

MAD

MAY 2022

ORDER OF SHEETS

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

TOTAL SHEETS = 274

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

VILLAGE OF DANE - I39/90

STH 113 TO CTH I

CTH V

DANE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6218-00-73	WISC 2022383	1

STATE PROJECT NUMBER
6218-00-73

PROJECT ID: 6218-00-73



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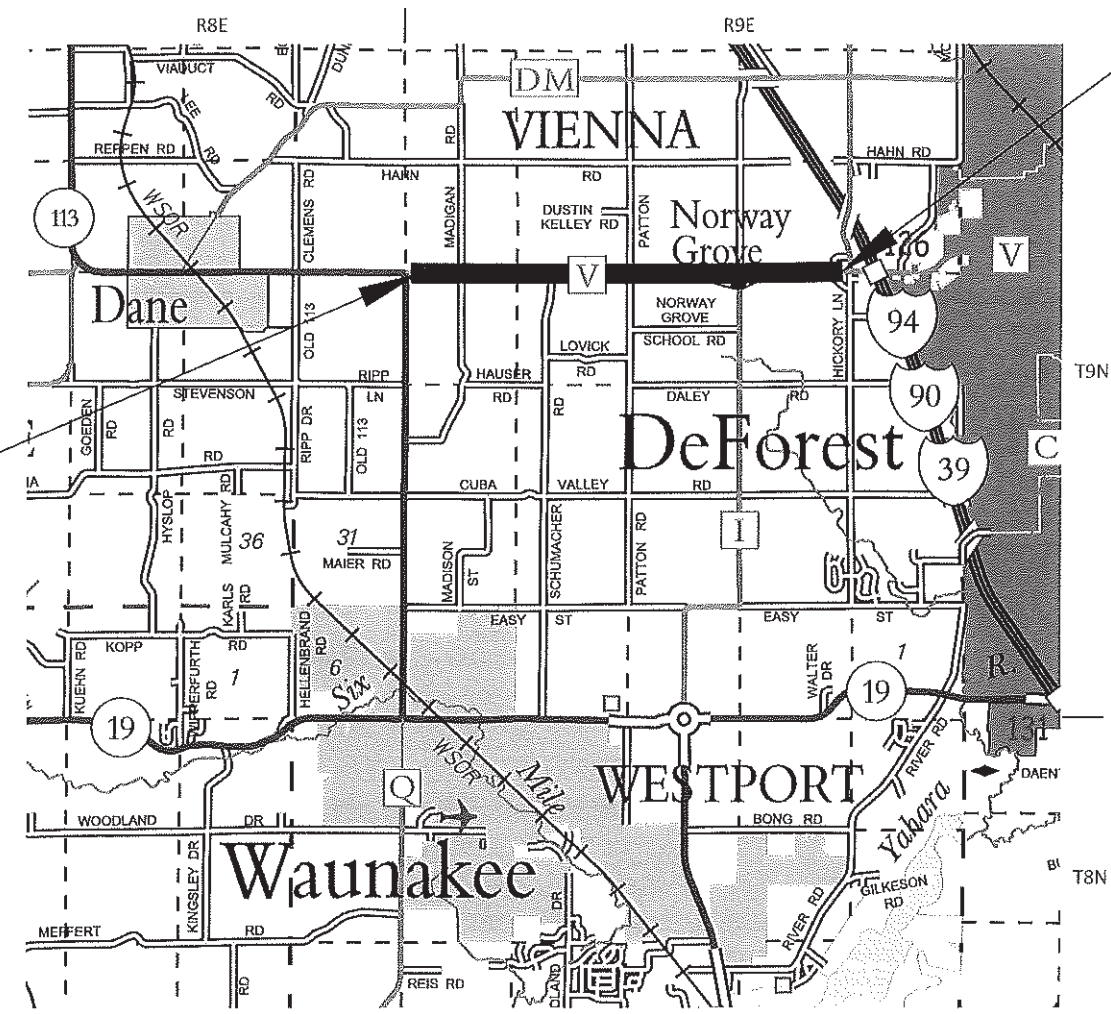
DESIGN DESIGNATION

A.A.D.T.	=	5,500 (2022)
A.A.D.T.	=	7,100 (2042)
D.H.V.	=	1,200
D.D.	=	60-40
T.	=	21.3%
DESIGN SPEED	=	55 MPH
ESALS	=	2,700,000

CONVENTIONAL SYMBOLS

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

BEGIN PROJECT
STA. 64+09.00
Y = 546842.061
X = 800709.337



LAYOUT
SCALE 0 2 MI
TOTAL NET LENGTH OF CENTERLINE = 3.949 MI

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

END PROJECT
STA. 270+99.50
Y = 546892.133
X = 821399.054



Bill
4/25/22

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	SURVEYOR
Surveyor	DANE COUNTY HIGHWAY
Designer	LORRAINE BETZEL, P.E.
Project Manager	REGIONAL EXAMINER
Regional Examiner	TODD MATHESON, P.E.
Regional Supervisor	
APPROVED FOR THE DEPARTMENT	
DATE: 2/1/2022	<i>Lorraine Betzel</i> (Signature)

E

STANDARD ABBREVIATIONS

AP	ACCESS POINT	PSI	POUNDS PER SQUARE INCH
AC	ACRE	PSF	POUNDS PER SQUARE FOOT
ADJ	ADJUST	PT	POINT
AECPRC	APRON ENDWALLS FOR CULVERT	PT	POINT OF TANGENCY
AH	AHEAD	PVC	POINT OF VERTICAL CURVE
AC	ASPHALT CEMENT	PVI	POINT OF VERTICAL INTERSECTION
ASPH	ASPHALTIC	PVT	POINT OF VERTICAL TANGENCY
ACP	ASPHALTIC PAVEMENT CONCRETE	R	RADIUS
AVG	AVERAGE	RD	ROAD
ADT	AVERAGE DAILY TRAFFIC	RDWY	ROADWAY
BK	BACK	REINF	REINFORCING OR REINFORCEMENT
BAD	BASE AGGREGATE DENSE	REQD	REQUIRED
BM	BENCH MARK	RR	RAILROAD
C/L	CENTER LINE	RT	RIGHT
CONC	CONCRETE	R/L	REFERENCE LINE
CONST	CONSTRUCTION	R/W	RIGHT-OF-WAY
CTH	COUNTY TRUNK HIGHWAY	S	SOUTH
CABC	CRUSHED AGGREGATE BASE COURSE	SB	SOUTHBOUND
CWT	HUNDREDWEIGHT	SC	SECTION CORNER
CY	CUBIC YARD	SDD	STANDARD DETAIL DRAWINGS
CP	CULVERT PIPE	SE	SUPERELEVATION
C & G	CURB AND GUTTER	SF	SQUARE FEET
D	DEGREE OF CURVE	SHLDR	SHOULDER
DHV	DESIGN HOUR VOLUME	SS	STORM SEWER
DIA	DIAMETER	ST	STREET
DWY	DRIVEWAY	STA	STATION
E	EAST	STH	STATE TRUNK HIGHWAYS
EB	EASTBOUND	STR	STRUCTURE OR STRUCTURAL
EL	ELEVATION	SQ	SQUARE
ESALS	EQUIVALENT SINGLE AXLE LOADS	SW	SIDEWALK
EXC	EXCAVATION	SY	SQUARE YARD
EBS	EXCAVATION BELOW SUBGRADE	T	TANGENT
EXIST	EXISTING	t	TON
FERT	FERTILIZE	T	TOWN
FE	FIELD ENTRANCE	T	TRUCKS (PERCENT OF)
FL	FLOW LINE	TEMP	TEMPORARY
FT	FOOT	TI	TEMPORARY INTEREST
HES	HIGH EARLY STRENGTH	TLE	TEMPORARY LIMITED EASEMENT
HP	HIGH POINT	TYP	TYPICAL
HMA	HOT MIX ASPHALT	USH	UNITED STATES HIGHWAY
INL	INLET	V	VELOCITY OF DESIGN SPEED
ID	INSIDE DIAMETER	VAR	VARIABLE
I	INTERSECTION ANGLE	VERT	VERTICAL
INV	INVERT	VC	VERTICAL CURVE
IP	IRON PIPE OR PIN	VOL	VOLUME
JT	JOINT	W	WEST
LB	POUND	WB	WESTBOUND
LT	LEFT	WM	WATER MAIN
L	LENGTH OF CURVE	WV	WATER VALVE
LF	LINEAR FOOT	X	EAST GRID COORDINATE
LP	LOW POINT	Y	YARD
LS	LUMP SUM	Y	NORTH GRID COORDINATE
MH	MANHOLE		
MAX	MAXIMUM		
Mgal	MEGAGALLON		
MPH	MILES PER HOUR		
MIN	MINIMUM		
MON	MONUMENT		
N	NORTH		
NB	NORTHBOUND		
NC	NORMAL CROWN		
NO	NUMBER		
NOM	NOMINAL		
OD	OUTSIDE DIAMETER		
OPT	OPTIONAL		
PAVT	PAVEMENT		
PC	POINT OF CURVATURE		
PCC	PORTLAND CEMENT CONCRETE		
PE	PRIVATE ENTRANCE		
PGL	PROFILE GRADE LINE		
PI	POINT OF INTERSECTION		
PL	PROPERTY LINE		
PLE	PERMANENT LIMITED EASEMENT		

GENERAL NOTES

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SEEDED, FERTILIZED, AND MULCHED AS DIRECTED BY THE ENGINEER. ALL OTHER DISTURBED AREAS SHALL BE SEEDED, FERTILIZED, AND MULCHED AT THE CONTRACTORS EXPENSE.

ALL CURB AND GUTTER RADII ARE MEASURED TO THE FLAG OF CURB UNLESS OTHERWISE NOTED.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE.

THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

SAWCUTS AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS AND MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER TO BETTER SUIT FIELD CONDITIONS.

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

PLACE 5" HMA PAVEMENT IN TWO LAYERS.
3" LOWER LAYER (3 MT 58-28 S), 2" UPPER LAYER (4 MT 58-28 S).

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

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS, SHALL BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

DO NOT STORE EQUIPMENT OR MATERIAL IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

SALVAGED TOPSOIL SHALL BE USED FOR ALL AREAS THAT ARE REQUIRED TO BE SEEDED. ONLY USE TOPSOIL IN AREAS AS DIRECTED BY THE ENGINEER.

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
EROSION CONTROL
PAVEMENT MARKING
TRAFFIC CONTROL
DETOUR PLAN

UTILITY CONTACTS

ALLIANT ENERGY - ELECTRIC
KAI GRAFF
6462 BLANCHARS CROSSING
WINDSOR, WI 53598
PHONE: (608) 459-5797
EMAIL: KAIGRAFF@ALLIANTENERGY.COM

AMERICAN TRANSMISSION COMPANY - ELECTRIC
DOUG VOSBERG
2489 RINDEN ROAD
COTTAGE GROVE, WI 53527
PHONE: (608) 877-7650
EMAIL: DVOSBERG@ATCLLC.COM

CHARTER COMMUNICATIONS - TELECOMMUNICATIONS
MIKE KING
2701 DANIELS STREET
MADISON, WI 53718
PHONE: (608) 206-0019
EMAIL: MICHAEL.KING@CHARTER.COM

LUMEN TECHNOLOGIES - TELECOMMUNICATIONS
STEVEN BISHOP
130 4TH STREET
BARABOO, WI 53913
PHONE: (608) 355-7501
EMAIL: STEVEN.BISHOP@LUMEN.COM

TDS METROCOM - TELECOMMUNICATIONS
JERRY MYERS
525 JUNCTION ROAD
MADISON, WI 53717
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EMAIL: JERRY.MYERS@TDSTELECOM.COM

TDS WAUNAKEE - TELECOMMUNICATIONS
JERRY MYERS
525 JUNCTION ROAD
MADISON, WI 53717
PHONE: (608) 279-7104
EMAIL: JERRY.MYERS@TDSTELECOM.COM

MADISON GAS AND ELECTRIC - GAS
ROGER AHLES
623 RAILROAD STREET
MADISON, WI 53701
PHONE: (608) 252-5682
EMAIL: RAHLES@MGE.COM

VILLAGE OF DEFOREST - WATER
GREG HALL
201 COMMERCE STREET
DEFOREST, WI 53532
PHONE: (608) 807-7023
EMAIL: HALLG@VI.DEFOREST.WI.US

DANE COUNTY CONTACTS

DESIGN ENGINEER
BRIAN RICE, P.E.
2302 FISH HATCHERY ROAD
MADISON, WI, 53713
(608) 266-4037
EMAIL: RICE.BRIAN@COUNTYOFDANE.COM

HIGHWAY COMMISSIONER
PAMELA DUNPHY, P.E.
2302 FISH HATCHERY ROAD
MADISON, WI, 53713
(608) 266-4036
EMAIL: DUNPHY@COUNTYOFDANE.COM

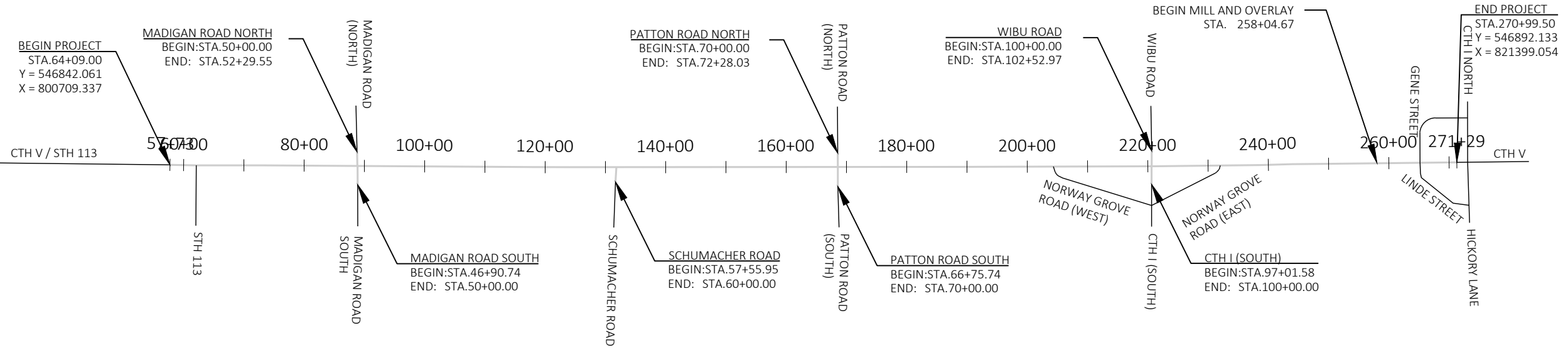
WISCONSIN DEPT OF
TRANSPORTATION CONTACTS

LORRAINE BETZEL, P.E.
2101 WRIGHT ST
MADISON, WI 53704
(608) 246-3279
LORRAINE.BETZEL@DOT.WI.GOV

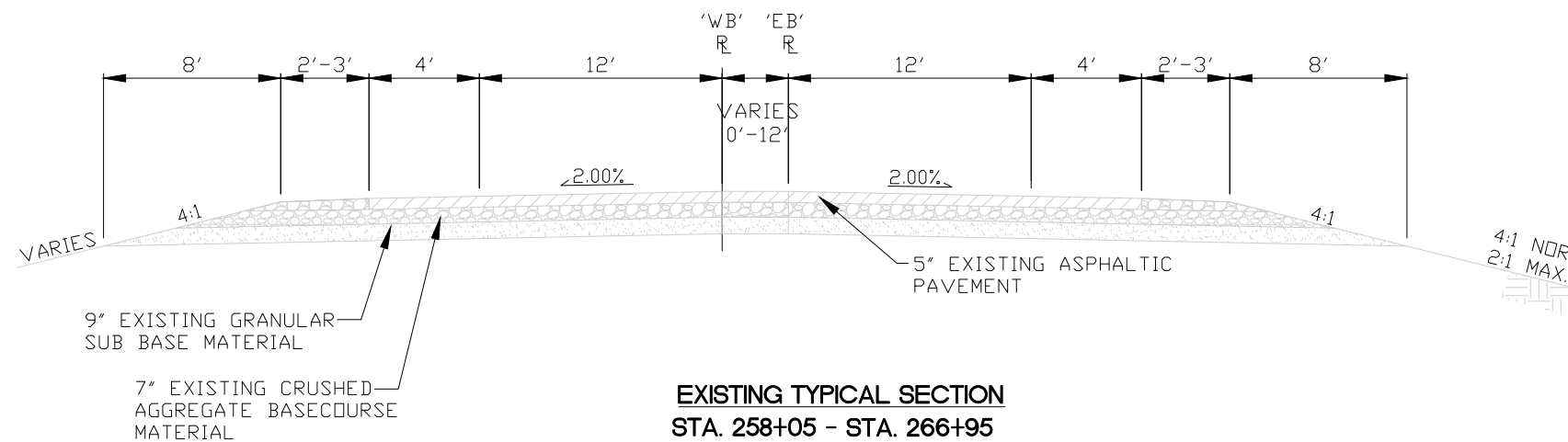
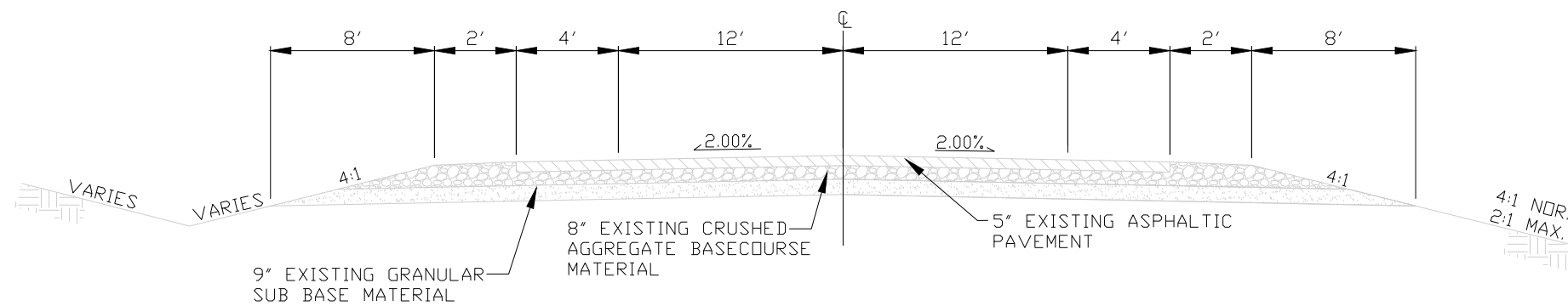
WISCONSIN DEPT OF
NATURAL RESOURCES CONTACTS

ERIC HEGGELUND
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
(608) 228-7927
ERIC.HEGGELUND@WISCONSIN.GOV

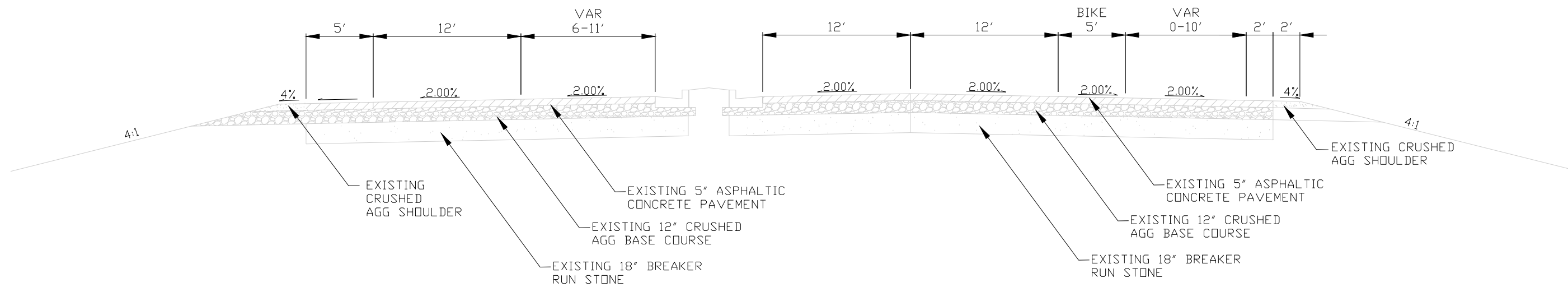




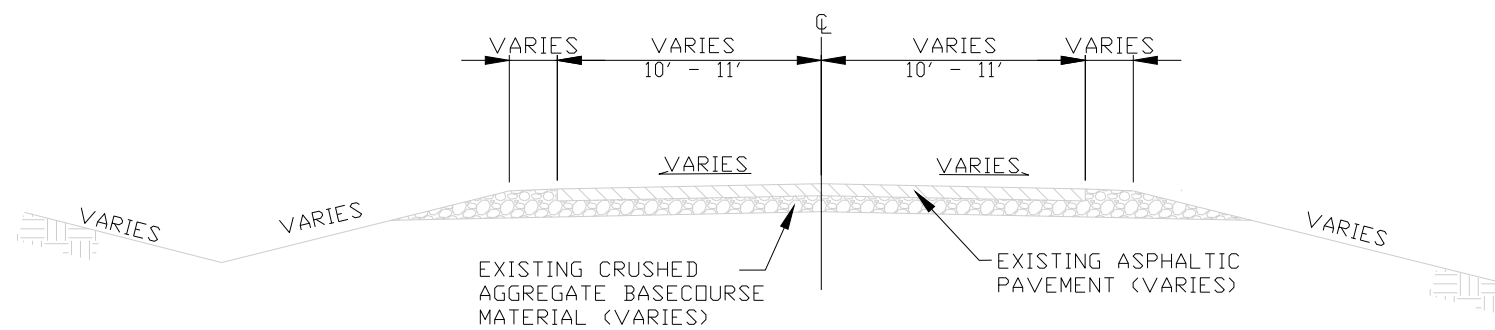
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	PROJECT OVERVIEW	SHEET E
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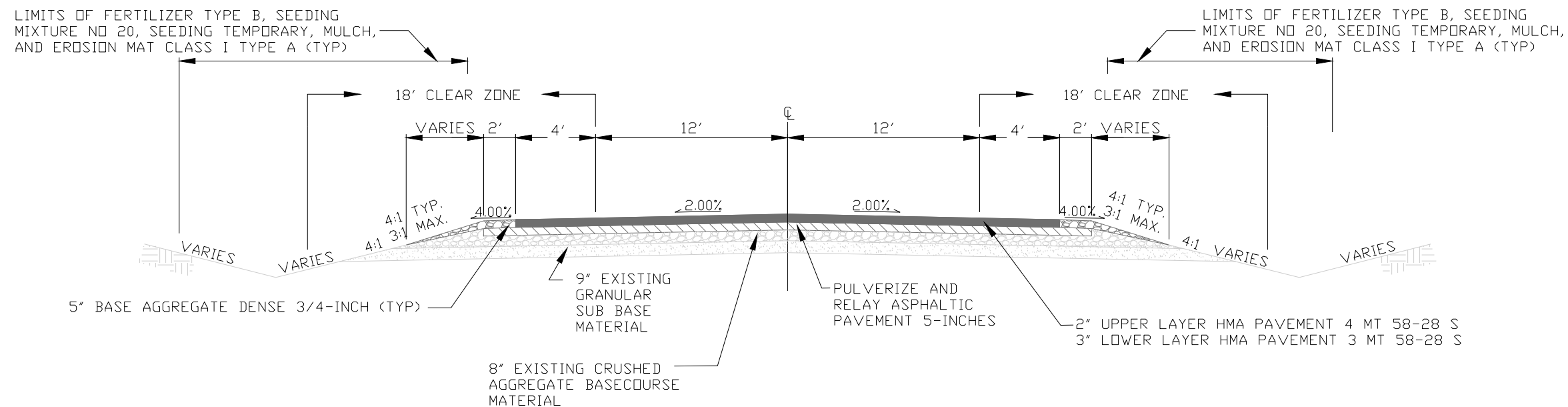
EXISTING TYPICAL SECTION
STA. 266+95 - STA. 270+99.50



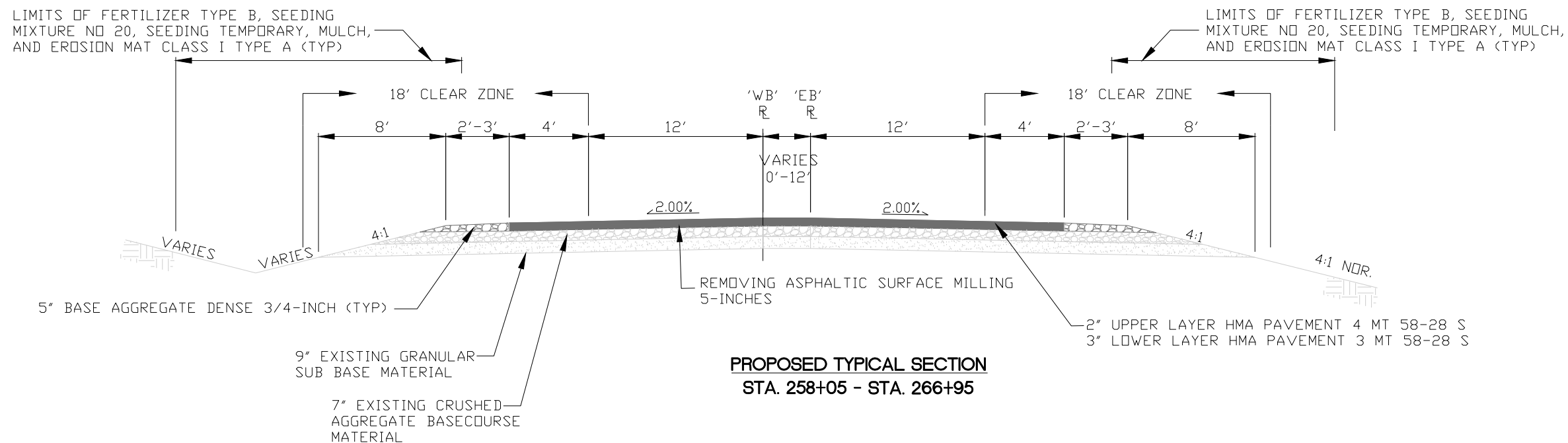
EXISTING TYPICAL SECTION
SIDE ROADS

- MADIGAN ROAD (NORTH AND SOUTH)
- SHUMACHER ROAD
- PATTON ROAD (NORTH AND SOUTH)
- W.I.B.U. ROAD
- CTH I (SOUTH)

NOT TO SCALE

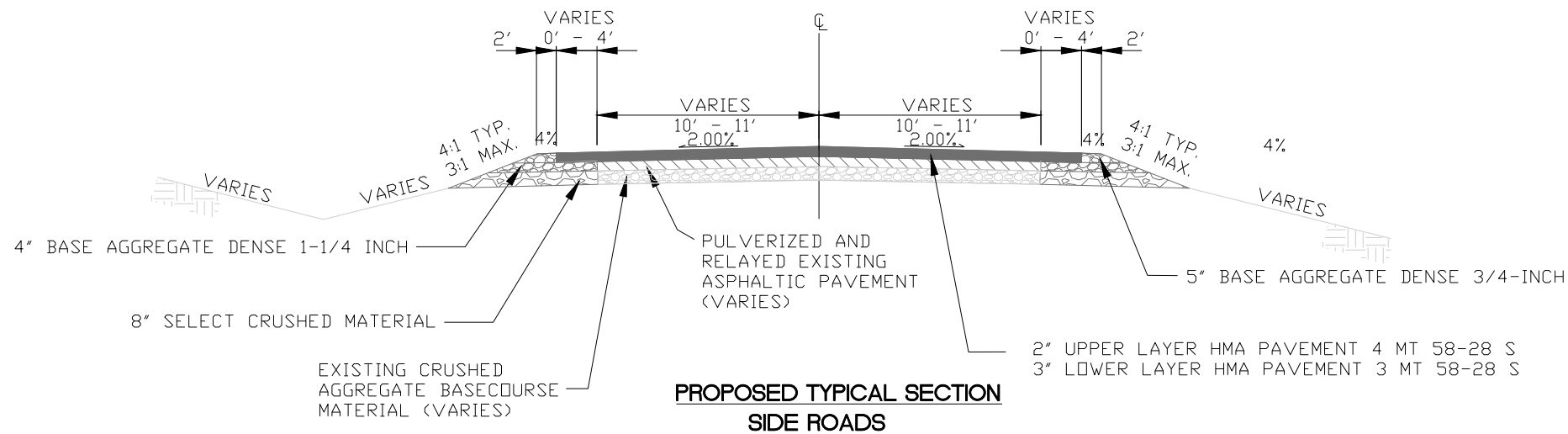
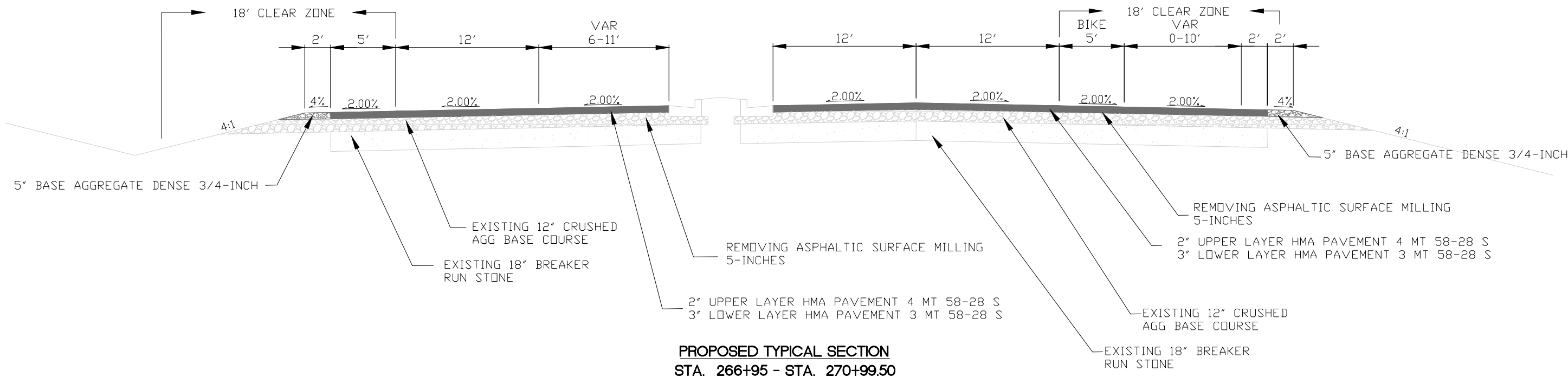


**PROPOSED TYPICAL SECTION
STA. 64+09 - STA. 258+05**



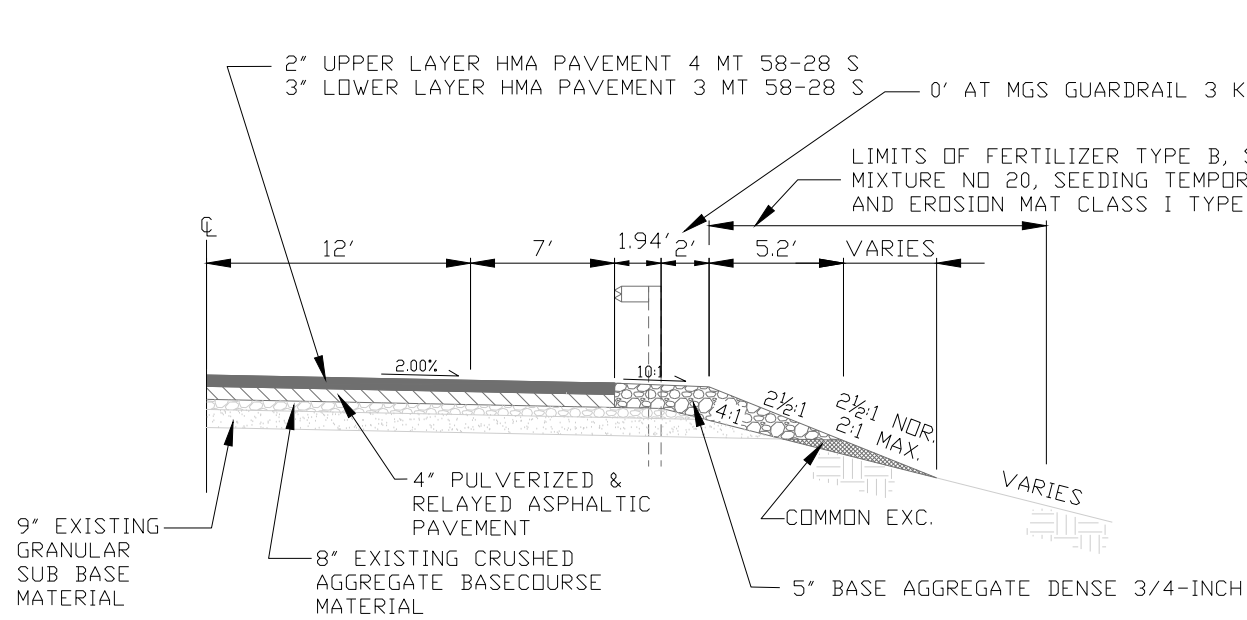
**PROPOSED TYPICAL SECTION
STA. 258+05 - STA. 266+95**

NOT TO SCALE



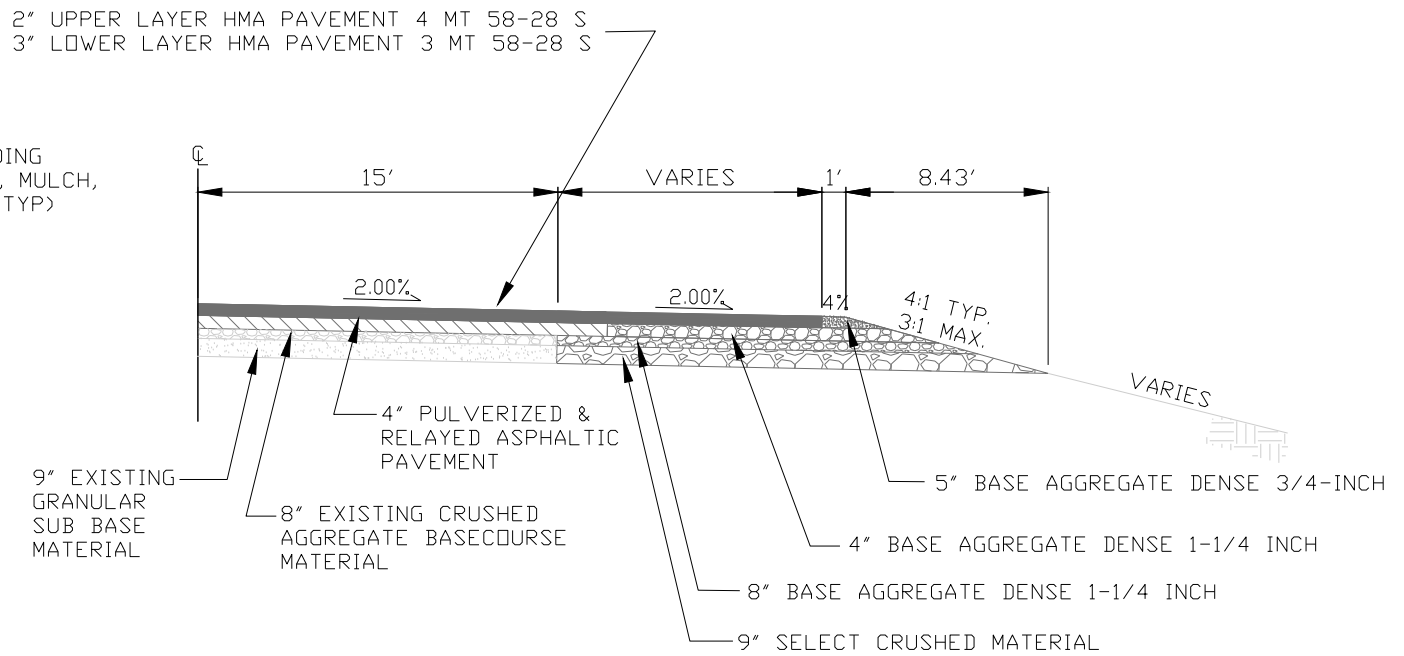
**PROPOSED TYPICAL SECTION
SIDE ROADS**
MADIGAN ROAD (NORTH AND SOUTH)
SHUMACHER ROAD
PATTON ROAD (NORTH AND SOUTH)
W.I.B.U. ROAD
CTH I (SOUTH)

NOT TO SCALE



PROPOSED TYPICAL 1/2 SECTION

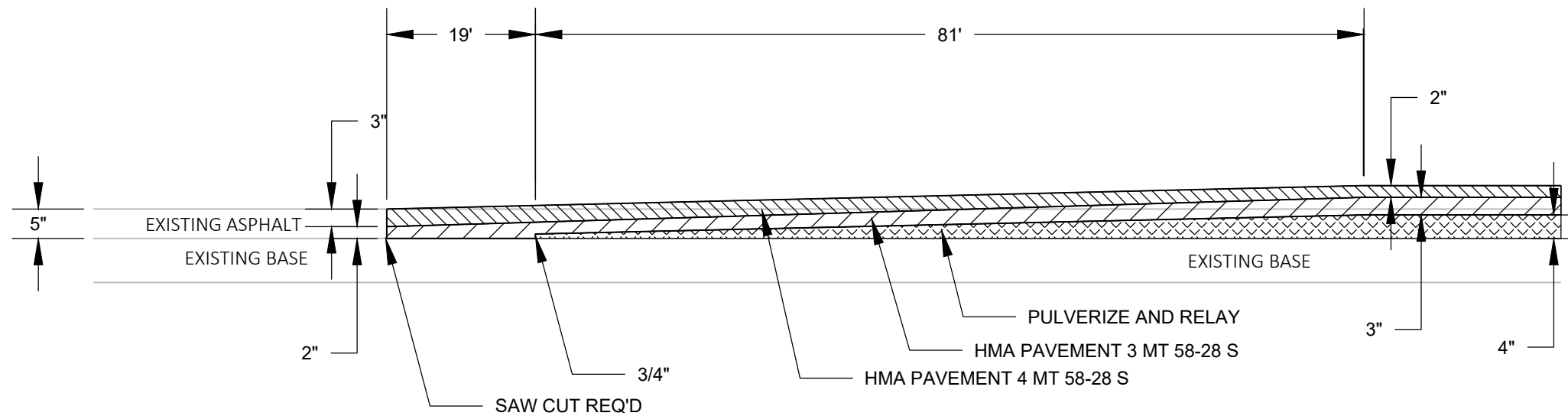
- STA. 200+05.20-STA. 202+23.60 (LT)
- STA. 200+14.93-STA. 202+33.68 (RT)
- STA. 244+15.09-STA. 248+43.44 (RT)
- STA. 246+50.24-STA. 250+79.48 (LT)
- STA. 248+83.36-STA.253+35.55 (RT)



PROPOSED TYPICAL 1/2 SECTION - WIDENING

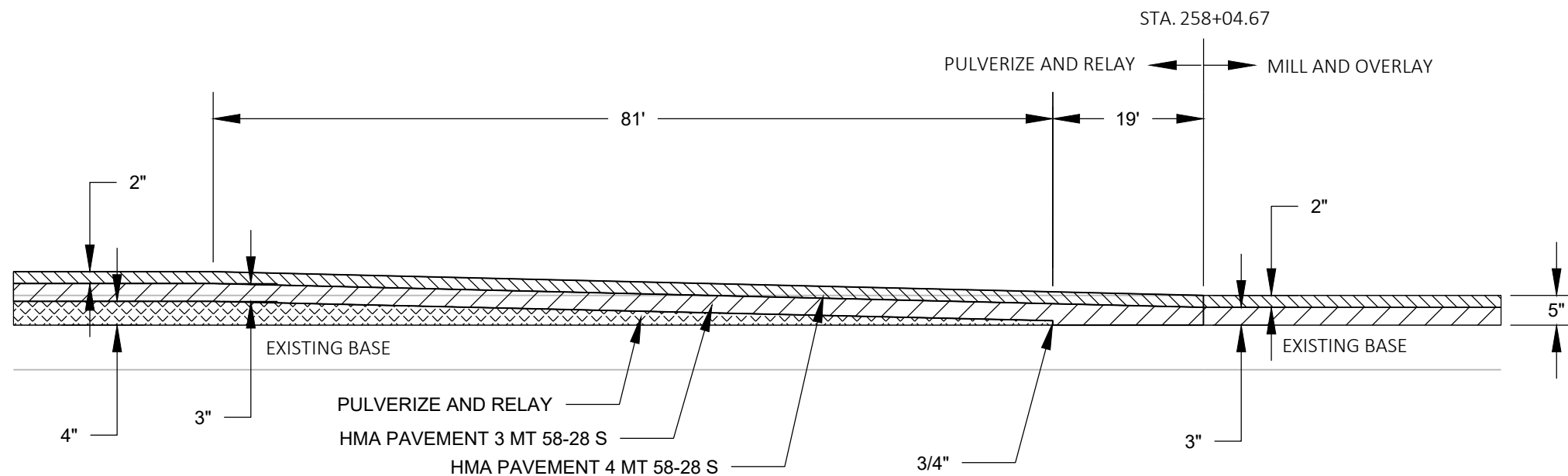
- STA. 84+25-STA. 90+42 (RT)
- STA. 87+26-STA. 93+44 (LT)
- STA. 126+18-STA. 133+42 (RT)
- STA. 150+65-STA. 166+77 (LT)
- STA. 163+93-STA. 170+10 (RT)
- STA. 167+01-STA. 174+18 (LT)
- STA. 214+39-STA. 222+37 (RT)
- STA. 214+39-STA. 225+28 (LT)

NOT TO SCALE



BUTT JOINT DETAIL

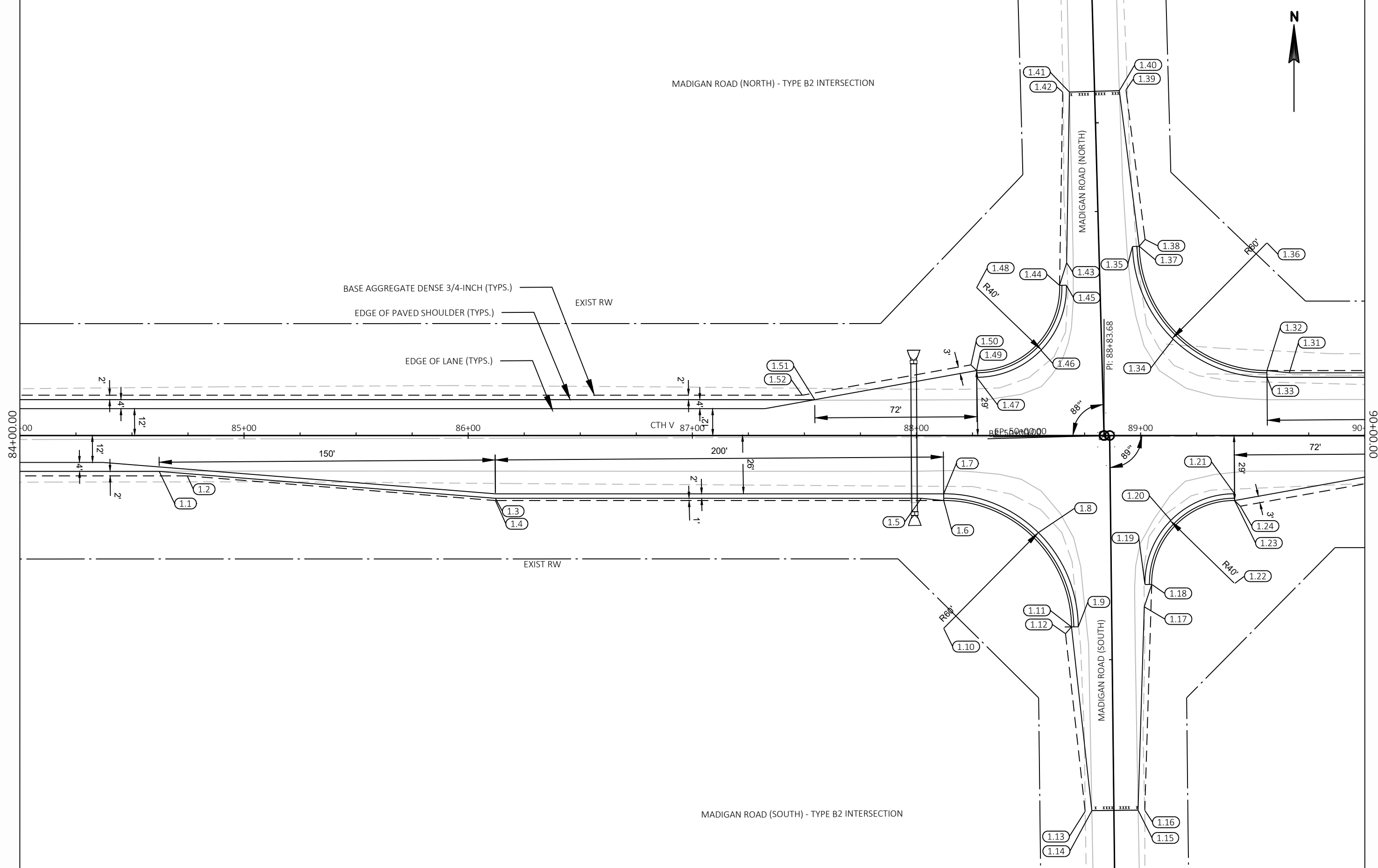
- STA. 64+09.00 CTH V
- STA. 46+90.74 (MADIGAN RD SOUTH)
- STA. 52+29.55 (MADIGAN RD NORTH)
- STA. 57+55.95 (SCHUMACHER RD)
- STA. 66+75.74 (PATTON RD SOUTH)
- STA. 72+28.03 (PATTON RD NORTH)
- STA. 97+01.58 (CTH I SOUTH)
- STA. 102+52.97 (W.I.B.U. RD)



PULVERIZE AND RELAY TO MILL AND OVERLAY TRANSITION DETAIL

STA. 258+04.67 (CTH V)

MADIGAN ROAD (NORTH) - TYPE B2 INTERSECTION



PROJECT NO: 6218-00-73

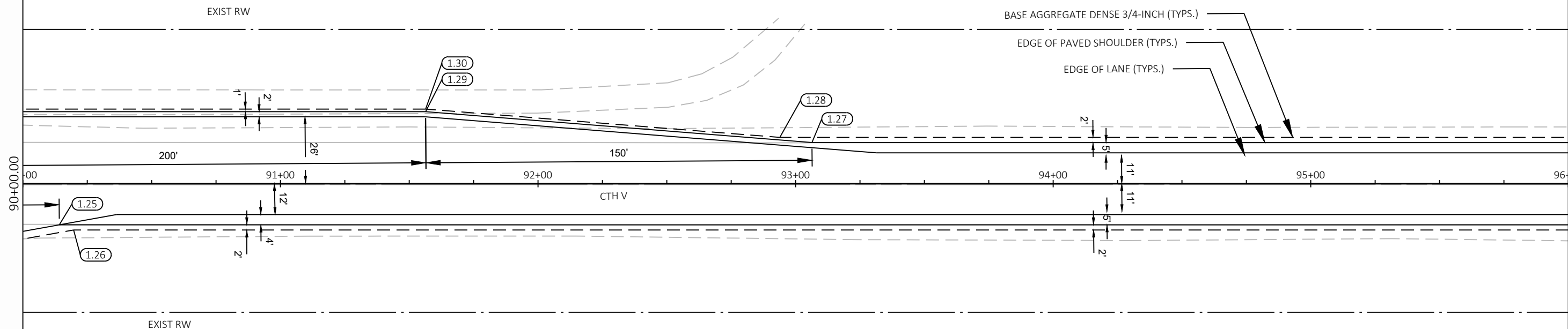
HWY: CTH V

COUNTY: DANE

INTERSECTION DETAILS (MADIGAN ROAD)

SHEET

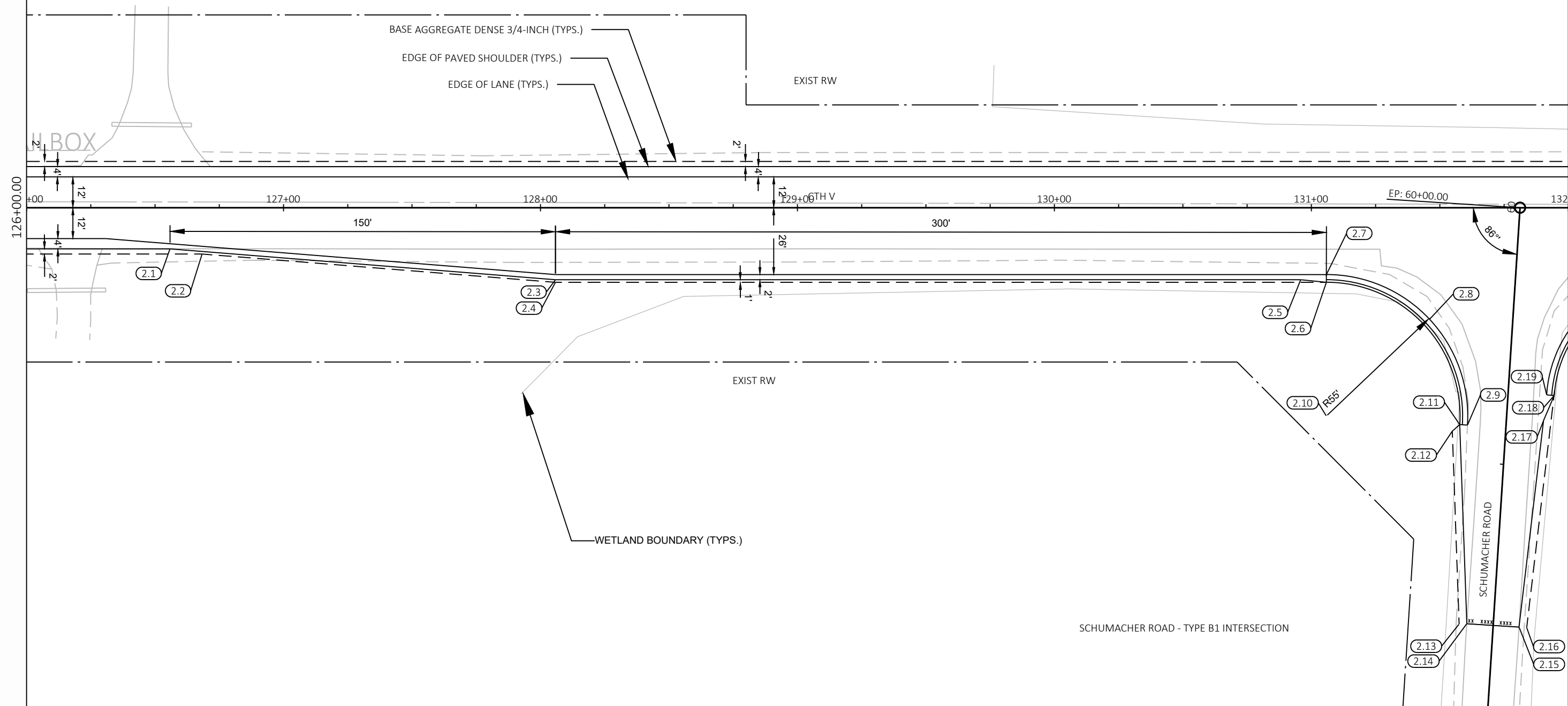
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	INTERSECTION DETAILS (MADIGAN ROAD)	SHEET	E
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MADIGAN ROAD INTERSECTION						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
1.1	84+62.16	16.00' RT	1013.99	546818.86	802762.19	EPS
1.2	84+74.66	18.00' RT	1013.52	546816.78	802774.67	EGS
1.3	86+12.16	28.00' RT	1009.33	546805.86	802912.10	EPS
1.4	86+12.16	29.00' RT	1009.23	546804.86	802912.09	EGS
1.5	88+02.16	28.00' RT	1005.17	546804.58	803102.10	EPS
1.6	88+12.16	29.00' RT	1005.08	546803.51	803112.09	BOC
1.7	88+12.16	26.00' RT	1005.00	546806.51	803112.11	FLG
1.8	88+54.34	43.33' RT	1003.63	546788.89	803154.18	FLG
1.9	88+72.15	85.32' RT	1001.72	546746.79	803171.71	FLG
1.10	88+12.16	86.00' RT	0.00	546746.51	803111.71	FLG RADIUS
1.11	88+69.15	85.36' RT	1001.87	546746.77	803168.71	BOC
1.12	88+66.49	88.39' RT	1001.46	546743.76	803166.02	EGS
1.13	88+75.28	167.68' RT	1000.53	546664.41	803174.28	EGS
1.14	88+78.24	167.35' RT	1000.64	546664.72	803177.25	EPS
1.15	88+98.85	167.12' RT	1000.62	546664.81	803197.88	EPS
1.16	89+01.84	167.21' RT	1000.49	546664.70	803200.87	EGS
1.17	89+01.62	76.43' RT	1002.01	546755.48	803201.25	EPS
1.18	89+04.93	66.41' RT	1002.74	546765.48	803204.62	BOC
1.19	89+01.93	66.44' RT	1002.33	546765.47	803201.62	FLG
1.20	89+13.49	37.87' RT	1003.10	546793.96	803213.36	FLG
1.21	89+41.93	26.00' RT	1002.88	546805.65	803241.88	FLG
1.22	89+41.93	66.00' RT	999.23	546765.65	803241.62	FLG RADIUS
1.23	89+41.93	29.00' RT	1002.87	546802.65	803241.86	BOC
1.24	89+44.47	31.54' RT	1002.50	546800.09	803244.39	EGS
1.25	90+14.15	16.00' RT	1002.16	546815.18	803314.17	EPS
1.26	90+19.71	18.00' RT	1002.02	546813.14	803319.71	EGS

MADIGAN ROAD INTERSECTION						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
1.27	93+06.36	16.00' LT	998.96	546845.27	803606.58	EPS
1.28	92+93.86	18.00' LT	999.03	546847.35	803594.09	EGS
1.29	91+56.36	28.00' LT	1000.36	546858.25	803456.66	EPS
1.30	91+56.36	29.00' LT	1000.26	546859.25	803456.67	EGS
1.31	89+66.36	28.00' LT	1002.49	546859.49	803266.67	EPS
1.32	89+56.36	29.00' LT	1002.57	546860.56	803256.67	BOC
1.33	89+56.36	26.00' LT	1002.67	546857.56	803256.65	FLG
1.34	89+14.52	43.00' LT	1003.30	546874.83	803214.92	FLG
1.35	88+96.38	84.36' LT	1004.63	546916.31	803197.06	FLG
1.36	89+56.36	86.00' LT	0.00	546917.55	803257.04	FLG RADIUS
1.37	88+99.38	84.44' LT	1004.80	546916.37	803200.06	BOC
1.38	89+02.00	87.52' LT	1004.57	546919.42	803202.69	EGS
1.39	88+93.46	154.26' LT	1007.47	546986.23	803194.60	EGS
1.40	88+90.50	153.89' LT	1007.58	546985.87	803191.63	EPS
1.41	88+68.21	153.27' LT	1007.58	546985.41	803169.36	EPS
1.42	88+65.21	153.32' LT	1007.50	546985.47	803166.37	EGS
1.43	88+66.99	77.11' LT	1004.41	546909.25	803167.63	EPS
1.44	88+63.83	67.02' LT	1004.51	546899.18	803164.41	BOC
1.45	88+66.83	67.10' LT	1004.10	546899.24	803167.41	FLG
1.46	88+55.52	38.11' LT	1003.80	546870.33	803155.90	FLG
1.47	88+26.84	26.00' LT	1004.69	546858.41	803127.15	FLG
1.48	88+26.84	66.00' LT	1004.93	546898.41	803127.41	FLG RADIUS
1.49	88+26.84	29.00' LT	1004.78	546861.41	803127.17	BOC
1.50	88+24.30	31.54' LT	1004.39	546863.97	803124.64	EGS
1.51	87+54.62	16.00' LT	1006.43	546848.90	803054.86	EPS
1.52	87+49.07	18.00' LT	1006.47	546850.93	803049.32	EGS



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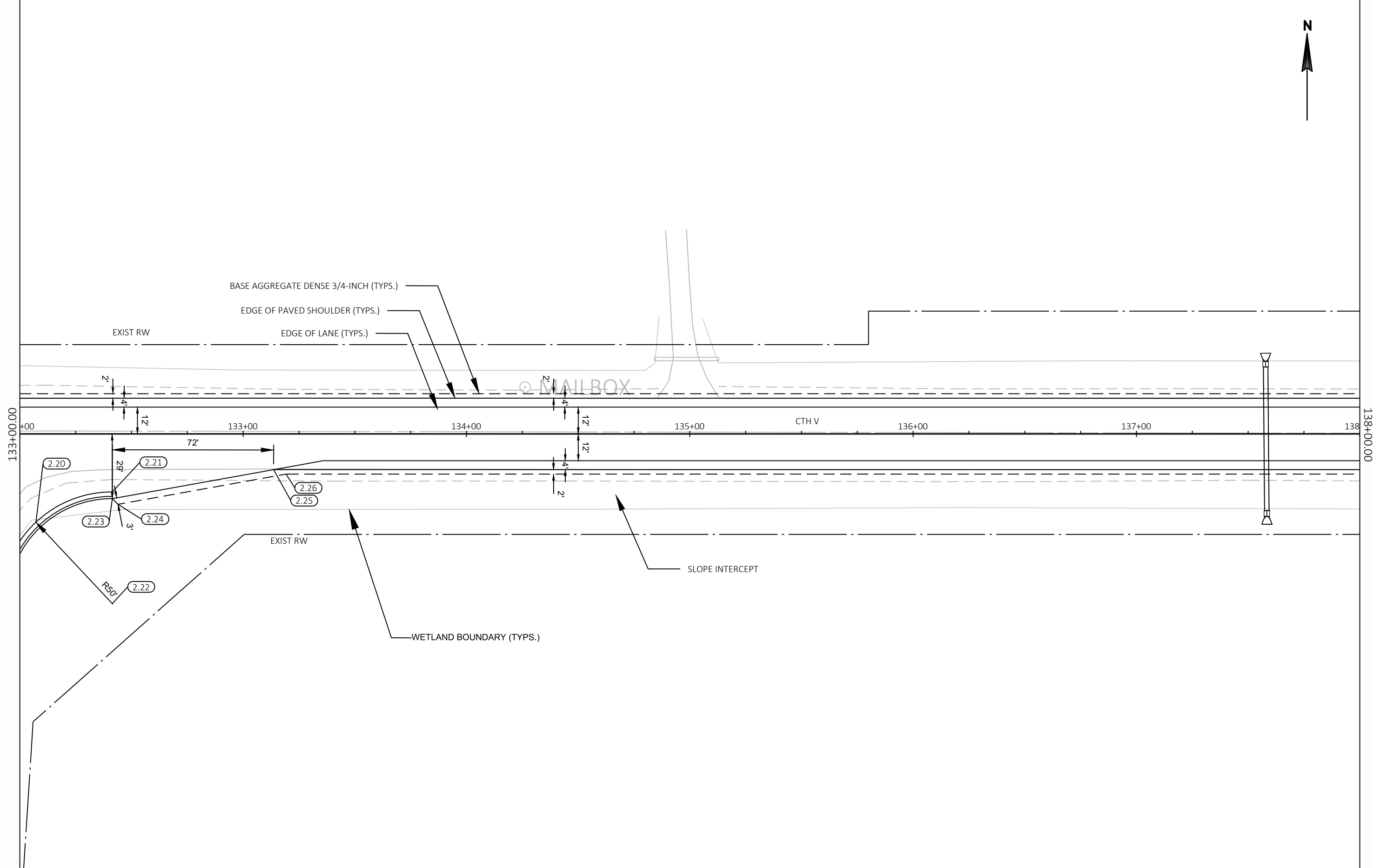
HWY: CTH V

COUNTY: DANE

INTERSECTION DETAILS (SCHUMACHER ROAD)

SHEET

E



PROJECT NO: 6218-00-73

HWY: CTH V

COUNTY: DANE

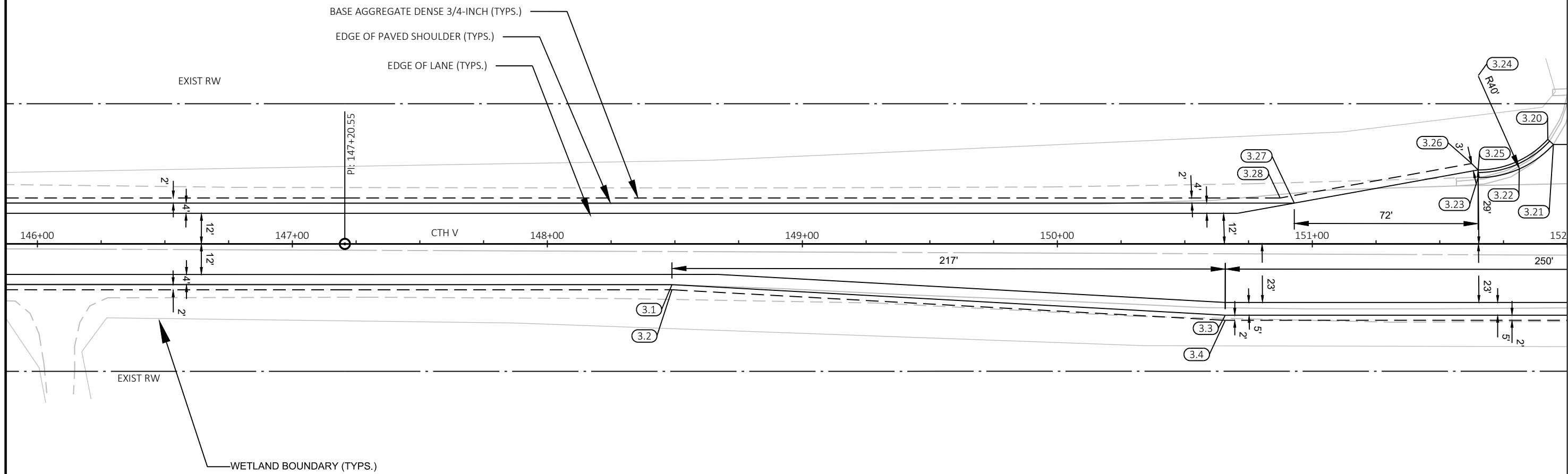
INTERSECTION DETAILS (SCHUMACHER ROAD)

SHEET

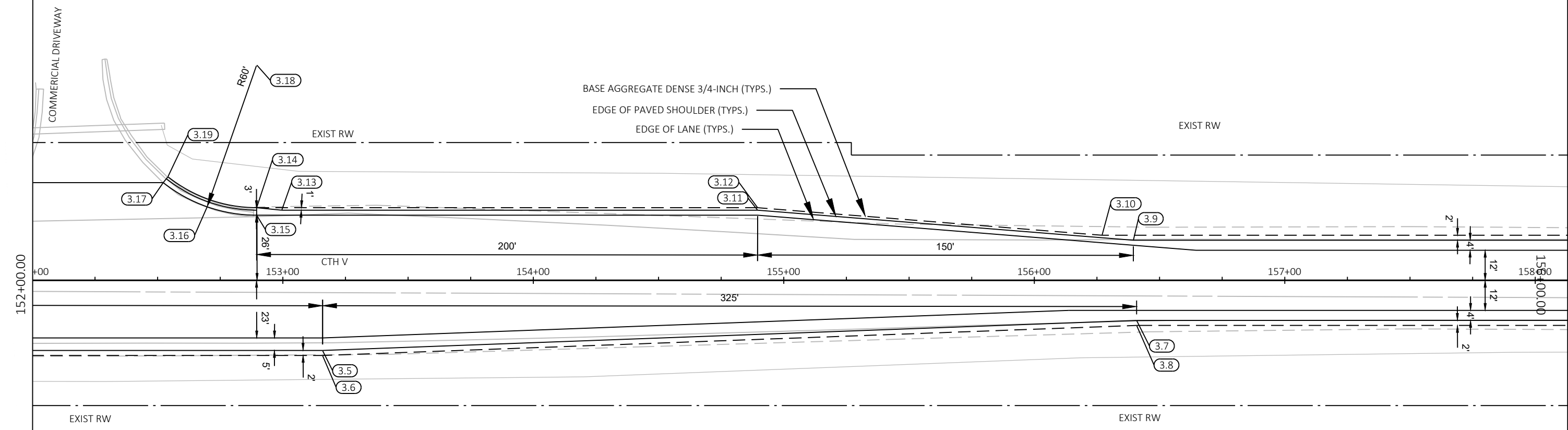
E

SCHUMACHER ROAD INTERSECTION						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
2.1	126+55.83	16.00' RT	978.26	546795.40	806955.91	EPS
2.2	126+68.33	18.00' RT	977.89	546793.41	806968.41	EGS
2.3	128+05.83	28.00' RT	974.44	546783.54	807105.92	EPS
2.4	128+05.83	29.00' RT	974.34	546782.54	807105.92	EGS
2.5	130+95.83	28.00' RT	969.85	546783.81	807395.92	EPS
2.6	131+05.83	29.00' RT	970.20	546782.82	807405.92	BOC
2.7	131+05.83	26.00' RT	969.79	546785.82	807405.92	FLG
2.8	131+45.95	43.38' RT	969.00	546768.48	807446.05	FLG
2.9	131+60.72	84.53' RT	967.60	546727.34	807460.86	FLG
2.10	131+05.83	81.00' RT	0.00	546730.82	807405.97	FLG RADIUS
2.11	131+57.72	84.34' RT	967.97	546727.53	807457.86	BOC
2.12	131+54.83	86.88' RT	967.36	546724.98	807454.97	EGS
2.13	131+57.49	161.88' RT	966.68	546649.99	807457.70	EGS

SCHUMACHER ROAD INTERSECTION						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
2.14	131+60.47	161.77' RT	966.84	546650.10	807460.68	EPS
2.15	131+80.80	163.08' RT	966.84	546648.82	807481.01	EPS
2.16	131+83.79	163.27' RT	966.71	546648.63	807484.00	EGS
2.17	131+90.35	82.73' RT	967.70	546729.17	807490.49	EPS
2.18	131+94.53	72.98' RT	967.85	546738.92	807494.66	BOC
2.19	131+91.54	72.79' RT	967.94	546739.11	807491.66	FLG
2.20	132+07.23	39.53' RT	968.81	546772.39	807507.33	FLG
2.21	132+41.43	26.00' RT	969.04	546785.95	807541.52	FLG
2.22	132+41.43	76.00' RT	0.00	546735.95	807541.56	FLG RADIUS
2.23	132+41.43	29.00' RT	968.29	546782.95	807541.52	BOC
2.24	132+43.98	31.54' RT	968.86	546780.41	807544.07	EGS
2.25	133+13.65	16.00' RT	968.93	546796.02	807613.73	EPS
2.26	133+19.21	18.00' RT	968.83	546794.02	807619.29	EGS



PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	INTERSECTION DETAILS (BYPASS LANE)	SHEET	E
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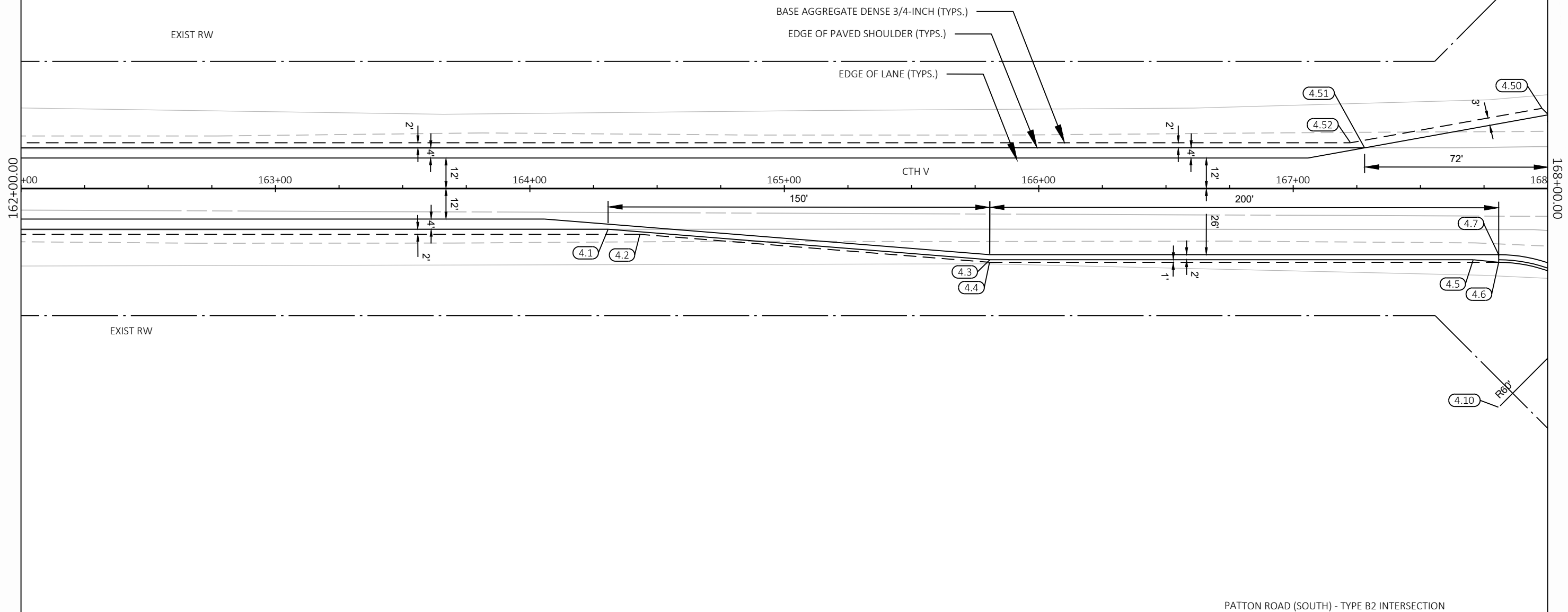
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	INTERSECTION DETAIL (BYPASS LANE)	SHEET E
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BYPASS LANE						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
3.1	148+48.85	16.00' RT	966.07	546797.47	809148.92	EPS
3.2	148+48.85	18.00' RT	965.99	546795.47	809148.93	EGS
3.3	150+65.85	28.00' RT	965.94	546785.69	809365.94	EPS
3.4	150+65.85	30.00' RT	965.86	546783.69	809365.94	EGS
3.5	153+15.85	28.00' RT	965.89	546785.93	809615.94	EPS
3.6	153+15.85	30.00' RT	965.81	546783.93	809615.94	EGS
3.7	156+40.85	16.00' RT	966.23	546798.25	809940.92	EPS
3.8	156+40.85	18.00' RT	966.15	546796.25	809940.93	EGS
3.9	156+39.54	16.00' LT	966.23	546830.25	809939.58	EPS
3.10	156+27.04	18.00' LT	966.19	546832.24	809927.08	EGS
3.11	154+89.54	28.00' LT	966.05	546842.11	809789.57	EPS
3.12	154+89.54	29.00' LT	966.01	546843.11	809789.57	EGS
3.13	152+99.54	28.00' LT	965.90	546841.92	809599.57	EPS
3.14	152+89.54	29.00' LT	965.19	546842.91	809589.57	BOC

BYPASS LANE						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
3.15	152+89.54	26.00' LT	965.94	546839.91	809589.57	FLG
3.16	152+69.79	29.34' LT	965.90	546843.23	809569.82	FLG
3.17	152+52.24	39.01' LT	965.73	546852.88	809552.26	FLG
3.18	152+89.54	86.00' LT	0.00	546899.91	809589.51	FLG RADIUS
3.19	152+54.10	41.35' LT	965.60	546855.23	809554.12	BOC
3.20	151+92.35	41.03' LT	965.75	546854.84	809492.37	BOC
3.21	151+94.56	39.01' LT	965.78	546852.82	809494.58	FLG
3.22	151+81.17	29.39' LT	965.99	546843.20	809481.21	FLG
3.23	151+65.05	26.00' LT	966.05	546839.78	809465.08	FLG
3.24	151+65.05	66.00' LT	0.00	546879.78	809465.04	FLG RADIUS
3.25	151+65.05	29.00' LT	965.30	546842.78	809465.08	BOC
3.26	151+62.50	31.54' LT	965.87	546845.32	809462.53	EGS
3.27	150+92.94	16.00' LT	966.19	546829.71	809392.99	EPS
3.28	150+87.40	18.00' LT	966.11	546831.71	809387.44	EGS

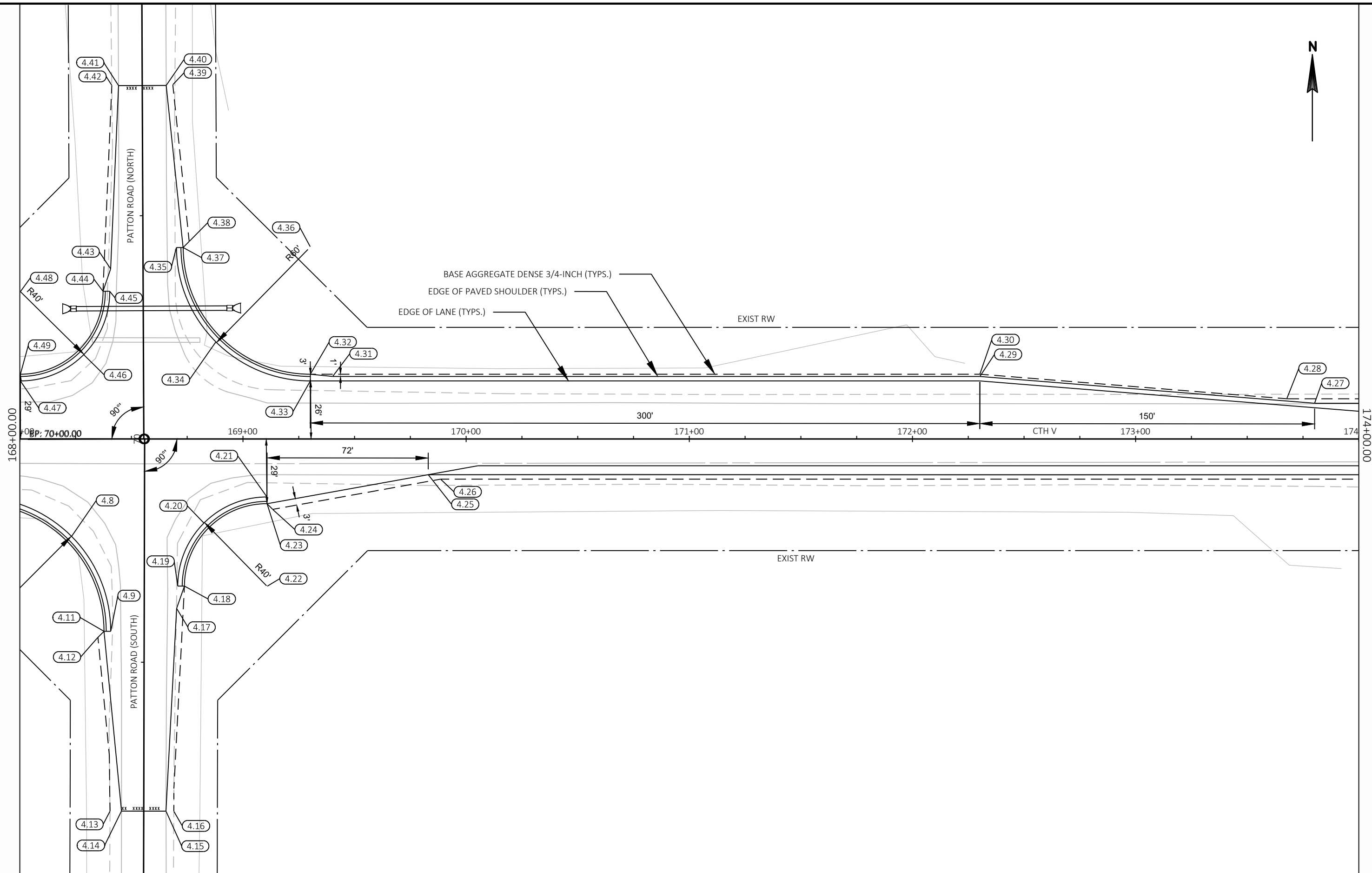


PATTON ROAD (NORTH) - TYPE B1 INTERSECTION



PATTON ROAD (SOUTH) - TYPE B2 INTERSECTION

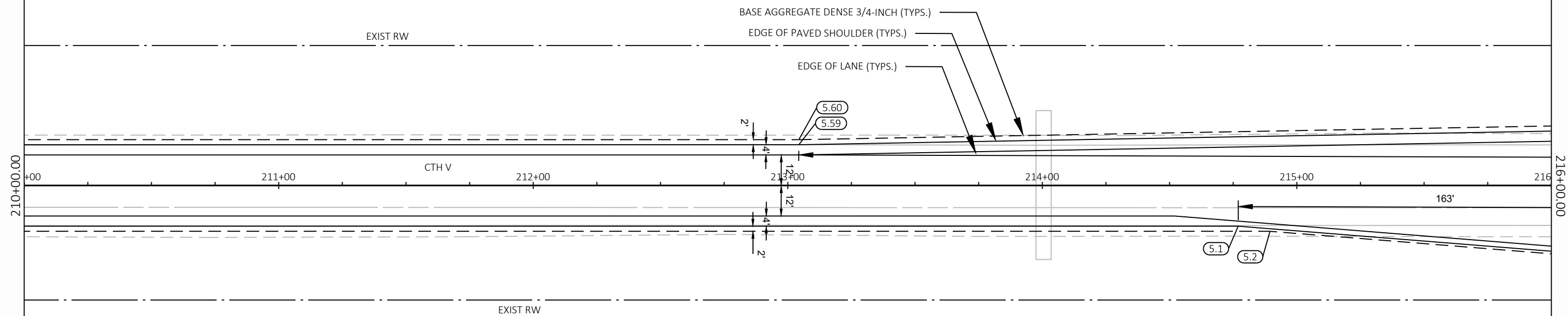
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	INTERSECTION DETAIL (PATTON ROAD)	SHEET	E
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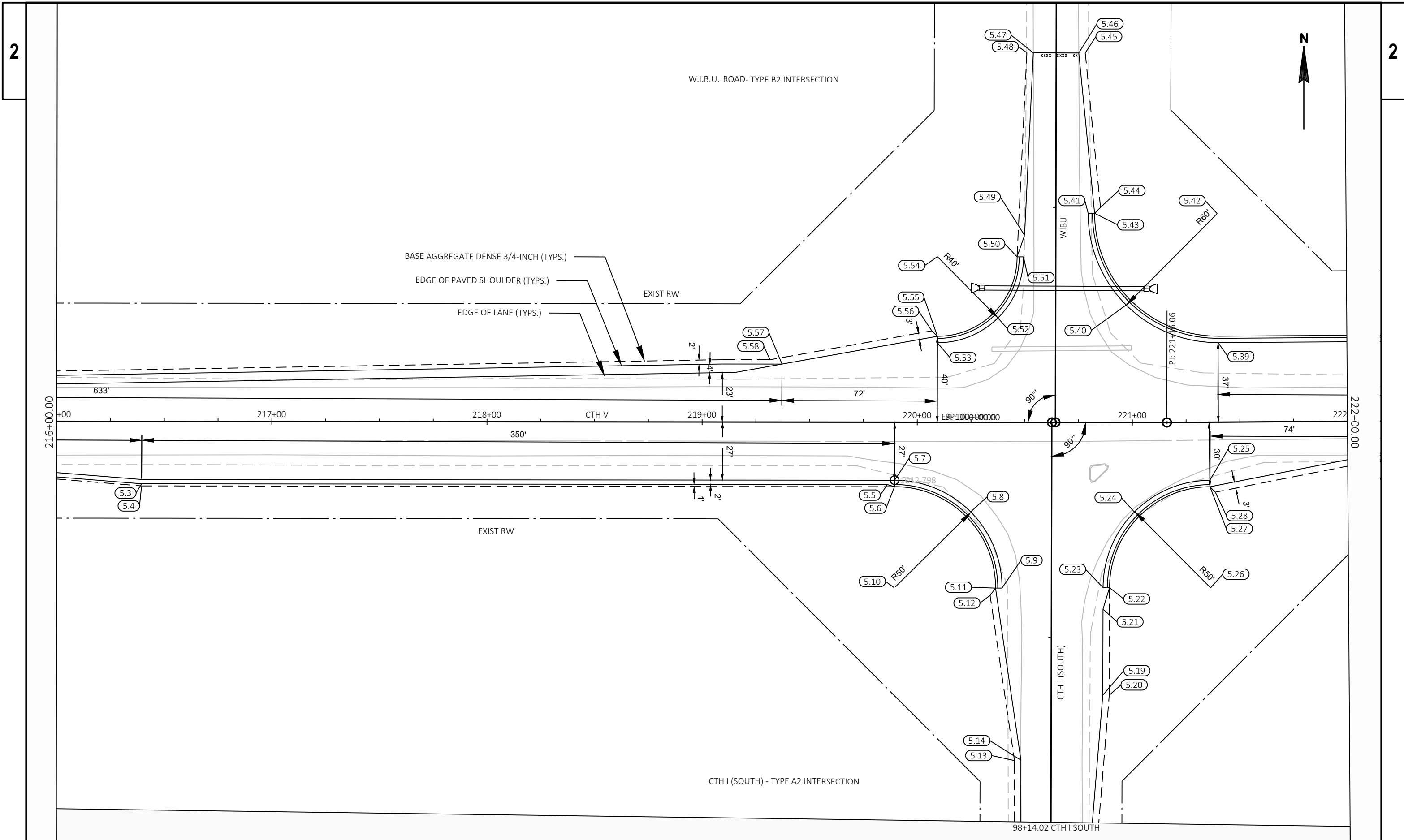


PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	INTERSECTION DETAIL (PATTON ROAD)	SHEET	E
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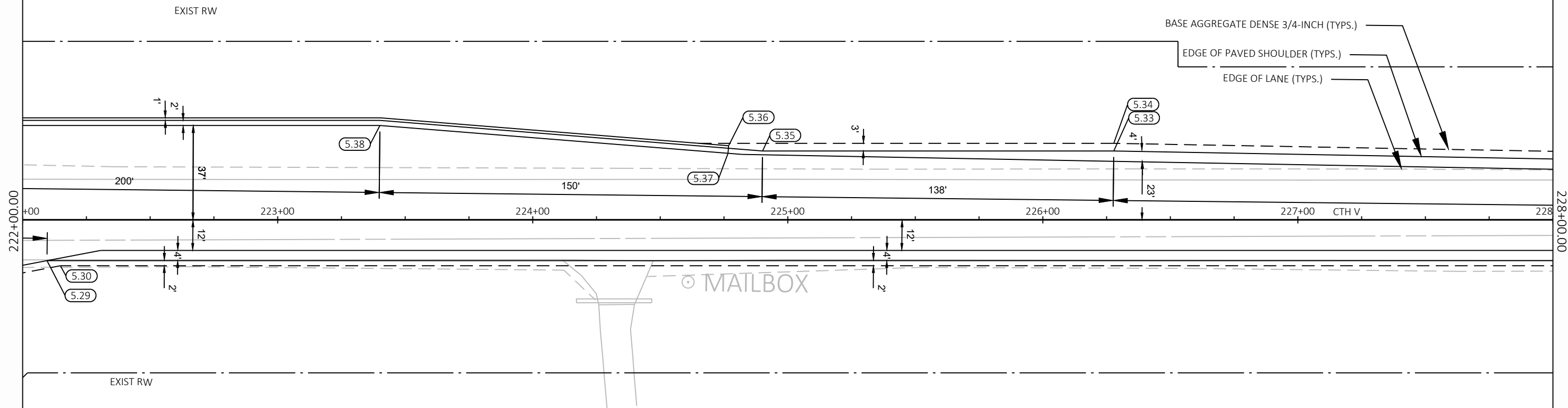
PATTON ROAD INTERSECTION						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
4.1	164+30.74	16.00' RT	966.07	546799.03	810730.81	EPS
4.2	164+43.24	18.00' RT	966.03	546797.05	810743.32	EGS
4.3	165+80.74	28.00' RT	965.98	546787.18	810880.83	EPS
4.4	165+80.66	28.99' RT	965.88	546786.19	810880.75	EGS
4.5	167+70.74	28.00' RT	965.70	546787.37	811070.83	EPS
4.6	167+80.74	29.00' RT	965.01	546786.38	811080.83	BOC
4.7	167+80.74	26.00' RT	965.76	546789.38	811080.82	FLG
4.8	168+23.22	43.63' RT	965.52	546771.79	811123.32	FLG
4.9	168+40.74	86.15' RT	964.84	546729.29	811140.88	FLG
4.10	167+80.74	86.00' RT	0.00	546729.38	811080.88	FLG RADIUS
4.11	168+37.74	86.14' RT	965.09	546729.29	811137.88	BOC
4.12	168+35.00	88.86' RT	964.67	546726.57	811135.15	EGS
4.13	168+40.43	166.71' RT	964.68	546648.73	811140.66	EGS
4.14	168+45.57	166.65' RT	964.83	546648.80	811145.79	EPS
4.15	168+65.53	166.71' RT	964.83	546648.75	811165.75	EPS
4.16	168+69.02	166.71' RT	964.69	546648.75	811169.24	EGS
4.17	168+70.27	75.90' RT	964.92	546739.57	811170.40	EPS
4.18	168+73.79	65.91' RT	965.41	546749.56	811173.91	BOC
4.19	168+70.79	65.90' RT	965.00	546749.57	811170.91	FLG
4.20	168+82.54	37.68' RT	965.64	546777.80	811182.64	FLG
4.21	169+10.79	26.00' RT	965.93	546789.51	811210.87	FLG
4.22	169+10.79	66.00' RT	961.81	546749.51	811210.91	FLG RADIUS
4.23	169+10.79	29.00' RT	965.18	546786.51	811210.88	BOC
4.24	169+13.33	31.54' RT	965.58	546783.97	811213.42	EGS
4.25	169+83.01	16.00' RT	966.13	546799.58	811283.09	EPS
4.26	169+88.57	18.00' RT	966.04	546797.58	811288.64	EGS

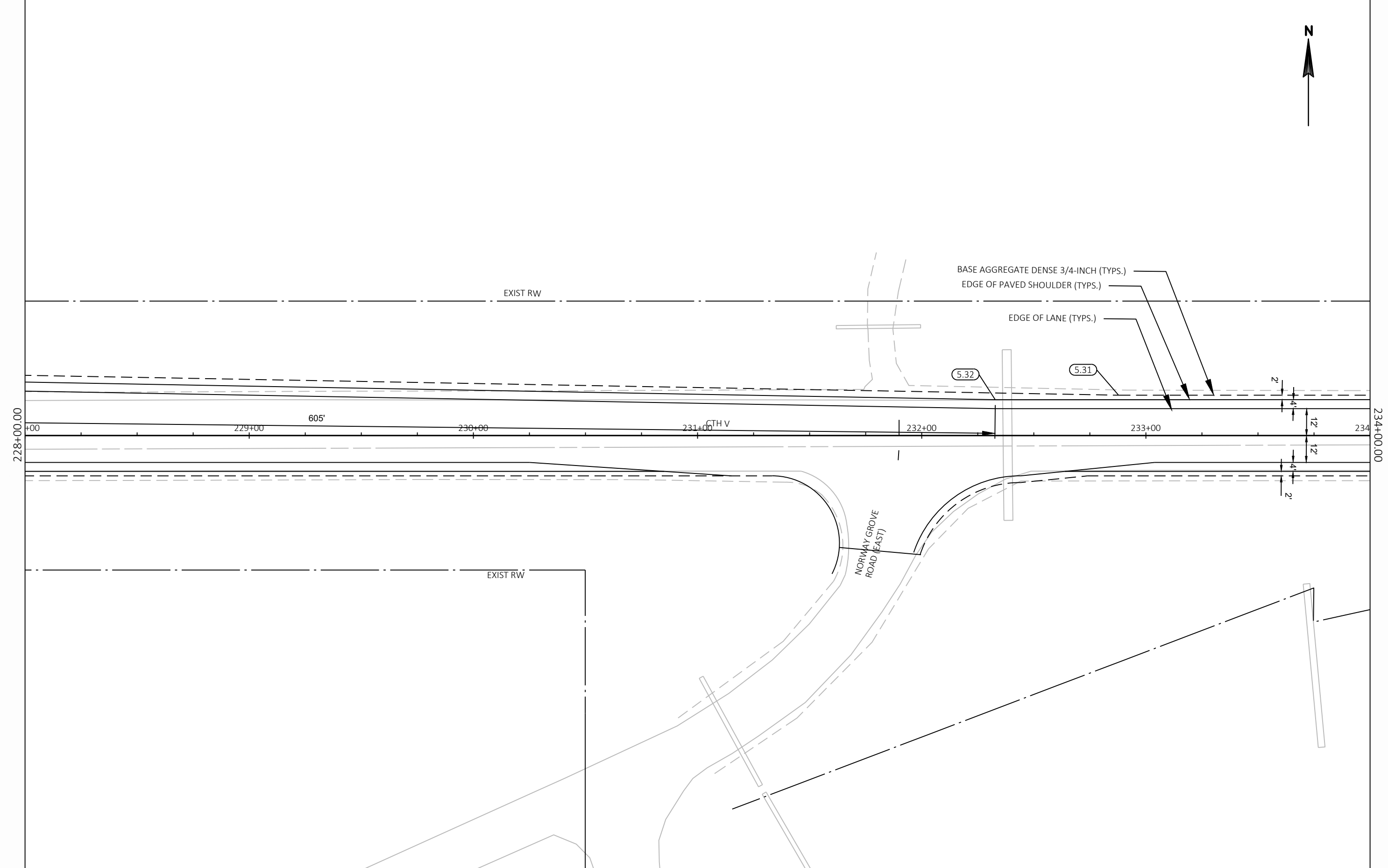
PATTON ROAD INTERSECTION						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
4.27	173+80.19	16.00' LT	966.15	546831.97	811680.24	EPS
4.28	173+67.69	18.00' LT	966.05	546833.96	811667.73	EGS
4.29	172+30.19	28.00' LT	965.83	546843.82	811530.22	EPS
4.30	172+30.19	29.00' LT	965.73	546844.82	811530.22	EGS
4.31	169+40.19	28.00' LT	965.91	546843.54	811240.22	EPS
4.32	169+30.19	29.00' LT	965.19	546844.53	811230.22	BOC
4.33	169+30.19	26.00' LT	965.94	546841.53	811230.23	FLG
4.34	168+87.86	43.48' LT	965.58	546858.97	811187.87	FLG
4.35	168+70.19	85.74' LT	965.21	546901.21	811170.17	FLG
4.36	169+30.19	86.00' LT	0.00	546901.53	811230.17	FLG RADIUS
4.37	168+73.19	85.75' LT	965.39	546901.22	811173.17	BOC
4.38	168+75.91	88.46' LT	965.05	546903.94	811175.88	EGS
4.39	168+68.57	158.67' LT	965.00	546974.14	811168.48	EGS
4.40	168+65.61	158.36' LT	965.12	546973.82	811165.51	EPS
4.41	168+44.24	158.27' LT	965.12	546973.71	811144.14	EPS
4.42	168+41.25	158.40' LT	965.00	546973.84	811141.15	EGS
4.43	168+40.71	76.18' LT	965.20	546891.61	811140.69	EPS
4.44	168+37.28	66.16' LT	965.61	546881.60	811137.27	BOC
4.45	168+40.28	66.17' LT	965.20	546881.61	811140.27	FLG
4.46	168+28.62	37.78' LT	965.50	546853.20	811128.65	FLG
4.47	168+00.28	26.00' LT	965.80	546841.40	811100.31	FLG
4.48	168+00.28	66.00' LT	961.92	546881.40	811100.27	FLG RADIUS
4.49	168+00.28	29.00' LT	966.17	546844.40	811100.31	BOC
4.50	167+97.74	31.54' LT	965.44	546846.94	811097.76	EGS
4.51	167+28.06	16.00' LT	966.01	546831.33	811028.10	EPS
4.52	167+22.50	18.00' LT	965.94	546833.32	811022.54	EGS



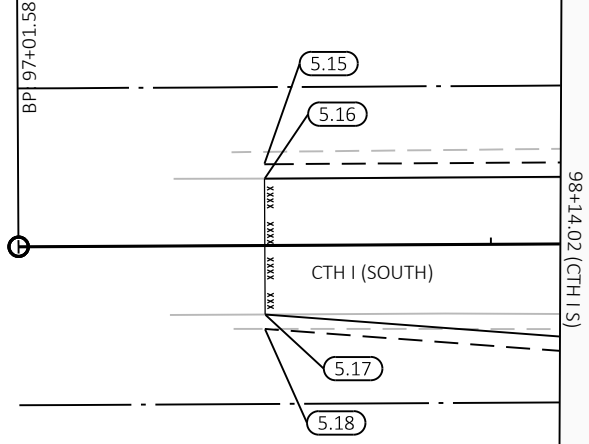


PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	INTERSECTION DETAILS (CTH I SOUTH/W.I.B.U. ROAD)	SHEET	E
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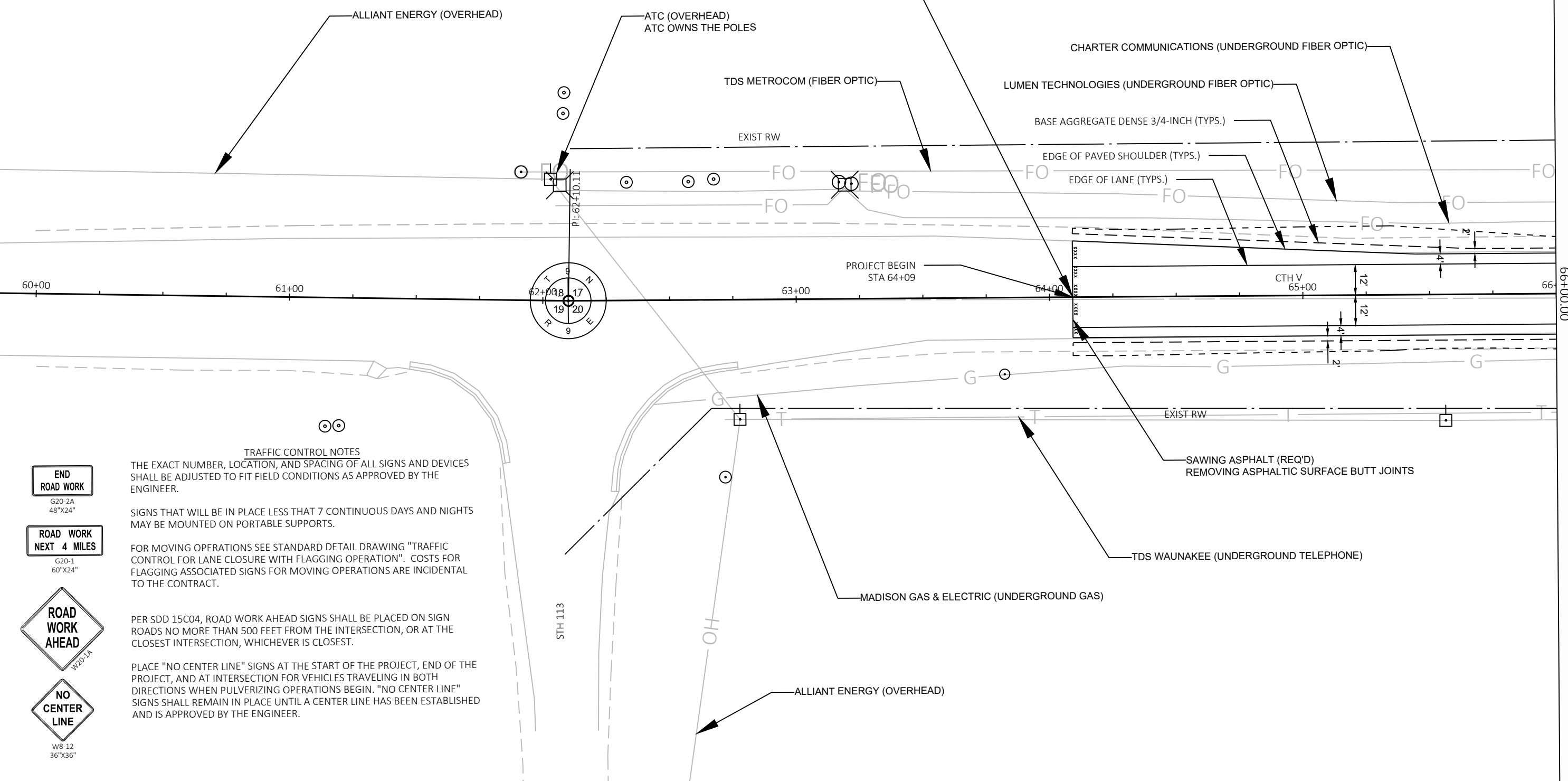
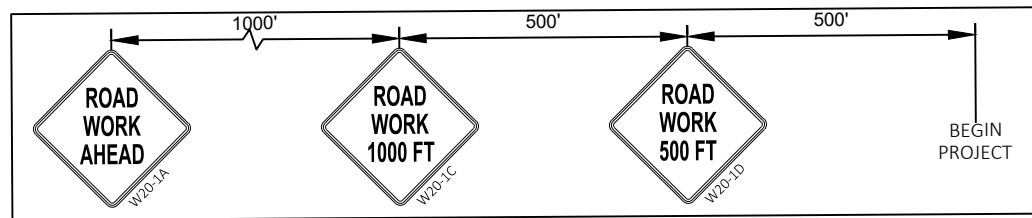


PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	INTERSECTION DETAILS (CTH I SOUTH/W.I.B.U. ROAD)	SHEET	E
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CTH I SOUTH & W.I.B.U. ROAD INTERSECTION						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
5.1	214+76.97	16.00' RT	1000.07	546809.52	815777.07	EPS
5.2	214+89.47	18.00' RT	1000.35	546807.56	815789.57	EGS
5.3	216+39.47	29.00' RT	1004.46	546797.02	815939.61	EPS
5.4	216+39.47	30.00' RT	1004.36	546796.02	815939.61	EGS
5.5	219+86.14	29.00' RT	1012.43	546798.10	816286.27	EPS
5.6	219+89.47	30.00' RT	1012.23	546797.11	816289.61	BOC
5.7	219+89.47	27.00' RT	1012.80	546800.11	816289.60	FLG
5.8	220+24.85	41.66' RT	1013.32	546785.56	816325.02	FLG
5.9	220+39.47	77.06' RT	1012.63	546750.21	816339.75	FLG
5.10	219+89.47	77.00' RT	0.00	546750.11	816289.75	FLG RADIUS
5.11	220+36.47	77.05' RT	1012.85	546750.21	816336.75	BOC
5.12	220+33.95	80.46' RT	1012.37	546746.79	816334.24	EGS
5.13	220+45.38	157.29' RT	1010.25	546670.00	816345.91	EGS
5.14	220+48.38	157.07' RT	1010.37	546670.23	816348.91	EPS
5.15	220+45.34	247.11' RT	1006.72	546580.18	816346.15	EGS
5.16	220+48.34	247.07' RT	1006.84	546580.23	816349.15	EPS
5.17	220+76.65	247.13' RT	1006.83	546580.25	816377.46	EPS
5.18	220+79.64	247.21' RT	1006.71	546580.18	816380.46	EGS
5.19	220+86.42	126.79' RT	1011.20	546700.62	816386.85	EPS
5.20	220+89.42	126.79' RT	1011.08	546700.63	816389.85	EGS
5.21	220+86.46	86.78' RT	1012.36	546740.64	816386.77	EPS
5.22	220+89.47	76.79' RT	1013.02	546750.63	816389.75	BOC
5.23	220+86.47	76.79' RT	1012.61	546750.63	816386.75	FLG
5.24	221+01.00	41.61' RT	1013.80	546785.85	816401.17	FLG
5.25	221+35.85	26.98' RT	1014.65	546800.75	816436.19	FLG
5.26	221+35.87	77.00' RT	0.00	546750.73	816436.75	FLG RADIUS
5.27	221+35.87	30.00' RT	1014.22	546797.72	816436.24	BOC
5.28	221+38.35	32.53' RT	1014.32	546795.22	816438.74	EGS
5.29	222+09.56	16.00' RT	1015.09	546812.53	816509.77	EPS
5.30	222+14.82	18.00' RT	1015.00	546810.58	816515.05	EGS

CTH I SOUTH & W.I.B.U. ROAD INTERSECTION						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
5.31	232+87.81	18.00' LT	1014.27	546858.27	817587.58	EGS
5.32	232+32.81	16.00' LT	1013.25	546855.67	817532.61	EPS
5.33	226+27.81	27.00' LT	1012.45	546860.08	816927.53	EPS
5.34	226+27.81	30.00' LT	1012.15	546863.08	816927.49	EGS
5.35	224+90.11	27.00' LT	1013.66	546858.58	816789.83	EPS
5.36	224+76.81	29.07' LT	1013.64	546860.51	816776.51	BOC
5.37	224+76.57	26.08' LT	1013.78	546857.52	816776.30	FLG
5.38	223+40.11	37.00' LT	1014.50	546866.95	816639.73	FLG
5.39	221+40.11	37.00' LT	1014.48	546864.77	816439.75	FLG
5.40	220+97.07	54.62' LT	1013.84	546882.06	816396.94	FLG
5.41	220+79.36	97.25' LT	1014.17	546924.64	816379.10	FLG
5.42	221+40.11	97.00' LT	1022.60	546924.76	816439.09	FLG RADIUS
5.43	220+82.35	97.25' LT	1014.11	546924.65	816382.09	BOC
5.44	220+85.08	99.99' LT	1014.05	546927.40	816384.81	EGS
5.45	220+77.92	171.82' LT	1015.22	546999.21	816377.43	EGS
5.46	220+74.92	171.79' LT	1015.34	546999.17	816374.43	EPS
5.47	220+53.77	171.85' LT	1015.34	546999.16	816353.28	EPS
5.48	220+50.78	171.93' LT	1015.22	546999.23	816350.29	EGS
5.49	220+49.80	86.99' LT	1014.02	546914.29	816349.57	EPS
5.50	220+46.33	76.96' LT	1014.31	546904.25	816346.13	BOC
5.51	220+49.33	76.95' LT	1013.90	546904.25	816349.13	FLG
5.52	220+37.45	48.56' LT	1013.42	546875.82	816337.34	FLG
5.53	220+09.33	37.00' LT	1012.95	546864.17	816309.26	FLG
5.54	220+09.33	77.00' LT	1013.43	546904.17	816309.13	FLG RADIUS
5.55	220+09.33	40.00' LT	1013.31	546867.17	816309.25	BOC
5.56	220+06.75	42.54' LT	1012.56	546869.70	816306.66	EGS
5.57	219+37.11	27.00' LT	1011.85	546853.95	816237.07	EPS
5.58	219+31.55	29.00' LT	1011.55	546855.93	816231.50	EGS
5.59	213+04.33	16.00' LT	994.65	546840.98	815604.33	EPS
5.60	213+04.33	18.00' LT	994.45	546842.98	815604.32	EGS



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

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

FOR MOVING OPERATIONS SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION". COSTS FOR FLAGGING ASSOCIATED SIGNS FOR MOVING OPERATIONS ARE INCIDENTAL TO THE CONTRACT.

PER SDD 15C04, ROAD WORK AHEAD SIGNS SHALL BE PLACED ON SIGN ROADS NO MORE THAN 500 FEET FROM THE INTERSECTION, OR AT THE CLOSEST INTERSECTION, WHICHEVER IS CLOSEST.

PLACE "NO CENTER LINE" SIGNS AT THE START OF THE PROJECT, END OF THE PROJECT, AND AT INTERSECTION FOR VEHICLES TRAVELING IN BOTH DIRECTIONS WHEN PULVERIZING OPERATIONS BEGIN. "NO CENTER LINE" SIGNS SHALL REMAIN IN PLACE UNTIL A CENTER LINE HAS BEEN ESTABLISHED AND IS APPROVED BY THE ENGINEER.

END ROAD WORK
 G20-2A
 48"x24"

ROAD WORK NEXT 4 MILES
 G20-1
 60"x24"

ROAD WORK AHEAD
 W20-1A

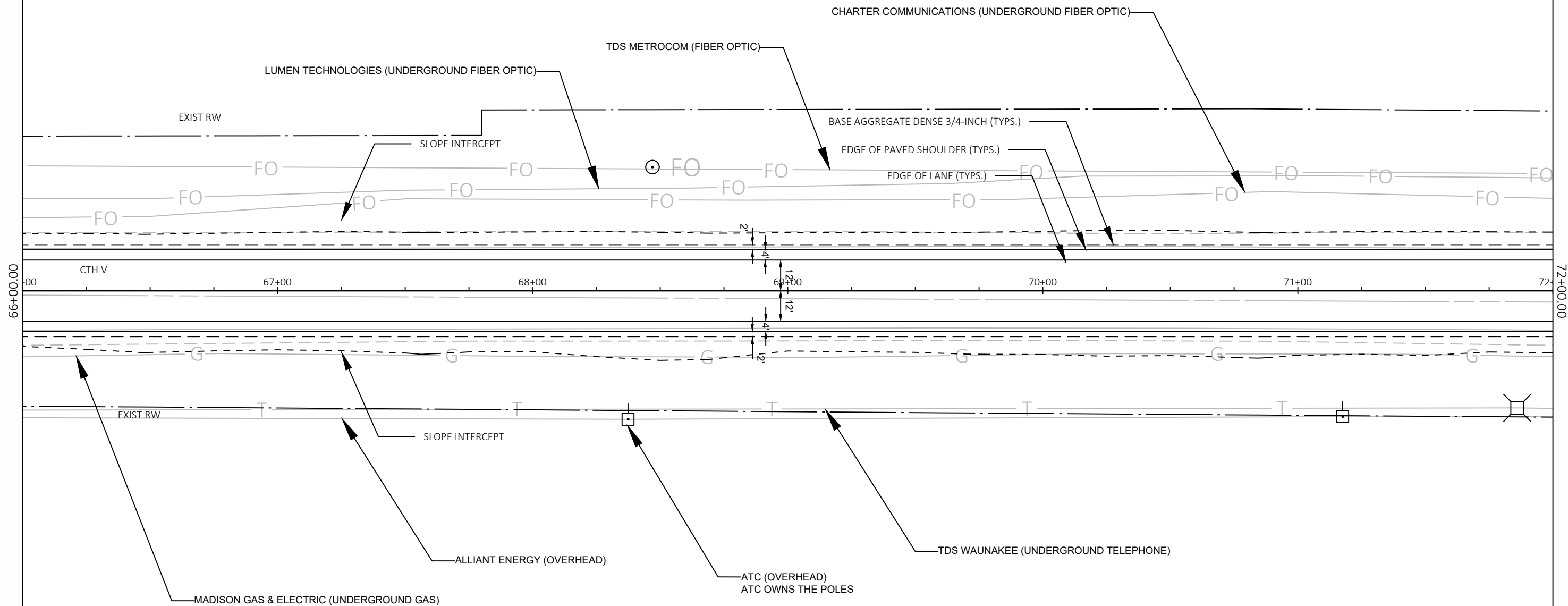
NO CENTER LINE
 W8-12
 36"x36"

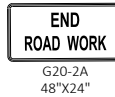


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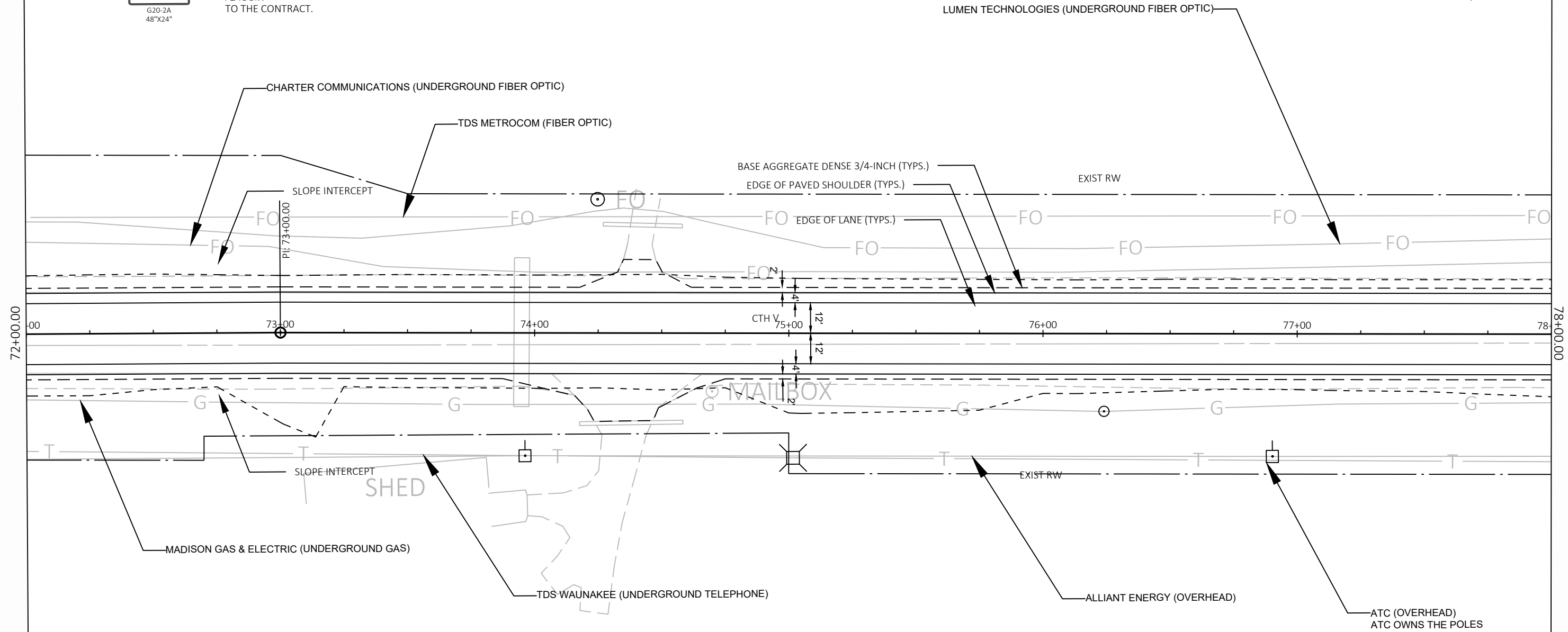


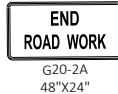


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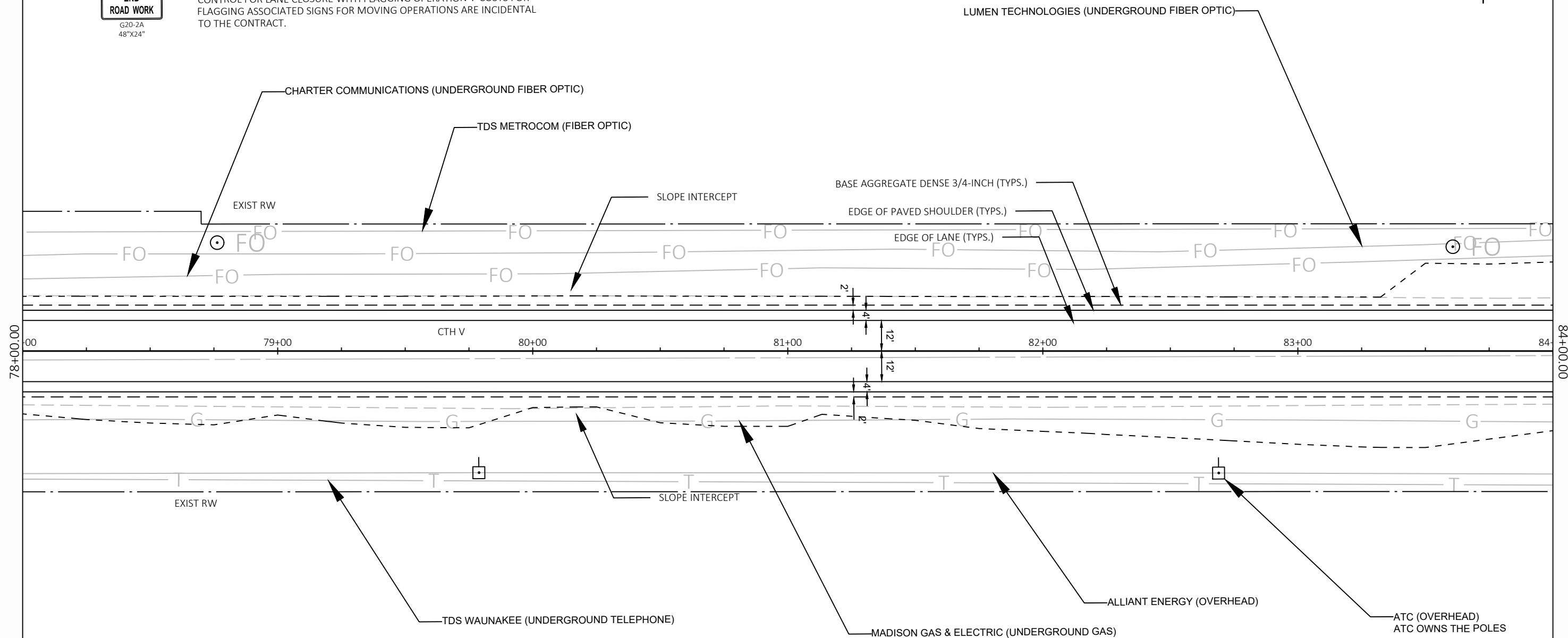


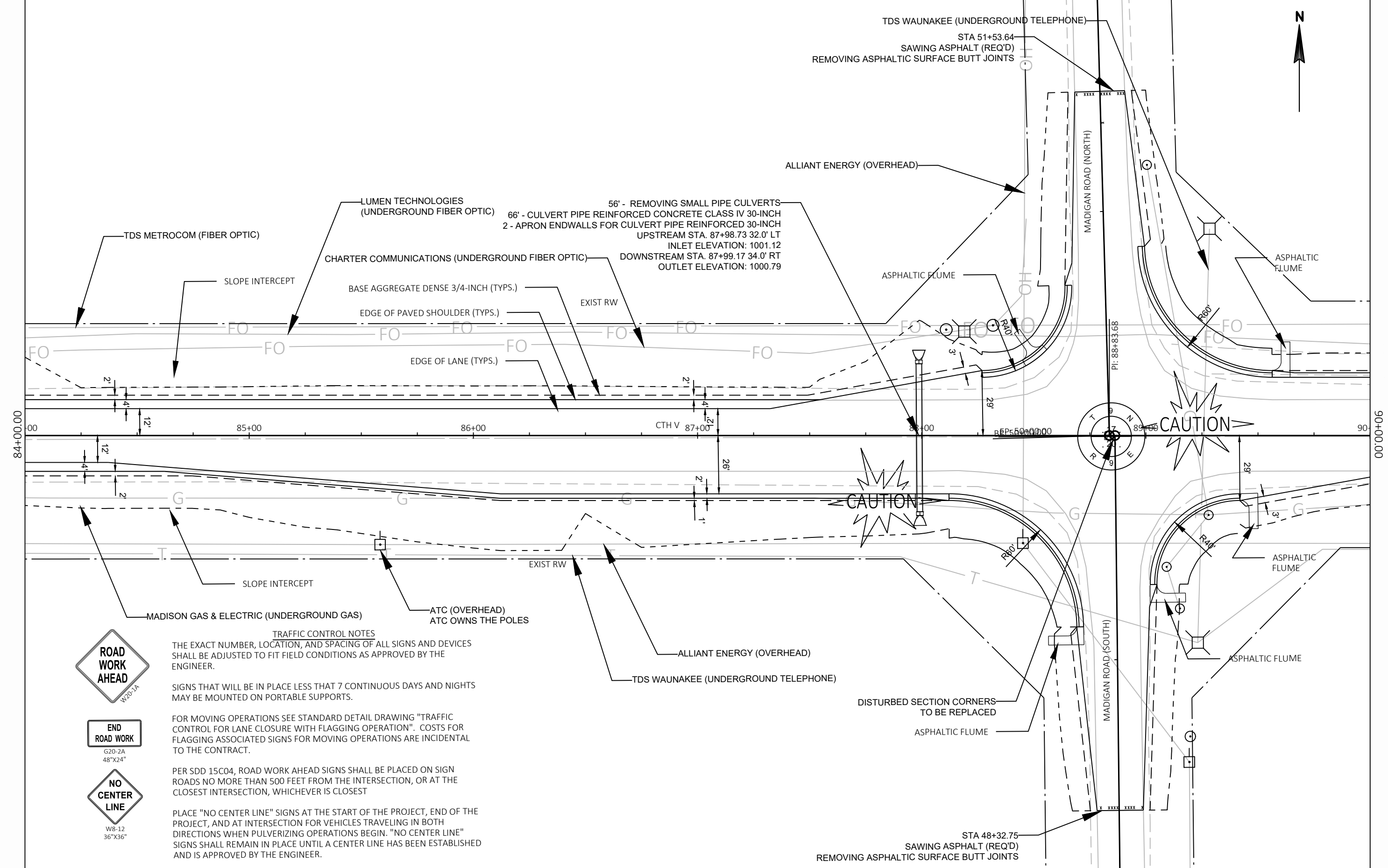


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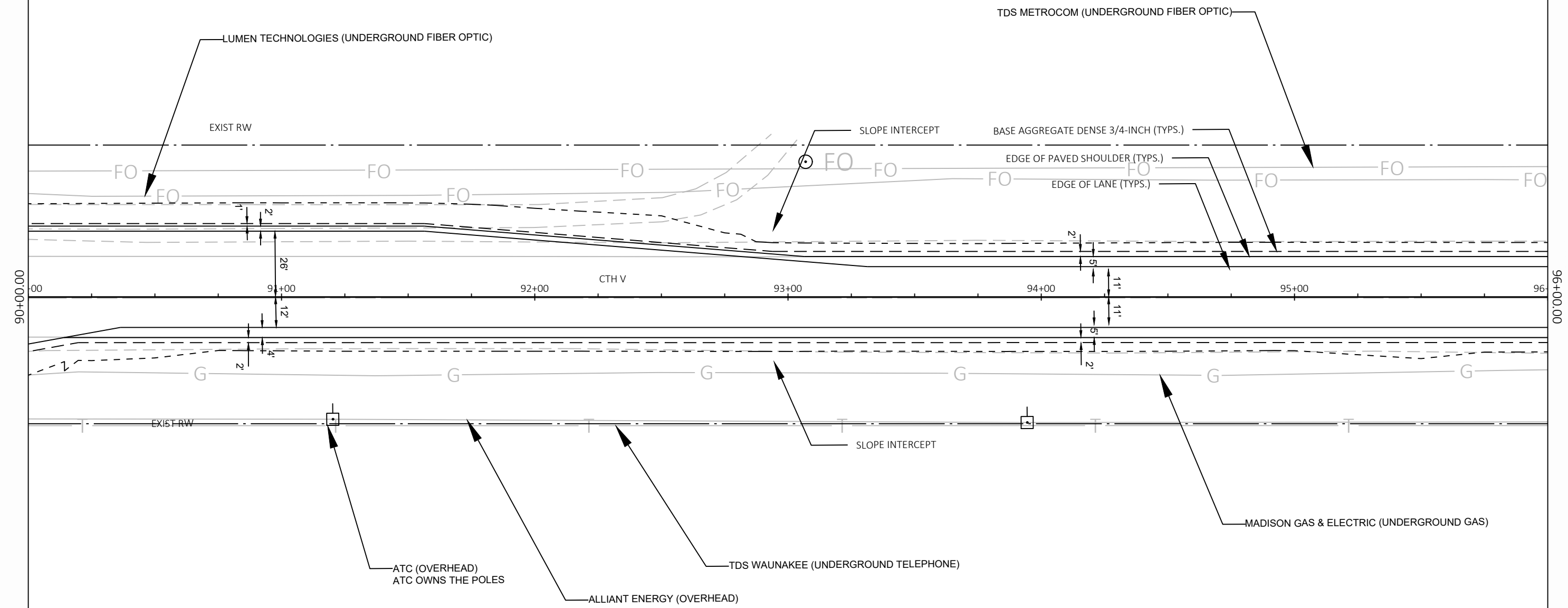


G20-2A
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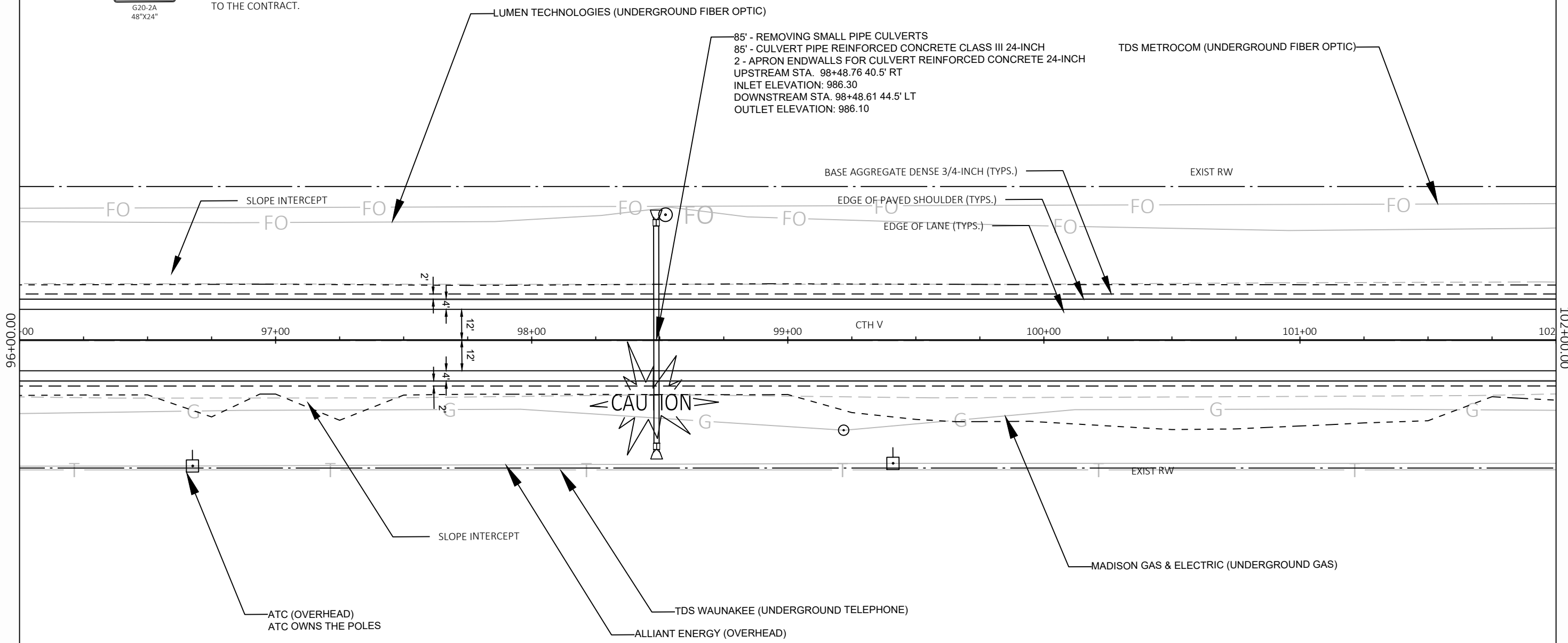
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	PLAN DETAILS	SHEET	E
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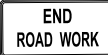
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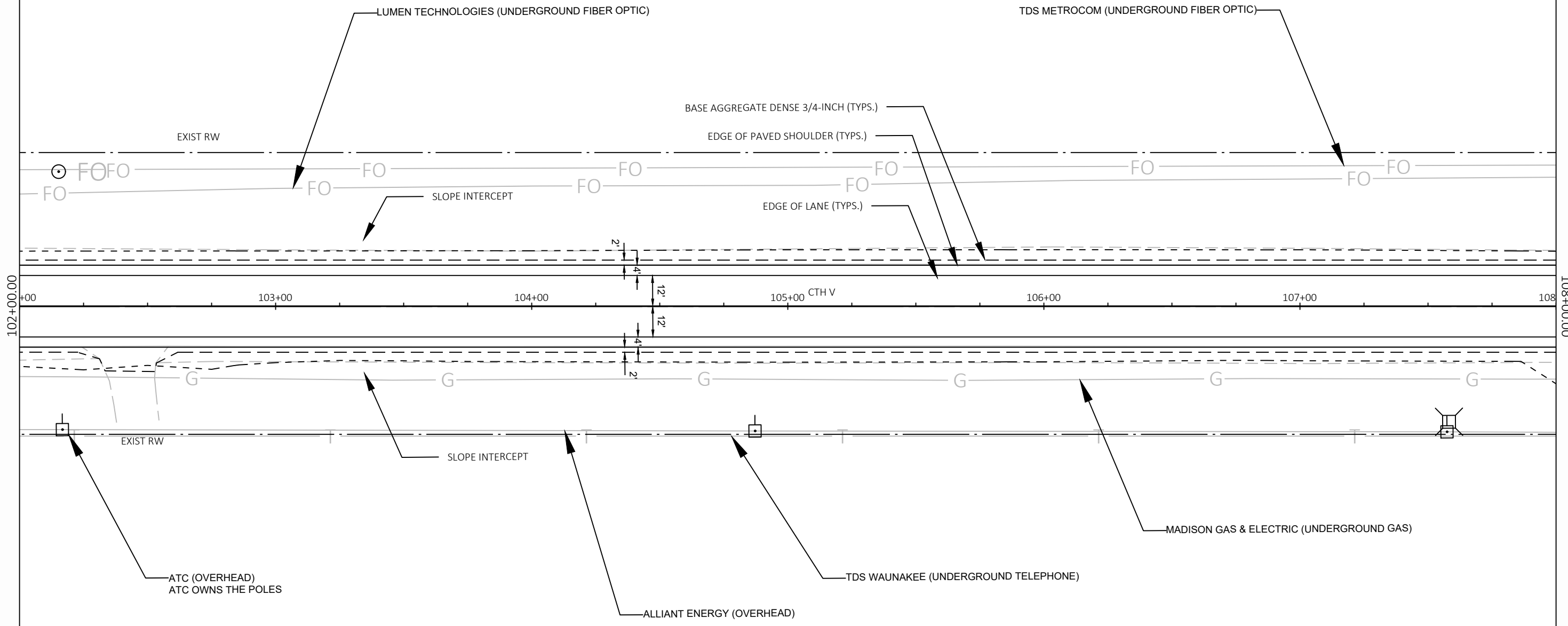
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TRAFFIC CONTROL NOTES

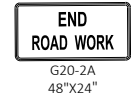
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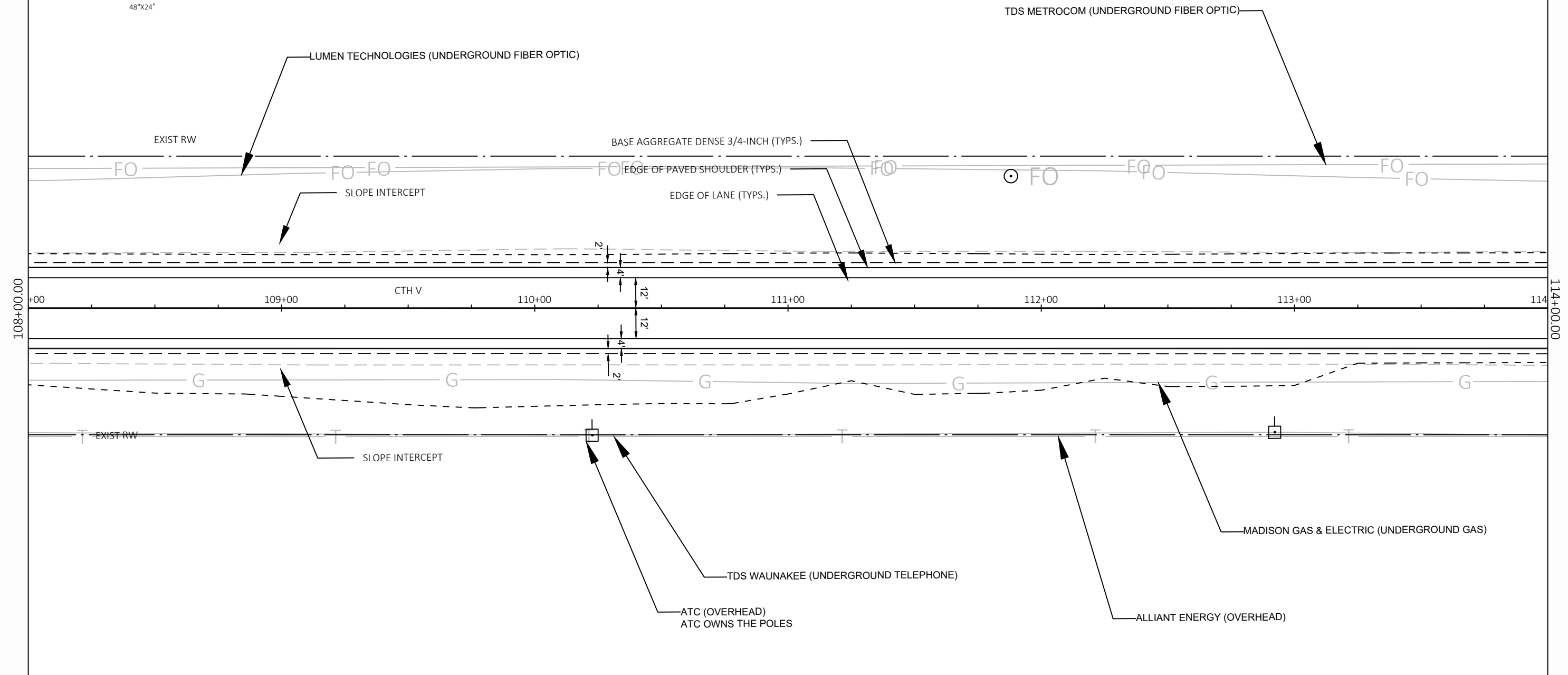
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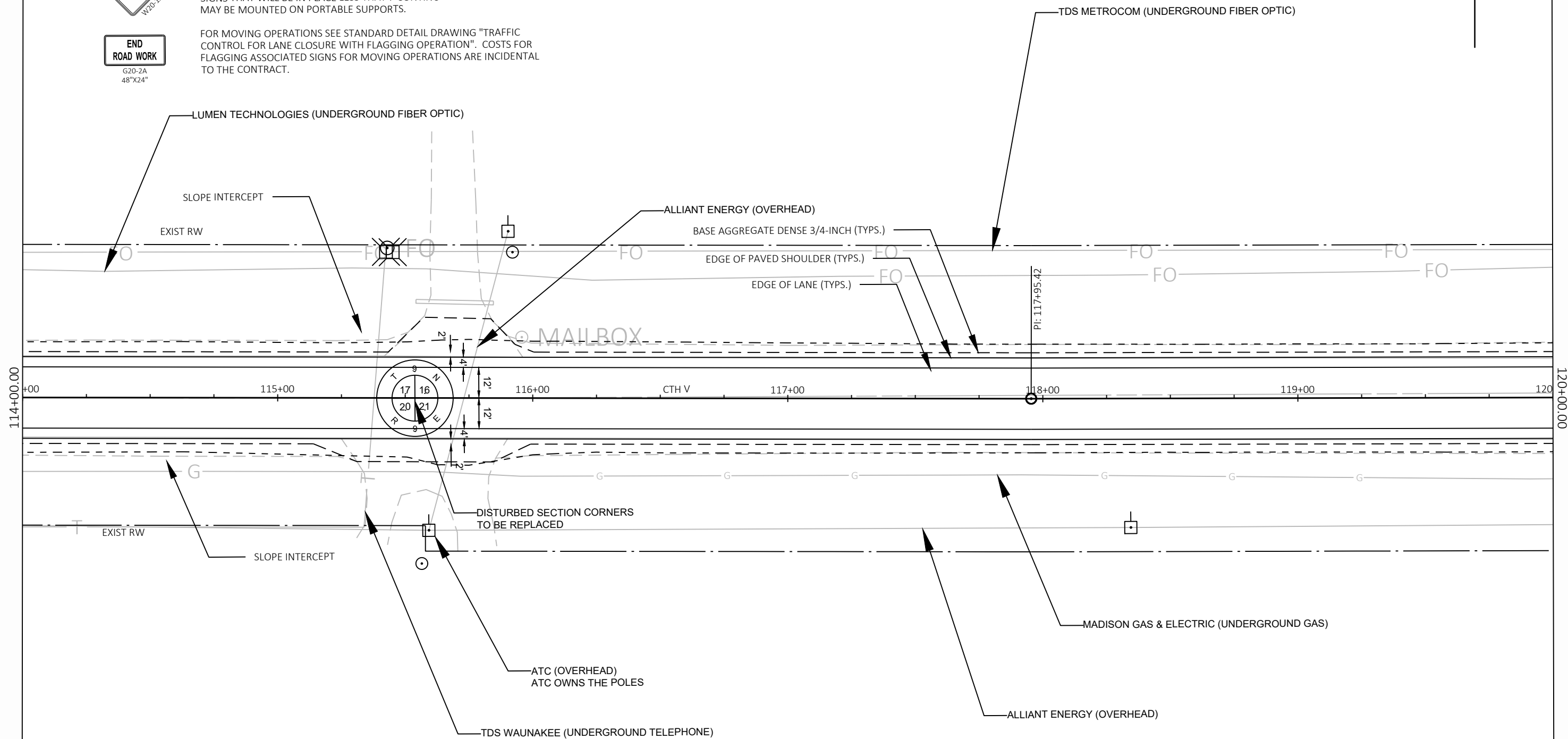
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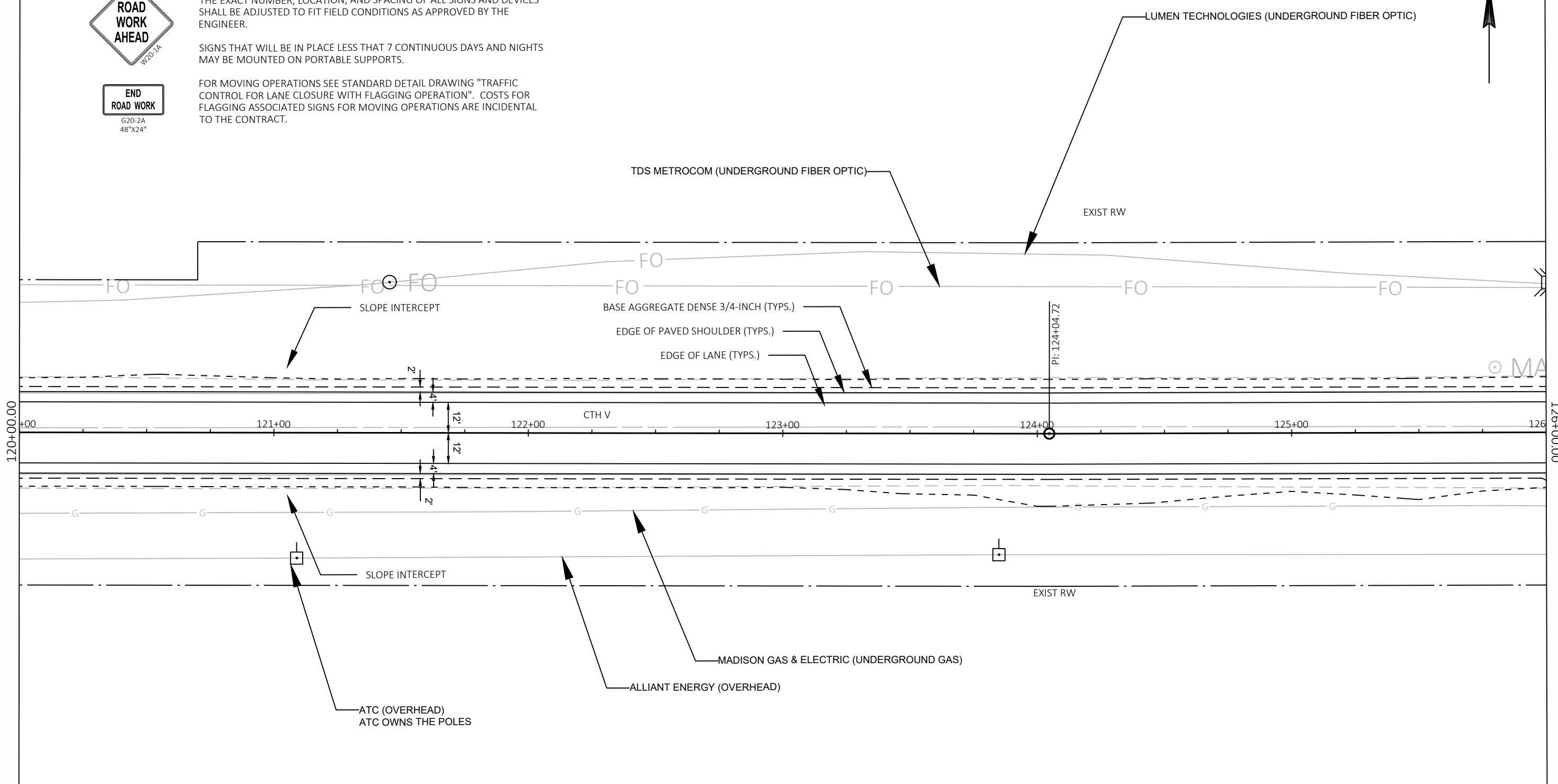
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120+00.00

126+00.00

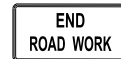


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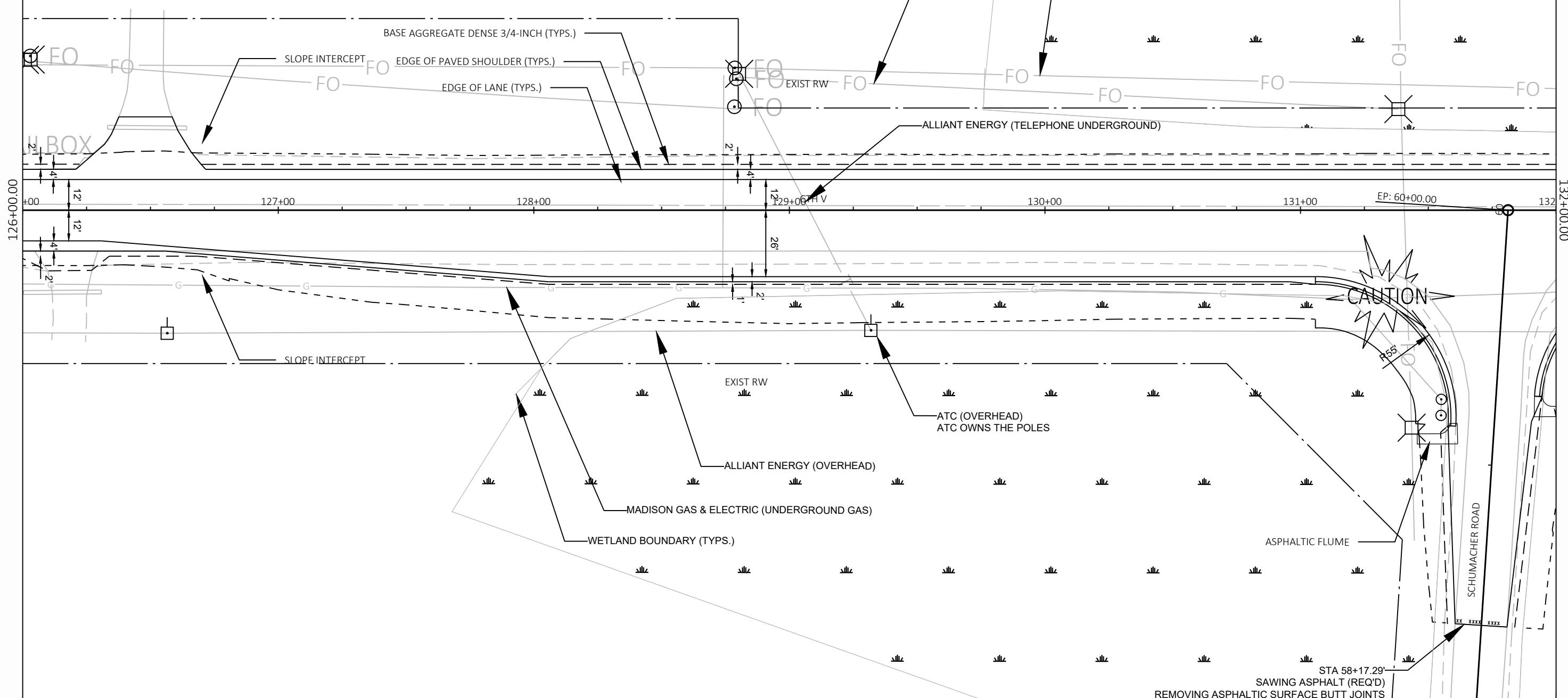


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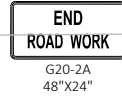
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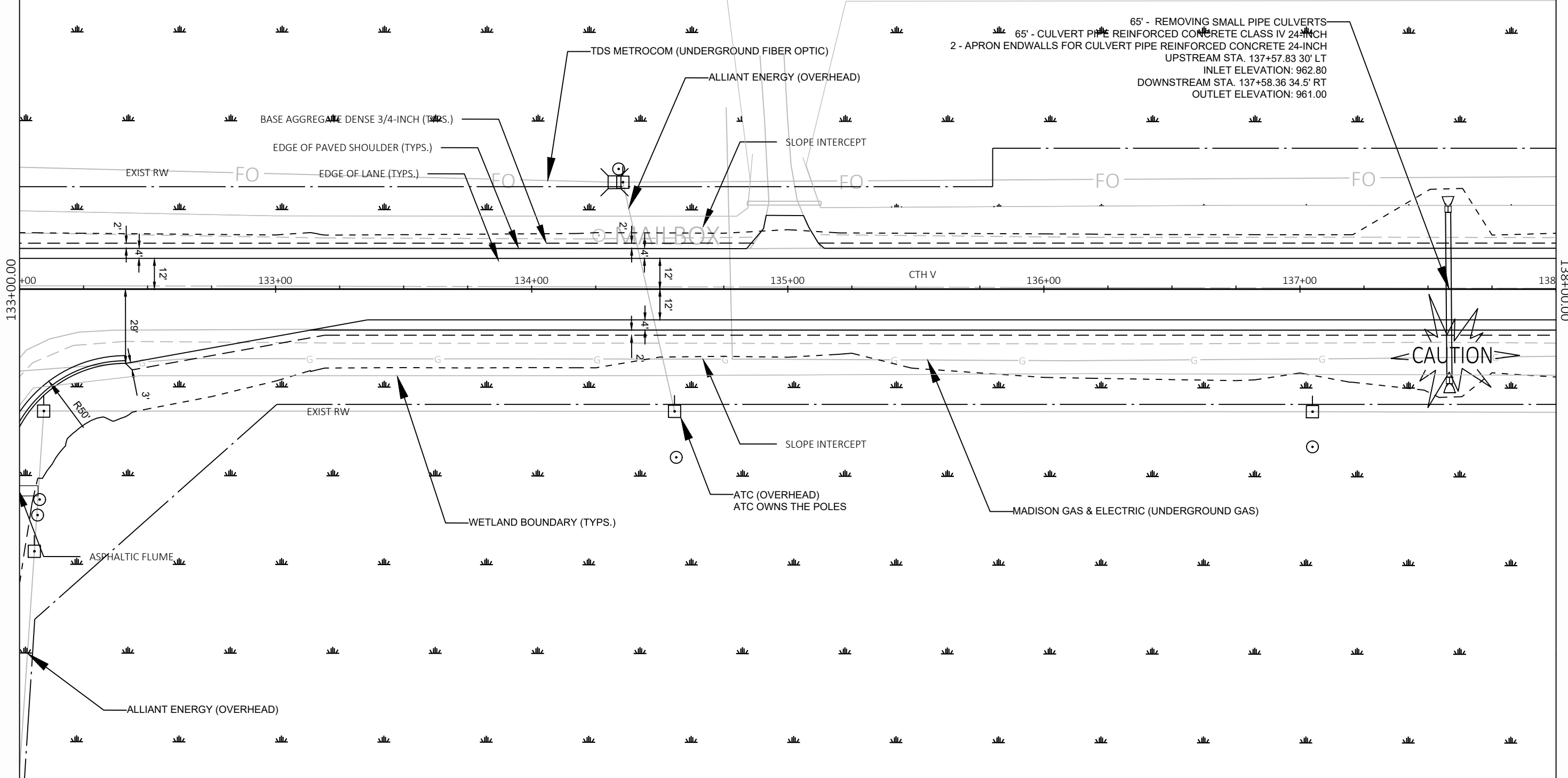


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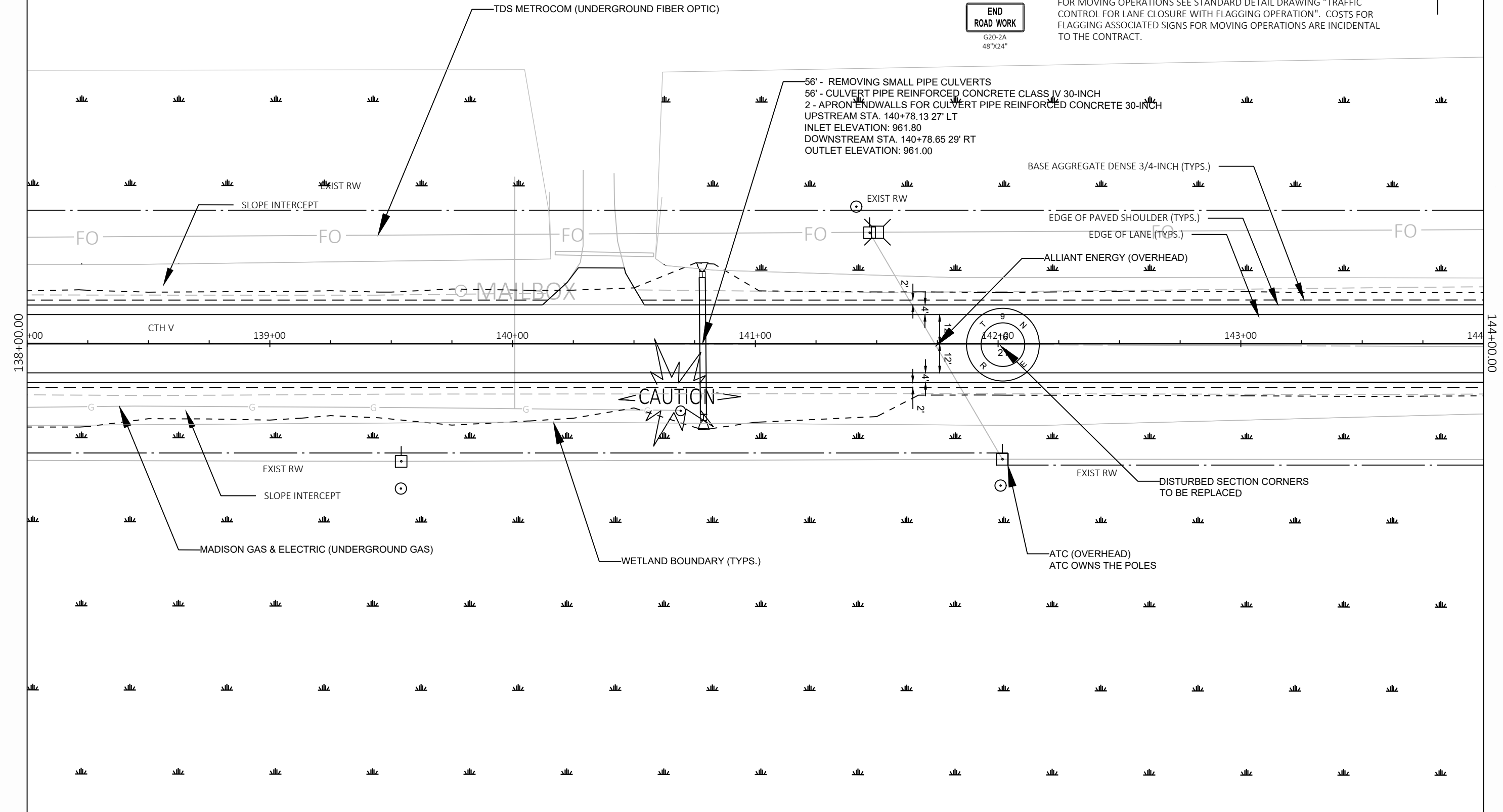
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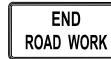


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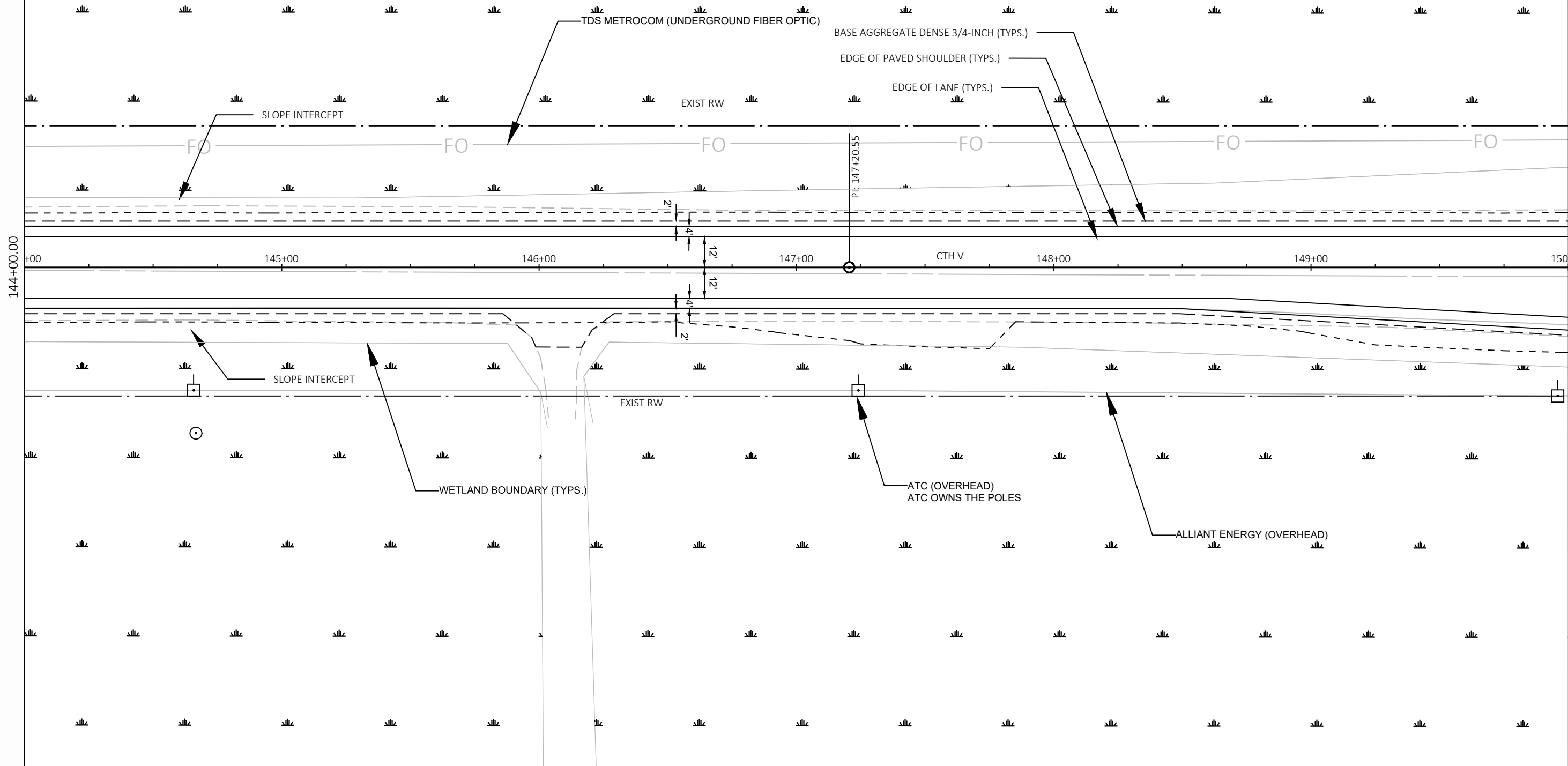
G20-2A
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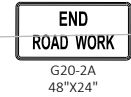
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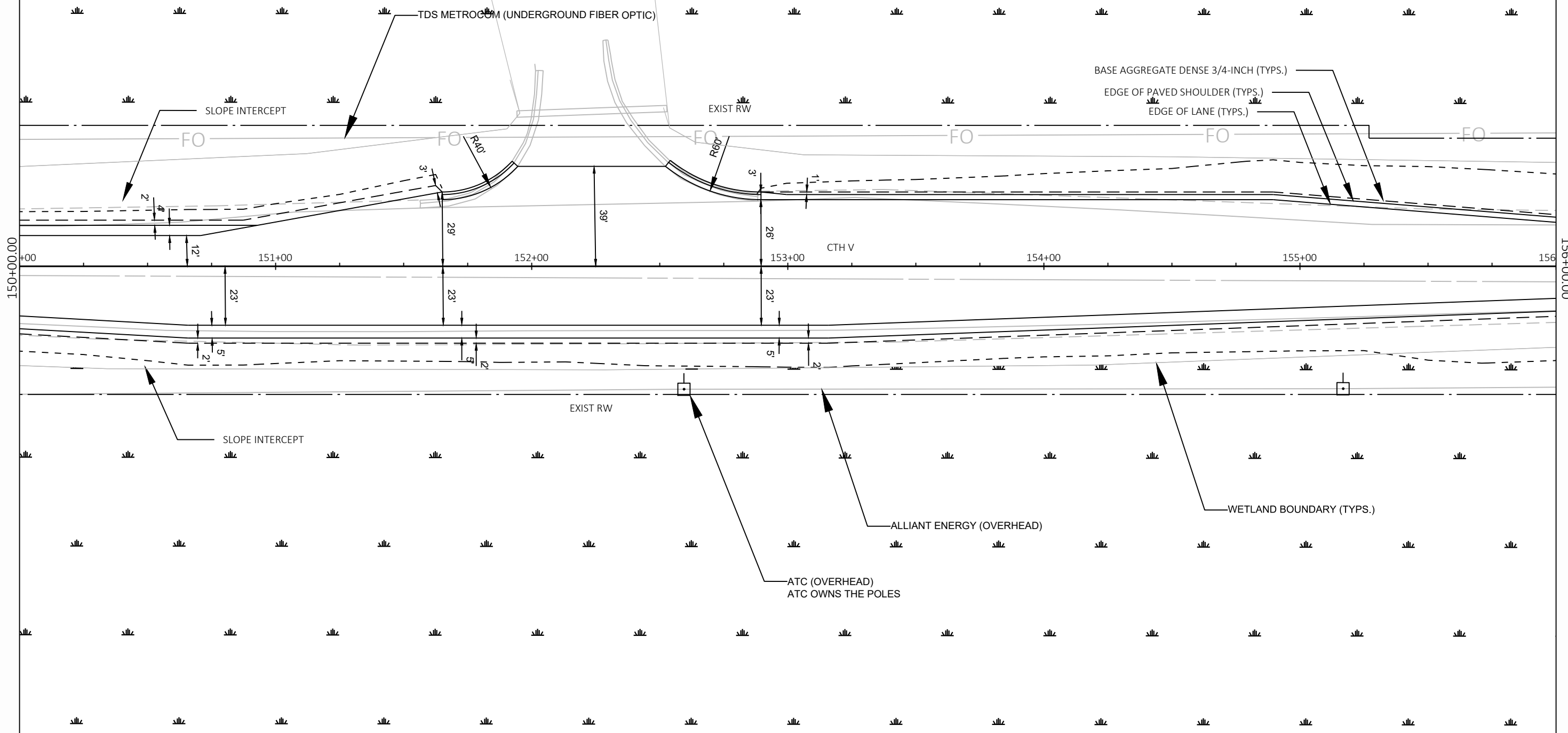




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TDS METROCOM (UNDERGROUND FIBER OPTIC)

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BASE AGGREGATE DENSE 3/4-INCH (TYP.)

EDGE OF PAVED SHOULDER (TYP.)

EDGE OF LANE (TYP.)

SLOPE INTERCEPT

EXIST RW

FO

FO

FO

FO

FO

FO

156+00.00

162+00.00

156+00 157+00 158+00 159+00 160+00 CTH V 161+00 162+00

EXIST RW

SLOPE INTERCEPT

WETLAND BOUNDARY (TYP.)

