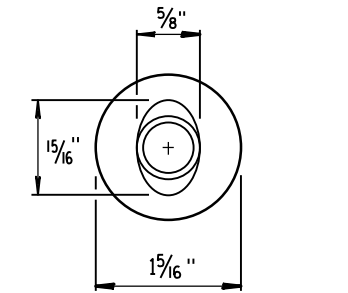
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

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.

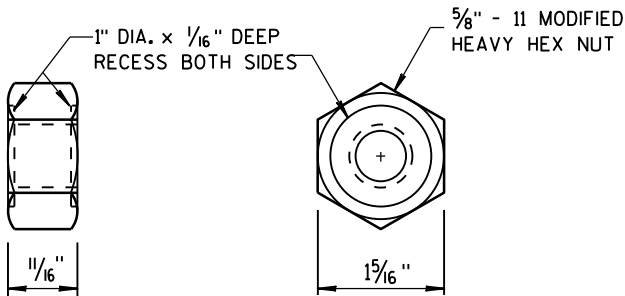


POST BOLT TABLE

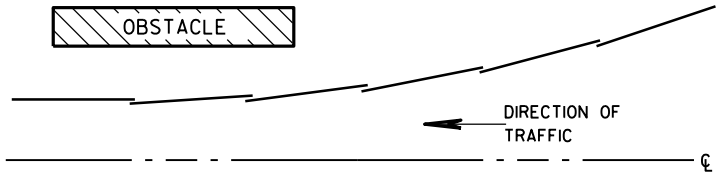
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



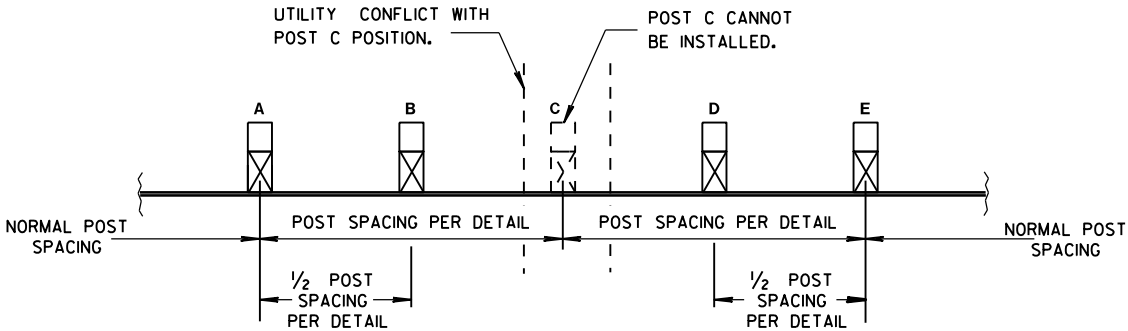
ALTERNATE BOLT HEAD



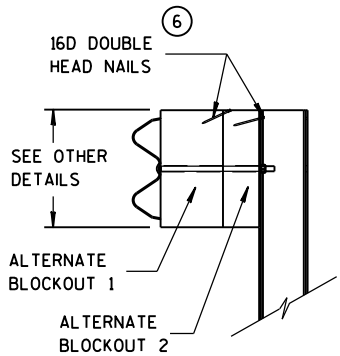
POST BOLT AND RECESS NUT



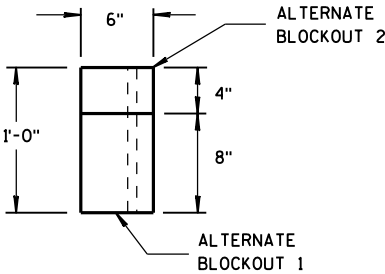
PLAN VIEW BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.
- (D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.
- (G) 1/2" DIAMETER X 3" LONG LAG BOLT AND WASHER.
- (H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.
- (I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

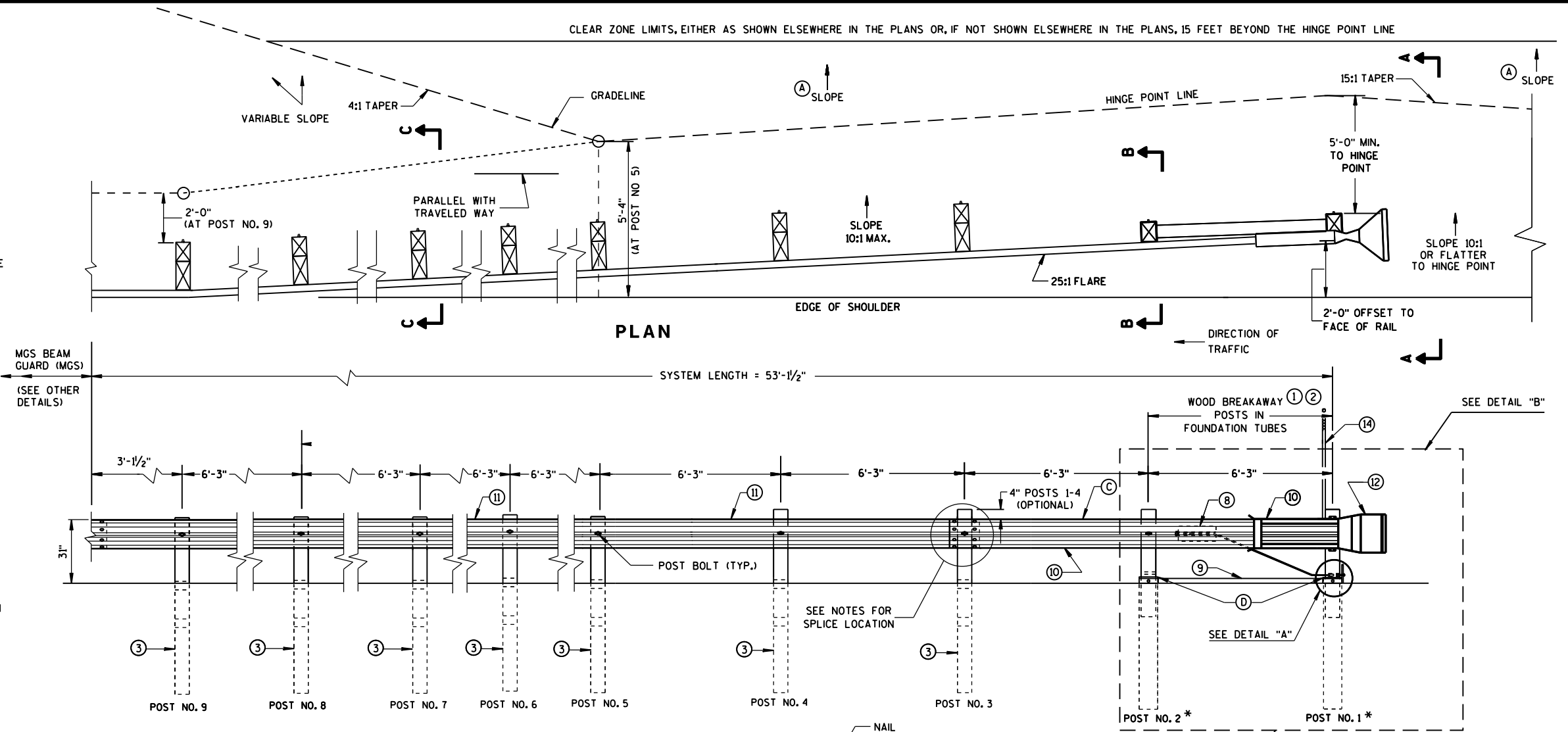
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

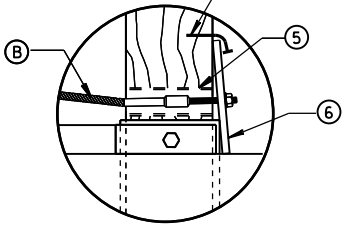
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

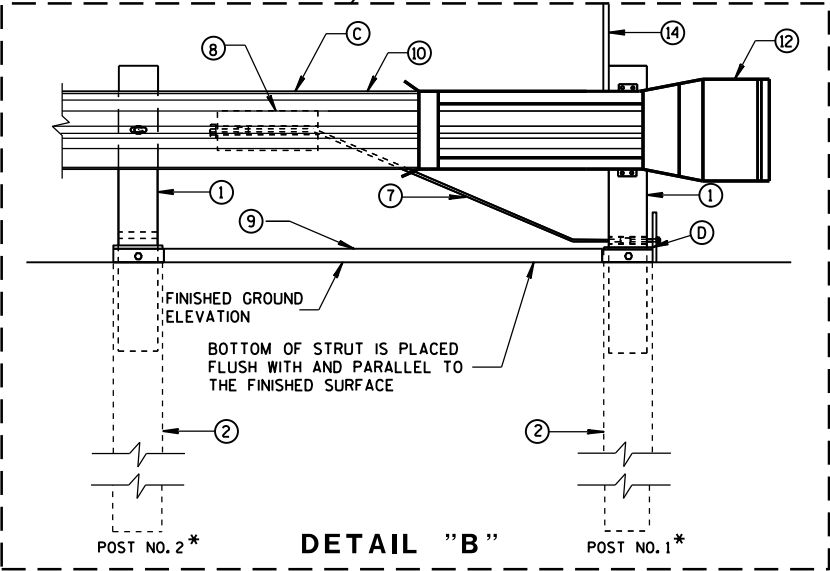
THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.



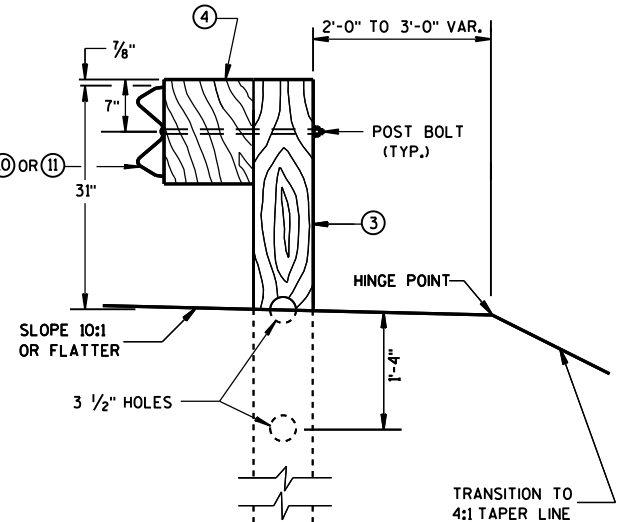
ELEVATION



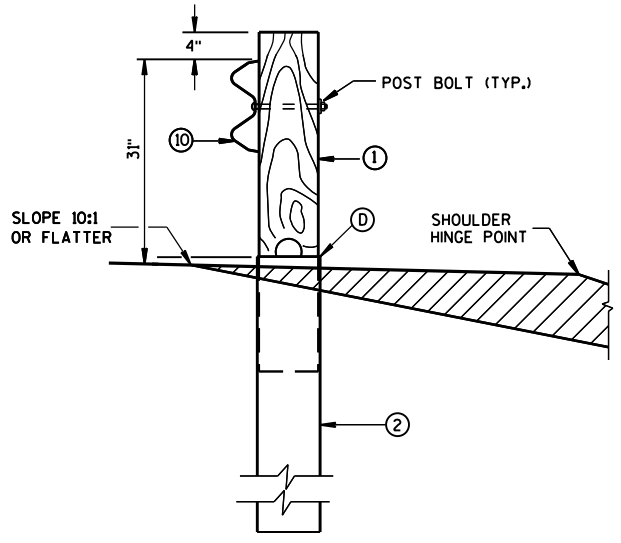
DETAIL "A"



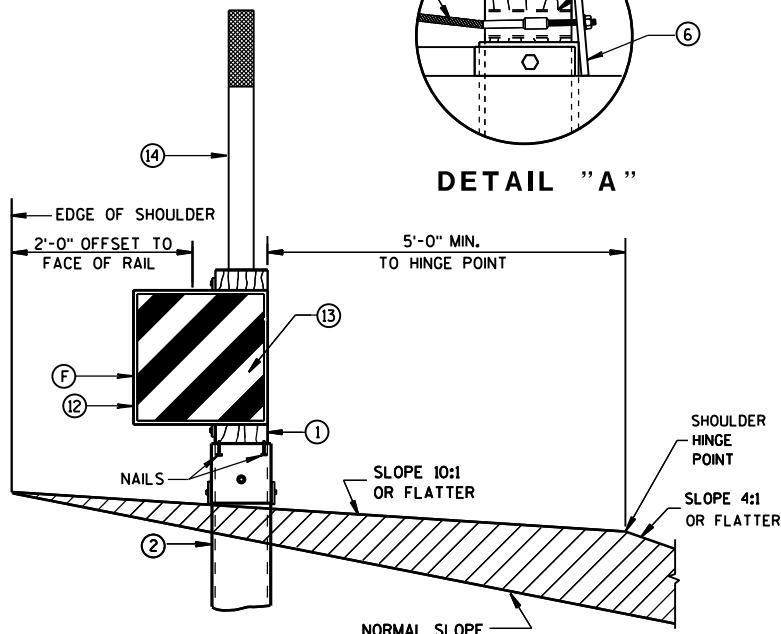
DETAIL "B"



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



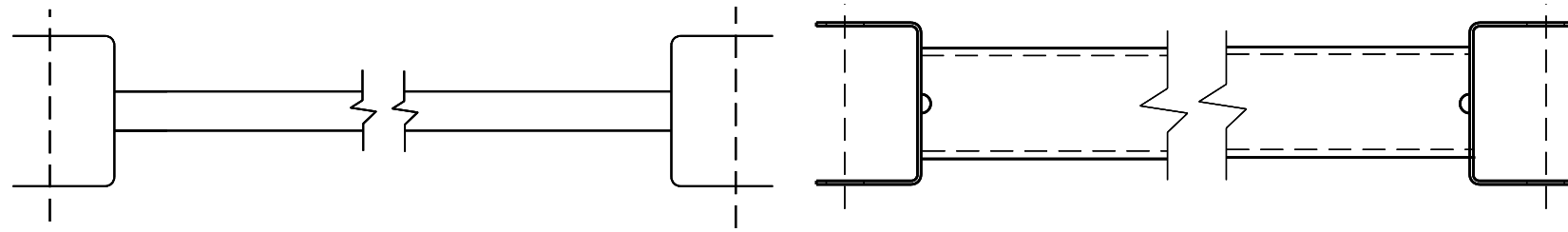
SECTION B-B
TYPICAL AT POST NO. 2*



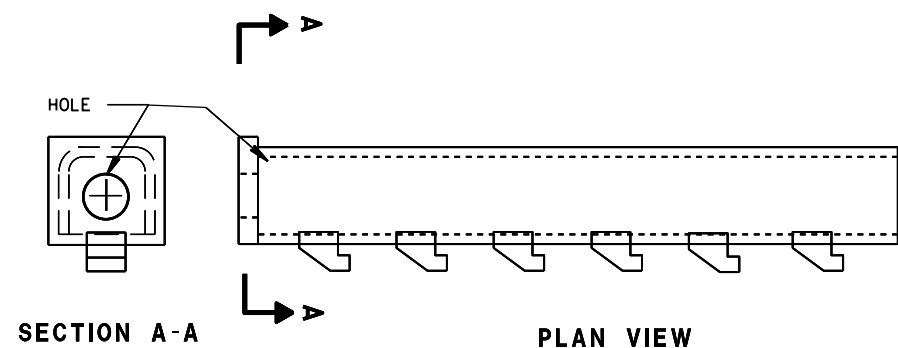
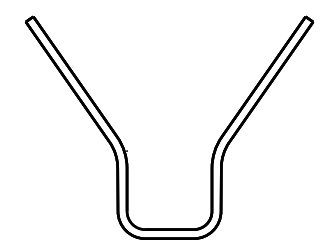
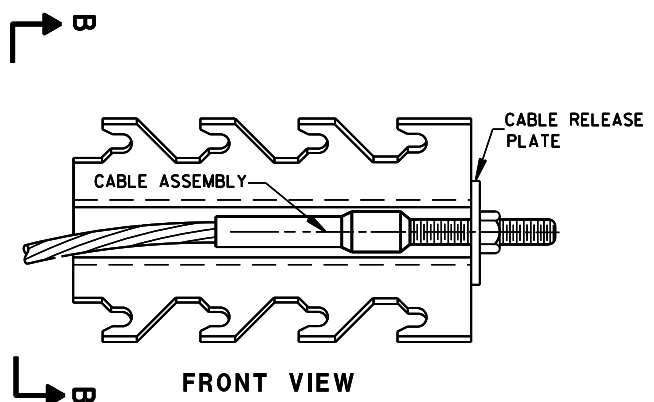
SECTION A-A
TYPICAL AT POST NO. 1*

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



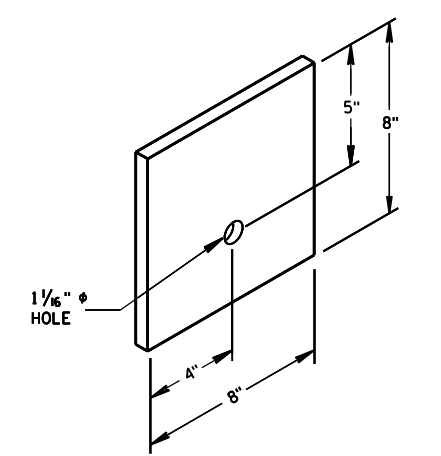
9 H
GENERIC GROUND STRUT



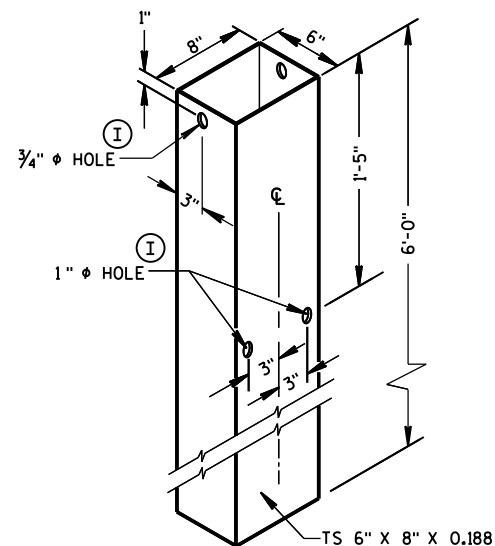
8 H
GENERIC ANCHOR CABLE BOX

BILL OF MATERIALS

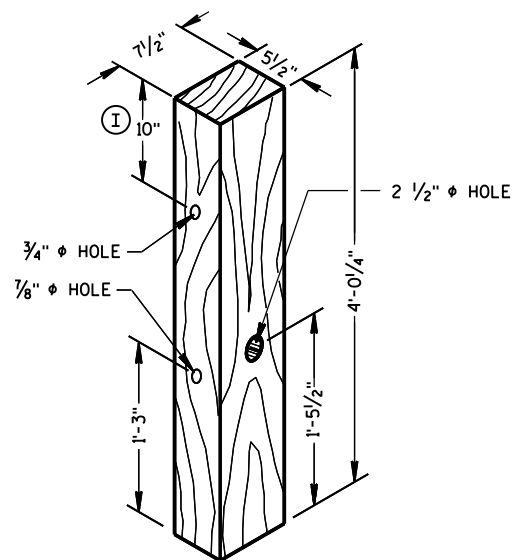
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND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



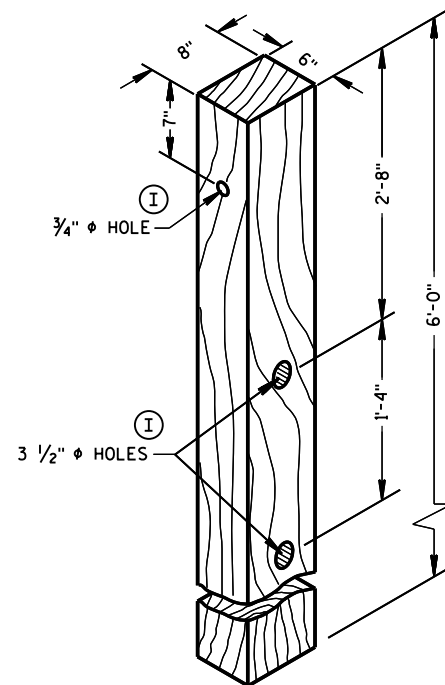
⑥
BEARING PLATE



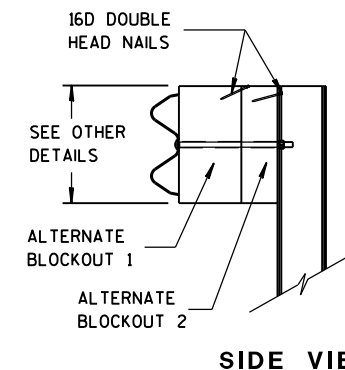
FOUNDATION TUBE ②



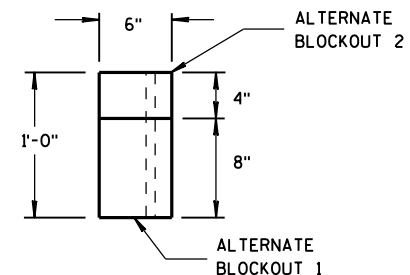
POSTS NUMBER 1 AND 2
WOOD BREAKAWAY POST ①



POSTS NUMBER 3-9
WOOD CRT POST ③

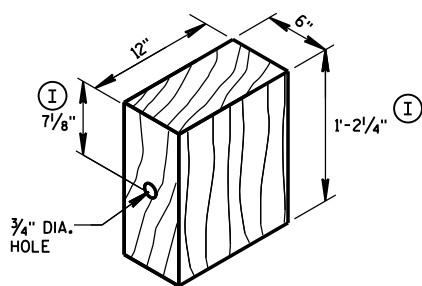


SIDE VIEW



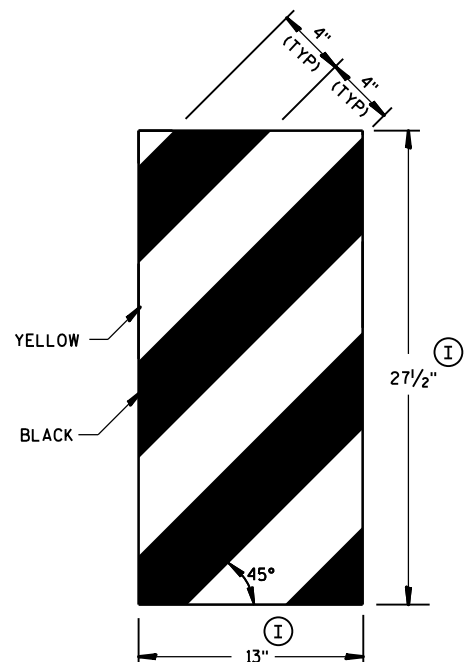
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

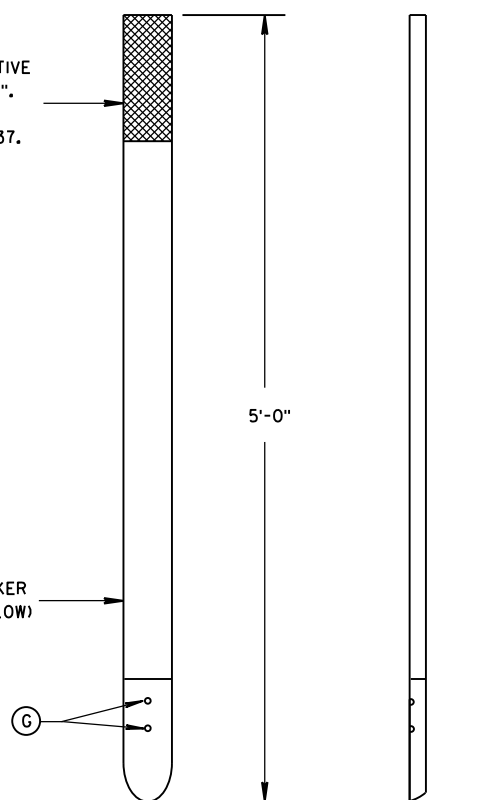
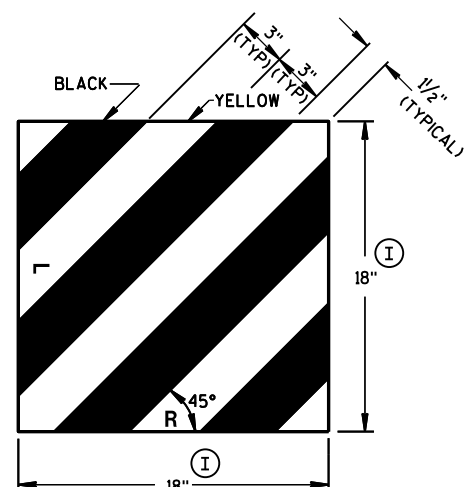


WOOD BLOCKOUT ④
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

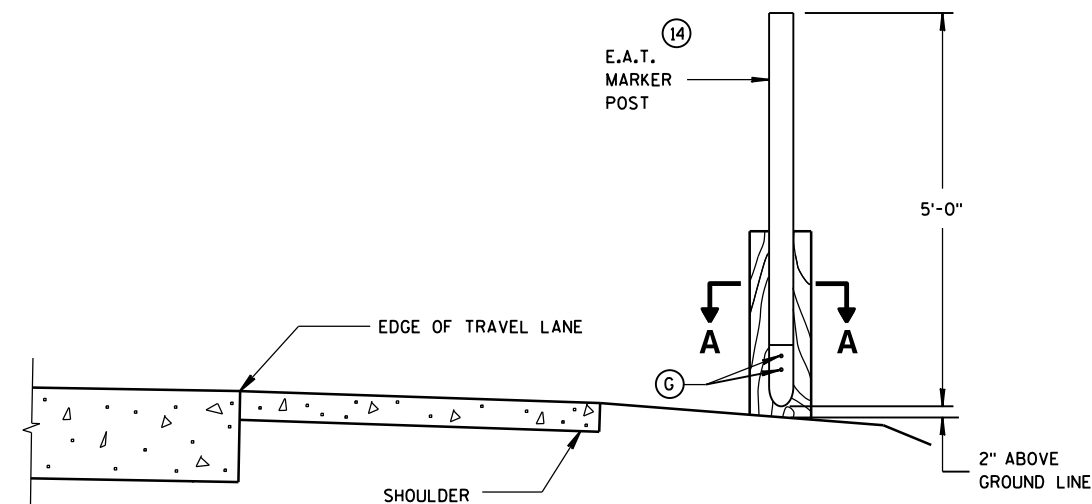
TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.