ATC (OVERHEAD)
ATC OWNS THE POLES

ALLIANT ENERGY (OVERHEAD)



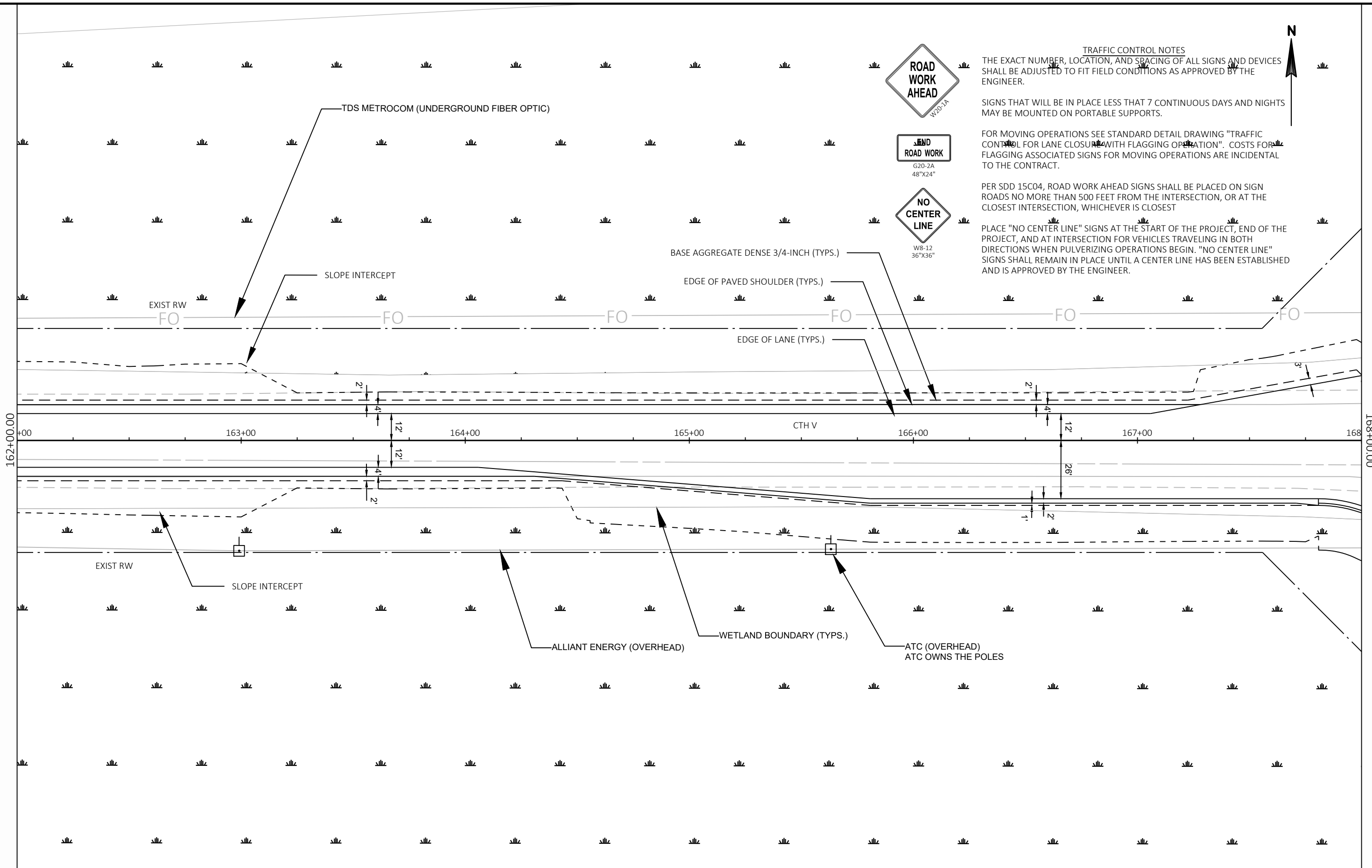
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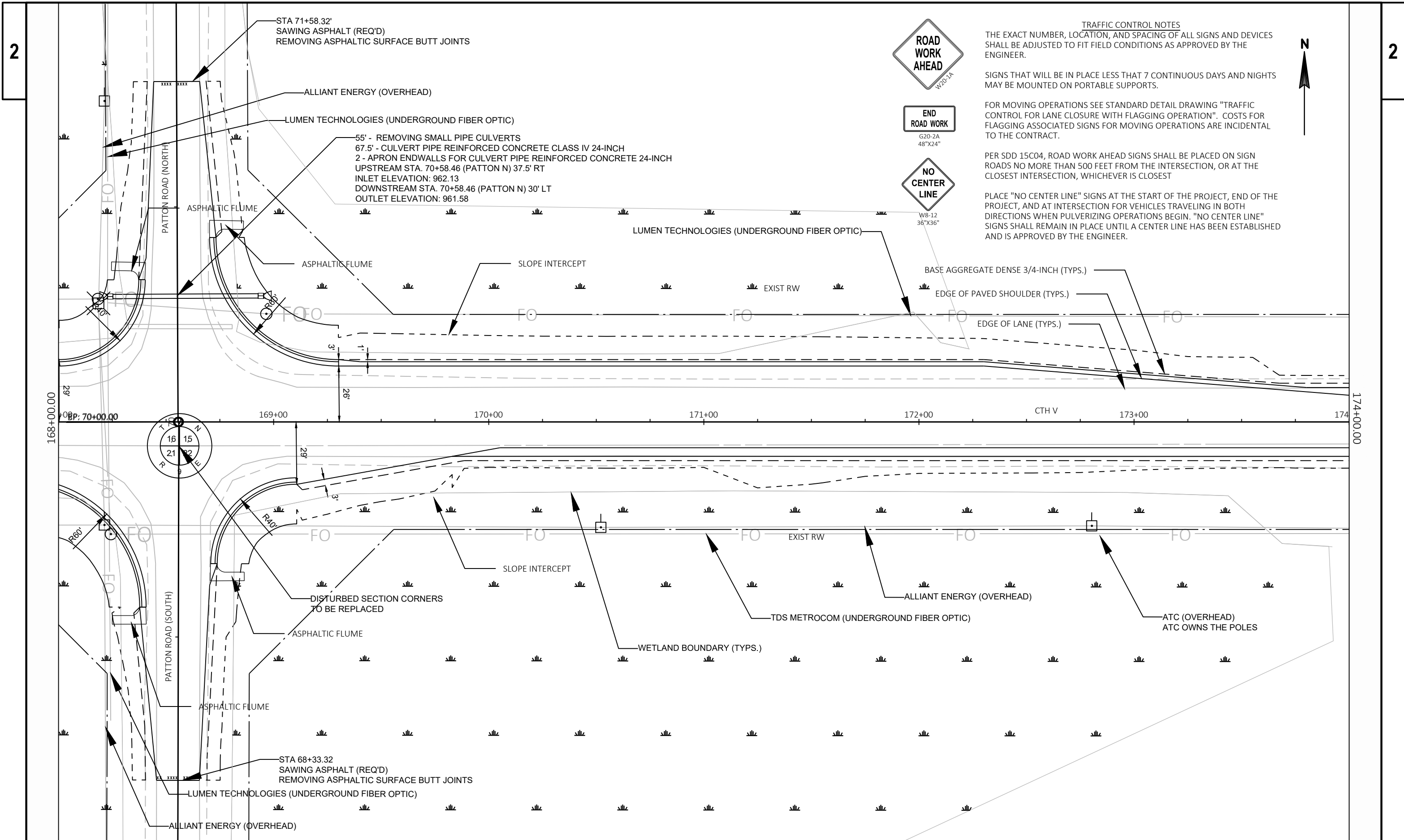
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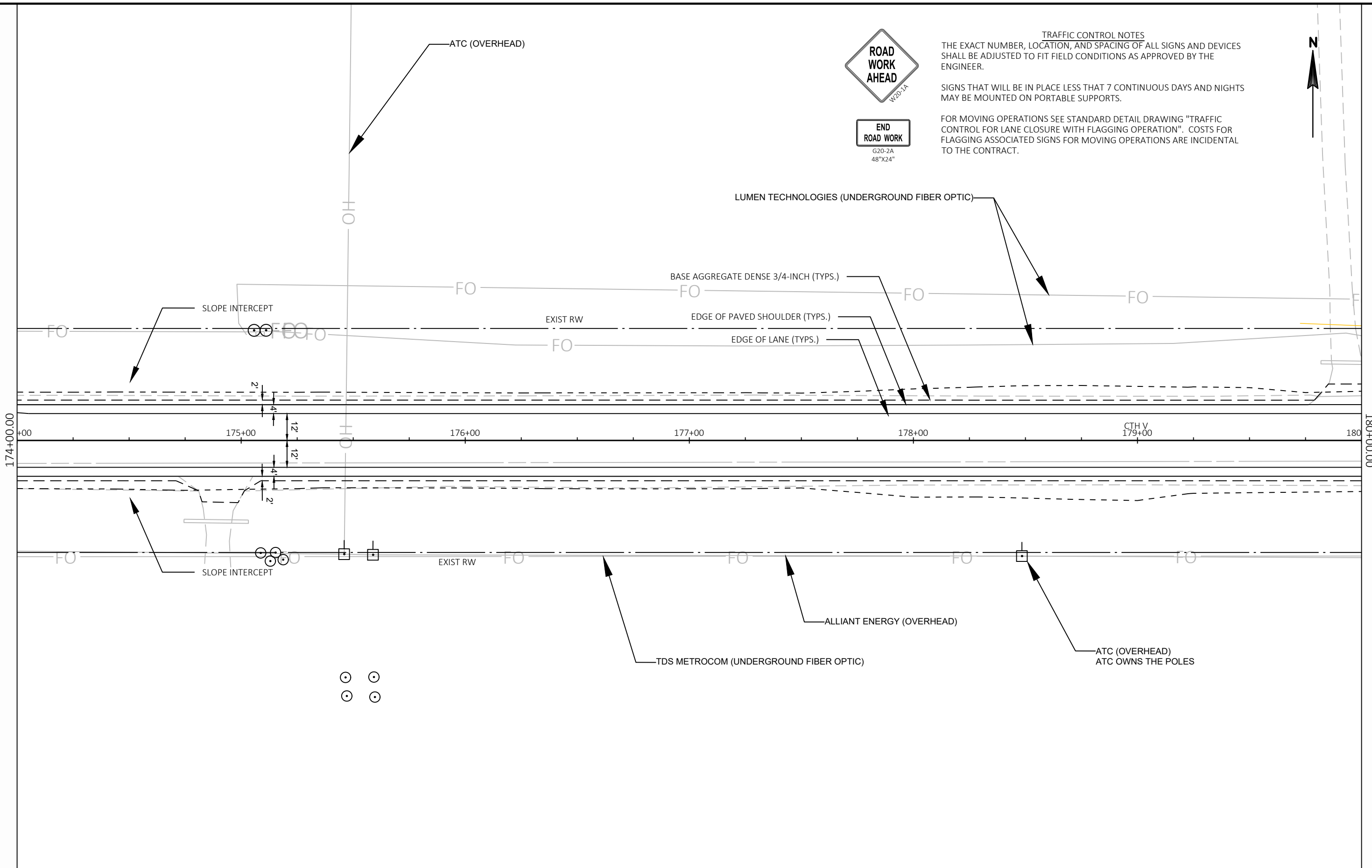
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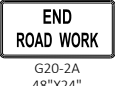
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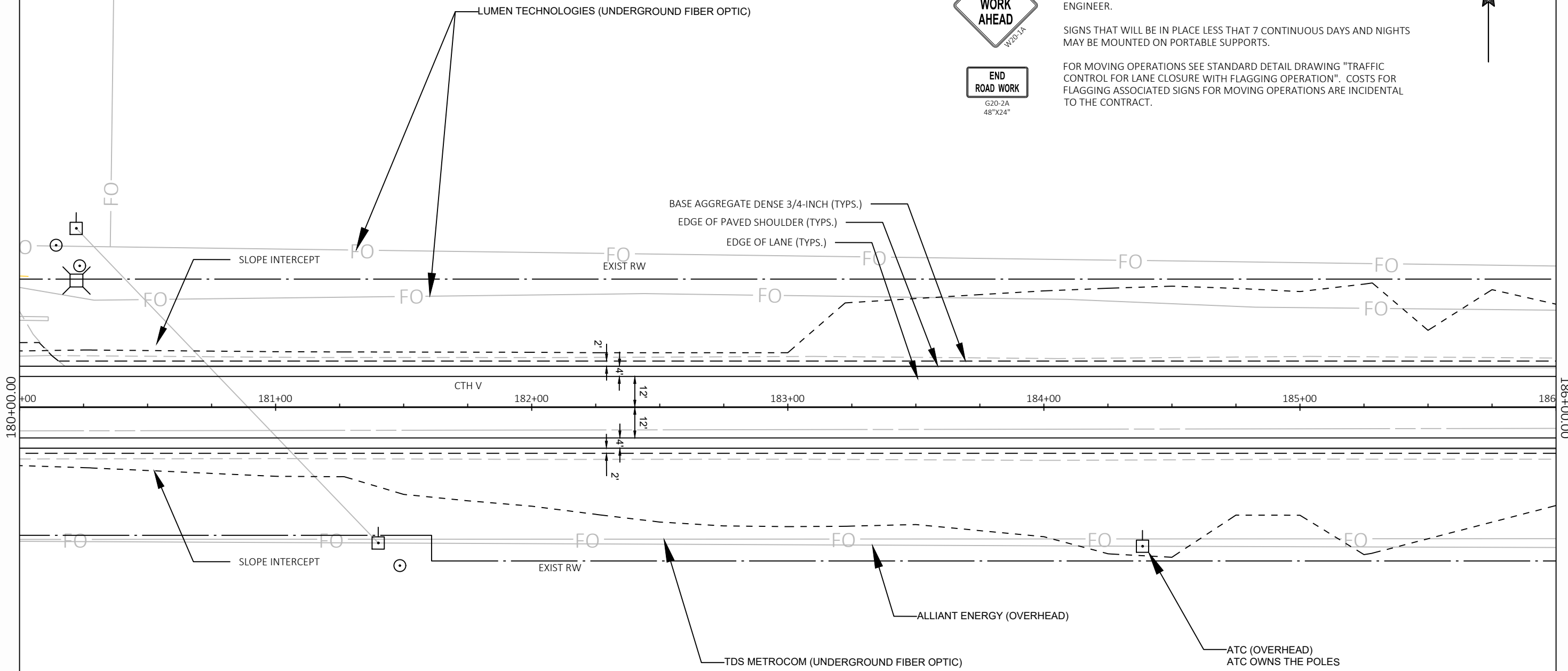
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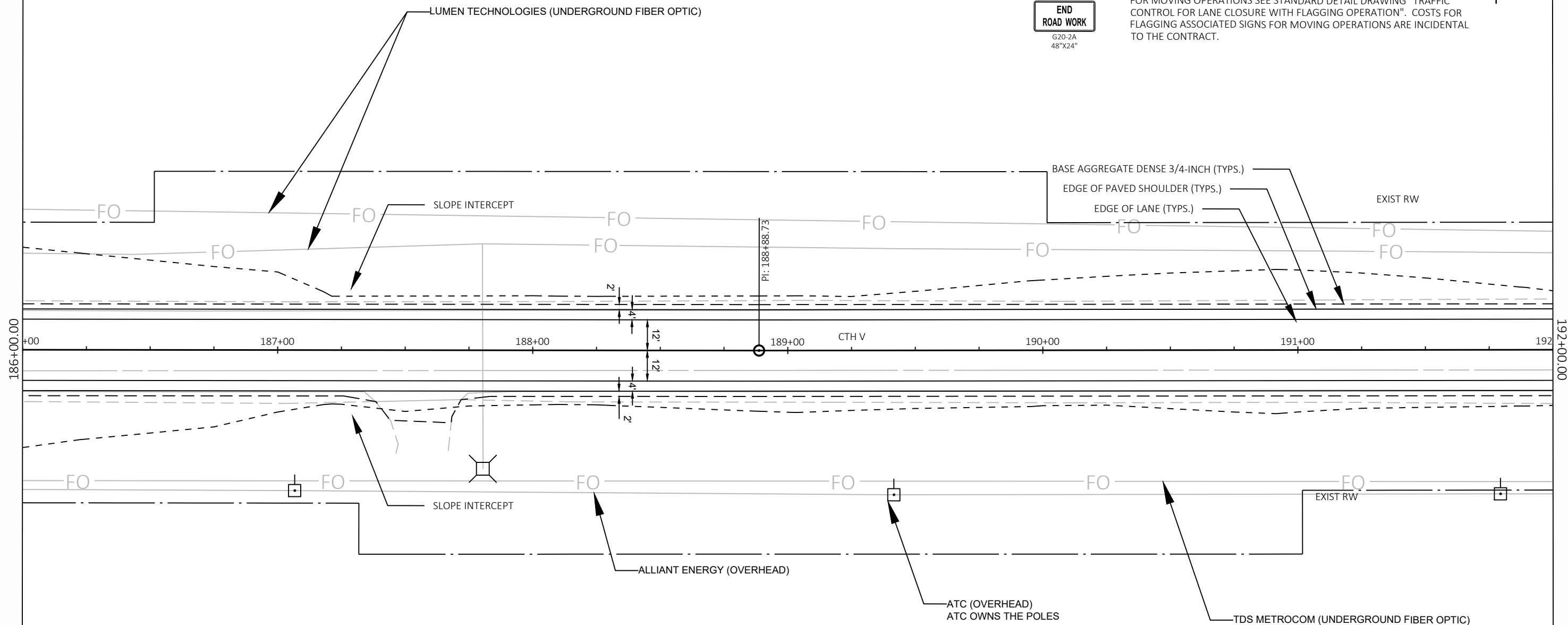




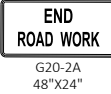
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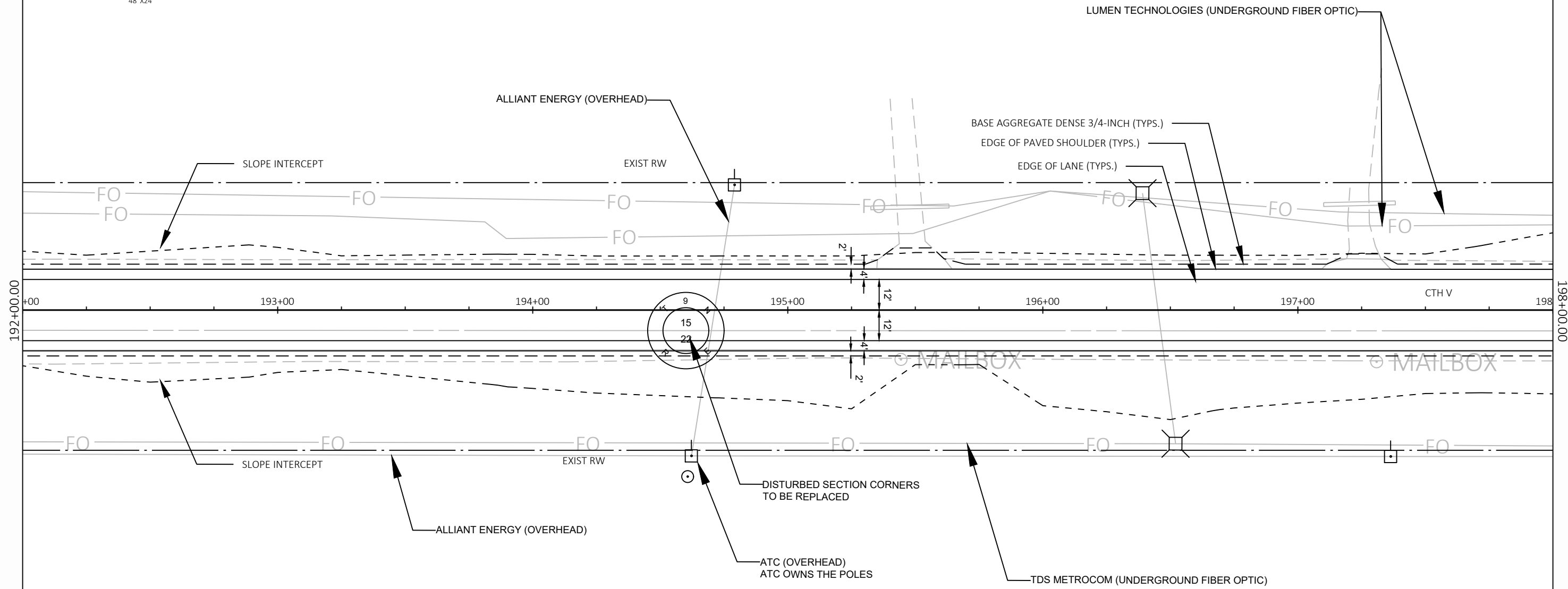
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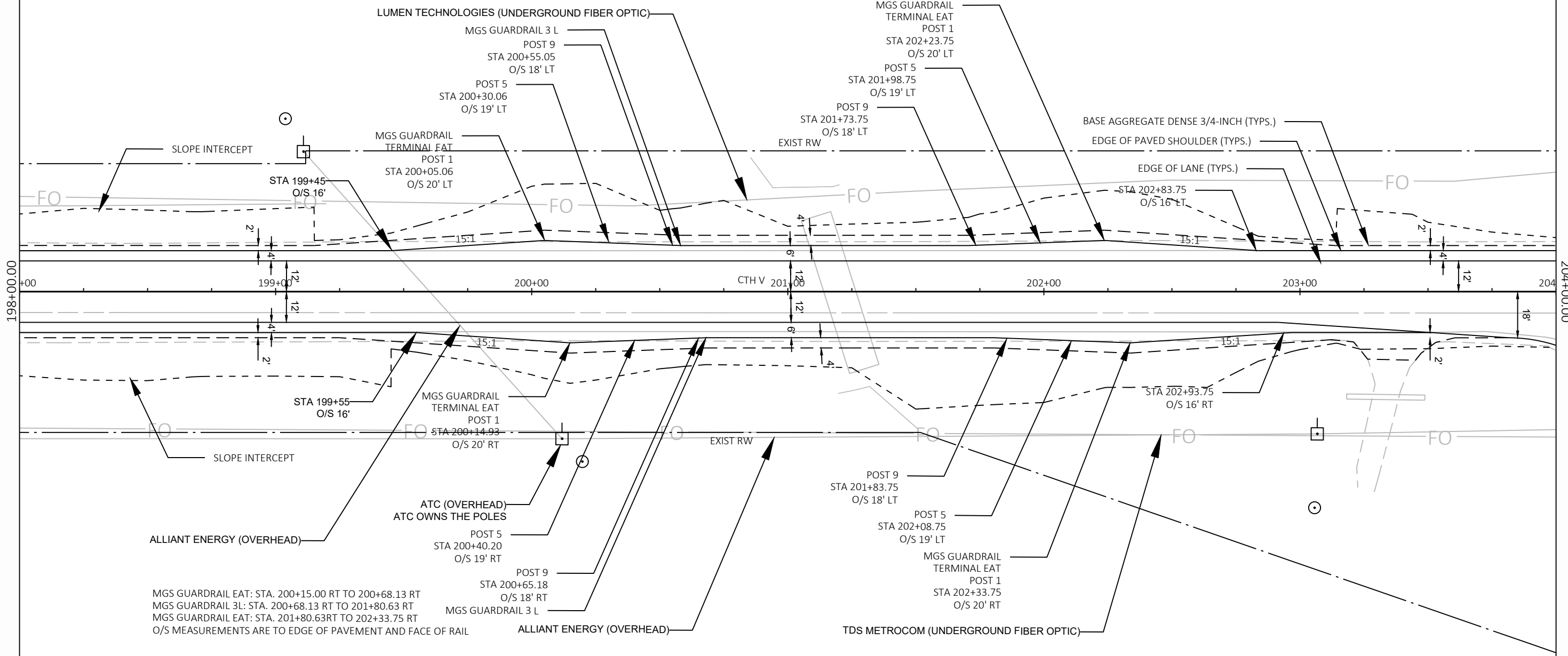
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G20-2A
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MGS GUARDRAIL EAT: STA. 200+05.00 LT TO 200+58.13 LT
 MGS GUARDRAIL 3L: STA. 200+58.13 LT TO 201+70.65 LT
 MGS GUARDRAIL EAT: STA. 201+70.65 LT TO 202+23.75 LT
 O/S MEASUREMENTS ARE TO EDGE OF PAVEMENT AND FACE OF RAIL





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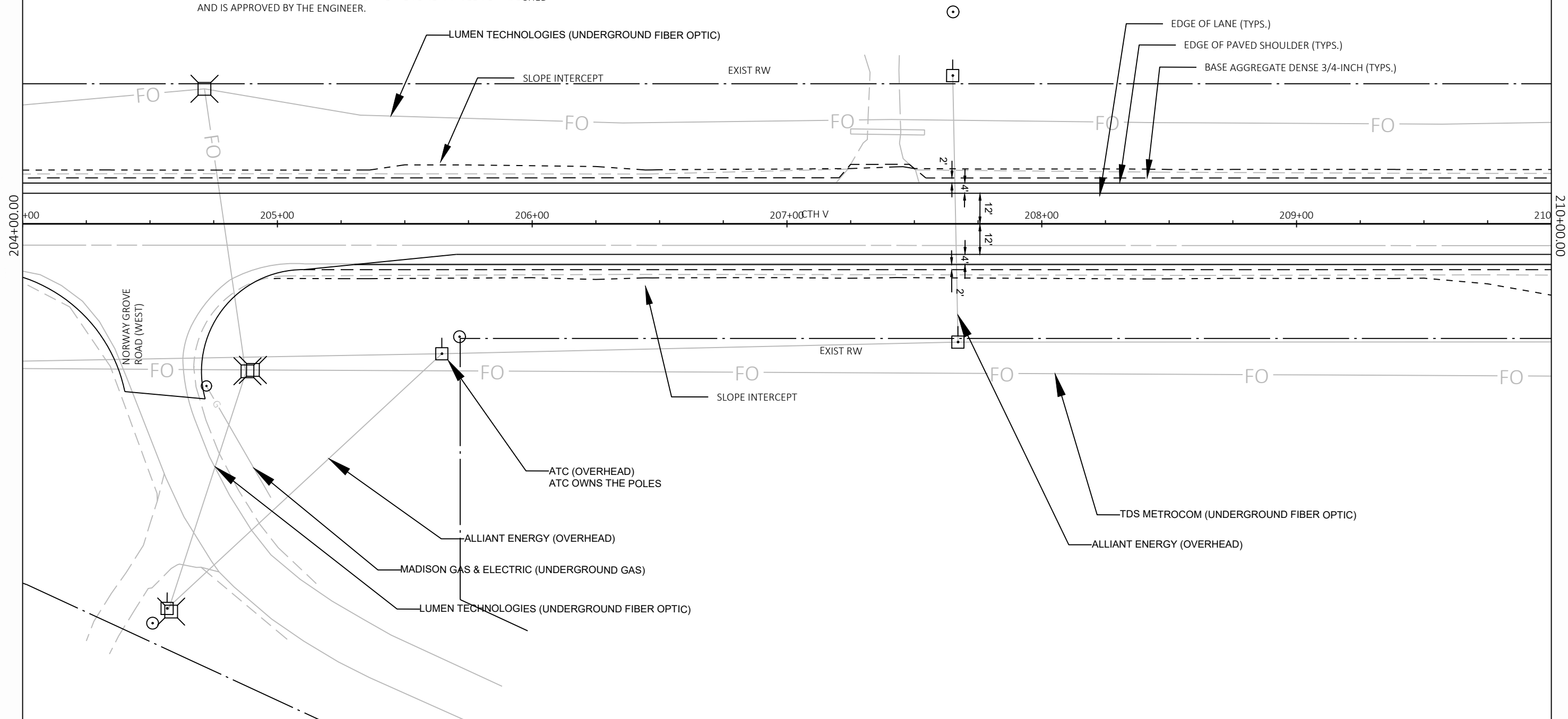
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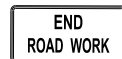
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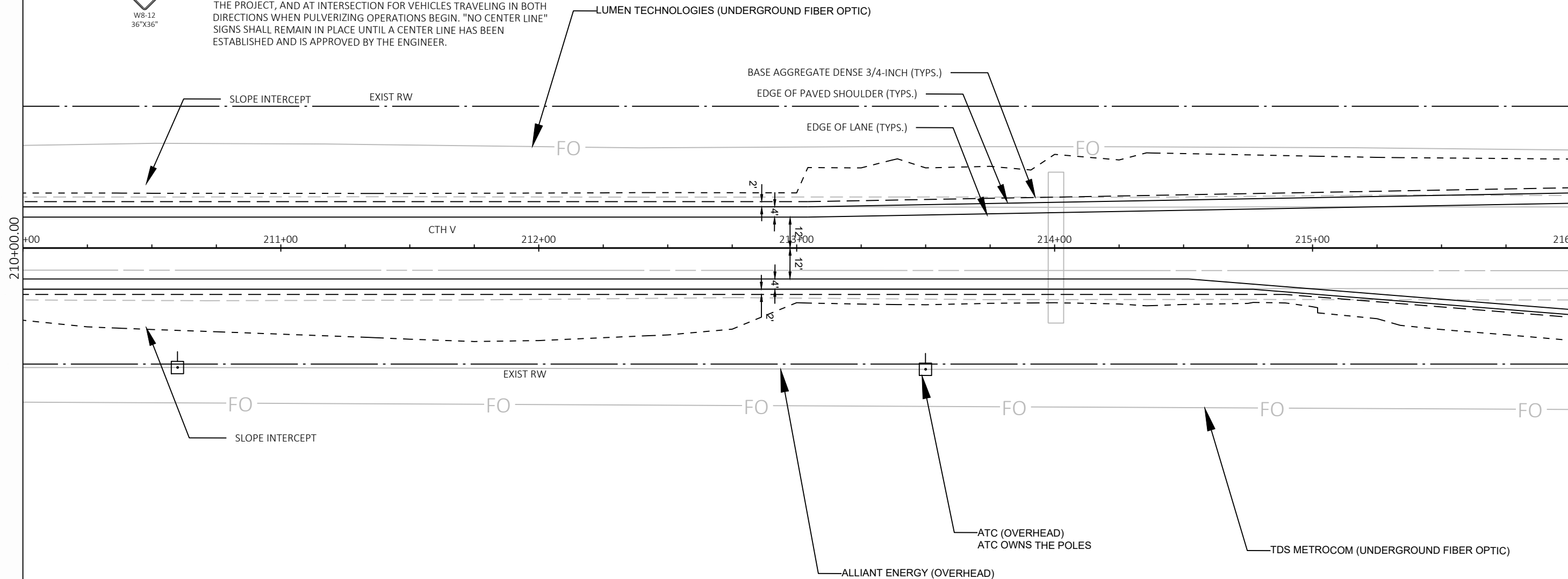
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FOR MOVING OPERATIONS SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION". COSTS FOR FLAGGING ASSOCIATED SIGNS FOR MOVING OPERATIONS ARE INCIDENTAL TO THE CONTRACT.

PER SDD 15C04, ROAD WORK AHEAD SIGNS SHALL BE PLACED ON SIGN ROADS NO MORE THAN 500 FEET FROM THE INTERSECTION, OR AT THE CLOSEST INTERSECTION, WHICHEVER IS CLOSEST



PLACE "NO CENTER LINE" SIGNS AT THE START OF THE PROJECT, END OF THE PROJECT, AND AT INTERSECTION FOR VEHICLES TRAVELING IN BOTH DIRECTIONS WHEN PULVERIZING OPERATIONS BEGIN. "NO CENTER LINE" SIGNS SHALL REMAIN IN PLACE UNTIL A CENTER LINE HAS BEEN ESTABLISHED AND IS APPROVED BY THE ENGINEER.





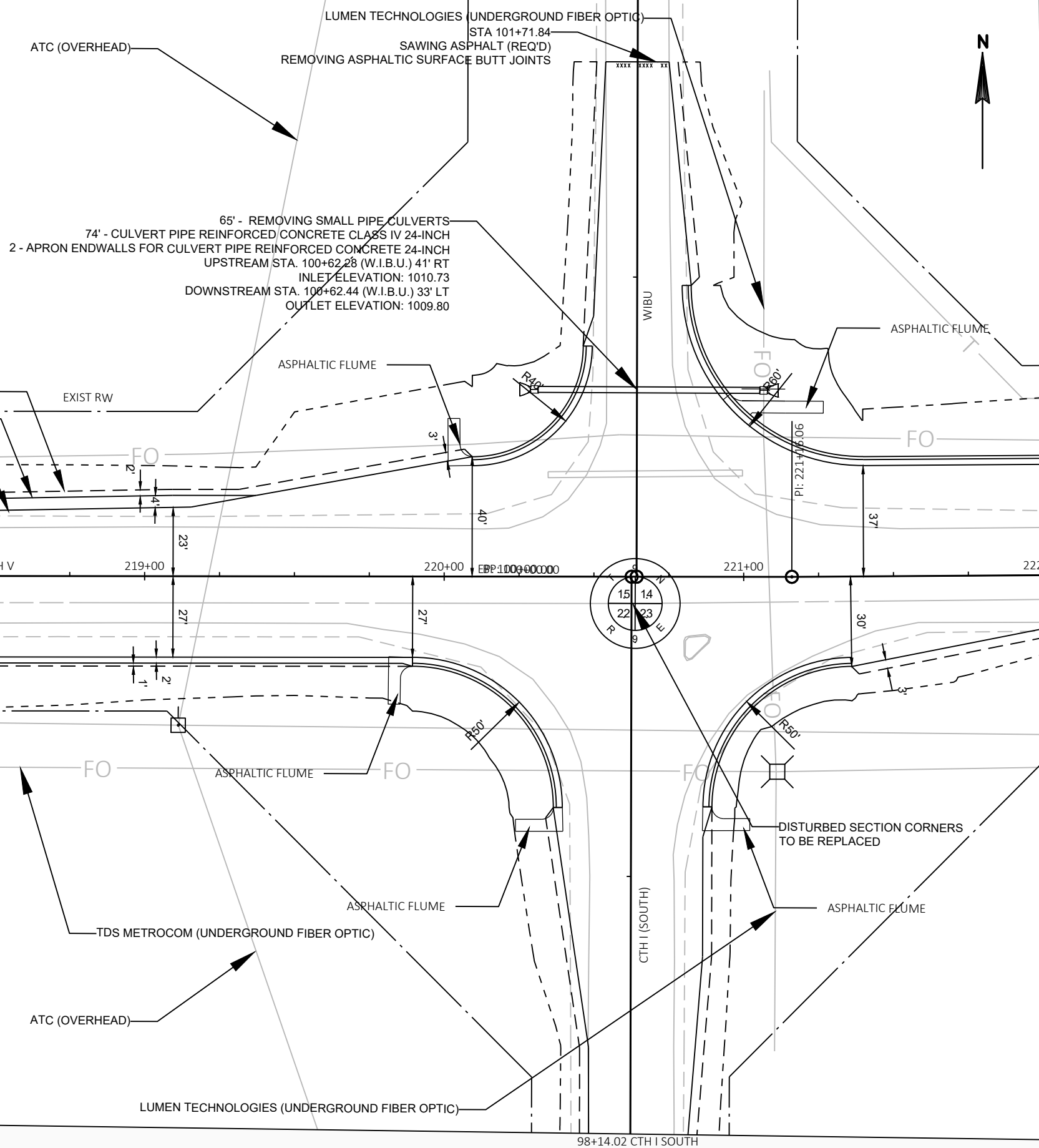
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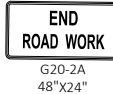
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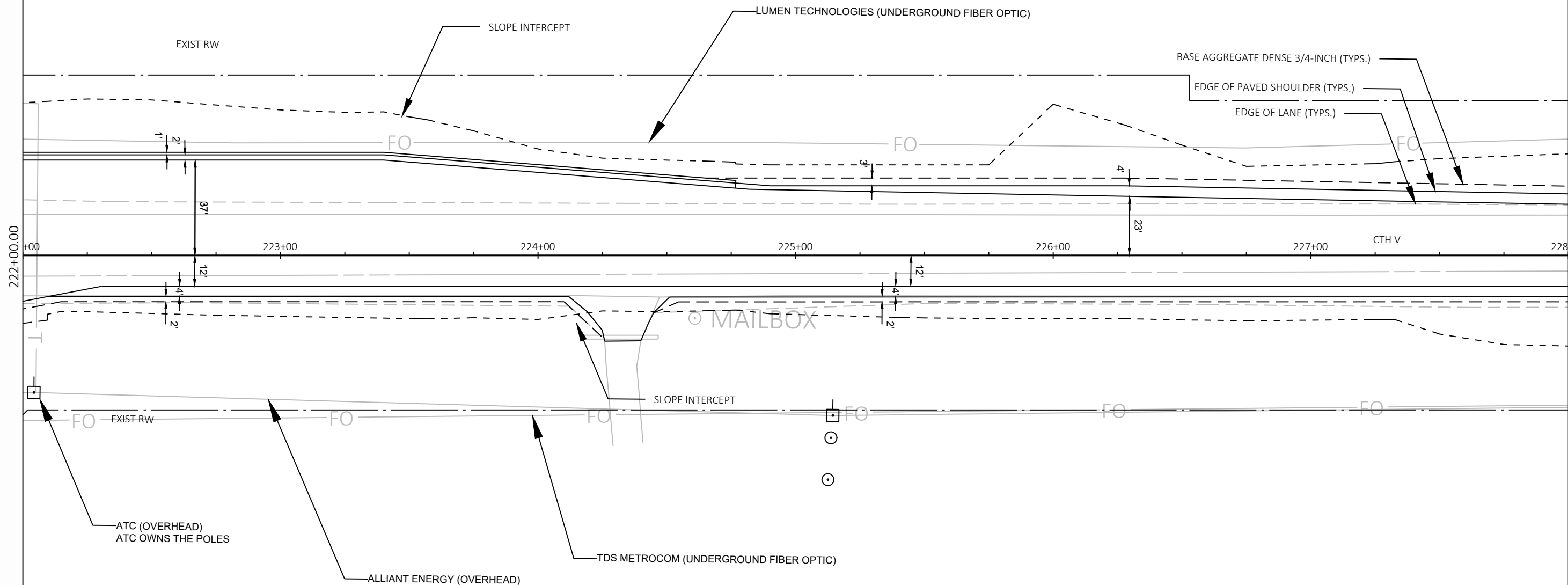
216+00.00 +00 217+00 218+00 CTH V 219+00 220+00 EBP:100+00000 221+00 222+00.00



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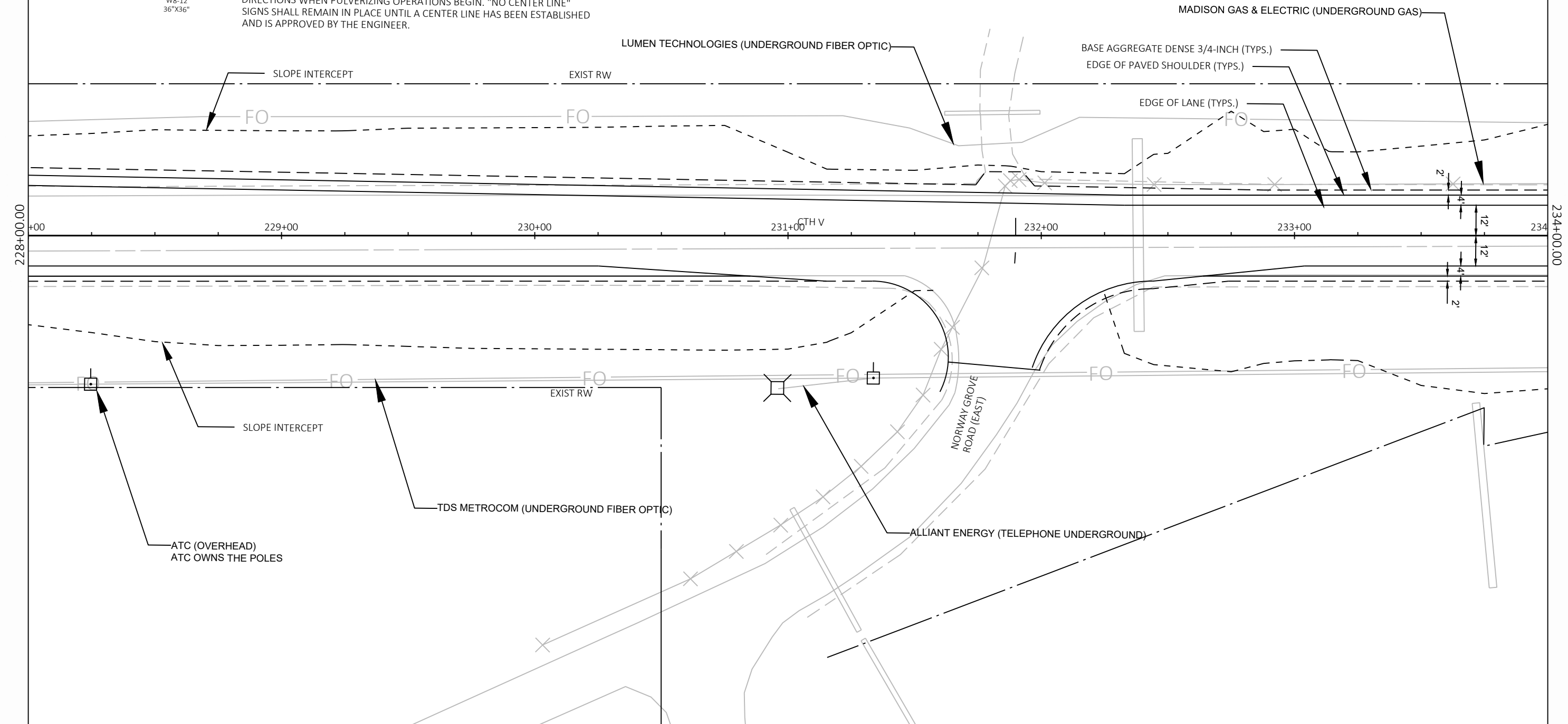
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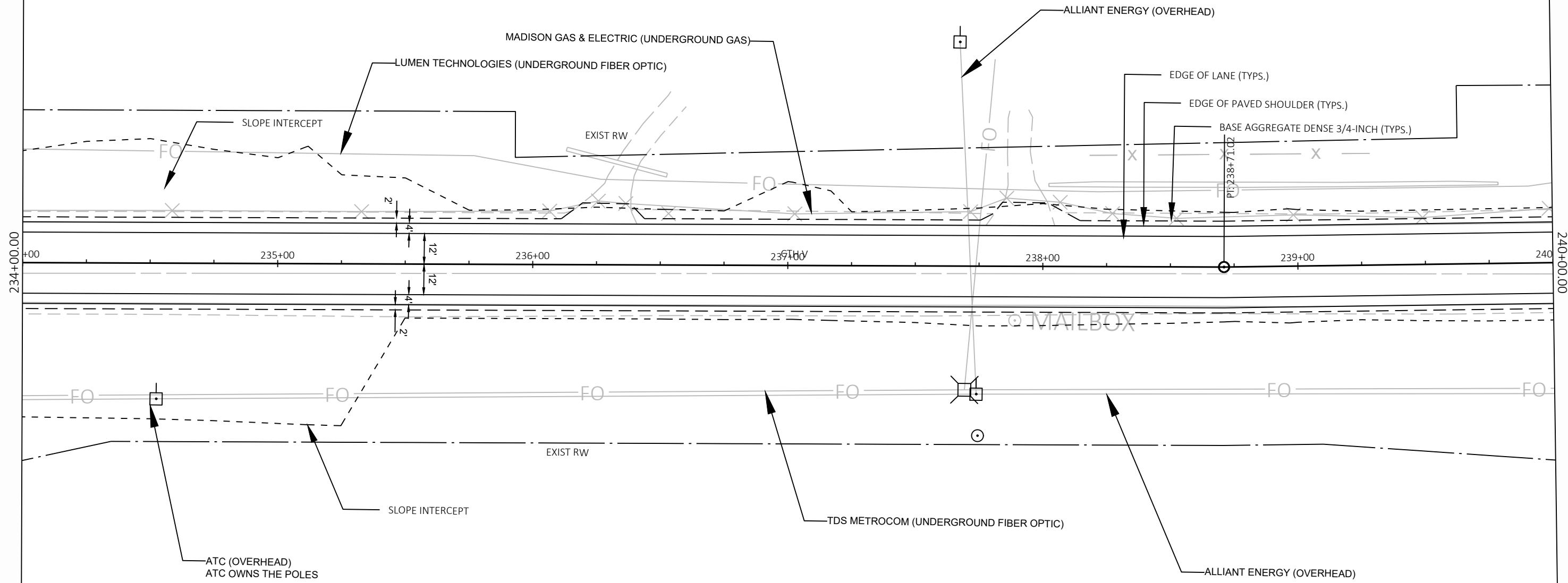
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	PLAN DETAILS	SHEET	E
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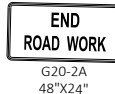


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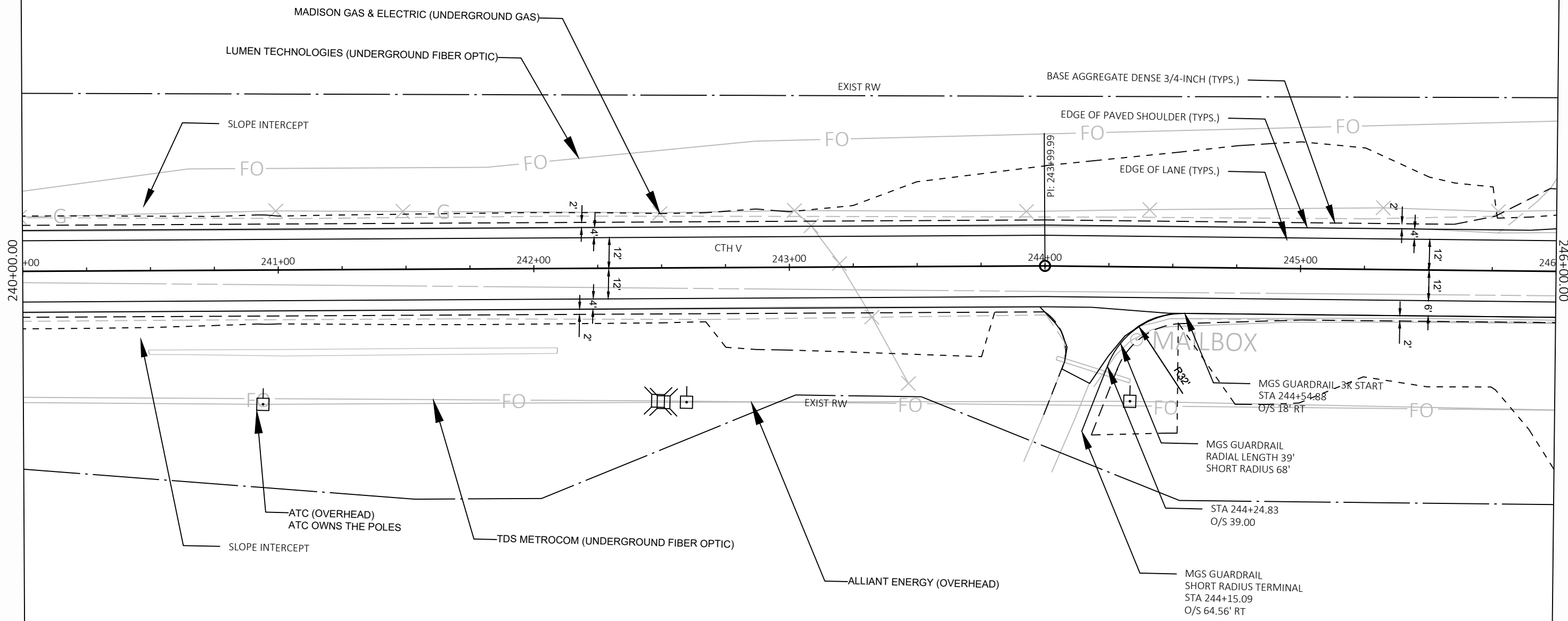




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MGS GUARDRAIL SHORT RADIUS TERMINAL: STA. 244+15.09 RT TO 244+24.83 RT
 MGS GUARDRAIL SHORT RADIUS: STA. 244+24.83 RT TO 244+54.88 RT
 MGS GUARDRAIL 3K: STA. 244+54.88 RT TO 247+92.39 RT
 MGS GUARDRAIL EAT: STA. 247+92.39 RT TO 248+45.51 RT
 O/S MEASUREMENTS ARE TO EDGE OF PAVEMENT AND FACE OF RAIL

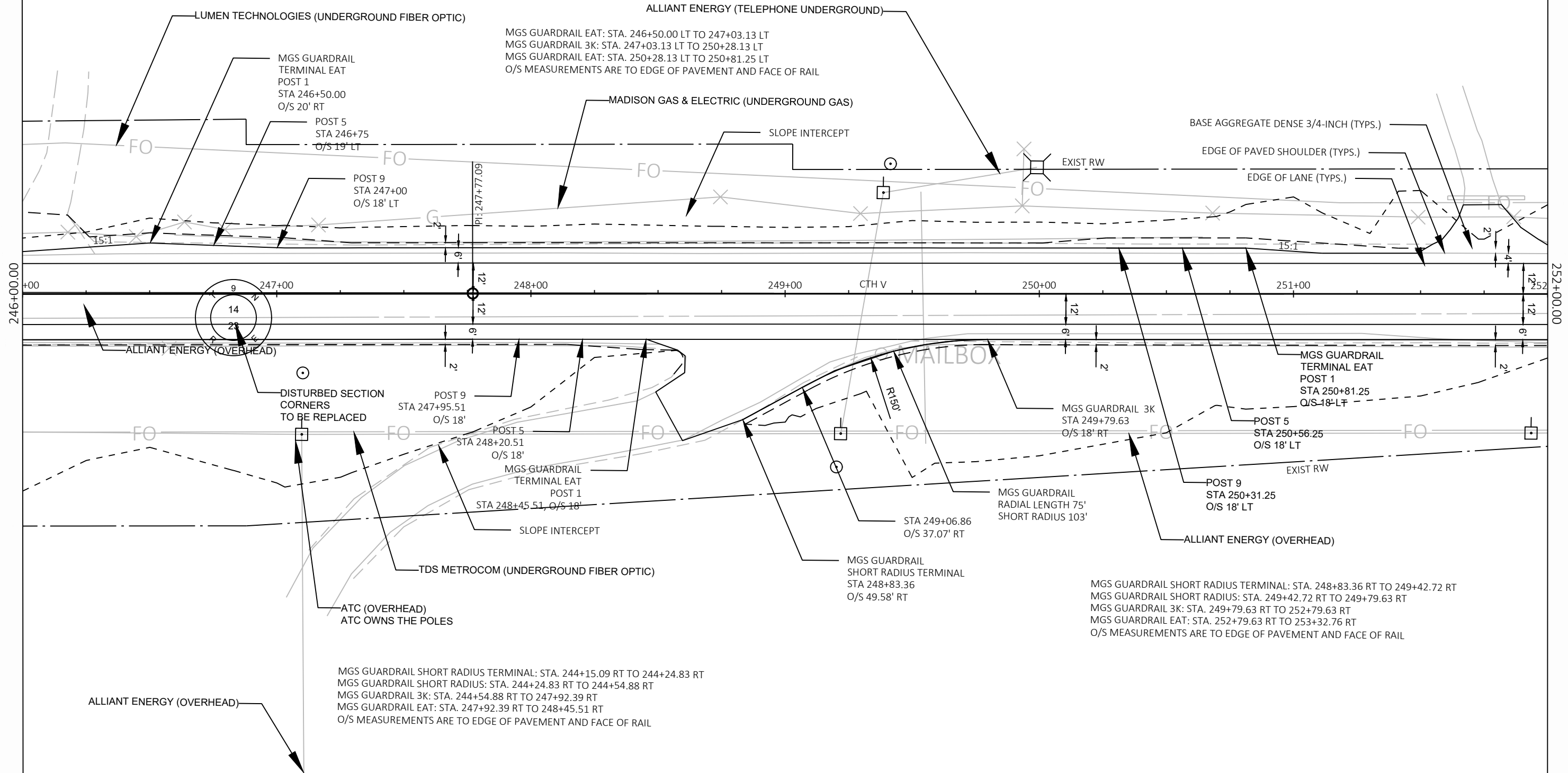


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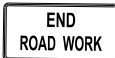
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	PLAN DETAILS	SHEET	E
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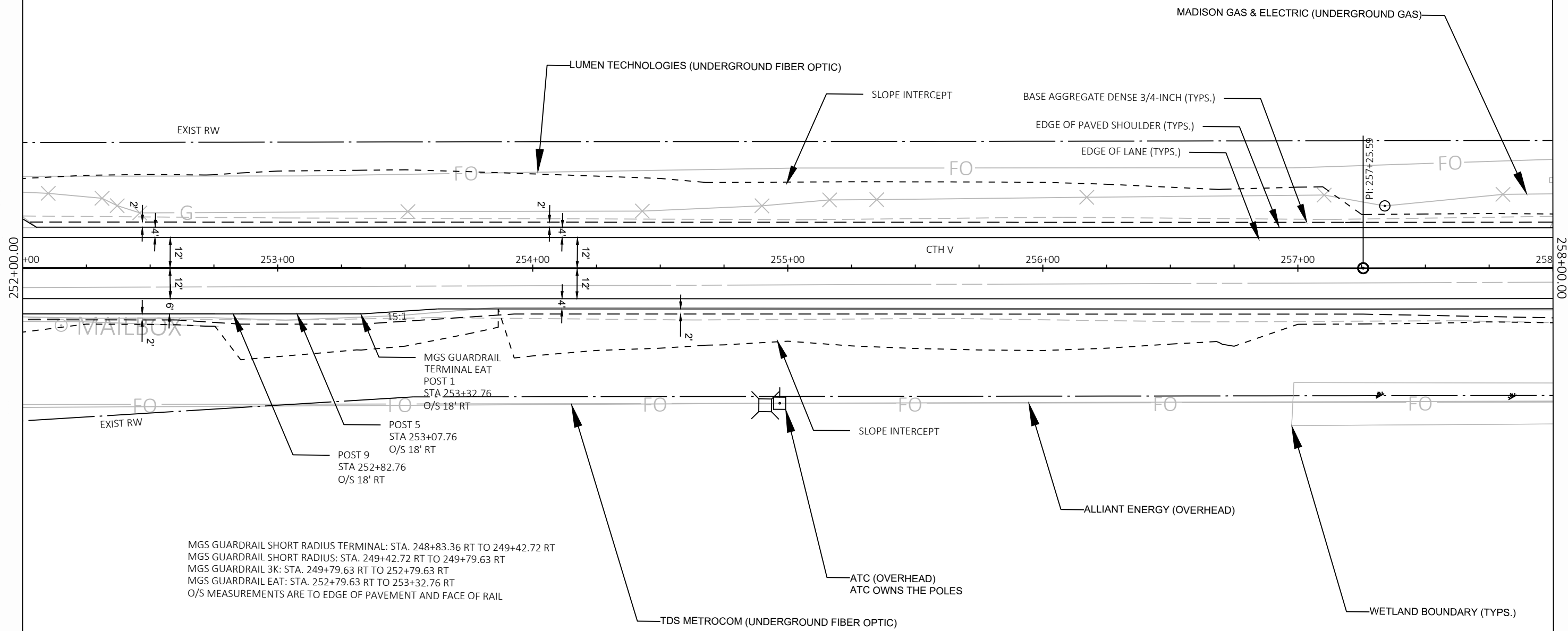


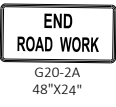
G20-2A
48"X24"

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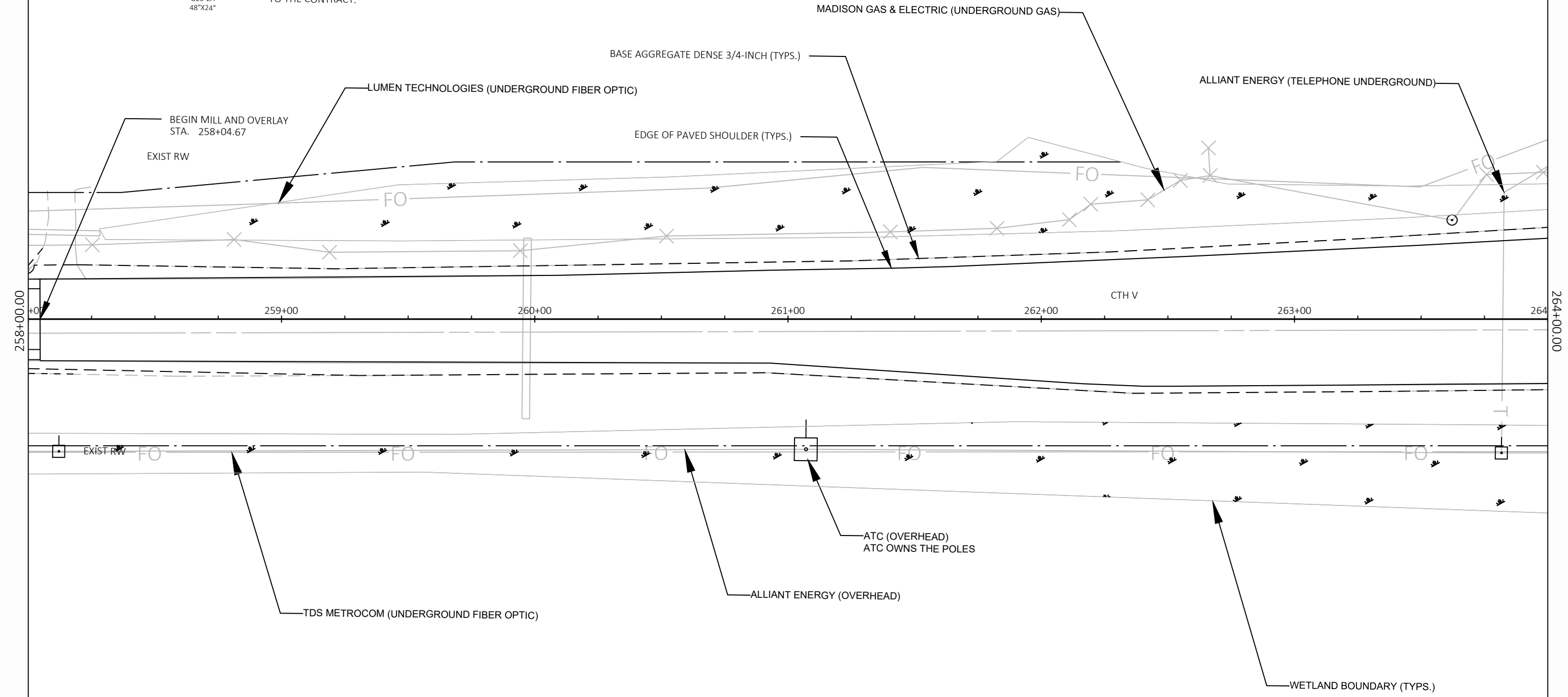




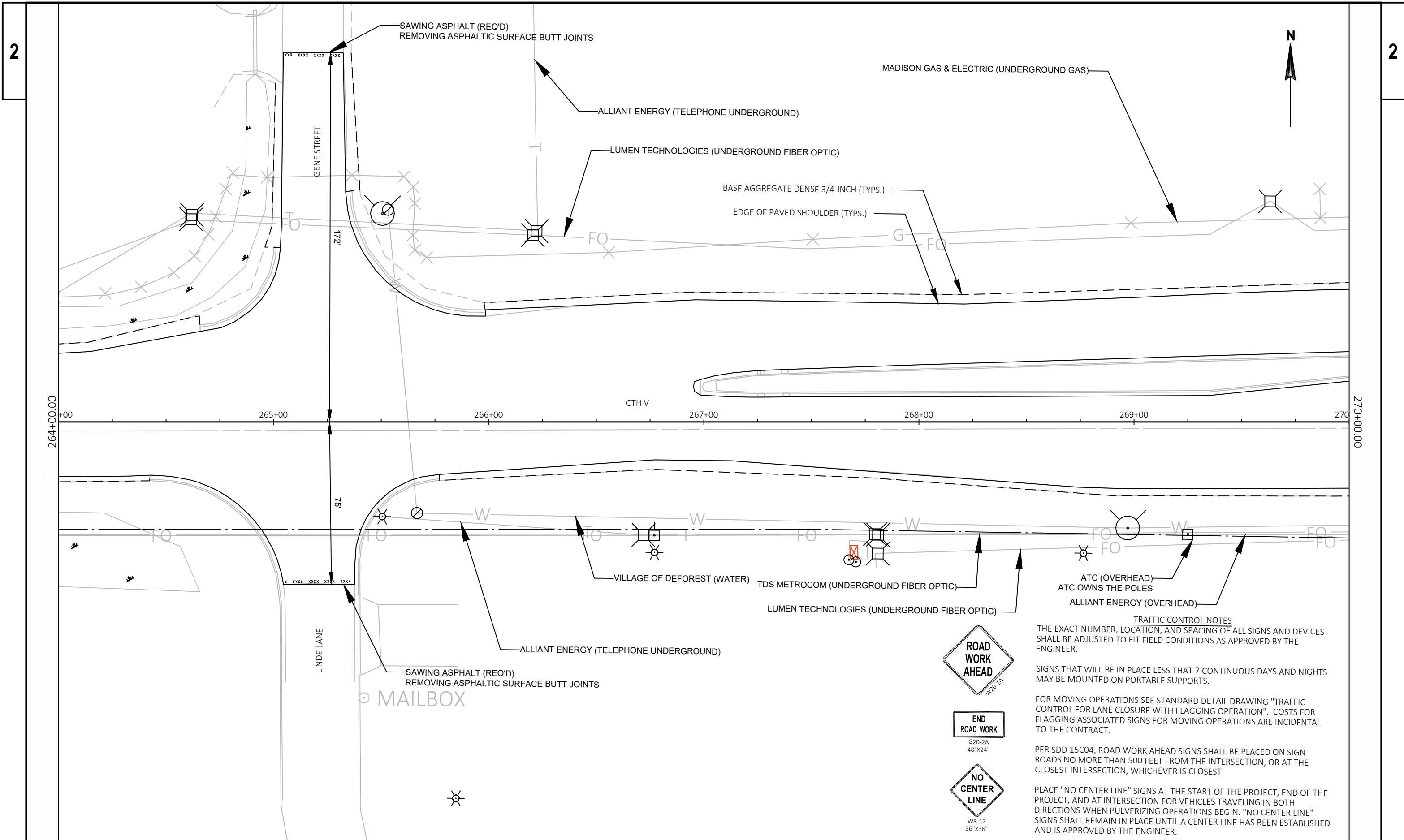
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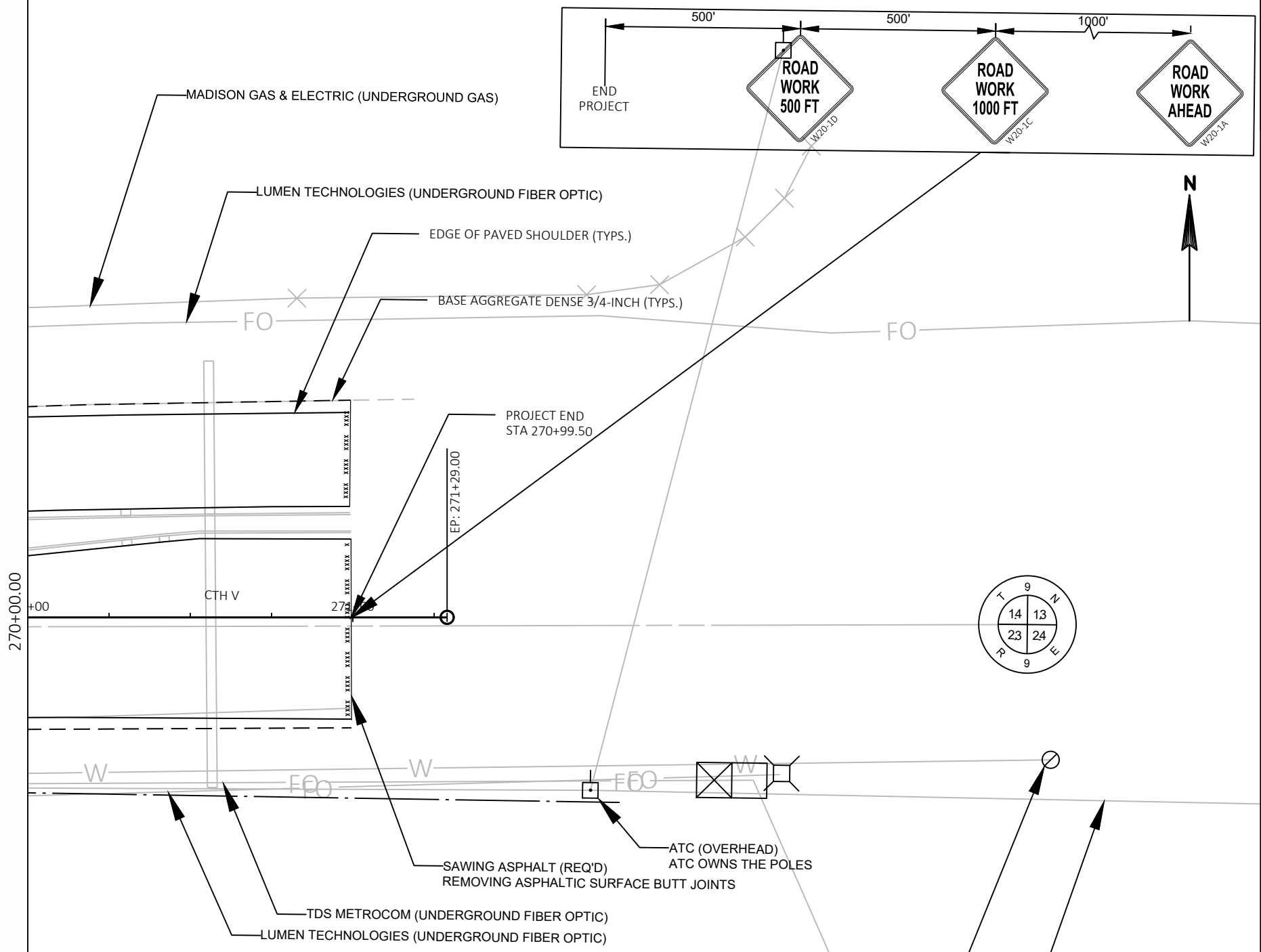
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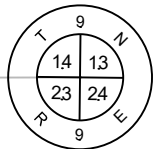
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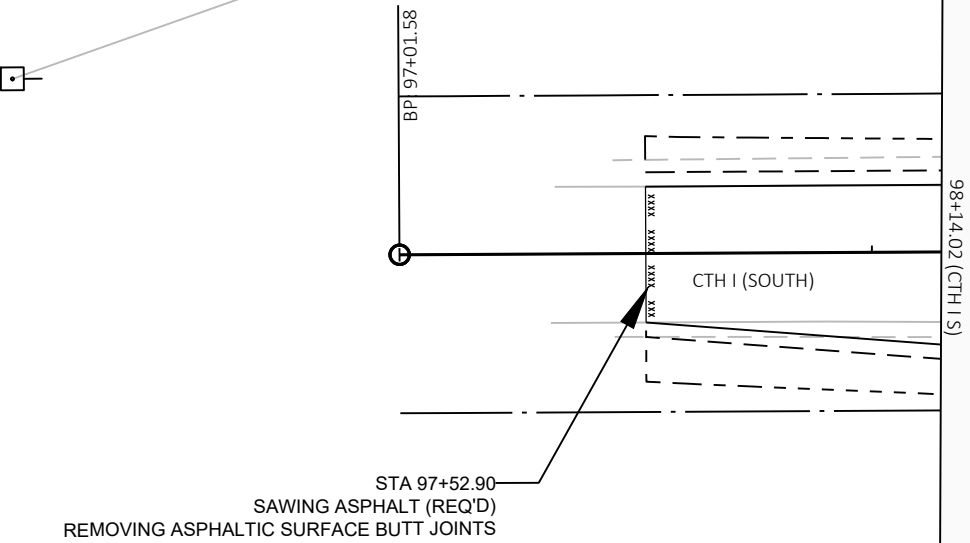
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- END ROAD WORK**
G20-2A
48"x24"
- ROAD WORK NEXT 4 MILES**
G20-1
60"x24"
- NO CENTER LINE**
W8-12
36"x36"

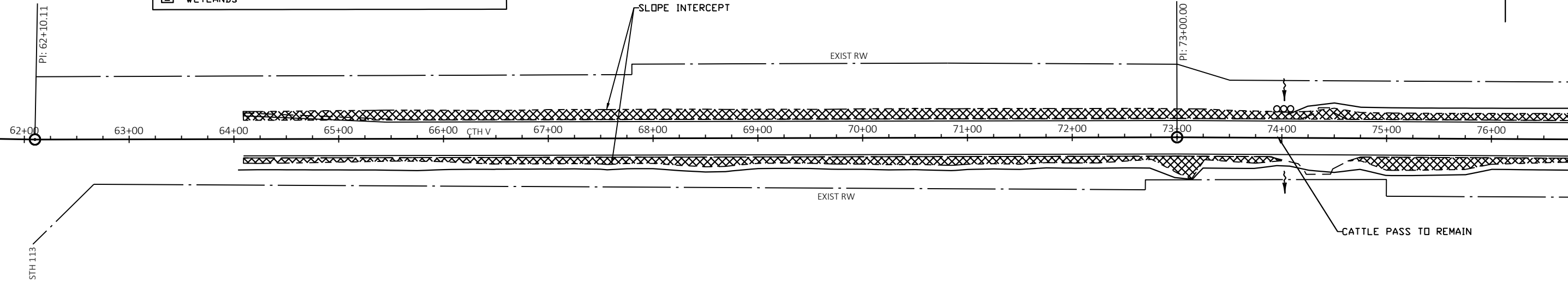




- SILT FENCE
- CULVERT PIPE CHECKS
- △△△ TEMPORARY DITCH CHECKS
- EROSION BALES
- ▣ EROSION MAT TYPE I CLASS A ON SLOPES 3:1 AND STEEPER
MULCH ON SLOPE 4:1 AND FLATTER
- WETLANDS



76+75.00



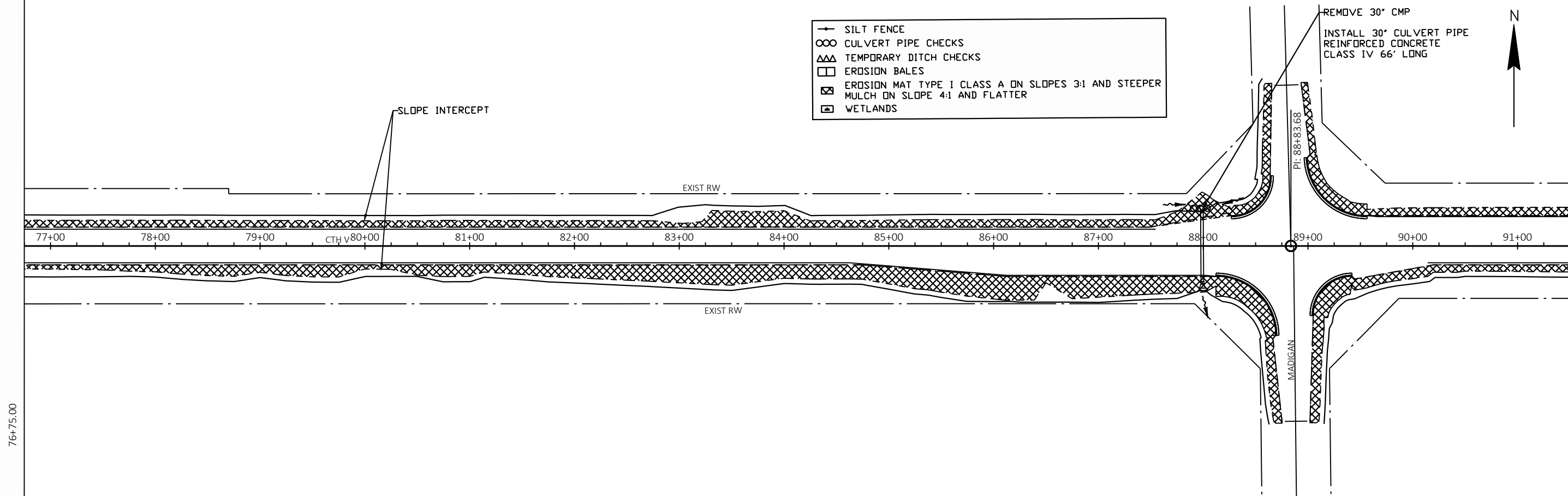
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5

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MULCH ON SLOPE 4:1 AND FLATTER
- WETLANDS



91+50.00



76+75.00

PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	EROSION CONTROL	SHEET	E
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- SILT FENCE
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- ⊠ EROSION MAT TYPE I CLASS A ON SLOPES 3:1 AND STEEPER
MULCH ON SLOPE 4:1 AND FLATTER
- ▣ WETLANDS

REMOVE 24" CMP 85' LONG
INSTALL 24" CULVERT PIPE
REINFORCED CONCRETE
CLASS III 85' LONG



SLOPE INTERCEPT

EXIST RW

EXIST RW

92+00 CTH V 93+00 94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00 103+00 104+00 105+00 106+00

5

91+50.00

106+25.00

5

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EXIST RW

PI: 117+95

107+00 108+00 109+00 CTH V 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00 119+00 120+00 121

EXIST RW

5

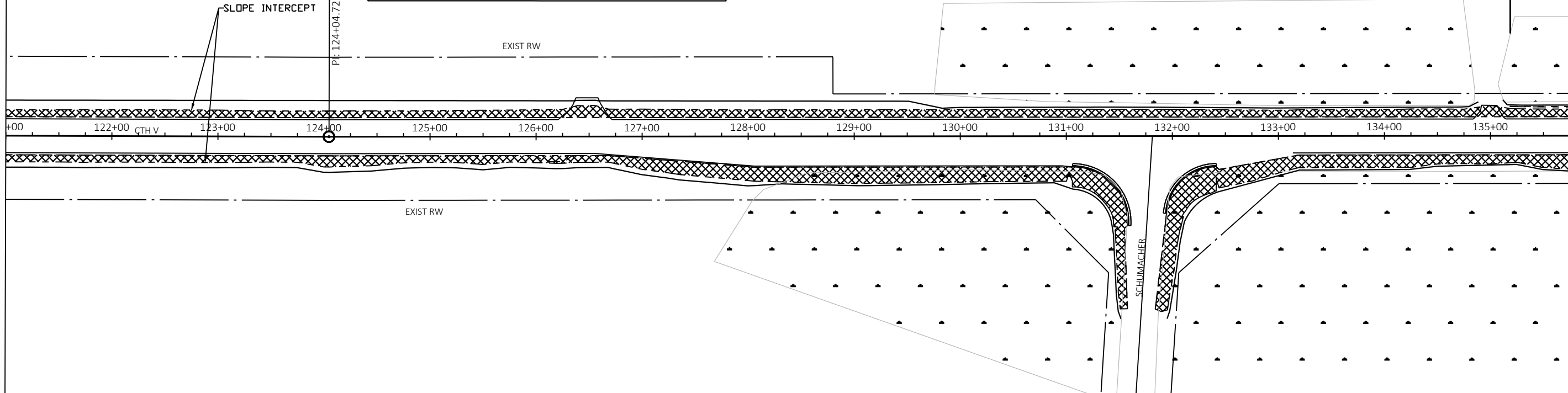
106+25.00

121+00.00

5

PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	EROSION CONTROL	SHEET	E
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- ▣ EROSION MAT TYPE I CLASS A ON SLOPES 3:1 AND STEEPER
MULCH ON SLOPE 4:1 AND FLATTER
- WETLANDS



5

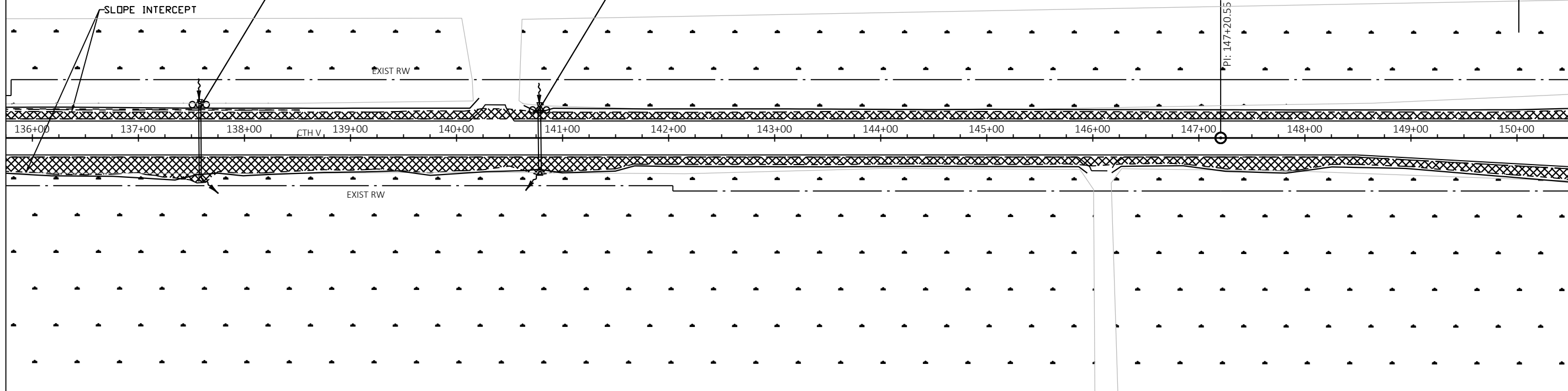
121+00.00

5

REMOVE 24" CMP 65' LONG
INSTALL 24" CULVERT PIPE
REINFORCED CONCRETE
CLASS IV 65' LONG

REMOVE 30" CMP 60' LONG
INSTALL 30" CULVERT PIPE
REINFORCED CONCRETE
CLASS IV 66' LONG

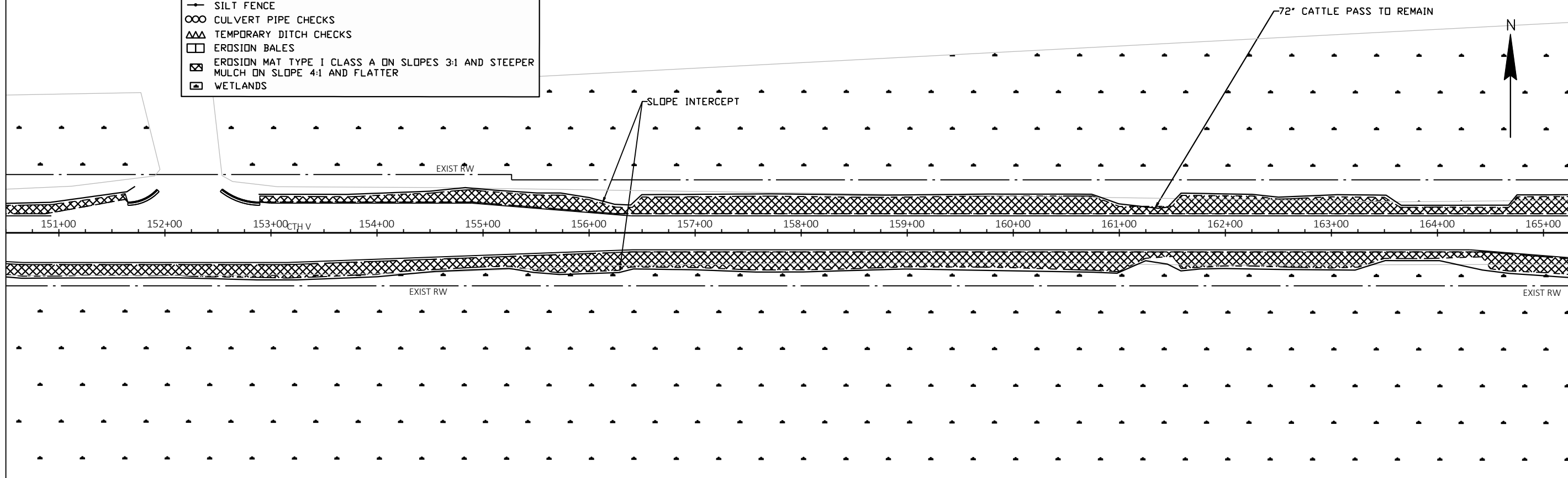
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MULCH ON SLOPE 4:1 AND FLATTER
- WETLANDS



135+75.00

150+50.00

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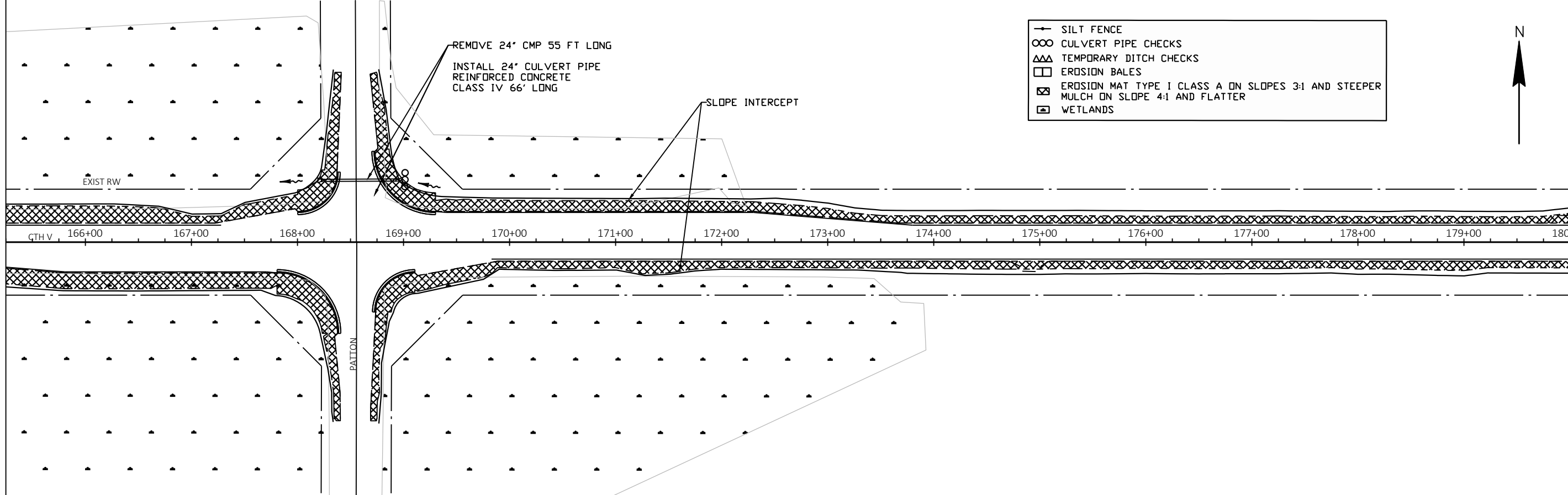
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150+50.00

165+25.00

5

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165+25.00

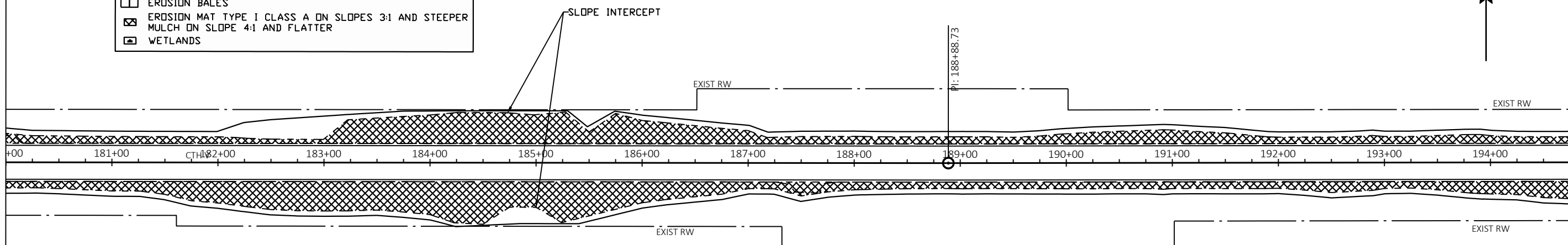
180+00.00

PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	EROSION CONTROL	SHEET	E
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- +— SILT FENCE
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194+75.00



5

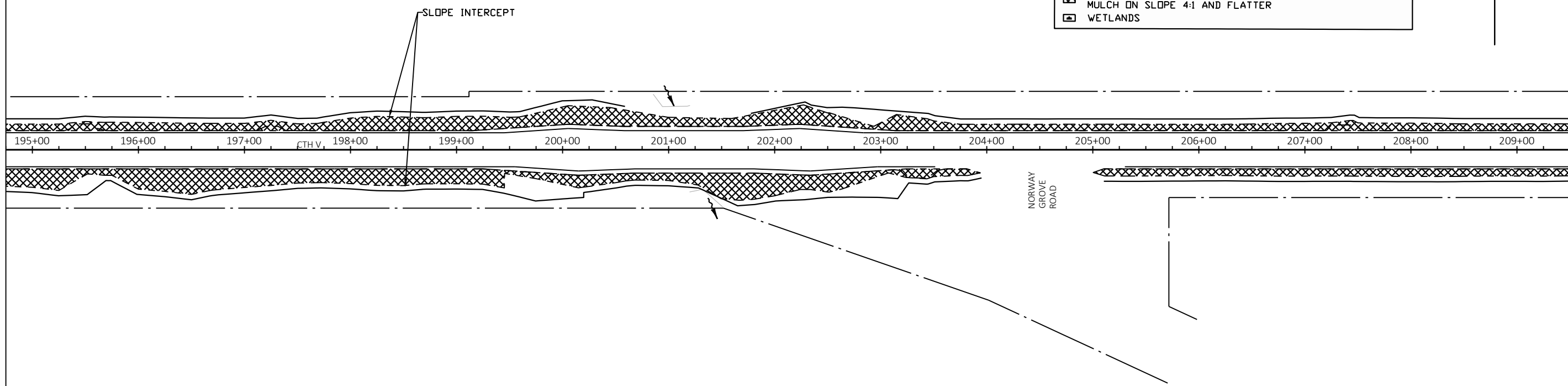
180+00.00

5

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209+50.00

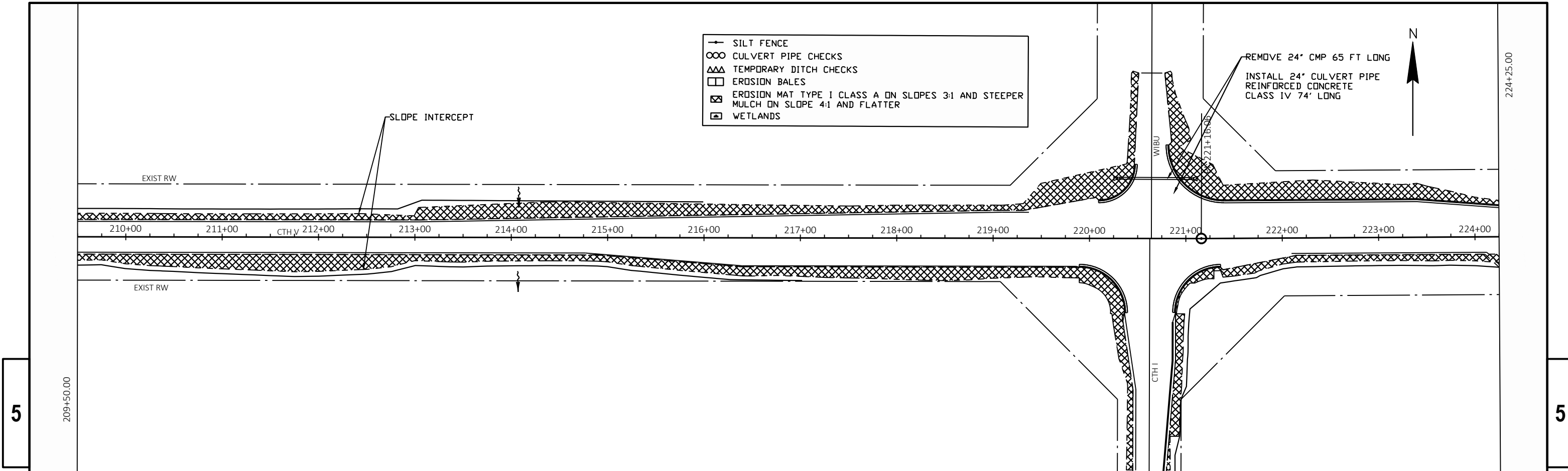


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194+75.00

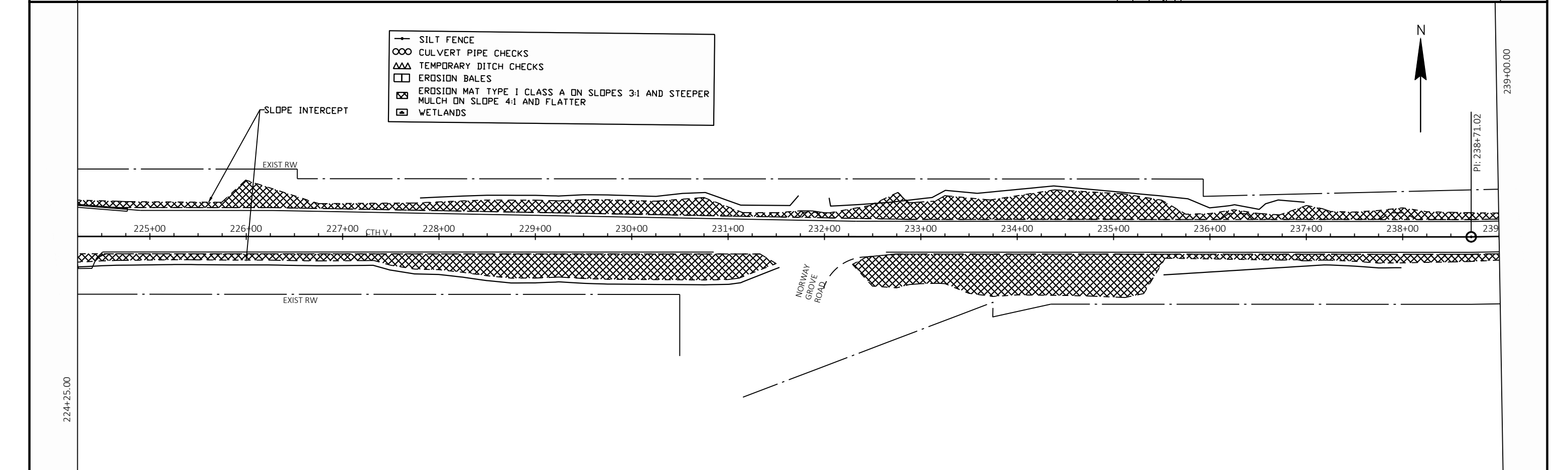
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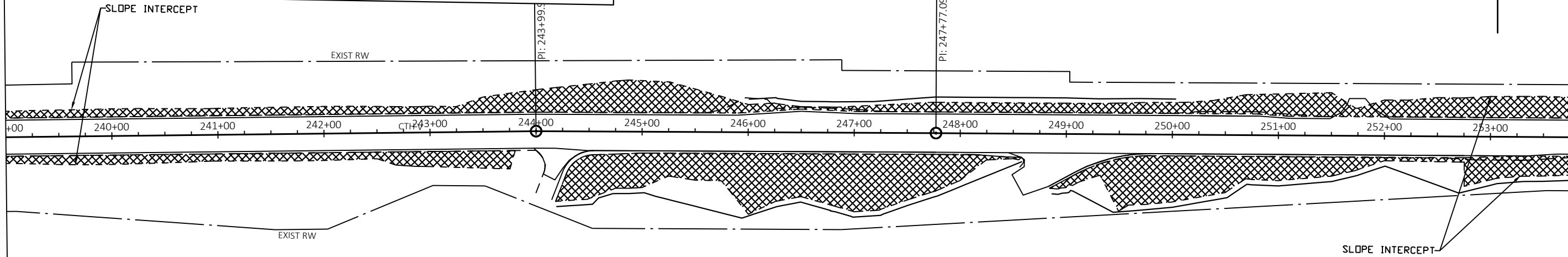


224+25.00

239+00.00

PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	EROSION CONTROL	SHEET	E
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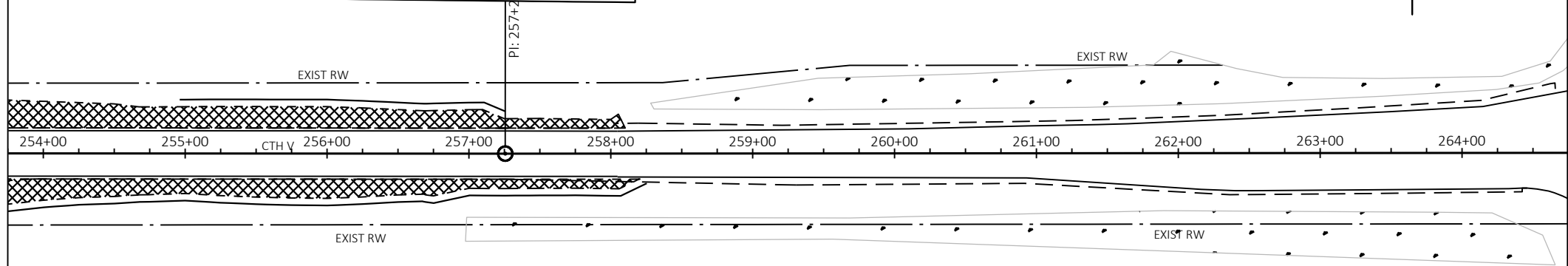
5

239+00.00

5

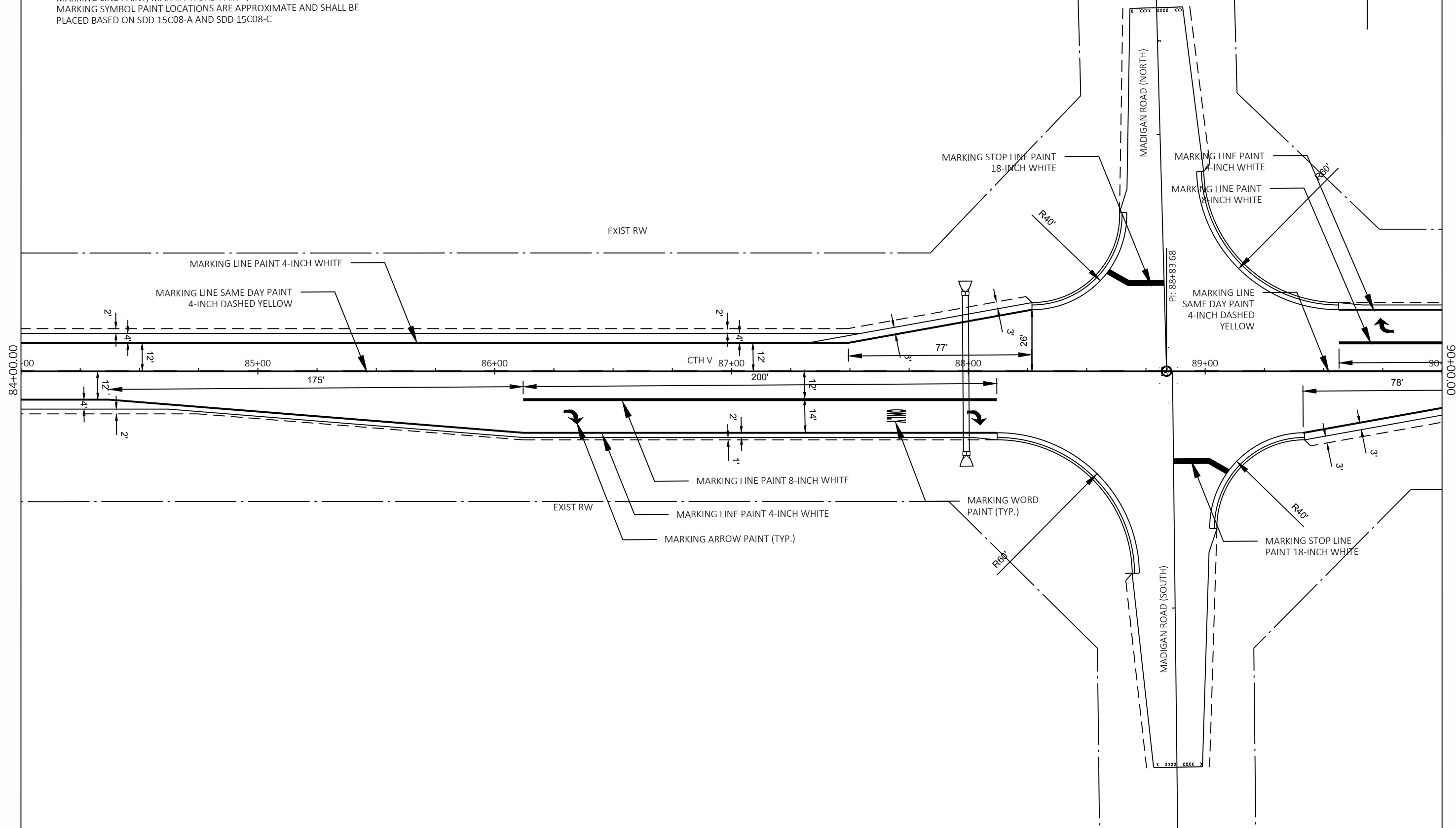
253+75.00

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- △△△ TEMPORARY DITCH CHECKS
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MULCH ON SLOPE 4:1 AND FLATTER
- ▣ WETLANDS



253+75.00

NOTES
 MARKING LINE SAME DAY PAINT 4-INCH YELLOW TO BE VERIFIED BY LOCATING NO PASSING ZONES
 MARKING LINE PAINT, MARKIN WORD PAINT , MARKING ARROW PAINT AND MARKING SYMBOL PAINT LOCATIONS ARE APPROXIMATE AND SHALL BE PLACED BASED ON SDD 15C08-A AND SDD 15C08-C

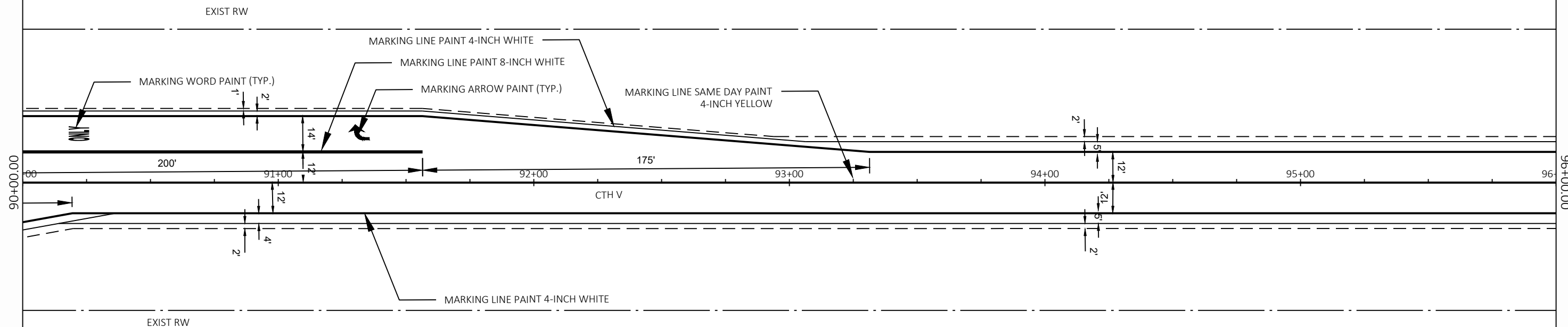


PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	PAVEMENT MARKING (MADIGAN ROAD)	SHEET	E
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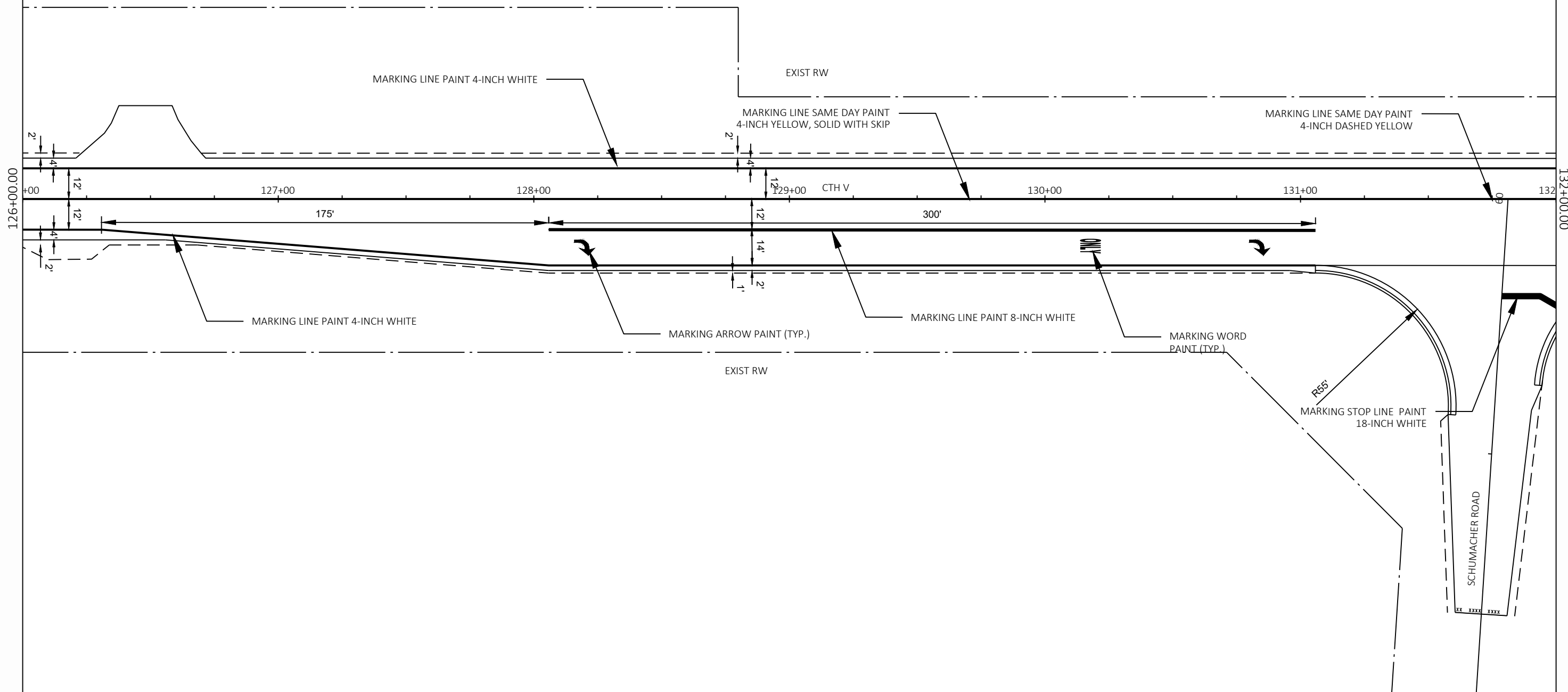


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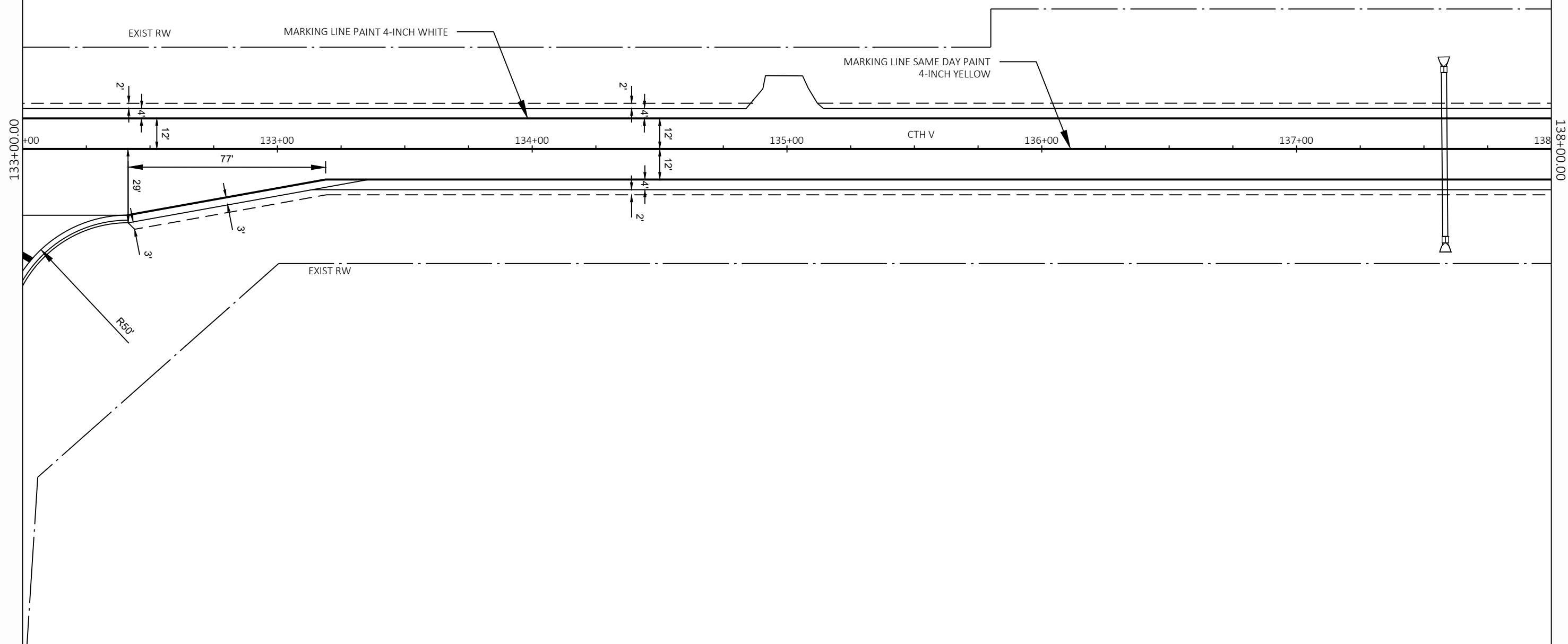
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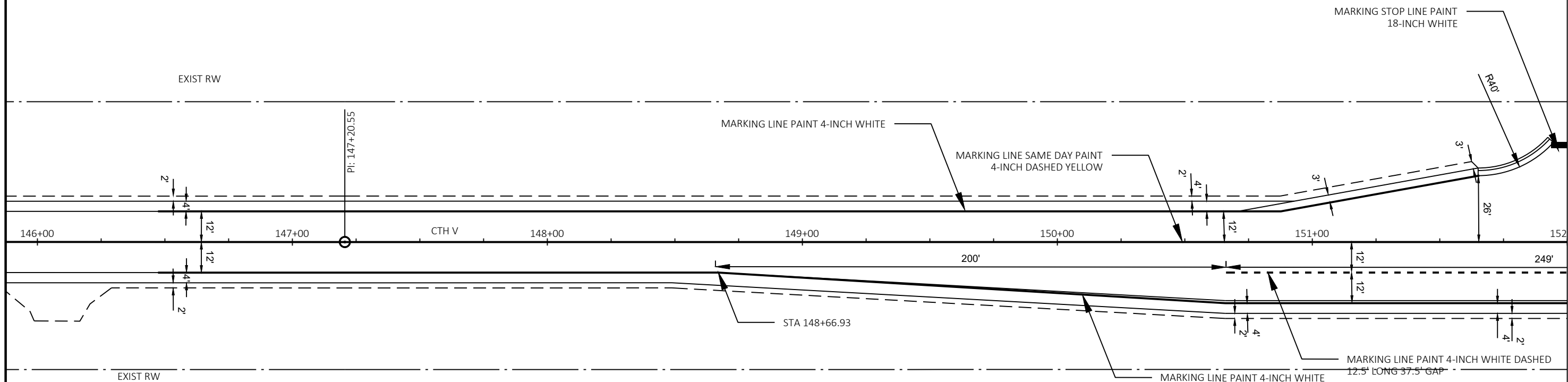
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	PAVEMENT MARKING(SCHUMACHER ROAD)	SHEET	E
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NOTES
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 LOCATING NO PASSING ZONES

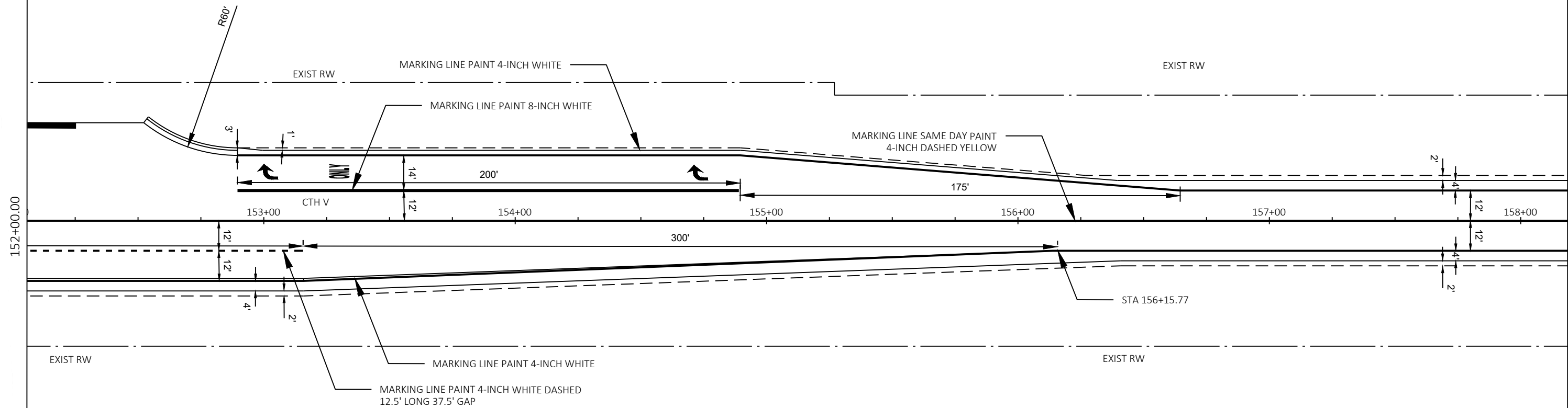
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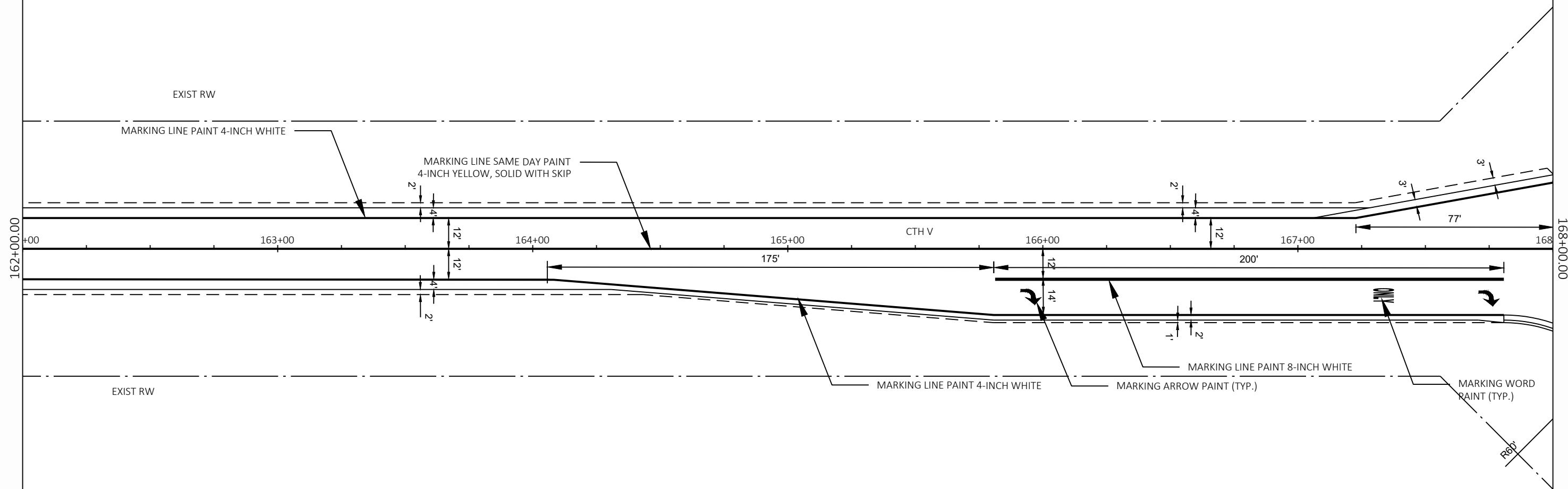
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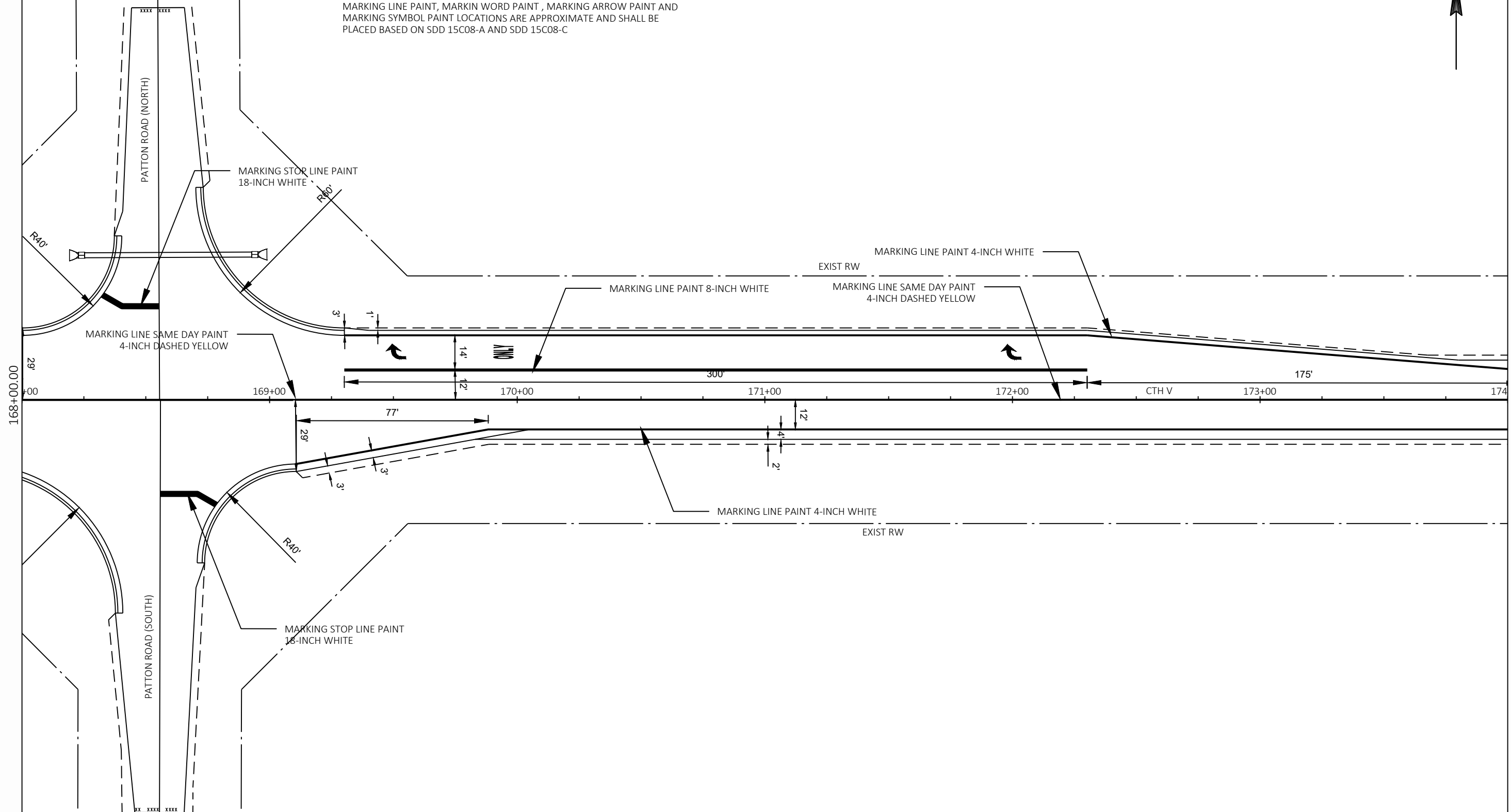


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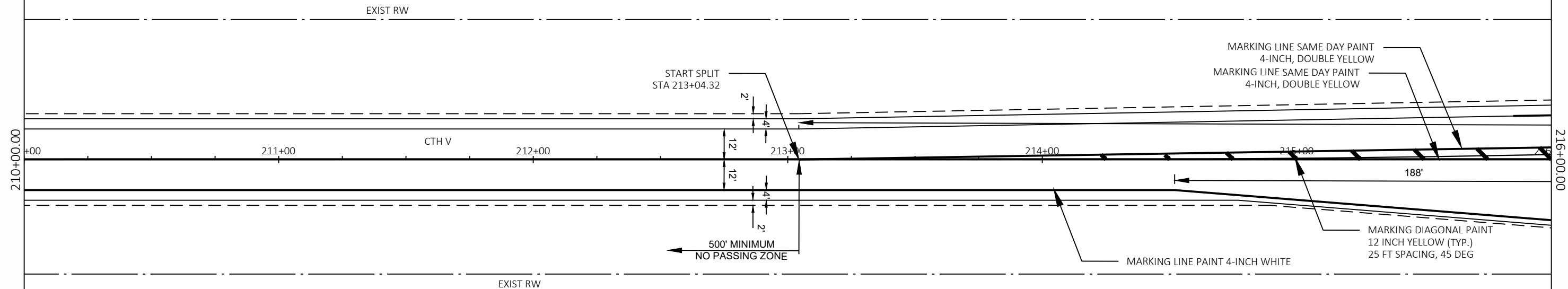


PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	PAVEMENT MARKING (PATTON ROAD)	SHEET	E
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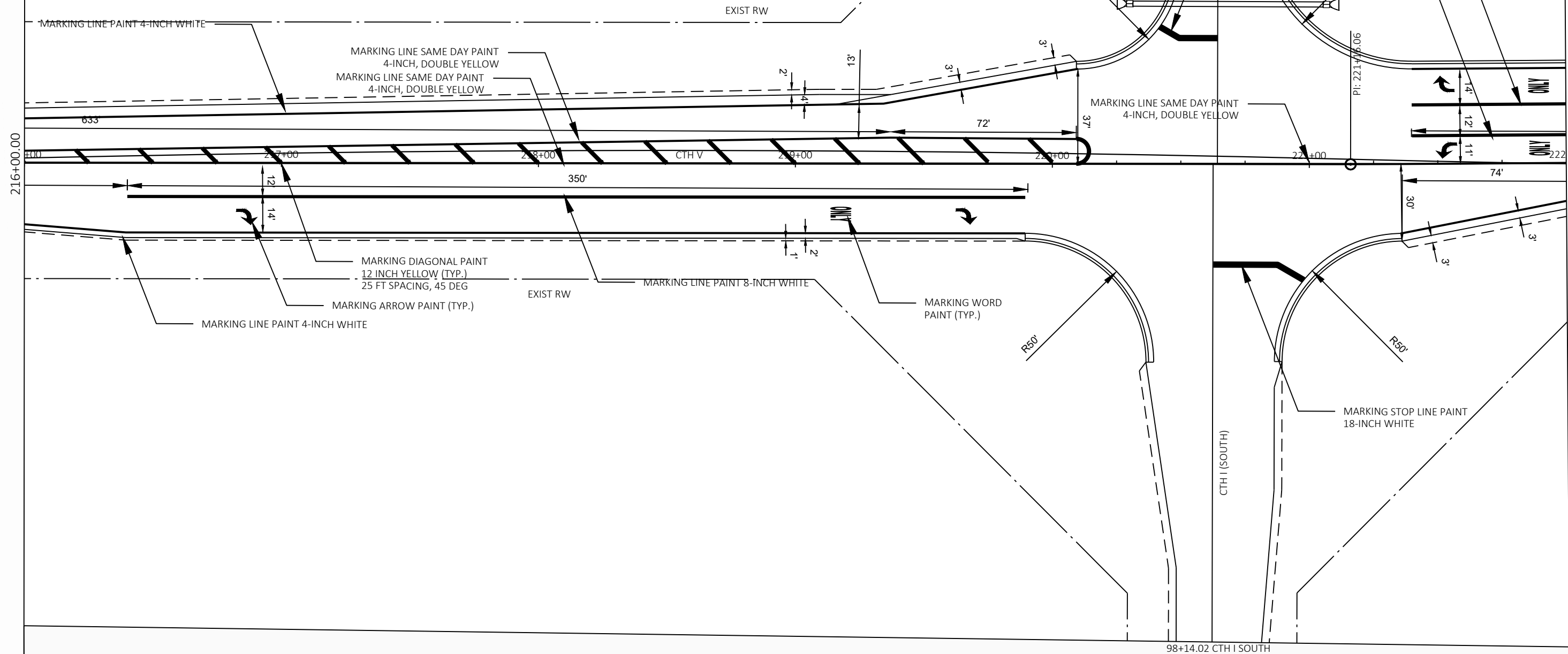
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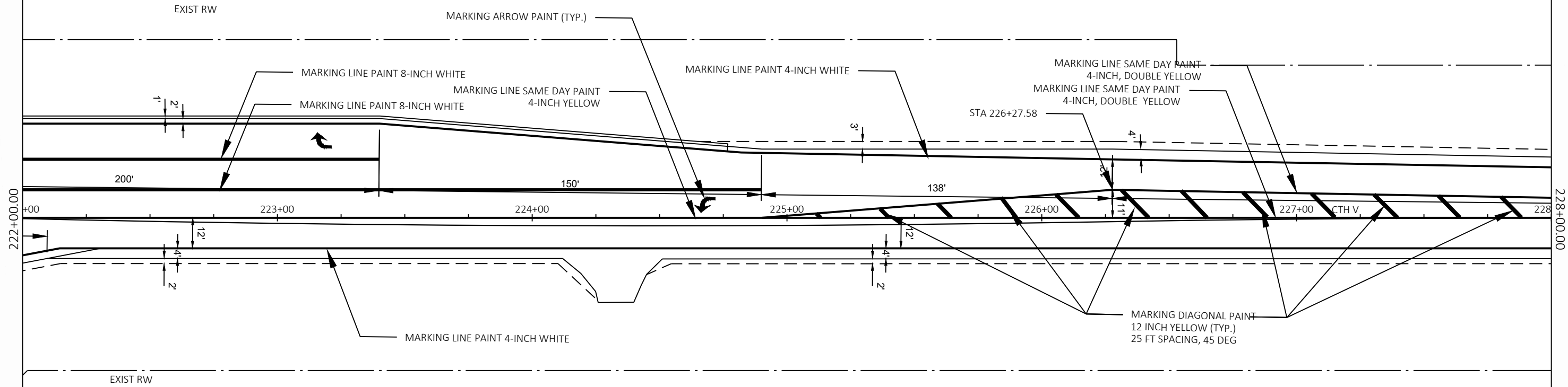


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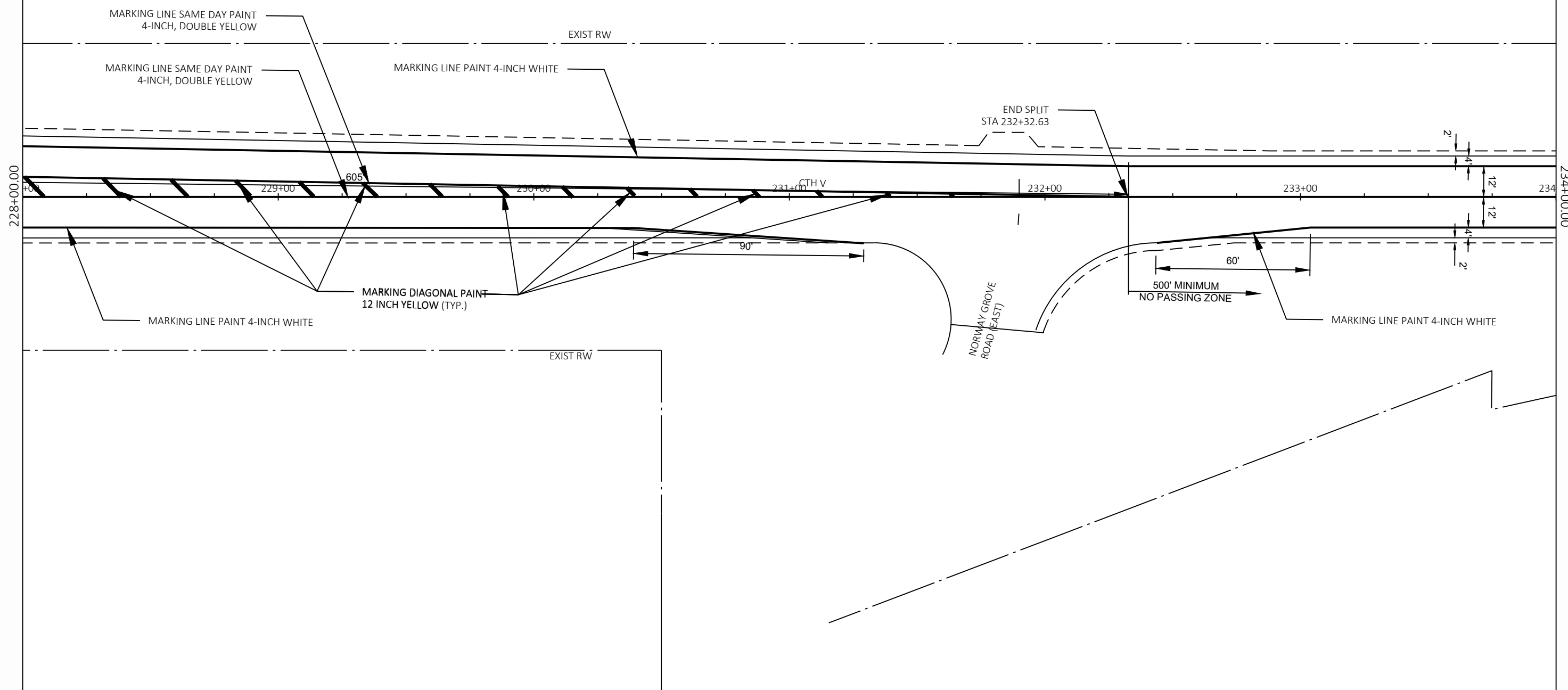
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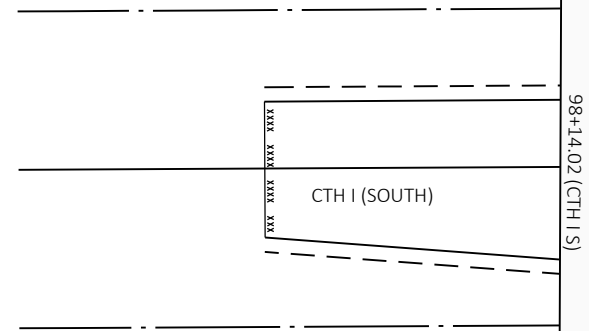


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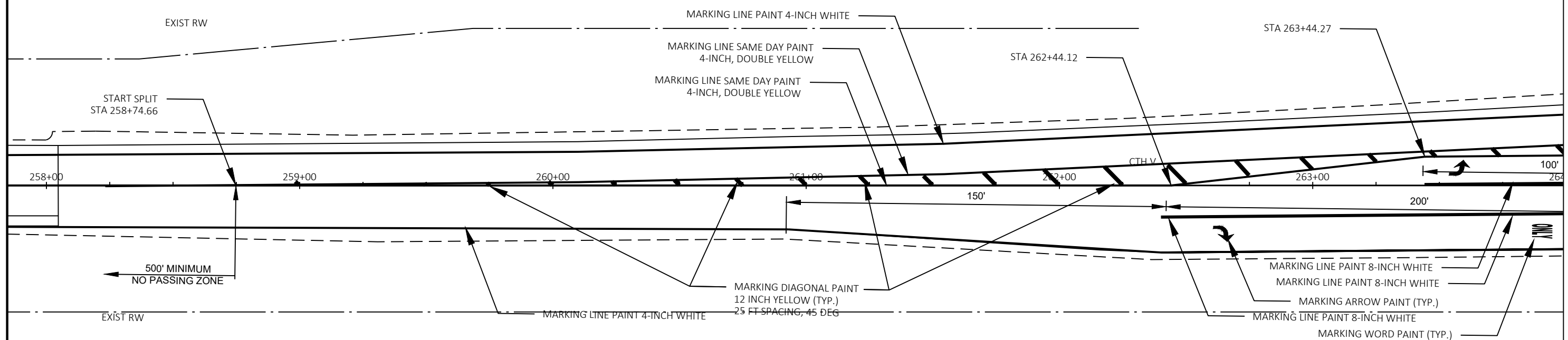




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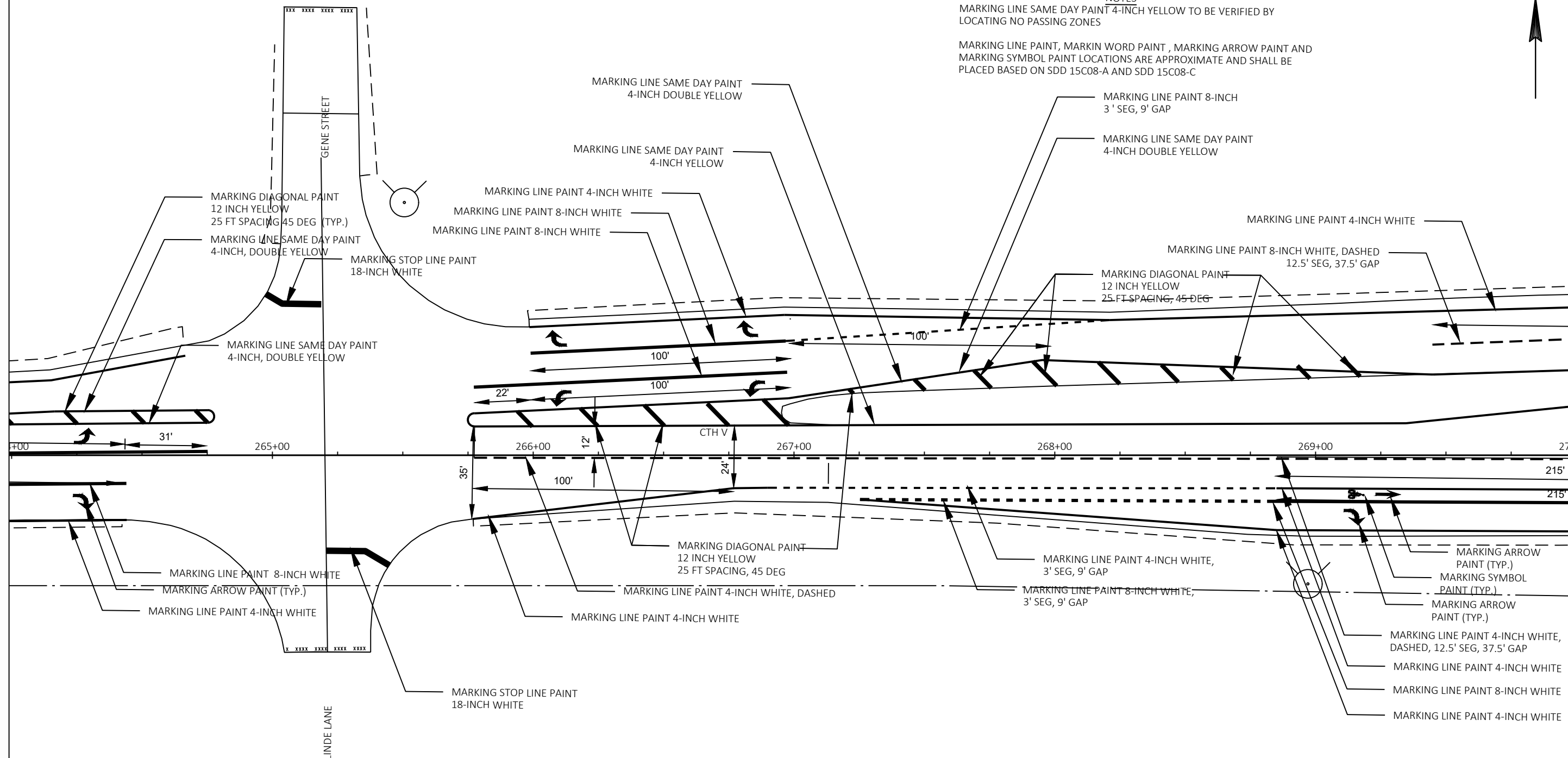
263+99.00



PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	PAVEMENT MARKING (GENE STREET)	SHEET	E
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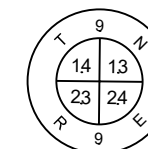
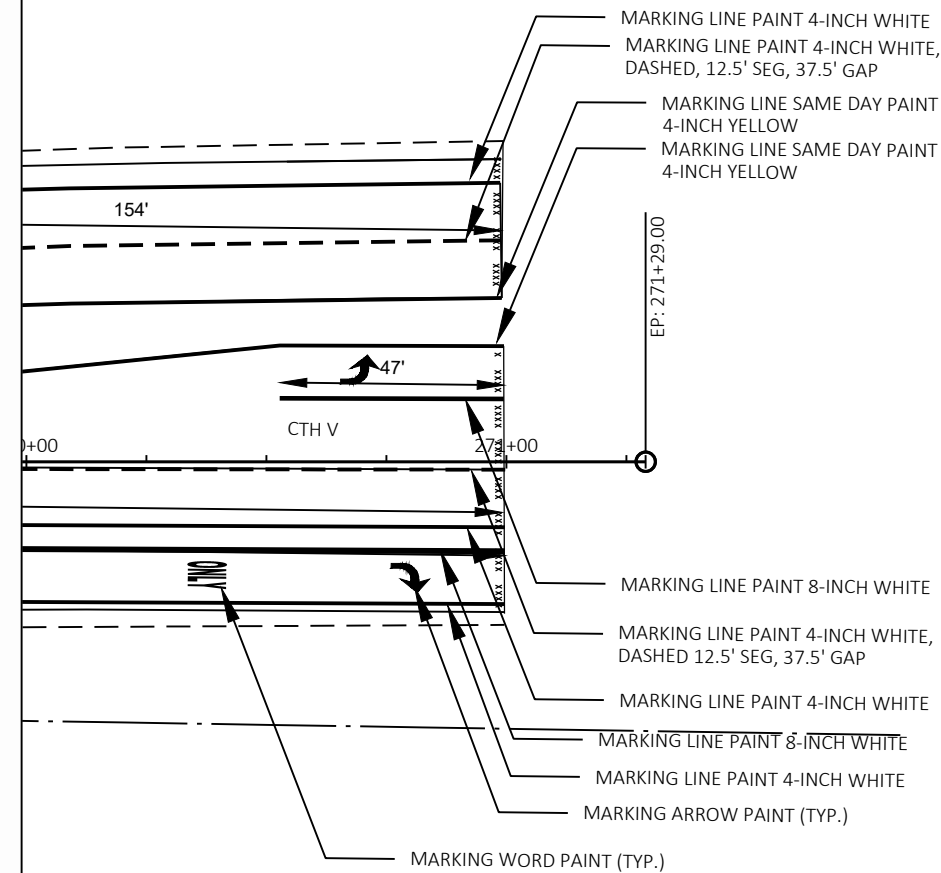


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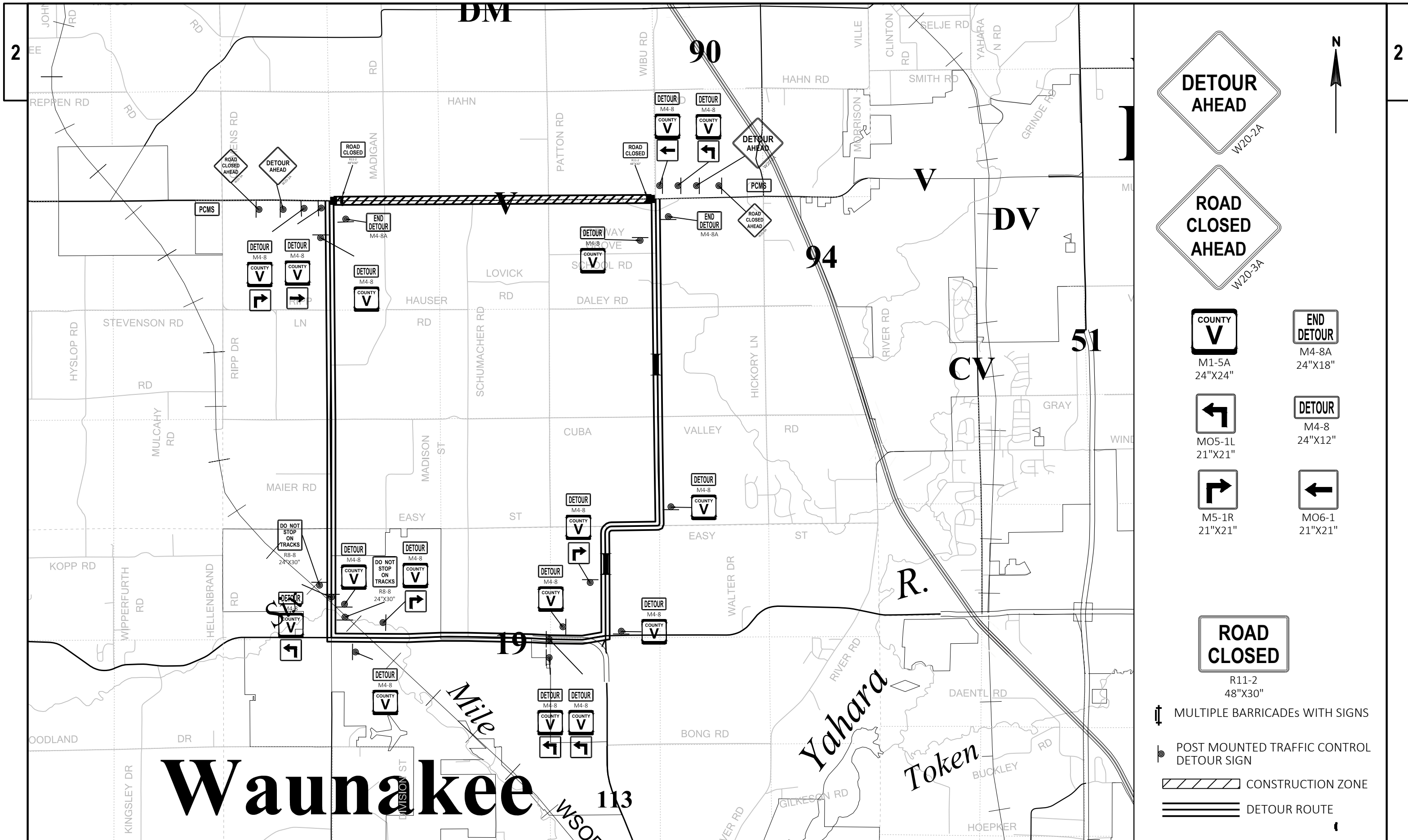


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269+99.00



Waunakee

Estimate Of Quantities

6218-00-73

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	6.000	6.000
0004	204.0110	Removing Asphaltic Surface	SY	467.000	467.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	630.000	630.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	9,112.000	9,112.000
0010	204.0150	Removing Curb & Gutter	LF	107.000	107.000
0012	204.0165	Removing Guardrail	LF	1,218.000	1,218.000
0014	204.0180	Removing Delineators and Markers	EACH	22.000	22.000
0016	205.0100	Excavation Common	CY	4,681.000	4,681.000
0018	208.0100	Borrow	CY	757.000	757.000
0020	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 6918-00-73	LS	1.000	1.000
0022	213.0100	Finishing Roadway (project) 01. 6918-00-73	EACH	1.000	1.000
0024	305.0110	Base Aggregate Dense 3/4-Inch	TON	27,669.000	27,669.000
0026	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	12,373.000	12,373.000
0028	312.0110	Select Crushed Material	TON	4,020.000	4,020.000
0030	325.0100	Pulverize and Relay	SY	73,791.000	73,791.000
0032	374.1020.S	QMP Pulverize and Relay Compaction	SY	73,791.000	73,791.000
0034	450.4000	HMA Cold Weather Paving	TON	750.000	750.000
0036	455.0605	Tack Coat	GAL	6,355.000	6,355.000
0038	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0040	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0042	460.2000	Incentive Density HMA Pavement	DOL	16,270.000	16,270.000
0044	460.2005	Incentive Density PWL HMA Pavement	DOL	13,660.000	13,660.000
0046	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	10,350.000	10,350.000
0048	460.2010	Incentive Air Voids HMA Pavement	DOL	25,430.000	25,430.000
0050	460.6223	HMA Pavement 3 MT 58-28 S	TON	15,252.000	15,252.000
0052	460.6224	HMA Pavement 4 MT 58-28 S	TON	10,169.000	10,169.000
0054	465.0105	Asphaltic Surface	TON	70.000	70.000
0056	465.0315	Asphaltic Flumes	SY	151.000	151.000
0058	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	85.000	85.000
0060	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	206.500	206.500
0062	522.0430	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	122.000	122.000
0064	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	8.000	8.000
0066	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	4.000	4.000
0068	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	1,519.000	1,519.000
0070	614.2330	MGS Guardrail 3 K	LF	963.000	963.000
0072	614.2340	MGS Guardrail 3 L	LF	225.000	225.000
0074	614.2350	MGS Guardrail Short Radius	LF	171.000	171.000
0076	614.2610	MGS Guardrail Terminal EAT	EACH	8.000	8.000
0078	614.2630	MGS Guardrail Short Radius Terminal	EACH	2.000	2.000
0080	618.0100	Maintenance And Repair of Haul Roads (project) 01. 6218-00-73	EACH	1.000	1.000
0082	619.1000	Mobilization	EACH	1.000	1.000
0084	624.0100	Water	MGAL	595.000	595.000
0086	625.0100	Topsoil	SY	1,000.000	1,000.000
0088	625.0500	Salvaged Topsoil	SY	41,744.000	41,744.000
0090	627.0200	Mulching	SY	20,872.000	20,872.000
0092	628.1104	Erosion Bales	EACH	60.000	60.000
0094	628.1504	Silt Fence	LF	35,400.000	35,400.000
0096	628.1520	Silt Fence Maintenance	LF	3,540.000	3,540.000
0098	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000

Estimate Of Quantities

6218-00-73

Line	Item	Item Description	Unit	Total	Qty
0100	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0102	628.2002	Erosion Mat Class I Type A	SY	20,872.000	20,872.000
0104	628.7504	Temporary Ditch Checks	LF	500.000	500.000
0106	628.7555	Culvert Pipe Checks	EACH	6.000	6.000
0108	629.0210	Fertilizer Type B	CWT	26.000	26.000
0110	630.0130	Seeding Mixture No. 30	LB	751.400	751.400
0112	630.0200	Seeding Temporary	LB	20.000	20.000
0114	630.0500	Seed Water	MGAL	469.000	469.000
0116	633.5200	Markers Culvert End	EACH	22.000	22.000
0118	638.2102	Moving Signs Type II	EACH	17.000	17.000
0120	642.5001	Field Office Type B	EACH	1.000	1.000
0122	643.0300	Traffic Control Drums	DAY	175.000	175.000
0124	643.0420	Traffic Control Barricades Type III	DAY	266.000	266.000
0126	643.0705	Traffic Control Warning Lights Type A	DAY	434.000	434.000
0128	643.0900	Traffic Control Signs	DAY	4,924.000	4,924.000
0130	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0132	643.5000	Traffic Control	EACH	1.000	1.000
0134	645.0220	Geogrid Type SR	SY	2,500.000	2,500.000
0136	646.1005	Marking Line Paint 4-Inch	LF	41,653.000	41,653.000
0138	646.3005	Marking Line Paint 8-Inch	LF	4,062.000	4,062.000
0140	646.4505	Marking Line Same Day Paint 4-Inch	LF	24,582.000	24,582.000
0142	646.5005	Marking Arrow Paint	EACH	29.000	29.000
0144	646.5105	Marking Word Paint	EACH	11.000	11.000
0146	646.5205	Marking Symbol Paint	EACH	2.000	2.000
0148	646.6105	Marking Stop Line Paint 18-Inch	LF	215.000	215.000
0150	646.7105	Marking Diagonal Paint 12-Inch	LF	545.000	545.000
0152	648.0100	Locating No-Passing Zones	MI	3.950	3.950
0154	650.5000	Construction Staking Base	LF	20,690.000	20,690.000
0156	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,519.000	1,519.000
0158	650.6000	Construction Staking Pipe Culverts	EACH	5.000	5.000
0160	650.8000	Construction Staking Resurfacing Reference	LF	20,690.000	20,690.000
0162	650.9910	Construction Staking Supplemental Control (project) 01. 6918-00-73	LS	1.000	1.000
0164	650.9920	Construction Staking Slope Stakes	LF	41,380.000	41,380.000
0166	690.0150	Sawing Asphalt	LF	439.000	439.000
0168	740.0440	Incentive IRI Ride	DOL	10,345.000	10,345.000
0170	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,400.000	2,400.000
0172	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	2,160.000	2,160.000
0174	SPV.0060	Special 01. Landmark Reference Monuments	EACH	7.000	7.000

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STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.0180 REMOVING DELINEATORS AND MARKERS EACH	522.0124 REINFORCED CONCRETE CLASS III 24-INCH LF	522.0424 REINFORCED CONCRETE CLASS IV 24-INCH LF	522.0430 REINFORCED CONCRETE CLASS IV 30-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	633.5200 END MARKERS CULVERT EACH	COMMENTS
87+98	CTH V	1	2	-	-	66	-	2	2	
98+48.50	CTH V	1	2	85	-	-	2	-	2	
137+58	CTH V	1	2	-	65	-	2	-	2	
140+78	CTH V	1	2	-	-	56	-	2	2	
70+58	PATTON N	1	2	-	67.5	-	2	-	2	
100+62	W.I.B.U.	1	2	-	74	-	2	-	2	
	UNDISTRIBUTED	-	10	-	-	-	-	-	10	SEE PLAN FOR CULVERTS TO REMAIN
TOTAL		6	22	85	206.5	122	8	4	22	

STATION	TO STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	325.0100 PULVERIZE AND RELAY SY	COMMENTS
64+09	89+50	MAINLINE/SIDE ROADS	-	225	-	9,984	BEGIN TO MADIGAN ROAD
89+50	132+50	MAINLINE/SIDE ROADS	-	25	-	15,694	MADIGAN ROAD TO SCHUMACHER ROAD
132+50	169+50	MAINLINE/SIDE ROADS	-	115	-	14,893	SCHUMACHER ROAD TO PATTON ROAD
169+50	222+00	MAINLINE/SIDE ROADS	-	80	-	20,146	PATTON ROAD TO CTH I (SOUTH)
222+00	258+04.67	MAINLINE/SIDE ROADS	-	25	-	13,074	CTH I (SOUTH) TO 258+04.67
258+04.67	270+99	MAINLINE/SIDE ROADS	-	160	9,112	-	258+04.67 TO END
		DRIVEWAYS	467	-	-	-	
TOTAL			467	630	9,112	73,791	

STATION	TO STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF	COMMENTS
151+56	152+90	CTH V	79	PRIVATE DRIVEWAY LEFT
99+72	99+80	CTH I (SOUTH)	28	
TOTAL			107	

STATION	TO STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	COMMENTS
244+19.59	248+49.16	RT	440	
246+59.76	250+64.30	LT	405	
249+06.86	252+76.85	RT	373	
TOTAL			1,218	

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			305.0110	305.0120	312.0110	645.0220		
			BASE AGGREGATE	BASE AGGREGATE	SELECT CRUSHED	GEOGRID TYPE SR		
			DENSE 3/4-INCH	DENSE 1 1/4-INCH	MATERIAL			
STATION	TO STATION	LOCATION	TON	TON	TON	SY	COMMENTS	
64+09	93+06	MAINLINE/SIDE ROADS	3,296	2,446	773	-	BEGIN TO MADIGAN ROAD	
93+06	133+14	MAINLINE/SIDE ROADS	5,813	1,410	467	-	MADIGAN ROAD TO SCHUMACHER ROAD	
133+14	173+80	MAINLINE/SIDE ROADS	4,806	2,679	874	-	SCHUMACHER ROAD TO PATTON ROAD	
173+80	232+33	MAINLINE/SIDE ROADS	6,969	5,838	1,906	-	PATTON ROAD TO CTH I (SOUTH)	
232+33	258+04.67	MAINLINE/SIDE ROADS	4,857	-	-	-	CTH I (SOUTH) TO 258+04.67	
258+04.67	270+99	MAINLINE/SIDE ROADS	1,548	-	-	-	258+04.67 TO END	
		DRIVEWAYS	380	-	-	-		
		UNDISTRIBUTED	-	-	-	2,500	INSTALL AS DIRECTED BY THE ENGINEER	
TOTAL			27,669	12,373	4,020	2,500		

			465.0315	601.0557		
			ASPHALTIC FLUMES	CONCRETE CURB & GUTTER SLOPED 6- INCH TYPE D		
STATION	TO STATION	LOCATION	SY	LF	COMMENTS	
88+00	90+00	INTERSECTION	47	314	MADIGAN	
131+00	132+50	INTERSECTION	18	165	SCHUMACHER	
151+50	153+00	INTERSECTION	-	73	UNNAMMED	
167+50	169+50	INTERSECTION	36	315	PATTON	
219+80	224+75	INTERSECTION	50	652	CTH I	
TOTAL			151	1,519		

			648.0100		
			LOCATING NO PASSING ZONES		
STATION	TO STATION	LOCATION	MI	COMMENTS	
64+09	270+99	MAINLINE	3.95		
TOTAL			3.95		

			455.0605	460.6223	460.6224	465.0105	450.4000		
			TACK COAT	HMA PAVEMENT 3 MT 58-28 S	HMA PAVEMENT 4 MT 58-28 S	ASPHALTIC SURFACE	HMA COLD WEATHER PAVING		
STATION	TO STATION	LOCATION	GAL	TON	TON	TON	TON	COMMENTS	
64+09	89+50	MAINLINE/SIDE ROADS	761	1,827	1,218	-	-	BEGIN TO MADIGAN ROAD	
89+50	132+50	MAINLINE/SIDE ROADS	1,185	2,843	1,896	-	-	MADIGAN ROAD TO SCHUMACHER ROAD	
132+50	169+50	MAINLINE/SIDE ROADS	1,150	2,761	1,841	-	-	SCHUMACHER ROAD TO PATTON ROAD	
169+50	222+00	MAINLINE/SIDE ROADS	1,609	3,861	2,574	-	-	PATTON ROAD TO CTH I (SOUTH)	
222+00	258+04.67	MAINLINE/SIDE ROADS	1,012	2,429	1,619	-	-	CTH I (SOUTH) TO 258+04.67	
258+04.67	270+99	MAINLINE/SIDE ROADS	638	1,531	1,021	-	-	258+04.67 TO END	
		DRIVEWAYS	-	-	-	70	-		
		UNDISTRIBUTED	-	-	-	-	750		
TOTAL			6,355	15,252	10,169	70	750		

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STATION	TO STATION	LOCATION	614.2330	614.2340	614.2350	614.2610	614.2630	COMMENTS
			MGS GUARDRAIL 3 K LF	MGS GUARDRAIL 3 L LF	MGS GUARDRAIL SHORT RADIUS LF	MGS GUARDRAIL TERMINAL EAT EACH	MGS GUARDRAIL SHORT RADIUS TERMINAL EACH	
200+05.00	202+23.75	LT	-	113	-	2	-	
200+15.00	202+33.75	RT	-	113	-	2	-	
244+15.12	248+45.51	RT	338	-	68	1	1	
246+50.00	250+81.25	LT	325	-	-	2	-	
248+83.36	253+32.76	RT	300	-	103	1	1	
TOTAL			963	225	171	8	2	

STATION	TO STATION	LOCATION	625.0100	625.0500	627.0200	628.1104	628.1504	628.1520	628.2002	628.7504	628.7555	629.0210	630.0130	630.0200	COMMENTS
			TOPSOIL SY	SALVAGED TOPSOIL SY	MULCHING SY	EROSION BALES EACH	SILT FENCE LF	SILT FENCE MAINTENANCE LF	EROSION MAT CLASS I TYPE A SY	TEMPORARY DITCH CHECKS LF	CULVERT PIPE CHECKS EACH	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 30 LB	SEEDING TEMPORARY	
64+09	89+50	MAINLINE	-	5,278	2,639	10	4,140	414	2,639	-	2	3	95	-	BEGIN TO MADIGAN ROAD
89+50	132+50	MAINLINE	-	7,589	3,794	10	8,340	834	3,794	-	1	5	137	-	MADIGAN ROAD TO SCHUMACHER ROAD
132+50	169+50	MAINLINE	-	8,967	4,483	10	7,440	744	4,483	-	2	6	161	-	SCHUMACHER ROAD TO PATTON ROAD
169+50	222+00	MAINLINE	-	11,556	5,778	20	9,580	958	5,778	-	1	7	208	-	PATTON ROAD TO CTH I (SOUTH)
222+00	258+04.67	MAINLINE	-	8,356	4,178	10	5,900	590	4,178	-	-	5	150	-	CTH I (SOUTH) TO 258+04.67
258+04.67	270+99	MAINLINE	-	-	-	-	-	-	-	-	-	-	-	-	258+04.67 TO END
	UNDISTRIBUTED		1,000	-	-	-	-	-	-	500	-	-	-	20	
TOTAL			1,000	41,744	20,872	60	35,400	3,540	20,872	500	6	26	751	20	

STATION	TO STATION	LOCATION	628.1905	628.1910	COMMENTS
			MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	
64+09	270+99	MAINLINE	1	2	
TOTAL			1	2	

STATION	TO STATION	LOCATION	624.0100	630.0500	COMMENTS
			WATER MGAL	SEED WATER MGAL	
64+09	89+50	MAINLINE/SIDE ROADS	86	59	
89+50	132+50	MAINLINE/SIDE ROADS	108	85	
132+50	169+50	MAINLINE/SIDE ROADS	112	101	
169+50	222+00	MAINLINE/SIDE ROADS	192	130	
222+00	258+04.67	MAINLINE/SIDE ROADS	73	94	
258+04.67	270+99	MAINLINE/SIDE ROADS	23	0	
TOTAL			595	469	

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STATION	TO STATION	LOCATION	646.1005	646.3005	646.4505	646.5005	646.5105	646.5205	646.6105	646.7105	COMMENTS
			MARKING LINE (PAINT) 4-INCH	MARKING LINE (PAINT) 8-INCH	MARKING LINE SAME DAY PAINT 4-INCH	MARKING ARROW PAINT	MARKING WORD PAINT	MARKING SYMBOL PAINT	MARKING STOP LINE PAINT 18- INCH	MARKING DIAGONAL PAINT 12-INCH	
			WHITE LF	WHITE LF	YELLOW LF	WHITE EACH	WHITE EACH	WHITE EACH	WHITE LF	YELLOW LF	
64+09	89+50	MAINLINE/SIDE ROADS	5,082	200	3,009	2	1	-	30	-	BEGIN TO MADIGAN ROAD
89+50	132+50	MAINLINE/SIDE ROADS	8,600	500	3,043	4	2	-	15	-	MADIGAN ROAD TO SCHUMACHER ROAD
132+50	169+50	MAINLINE/SIDE ROADS	7,517	400	931	4	2	-	30	-	SCHUMACHER ROAD TO PATTON ROAD
169+50	222+00	MAINLINE/SIDE ROADS	10,500	1,186	6,309	4	2	-	85	151	PATTON ROAD TO CTH I (SOUTH)
222+00	258+04.67	MAINLINE/SIDE ROADS	7,210	828	7,959	4	2	1	15	163	CTH I (SOUTH) TO 258+04.67
258+04.67	270+99	MAINLINE/SIDE ROADS	2,744	948	3,330	11	2	1	40	232	258+04.67 TO END
TOTAL			41,653	4,062	24,582	29	11	2	215	545	

STATION	TO STATION	LOCATION	650.5000	650.5500	650.6000	650.8000	650.9910	204.0120	COMMENTS
			CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING CURB & GUTTER LF	CONSTRUCTION STAKING PIPE CULVERTS EACH	CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) LS	CONSTRUCTION STAKING SLOPE STAKES LF	
64+09	270+99	MAINLINE	20,690	1,519	5	20,690	1	41,380	
TOTAL			20,690	1,519	5	20,690	1	41,380	

690.0150

STATION	TO STATION	LOCATION	SPV.0060.01 LANDMARK REFERENCE MONUMENTS	COMMENTS
			EACH	
62+10			1	
88+54			1	
115+54			1	
168+56			1	
194+60			1	
220+64			1	
246+83			1	
TOTAL			7	

STATION	TO STATION	LOCATION	SAWING ASPHALT	COMMENTS
			LF	
64+09		MAINLINE	32	
88+78	89+00	MADIGAN	22	
88+68	88+90	MADIGAN	22	
131+60	131+82	SHUMACHER	22	
151+94	152+52	SIDEROAD	58	
168+45	168+67	PATTON	22	
168+44	168+66	PATTON	22	
204+40	204+62	NORWAY GROVE	22	
220+48	220+77	CTH I	29	
220+54	220+76	WIBU	22	
230+60	231+86	NORWAY GROVE	22	
264+58	265+72	LINDE	114	
265+05	265+35	GENE	30	
TOTAL			439	

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		AVAILABLE MATERIAL (4)	REDUCED EBS IN FILL (5)	EXPANDED EBS BACKFILL (6)	UNEXPANDED FILL	EXPANDED FILL (7)	MASS ORDINATE +/- (8)	208.0100 BORROW	COMMENT
			CUT (2)	EBS EXCAVATION (3)		FACTOR 0.80	FACTOR 1.30		FACTOR 1.25			
DIVISION 1												
	84+62 TO 93+00	MADIGAN ROAD INTERSECTION	248	310	248	248	403	776	660	-411	411	
	126+00 TO 133+00	SCHUMACHER ROAD INTERSECTION	207	259	207	207	337	648	551	-344	344	
	164+00 TO 174+00	PATTON ROAD INTERSECTION	370	630	370	504	819	926	528	-157	157	
	214+00 TO 232+00	CTH I (SOUTH) INTERSECTION	1,667	989	1,667	791	1,286	2,000	1,511	156	0	
DIVISION 1 SUBTOTAL			2,493	2,188	2,493	1,751	2,845	4,350	3,249	-757	757	
GRAND TOTAL			2,493	2,188	2,493	1,751	2,845	4,350	3,249	-757	757	
TOTAL COMMON EXC			4,681									

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
 - (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
 - (3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
 - (4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
 - (5) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = X.2X
 - (6) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH SELECT BORROW MATERIAL. EBS BACKFILL FACTOR = X.4X. ITEM NUMBER 208.1100
 - (7) EXPANDED FILL FACTOR = X.6X
- DEPENDING ON SELECTIONS:
- OR **EXPANDED FILL = (UNEXPANDED FILL - REDUCED EBS) * FILL FACTOR**
 - OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR
 - OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) * FILL FACTOR
 - OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * FILL FACTOR
- (8) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

HMA QMP MIXTURE TABLE

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FT DRIVING LANES	64+09 TO 258+04.67 258+04.67 TO 271+06	BINDER LAYER	PULVERIZE AND RELAY MILLED EXISTING HMA SURFACE	HMA PAVEMENT 3 MT 58-28 S	8967	3"	ITEM 460.2010 INCENTIVE AIR VOIDS HMA PAVEMENT	ITEM 460.2005 INCENTIVE DENSITY PWL HMA PAVEMENT
12 FT DRIVING LANES	64+09 TO 271+06	SURFACE LAYER	BINDER LAYER	HMA PAVEMENT 4 MT 58-28 S	5979	2"	ITEM 460.2010 INCENTIVE AIR VOIDS HMA PAVEMENT	ITEM 460.2005 INCENTIVE DENSITY PWL HMA PAVEMENT
4 FT SHOULDER	64+09 TO 258+04.67 258+04.67 TO 271+06	BINDER LAYER	PULVERIZE AND RELAY MILLED EXISTING HMA SURFACE	HMA PAVEMENT 3 MT 58-28 S	2719	3"	ITEM 460.2010 INCENTIVE AIR VOIDS HMA PAVEMENT	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
4 FT SHOULDER	64+09 TO 271+06	SURFACE LAYER	BINDER LAYER	HMA PAVEMENT 4 MT 58-28 S	1813	2"	ITEM 460.2010 INCENTIVE AIR VOIDS HMA PAVEMENT	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
INTERSECTIONS/TURN LANES	64+09 TO 258+04.67 258+04.67 TO 271+06	BINDER LAYER	PULVERIZE AND RELAY MILLED EXISTING HMA SURFACE	HMA PAVEMENT 3 MT 58-28 S	3566	3"	ITEM 460.2010 INCENTIVE AIR VOIDS HMA PAVEMENT	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
INTERSECTIONS/TURN LANES	64+09 TO 271+06	SURFACE LAYER	BINDER LAYER	HMA PAVEMENT 4 MT 58-28 S	2377	2"	ITEM 460.2010 INCENTIVE AIR VOIDS HMA PAVEMENT	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE

3

3

TRAFFIC CONTROL OPERATIONS	DURATION (DAYS)	643.0300		643.0420		643.0705		643.0900		643.1050	
		TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL WARNING LLIGHTS TYPE A		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS PCMS	
		EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY
PROJECT PRE-WARNING	7	-	-	-	-	-	-	-	-	2	14
MAINLINE CLOSURE	7	-	-	38	266	62	434	85	595	2	14
MAINLINE WARNING SIGNS	117	-	-	-	-	-	-	37	4329	-	-
BEAM GUARD REPLACEMENT	5	35	175	-	-	-	-	-	-	-	-
TOTAL			175		266		434		4924		28

638.2102

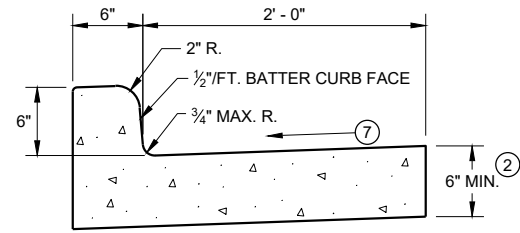
MOVING SIGNS

TYPE II

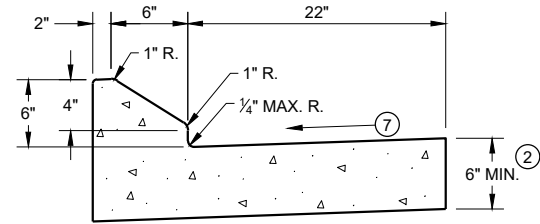
STATION	TO STATION	LOCATION	EACH	COMMENTS
64+09	270+99	MAINLINE	17	INTERSECTION SIGNS
TOTAL			17	

Standard Detail Drawing List

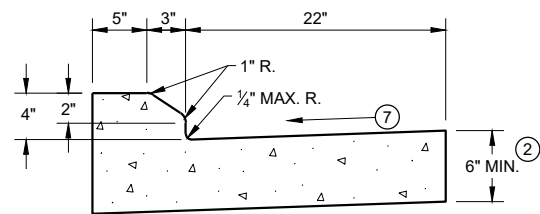
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-04A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B53-01A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-15A	PAVEMENT MARKING SYMBOLS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C07-15E	PAVEMENT MARKING FOR BIKE LANES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-09A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-08	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-06B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C29-07A	BICYCLE LANE MARKING
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15C35-04B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-04C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS



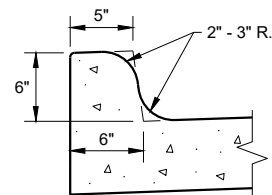
TYPES A^① & D



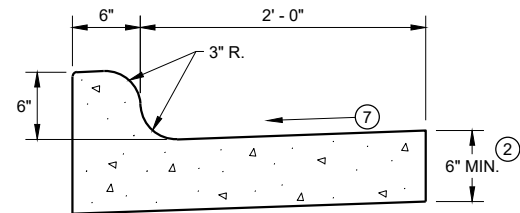
6" SLOPED CURB TYPES G^① & J



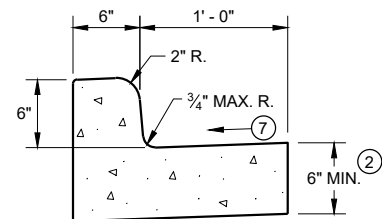
4" SLOPED CURB TYPES G^① & J



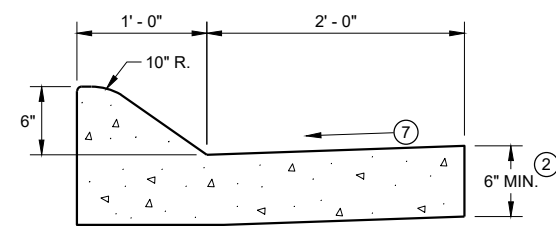
TYPES K^① & L
(OPTIONAL CURB SHAPE)



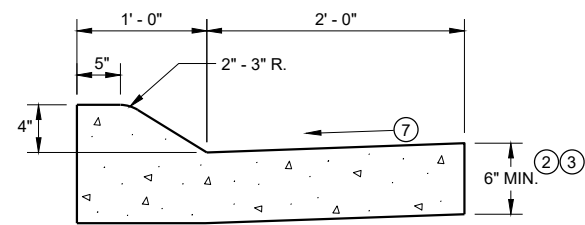
TYPES K^① & L
CONCRETE CURB AND GUTTER 30"