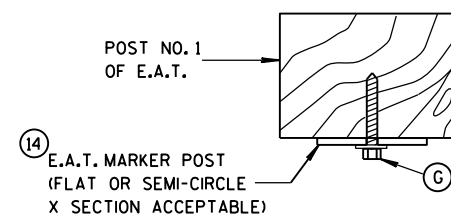
GENERIC REFLECTIVE SHEETING ⑬ ①



FRONT VIEW
SIDE VIEW
E.A.T. MARKER POST ⑭



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)

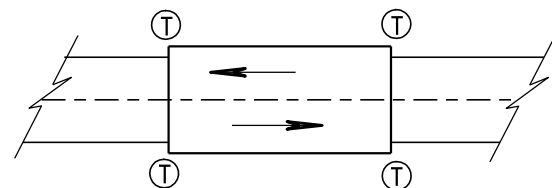


SECTION A-A

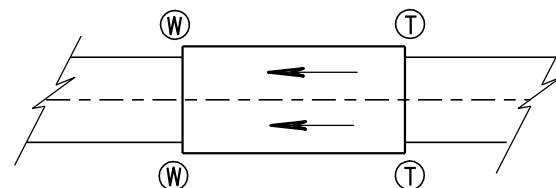
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

GENERAL NOTES

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

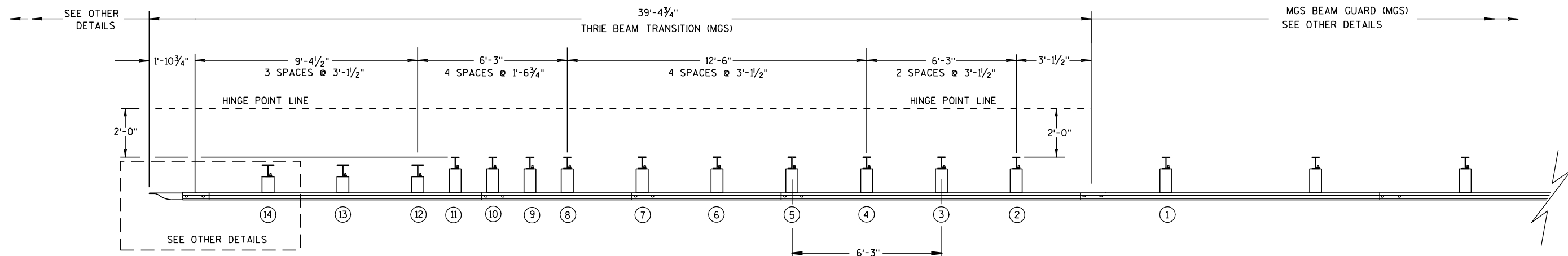
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

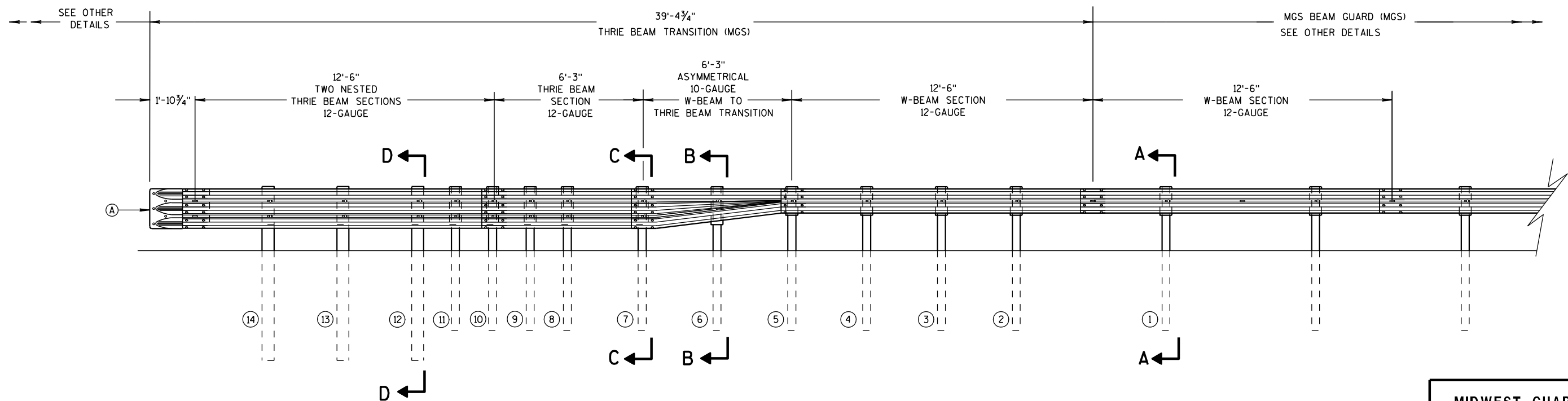
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

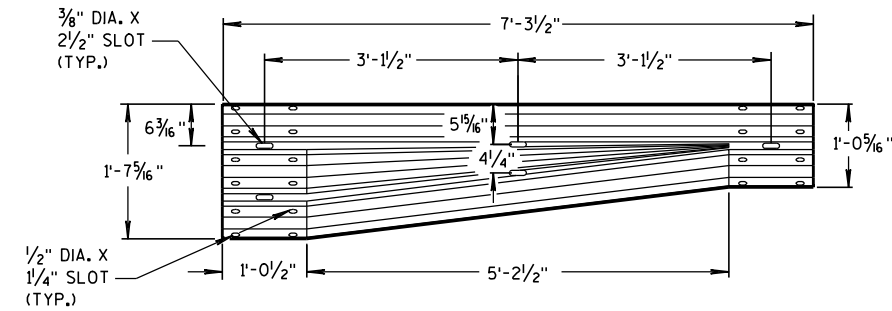
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

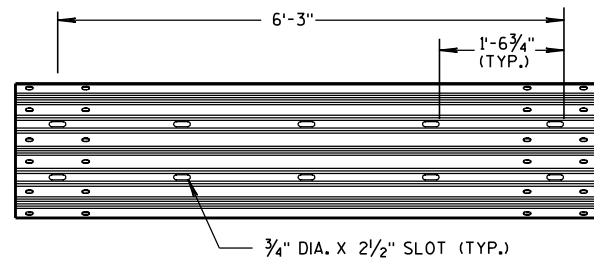
S.D.D. 14 B 45-3b



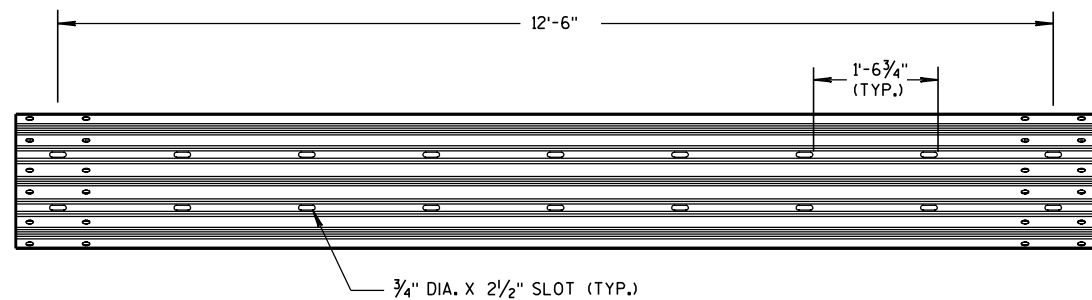
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



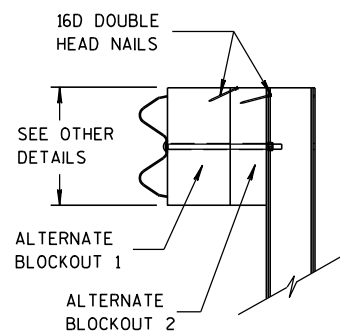
W-BEAM TO THRIE BEAM TRANSITION SECTION



6'-3" THRIE BEAM SECTION

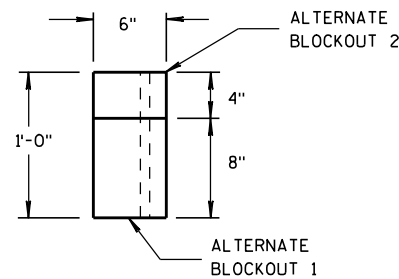


12'-6" THRIE BEAM SECTION

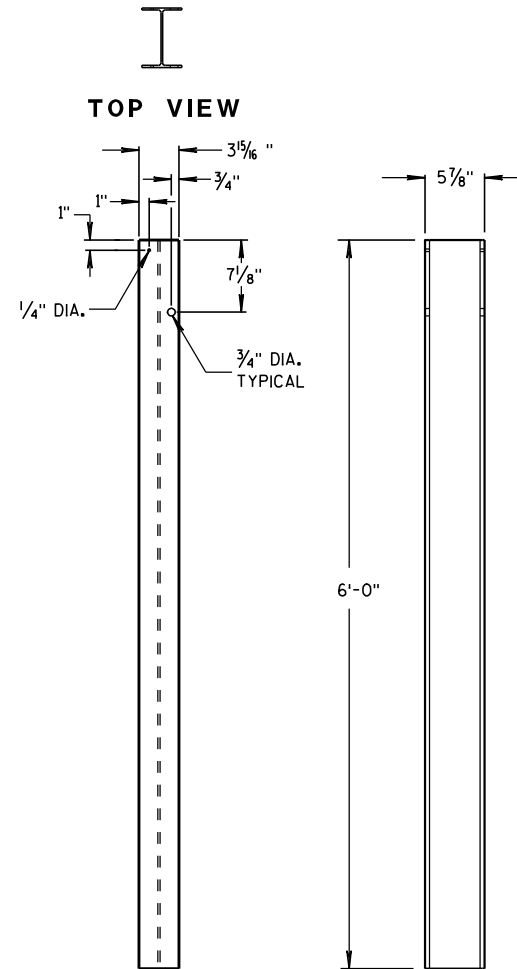


SIDE VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



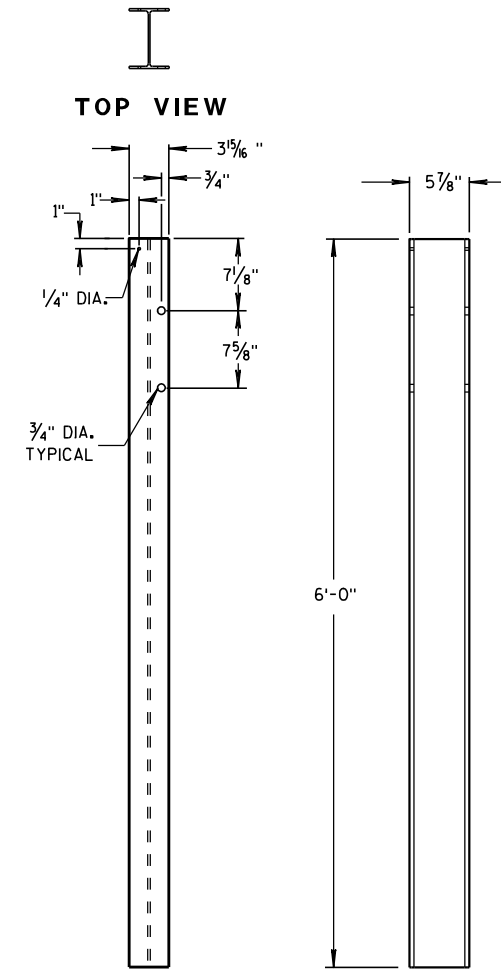
TOP VIEW



FRONT VIEW

SIDE VIEW

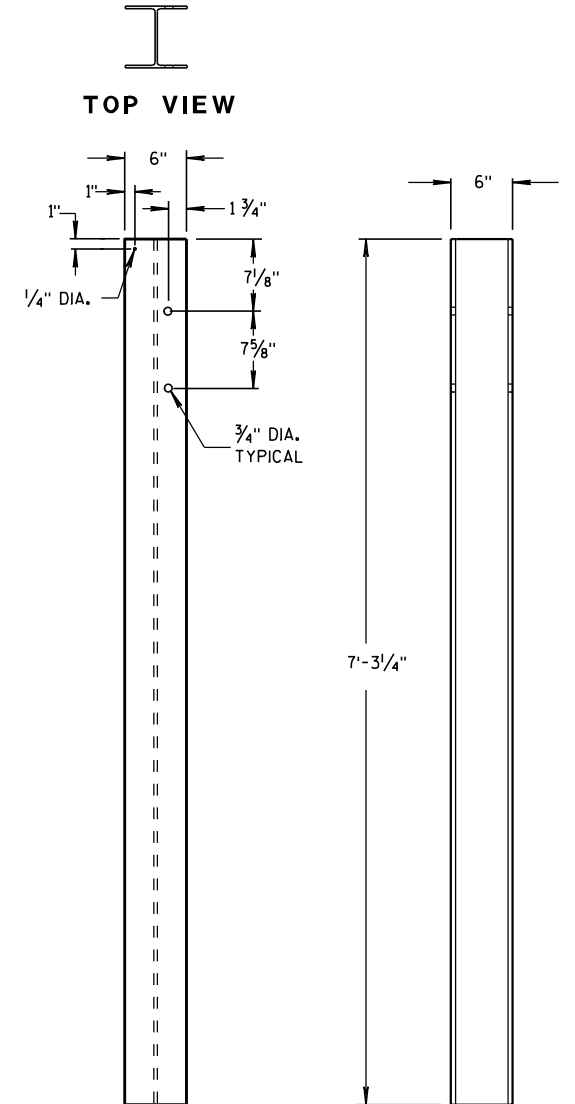
STEEL POSTS 1-5



FRONT VIEW

SIDE VIEW

STEEL POSTS 6-11



FRONT VIEW

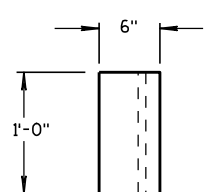
SIDE VIEW

STEEL POSTS 12-14

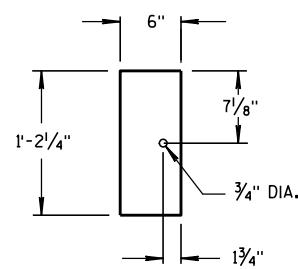
STEEL POST SIZES

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

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

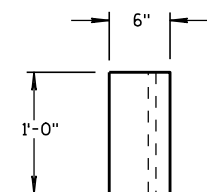


TOP VIEW

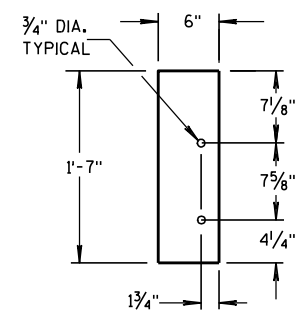


FRONT VIEW

BLOCKOUT POSTS 1-5

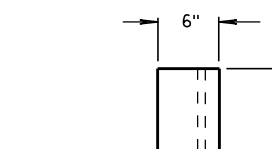


TOP VIEW

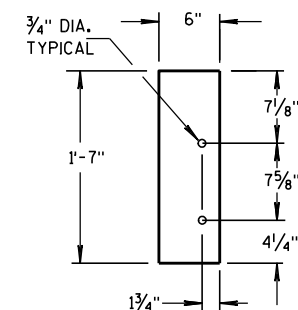


FRONT VIEW

BLOCKOUT POSTS 6-11



TOP VIEW

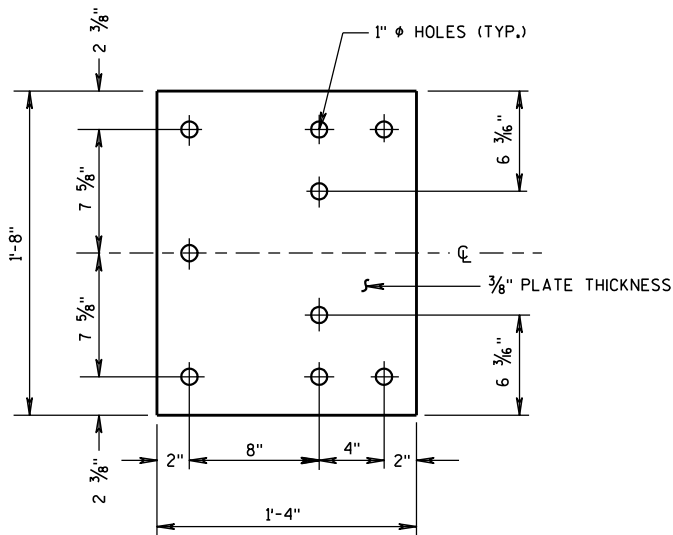


FRONT VIEW

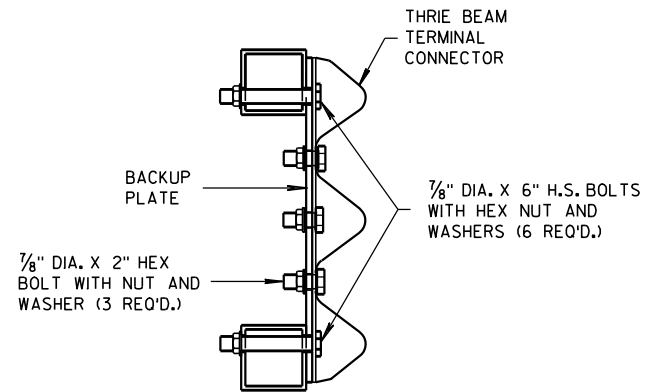
BLOCKOUT POSTS 12-14

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

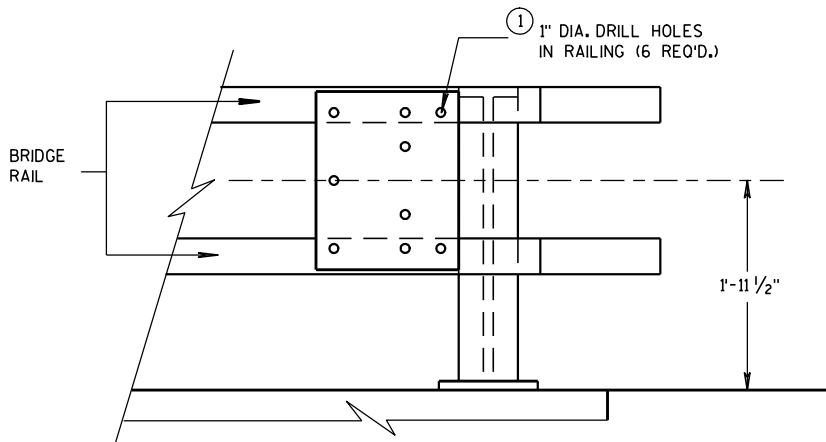
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



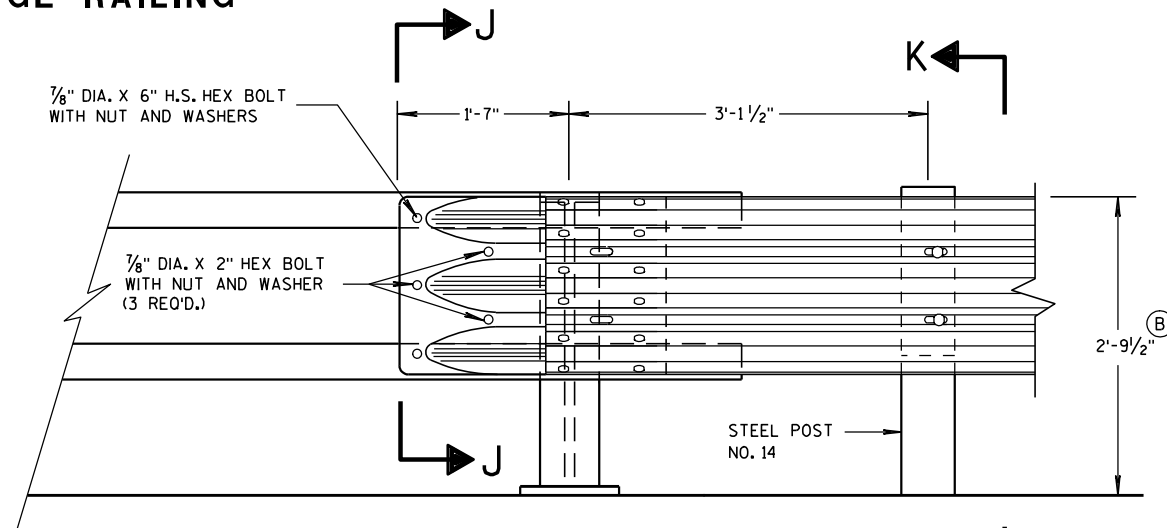
BACK-UP PLATE DETAIL



SECTION J-J

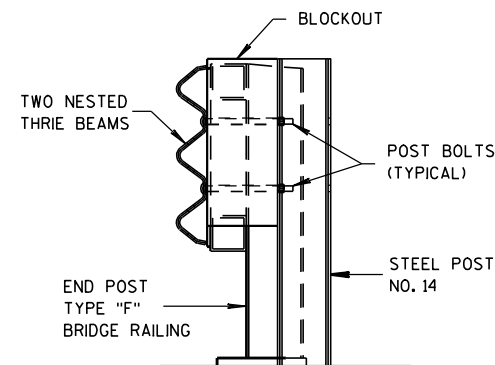


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

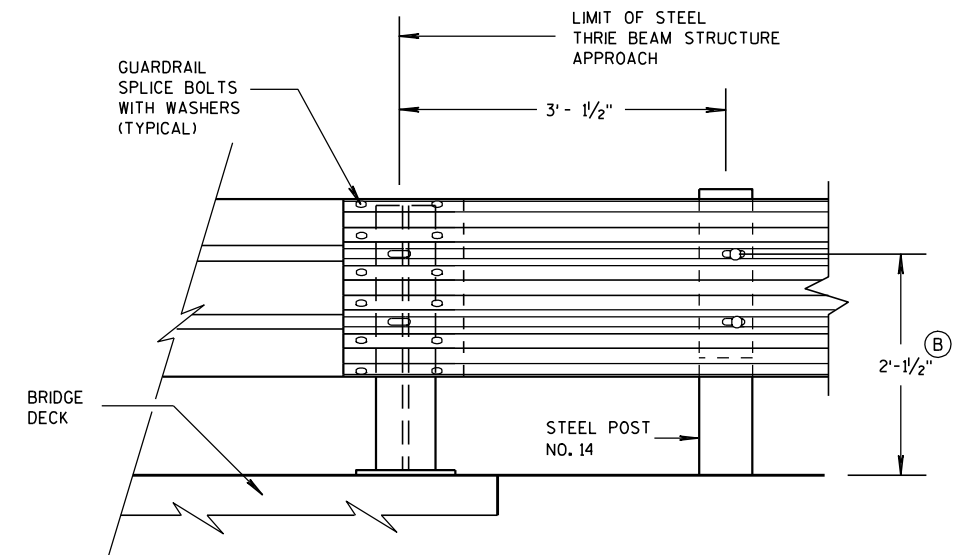
THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"



SECTION K-K

GENERAL NOTES

- ① DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.



**FRONT VIEW
THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"**

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

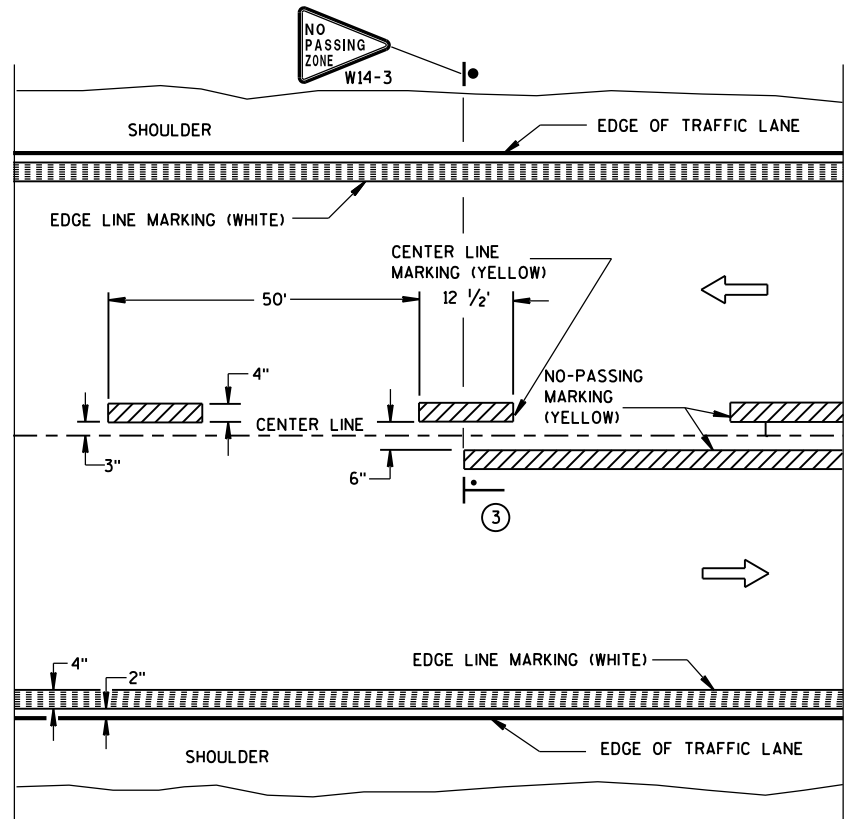
APPROVED
8/31/2012

DATE

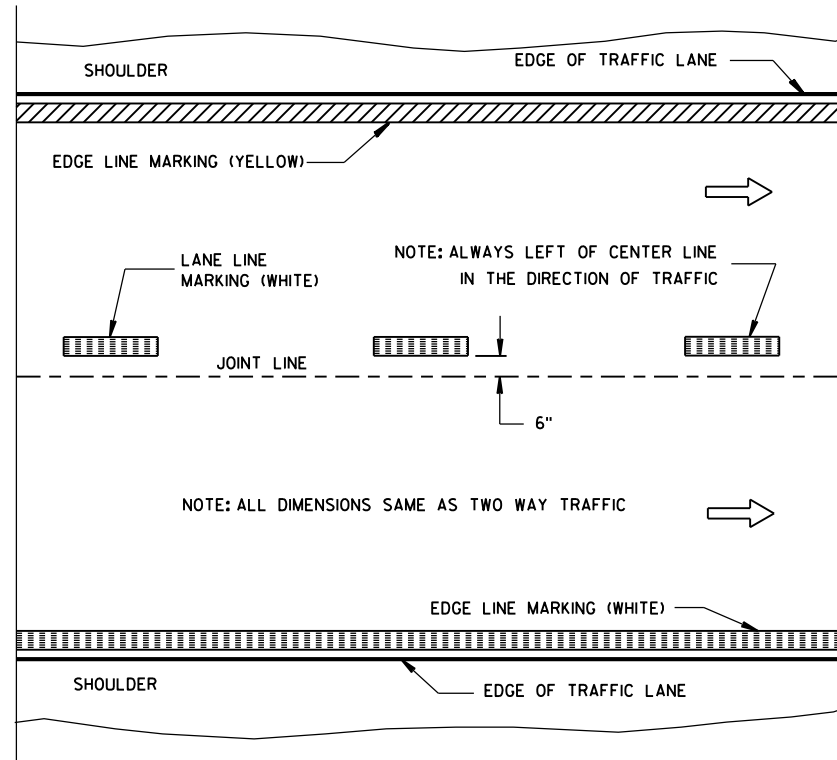
FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT
ENGINEER