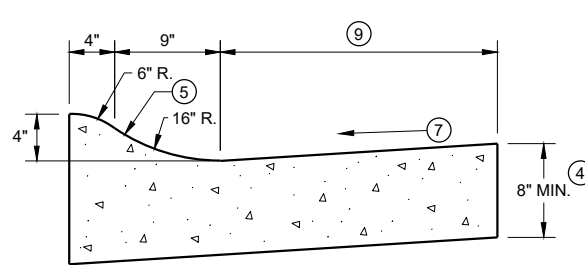
TYPES A^① & D
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D

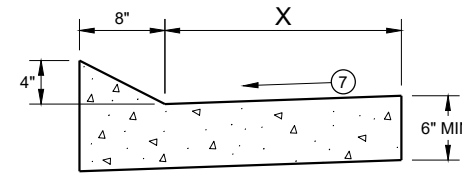


4" SLOPED CURB TYPES A^① & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

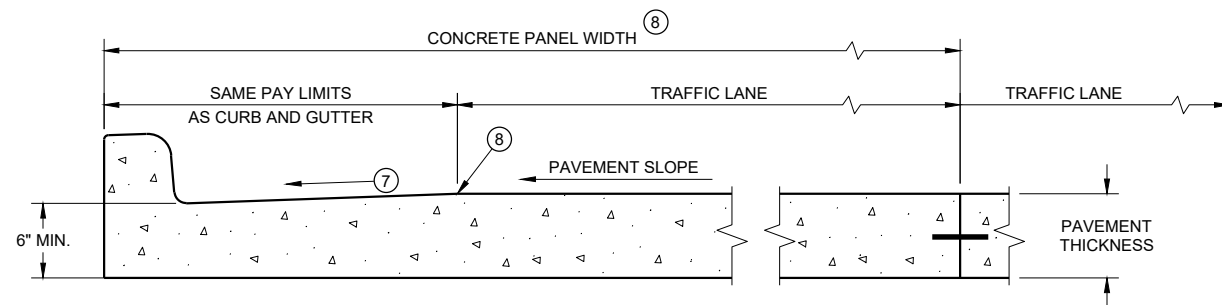
TBT & TBTT	X
30"	22"
36"	28"



TYPES TBT & TBTT^①
CONCRETE CURB AND GUTTER

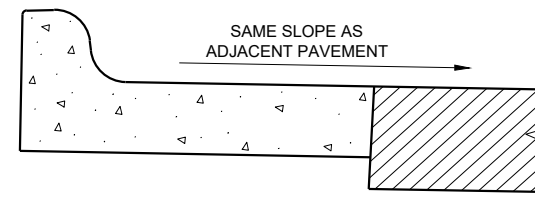
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

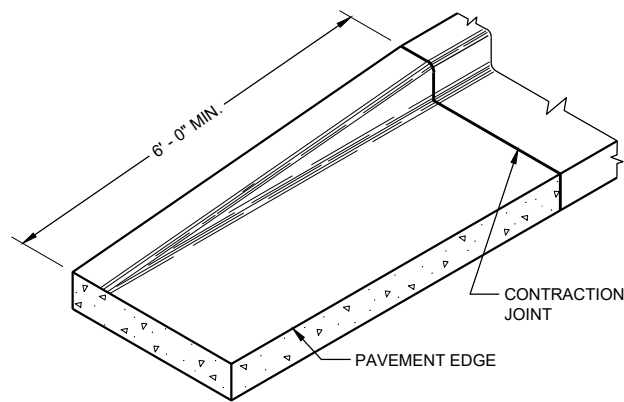
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

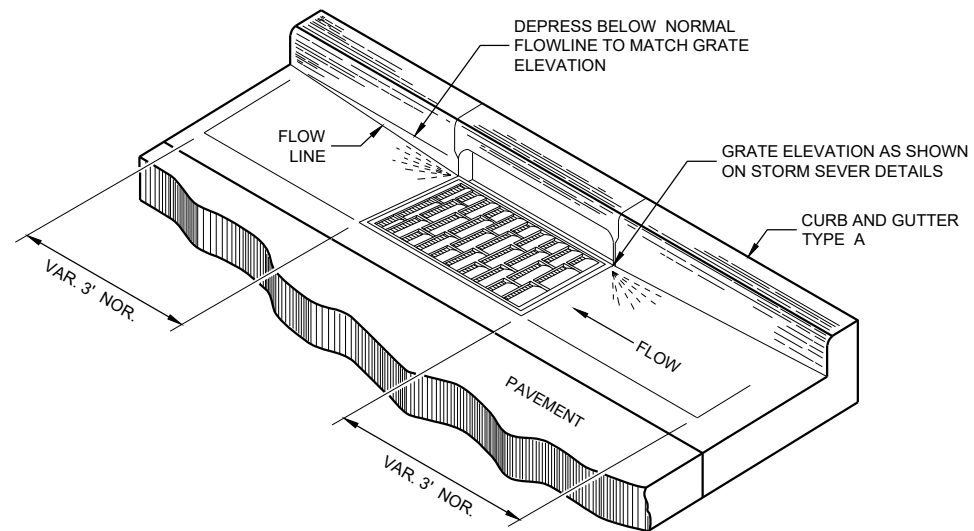
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

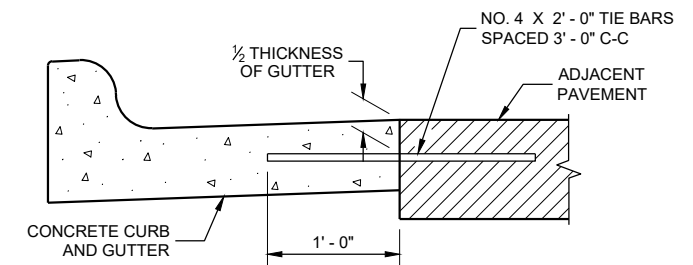
GENERAL NOTES

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

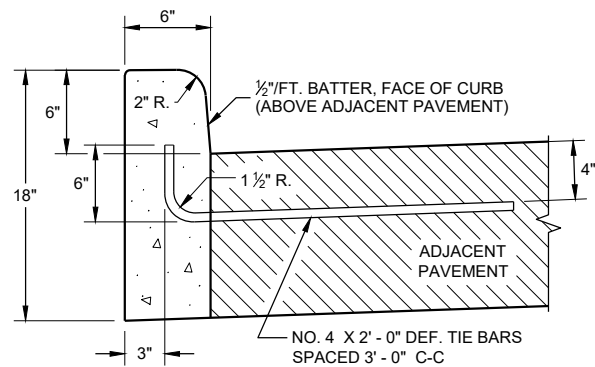
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

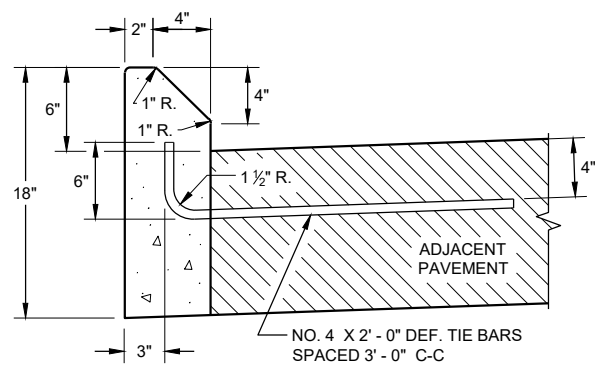
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION ①

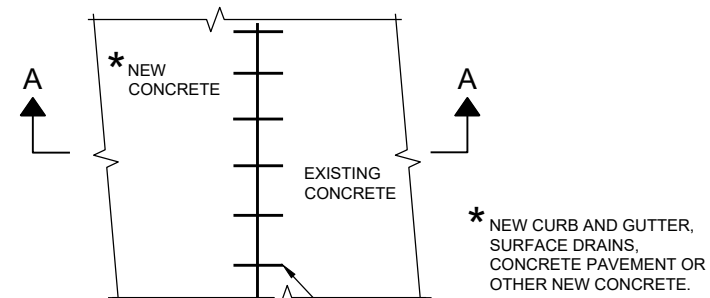


TYPES A ① & D

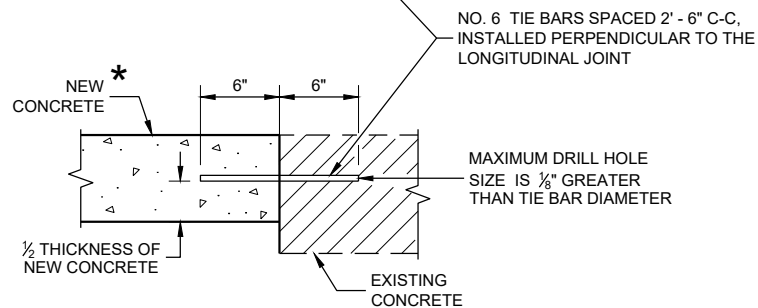


TYPES G ① & J

CONCRETE CURB

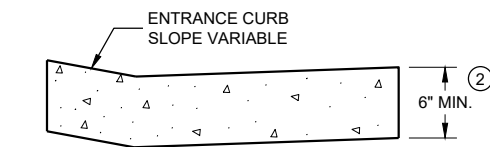


PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB ⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

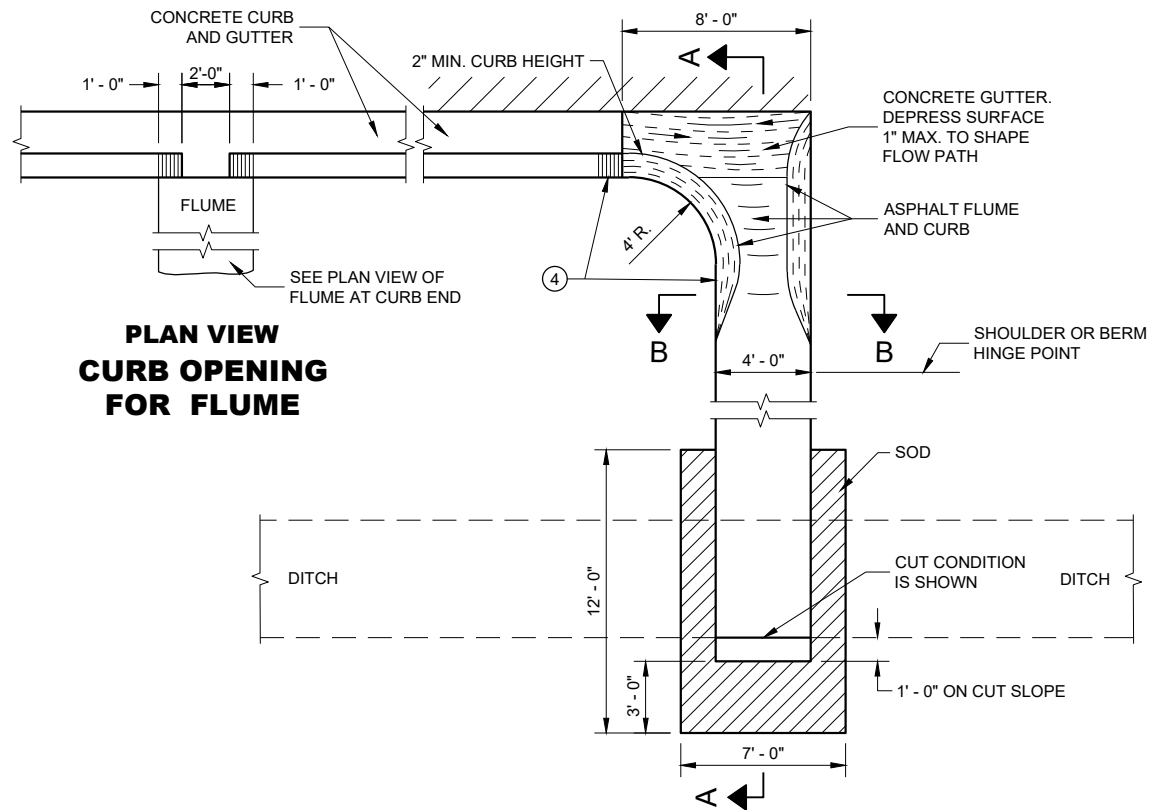
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

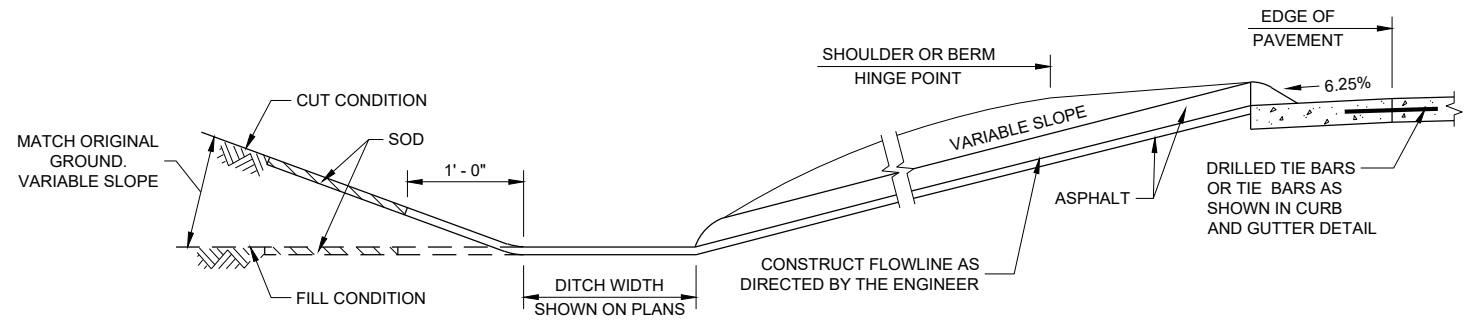
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

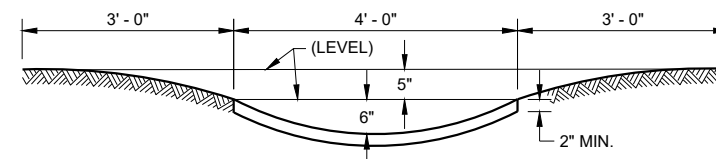
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

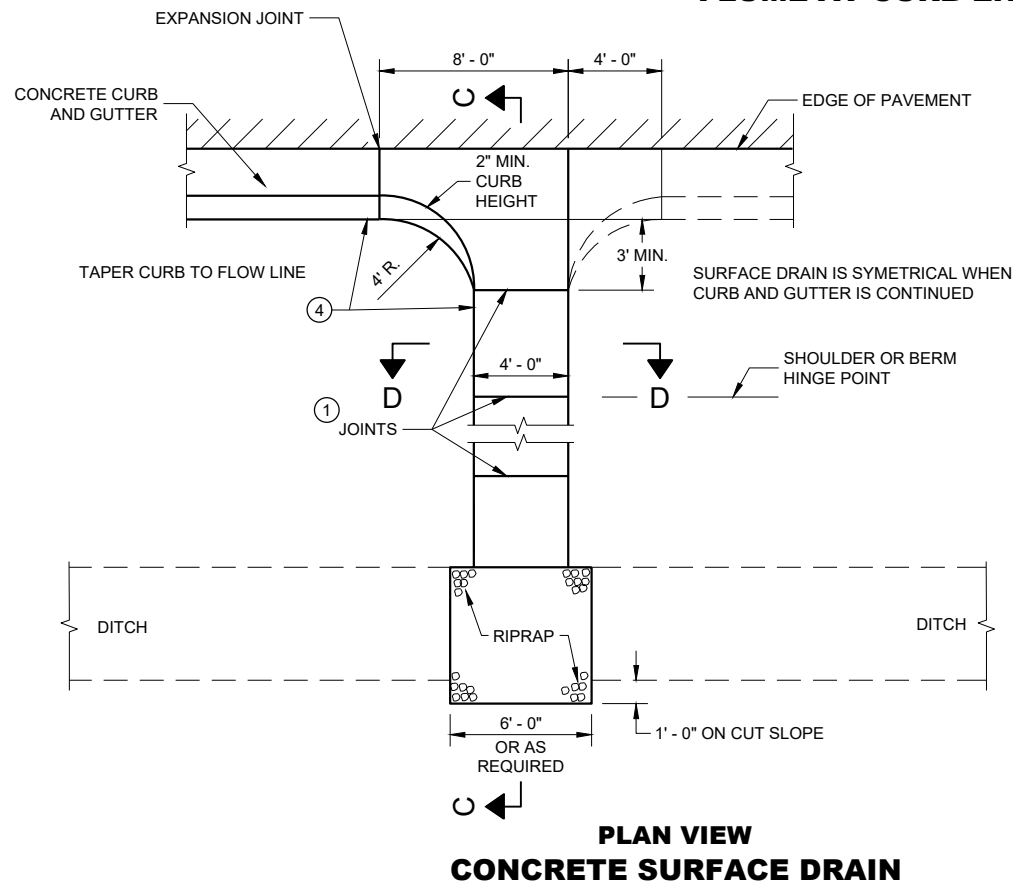
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.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



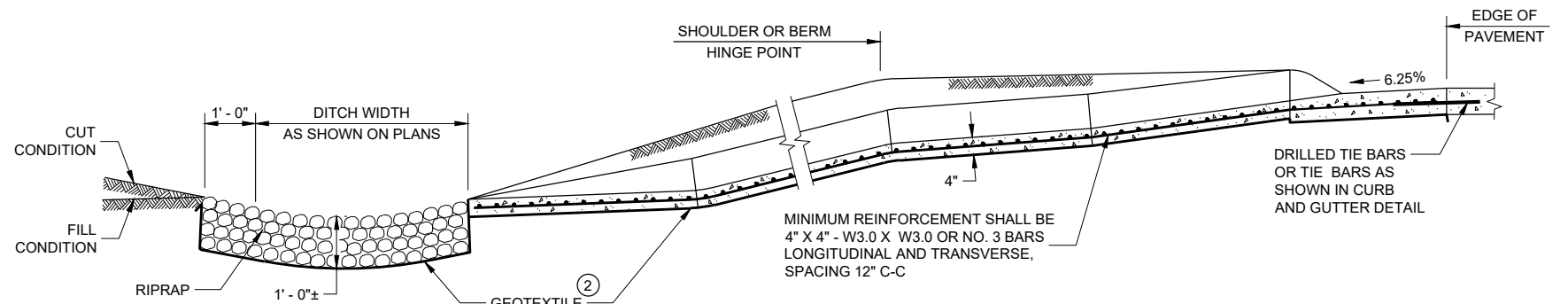
SECTION A - A



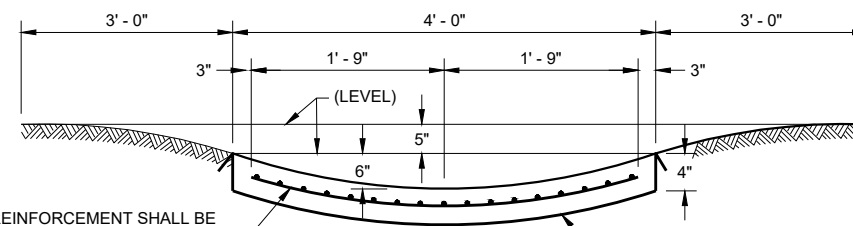
SECTION B - B



**PLAN VIEW
CONCRETE SURFACE DRAIN**



SECTION C - C



SECTION D - D

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

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

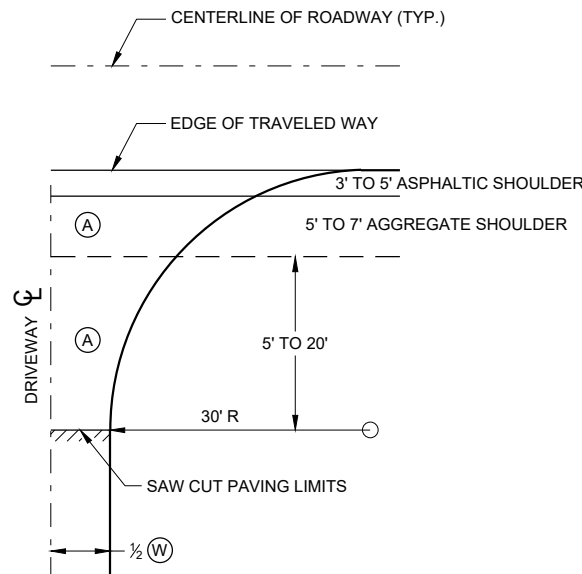
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

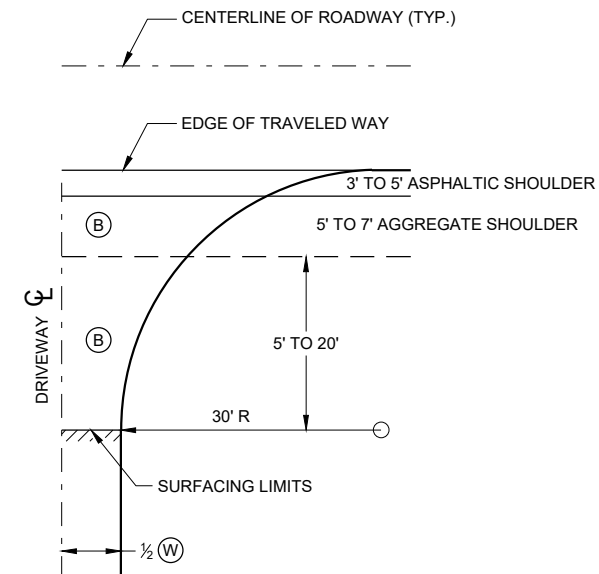
GENERAL NOTES

- ① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.

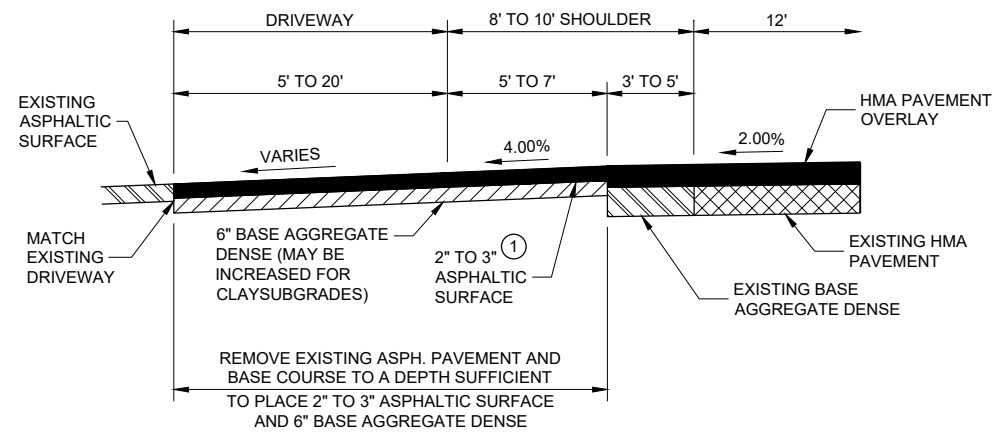


- (A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- (B) : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- (W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.

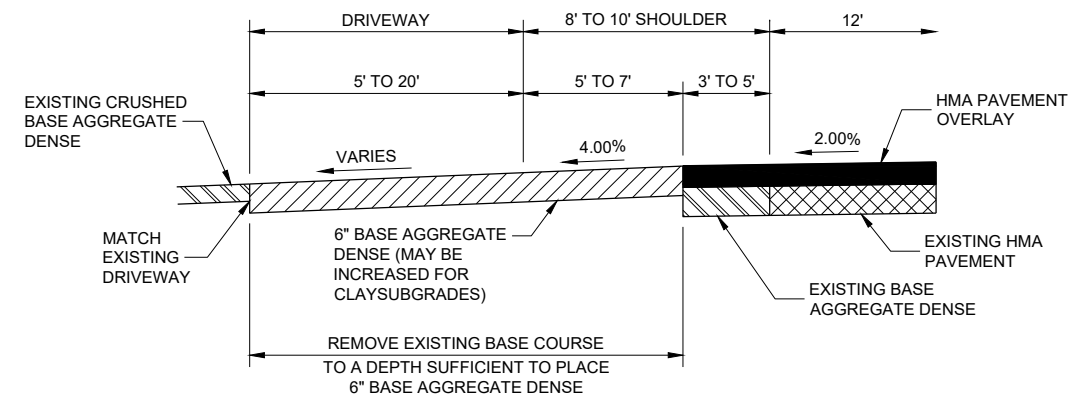
**PLAN VIEW
HALF SECTION**



**PLAN VIEW
HALF SECTION**



**PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS**



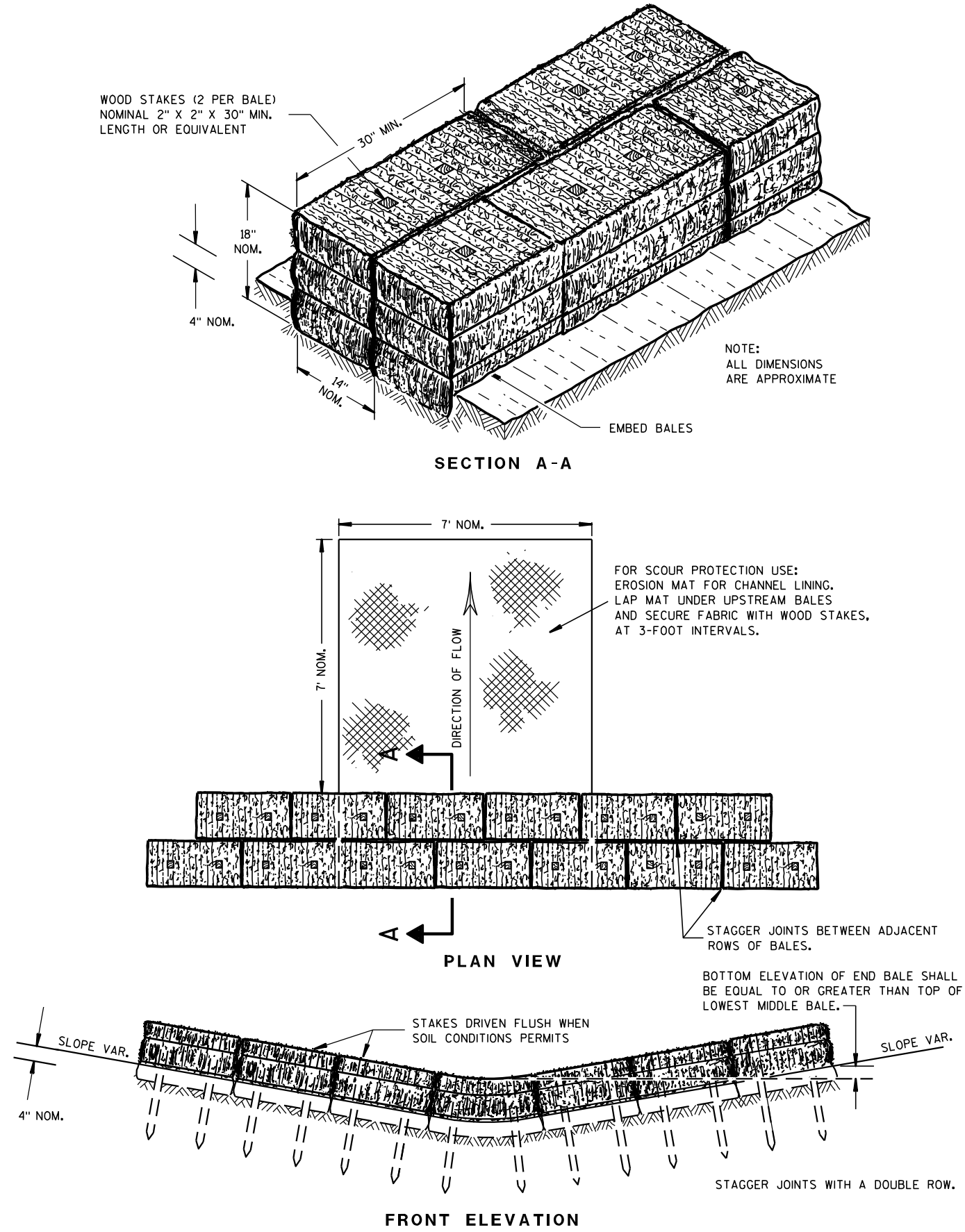
**PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS**

**DRIVEWAYS WITHOUT CURB
AND GUTTER RESURFACING
PROJECTS RURAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

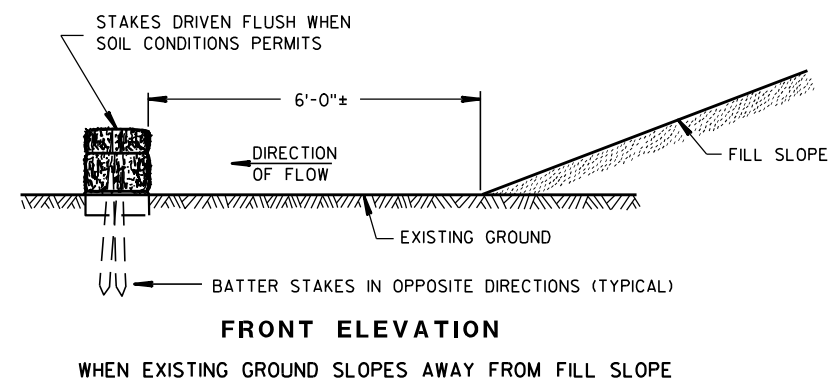
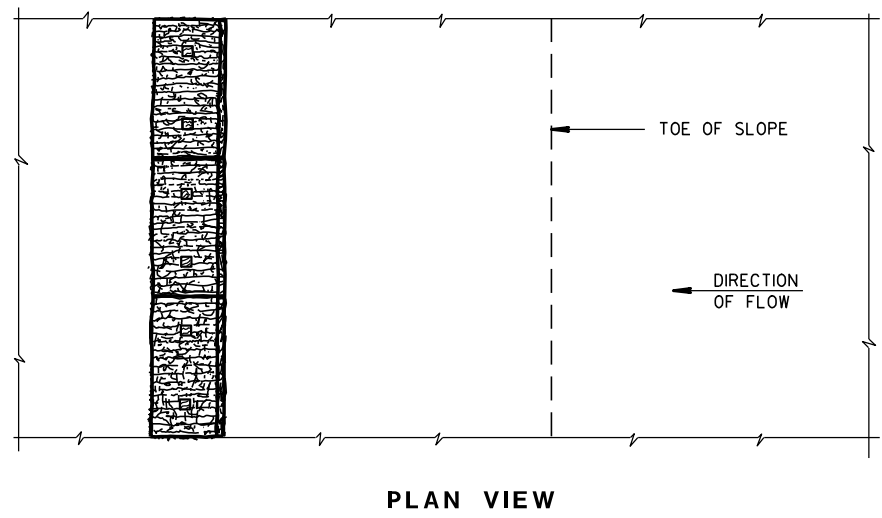
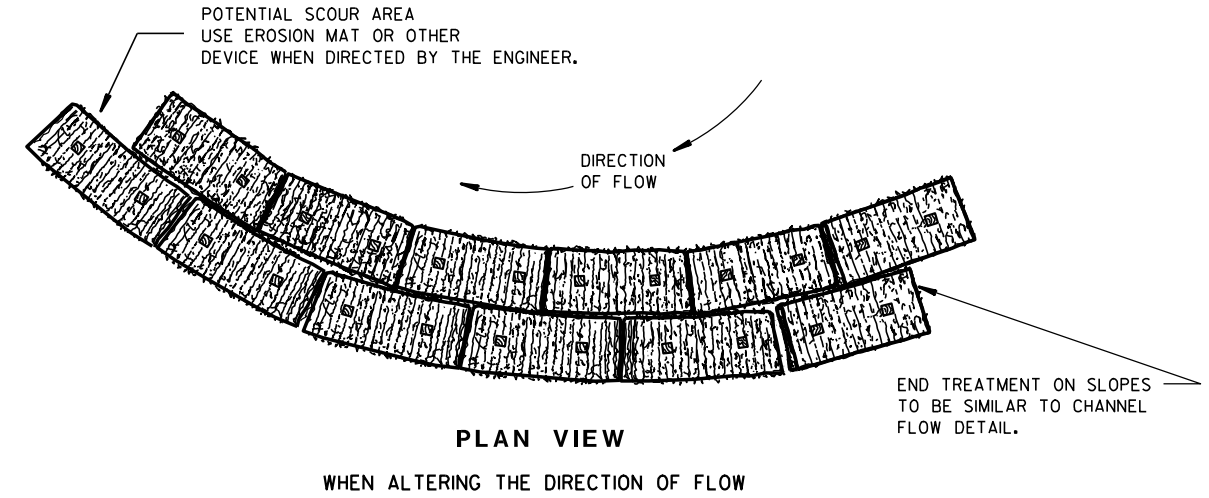


TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

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

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

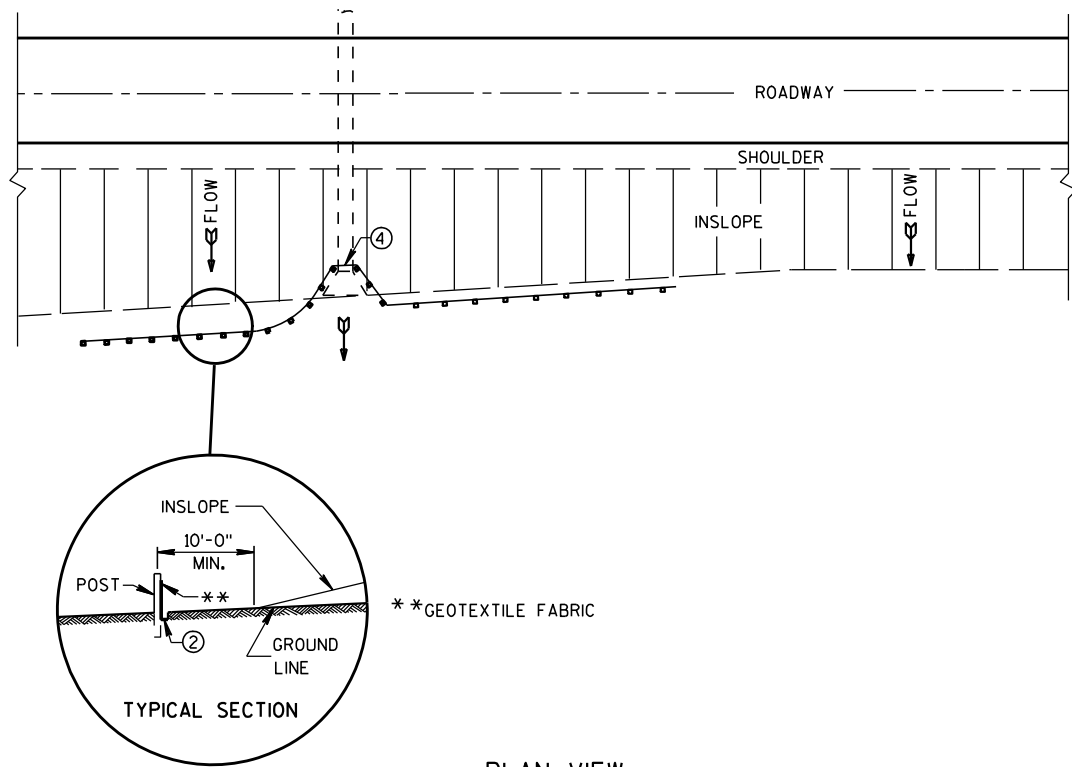


EROSION BALES FOR SHEET FLOW

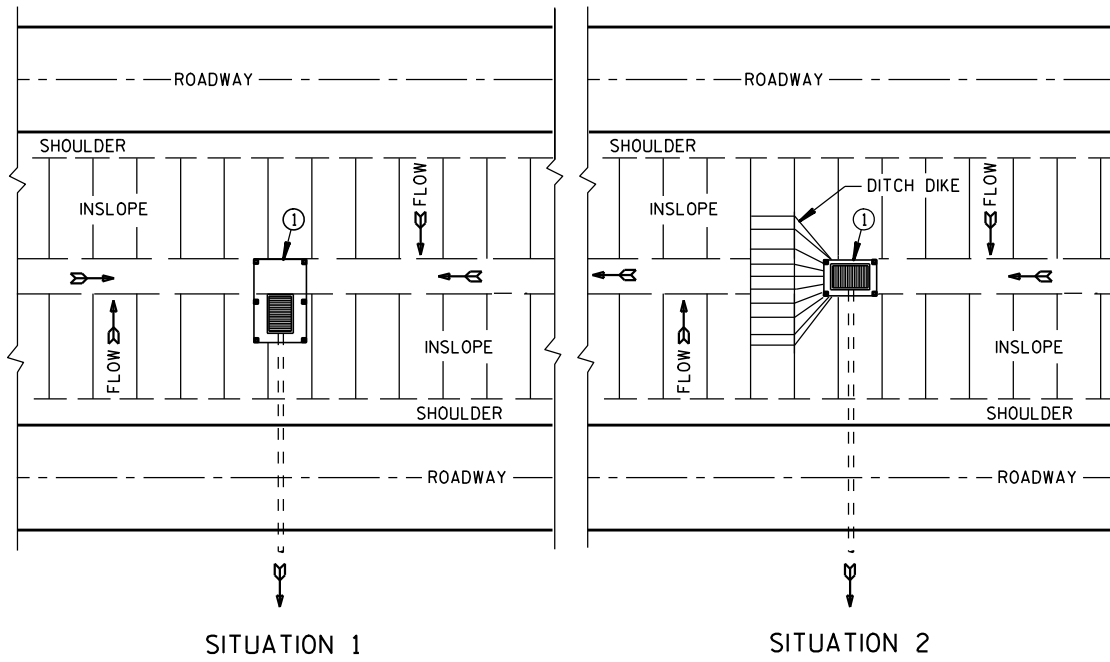
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

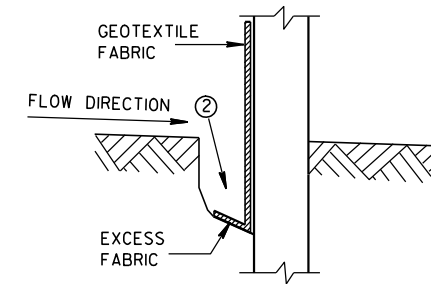


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

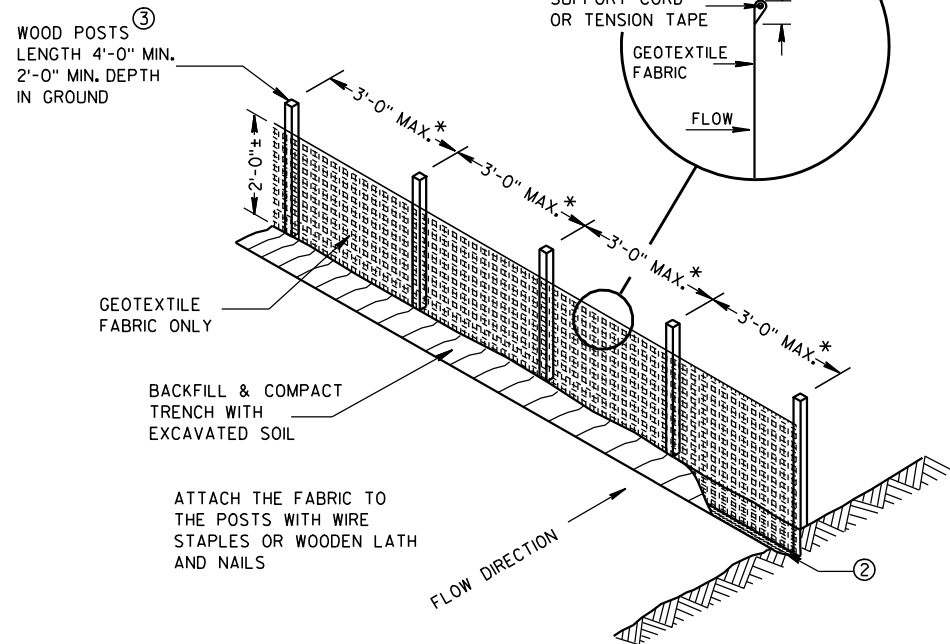
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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



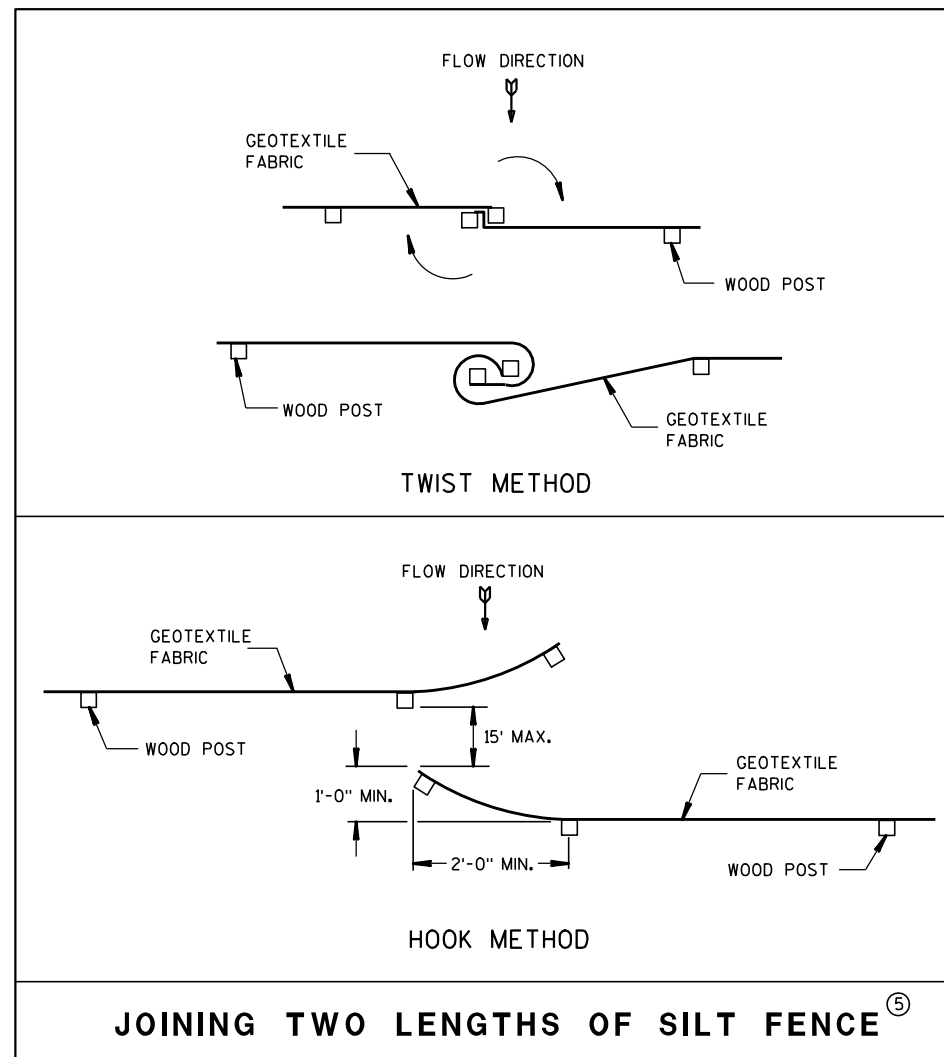
TRENCH DETAIL

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

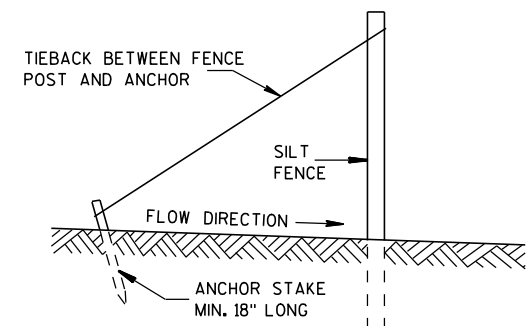


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

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

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

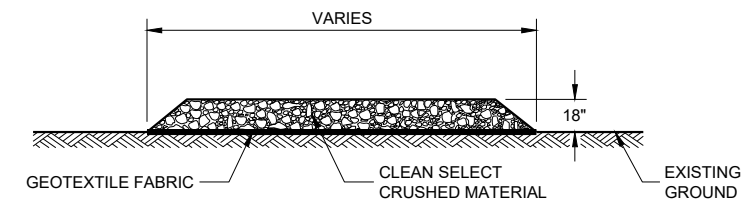
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

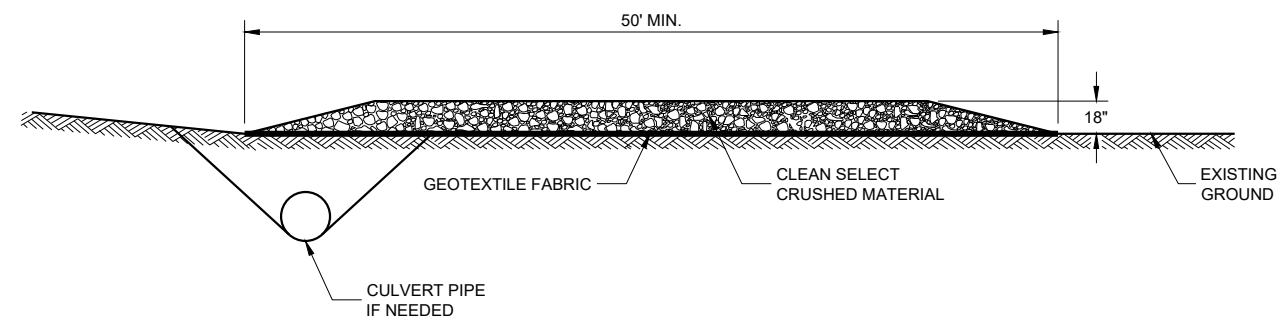
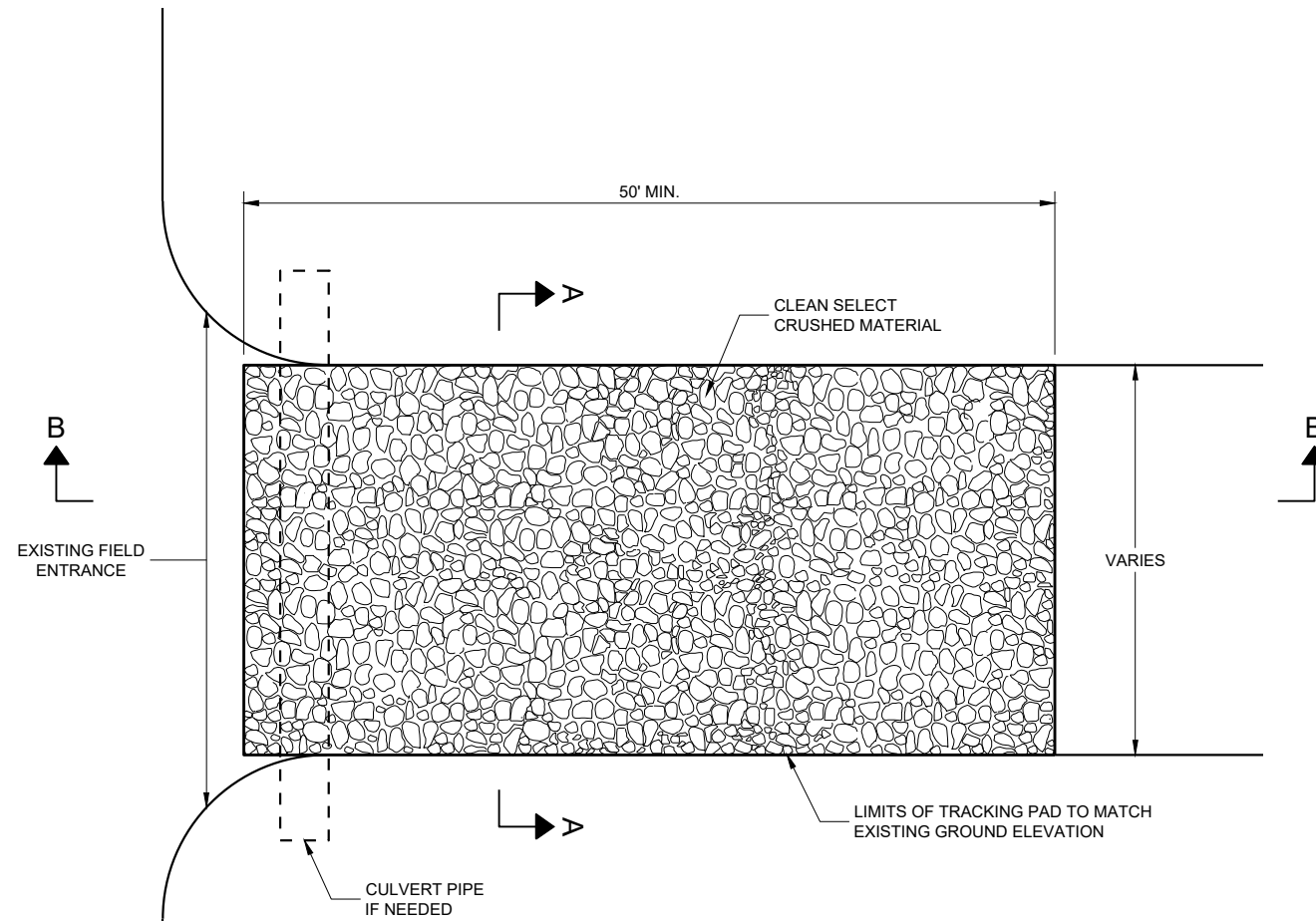
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

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

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



SECTION A - A



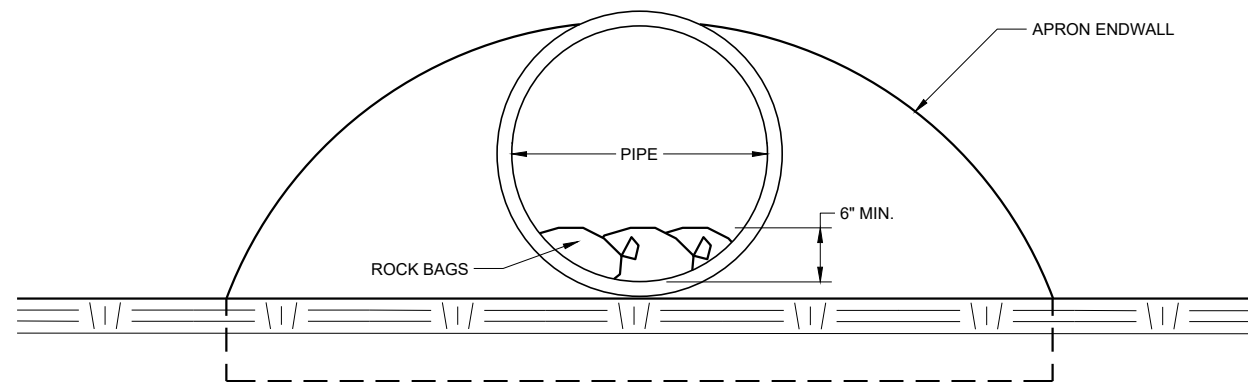
SECTION B - B

TRACKING PAD

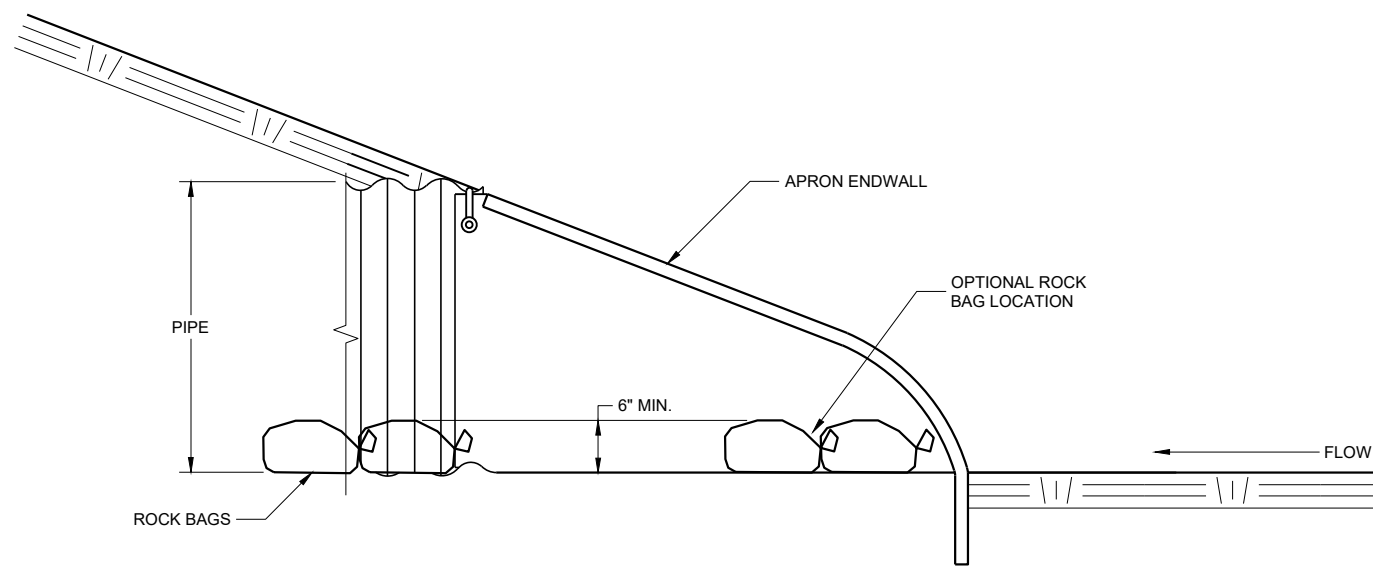
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
 (INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

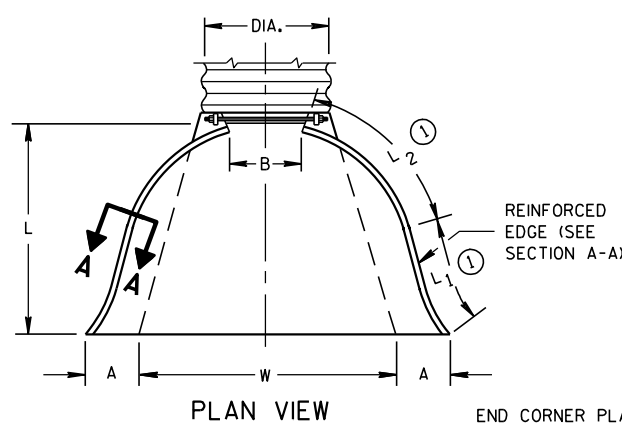
FHWA

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

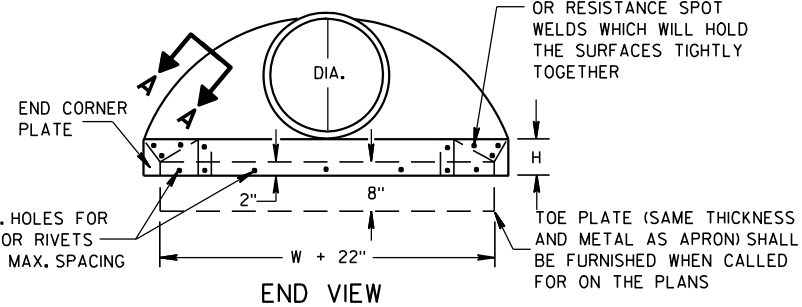
* EXCEPT CENTER PANEL SEE GENERAL NOTES

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

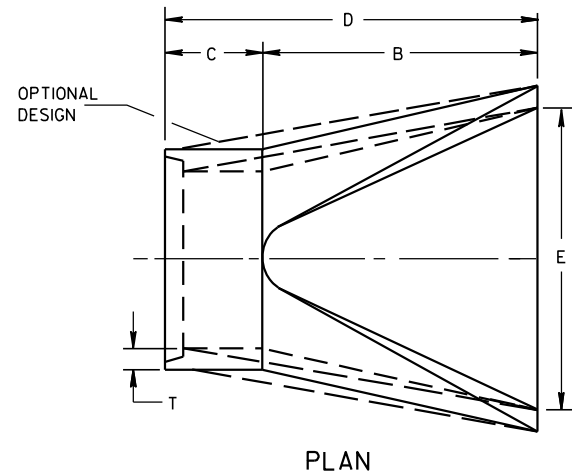
* MINIMUM
** MAXIMUM



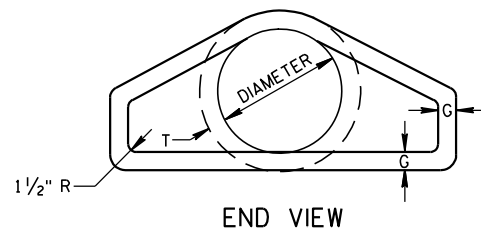
REINFORCED EDGE (SEE SECTION A-A)
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



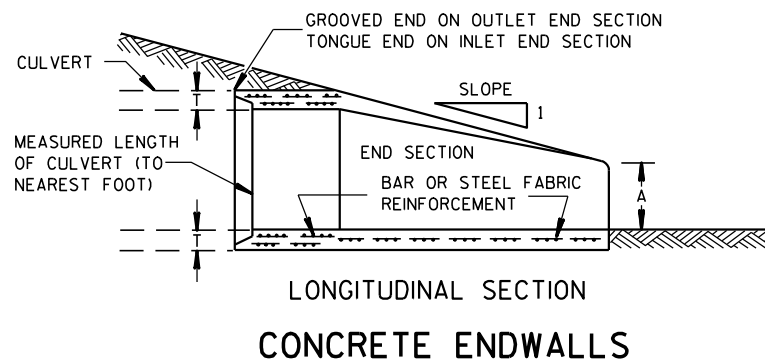
SIDE ELEVATION
METAL ENDWALLS



PLAN

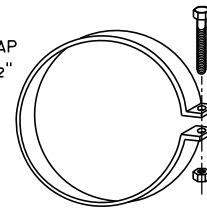


END VIEW

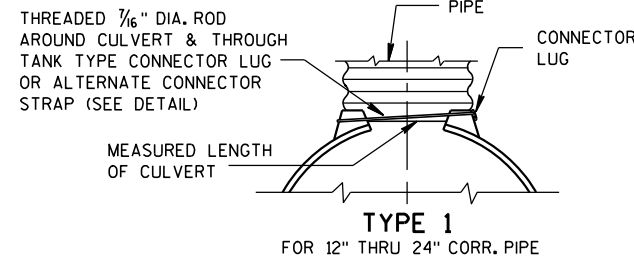


LONGITUDINAL SECTION
CONCRETE ENDWALLS

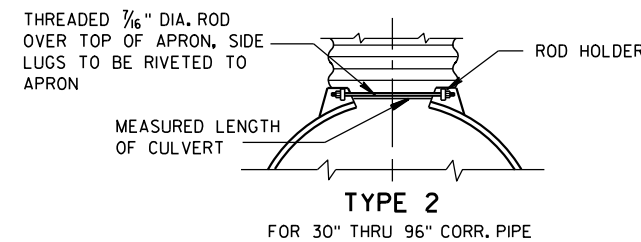
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



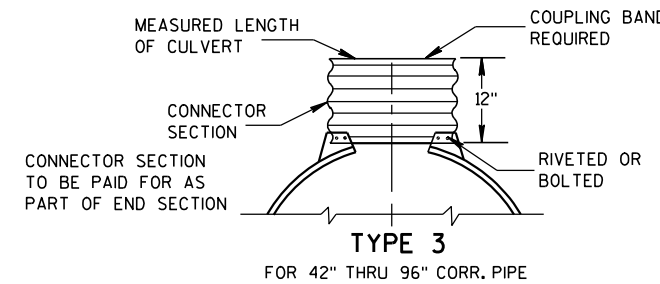
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



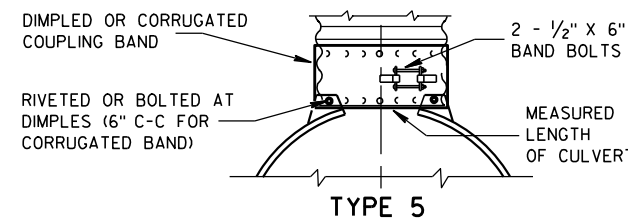
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

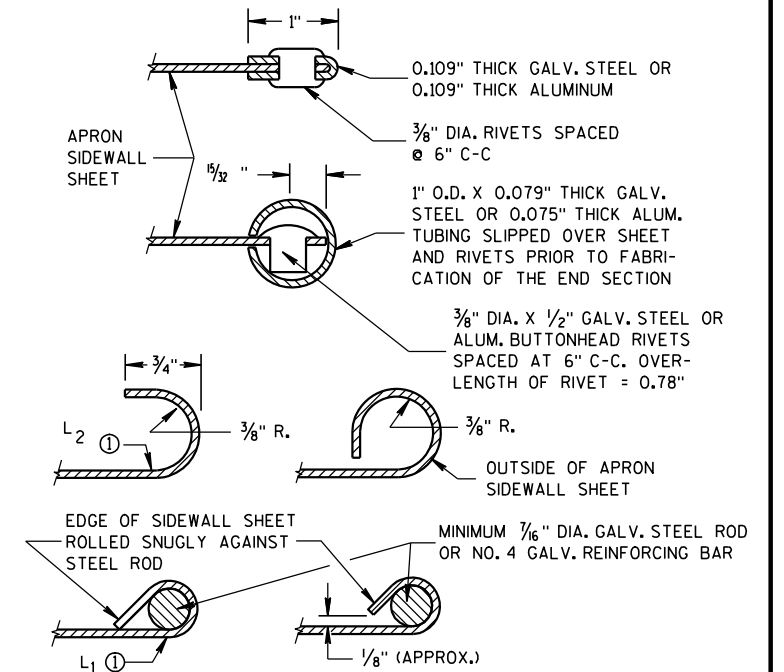
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

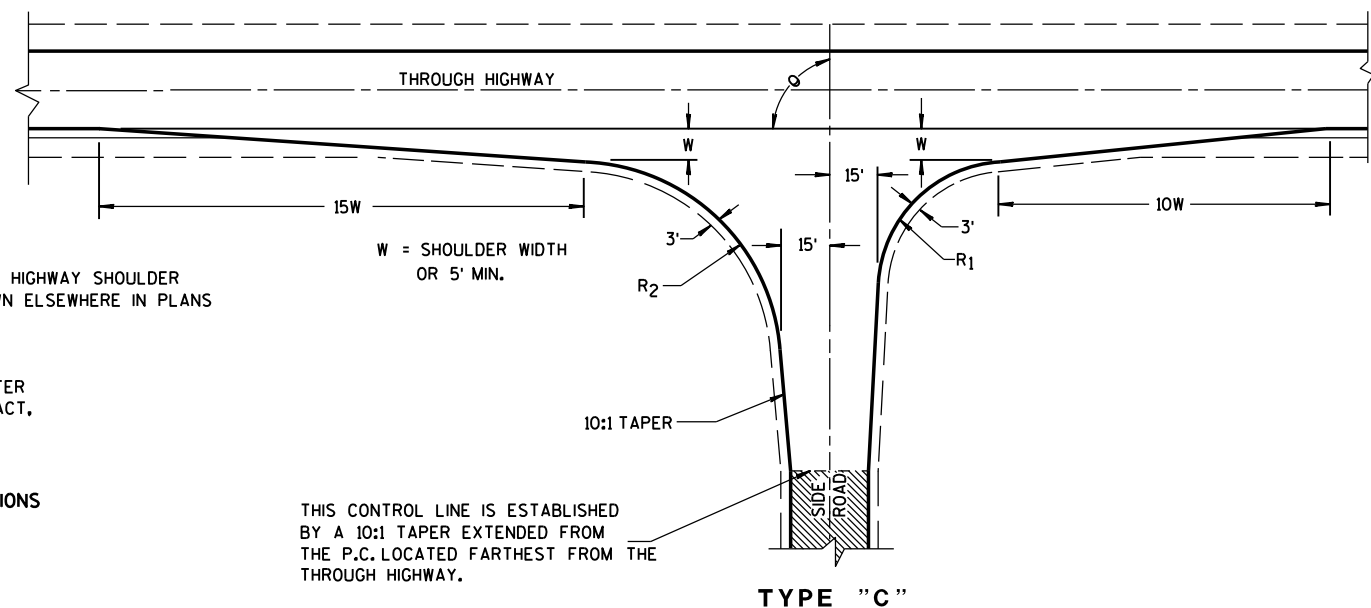
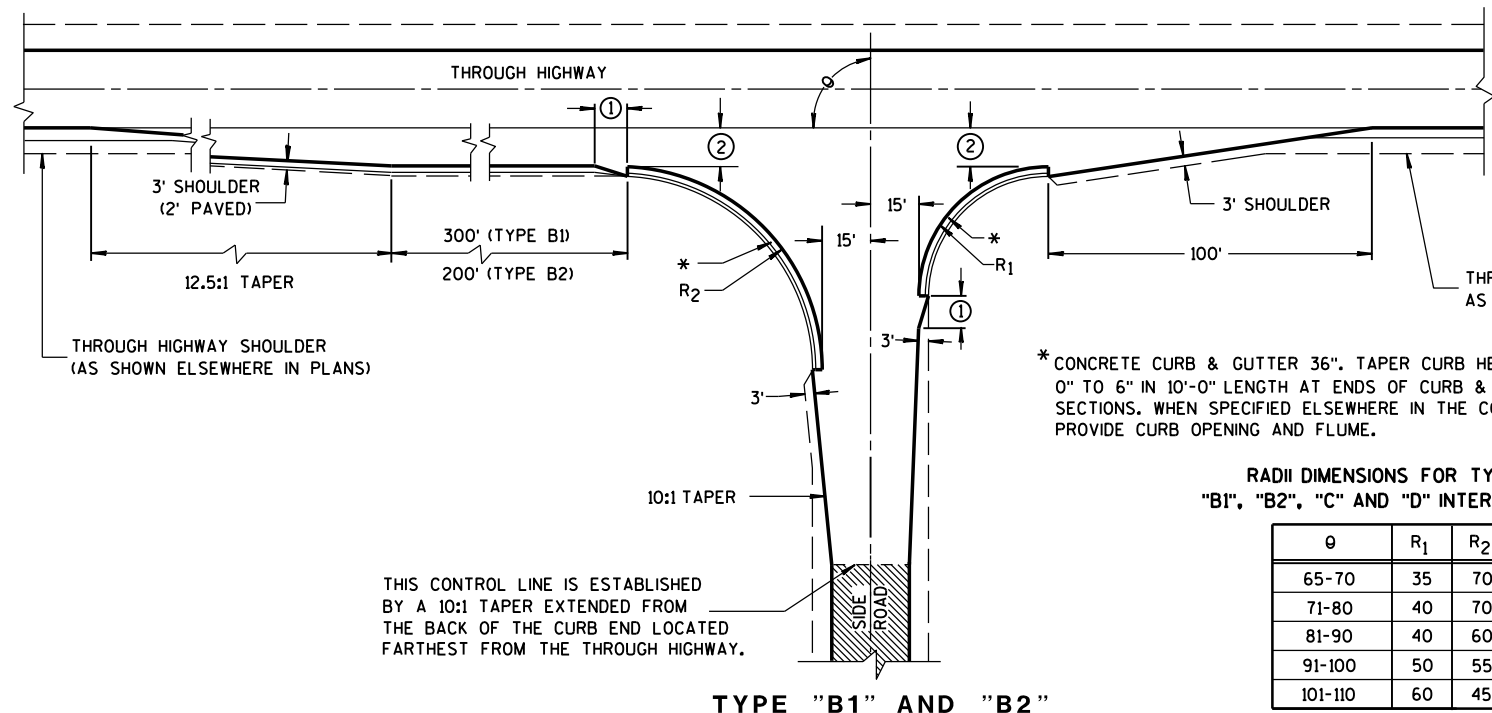
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

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

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

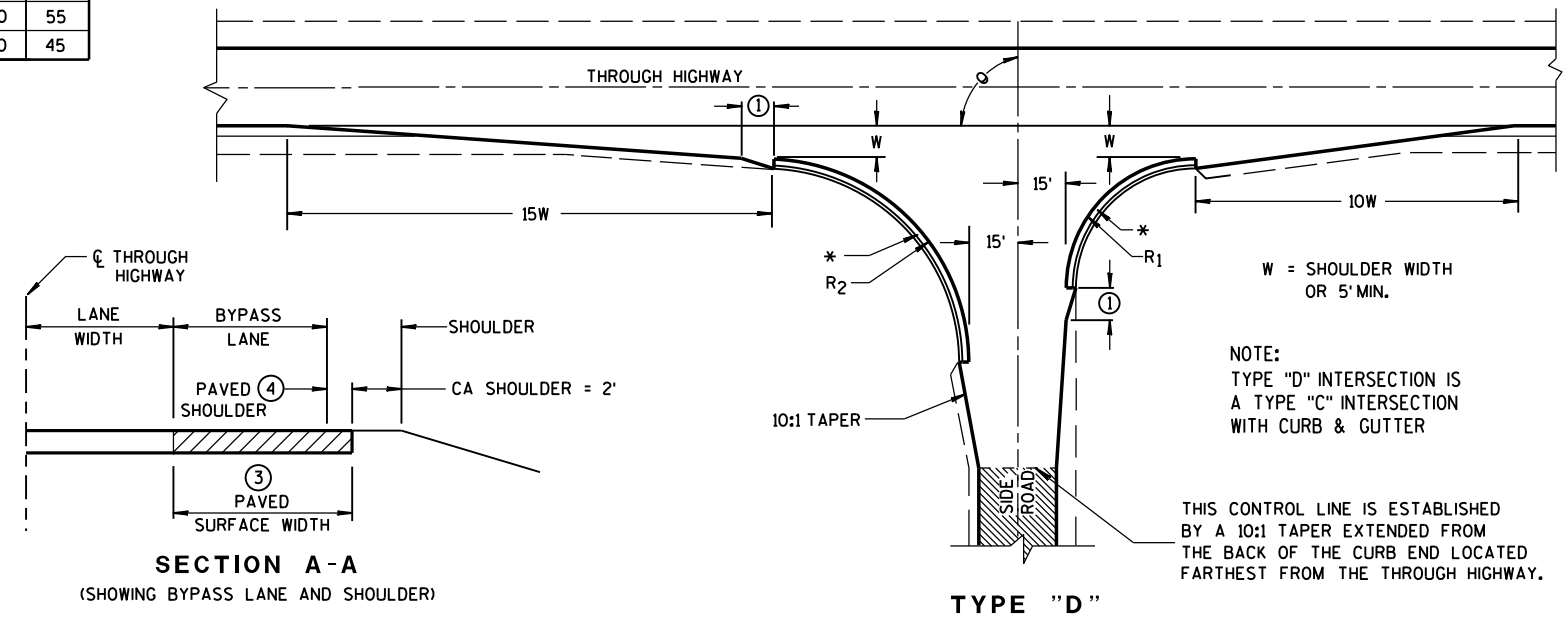
WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

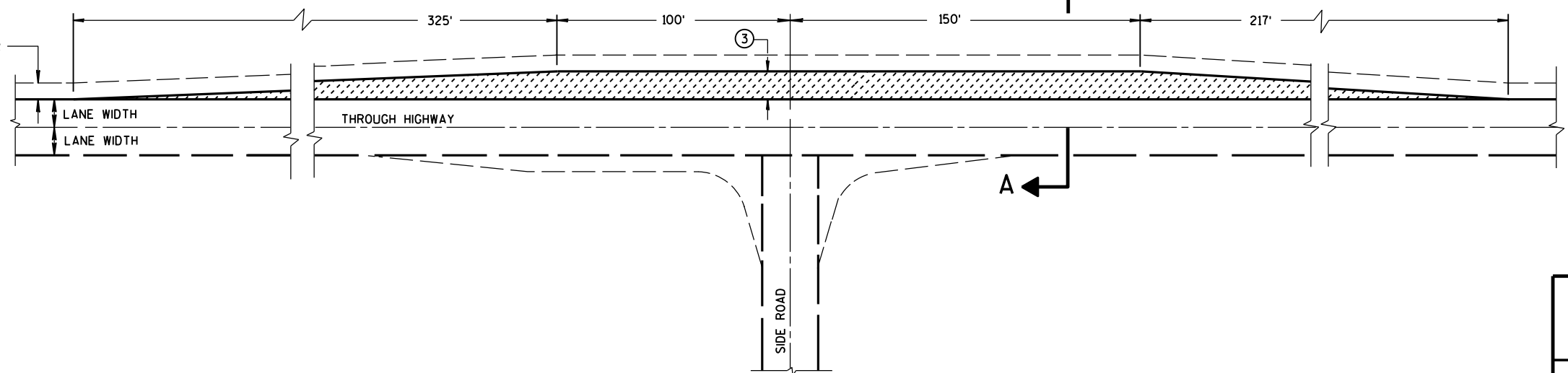
BYPASS LANE

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

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

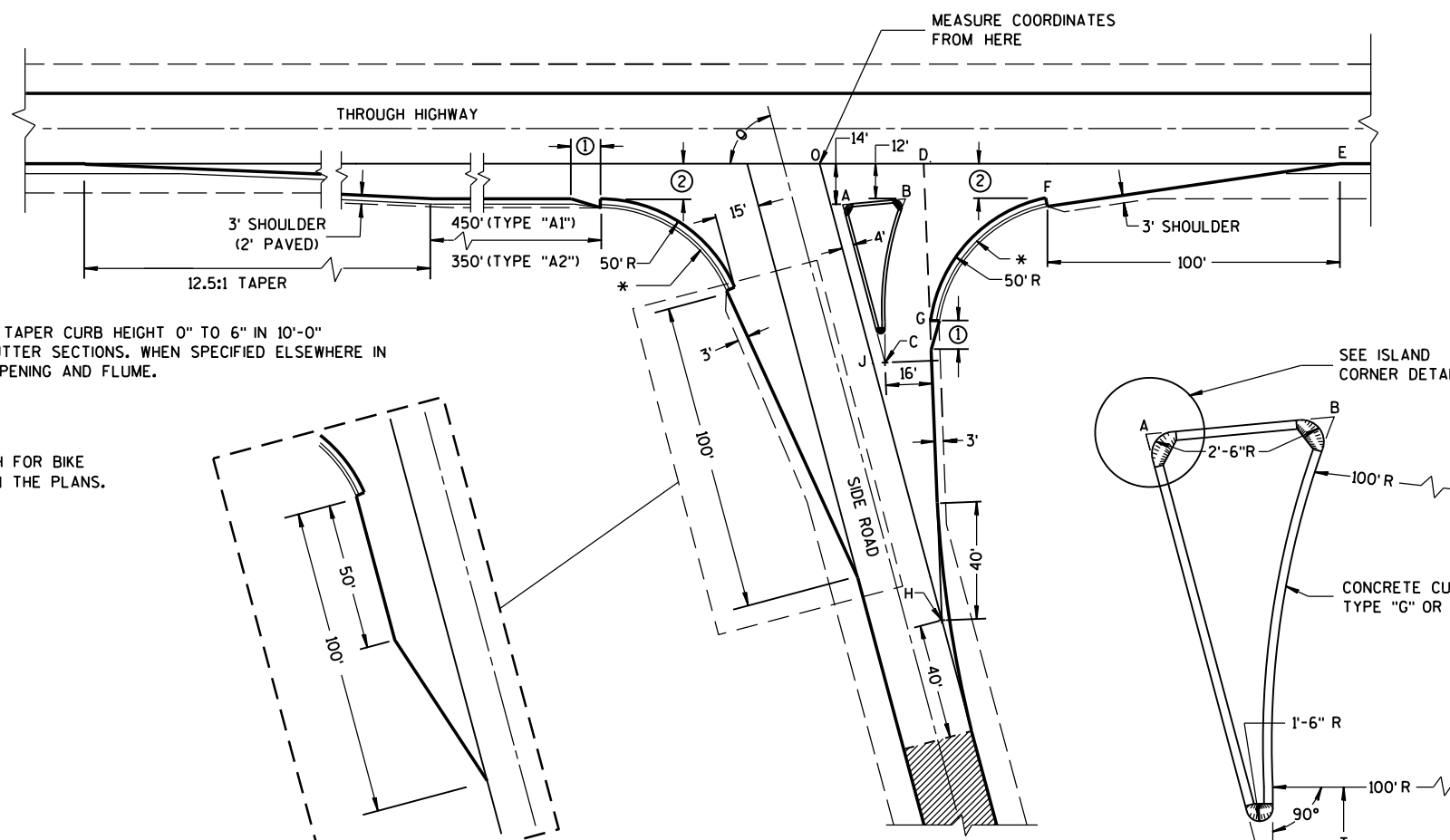
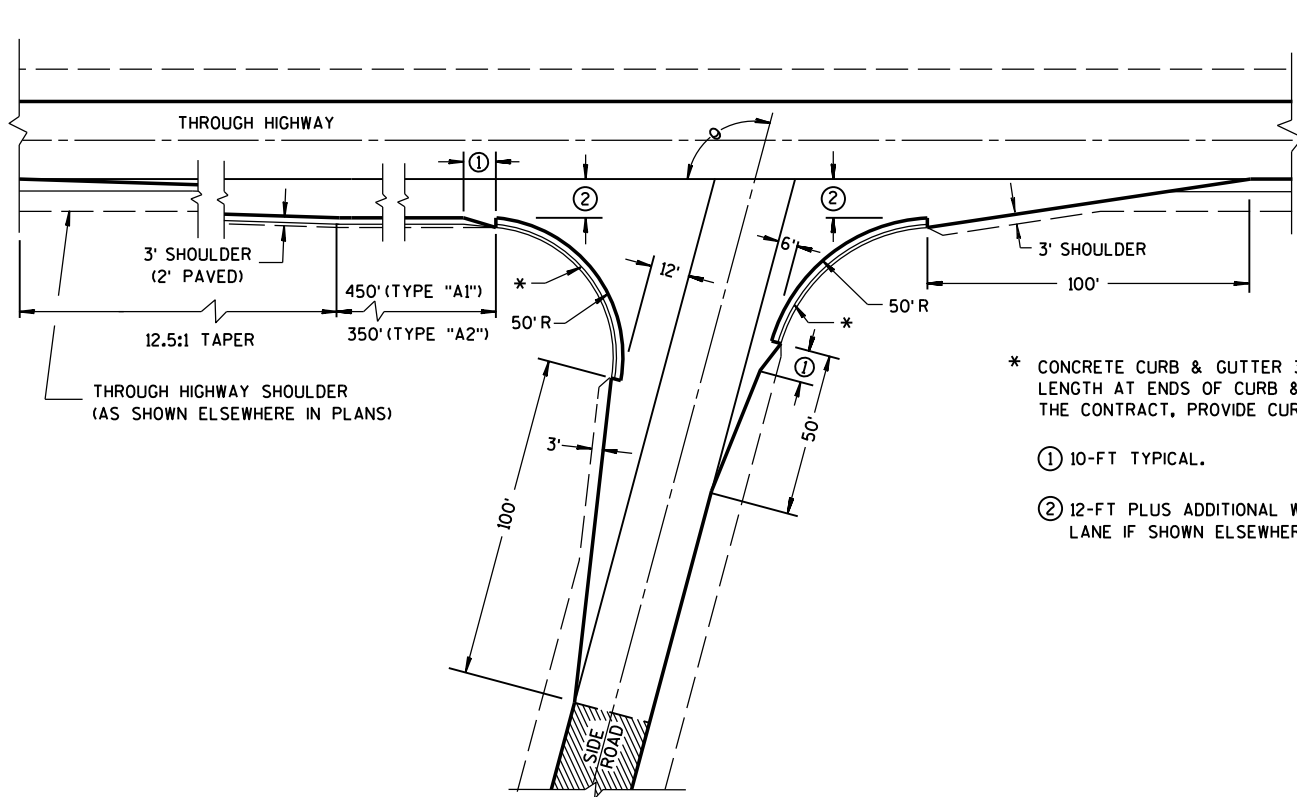


SECTION A-A (SHOWING BYPASS LANE AND SHOULDER)

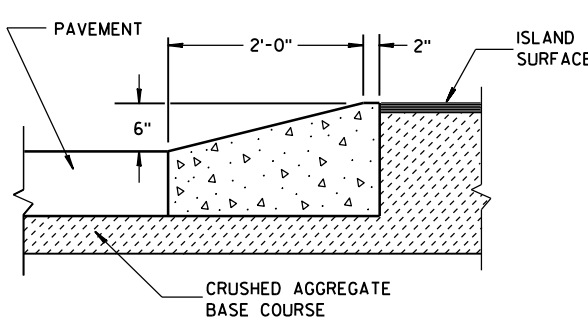
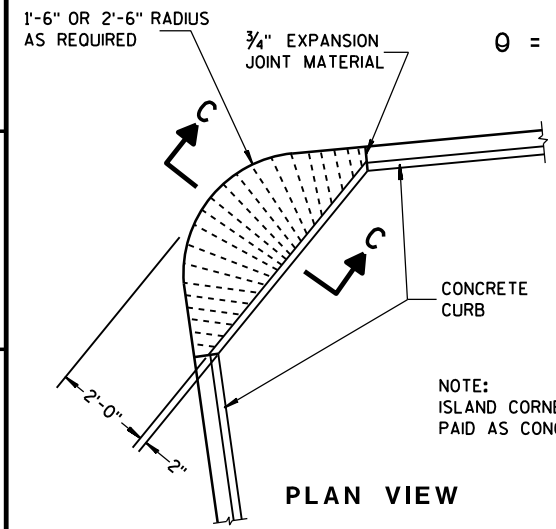


TEE INTERSECTION BYPASS LANE DETAIL

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



- * CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.
- ① 10-FT TYPICAL.
- ② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.



SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
 $\theta =$ ACUTE ANGLES 70° OR LESS

TABLE OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES
 (INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

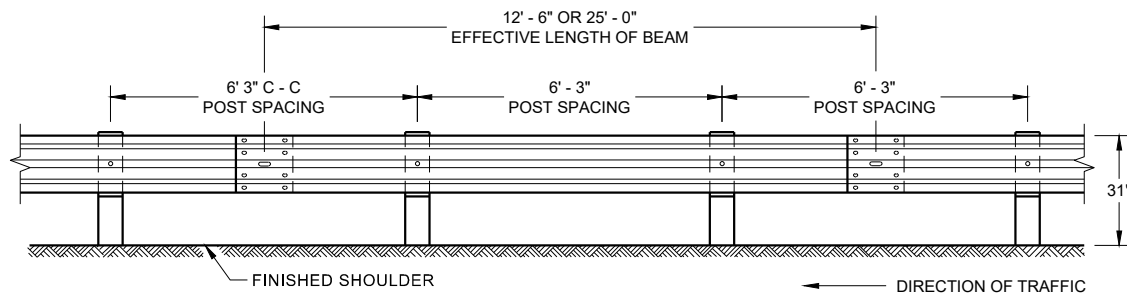
ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O")								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7	44.9	46.4	41.9	205.0	104.6	64.0	85.0	32.3	67.4	4.9	85.9	169.9
65	10.9	39.0	37.8	39.4	196.1	95.7	54.1	70.5	28.2	63.6	8.5	80.9	166.9
70	9.4	33.9	29.8	37.4	188.3	87.8	45.6	56.1	24.6	59.7	11.5	76.1	164.1
75	7.9	29.3	22.3	35.7	181.2	80.7	38.2	41.8	21.5	55.8	13.8	71.4	161.4
80	6.5	25.4	15.6	34.4	174.8	74.4	31.8	27.6	18.9	52.0	15.6	66.9	158.9

TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

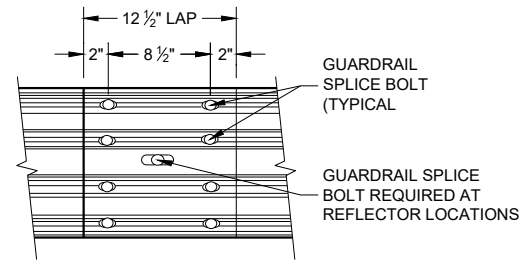
AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/12 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



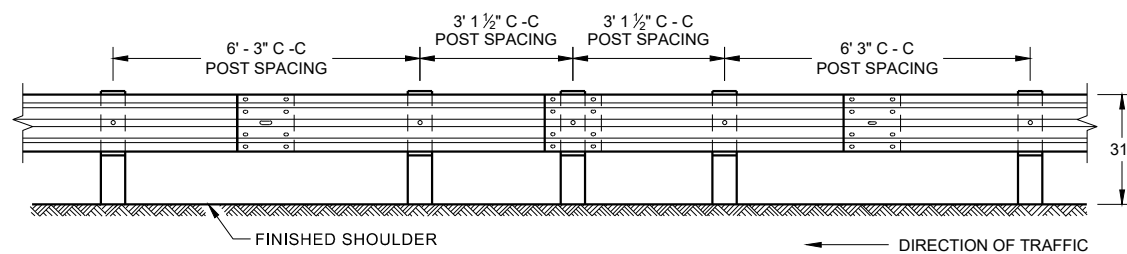
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



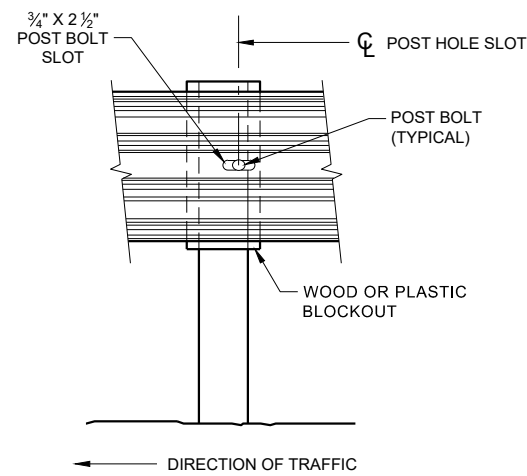
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

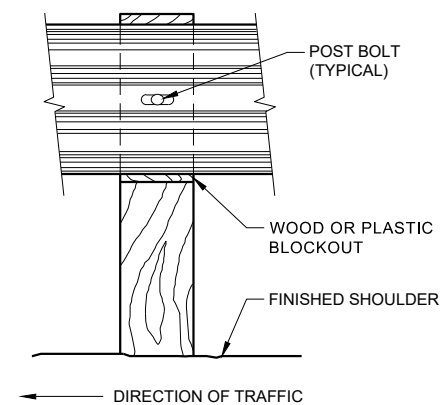
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" 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 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



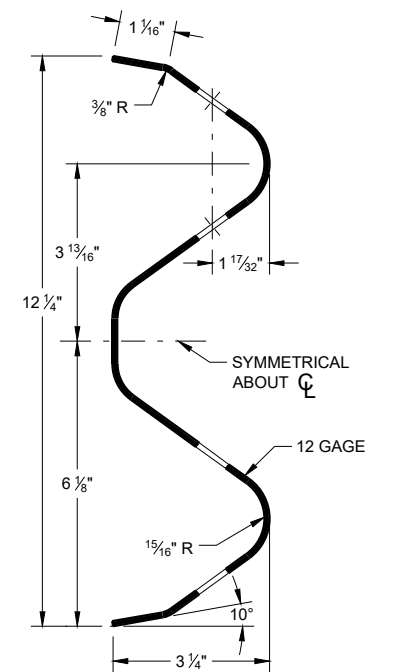
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



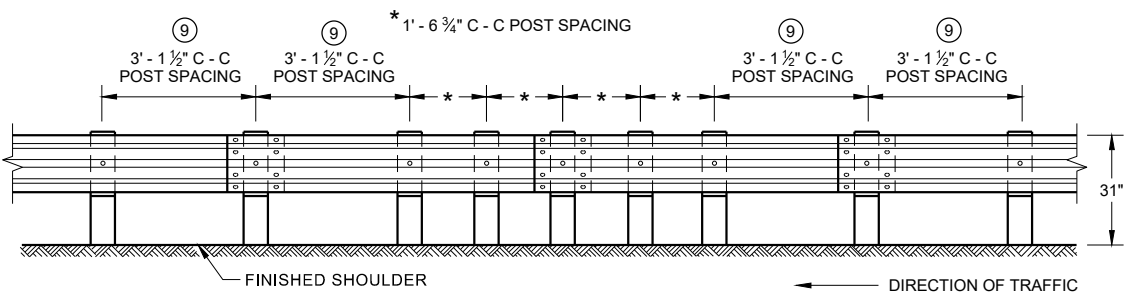
FRONT VIEW AT STEEL POST



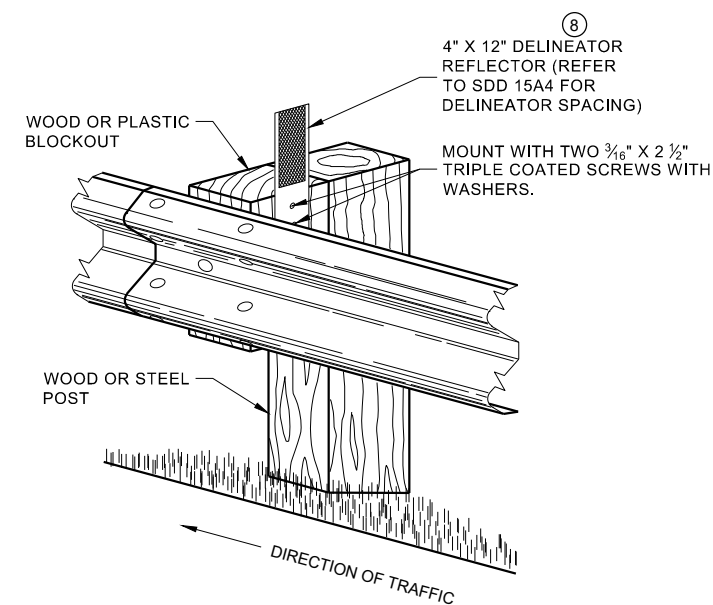
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



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



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

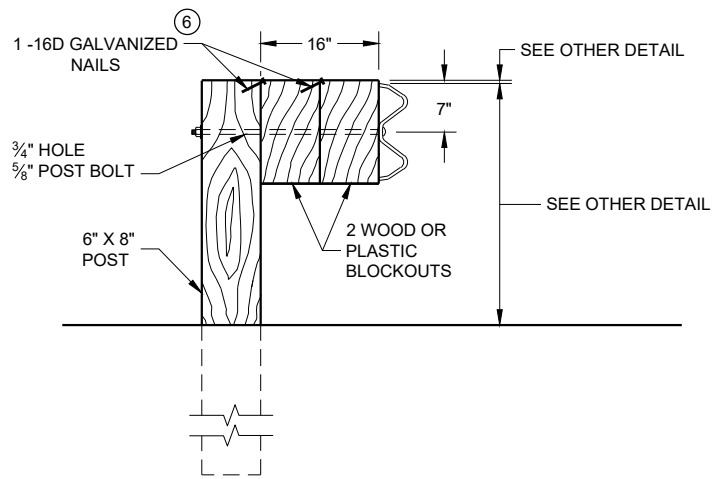
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

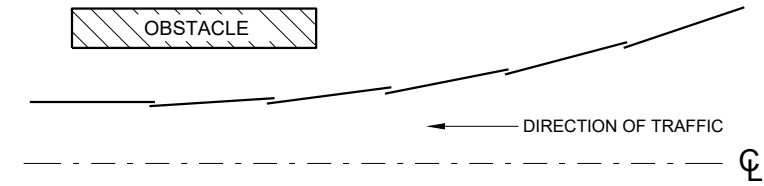
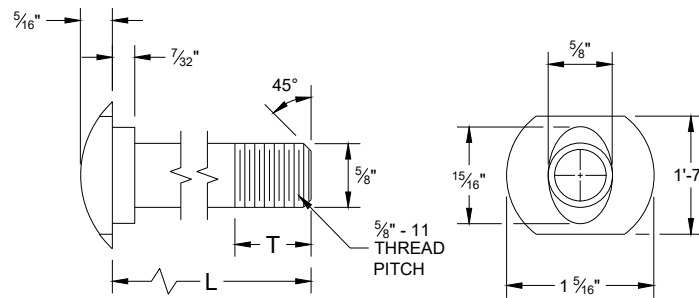
SDD 14B42 - 07b



DETAIL FOR 16" BLOCKOUT DEPTH

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

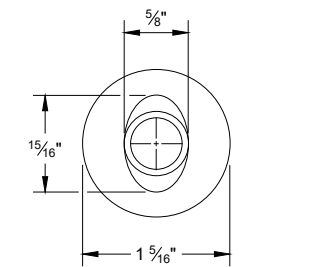
- NOTE:
1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
 2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.



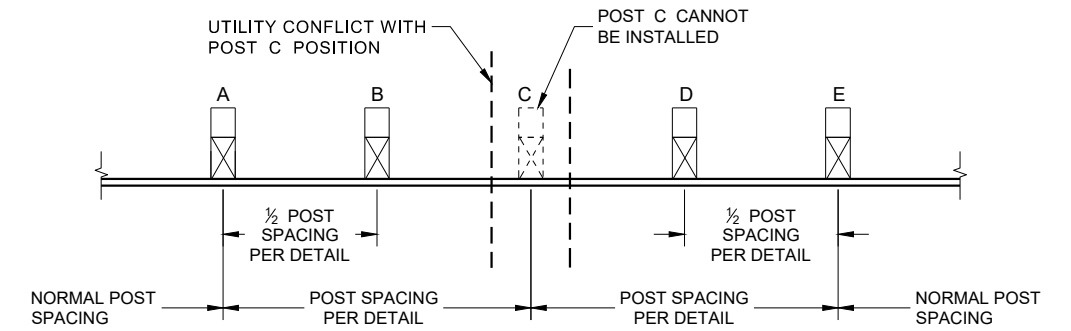
**PLAN VIEW
BEAM LAPPING DETAIL**

POST BOLT TABLE

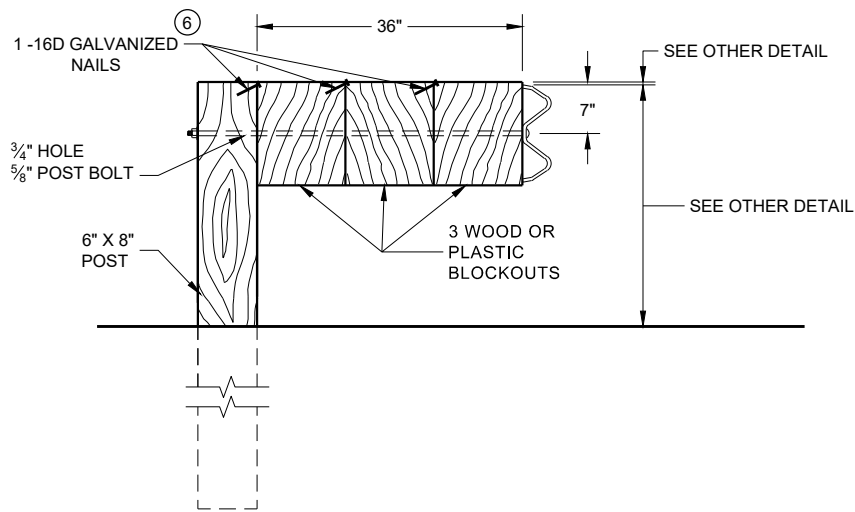
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

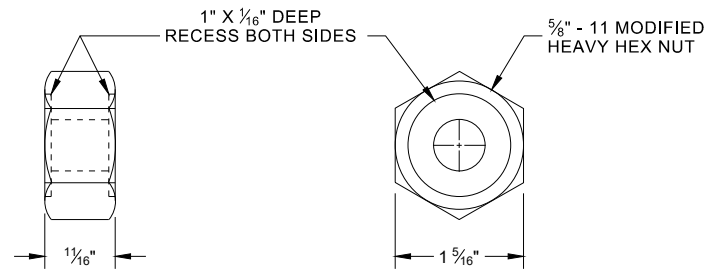


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

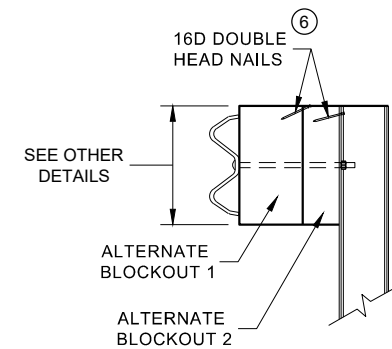


DETAIL FOR 36" BLOCKOUT DEPTH

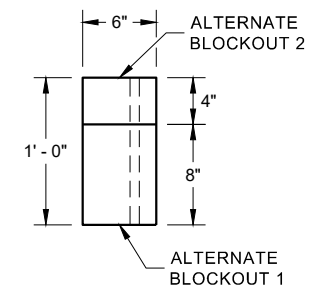
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT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



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



SIDE VIEW



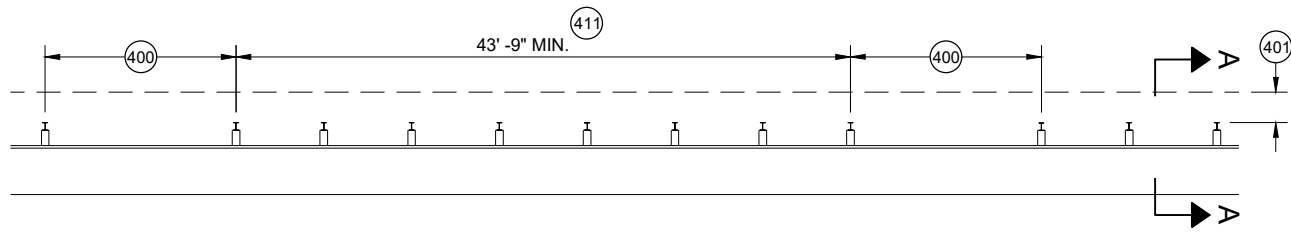
PLAN VIEW

**ALTERNATE WOOD
BLOCKOUT DETAIL**

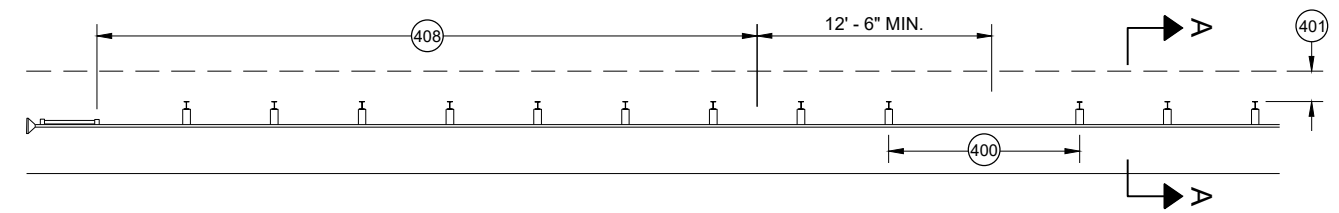
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

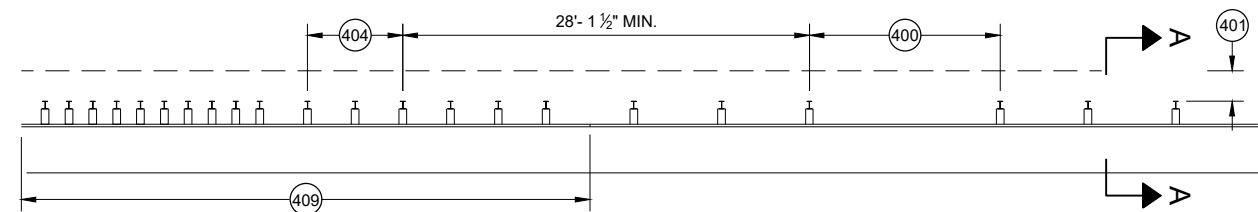
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



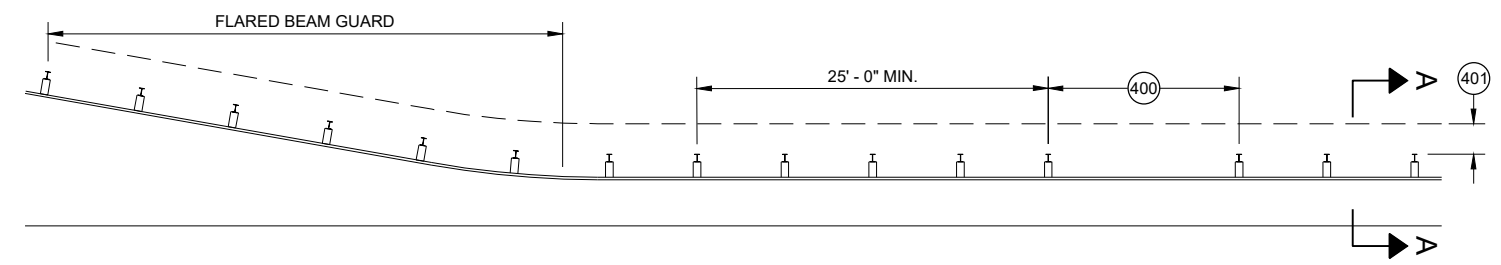
MISSING POST IN MGS GUARDRAIL



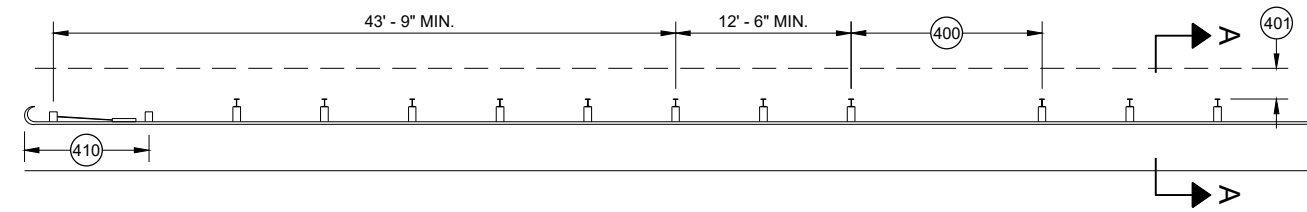
MISSING POST IN MGS GUARDRAIL NEAR EAT



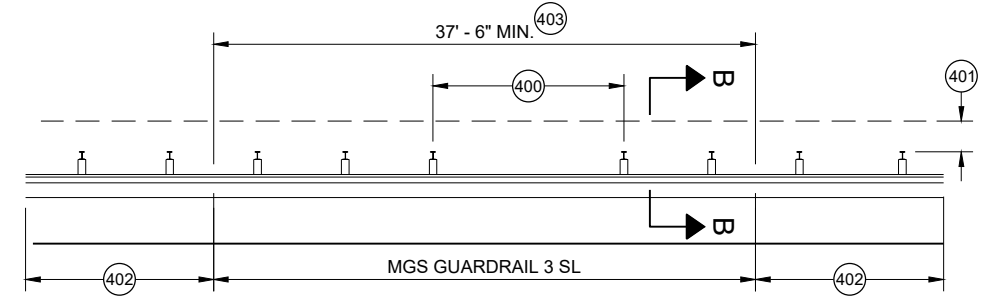
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

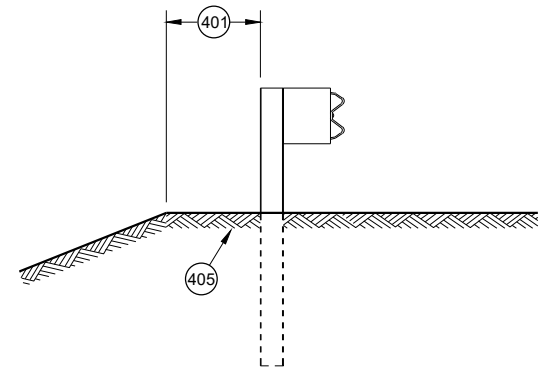


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

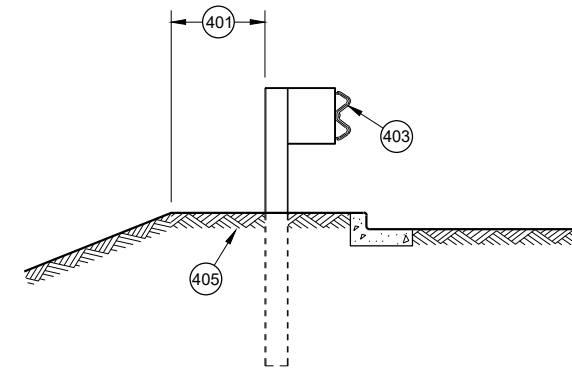


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

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



SECTION A - A



SECTION B - B

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

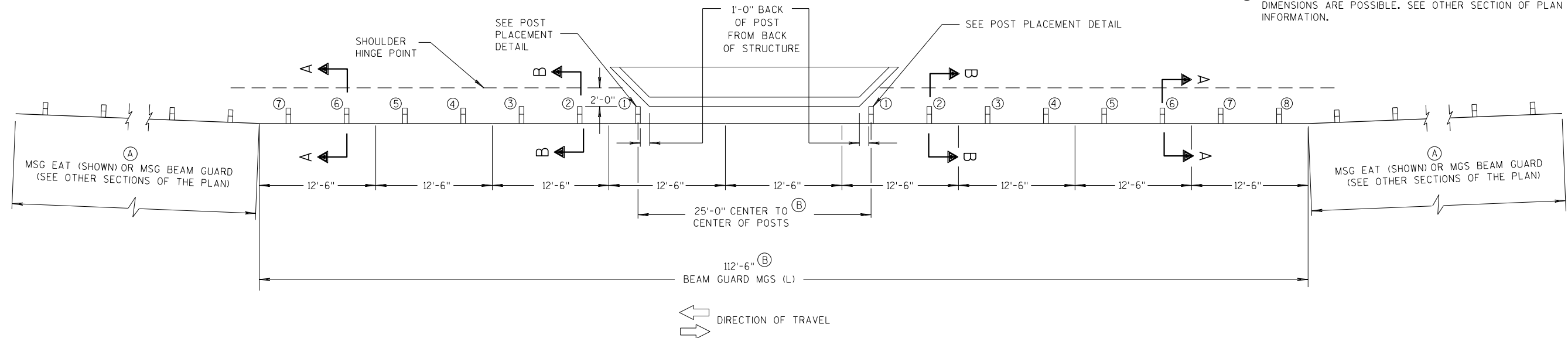
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

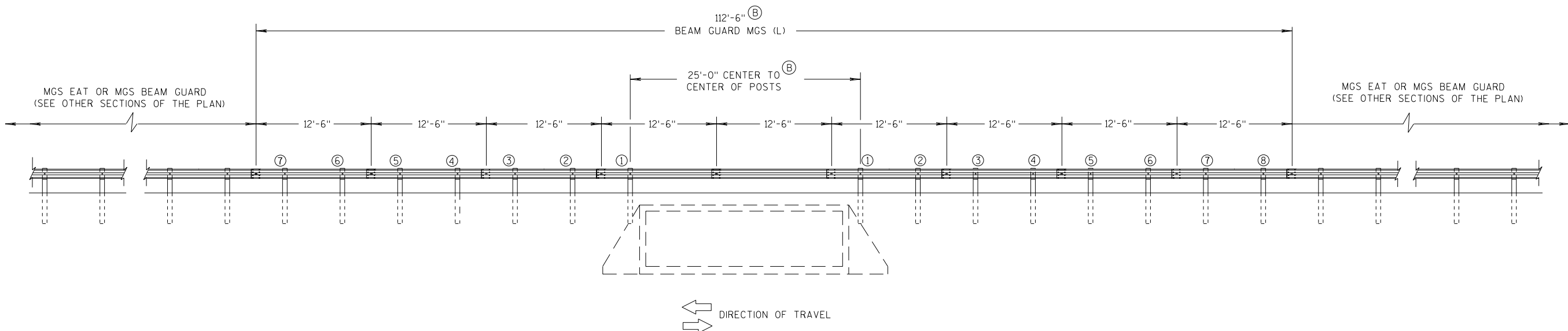
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN, IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

**MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)**

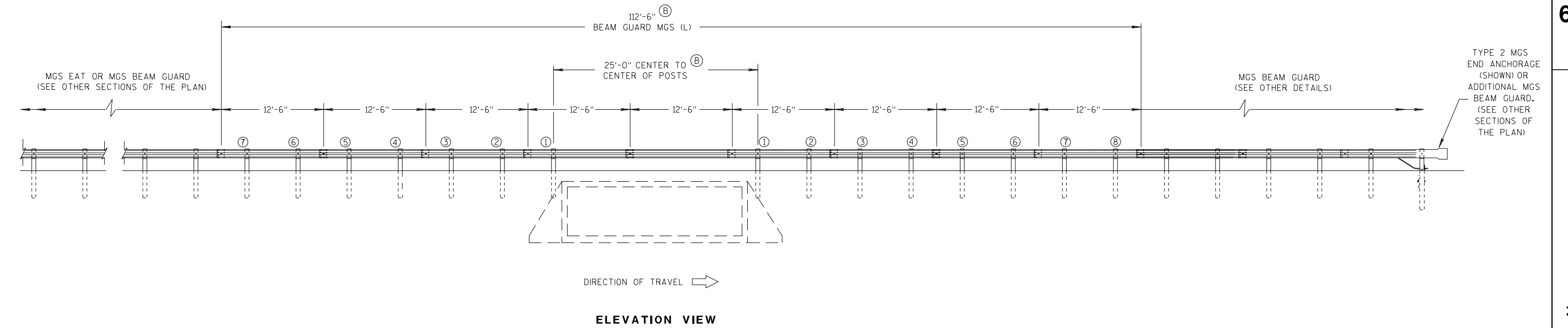
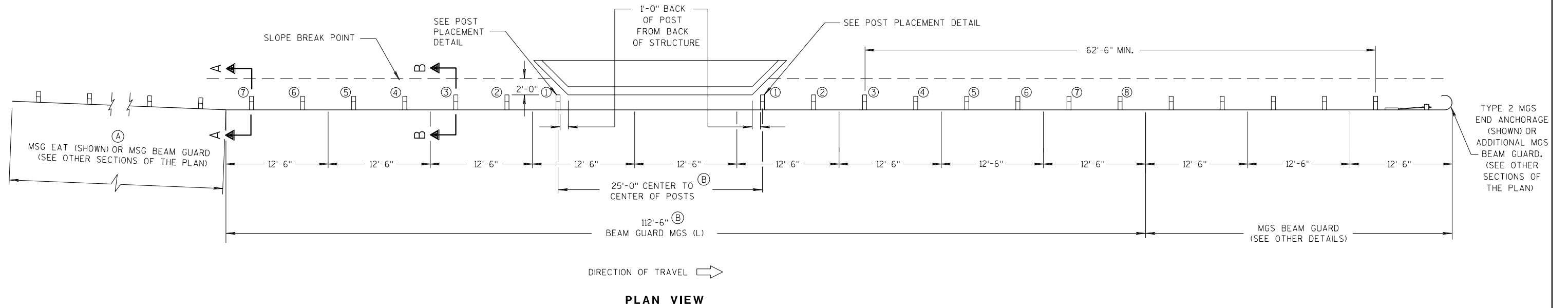
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

SEE SDD 14 B 42 FOR MORE DETAILS.

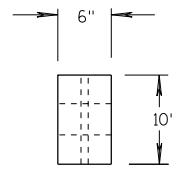
- (A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
- (B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



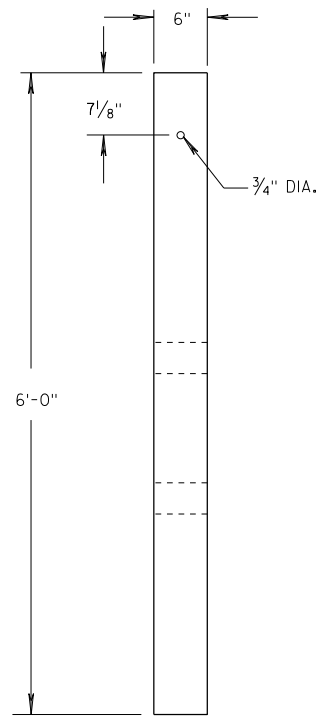
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

**MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)**

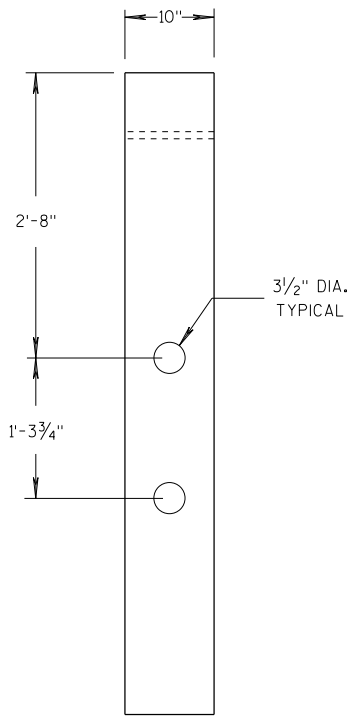
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW

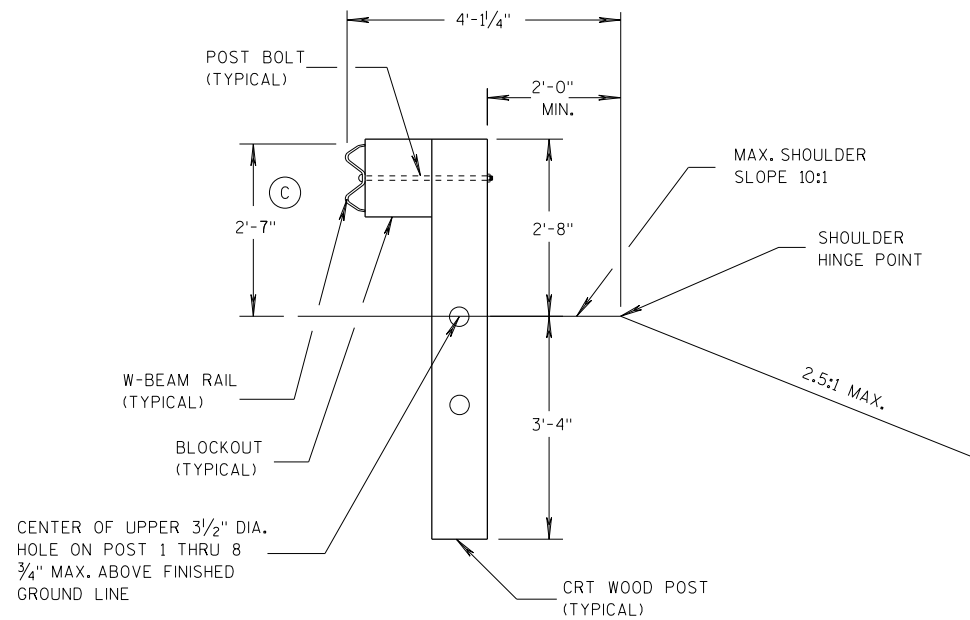


FRONT VIEW

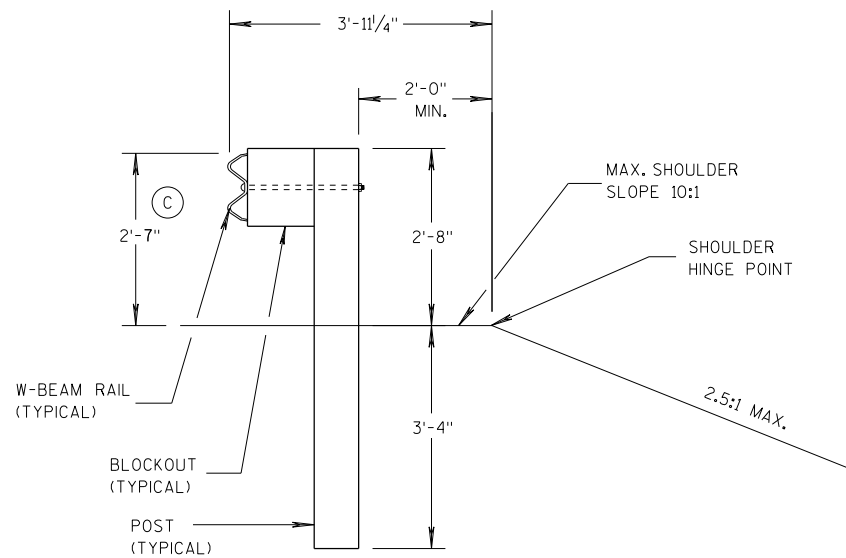


SIDE VIEW

CRT WOOD POST



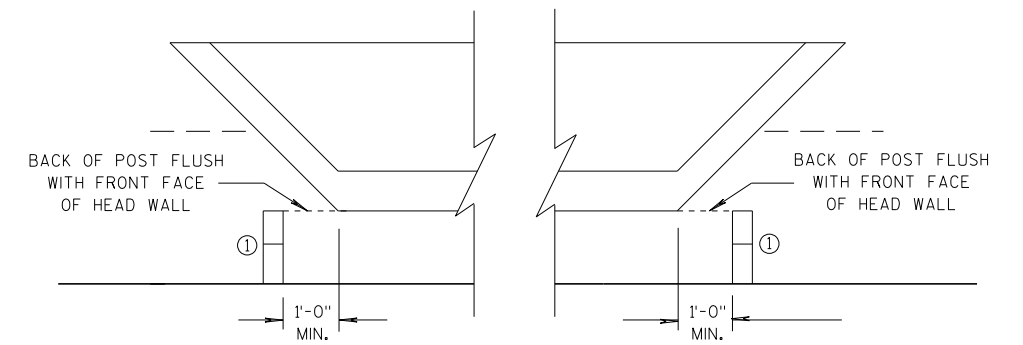
SECTION B-B
POSTS NO. 1-3
SEE OTHER DETAILS



SECTION A-A
POSTS NO. 4-8
SEE OTHER DETAILS

GENERAL NOTES

(C) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED	/S/ Rodney Taylor
DATE	07/2018
FHWA	ROADWAY STANDARDS DEVELOPMENT ENGINEER

GENERAL NOTES

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

SEE SDD 14B42 FOR MORE INFORMATION.

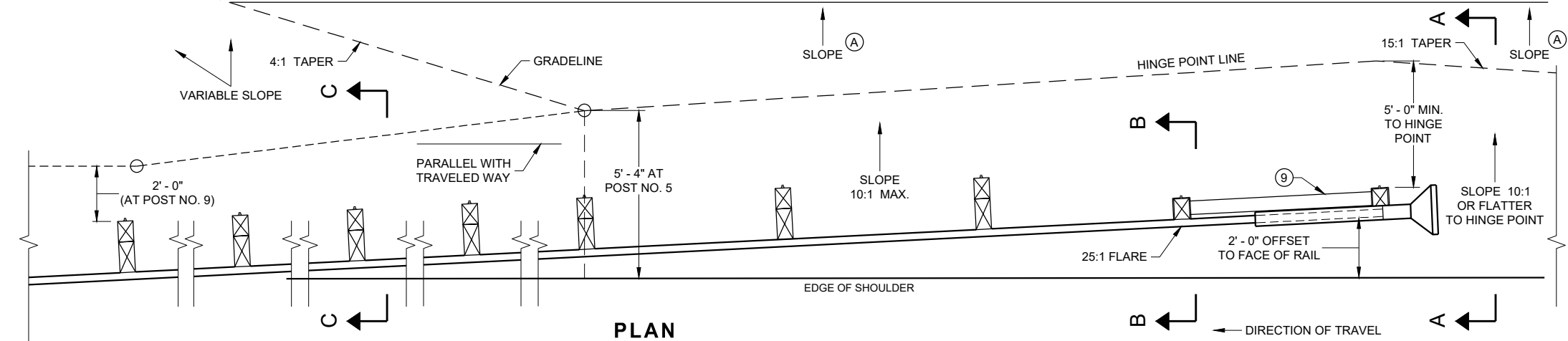
* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

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

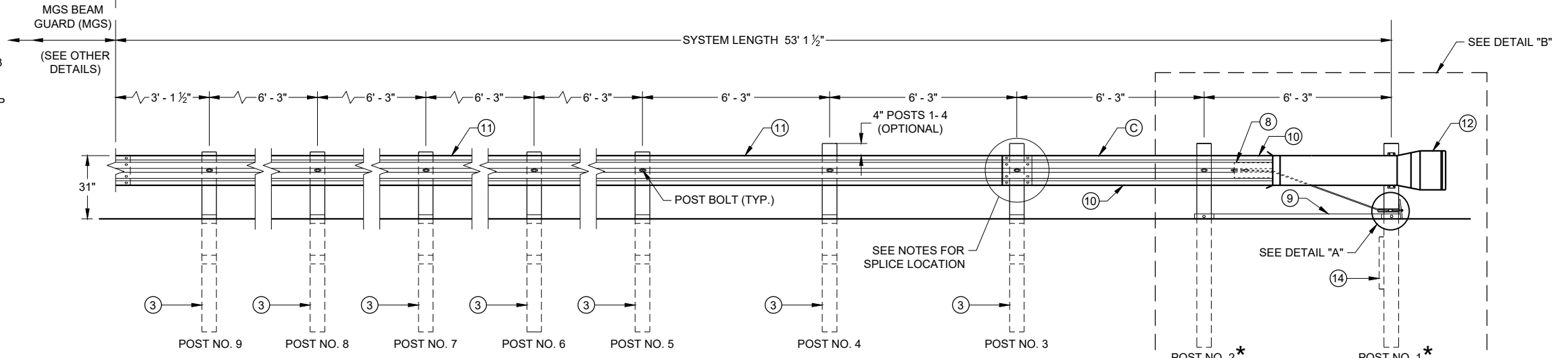
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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

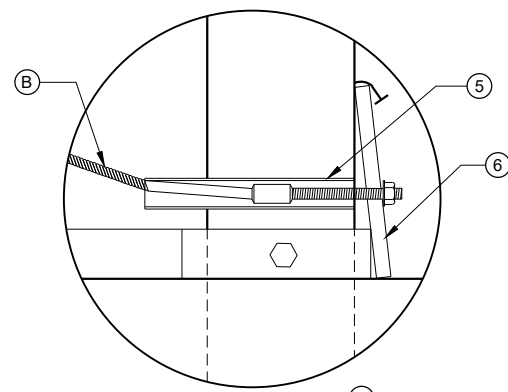
CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



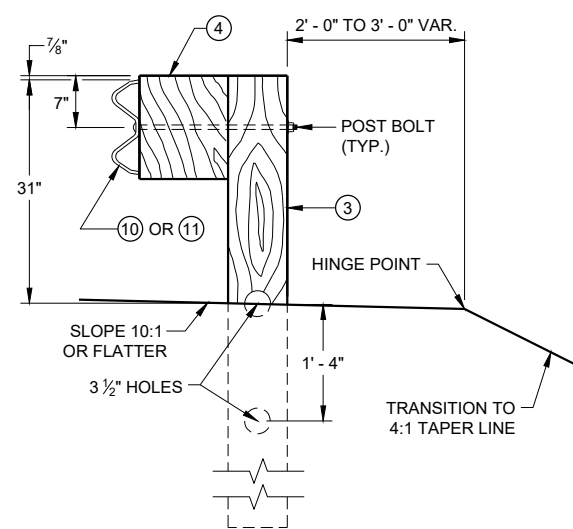
PLAN



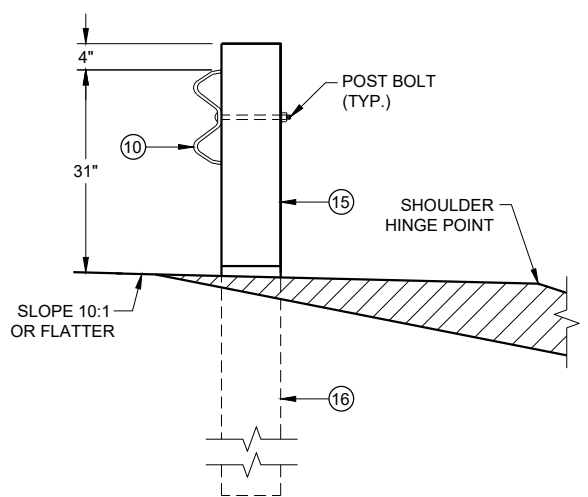
ELEVATION



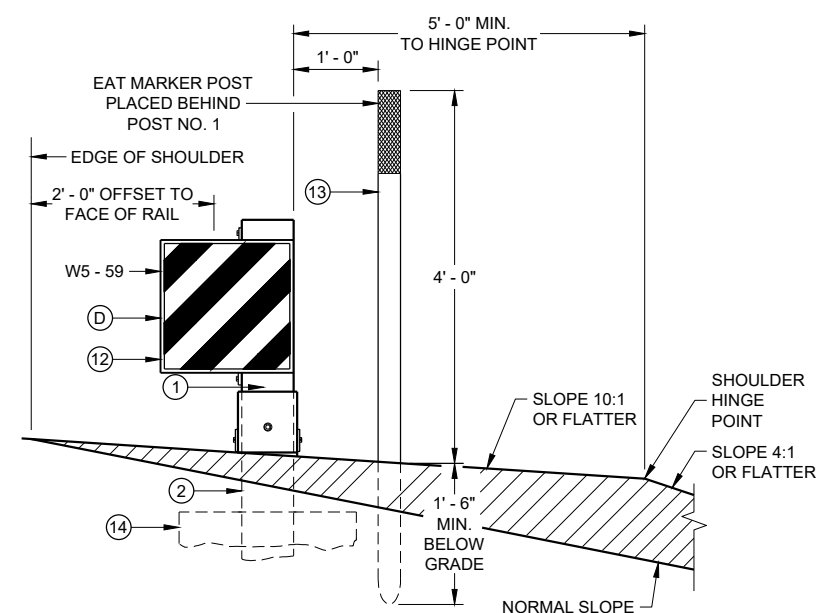
DETAIL "A"



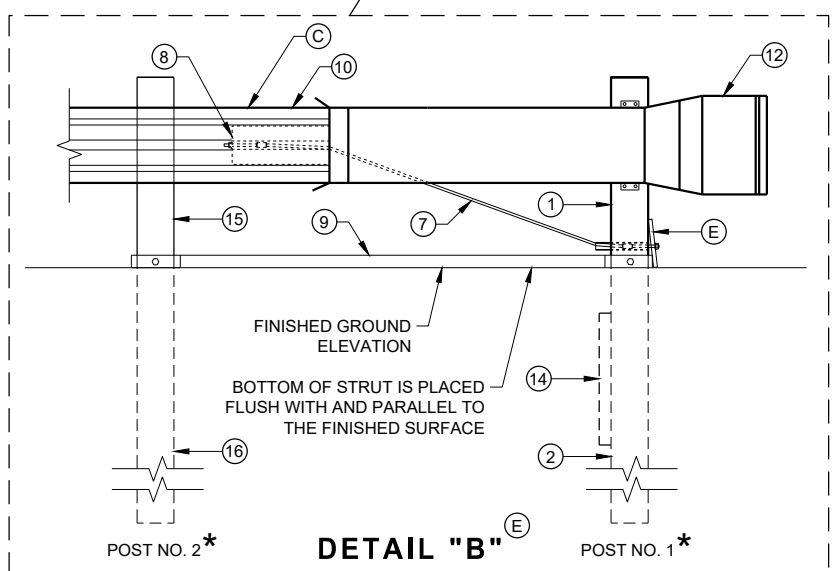
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



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



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



DETAIL "B"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

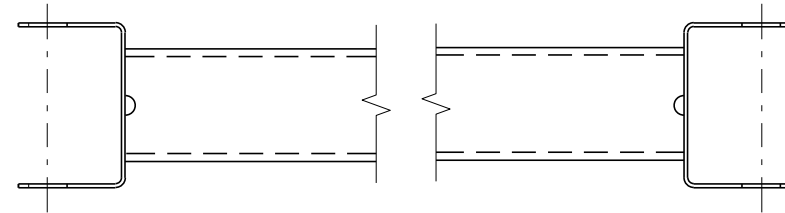
6

SDD 14B44 - 04a

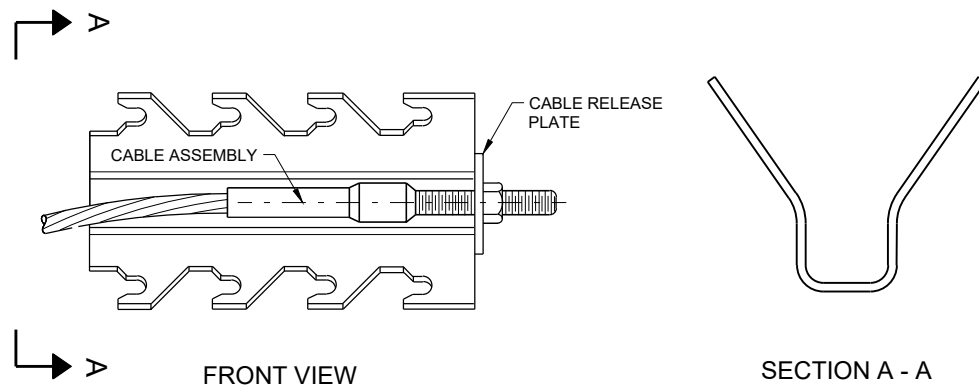
SDD 14B44 - 04a

BILL OF MATERIALS

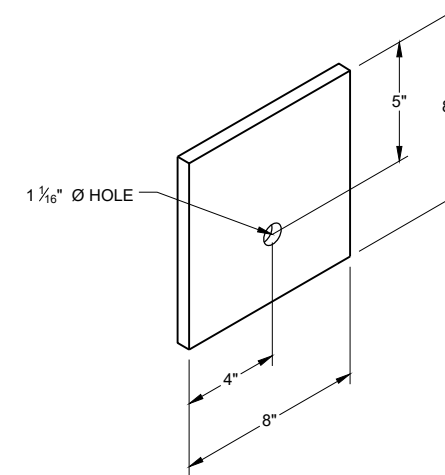
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL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



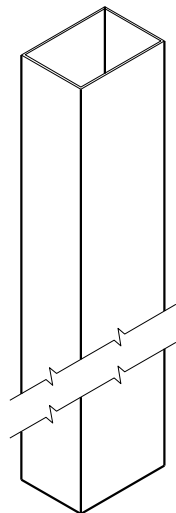
GENERIC GROUND STRUT ⑨ ⑤



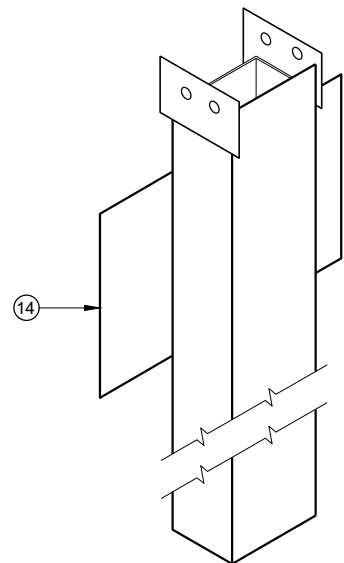
GENERIC ANCHOR CABLE BOX ⑨ ⑤



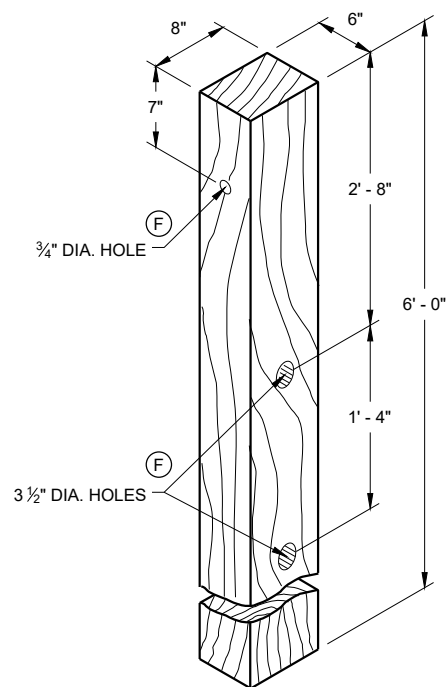
BEARING PLATE ⑥ ⑤



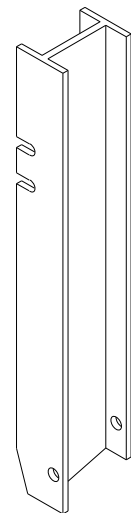
UPPER POST NO. 1 ⁽¹⁾ (E)



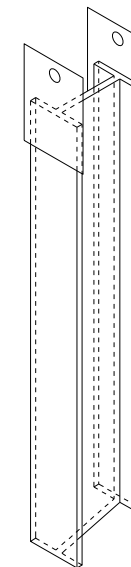
LOWER POST NO. 1 ⁽²⁾ (E)



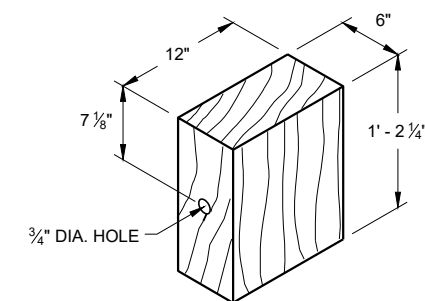
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

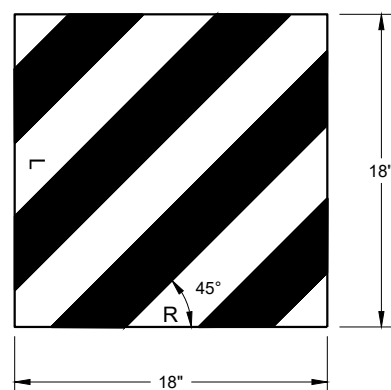


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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

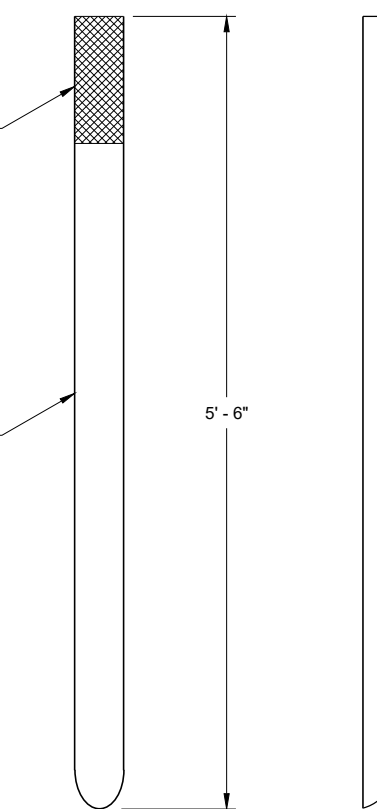
6



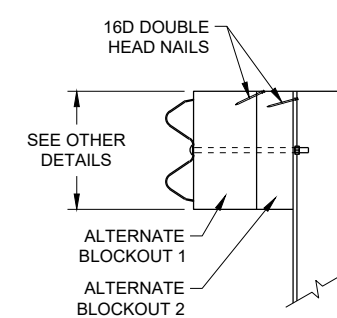
REFLECTIVE SHEETING DETAIL ^(E)

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

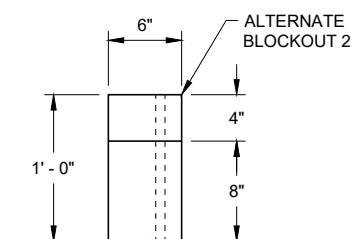
E.A.T. MARKER
POST (YELLOW)



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



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

6

SDD 14B44 - 04c

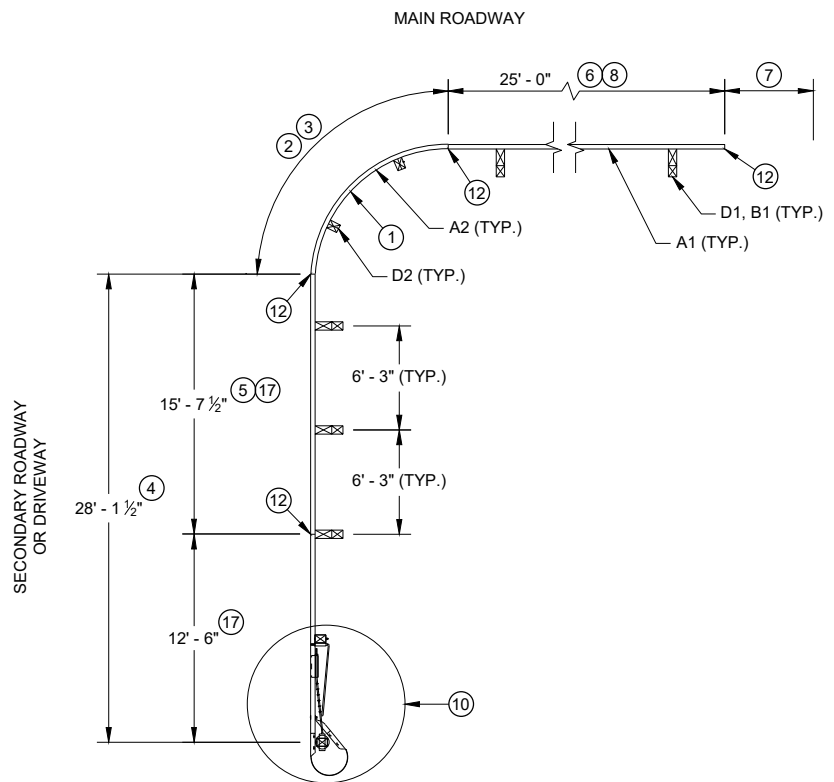
SDD 14B44 - 04c

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

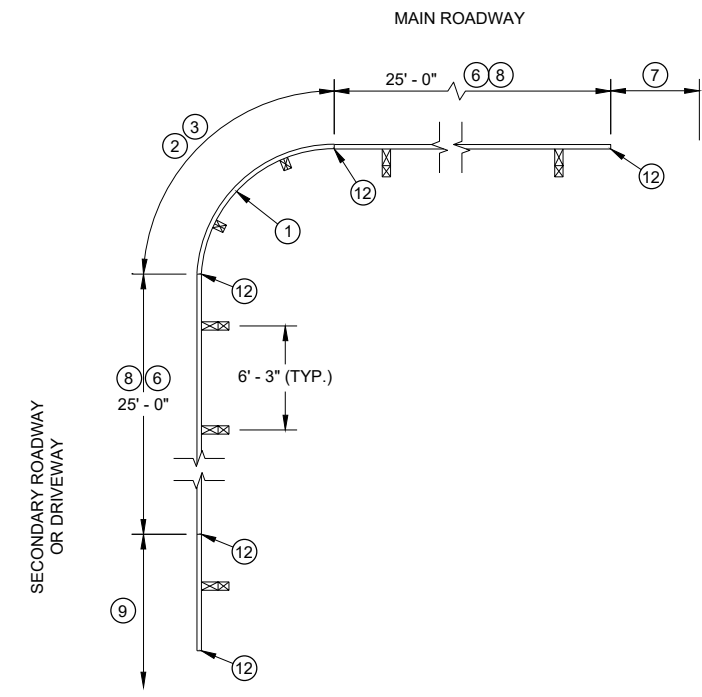
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



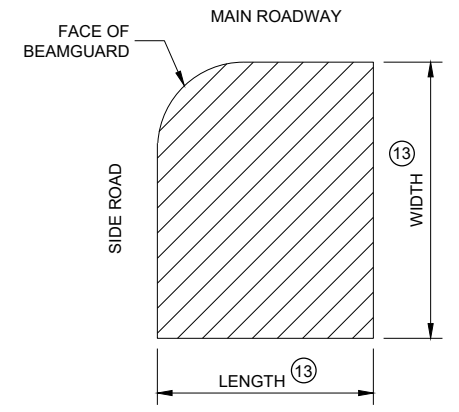
**PLAN VIEW
SHORT RADIUS BEAM GUARD WITH
SHORT RADIUS TERMINAL ON
SECONDARY ROAD OR DRIVEWAY**



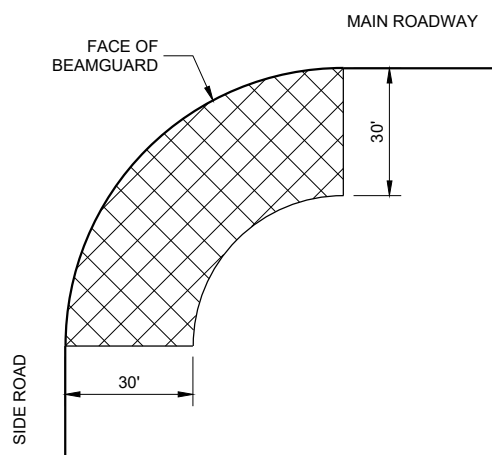
**PLAN VIEW
SHORT RADIUS BEAM GUARD WITH
EAT, ADDITIONAL BEAM GUARD
OR
TRANSITION TO RIGID BARRIER ON
SECONDARY ROAD OR DRIVEWAY**

TABLE FOR RADIUS OF 32' AND LESS

RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30



**AREA FREE OF FIXED
OBJECTS FOR RADIUS
32' AND LESS**

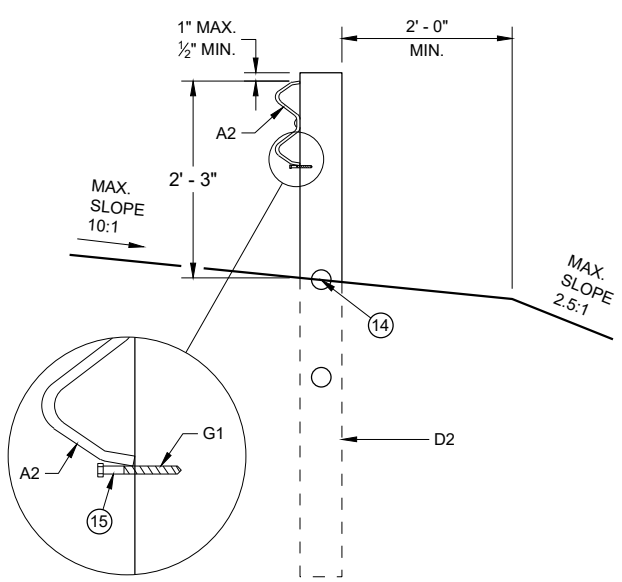


**AREA FREE OF FIXED
OBJECTS FOR RADIUS
GREATER THAN 32'**

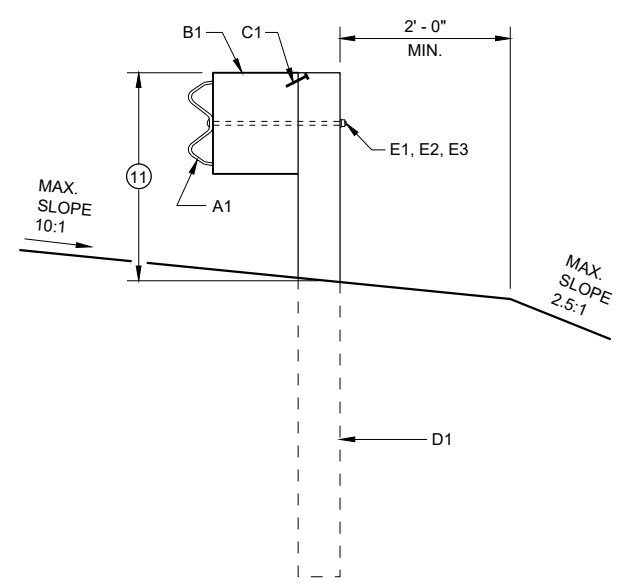
GENERAL NOTES

- SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.
- SEE SDD 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.
- GALVANIZE PARTS AFTER FABRICATION.
- WELDING TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI / AWS D1.1.
- UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.
- UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERTICAL.
- ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUT.
- UNLESS NOTED OTHERWISE, CUT OR PROVIDE BOLTS THAT ARE 1/4" TO 1/2" BEYOND THE NUT.
- DRAWINGS ARE NOT TO SCALE.

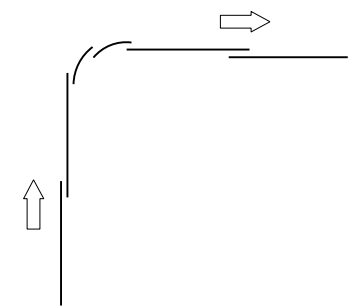
- ① RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.
- ② CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6' - 3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE (CRT) POSTS.
- ③ WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAIL IS RESTED ON TOP OF LAG SCREW.
- ④ MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID WITH BEAM GUARD ITEM.
- ⑤ ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.
- ⑥ MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TO TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.
- ⑦ BEAM GUARD, EAT, OR TRANSITION TO RIGID BARRIER. SEE PLAN.
- ⑧ TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.
- ⑨ ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.
- ⑩ SHORT RADIUS TERMINAL (SEE OTHER DETAILS).
- ⑪ HEIGHT VARIES. SEE NOTE ⑧ AND ⑧.
- ⑫ BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRES PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.
- ⑬ SEE TABLE FOR VALUES.
- ⑭ MAXIMUM HEIGHT FOR CENTER OF HOLE IS 3/4" ABOVE FINISHED GROUND ±1".
- ⑮ DRILL POST 1 5/8" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.
- ⑯ SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.
- ⑰ TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL (CRT).



**CONTROLLED RELEASE
TERMINAL POST (CRT) IN RADIUS**



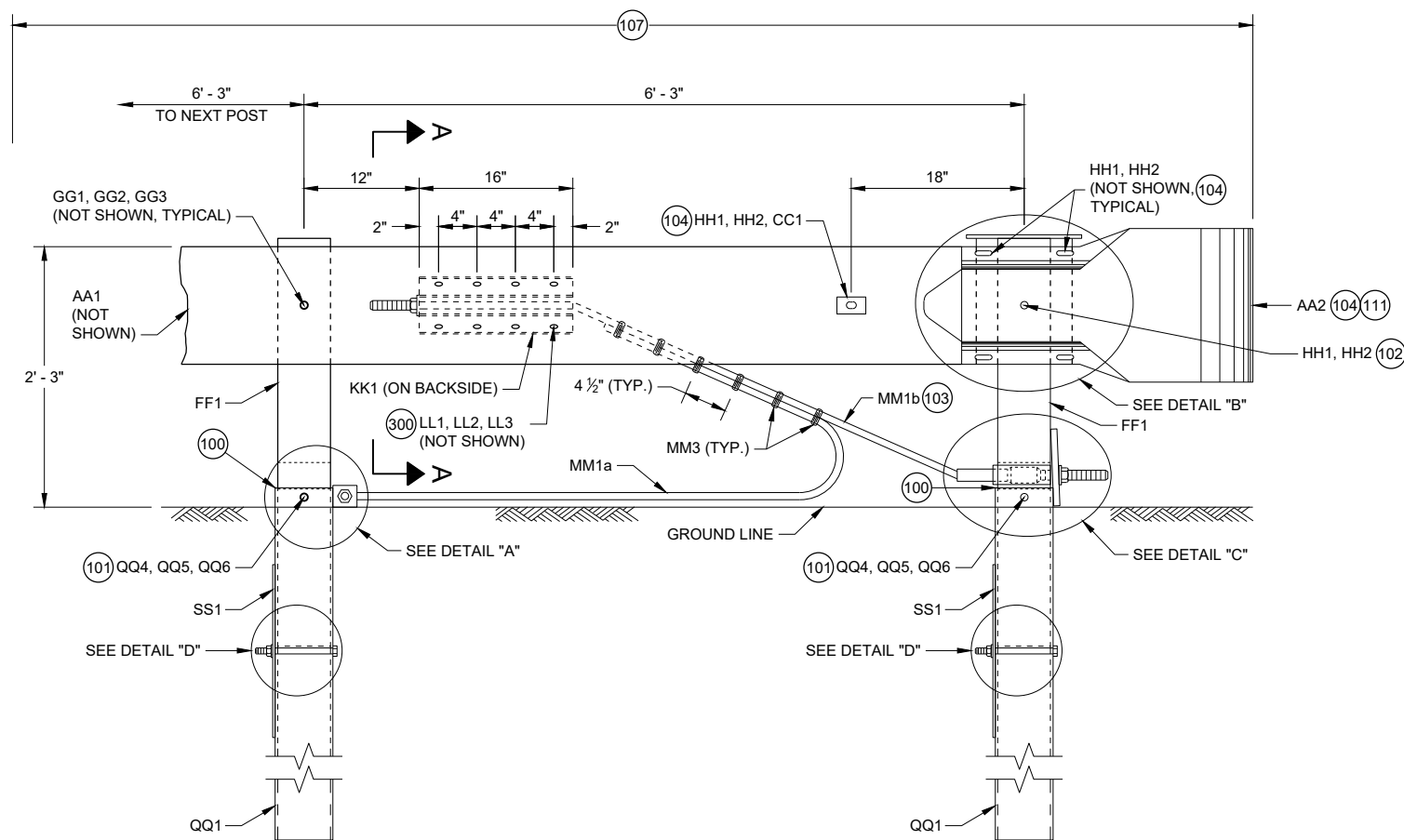
**BEAM GUARD POSTS
IN HEIGHT TRANSITION**



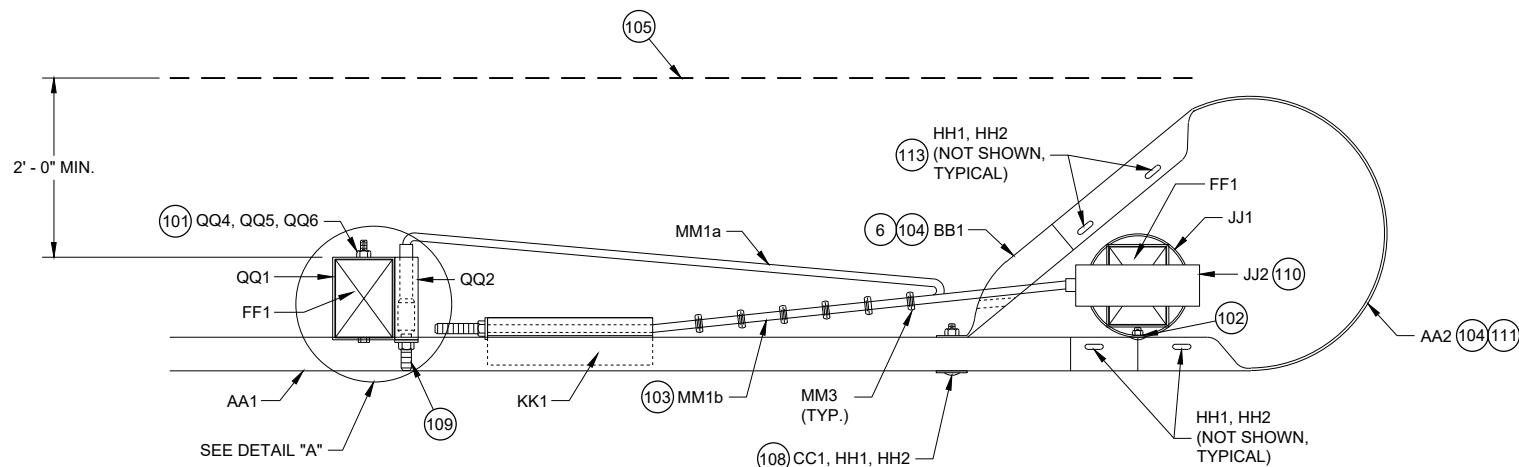
LAP SPLICE DETAIL

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

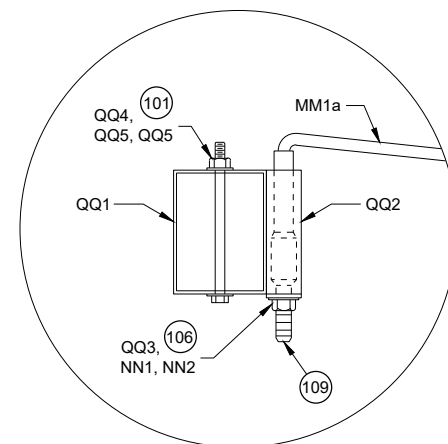
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



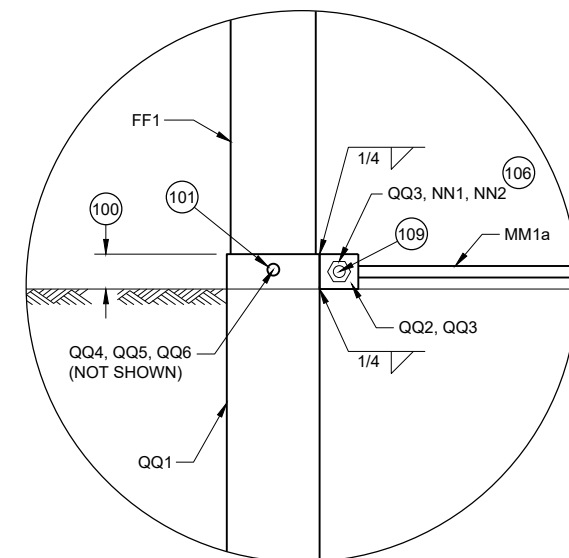
**PROFILE VIEW
SHORT RADIUS TERMINAL**



**TOP VIEW
SHORT RADIUS TERMINAL**



**TOP VIEW
DETAIL "A"
(WOOD BREAKAWAY AND BEAM
GUARD RAIL POSTS NOT SHOWN)**



**PROFILE VIEW
DETAIL "A"**

GENERAL NOTES

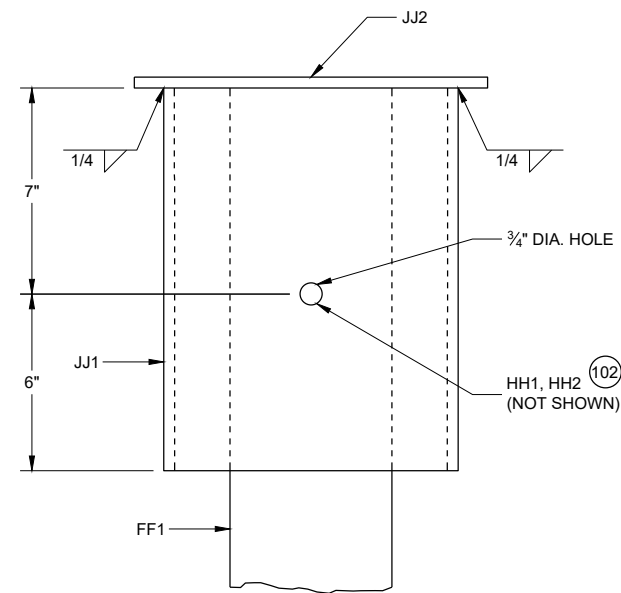
- 100 TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.
- 101 WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.
- 102 SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL "B".
- 103 CABLE IS TAUT.
- 104 ADJUST AA2 AND BB1 TO FIT.
- 105 BREAK POINT OF SHOULDER.
- 106 TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL "A" PROFILE VIEW.
- 107 PAY LIMIT FOR BEAM GUARD.
- 108 SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.
- 109 CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS 1/2" TOLERANCE). DEBURR AFTER CUTTING.
- 110 SEE STEEL PIPE ASSEMBLY DETAILS.
- 111 ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.
- 112 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.
- 113 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

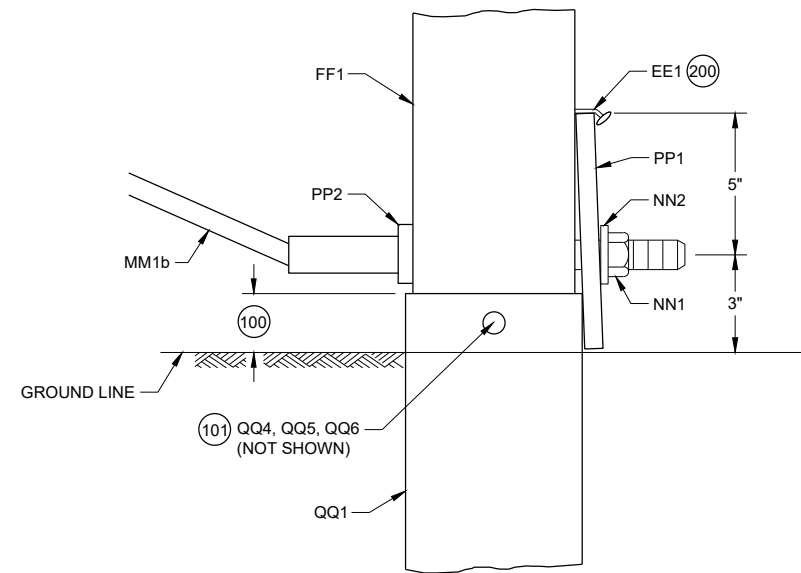
STATE OF WISCONSIN
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GENERAL NOTES

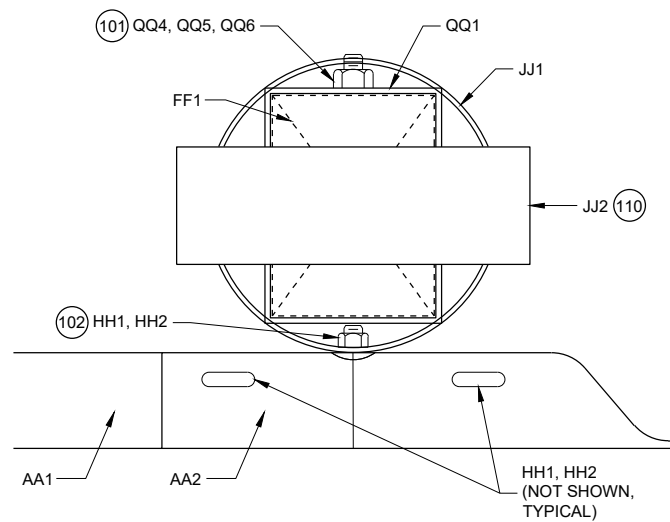
(200) TWO (2) NAILS SPACED 4 INCHES CENTER TO CENTER.