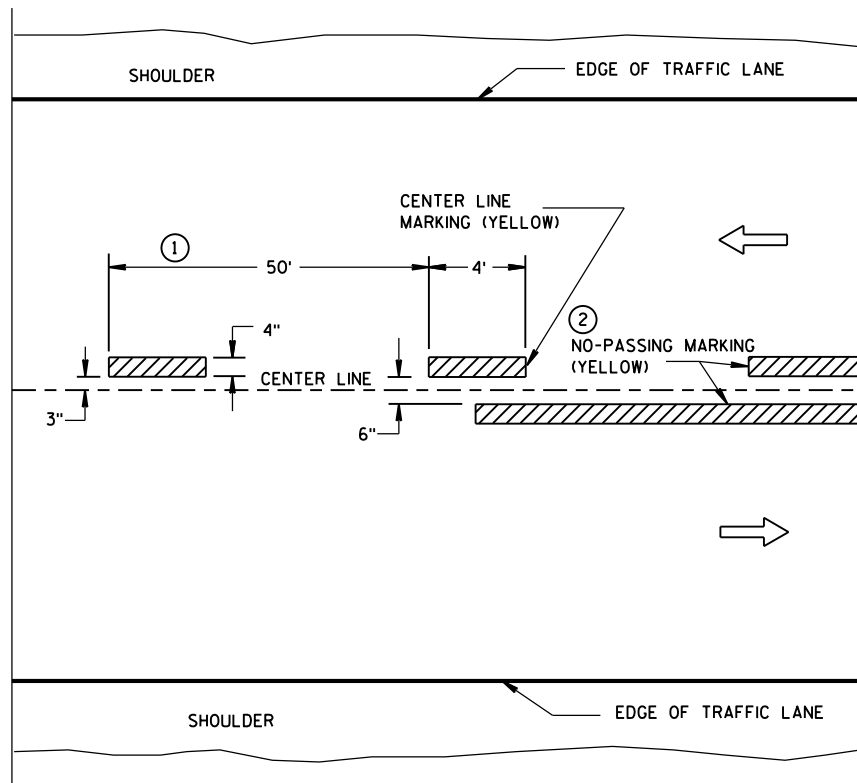


TWO WAY TRAFFIC

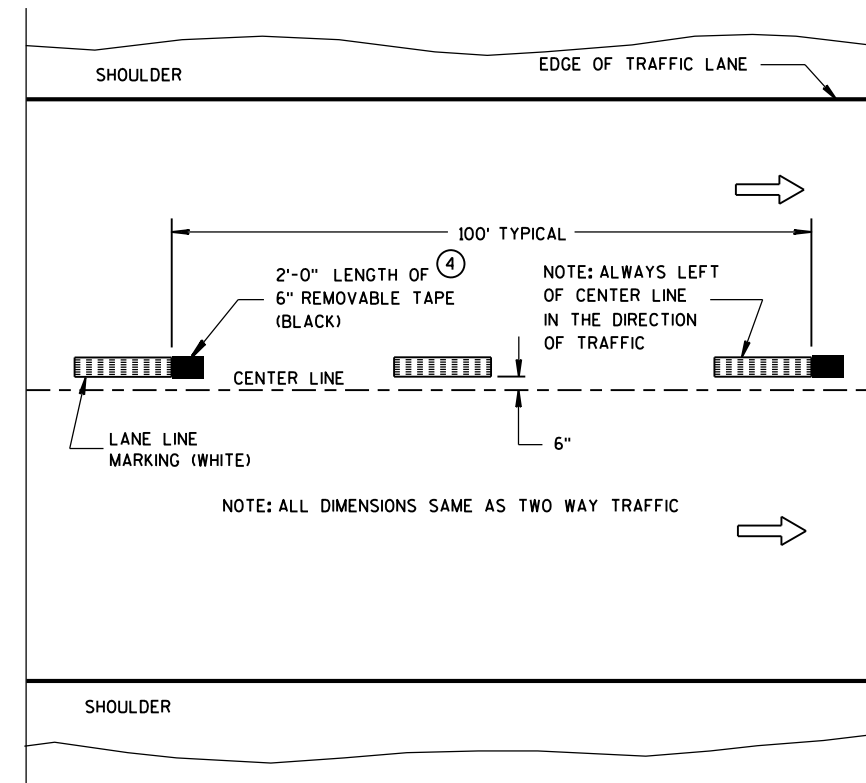


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

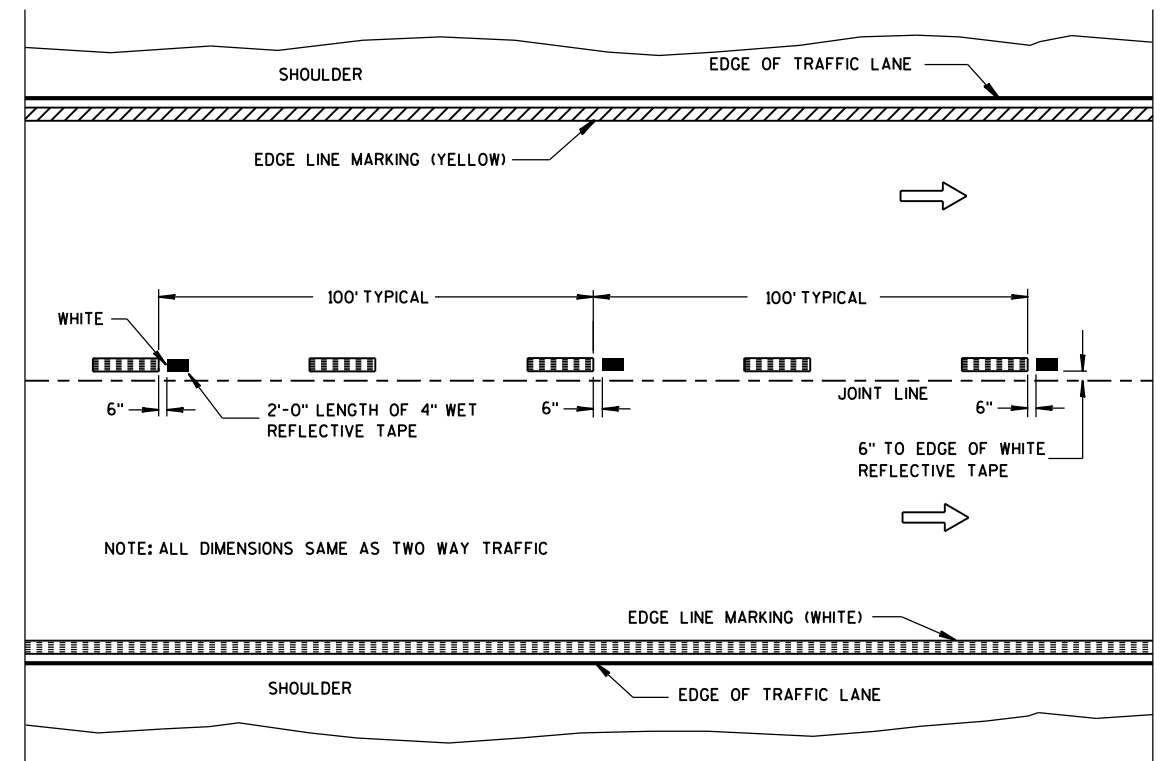
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



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

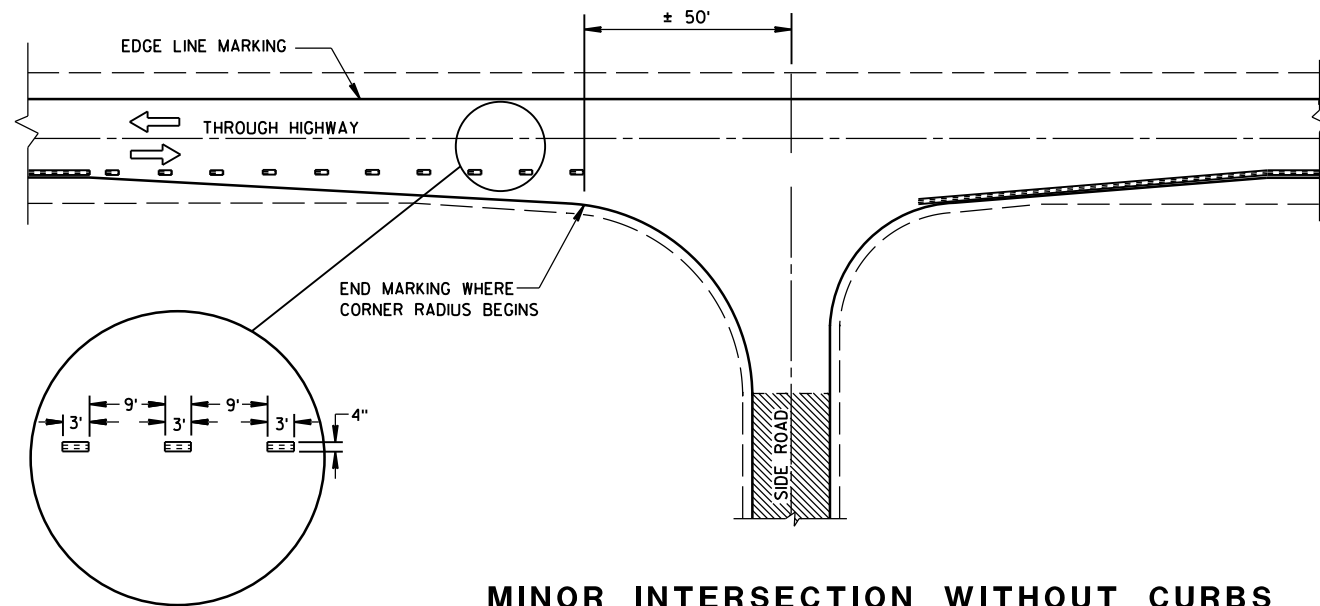
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

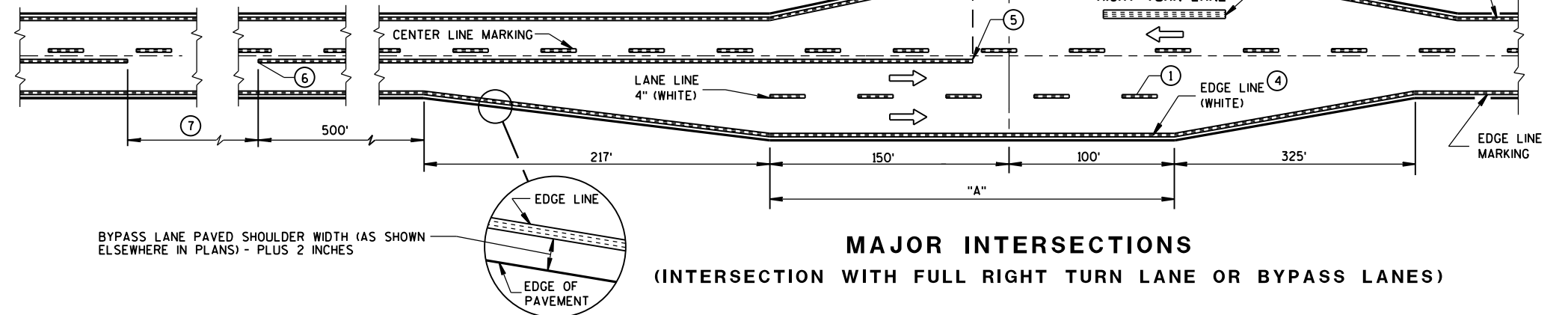
APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER
FHWA



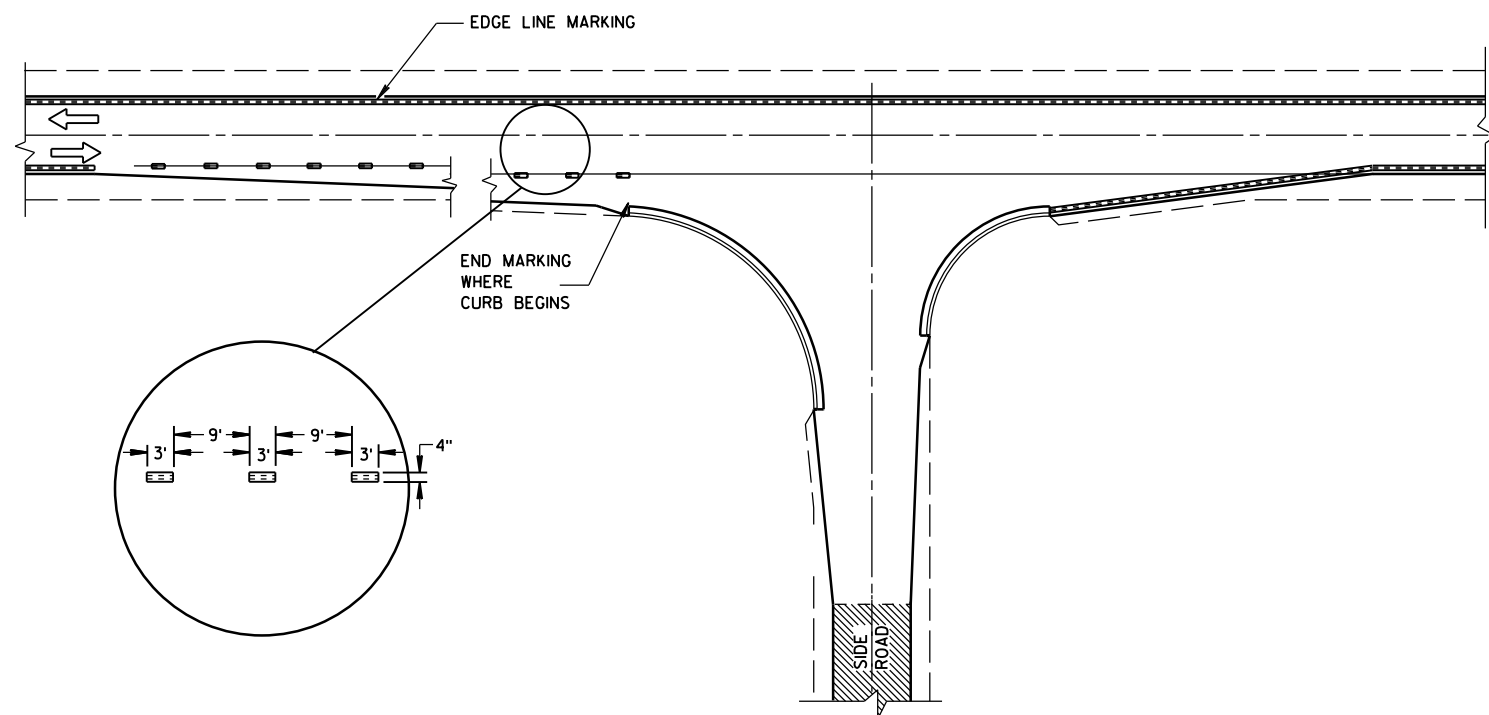
MINOR INTERSECTION WITHOUT CURBS

⑦

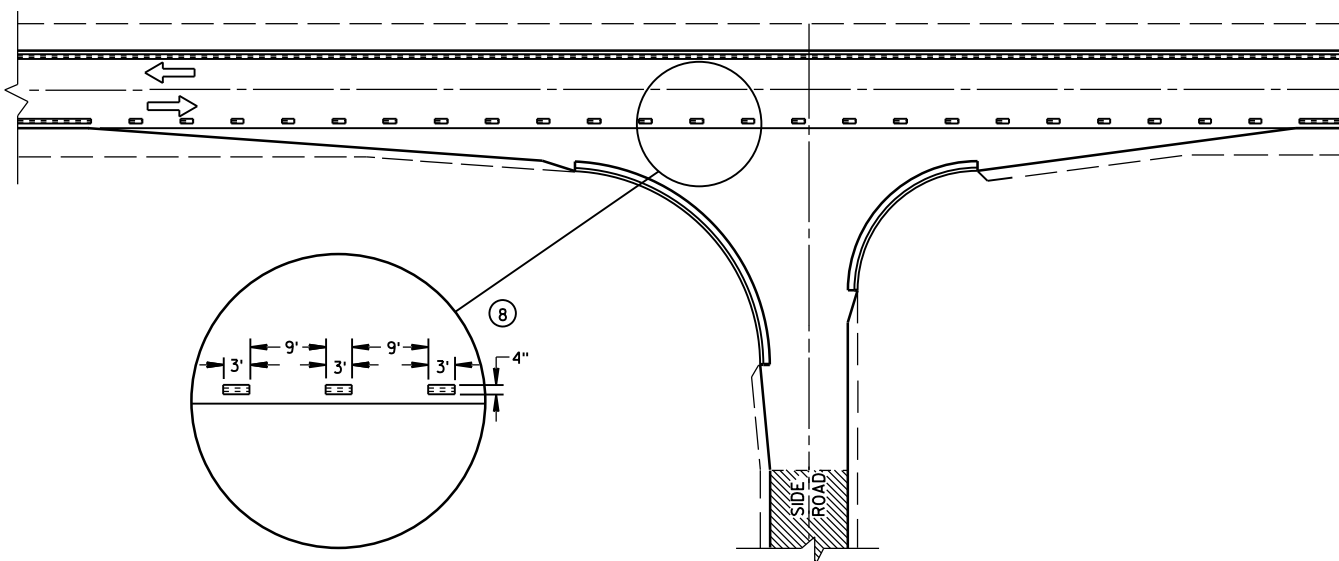
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



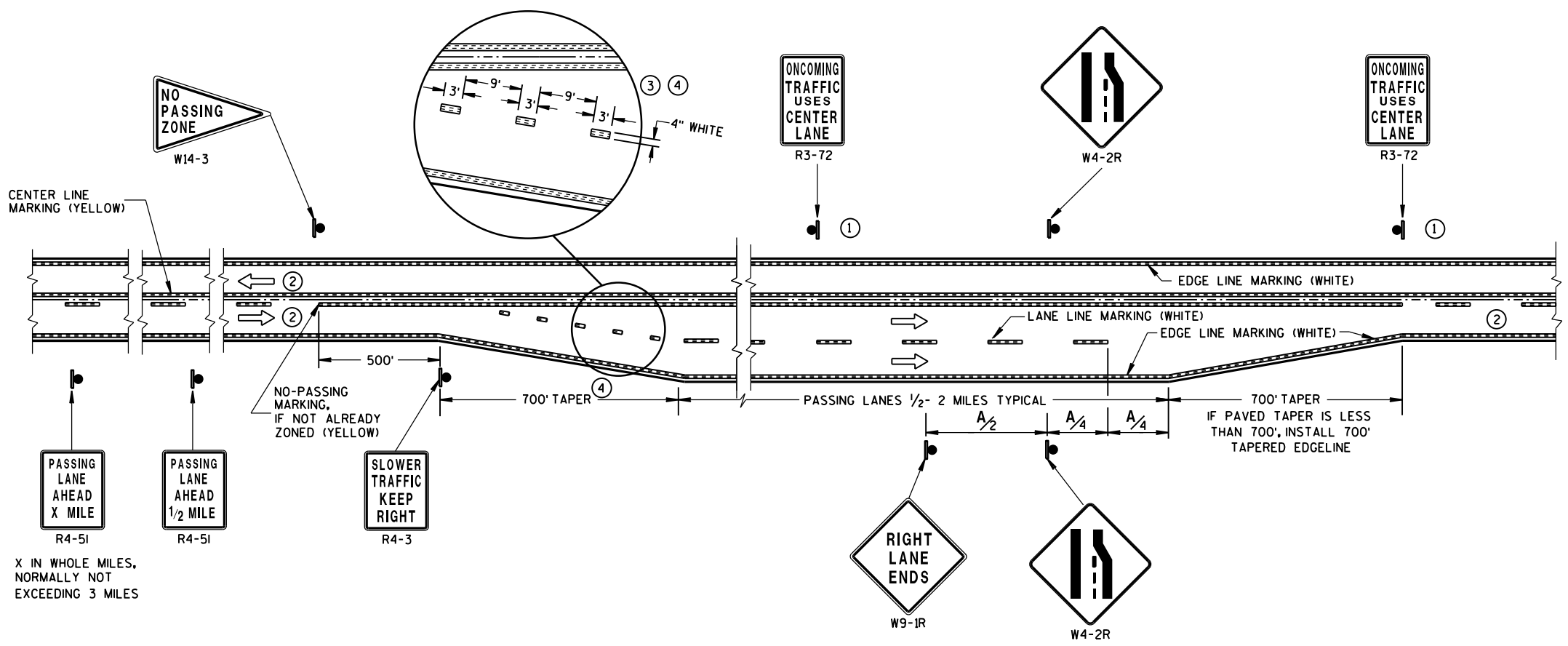
MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

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

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE-YELLOW LINE
(THROUGHOUT ENTIRE PASSING/CLIMBING LANE)**

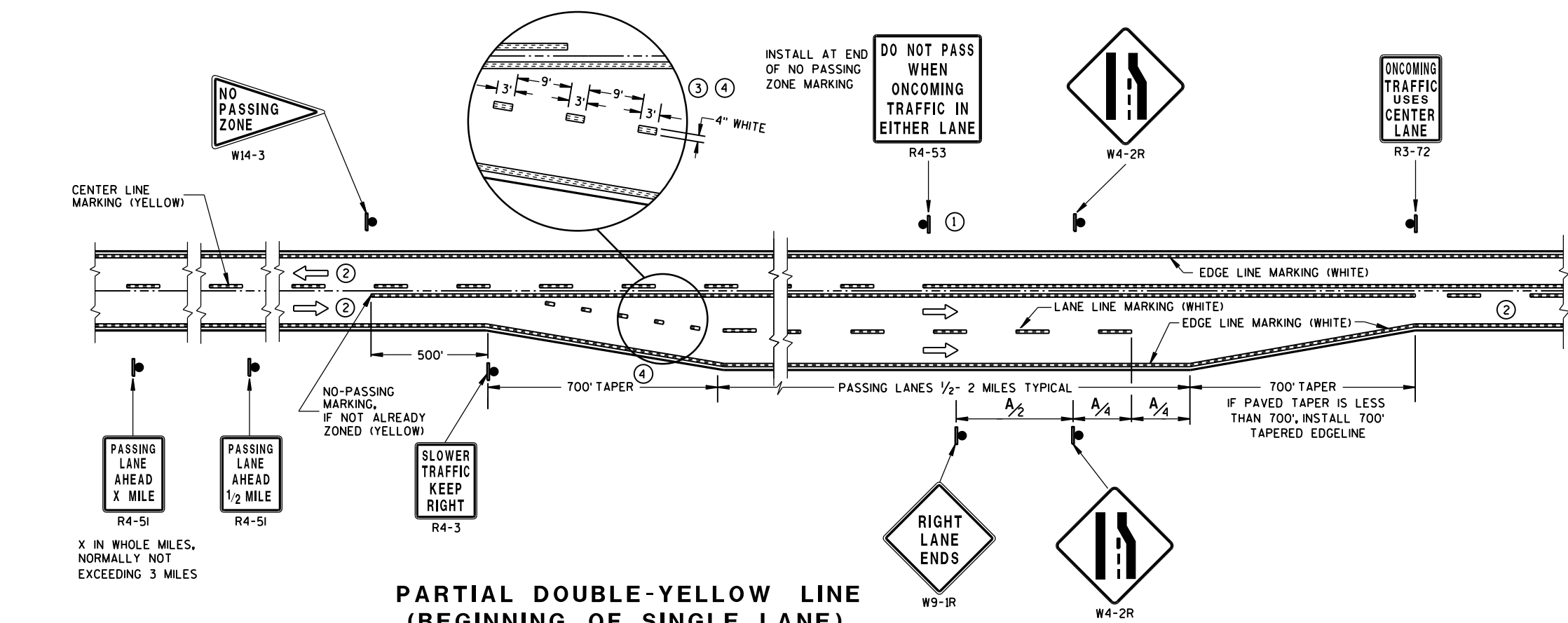
GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

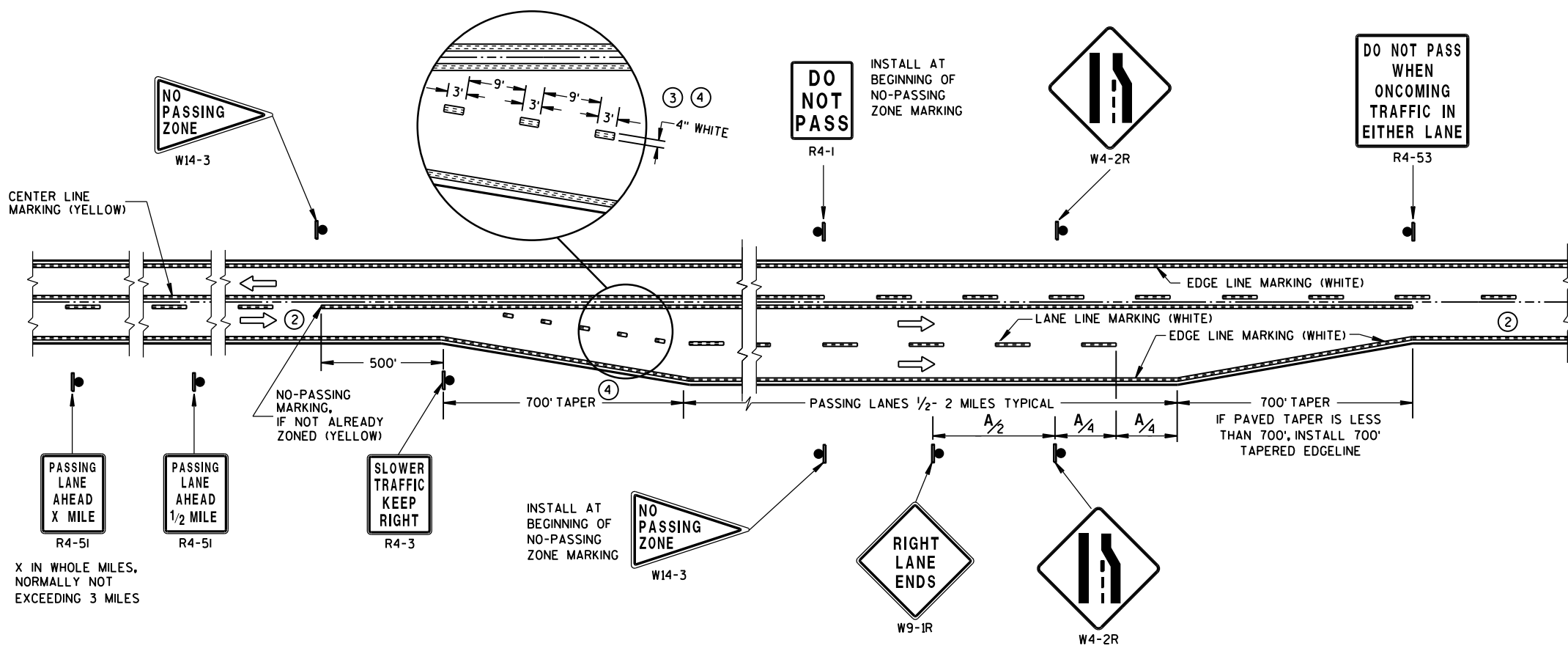
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950



**PARTIAL DOUBLE-YELLOW LINE
(BEGINNING OF SINGLE LANE)**

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE-YELLOW LINE
(END OF SINGLE LANE)**

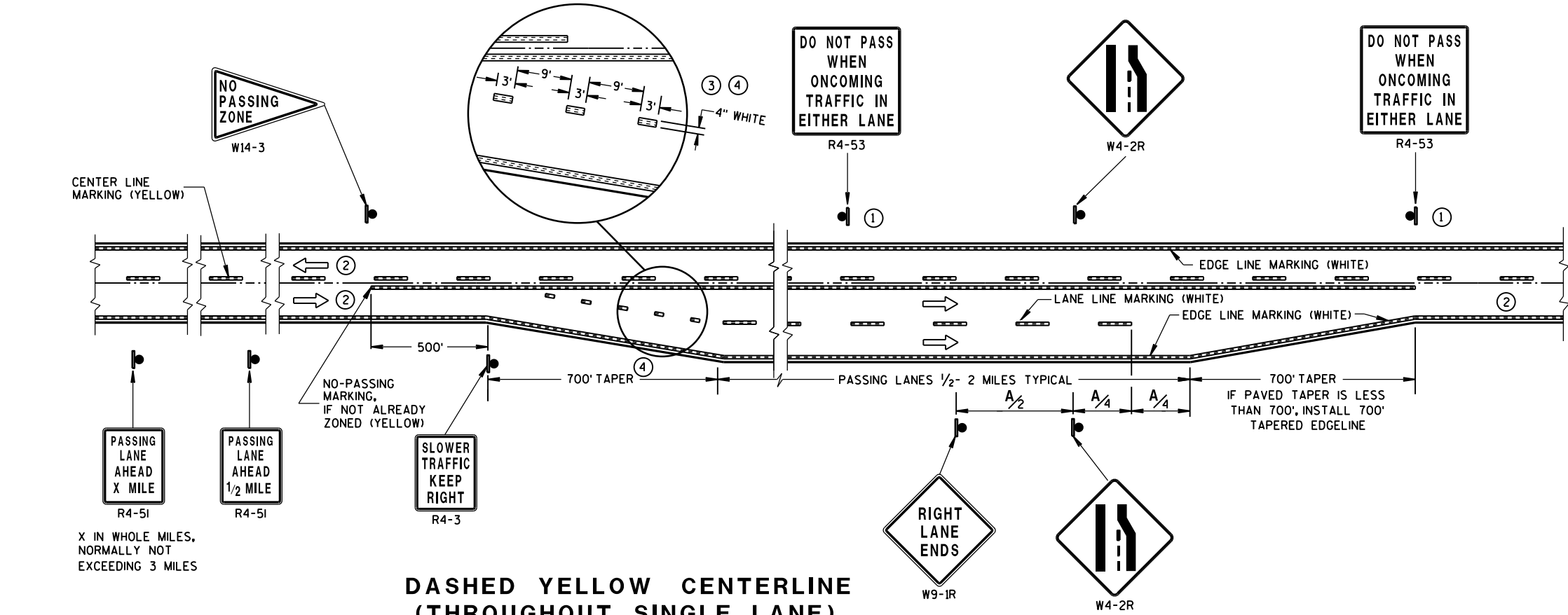
GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1/2 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950







**DASHED YELLOW CENTERLINE
(THROUGHOUT SINGLE LANE)**

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE &
PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

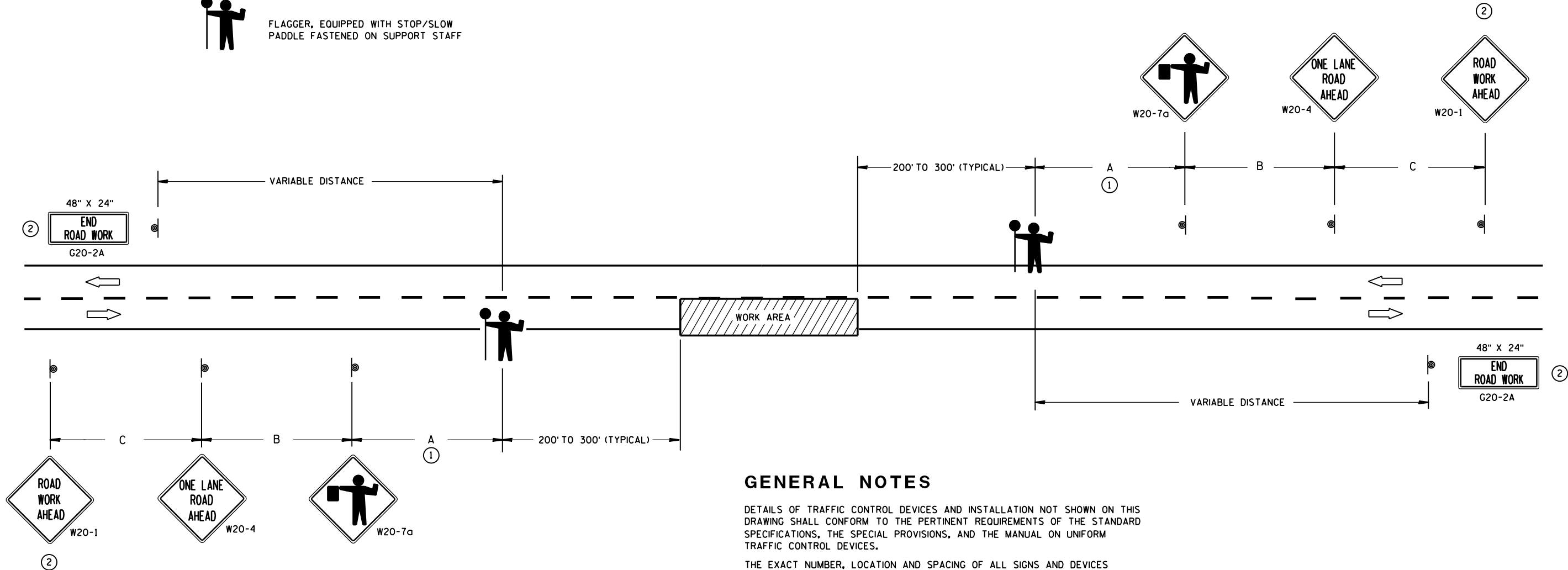
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

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



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



GENERAL NOTES

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

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

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

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

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

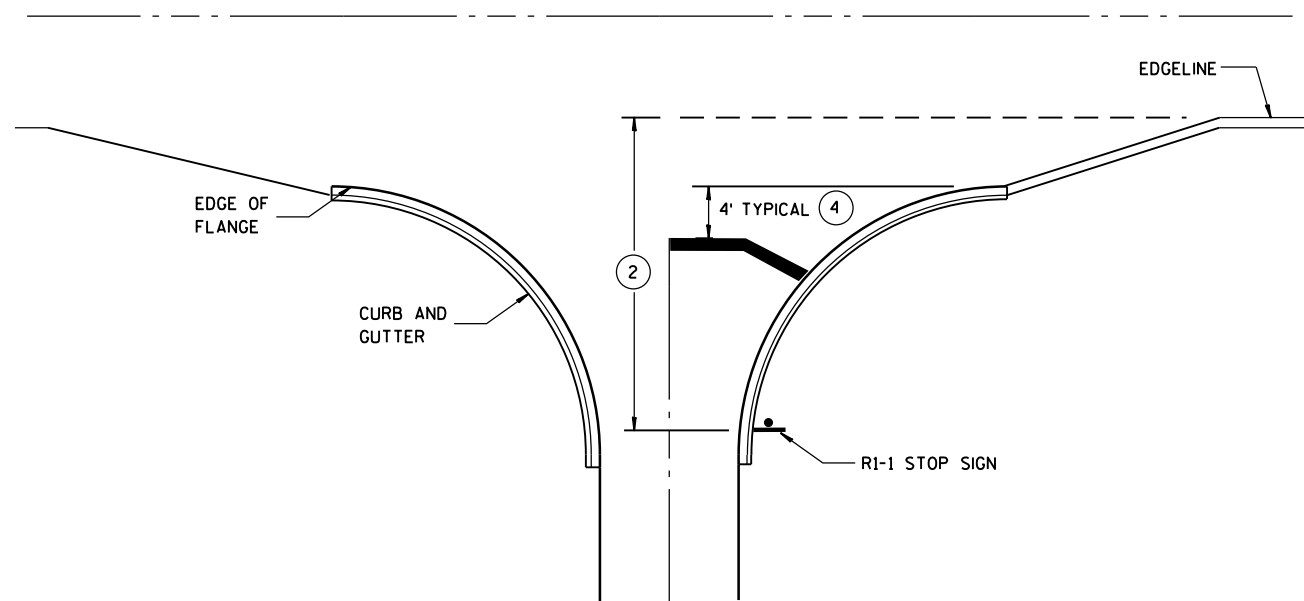
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

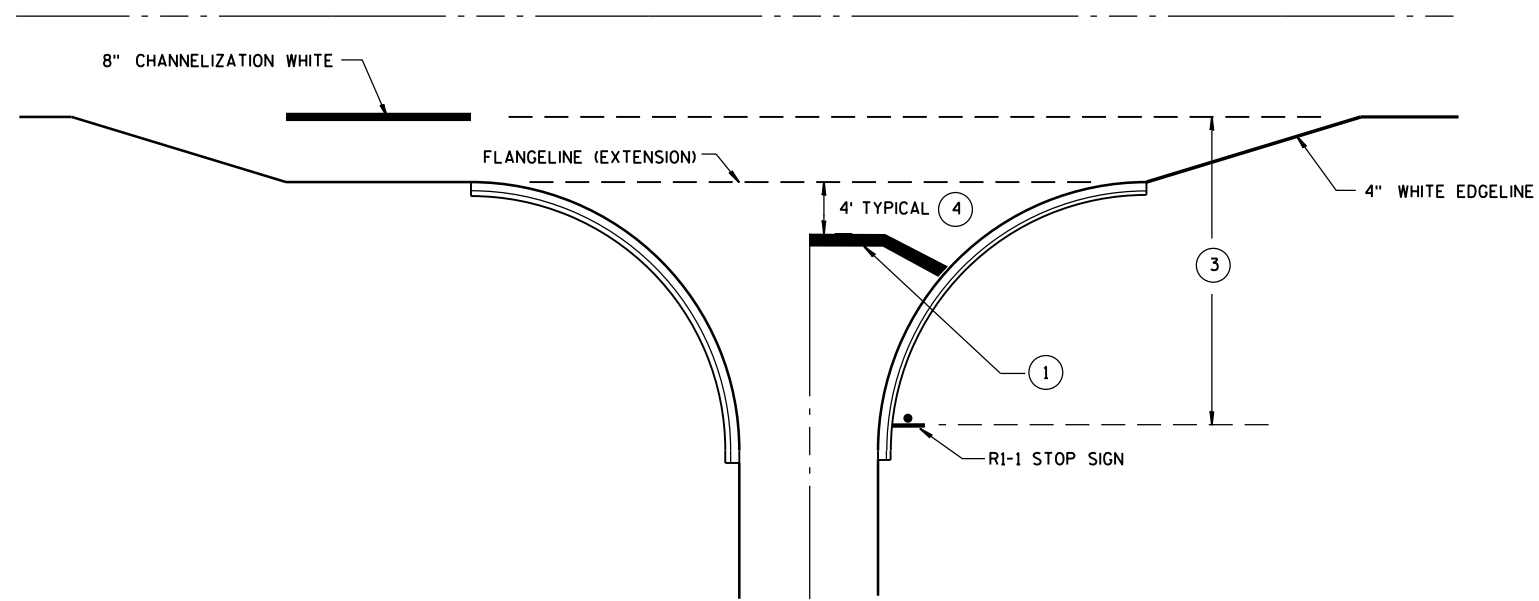
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

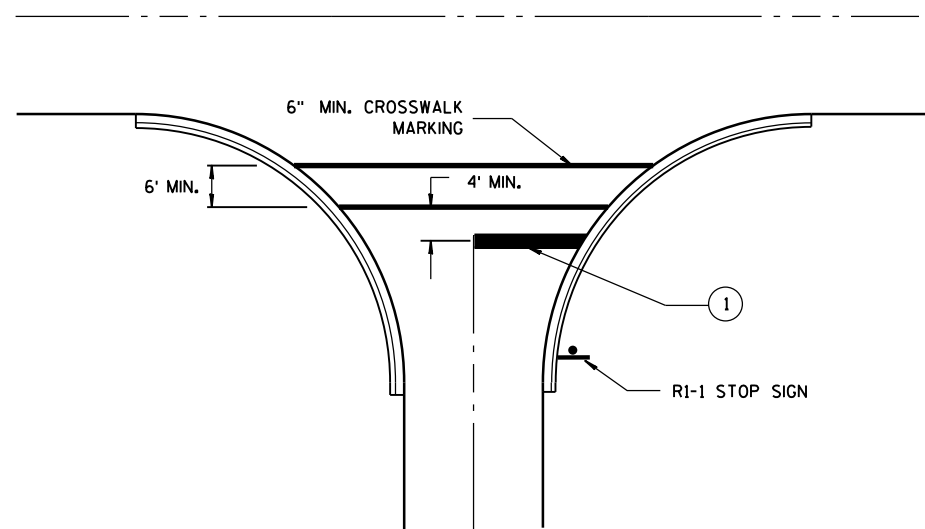
APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



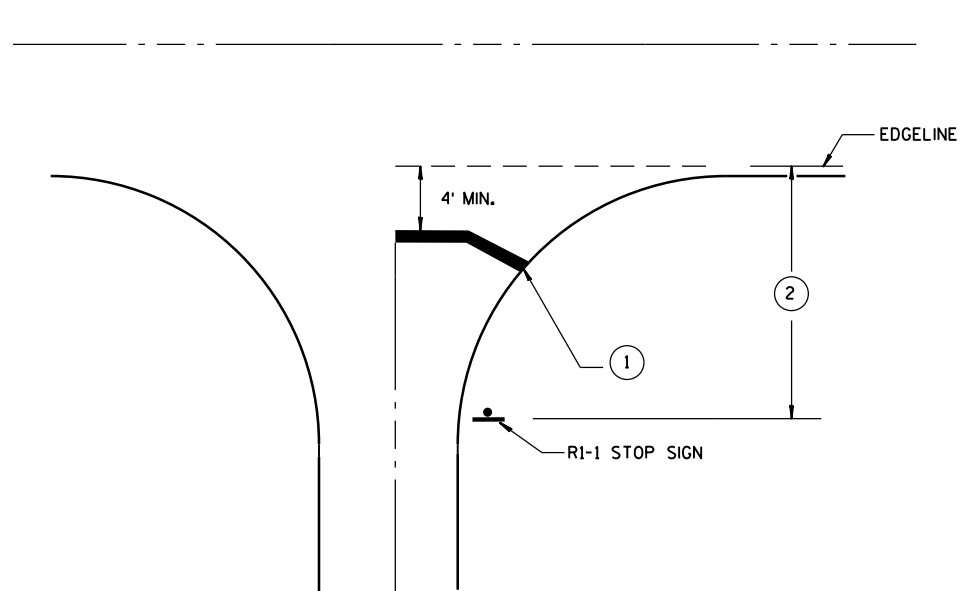
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



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



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



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

GENERAL NOTES

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

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

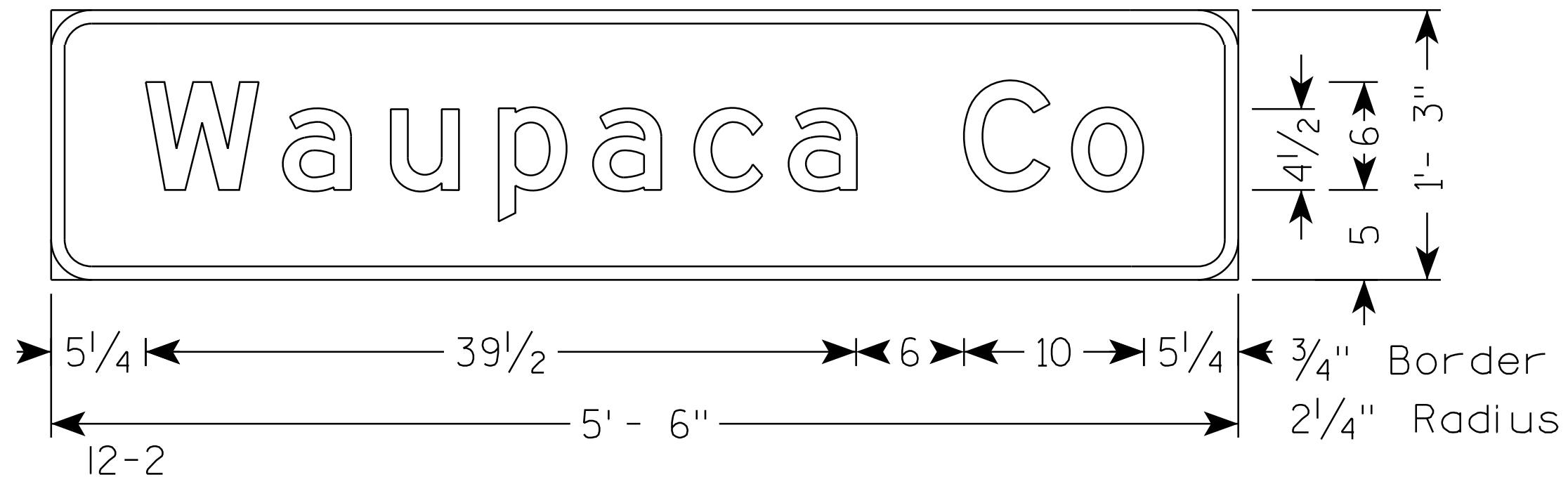
4/30/2013
DATE

FHWA

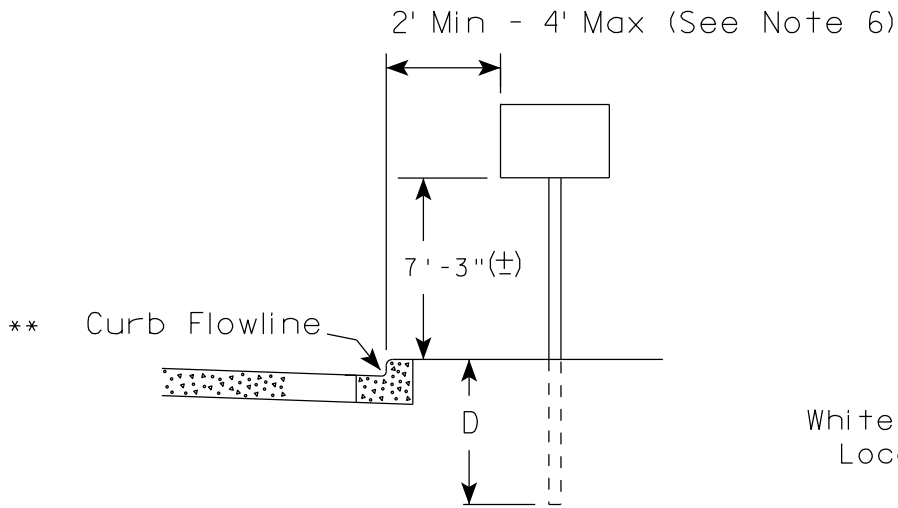
/S/ Travis Feltz
STATE TRAFFIC ENGINEER

NOTES

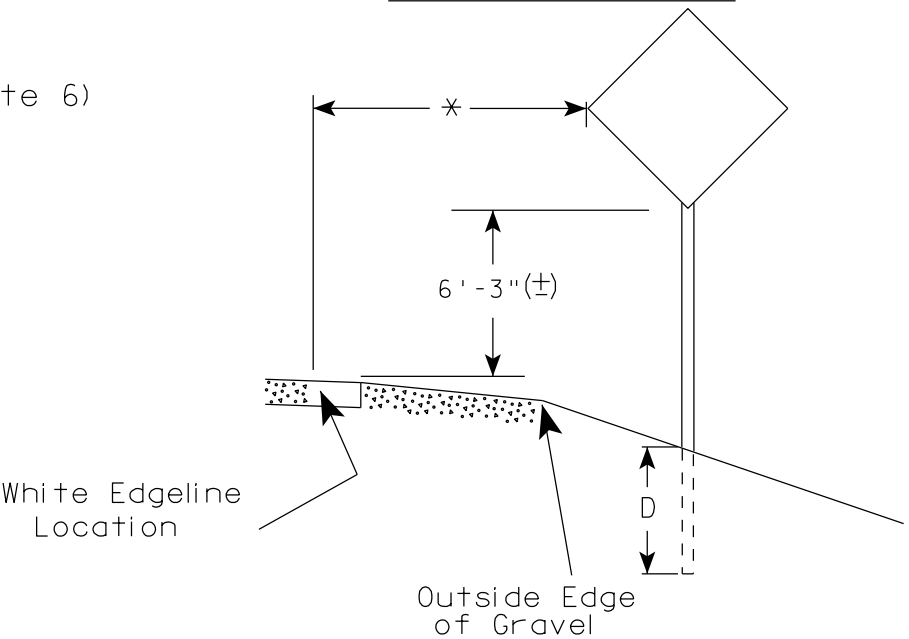
1. All Signs Type II - Type H Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 Background - Green
 Message - White
3. Message Series - E



URBAN AREA



RURAL AREA (See Note 2)



- GENERAL NOTES
1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
 2. If signs are mounted on barrier wall, see A4-10 sign plate.
 3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
 4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. The (±) tolerance for mounting height is 3 inches.
 8. Folding stop signs (R1-1F) 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) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

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

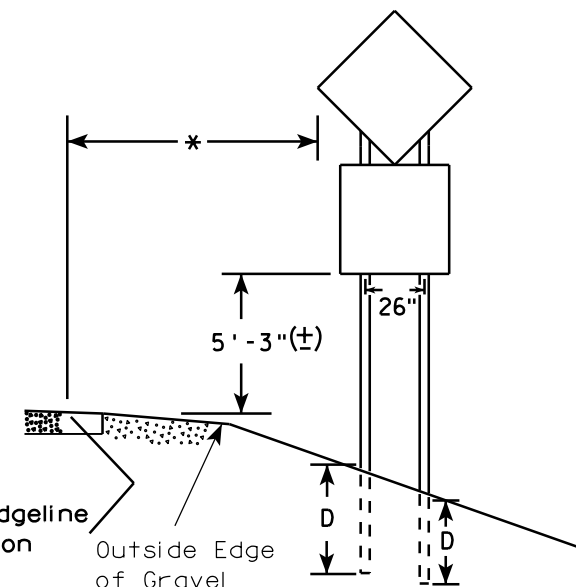
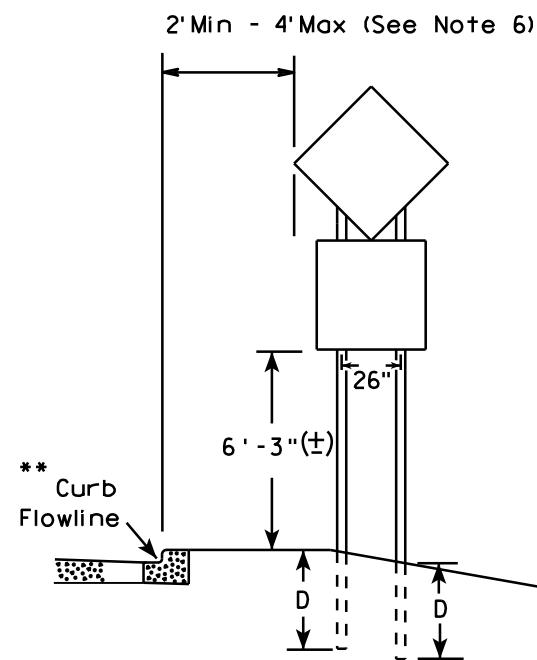
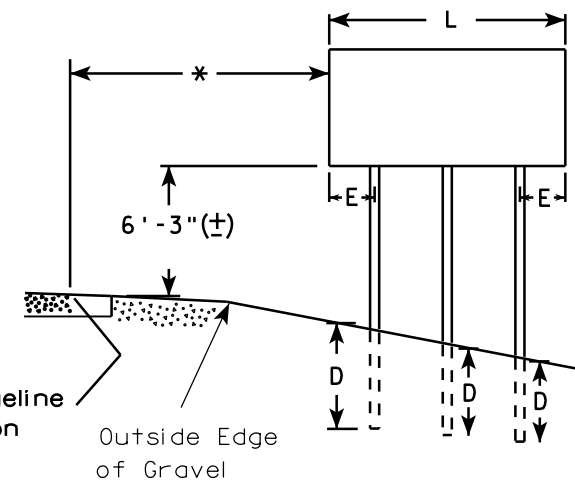
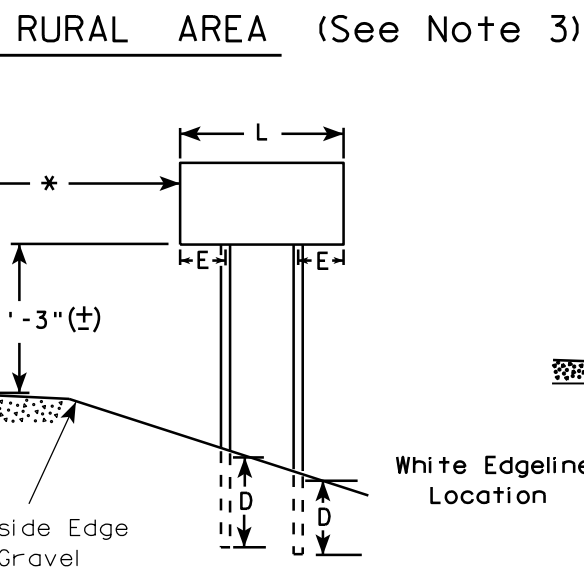
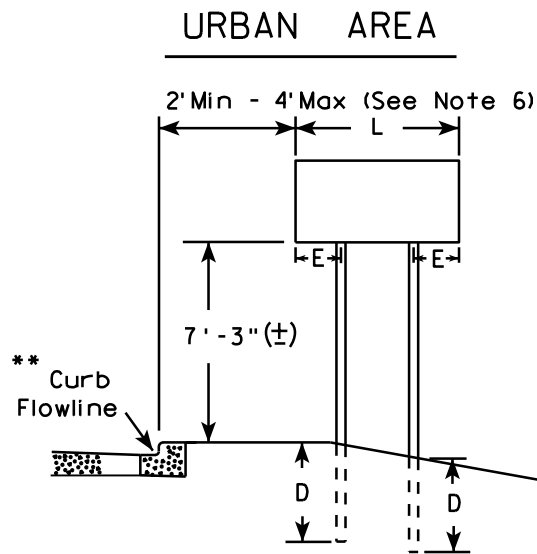
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18



48" DIAMOND WARNING SIGN

48" DIAMOND WARNING SIGN

- GENERAL NOTES**
- For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 - See tables below for required number of posts.
 - For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 - The (±) tolerance for mounting height is 3 inches.
 - Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 - Offset distance shall be consistent with existing signs or consistent throughout length of project.
 - Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 - The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