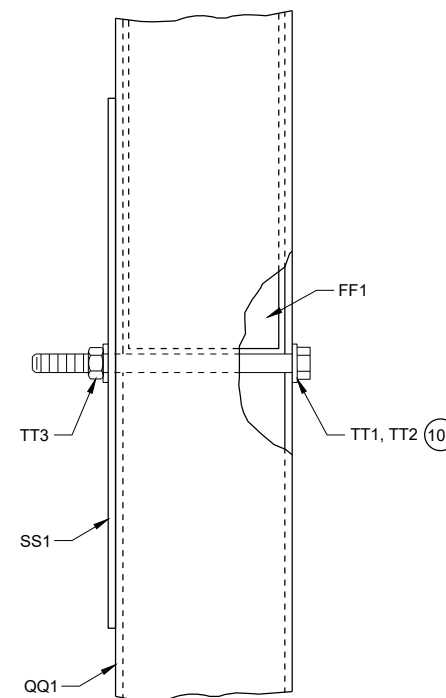
**PROFILE VIEW
DETAIL "B"
STEEL PIPE ASSEMBLY
(BEAM GUARD AND W BEAM
END SECTION NOT SHOWN)**



**PROFILE VIEW
DETAIL "C"**



**PLAN VIEW
DETAIL "B"
STEEL PIPE ASSEMBLY**



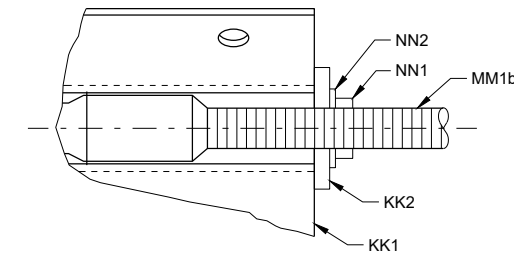
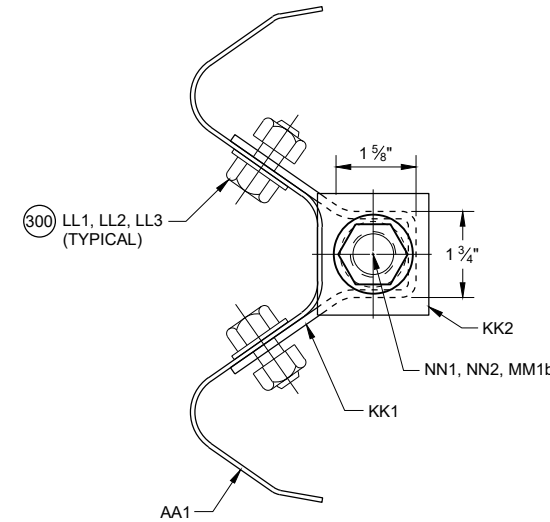
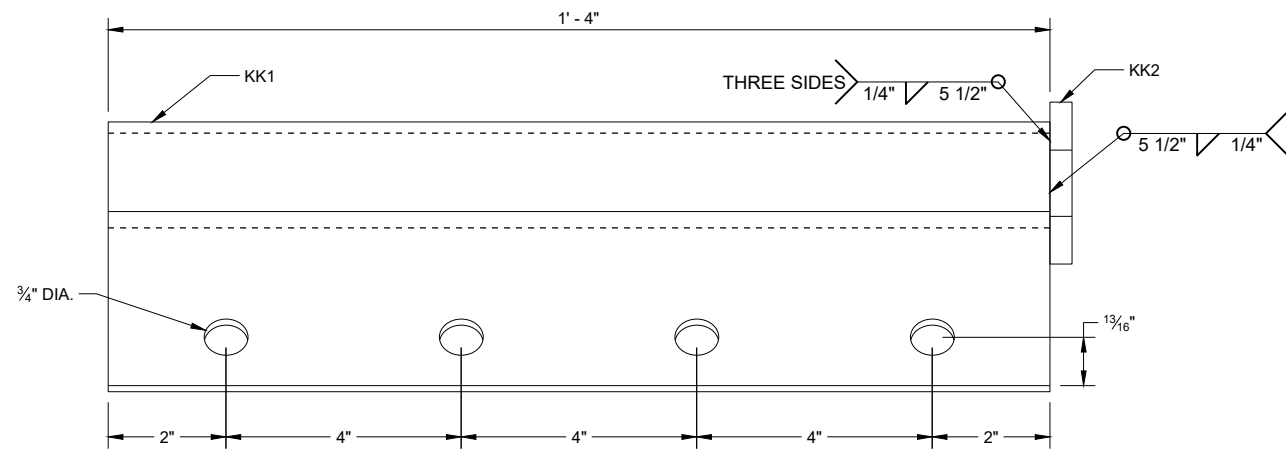
**PROFILE VIEW
DETAIL "D"**

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

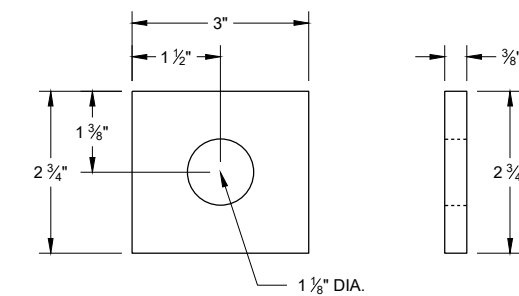
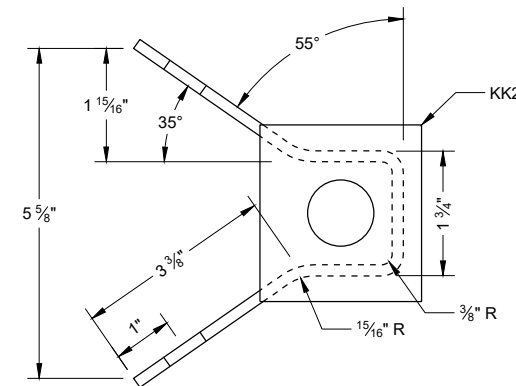
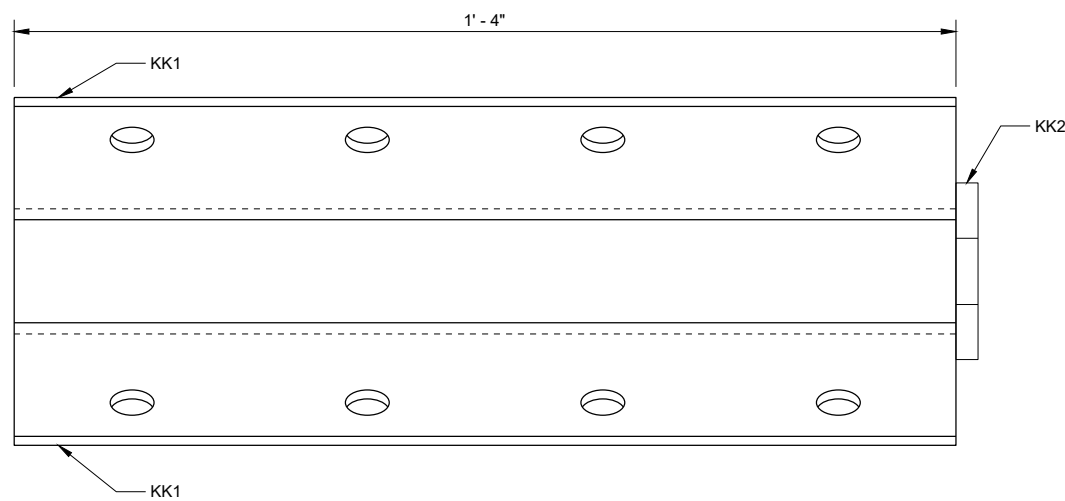
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

300 WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT (8) LL1 AND LL3 REQUIRED. SIXTEEN (16) LL2 REQUIRED.



SECTION A - A

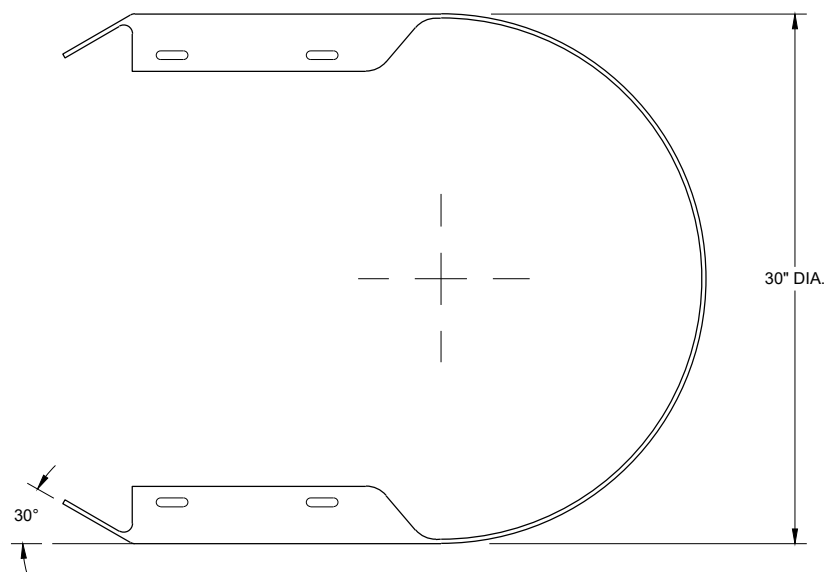


ANCHOR BRACKET BEARING PLATE (KK2)

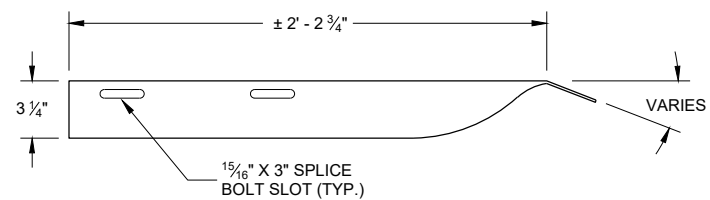
ANCHOR BRACKET (KK1, KK2)

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



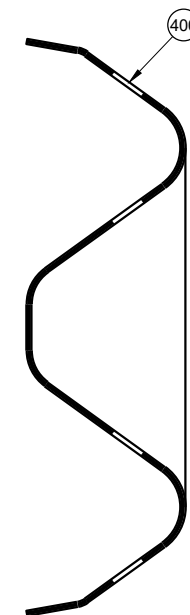
TOP VIEW



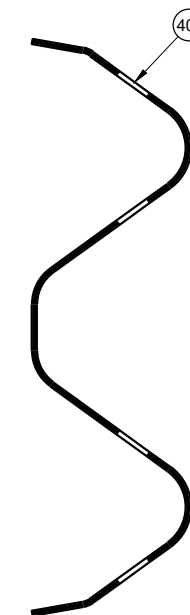
TOP VIEW

GENERAL NOTES

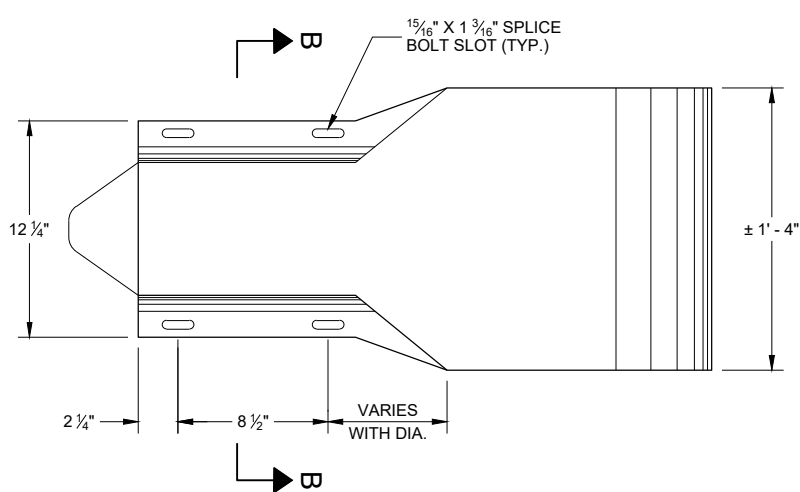
- (400) CROSS SECTION OF PART IS TO FIT OVER AA1 .
- (401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



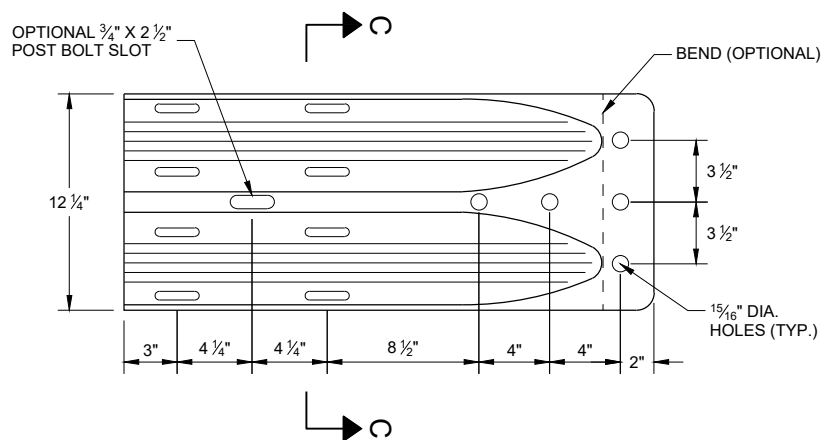
SECTION B - B



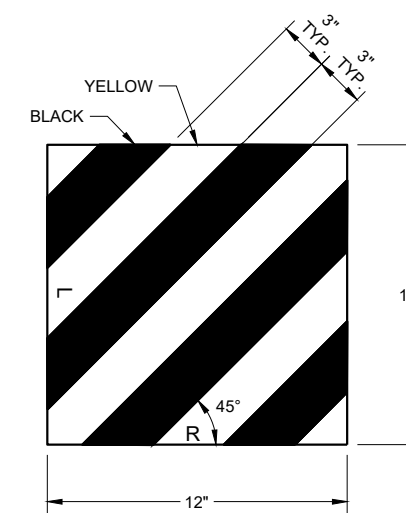
SECTION C - C



**PROFILE VIEW
W BEAM
END SECTION BUFFER (AA2)**



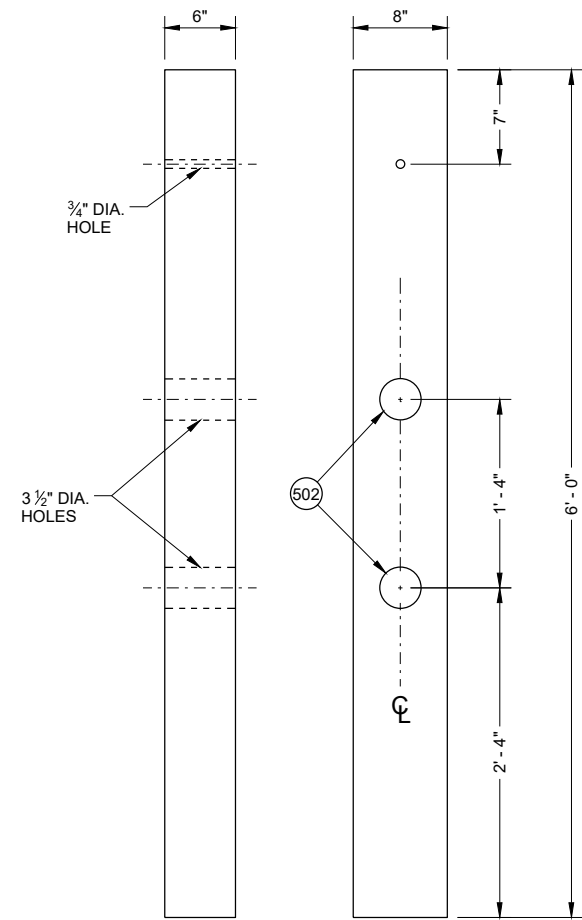
**PROFILE VIEW
W BEAM
TERMINAL CONNECTOR (BB1)**



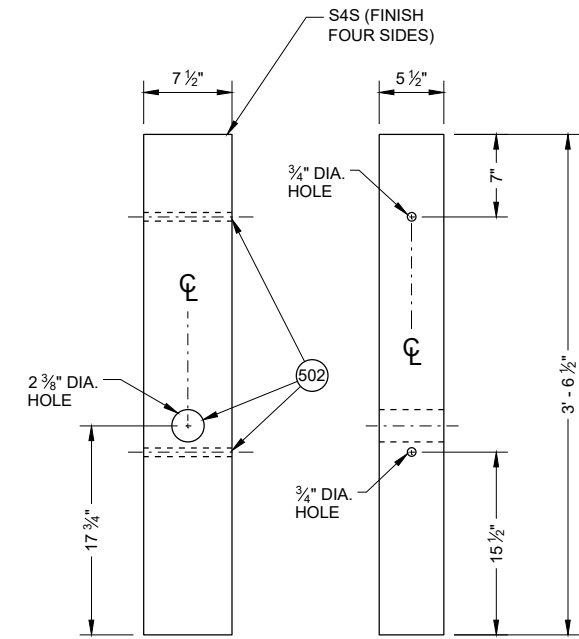
REFLECTIVE SHEETING (UU1, UU2)

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

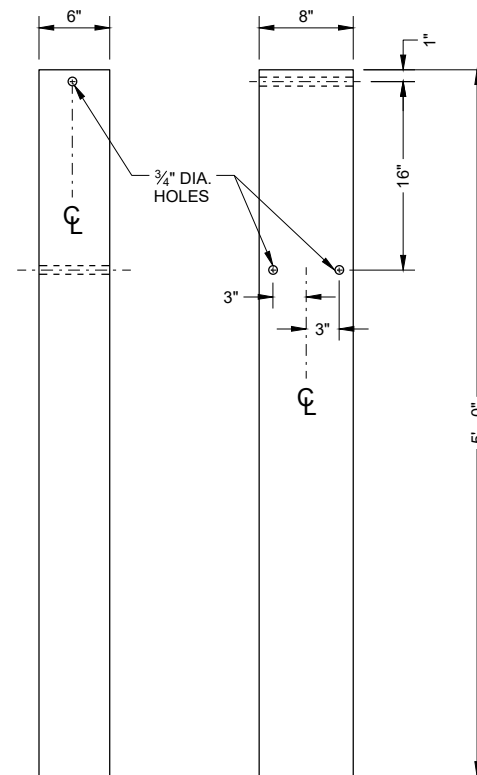
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



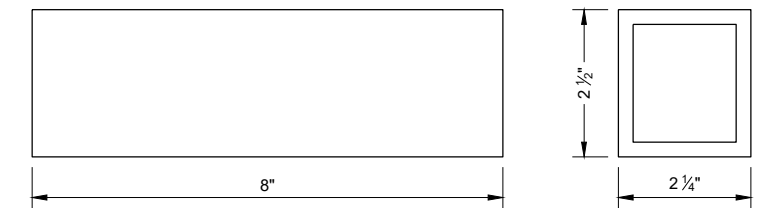
**FRONT VIEW SIDE VIEW
CONTROLLED RELEASE
POST (CRT) (DD2)**



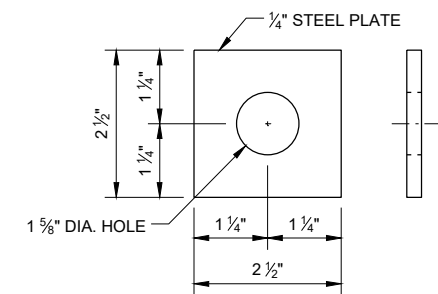
**FRONT VIEW SIDE VIEW
WOOD BREAKAWAY POST (FF1)**



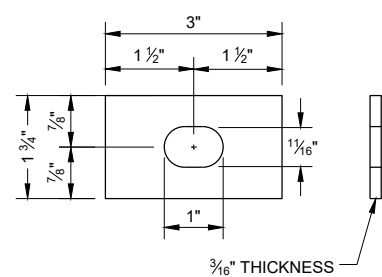
**FRONT VIEW SIDE VIEW
FOUNDATION TUBE (QQ1)**



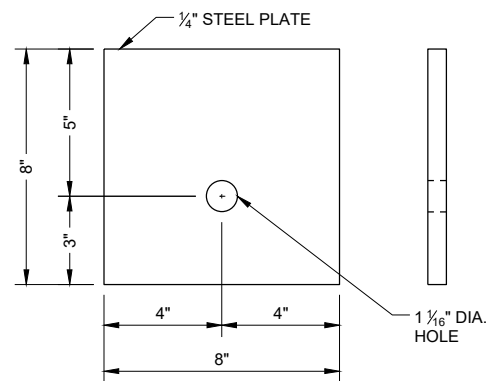
**FOUNDATION TUBE -
ANCHOR CABLE TUBE (QQ2)**



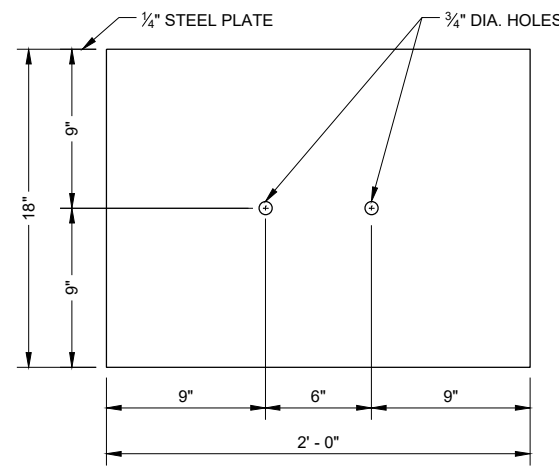
**ANCHOR CABLE TUBE
END PLATE (QQ3)**



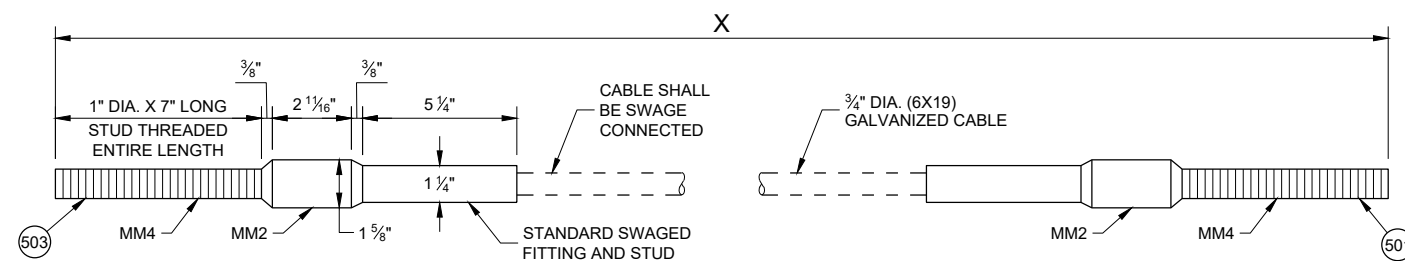
**RECTANGULAR PLATE
WASHER (CC1)**



BEARING PLATE (PP1)



SOIL PLATE (SS1)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

MM1b	9' - 0"
MM1b	6' - 8"

- GENERAL NOTES**
- (500) SEE DETAIL "D" FOR LOCATION AND ATTACHMENT OF SS1.
 - (501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.
 - (502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.
 - (503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL THE RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
E3	POST BOLT - NUT	AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	1/2" DIA. 6" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329	

6

6

SDD 14B53 - 019

SDD 14B53 - 019

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	$\frac{3}{8}$ " DIA. SEE 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
ASTM A563 GRADE A HEAVY HEX HEAD			
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	$\frac{3}{8}$ " DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	$\frac{3}{8}$ " DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS $\frac{3}{8}$ " X 4" X 1' - 0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
KK2	ANCHOR BRACKET - BEARING PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	$\frac{3}{8}$ " DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	$\frac{3}{8}$ " DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	$\frac{3}{8}$ " DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	$\frac{3}{4}$ "
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
NN2	ANCHOR CABLE - NUT - WASHER	UNC	1" DIA.
		ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

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SDD 14B53 - 01h

SDD 14B53 - 01h

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
PP1	BEARING PLATE AT POST	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/8"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	
QQ3	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS 2 1/2" X 2 1/2" X 1/4"
		GALV. AASHTO M111 / ASTM A123	
QQ4	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
QQ5	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
QQ6	GROUND STRUT AND YOKE - NUT	HEAVY HEX	5/8 DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
SS1	SOIL PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8 DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING. SHEETING TYPE FOR MARKER.
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

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SDD 14B53 - 01i

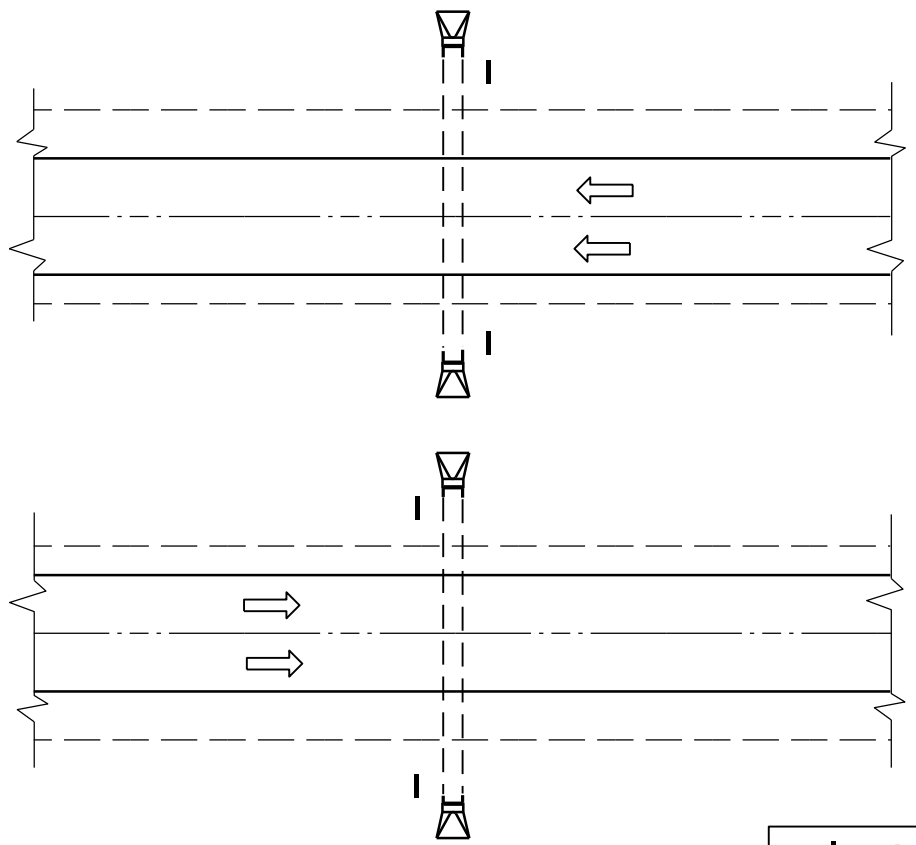
SDD 14B53 - 01i

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

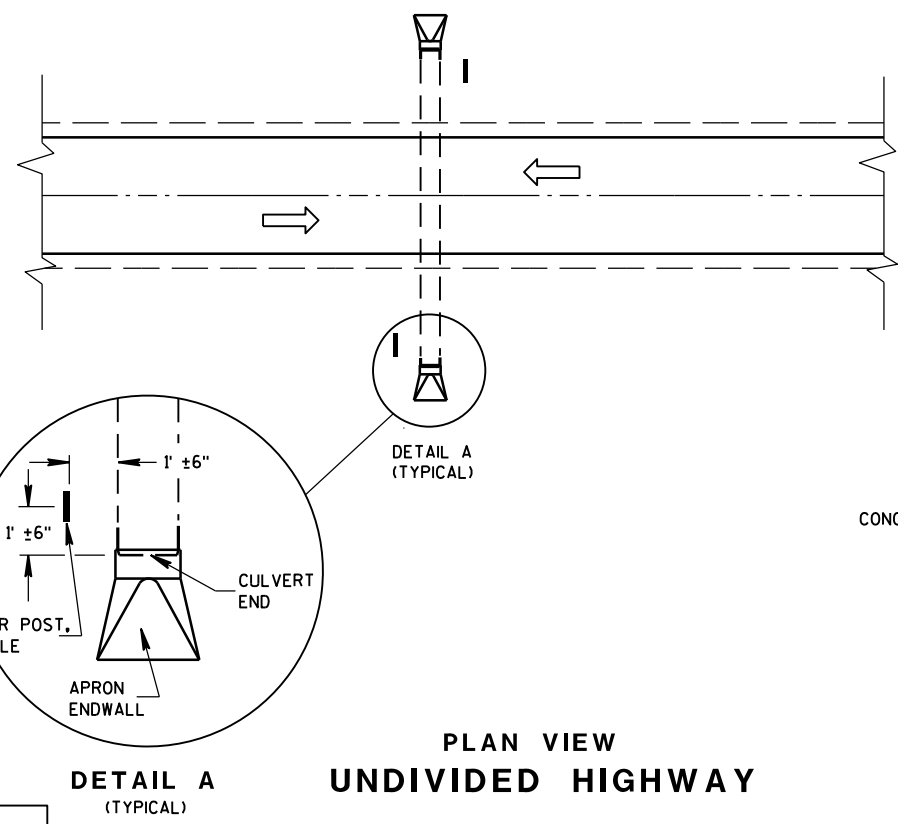
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



PLAN VIEW
DIVIDED HIGHWAY

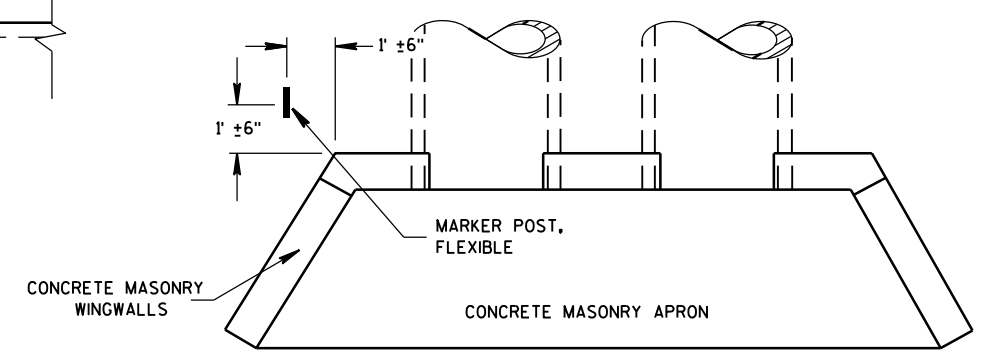


PLAN VIEW
UNDIVIDED HIGHWAY

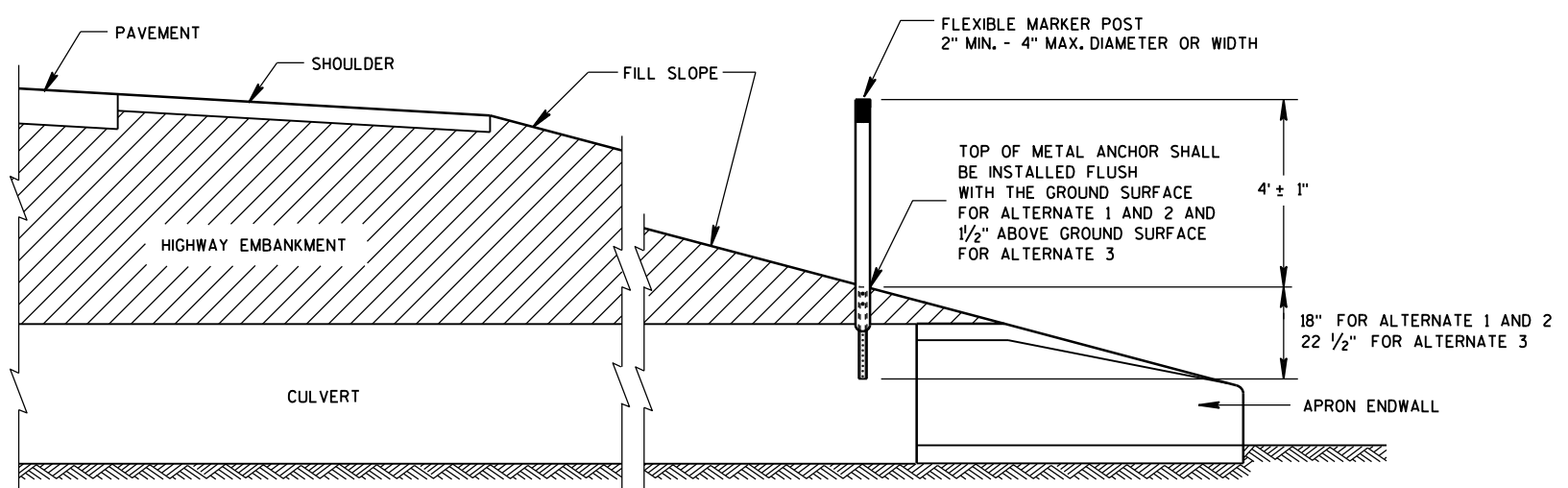
FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

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



PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

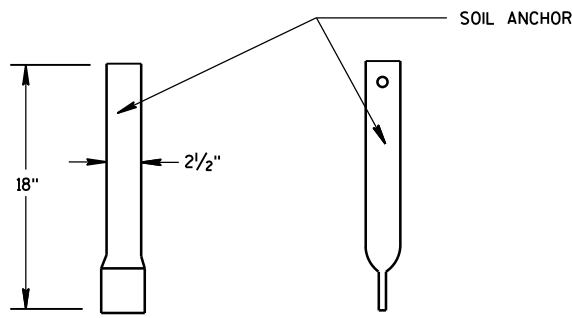
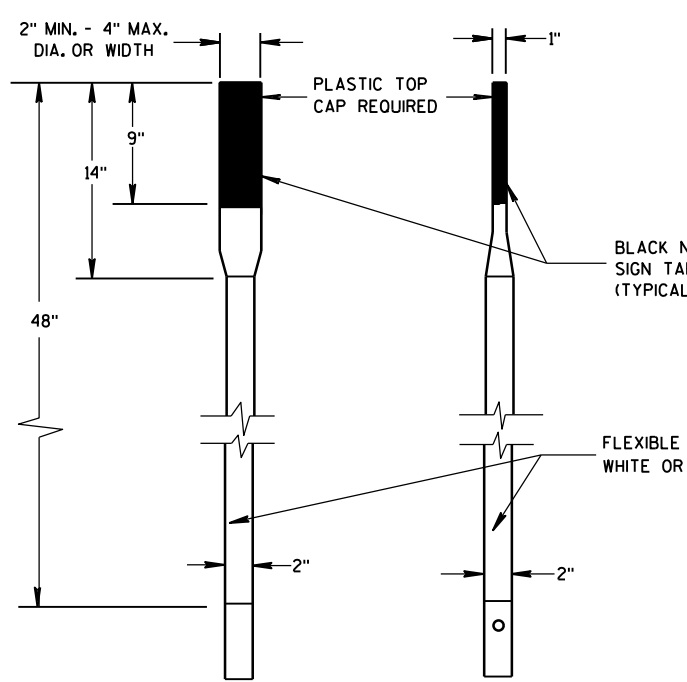
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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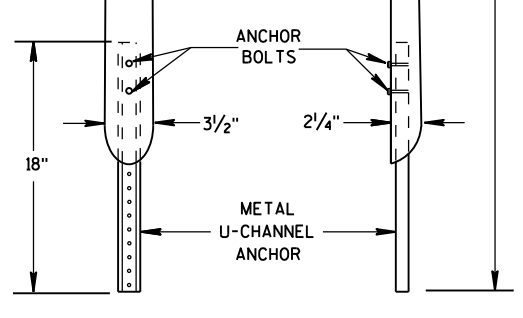
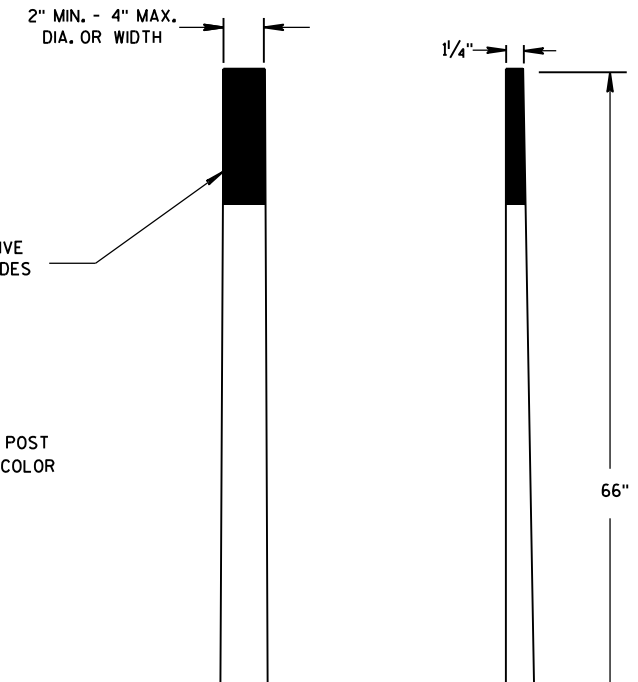
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S.D.D. 15 A 3-2a

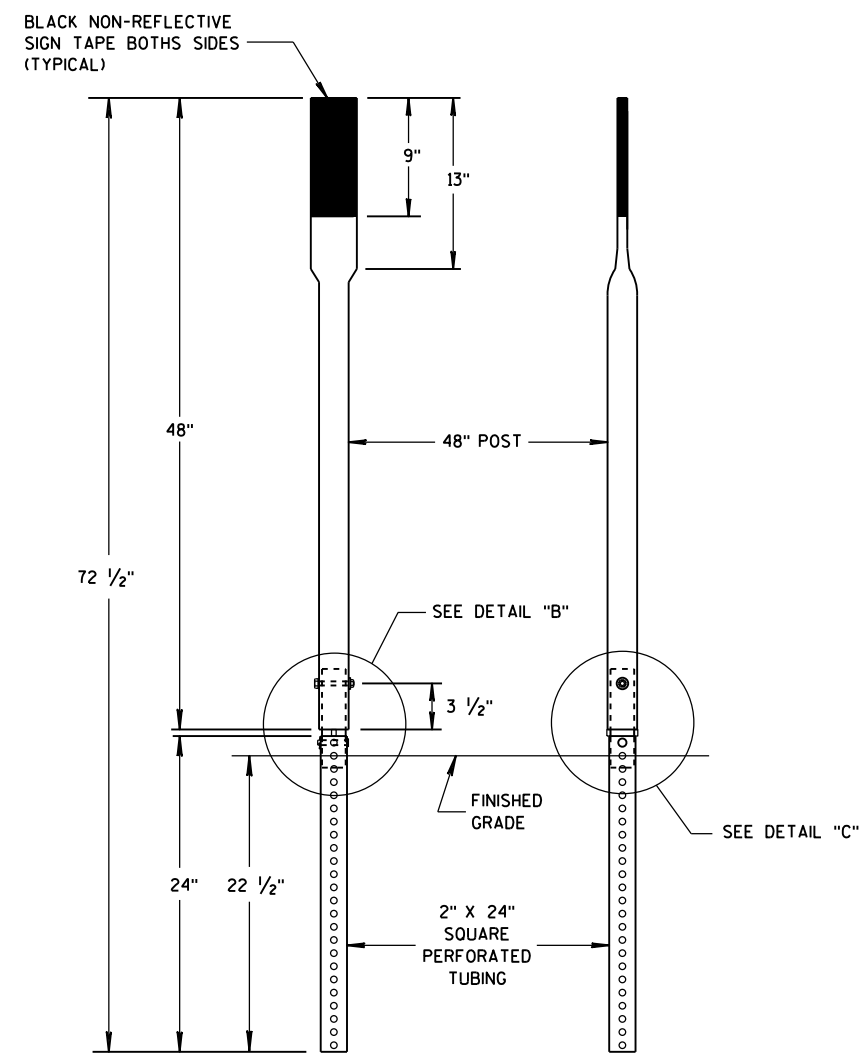
S.D.D. 15 A 3-2a



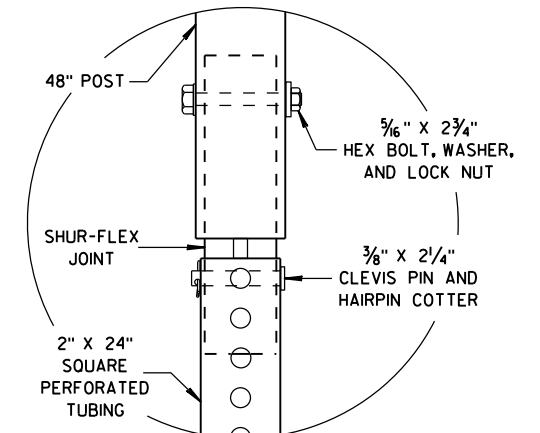
FRONT VIEW SIDE VIEW
ALTERNATE 1



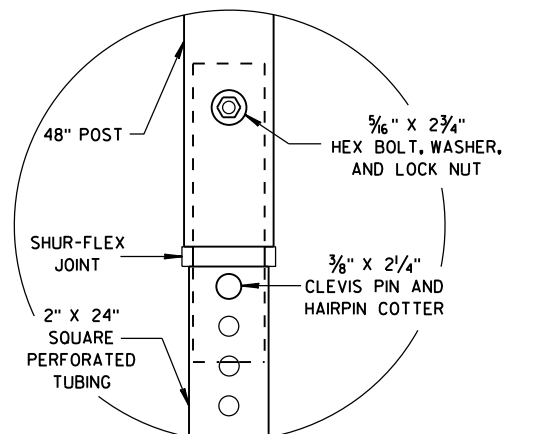
FRONT VIEW SIDE VIEW
ALTERNATE 2



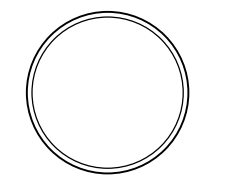
FRONT VIEW SIDE VIEW
ALTERNATE 3



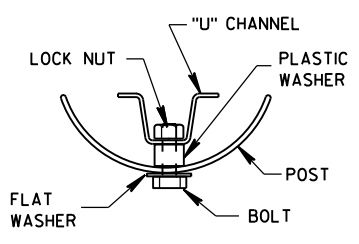
DETAIL B



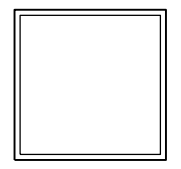
DETAIL C



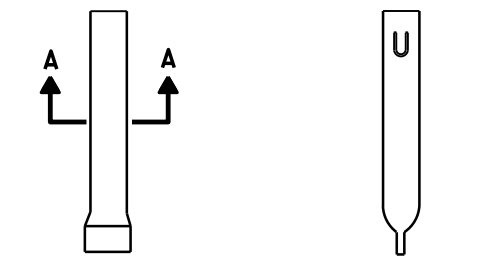
SECTION A-A



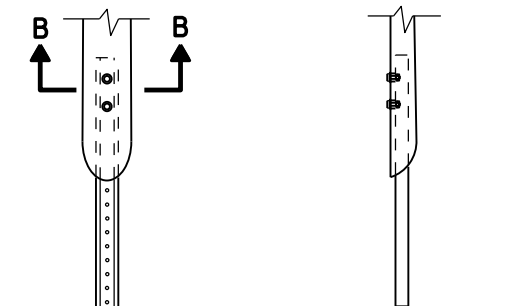
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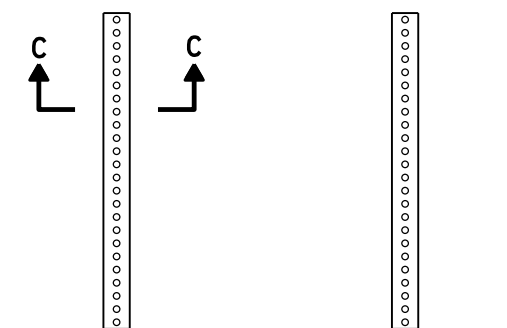
SECTION C-C



FRONT VIEW SIDE VIEW
ALTERNATE 1



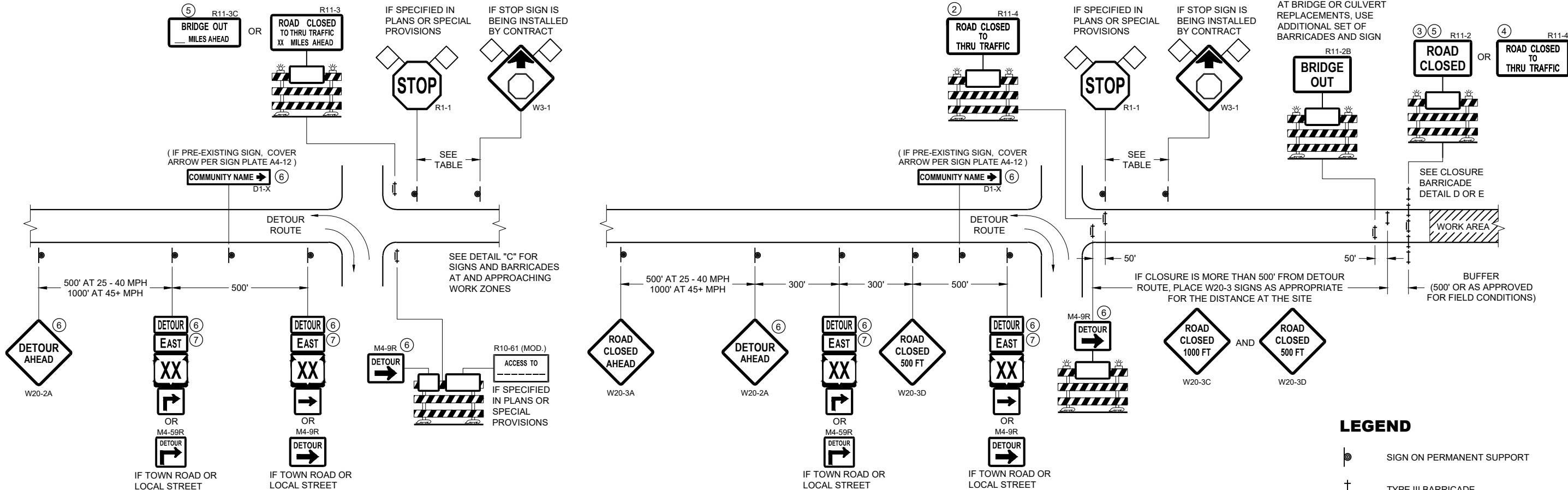
FRONT VIEW SIDE VIEW
ALTERNATE 2



FRONT VIEW SIDE VIEW
ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

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



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

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

**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

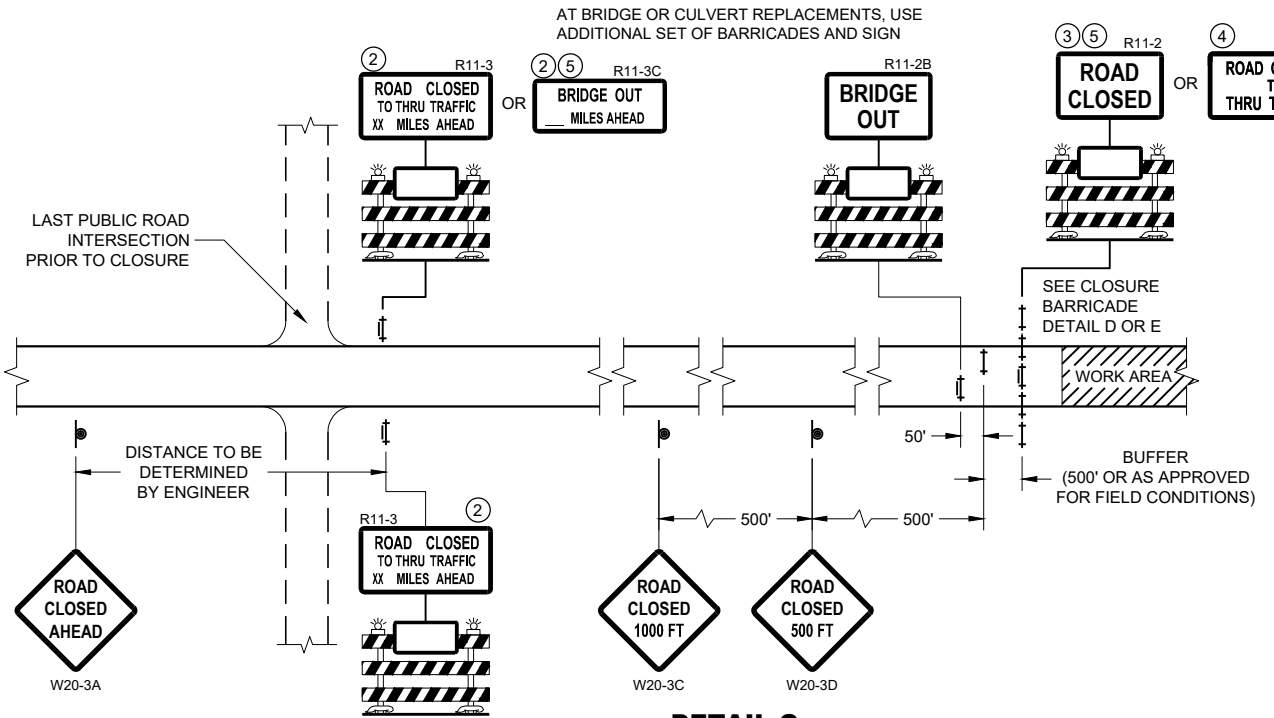
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

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

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

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



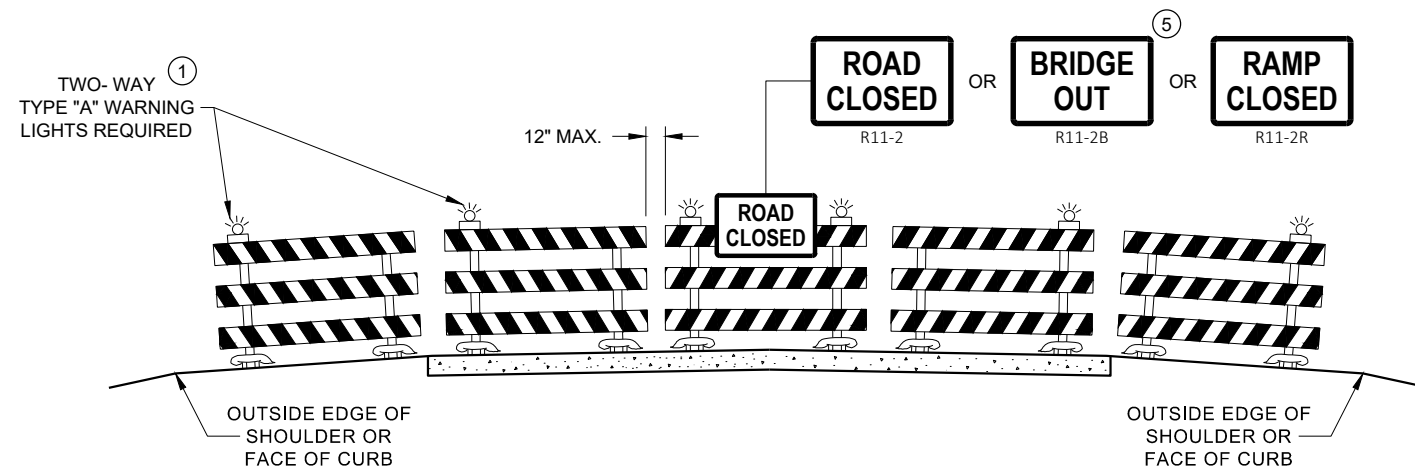
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

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

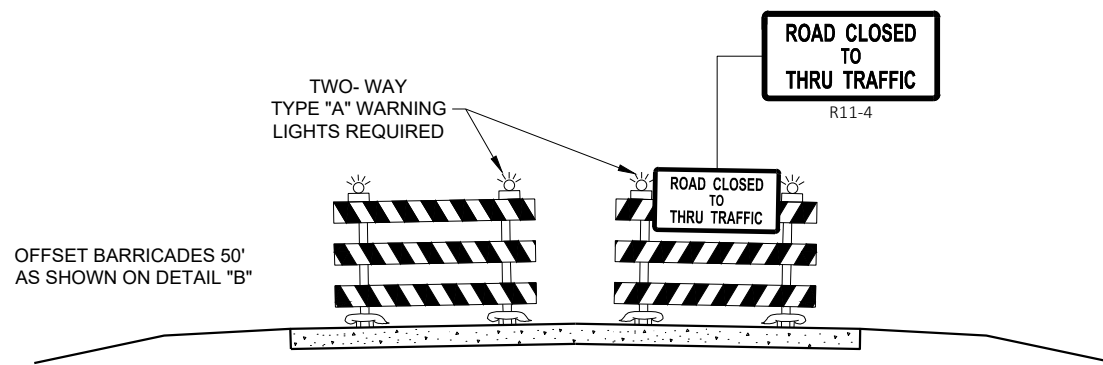
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



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

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

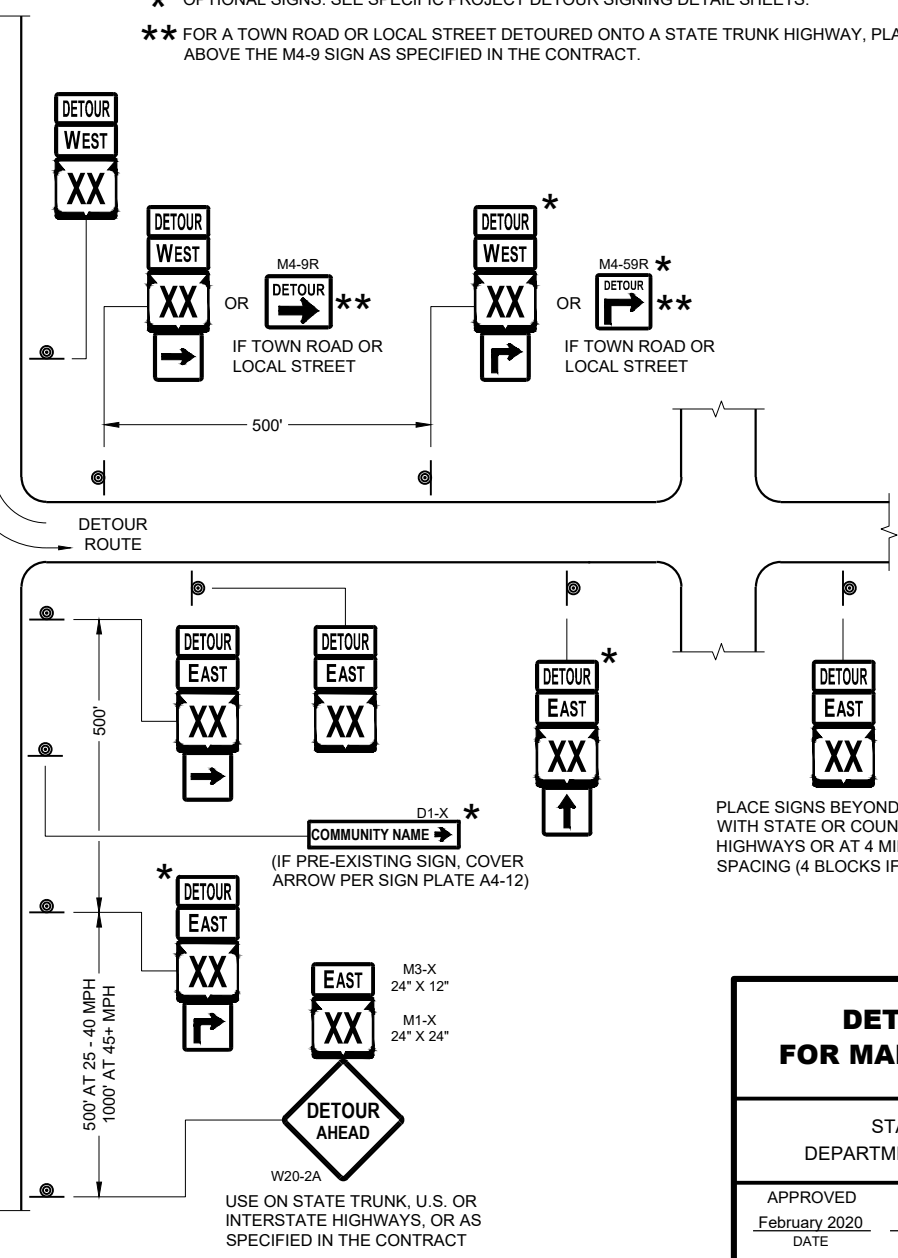
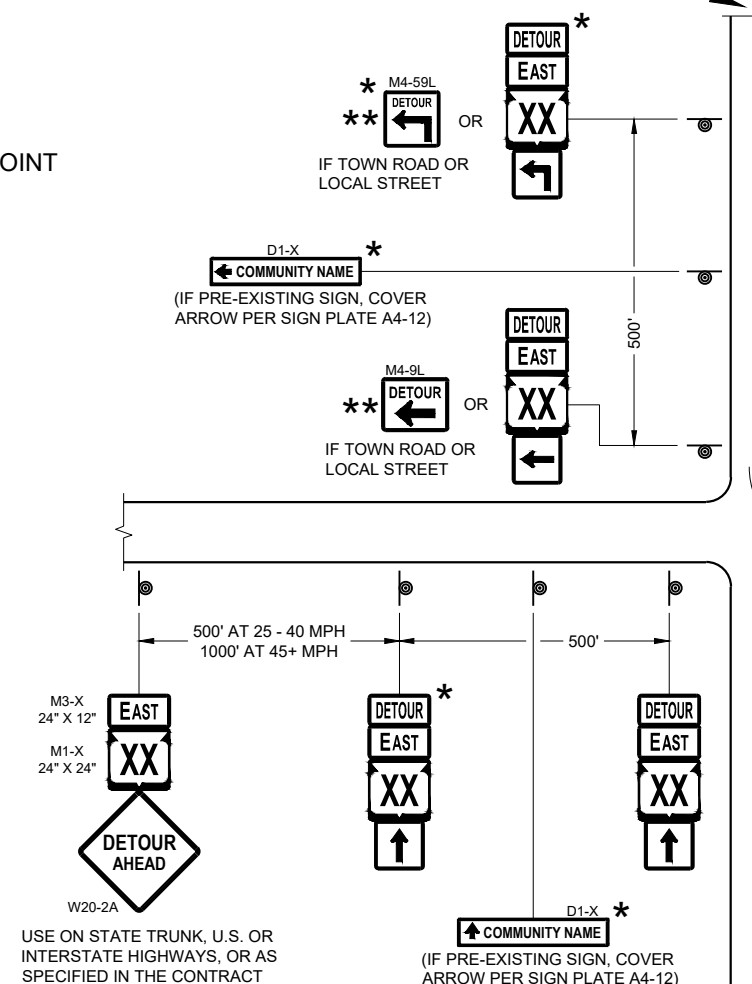
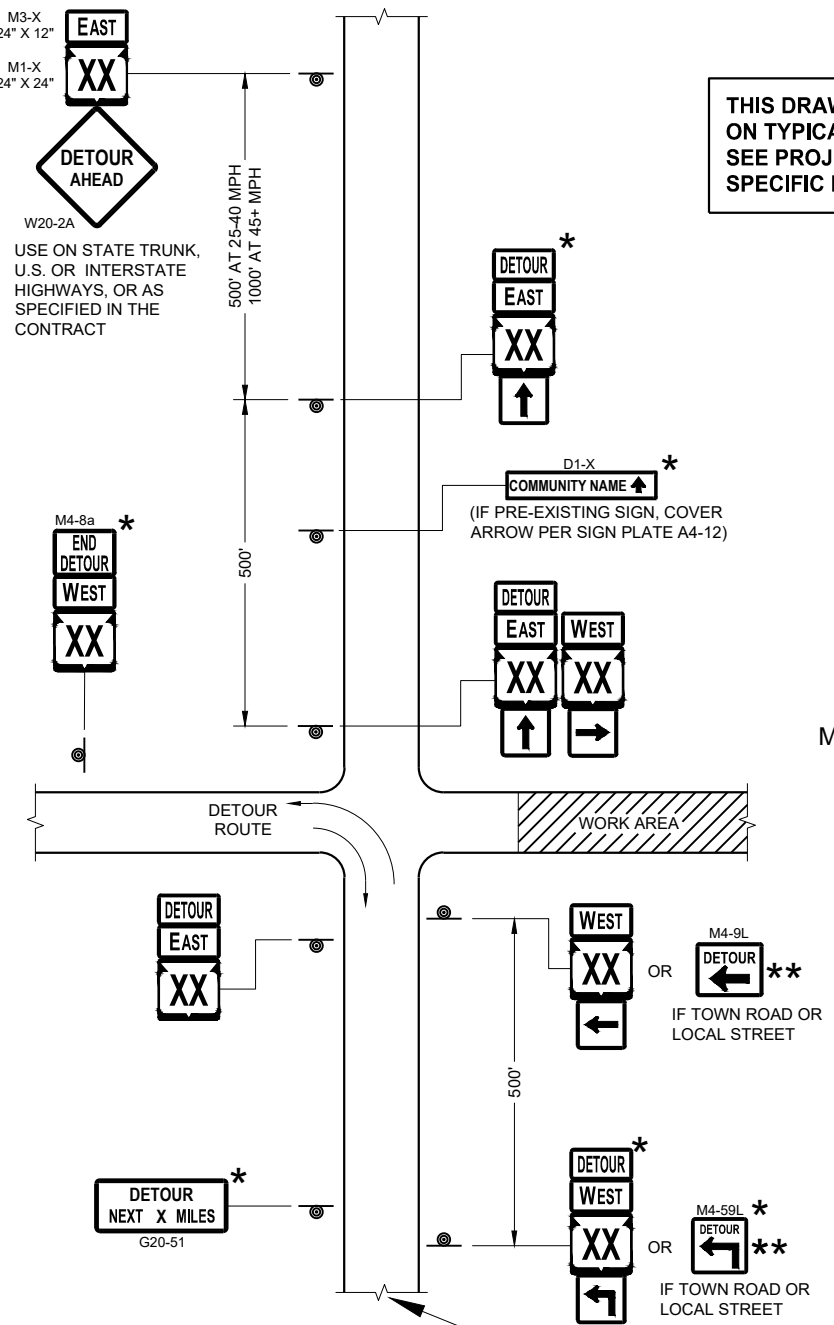
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

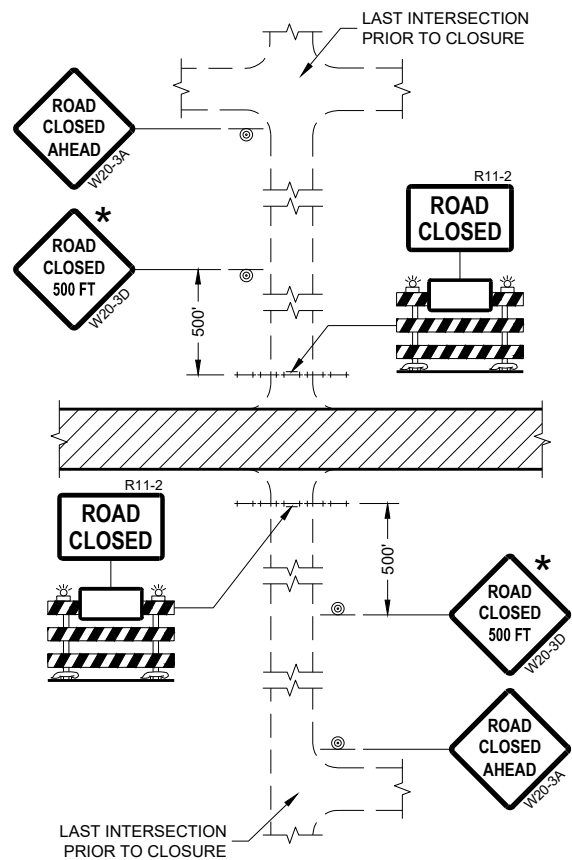
MATCH POINT

DETAIL F DETOUR SIGNING

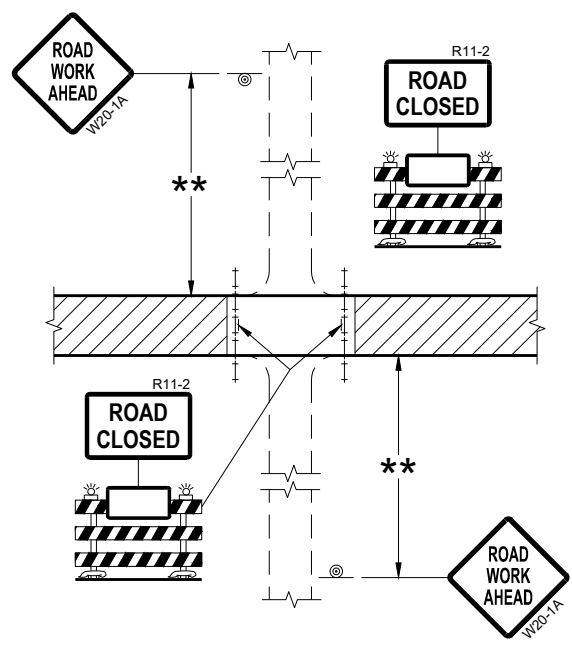


SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

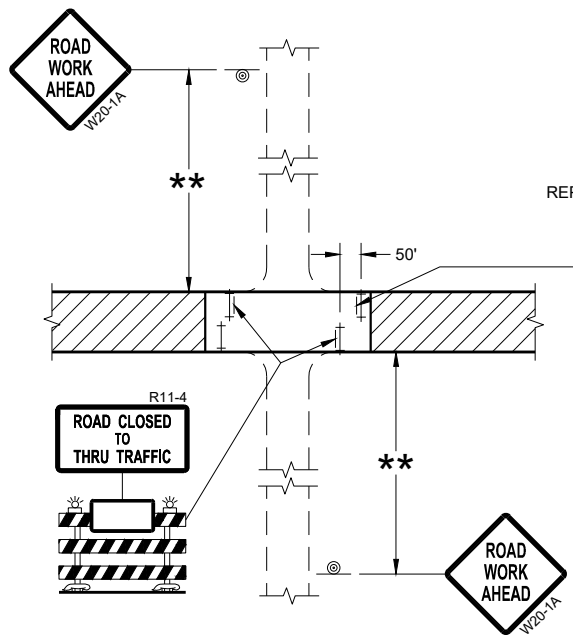
DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



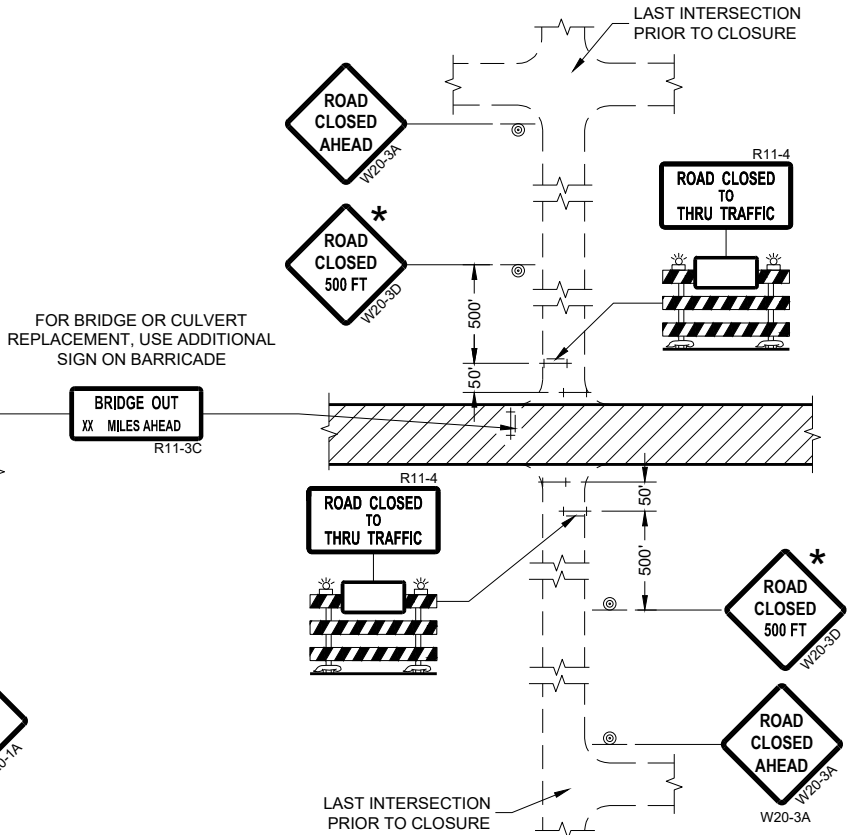
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 2018 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

GENERAL NOTES

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

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




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

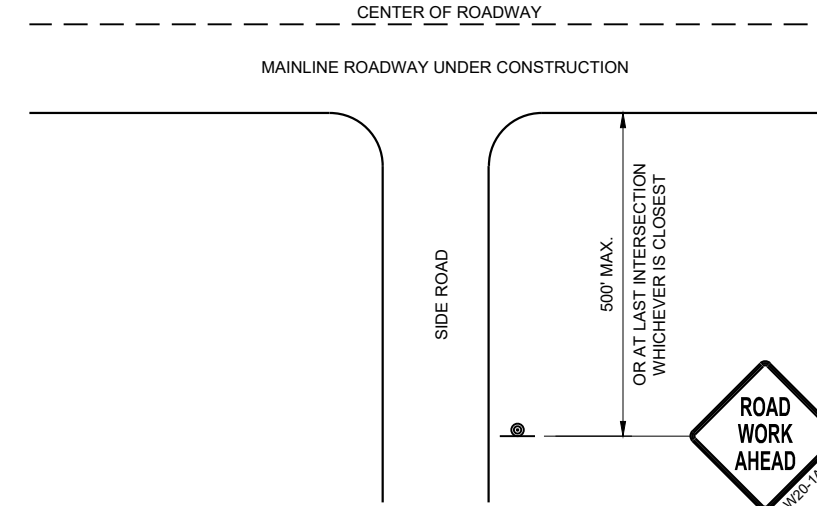
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

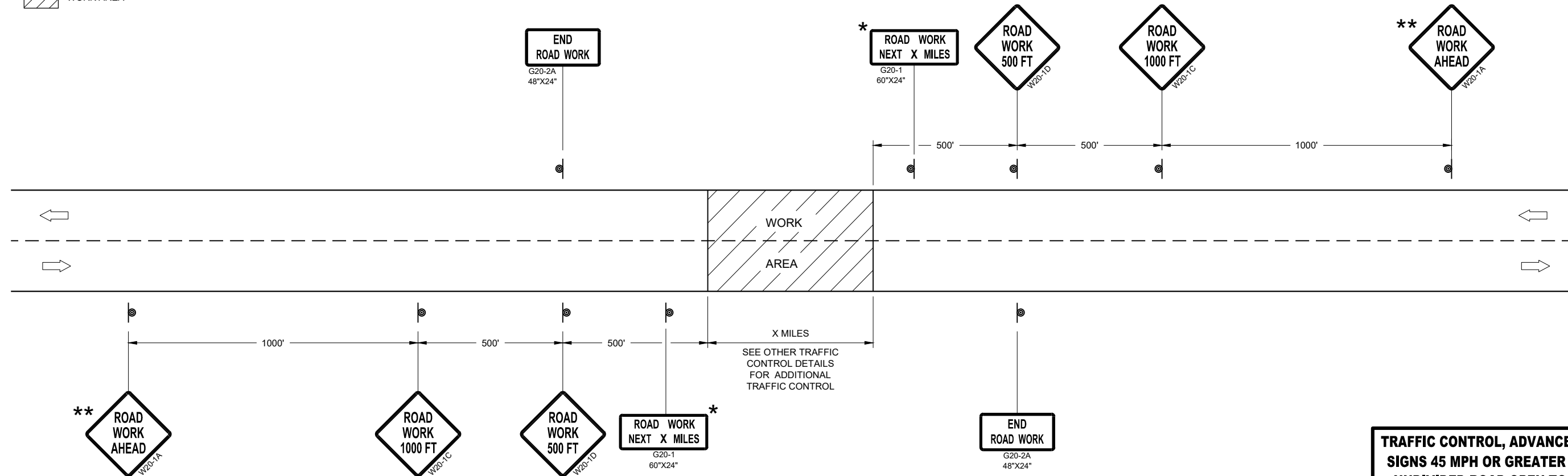
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

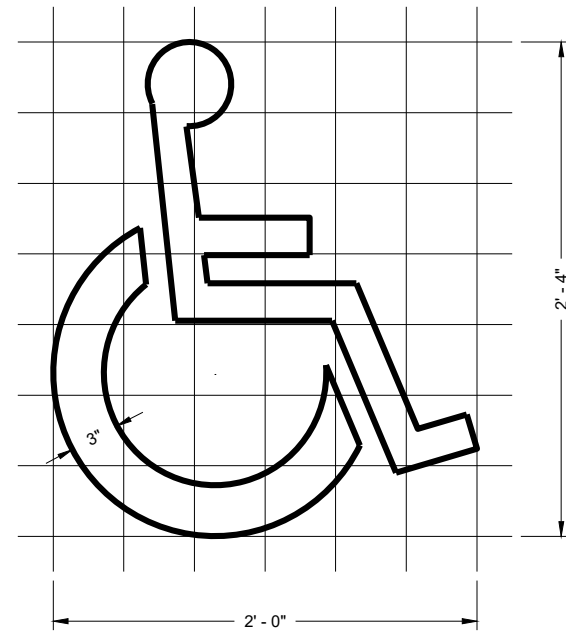
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WORK ZONE ENGINEER

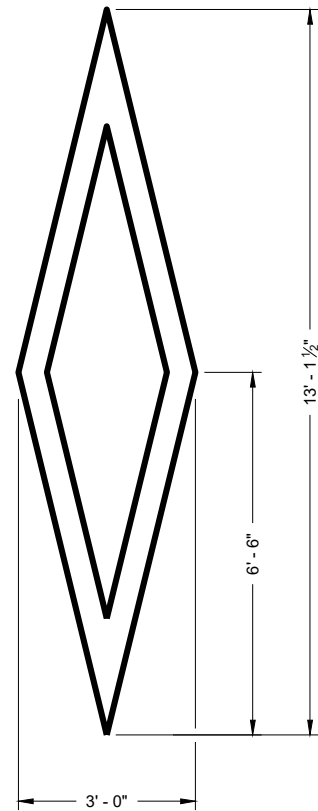
FHWA

GENERAL NOTES

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



HANDICAP SYMBOL

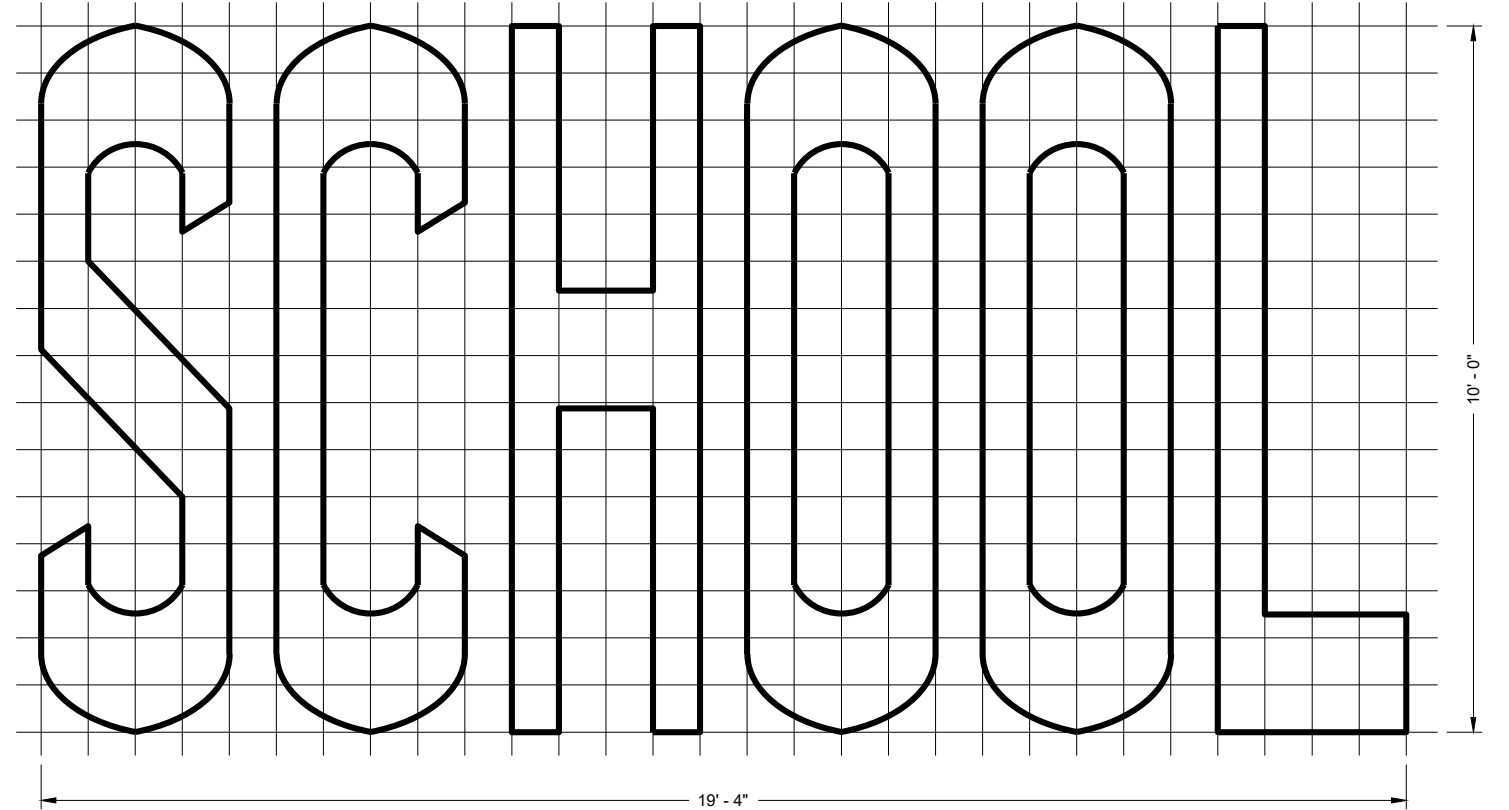
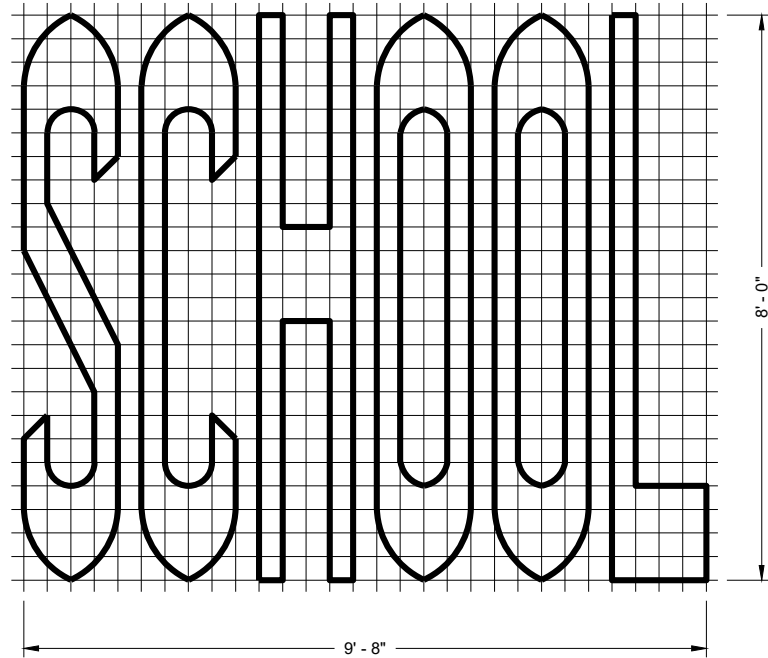
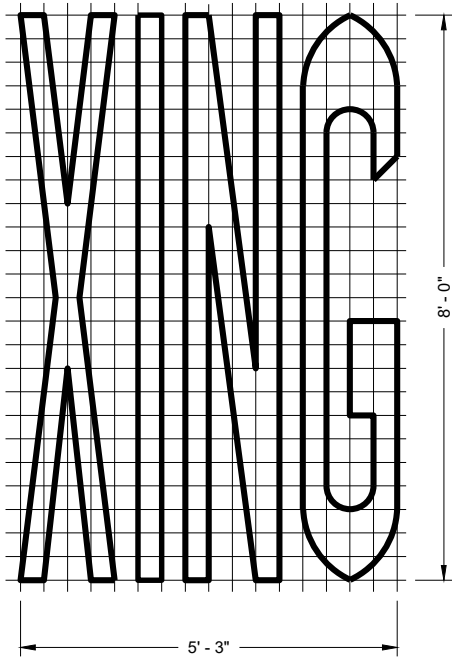
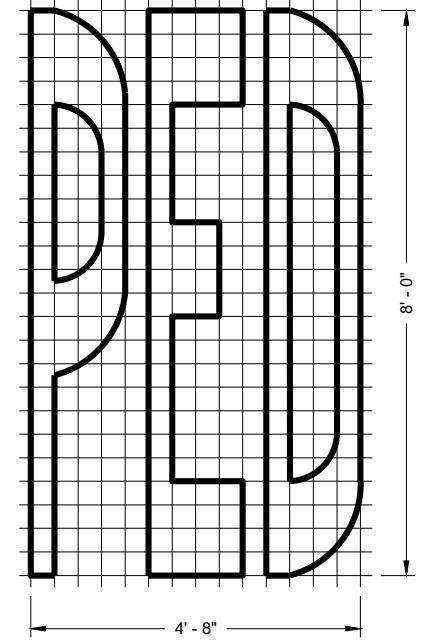
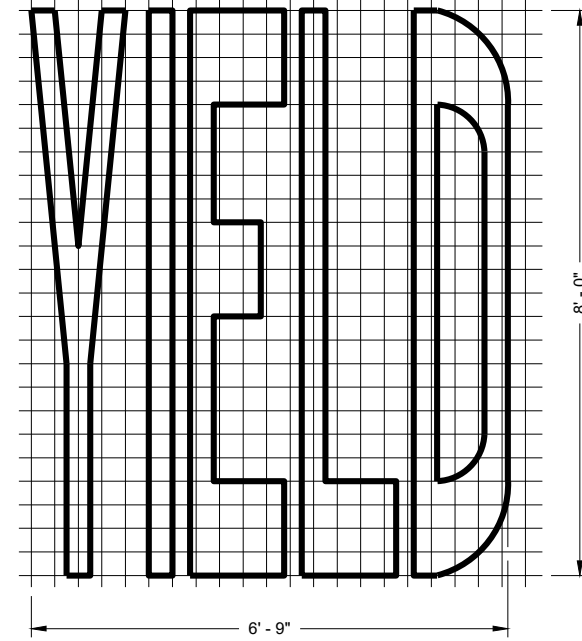
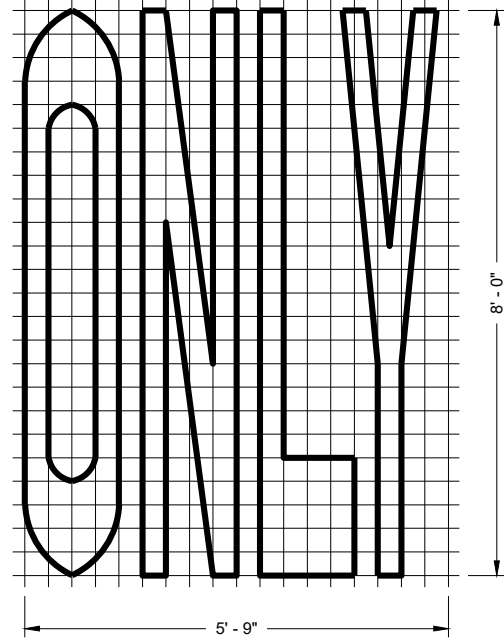
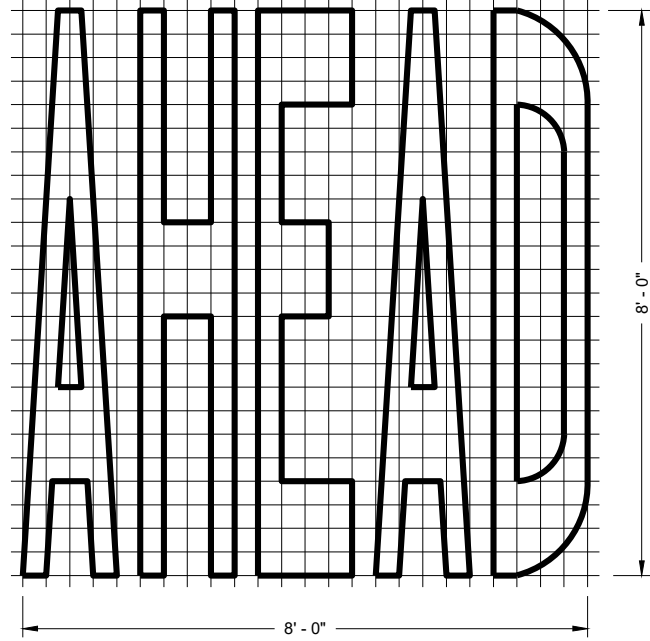
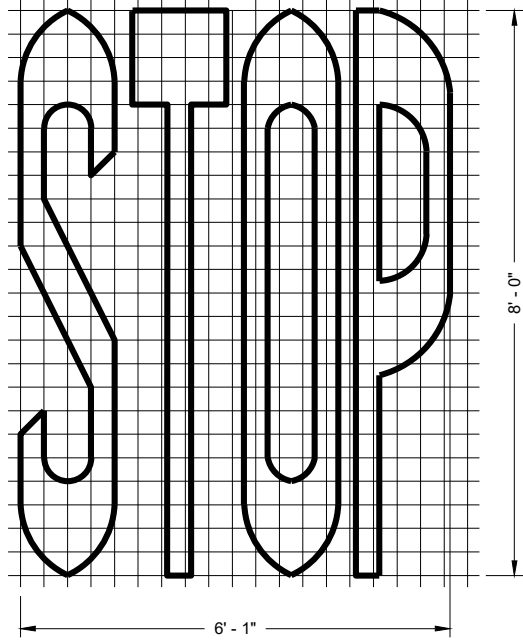