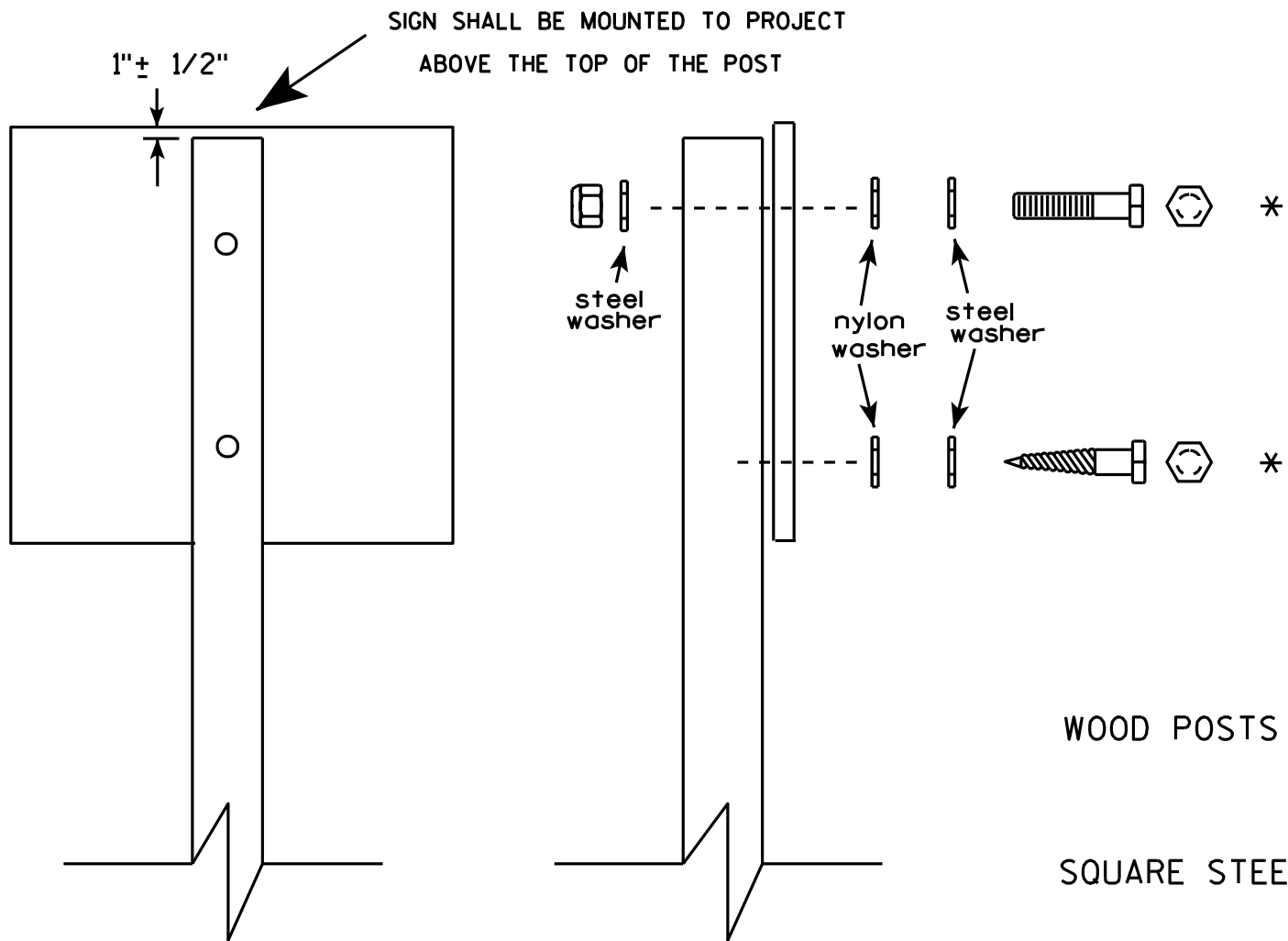
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-4.12

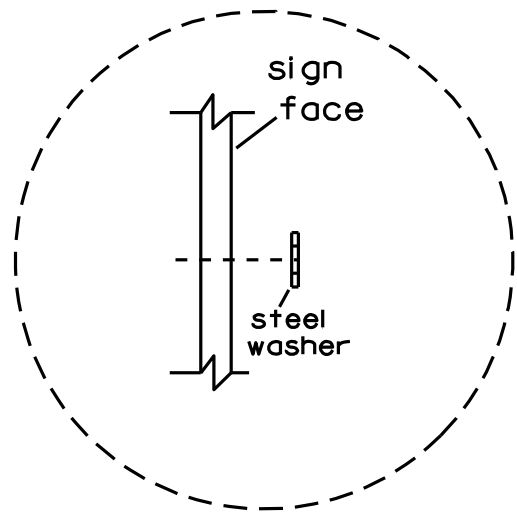


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

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

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

- WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.

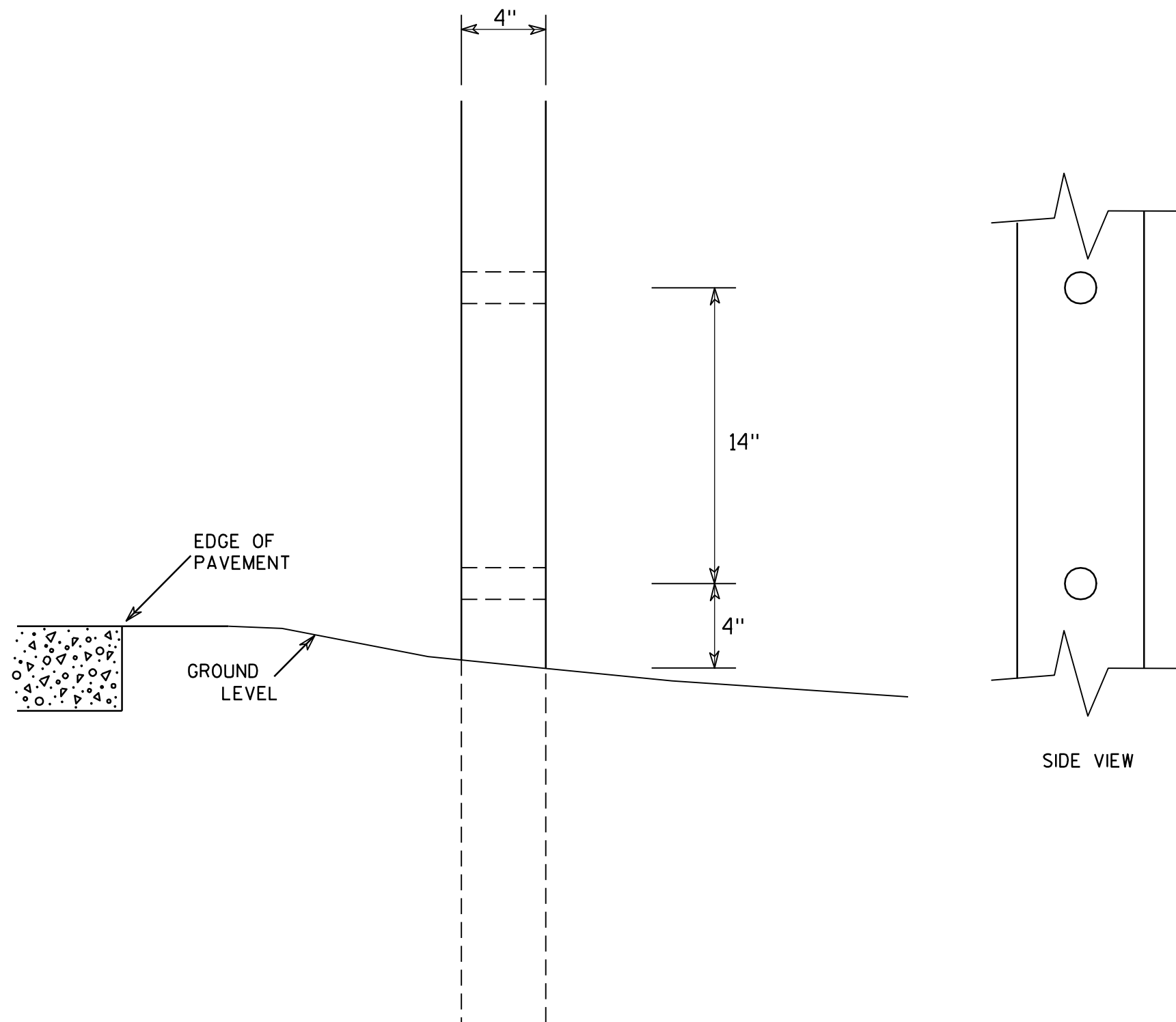


Washer Placement when Sign Has Other Than Type H or Type F Face

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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7

7



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

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:

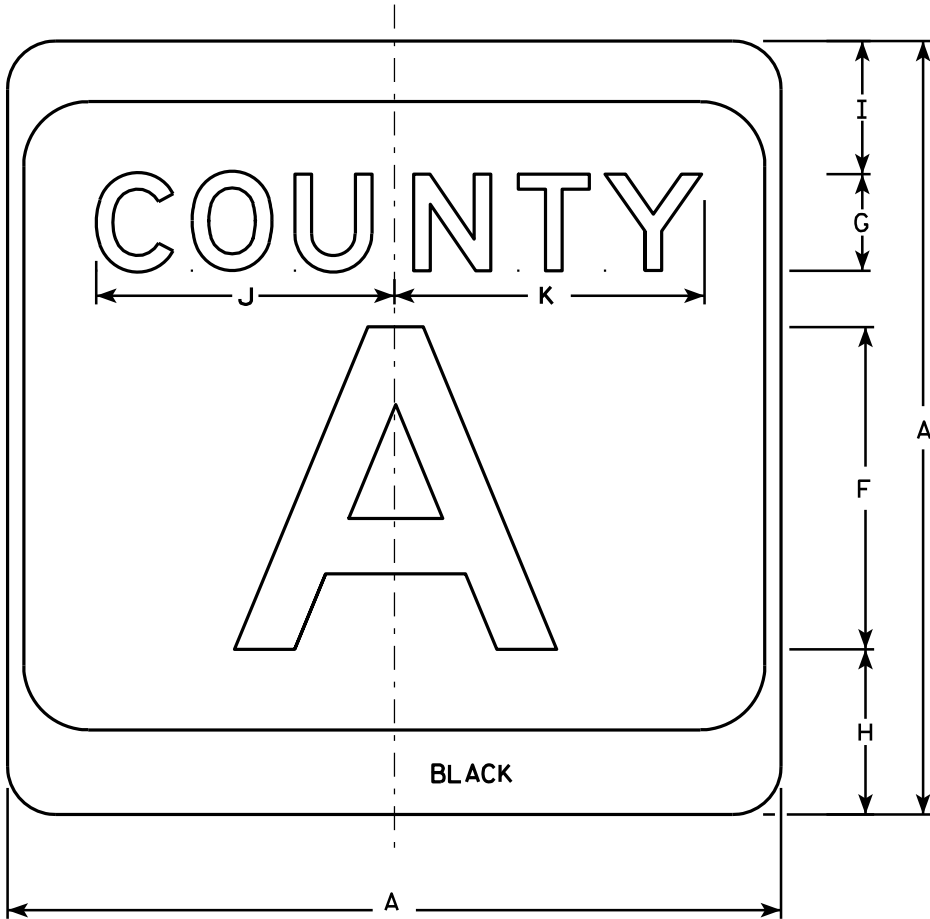
HWY:

COUNTY:

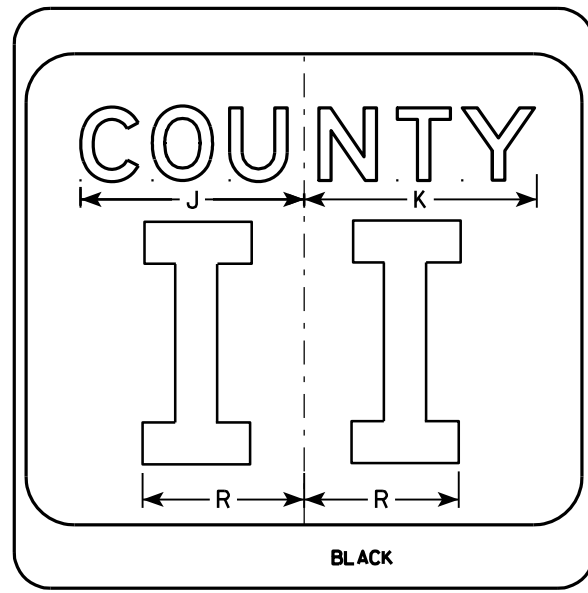
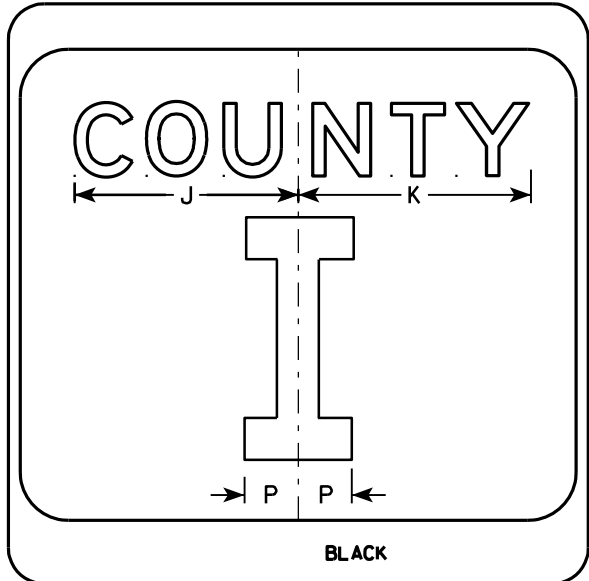
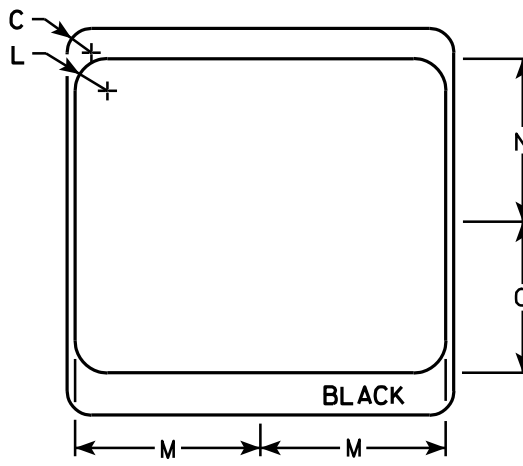
SHEET NO:

E

7



M1-5A



NOTES

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

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

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO:

HWY:

COUNTY:

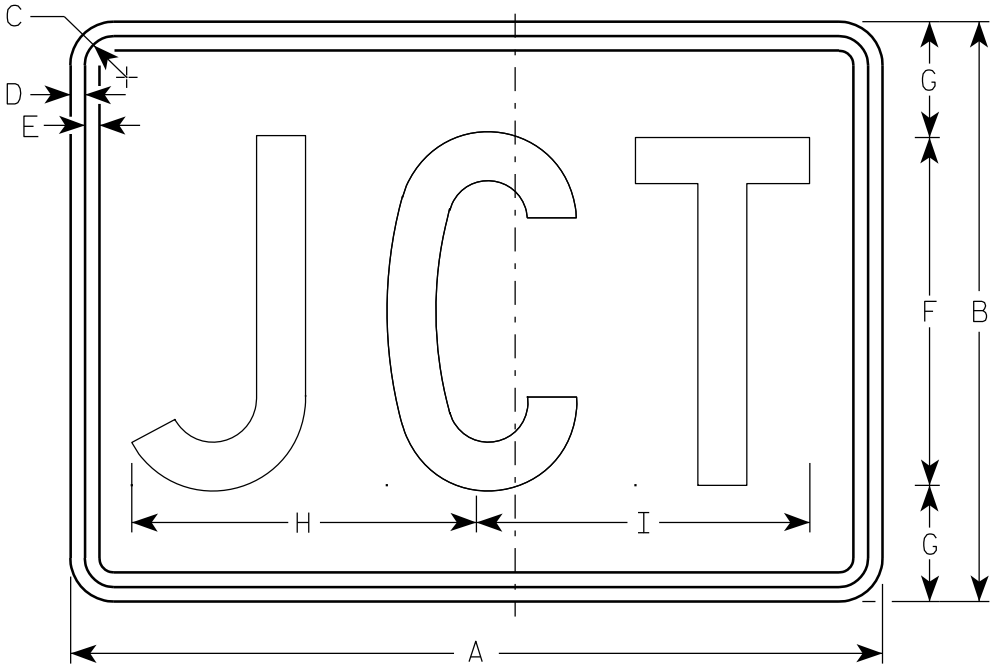
SHEET NO:

E

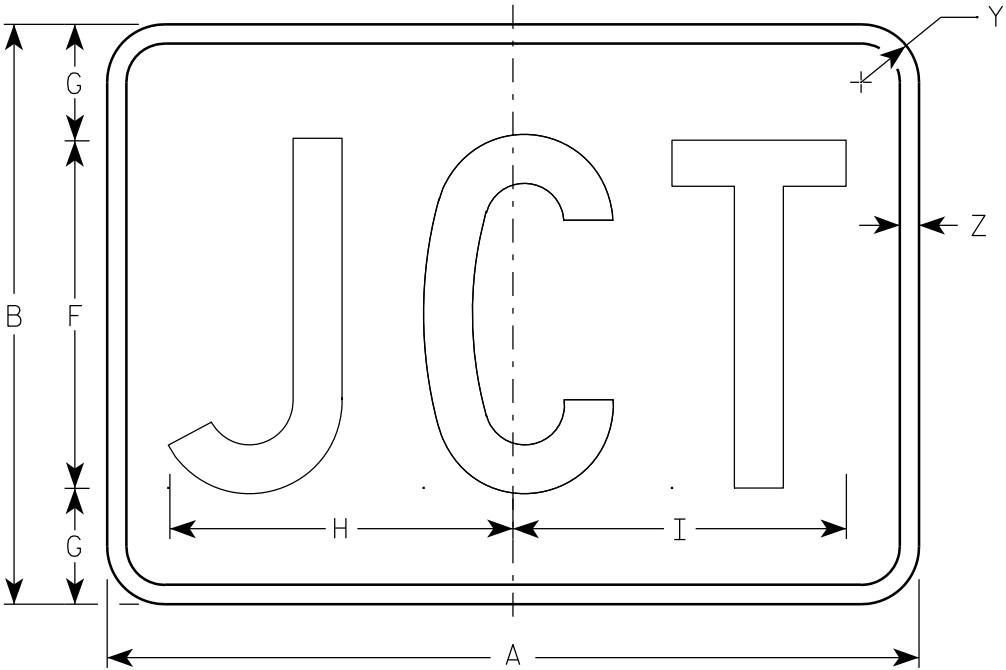
7

NOTES

1. Sign is Type II - See Note 5 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
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 - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB2-1 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG2-1 Background - Green
Message - White - Type H Reflective
MK2-1 Background - Green
Message - White - Type H Reflective
MM2-1 Background - White - Type H Reflective
Message - Green
MN2-1 Background - Brown
Message - White - Type H Reflective
MR2-1 Background - Brown
Message - Yellow - Type H Reflective



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 mm

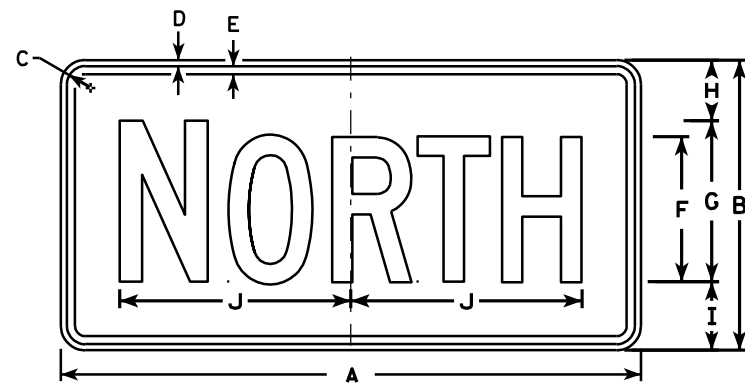
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
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	0.20

STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

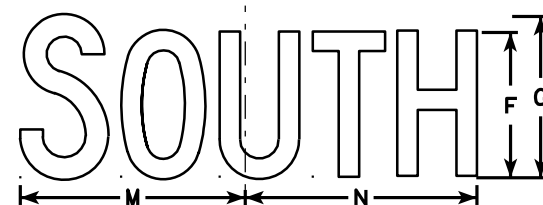
DATE 3/16/10 PLATE NO. M2-1.10



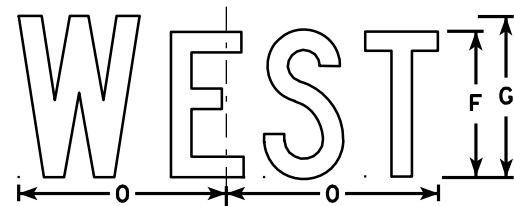
M3-1
MK3-1
M03-1



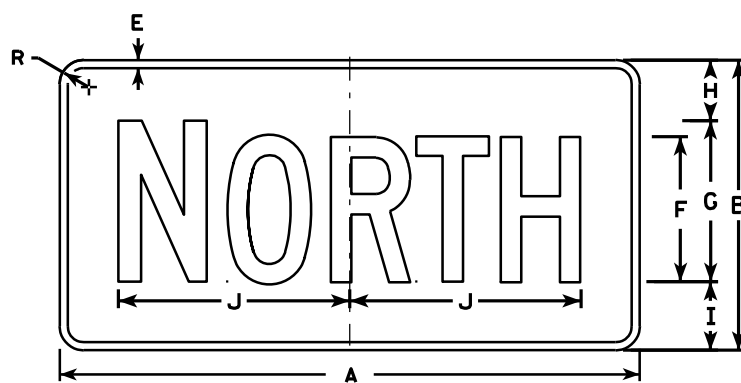
M3-2
MK3-2
M03-2



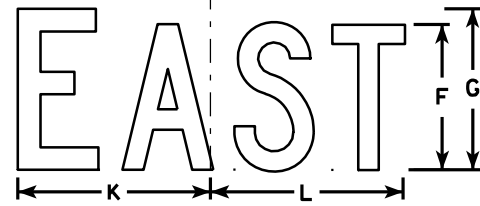
M3-3
MK3-3
M03-3



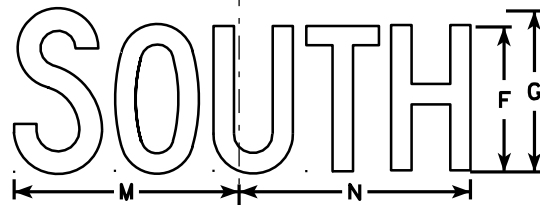
M3-4
MK3-4
M03-4



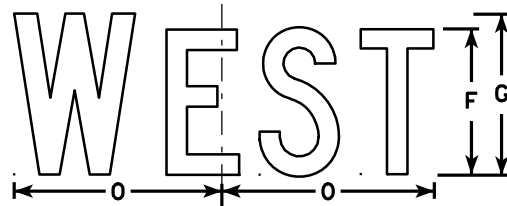
MB3-1
MG3-1
MM3-1
MN3-1



MB3-2
MG3-2
MM3-2
MN3-2



MB3-3
MG3-3
MM3-3
MN3-3



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective (Detour or temporary signs - Reflective)
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White - Type H Reflective (Detour or temporary signs - Reflective)
MG3-1 thru MG3-4 Background - Green
Message - White - Type H Reflective
MK3-1 thru MK3-4 Background - Green
Message - White - Type H Reflective
MM3-1 thru MM3-4 Background - White - Type H Reflective
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White - Type H Reflective
M03-1 thru M03-4 Background - Orange - Reflective
Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

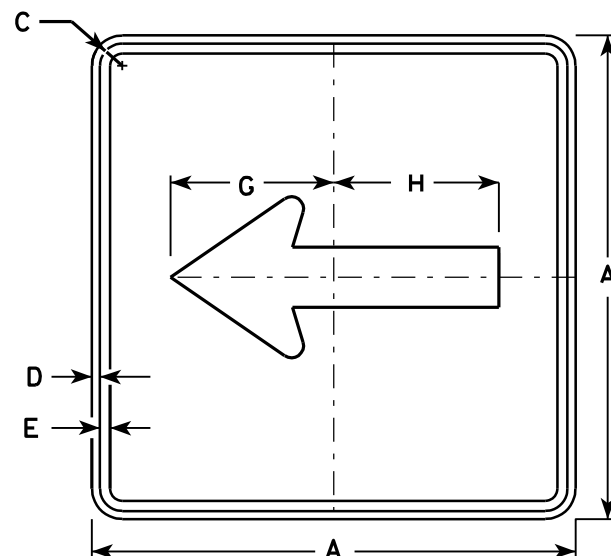
PROJECT NO: HWY: COUNTY: SHEET NO: E

STANDARD SIGNS M3-1 thru M3-4 SERIES

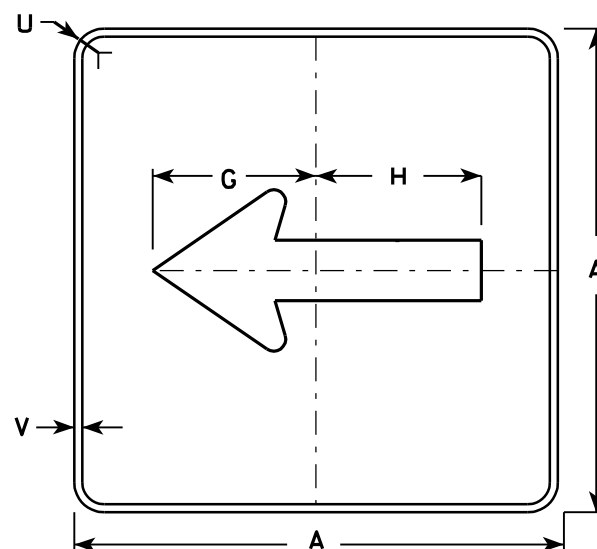
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

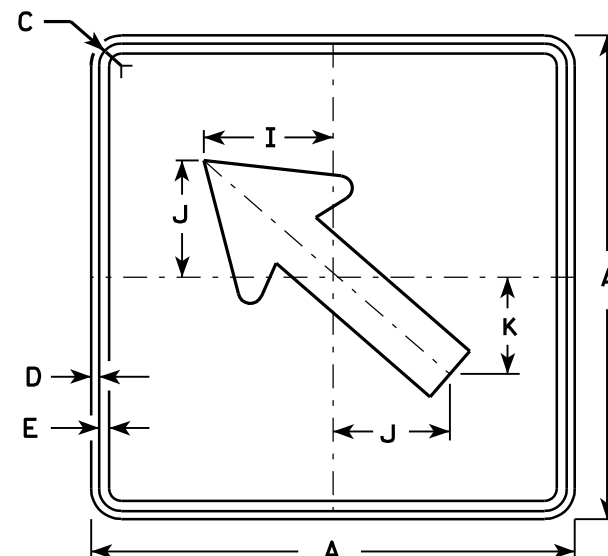
DATE 11/10/10 PLATE NO. M3-1.12



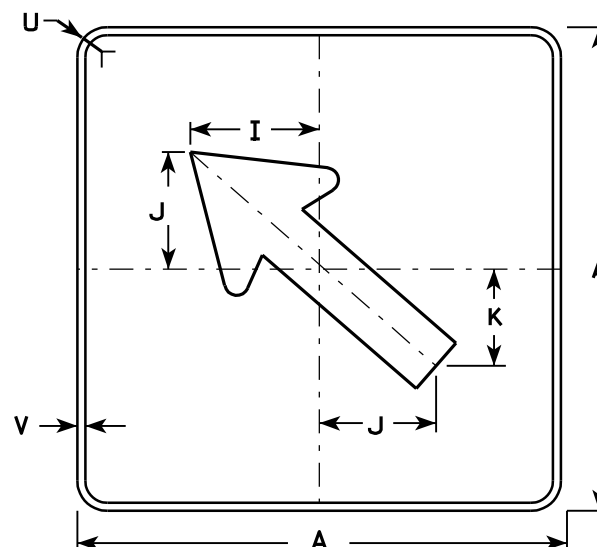
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



MB6-1
MG6-1
MN6-1



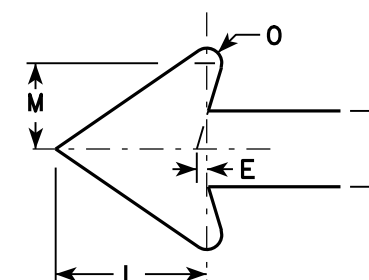
M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-2
MG6-2
MN6-2

NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 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 - Type H Reflective
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White - Type H Reflective
MG6-1 and MG6-2 Background - Green
Message - White - Type H Reflective
MK6-1 and MK6-2 Background - Green
Message - White - Type H Reflective
MM6-1 and MM6-2 Background - White - Type H Reflective
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White - Type H Reflective
MO6-1 and MO6-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White - Type H Reflective
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow - Type H 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	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

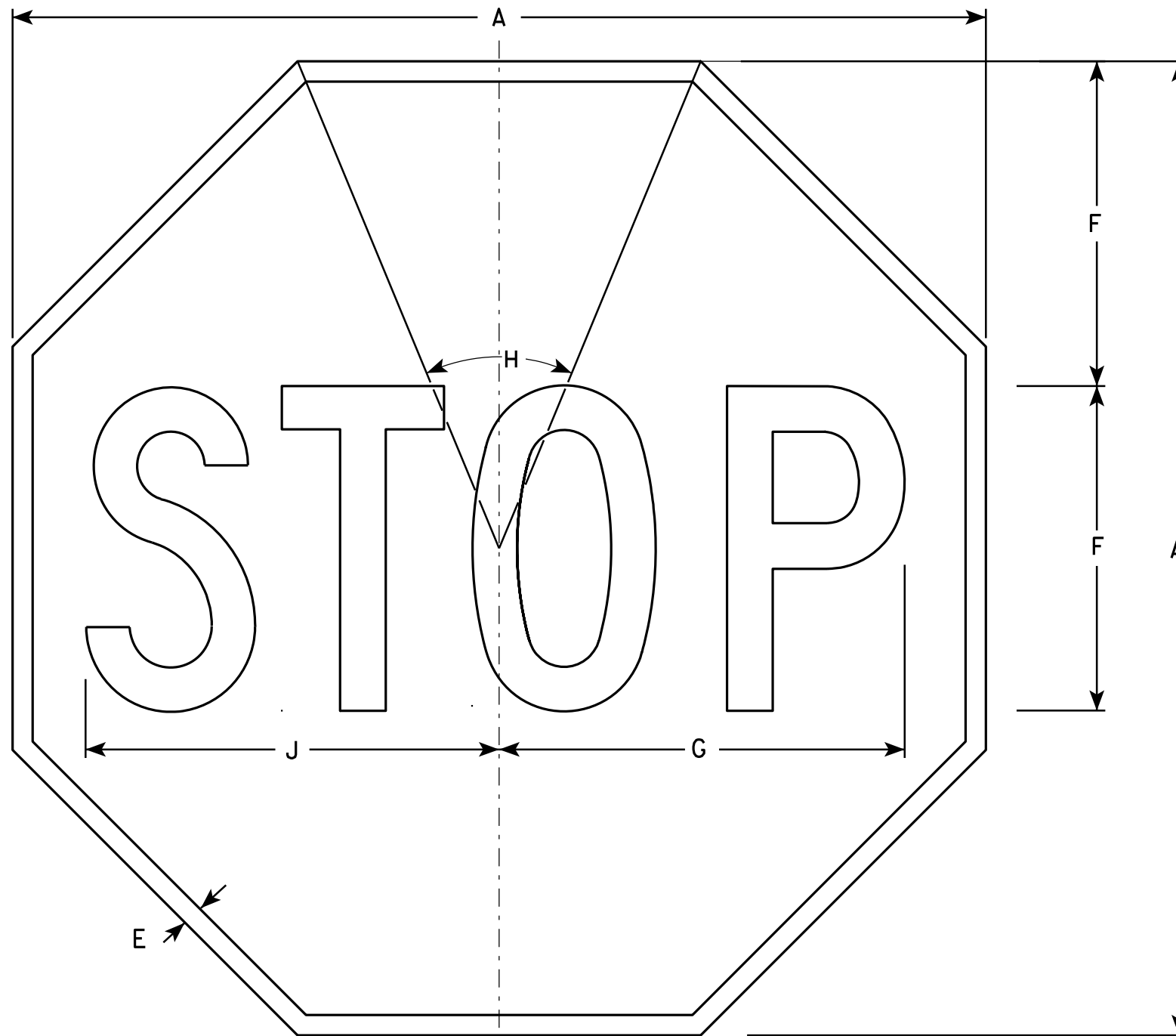
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

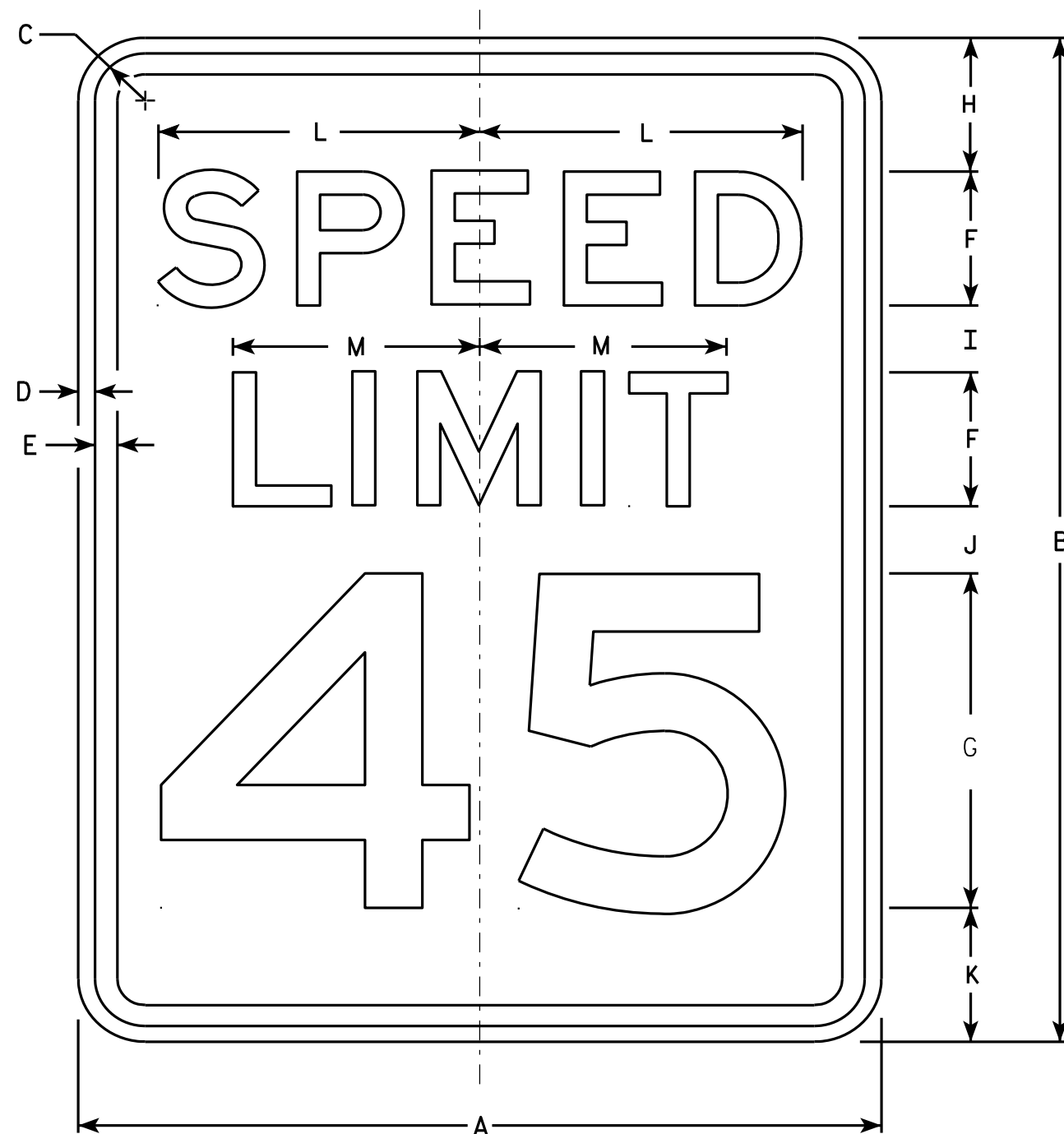
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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R2-1

NOTES

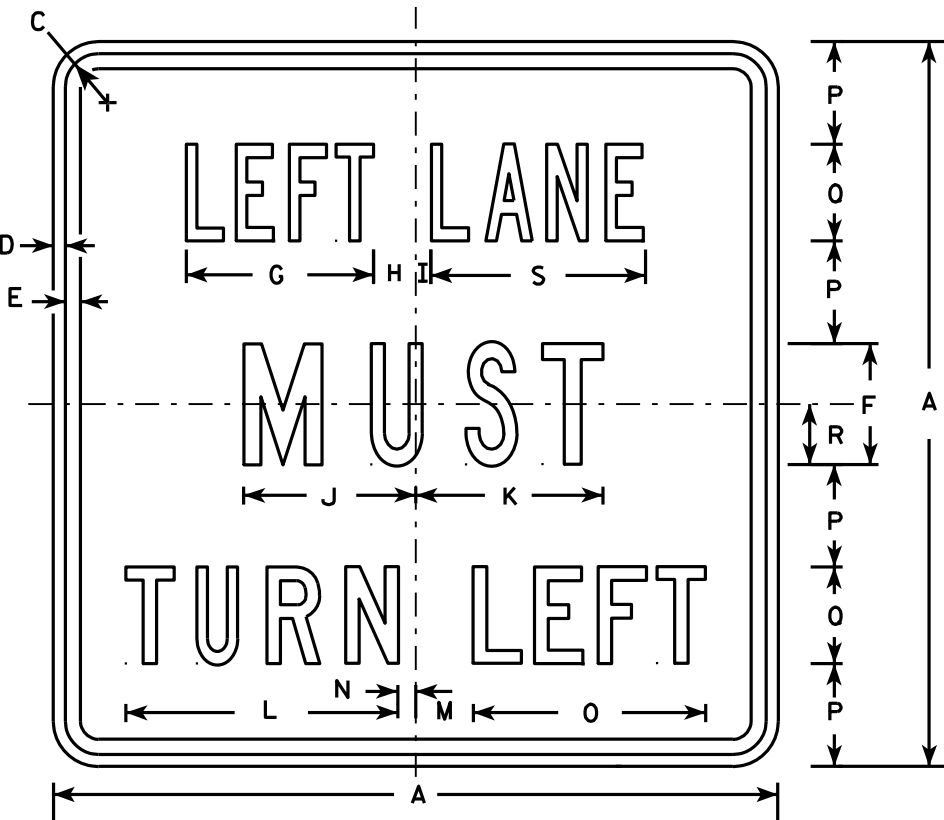
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

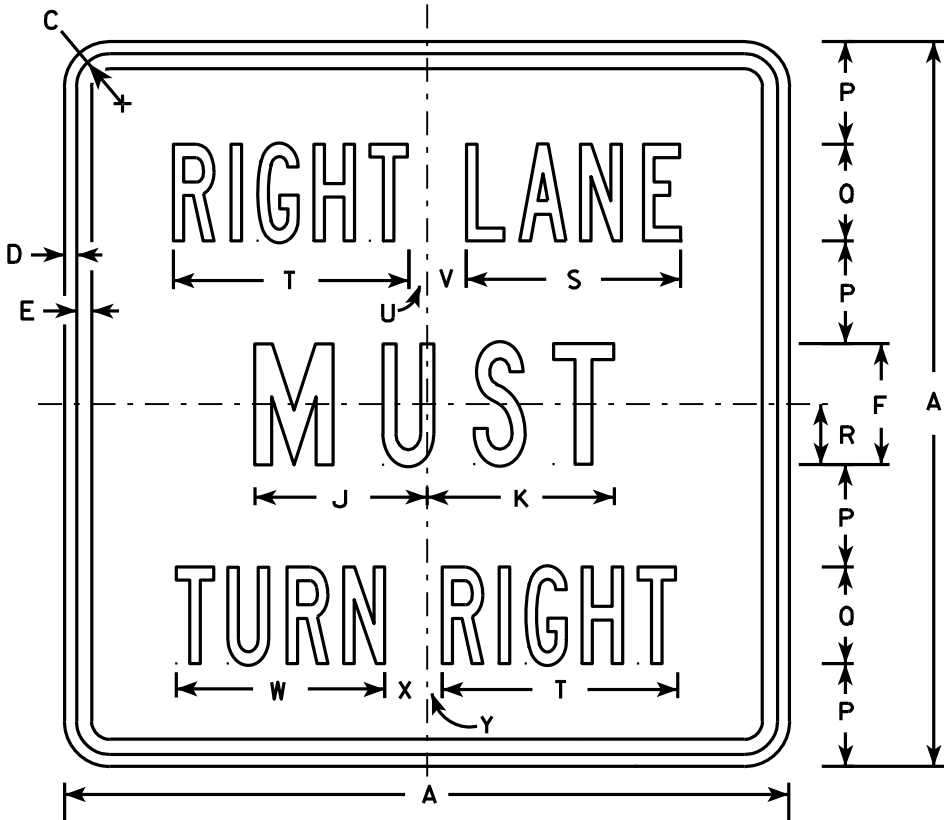
STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



R3-7L



R3-7R

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White
Message - Black
- 3. Message Series - Line 1 is Series B.
Line 2 is Series C.
Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

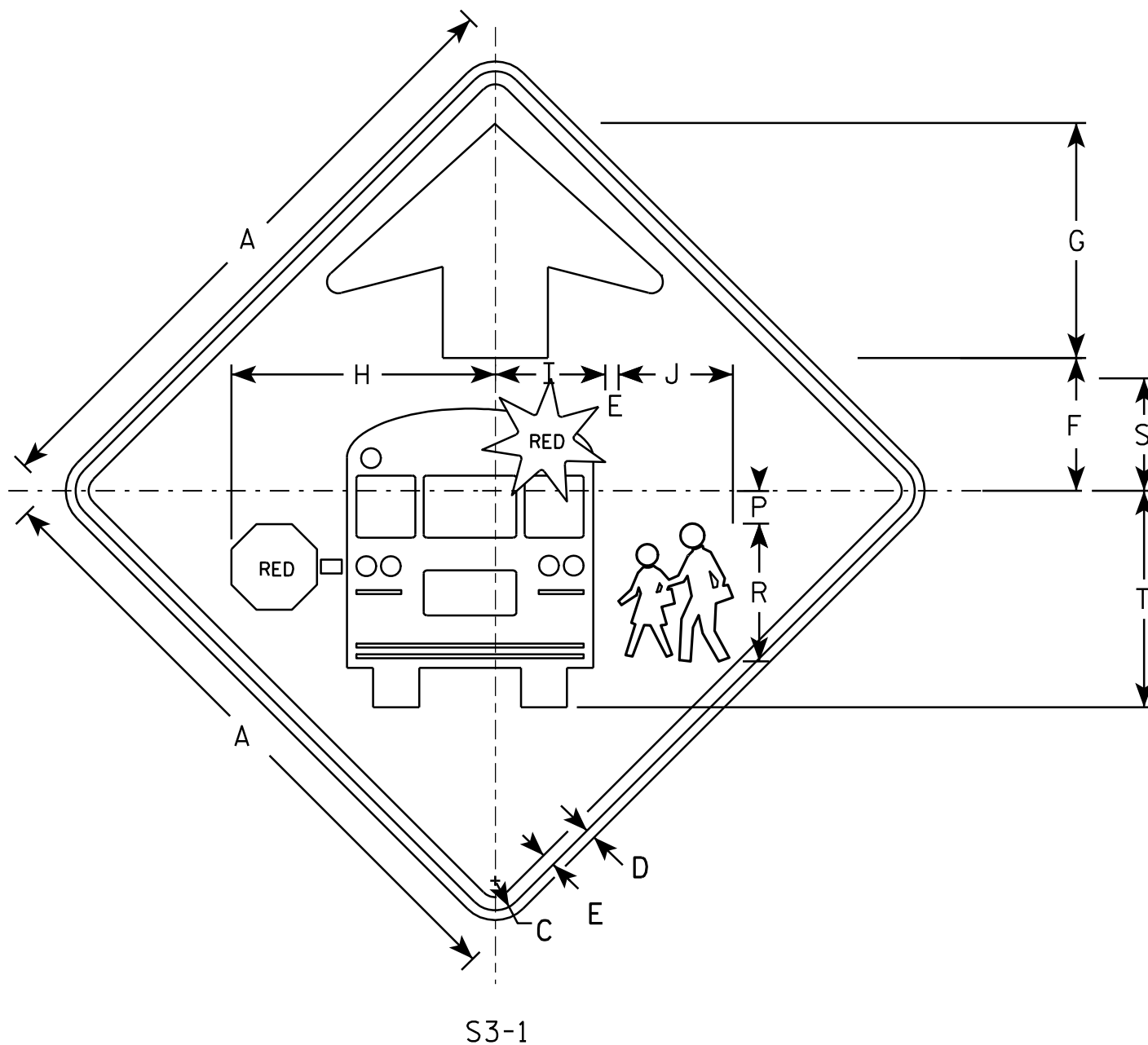
E

STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

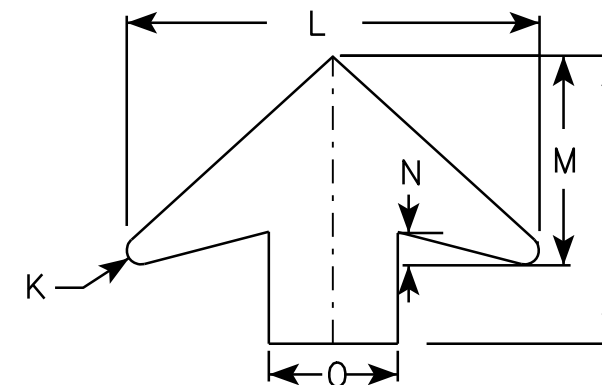
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3



NOTES

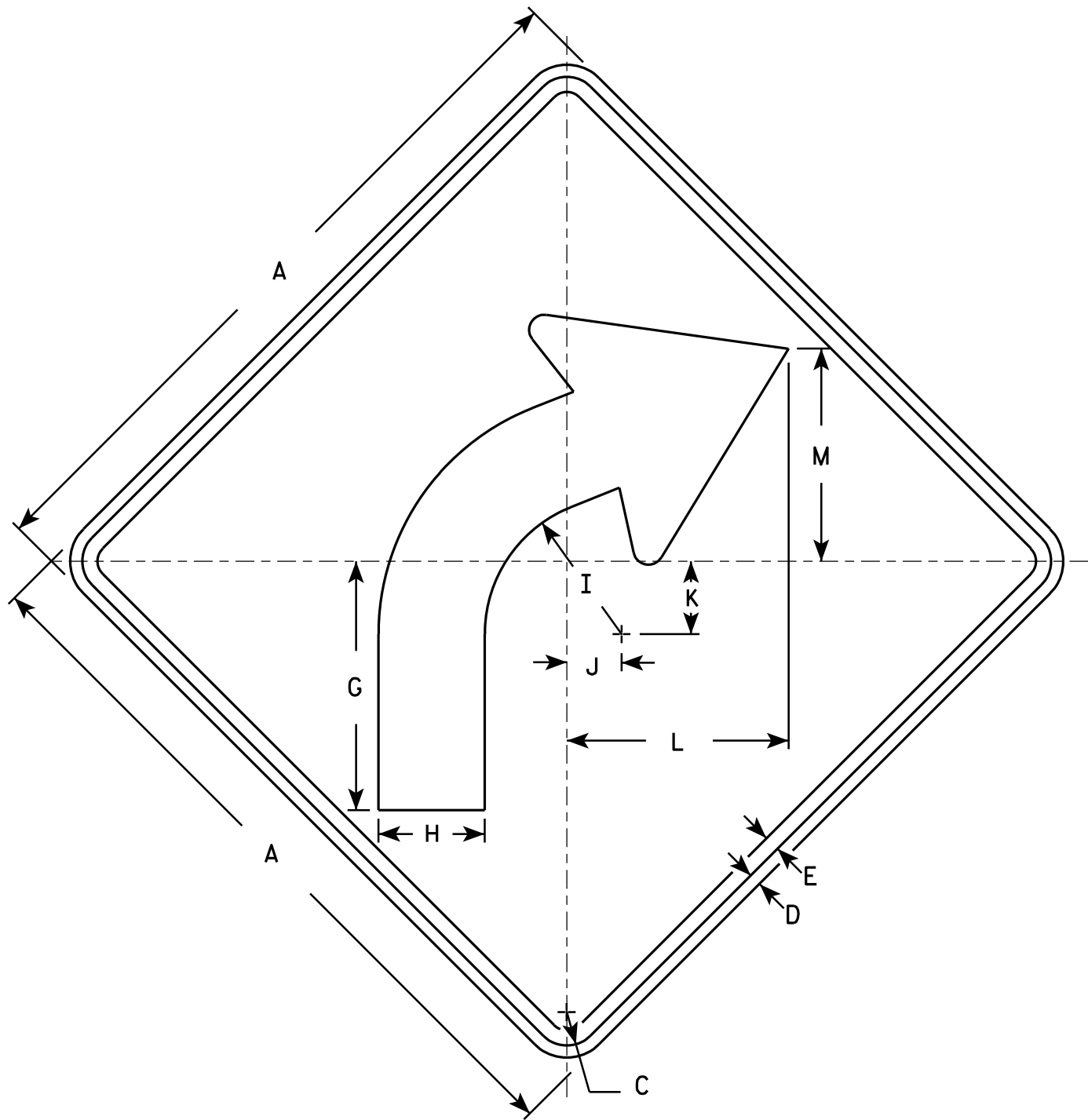
1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 - Background - YELLOW-GREEN
 - Message - BLACK except as noted
 - Circles except PEDS- RED BACKGROUND
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

[illegible]

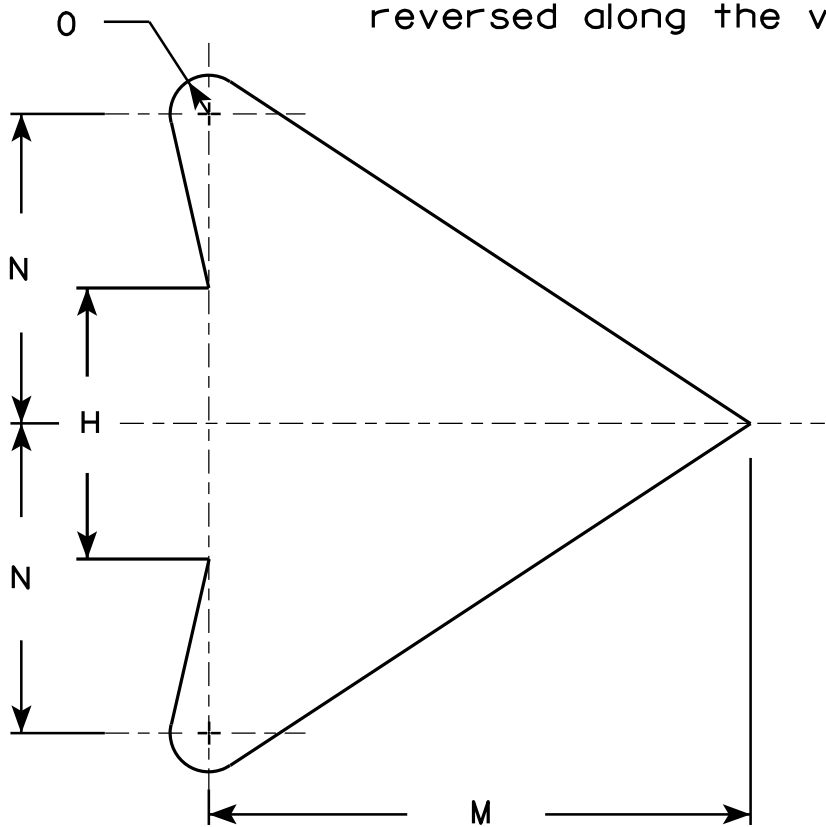
STANDARD SIGN	
S3-1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R. Rauch</u> for State Traffic Engineer
DATE <u>6/8/10</u>	PLATE NO. <u>S3-16</u>

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

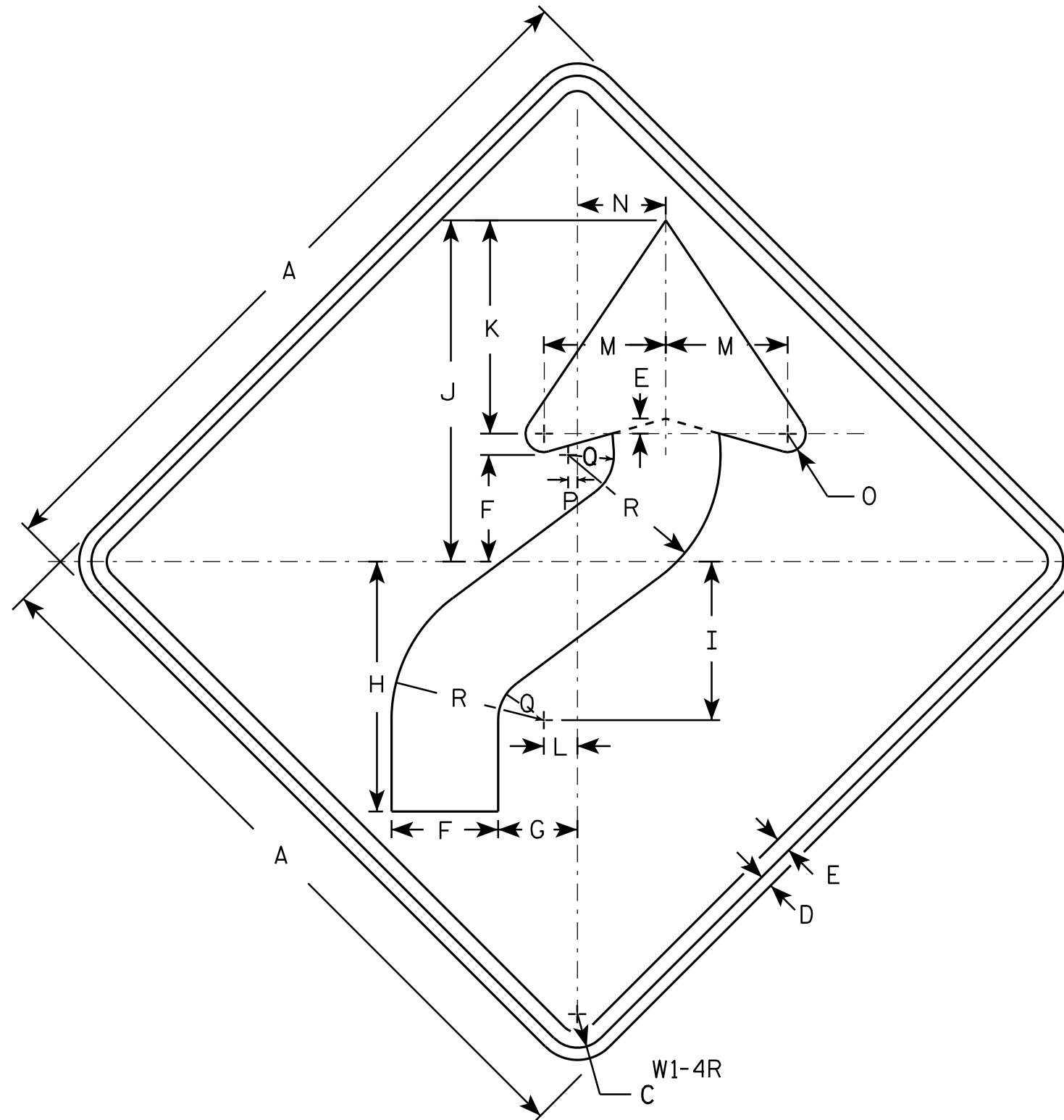
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6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

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - Black
- 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.
- W1-4L is the same as W1-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	3 1/2	2 5/8	8 1/4	5 1/4	11 1/4	7	1 1/8	4	3	5/8	1/4	1 1/2	5									4.0
2S	30		1 3/8	1/2	5/8	4 3/8	3 1/4	10 1/4	6 1/2	14	8 3/4	1 3/8	5	3 5/8	3/4	3/8	1 7/8	6 1/4									6.25
2M	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
3	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
4	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN W1 - 4

WISCONSIN DEPT OF TRANSPORTATION

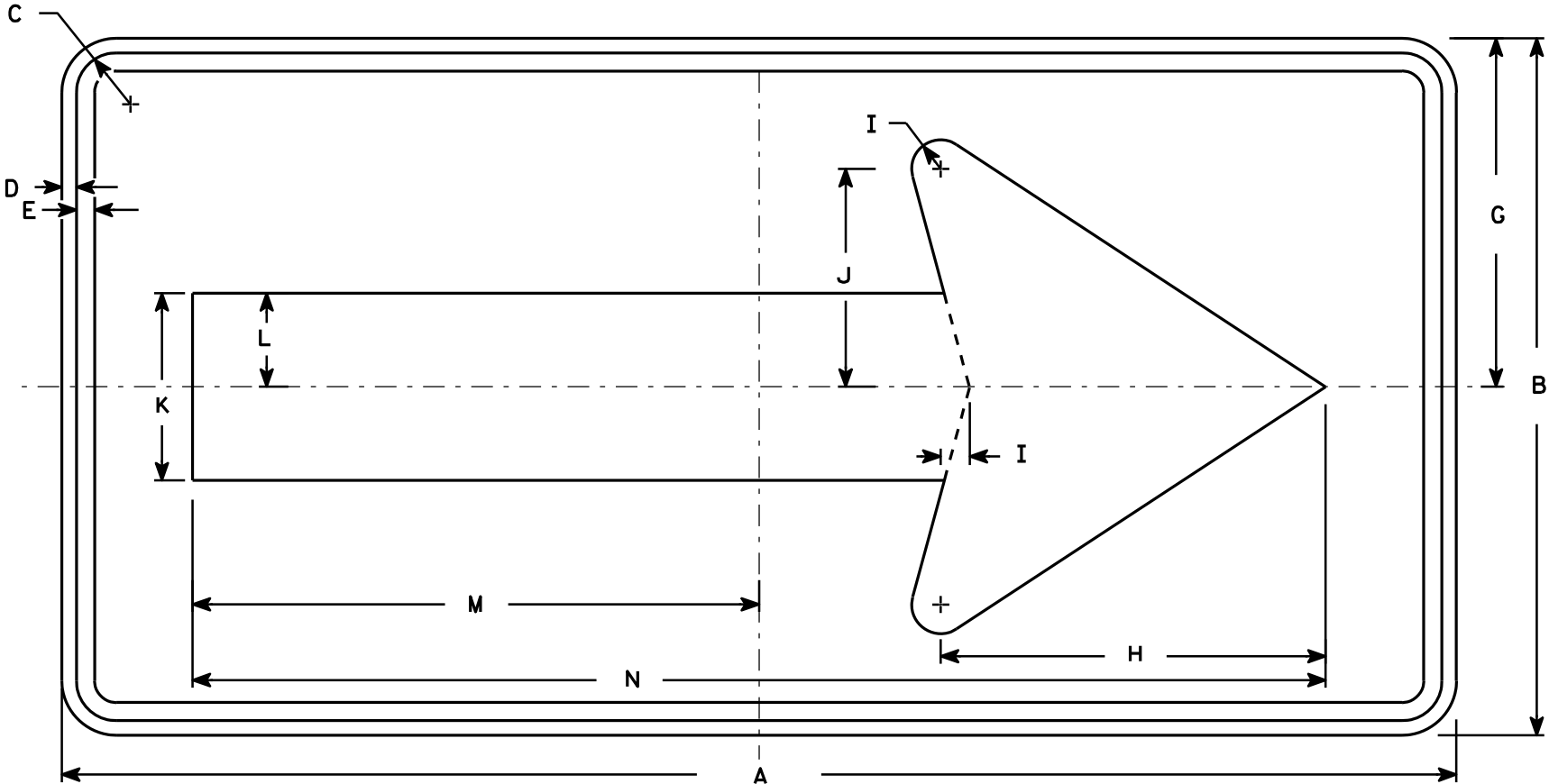
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-4.11

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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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.



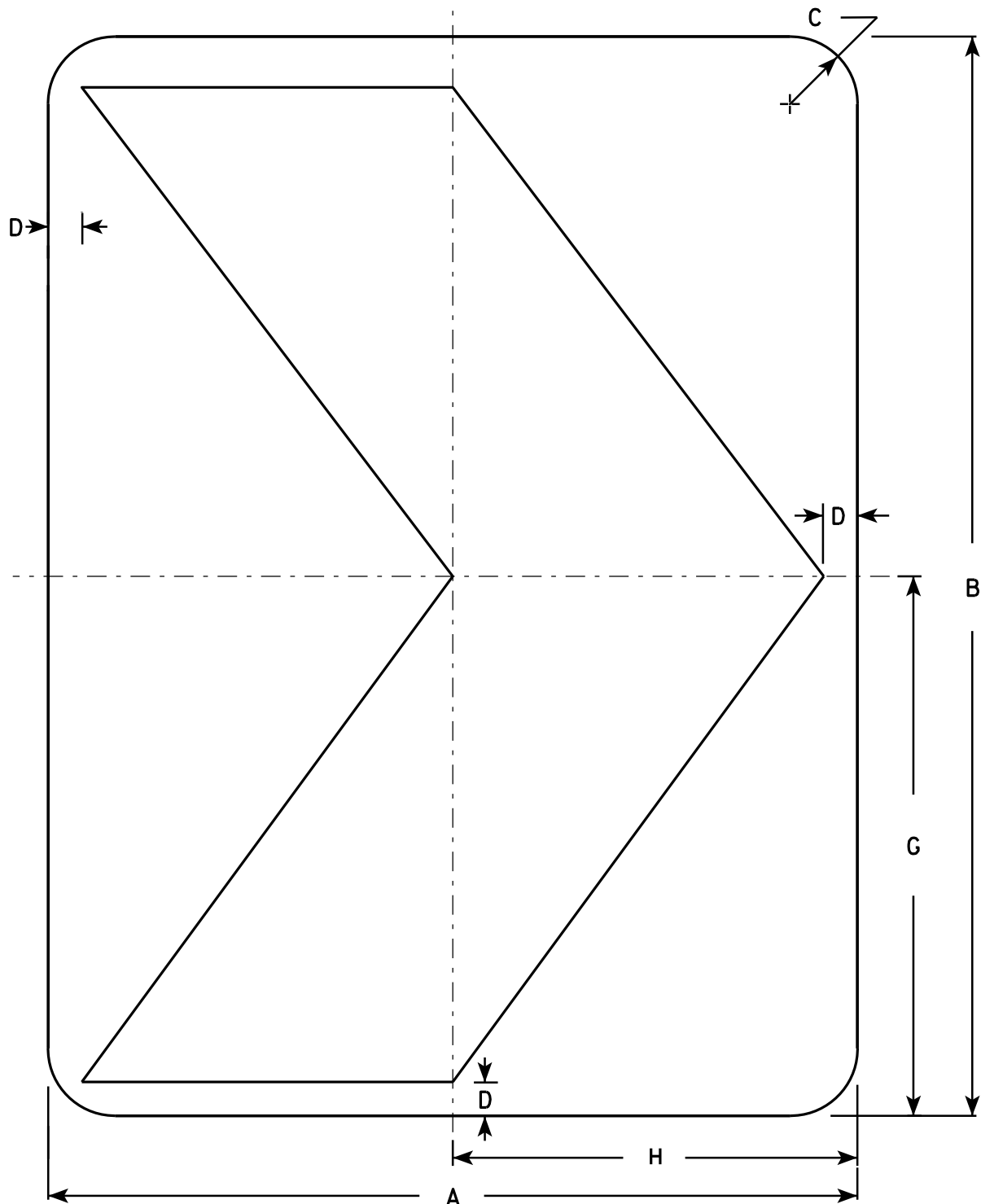
W1-6

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	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W1-6.8



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - 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.

W1-8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/2	1/2			9	6																			1.5
2S	18	24	1 1/2	3/4			12	9																			3.0
2M	18	24	1 1/2	3/4			12	9																			3.0
3	24	30	1 1/2	1			15	12																			5.0
4	30	36	1 7/8	1 1/4			18	15																			7.5
5	36	48	2 1/4	1 1/2			24	18																			12.0

STANDARD SIGN

W1-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

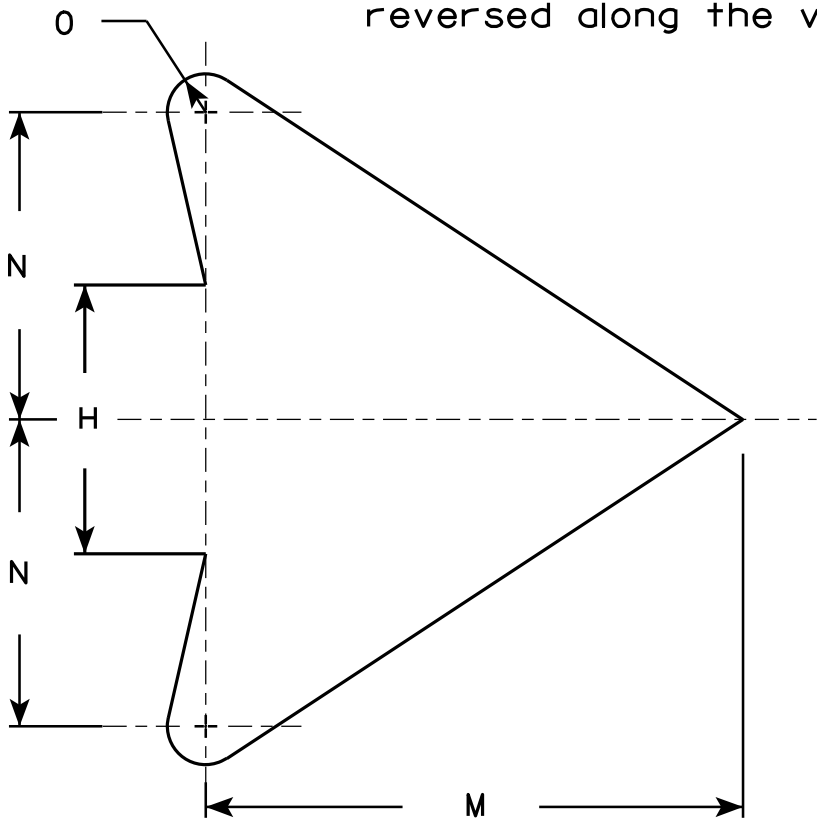
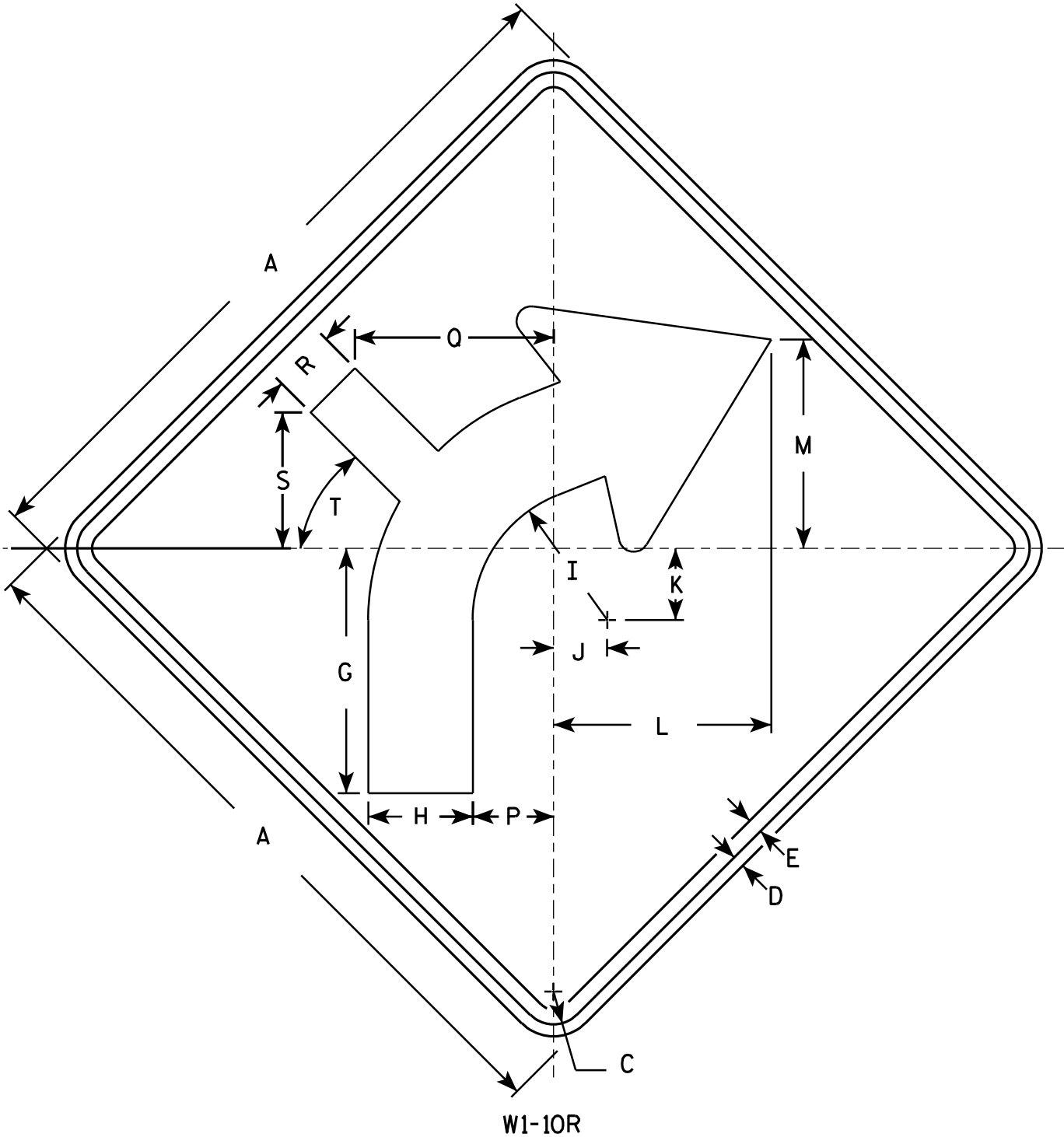
PROJECT NO:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W1-10L is the same as W1-10R except the arrow is reversed along the vertical centerline.



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	2 5/8	6 5/8	2 1/8	4 1/2	45°							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	3 3/8	8 3/8	2 5/8	5 3/4	45°							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	4	10	3 1/4	6 7/8	45°							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	4	10	3 1/4	6 7/8	45°							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	4	10	3 1/4	6 7/8	45°							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	5 3/8	13 1/4	4 1/4	9 1/8	45°							16.0

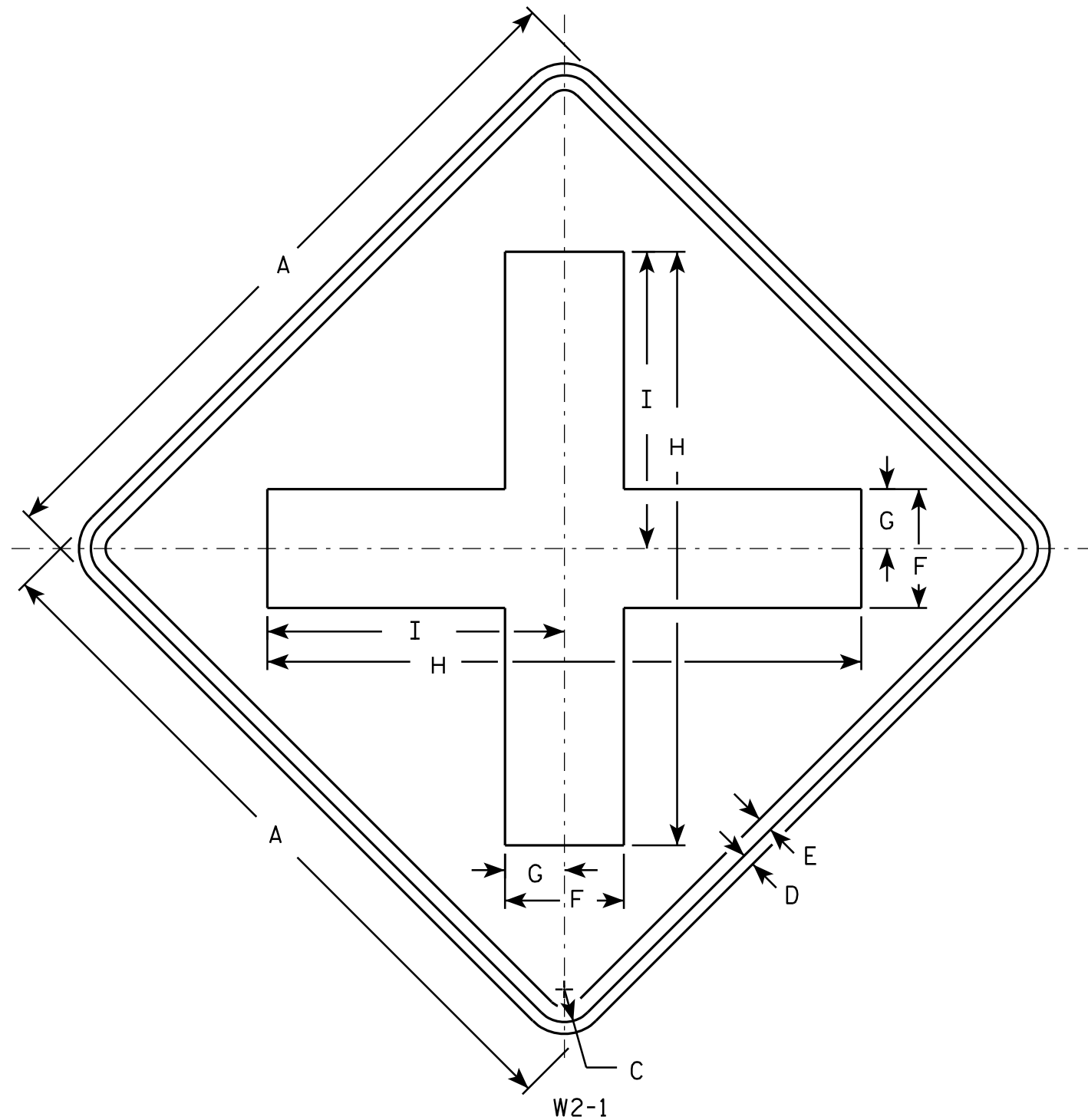
STANDARD SIGN
W1-10

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-10.3

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2	20	10																		4.0
2S	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3	30	15																		9.0
4	48		2 1/4	3/4	1	8	4	40	20																		16.0
5																											

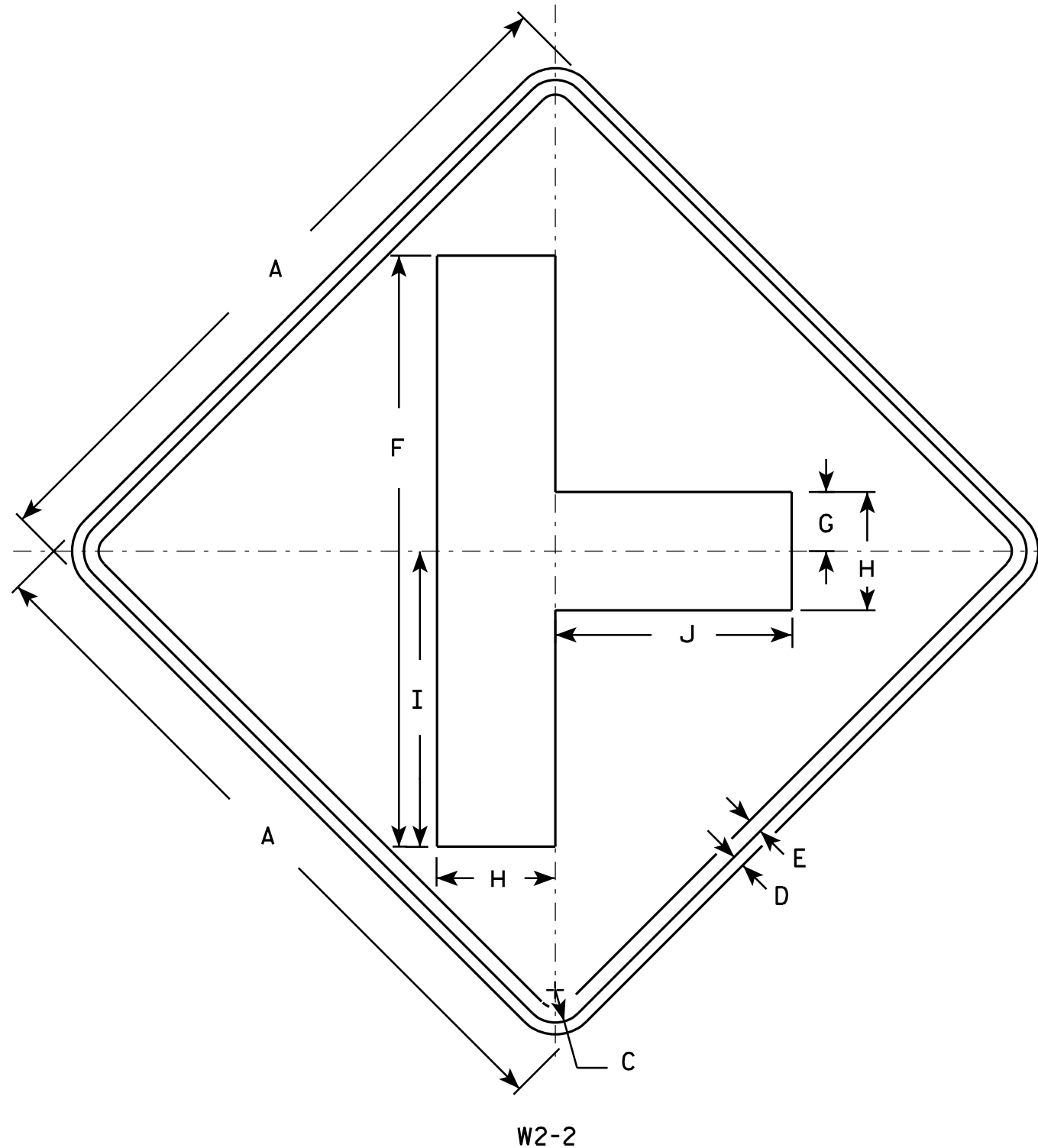
STANDARD SIGN W2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-1.9

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

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

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	20	2	4	10	8																	4.0
2S	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
2M	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
3	36		1 5/8	5/8	3/4	30	3	6	15	12																	9.0
4	48		2 1/4	3/4	1	40	4	8	20	16																	16.0
5																											

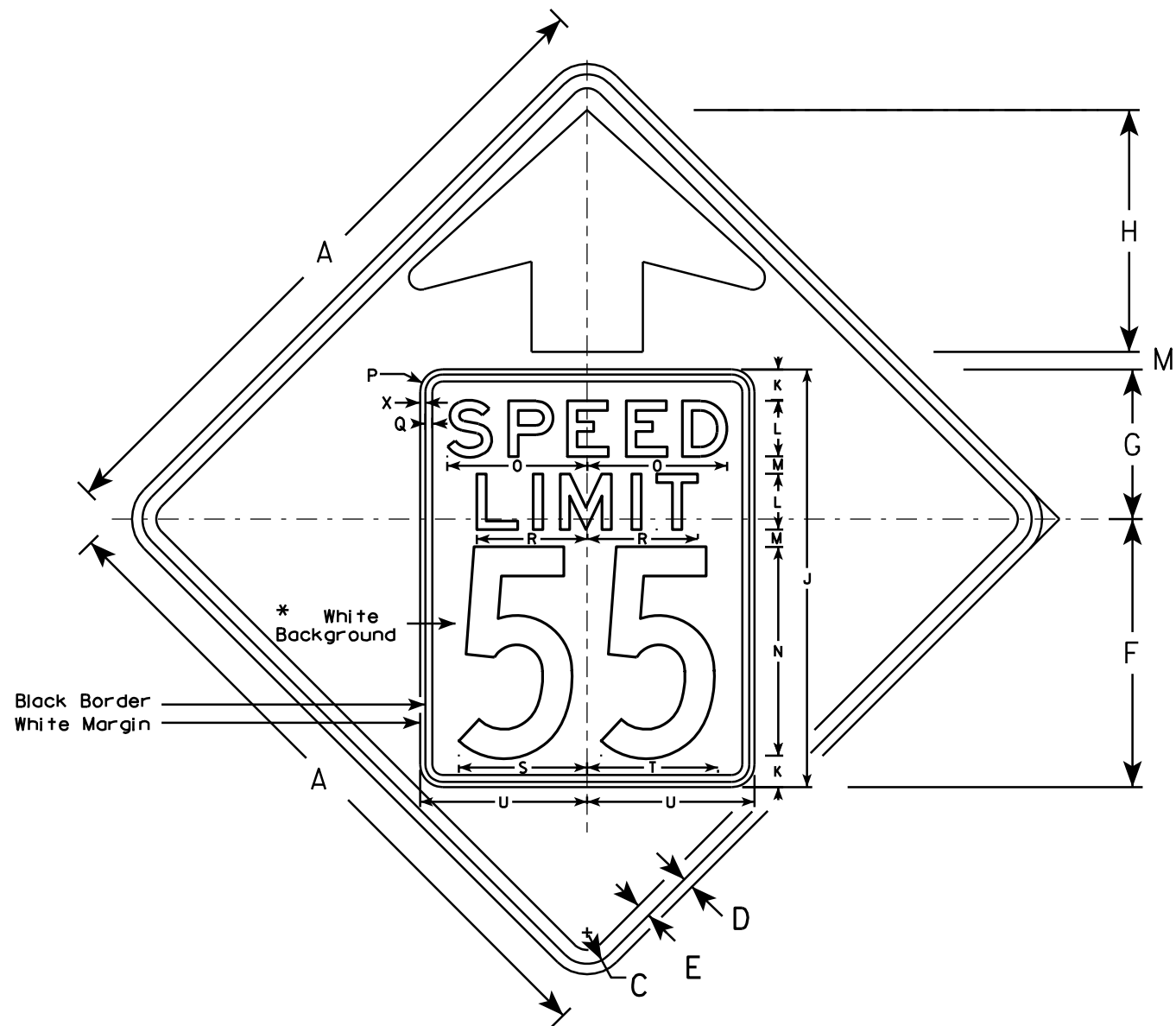
STANDARD SIGN W2-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-2.6

PROJECT NO: HWY: COUNTY: SHEET NO: E

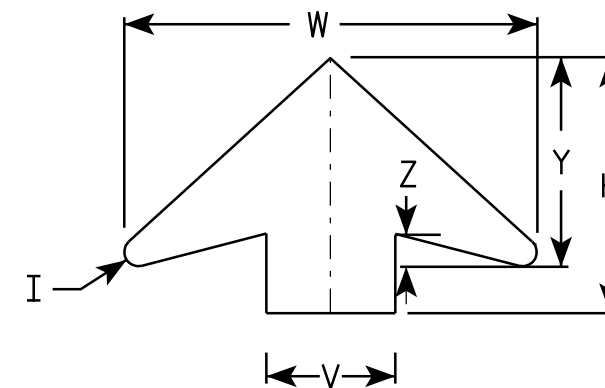


W3-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
Background - YELLOW*
Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
2M	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
3	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
4	48		2 1⁄4	3⁄4	1	19 1⁄4	10 3⁄4	17 3⁄8	7⁄8	30	2 1⁄4	4	1 1⁄4	15	10	1 5⁄8	1⁄2	8	9 1⁄4	9 3⁄8	12	8	25 5⁄8	3⁄8	13	2	16.0
5	48		2 1⁄4	3⁄4	1	19 1⁄4	10 3⁄4	17 3⁄8	7⁄8	30	2 1⁄4	4	1 1⁄4	15	10	1 5⁄8	1⁄2	8	9 1⁄4	9 3⁄8	12	8	25 5⁄8	3⁄8	13	2	16.0

STANDARD SIGN

W3-5

WISCONSIN DEPT OF TRANSPORTATION

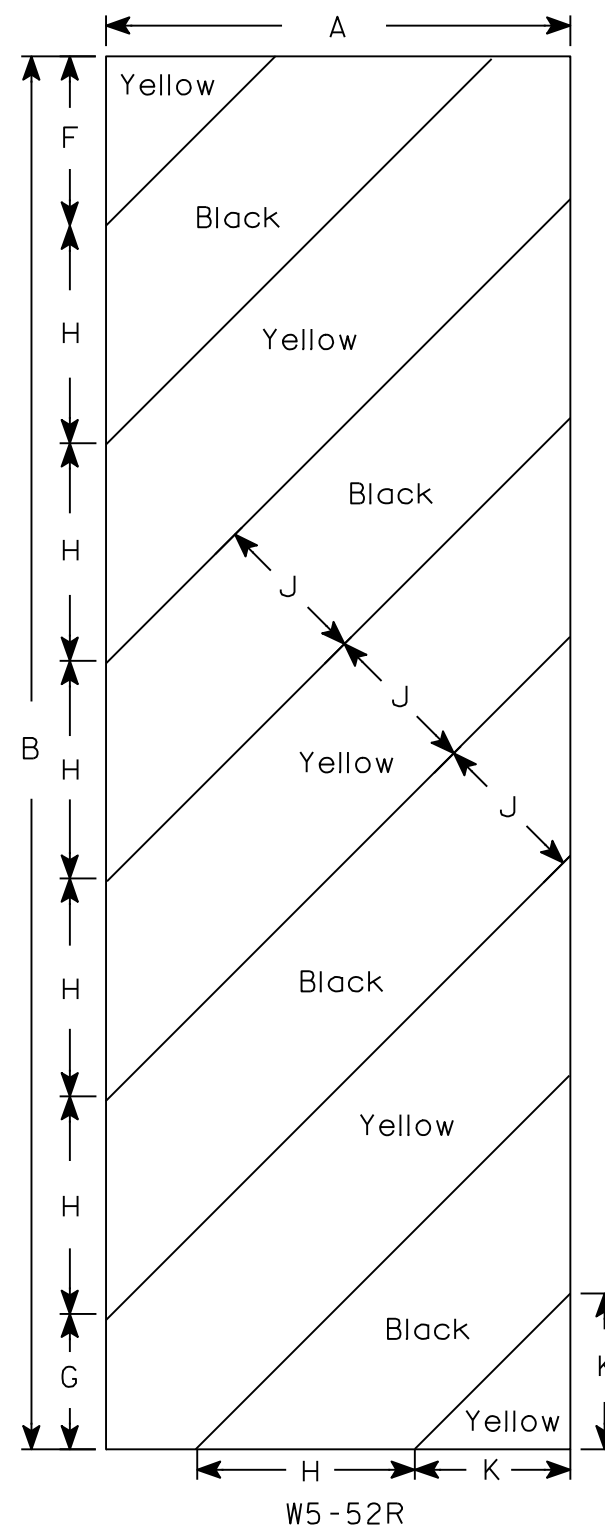
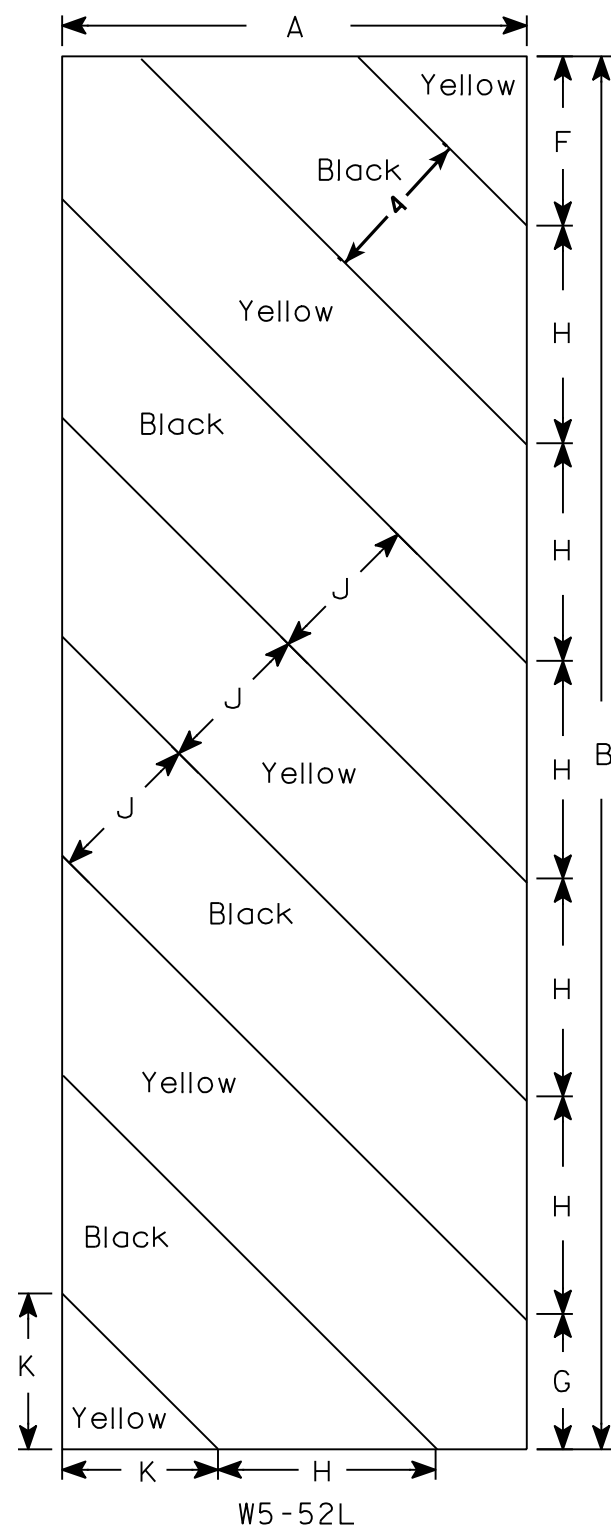
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO:

E



NOTES

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

[illegible]

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 5/29/12 PLATE NO. W5-52.9

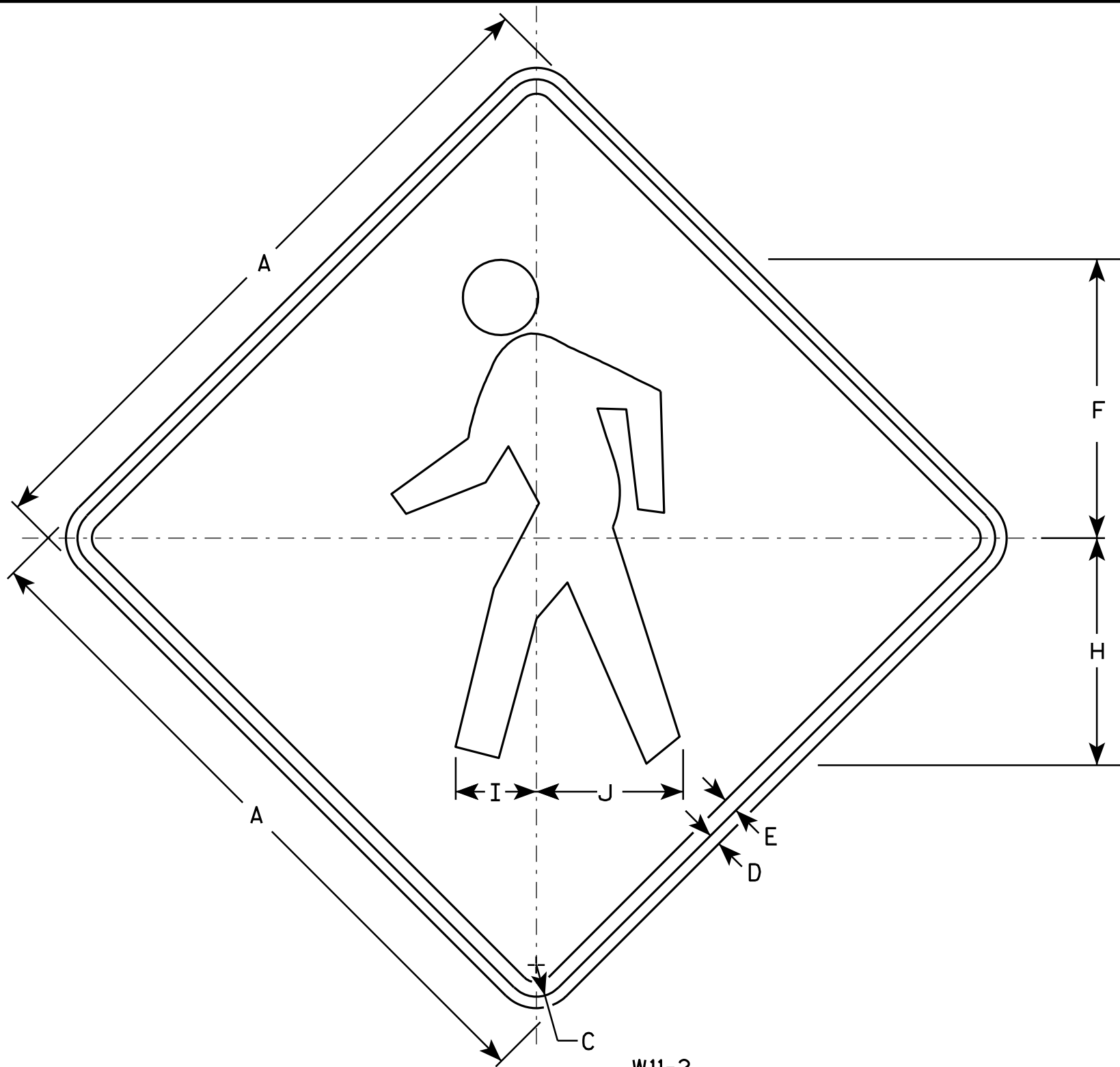
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

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

W11-2

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

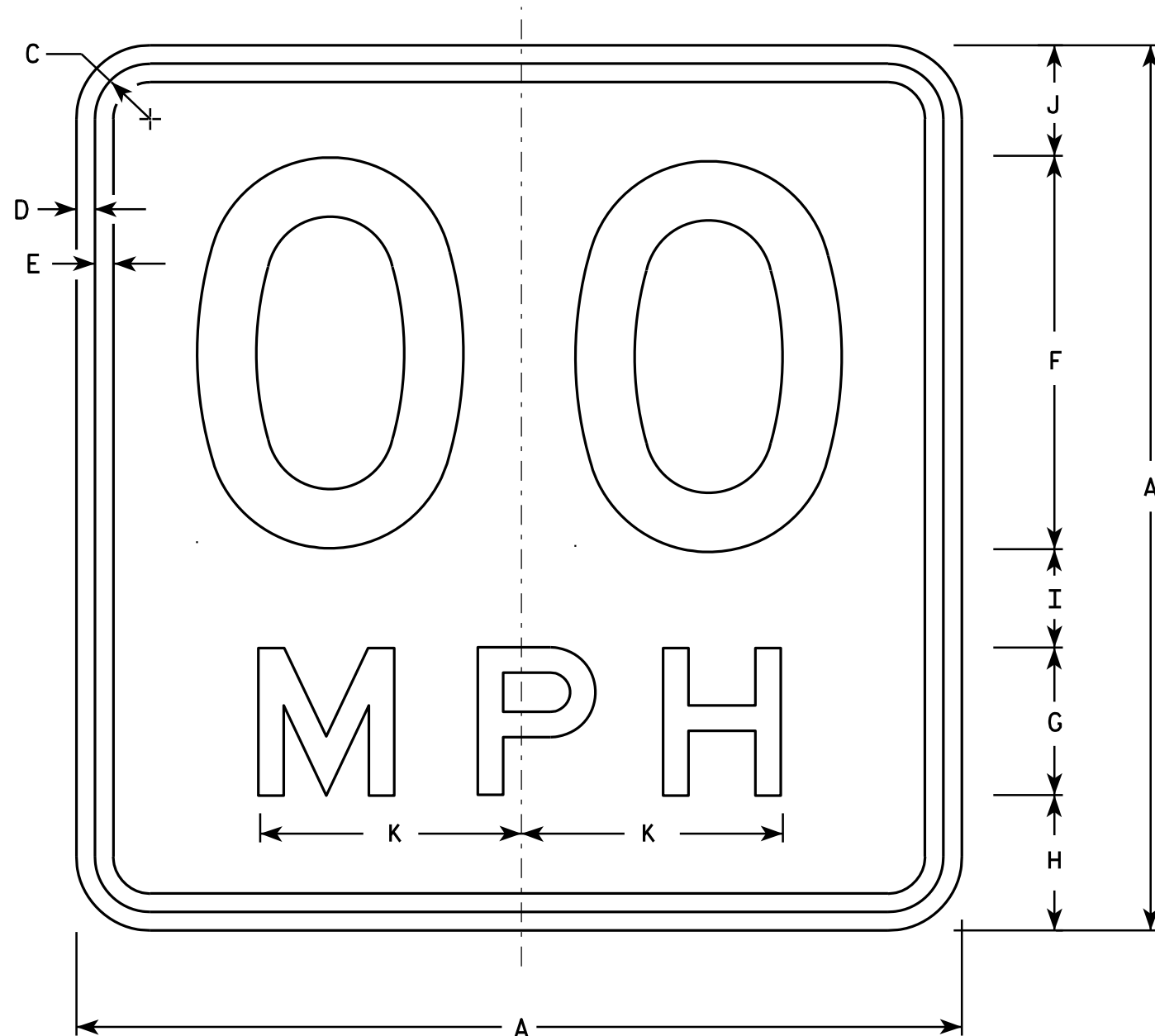
STANDARD SIGN W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. 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

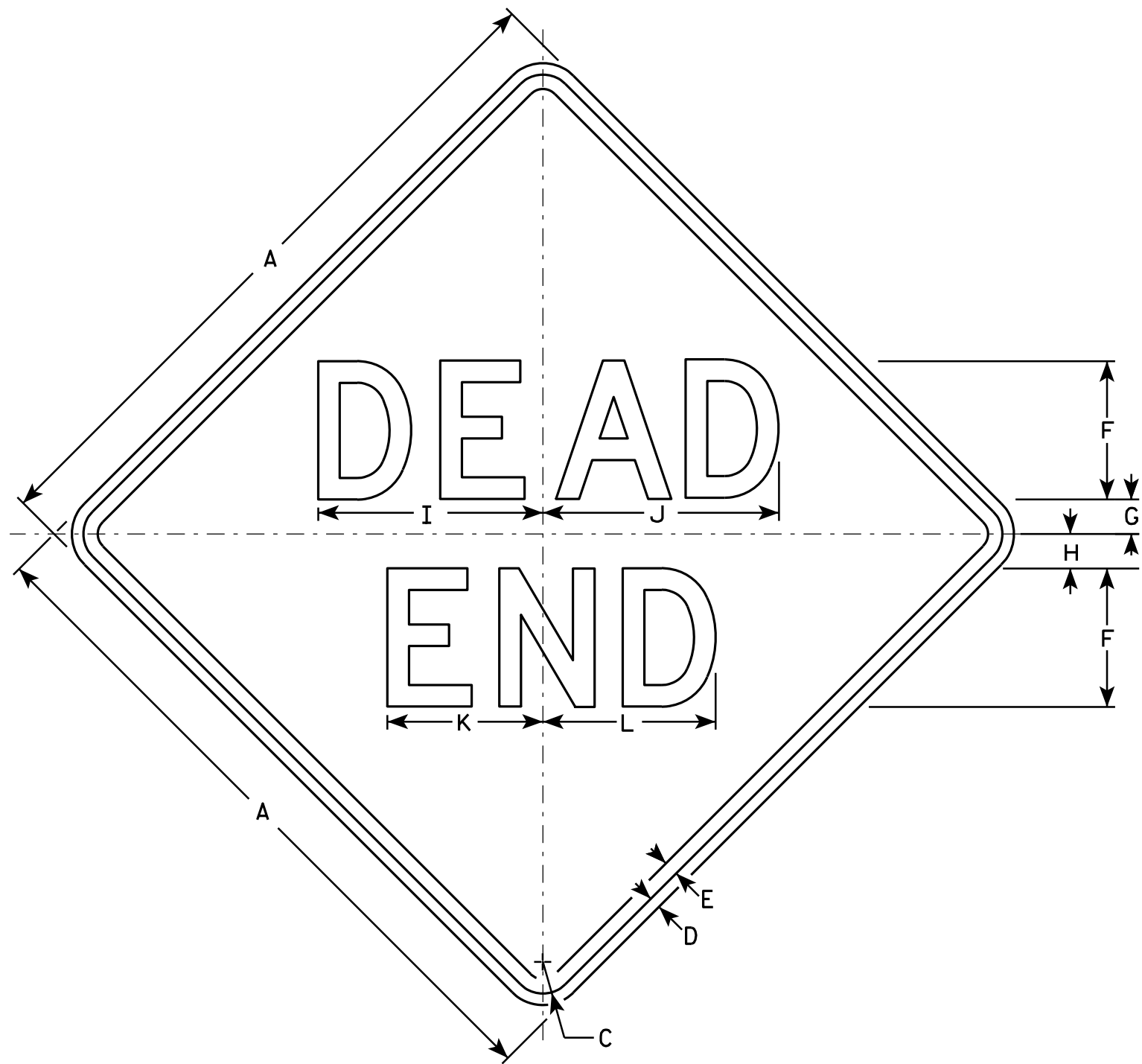
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



W14-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area, sq. ft.
1	24		1 1/8	3/8	1/2	5	1	2	8 1/4	8 5/8	5 5/8	6 1/4															4.0
2S	30		1 3/8	1/2	5/8	6	1 1/2	2 1/2	9 3/4	10 1/4	6 3/4	7 1/2															6.25
2M	30		1 3/8	1/2	5/8	6	1 1/2	2 1/2	9 3/4	10 1/4	6 3/4	7 1/2															6.25
3	36		1 5/8	5/8	3/4	7	2	3	11 3/8	12	7 7/8	8 3/4															9.0
4																											
5																											

STANDARD SIGN
W14-1

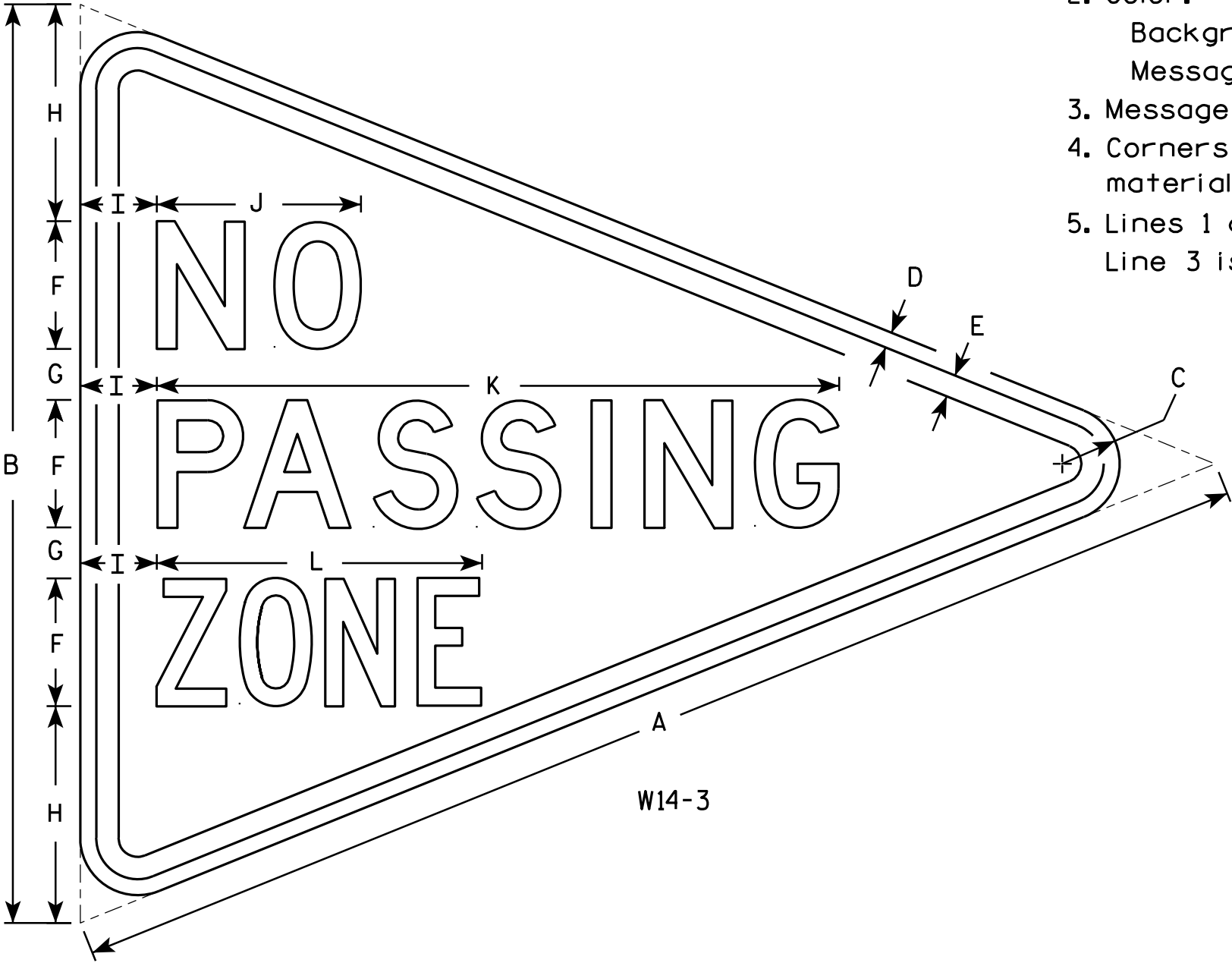
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer
DATE 3/13/13 PLATE NO. W14-1.7

PROJECT NO: HWY: COUNTY: SHEET NO: E

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - See note 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.
Line 3 is series C.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

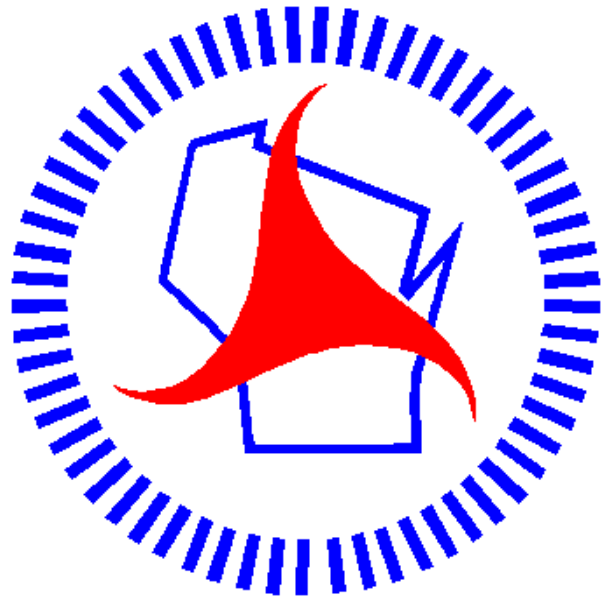
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

Notes



Wisconsin Department of Transportation

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