**PREFERENTIAL
LANE SYMBOL**

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
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SINGLE LANE

TWO - LANE

GENERAL NOTES

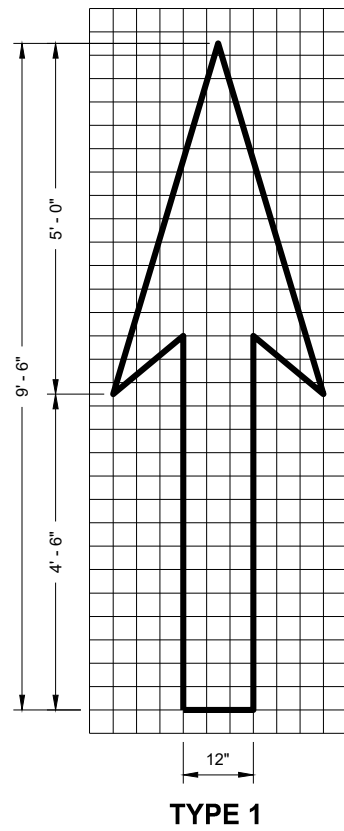
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING WORDS

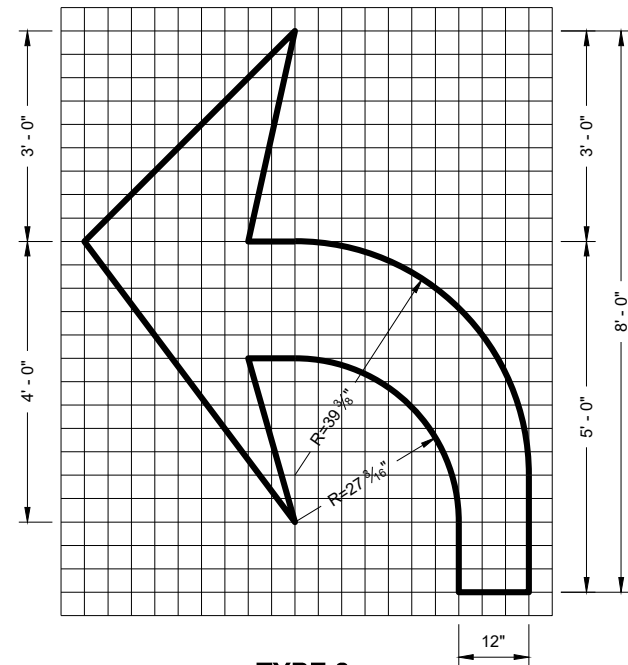
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ENGINEER

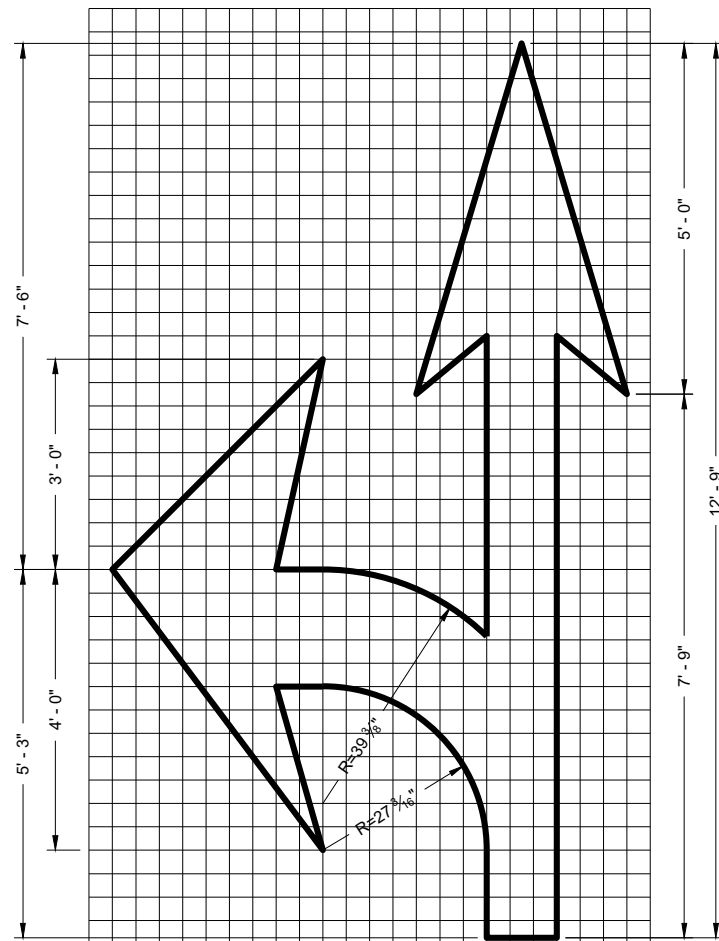
FHWA



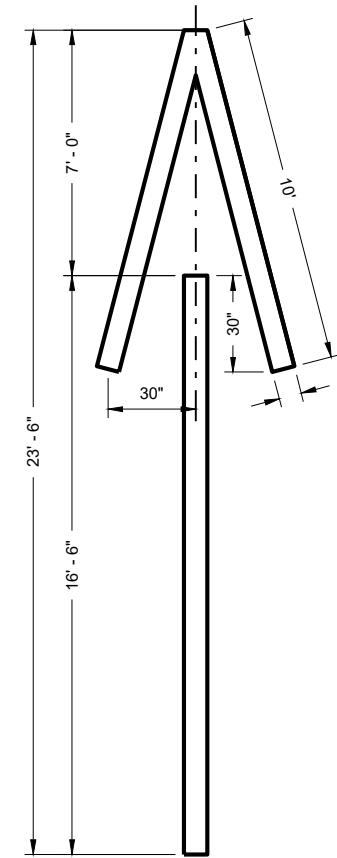
TYPE 1



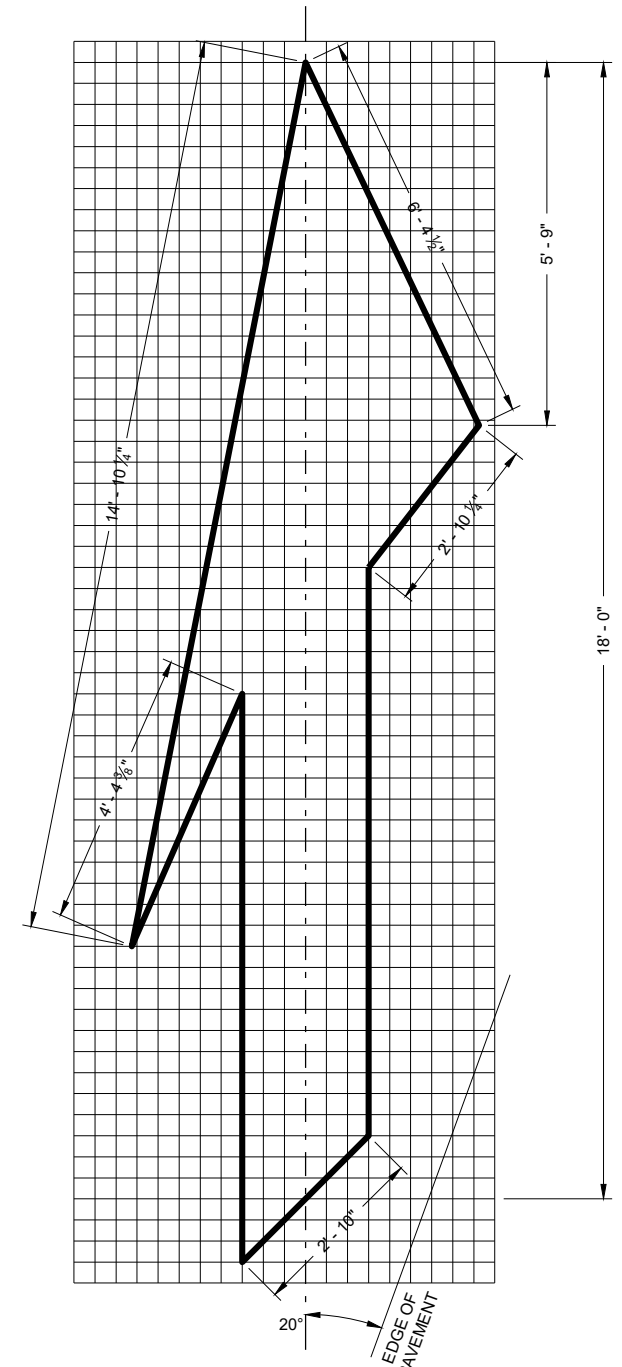
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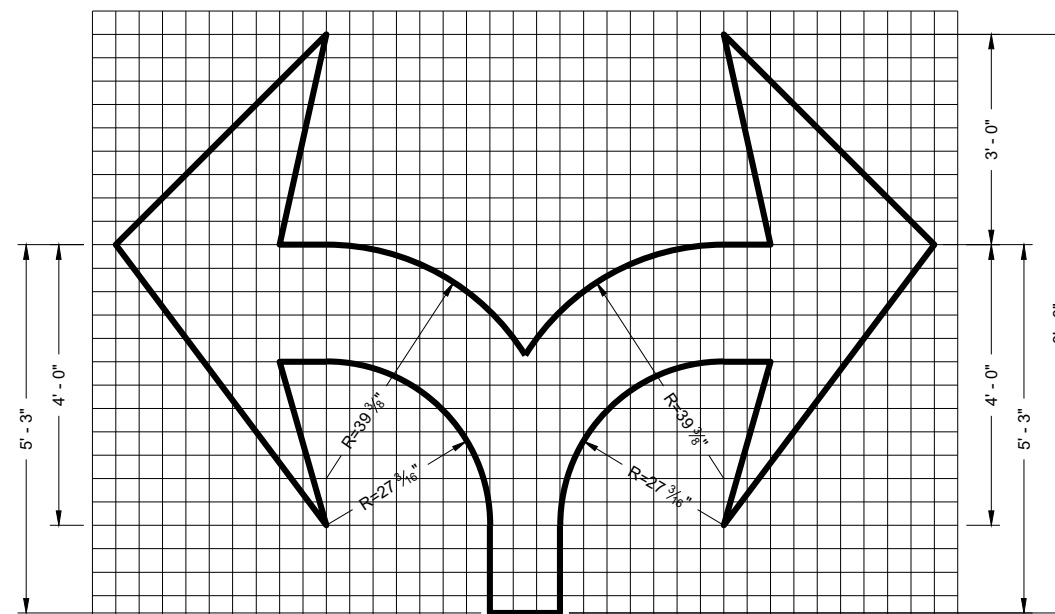
TYPE 3



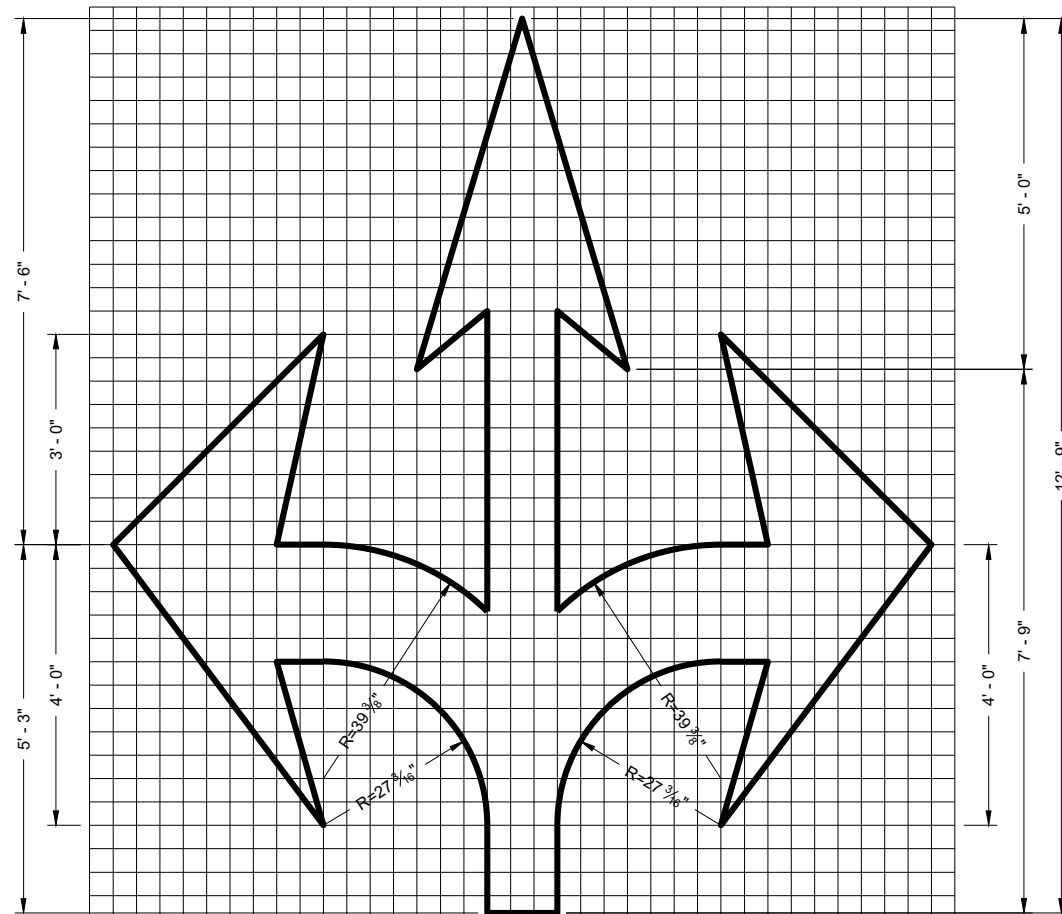
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 7



TYPE 6

GENERAL NOTES

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

PAVEMENT MARKING ARROWS

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DEPARTMENT OF TRANSPORTATION

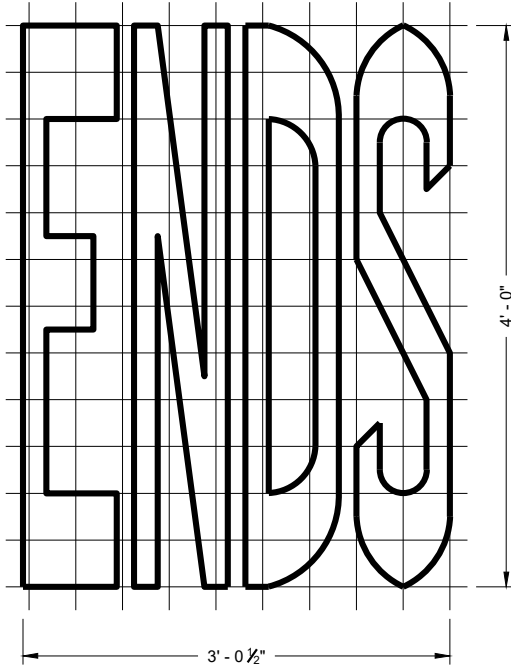
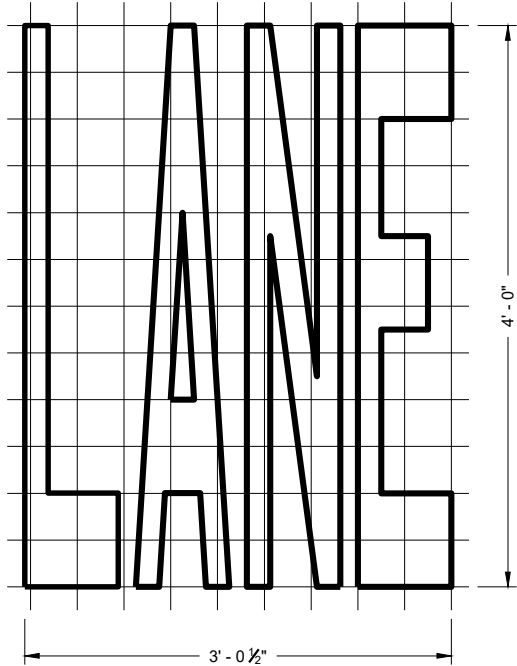
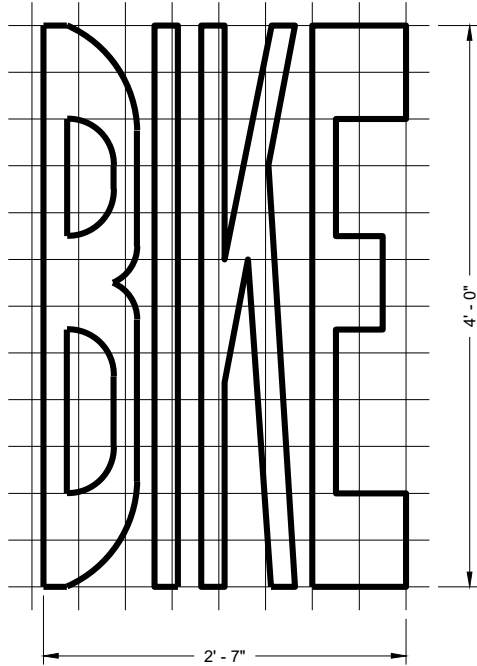
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DATE

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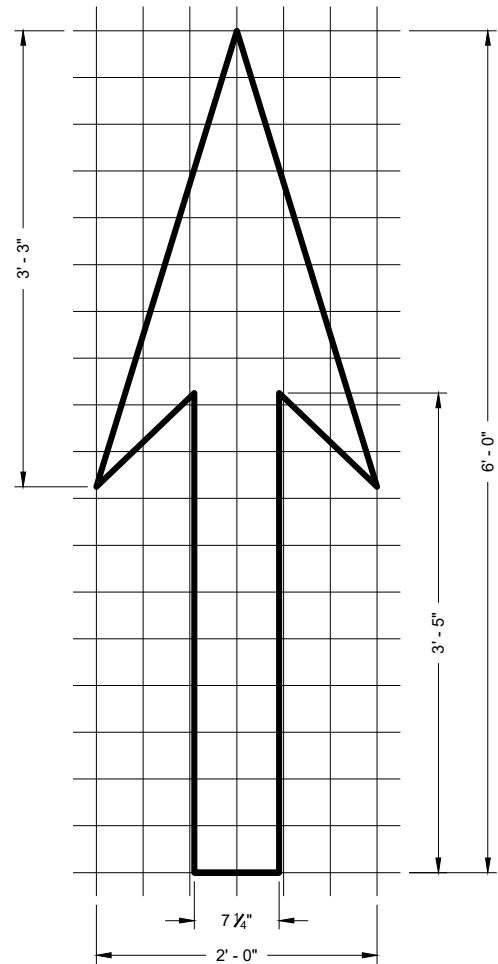
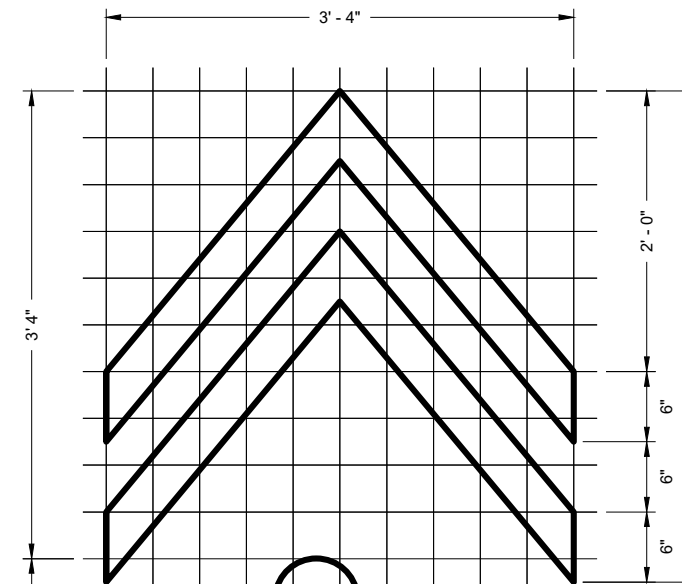
/s/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER



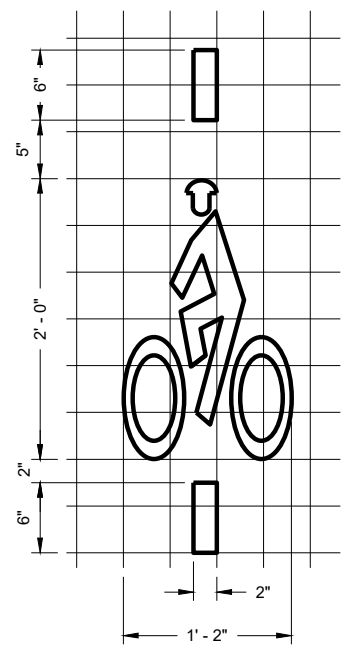
BIKE LANE WORDS

GENERAL NOTES

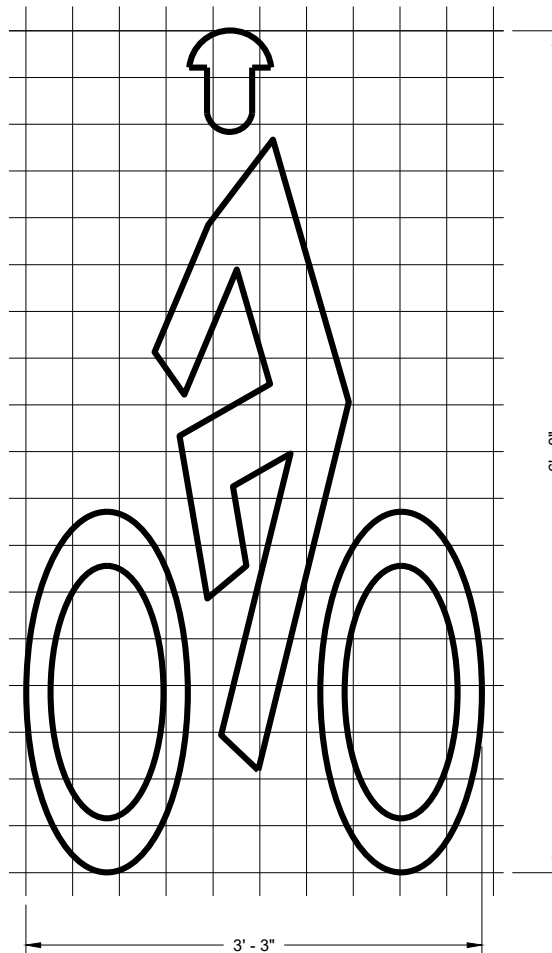
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



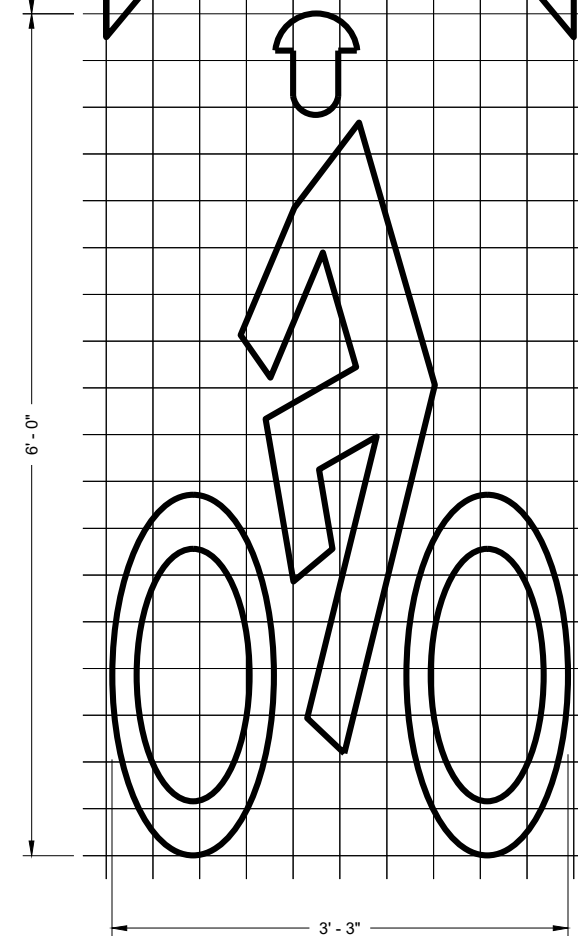
BIKE LANE ARROW



BIKE DETECTOR PAVEMENT MARKING



BIKE LANE SYMBOL



BIKE LANE SYMBOL FOR SHARED LANE

6

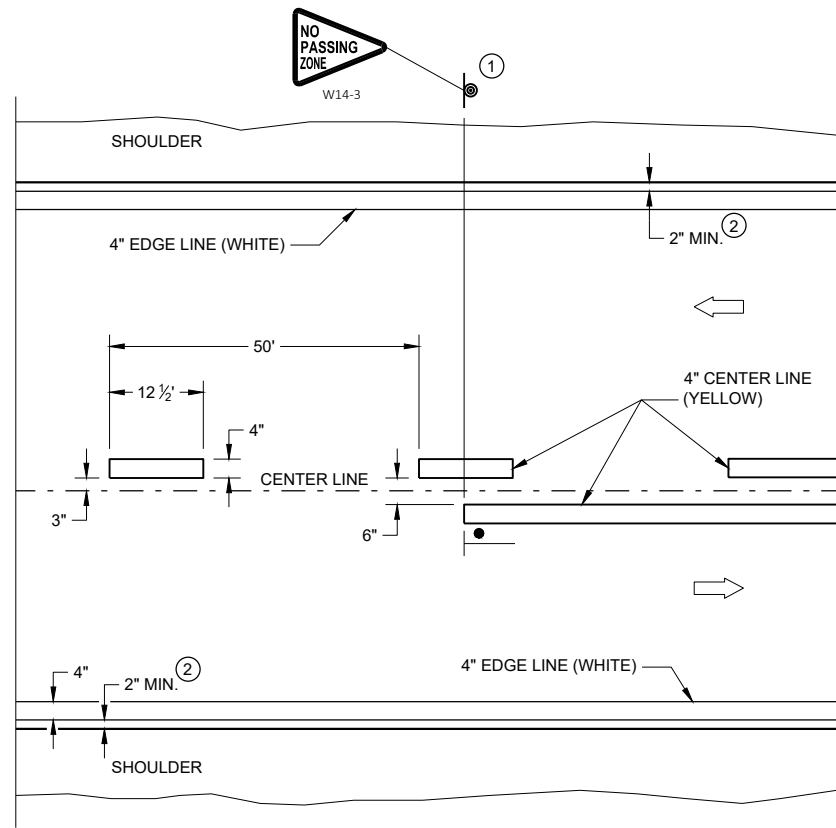
6

PAVEMENT MARKING FOR BIKE LANES

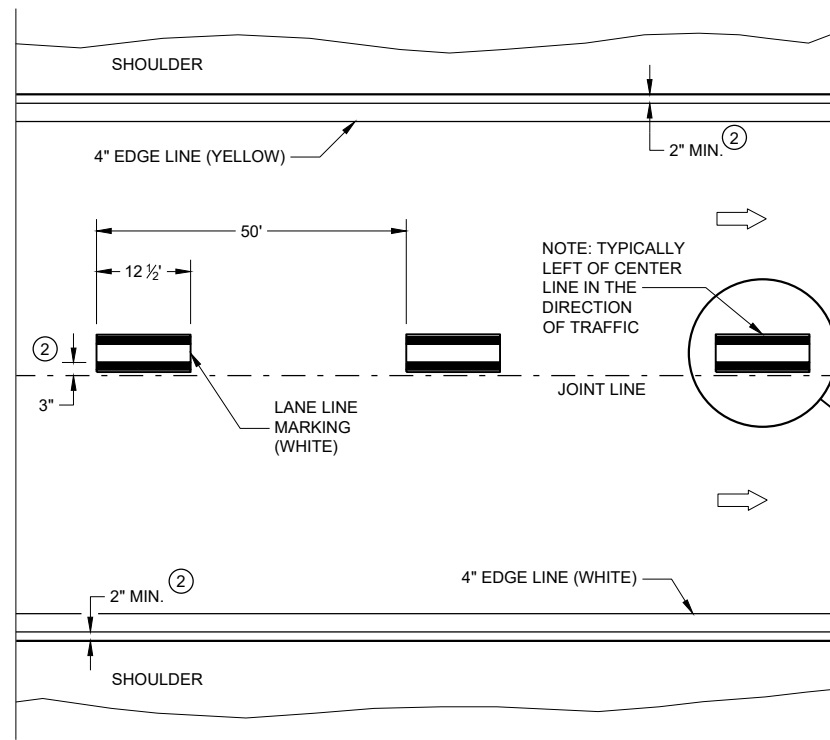
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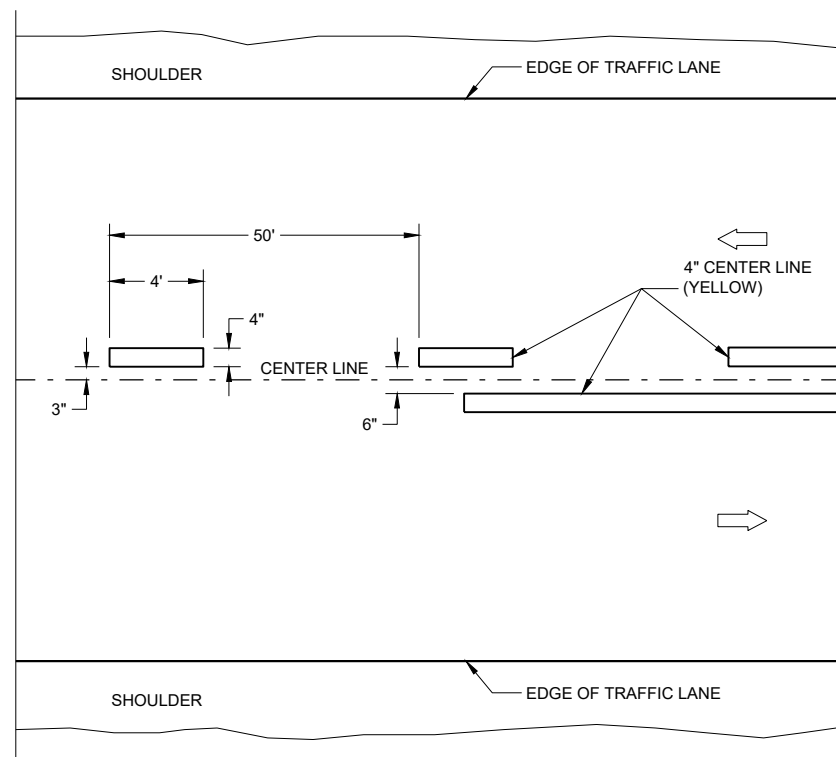


TWO WAY TRAFFIC

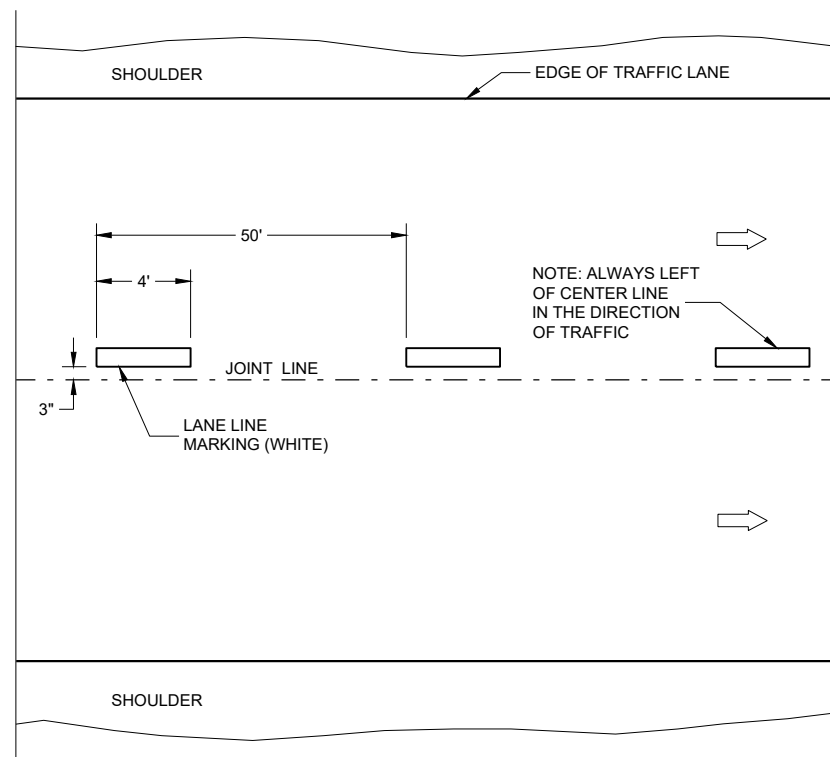


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

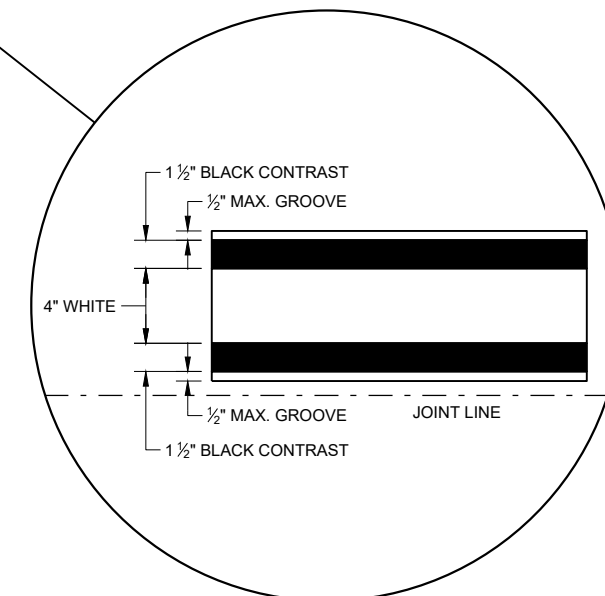
GENERAL NOTES

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

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

LEGEND

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



**LONGITUDINAL MARKING
(MAINLINE)**

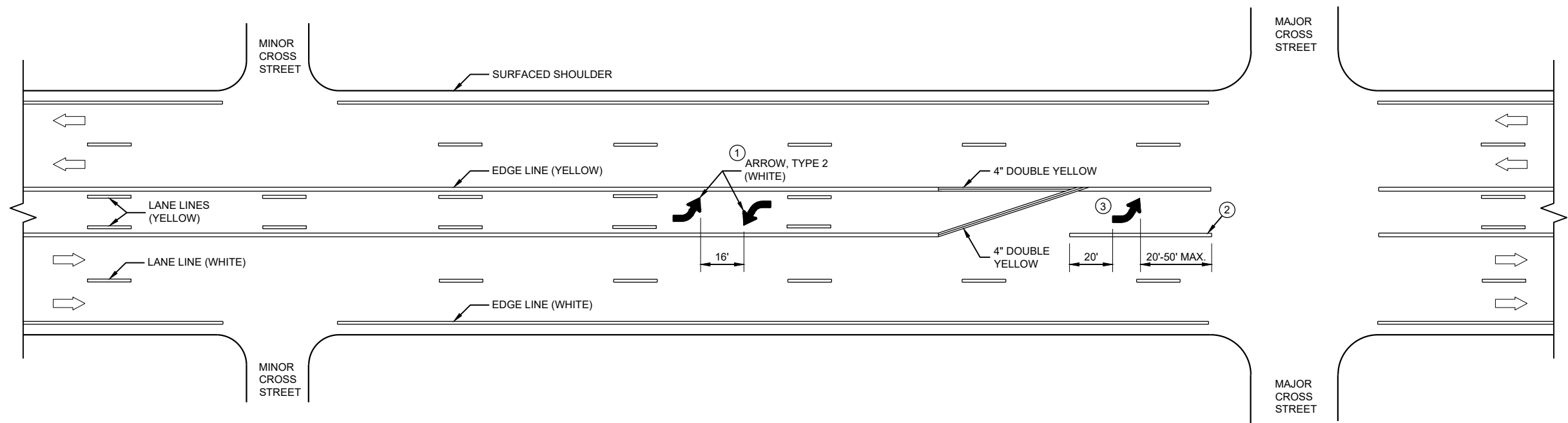
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February 2020 /S/ Matthew Rauch
DATE STATEWIDE SIGNING AND MARKING
ENGINEER

GENERAL NOTES

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

➡ DIRECTION OF TRAFFIC

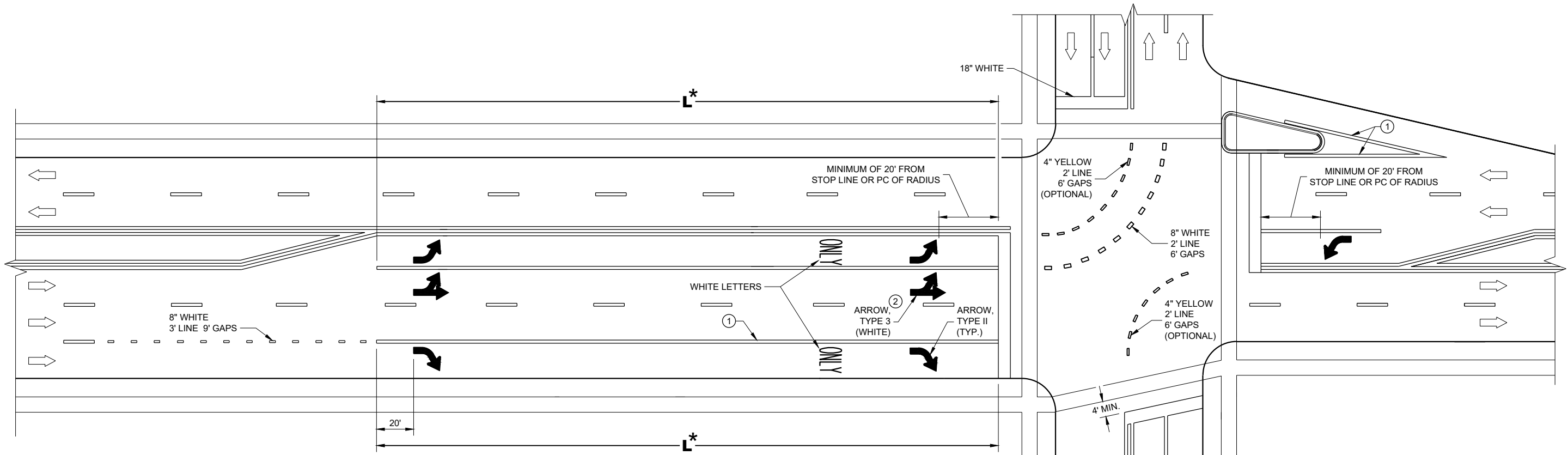


TWO WAY LEFT TURN LANE

6

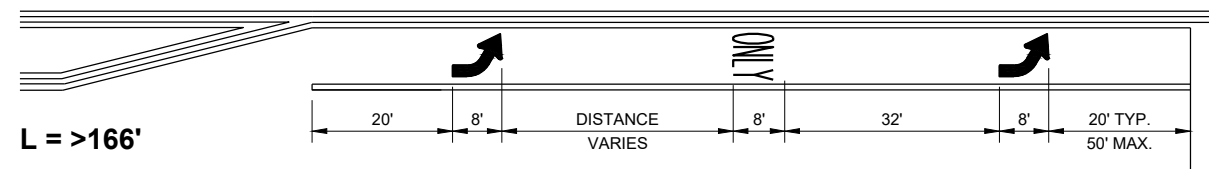
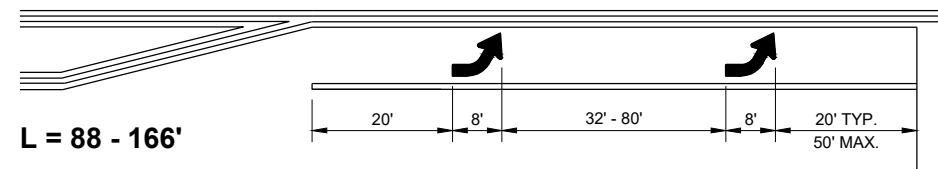
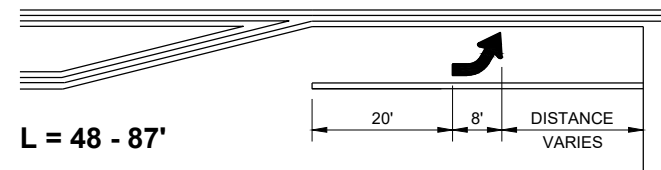
6

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



TURN LANE OPTIONS

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



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

GENERAL NOTES

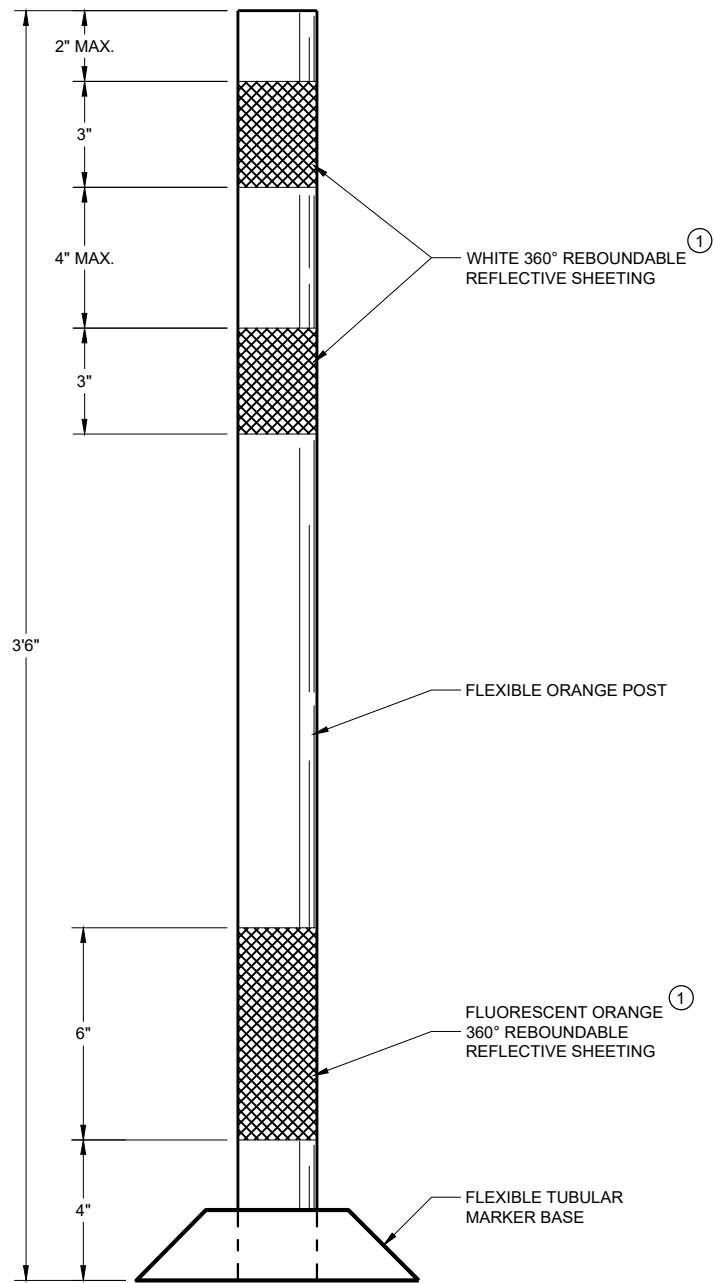
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE TUBULAR
MARKER POST
WORK ZONE

GENERAL NOTES

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

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

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

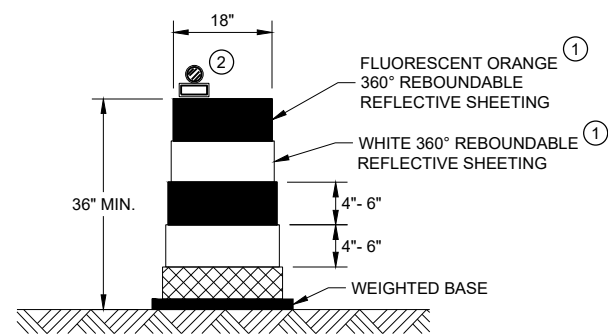
① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

**CHANNELIZING DEVICES
FLEXIBLE TUBULAR
MARKER POST**

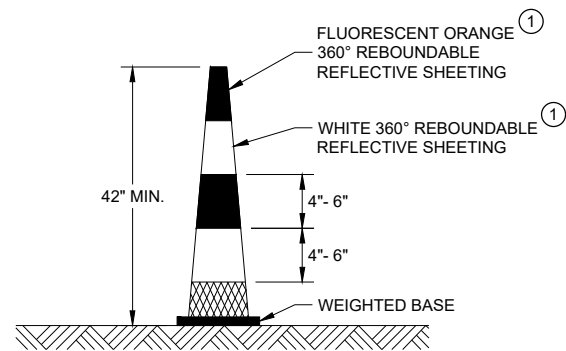
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APPROVED
May 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

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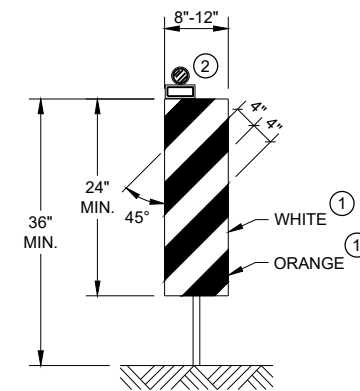


DRUM



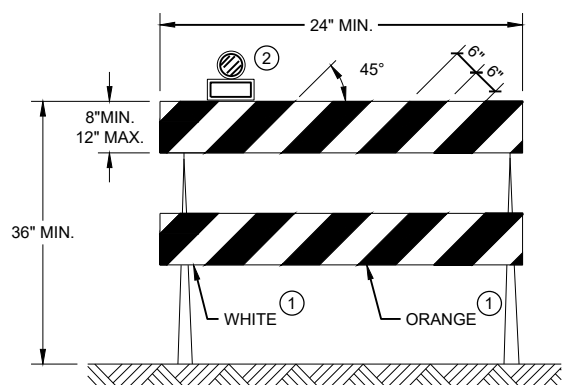
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



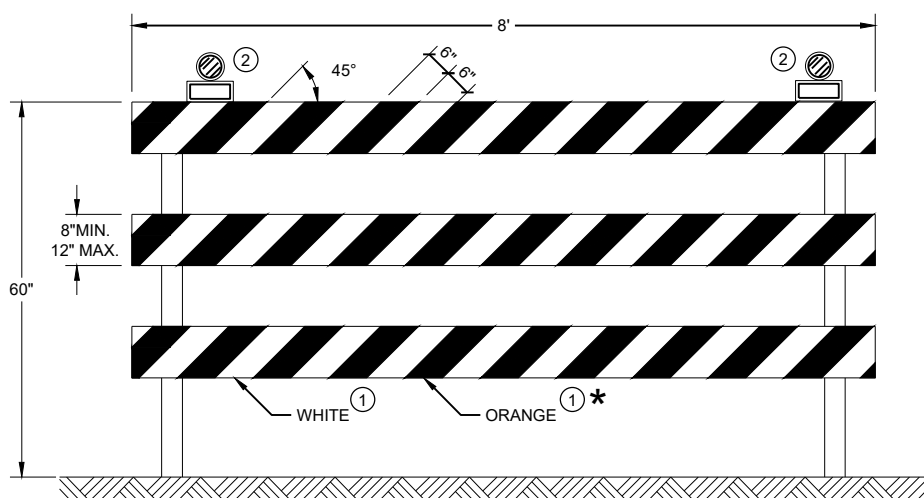
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES






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

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

STATE OF WISCONSIN
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APPROVED
May 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

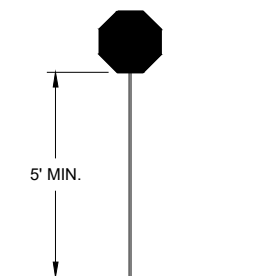
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



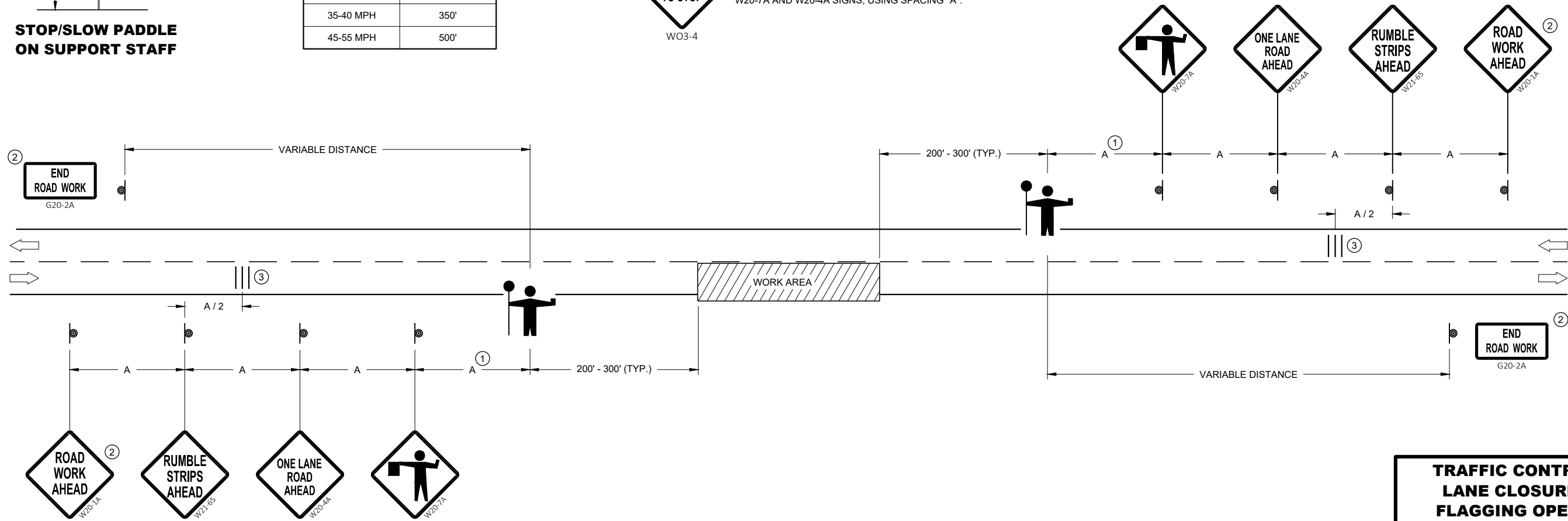
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".







TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

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

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

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

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

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

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

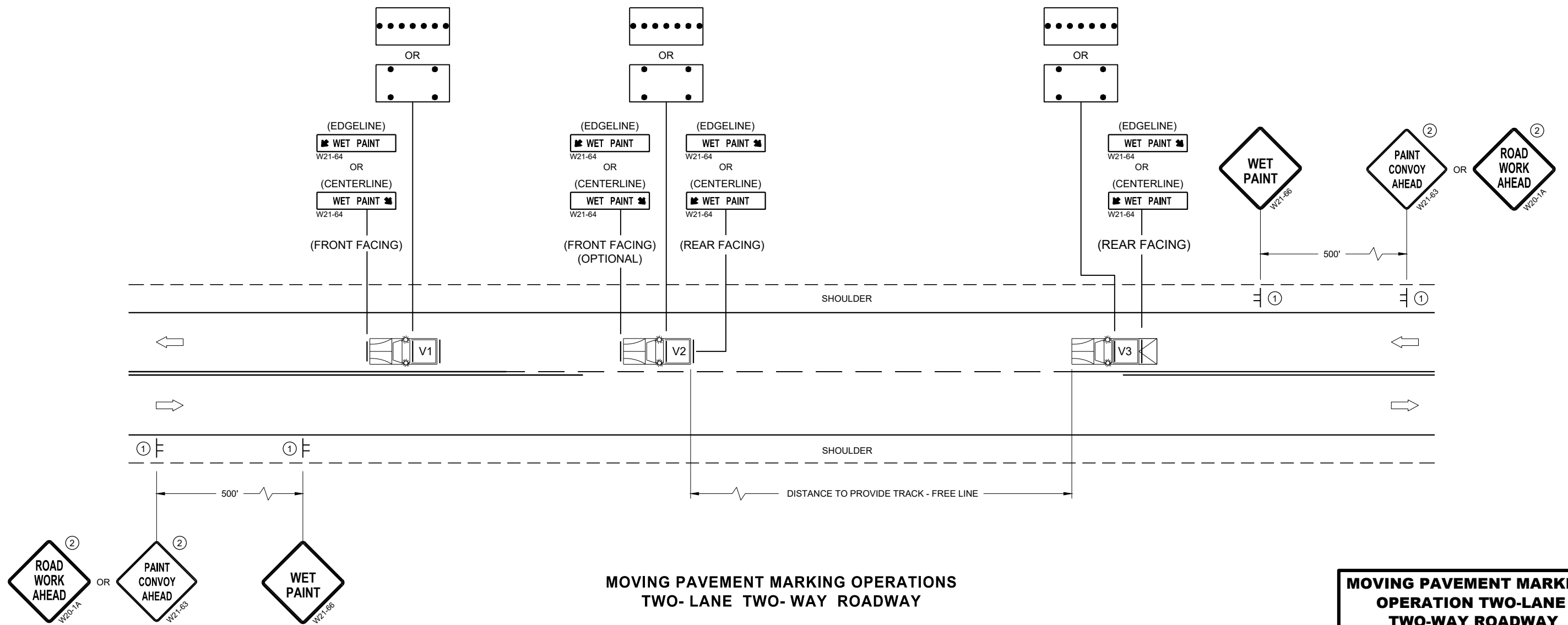
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

6

6








**MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY**

SDD 15C19 - 06a

SDD 15C19 - 06a

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (MERGE)
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

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

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

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

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

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

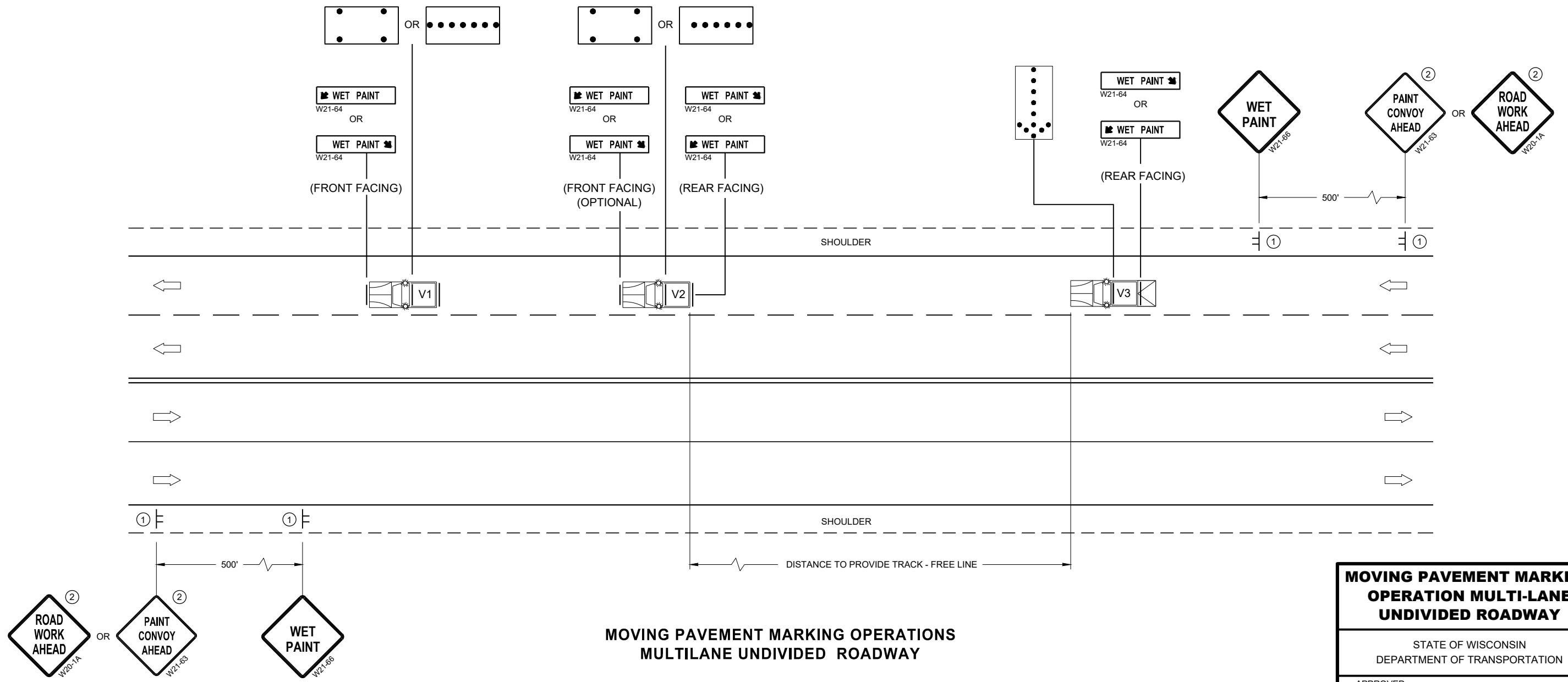
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLES AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL HAVE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

6

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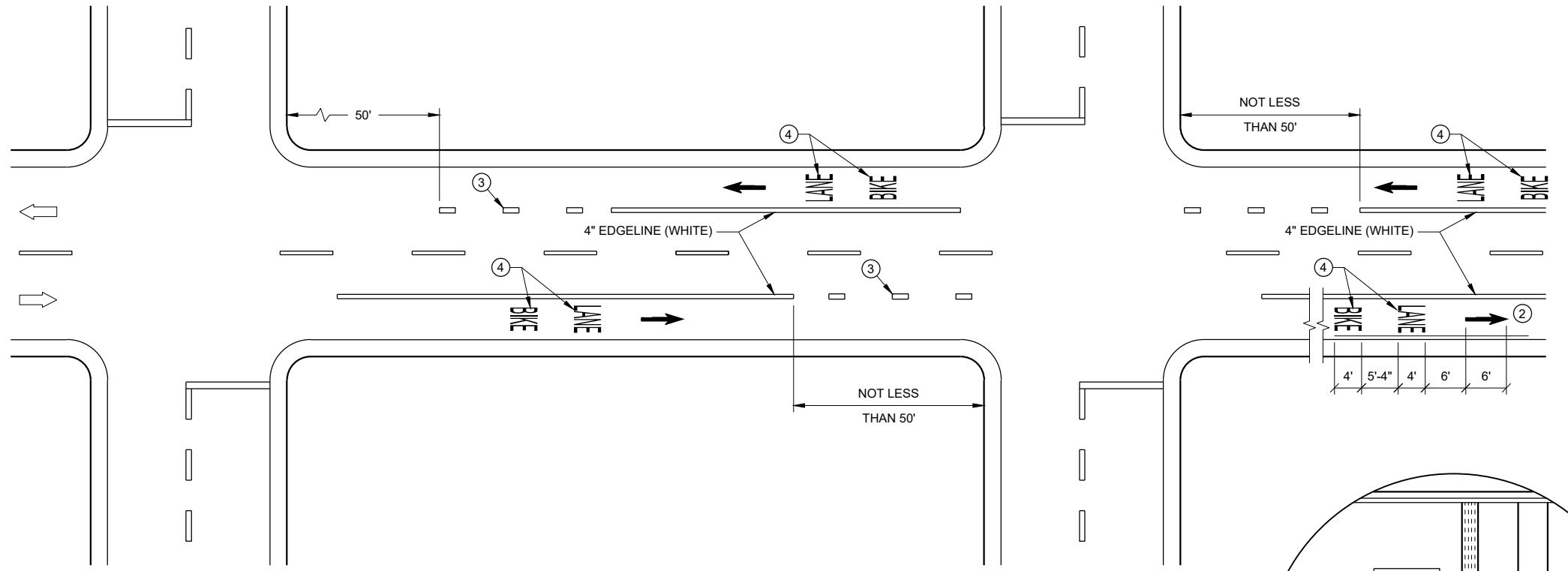


SDD 15C19 - 06b

SDD 15C19 - 06b

**MOVING PAVEMENT MARKING OPERATIONS
MULTILANE UNDIVIDED ROADWAY**

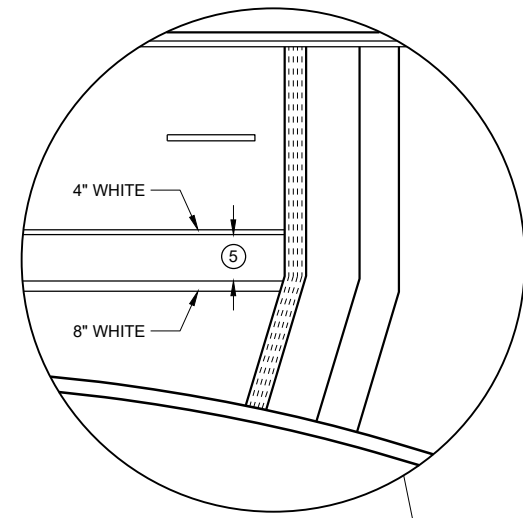
MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



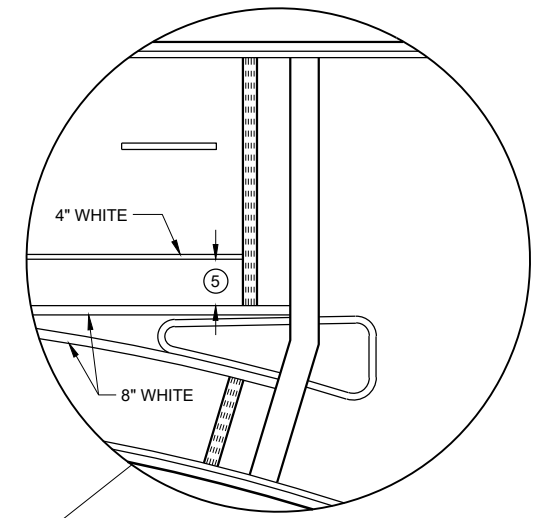
DESIGNATED BIKE LANE - NO PARKING

- GENERAL NOTES**
- ① DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
 - ② MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
 - ③ DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
 - ④ BIKE SYMBOLS OR WORDS MAY BE USED.
 - ⑤ BIKE ACCOMMODATION IS TYPICAL 5 FEET WIDE AND MINIMUM OF 4 FEET FROM A LONGITUDINAL JOINT. USE 5 FEET AT ≥ 45 MPH.
 - ⑥ OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FOOT WIDE TURN LANE).
 - ⑦ REFER TO CONTRACT PLANS FOR LANE WIDTH.

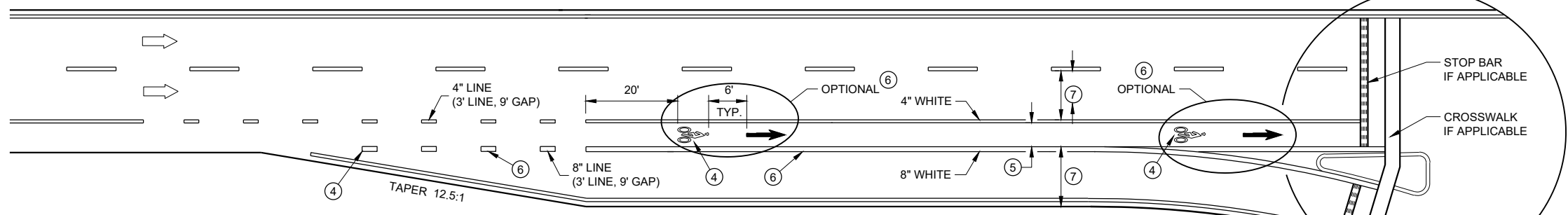
➔ DIRECTION OF TRAVEL



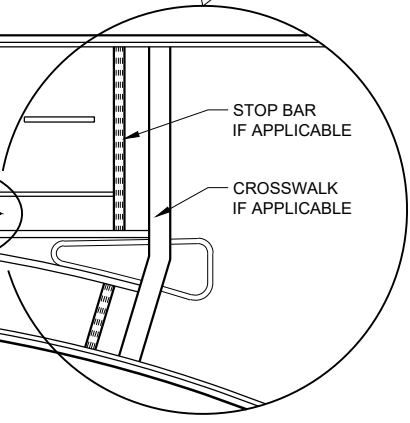
4 LANE DIVIDED WITHOUT ISLAND



4 LANE DIVIDED WITH ISLAND



BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS (4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)

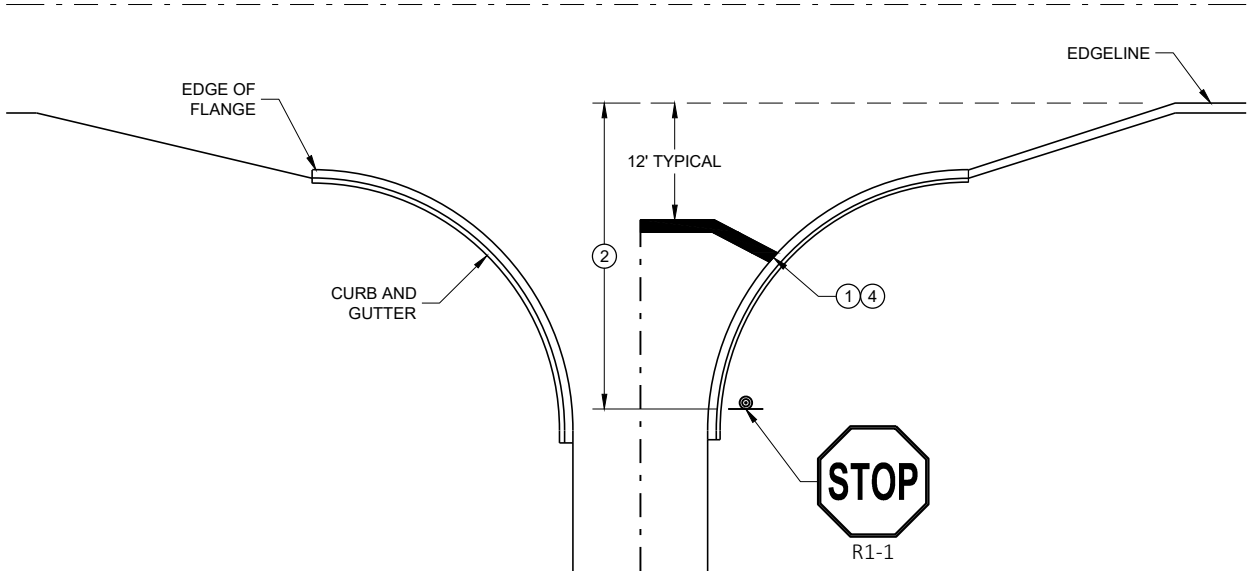


BIKE LANE MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2020 DATE	/S/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	

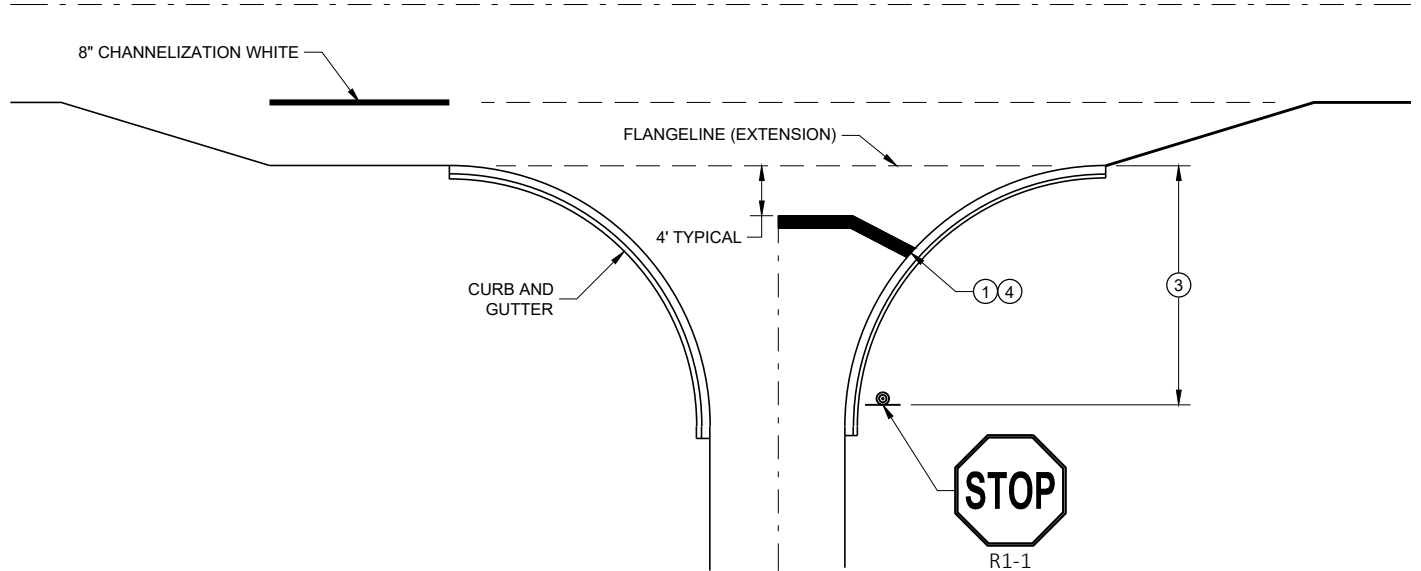
GENERAL NOTES

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

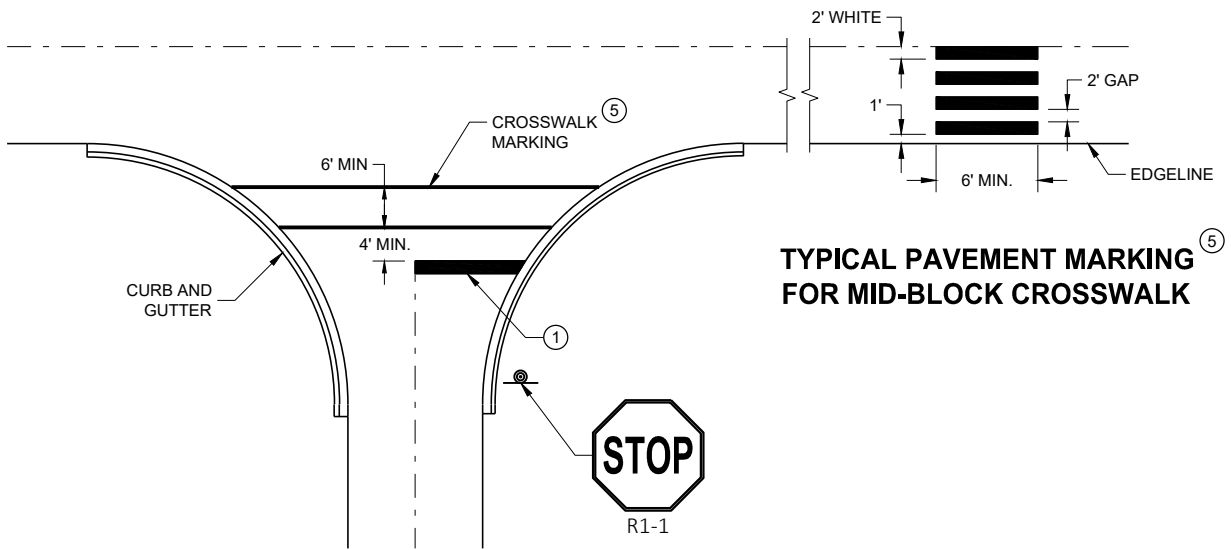
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

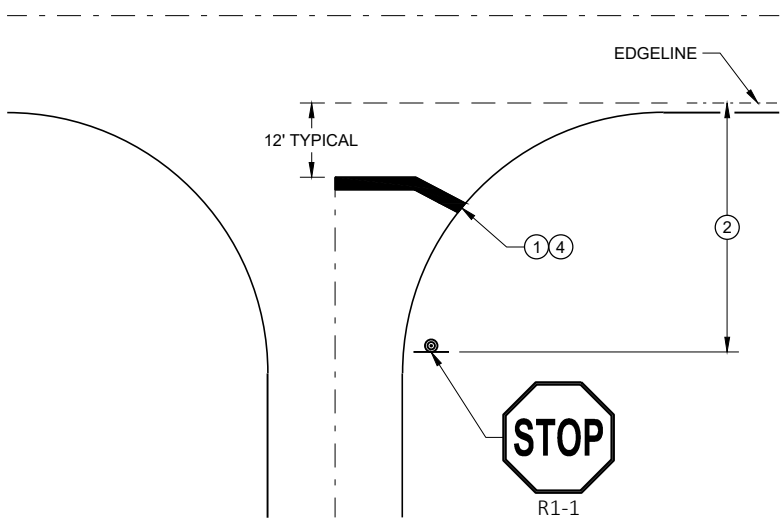


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/s/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	

6

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SDD 15C33 - 04

SDD 15C33 - 04

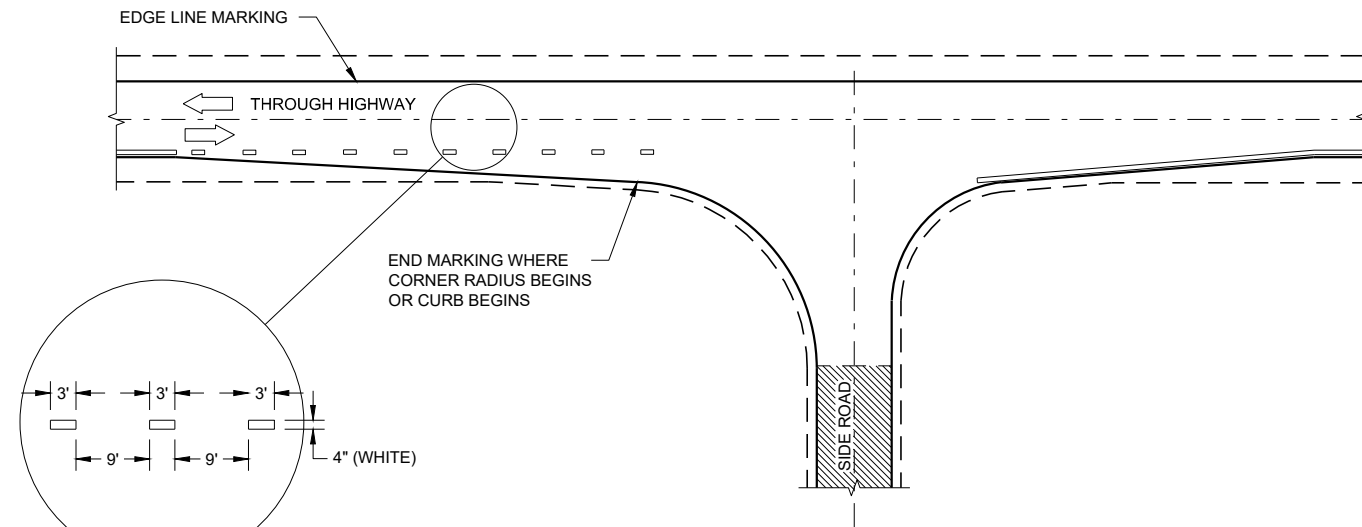
GENERAL NOTES

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

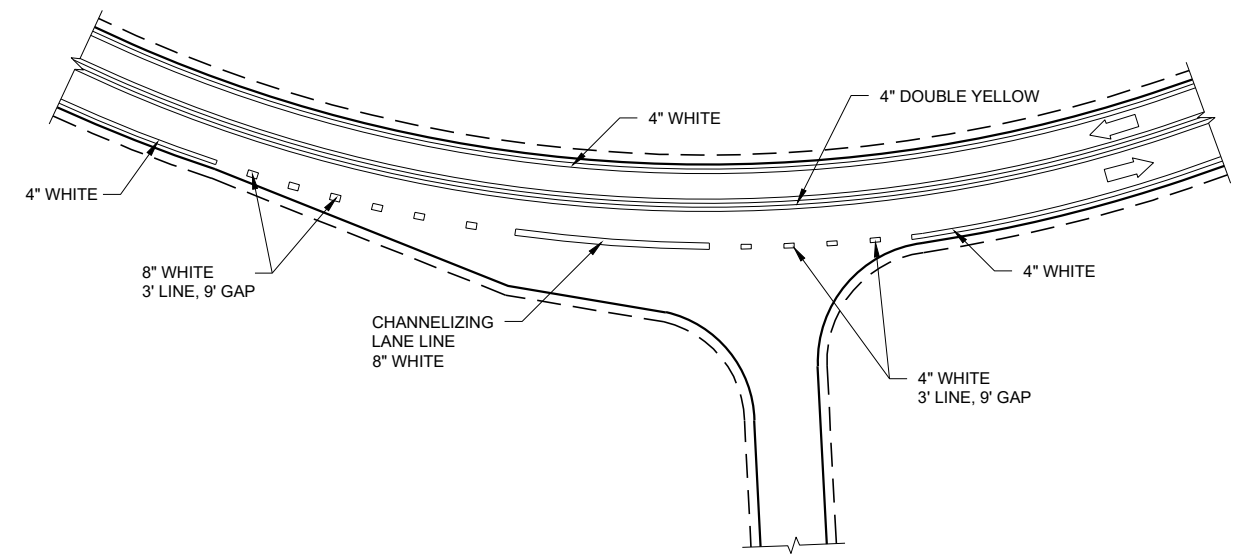
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

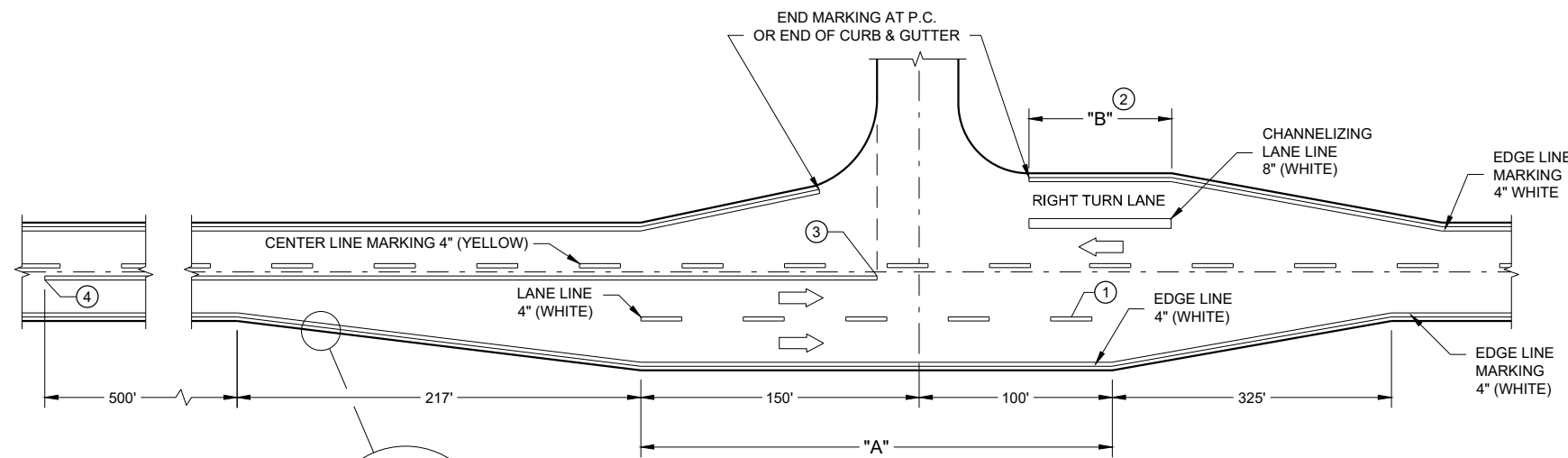
➔ DIRECTION OF TRAVEL



MINOR INTERSECTION



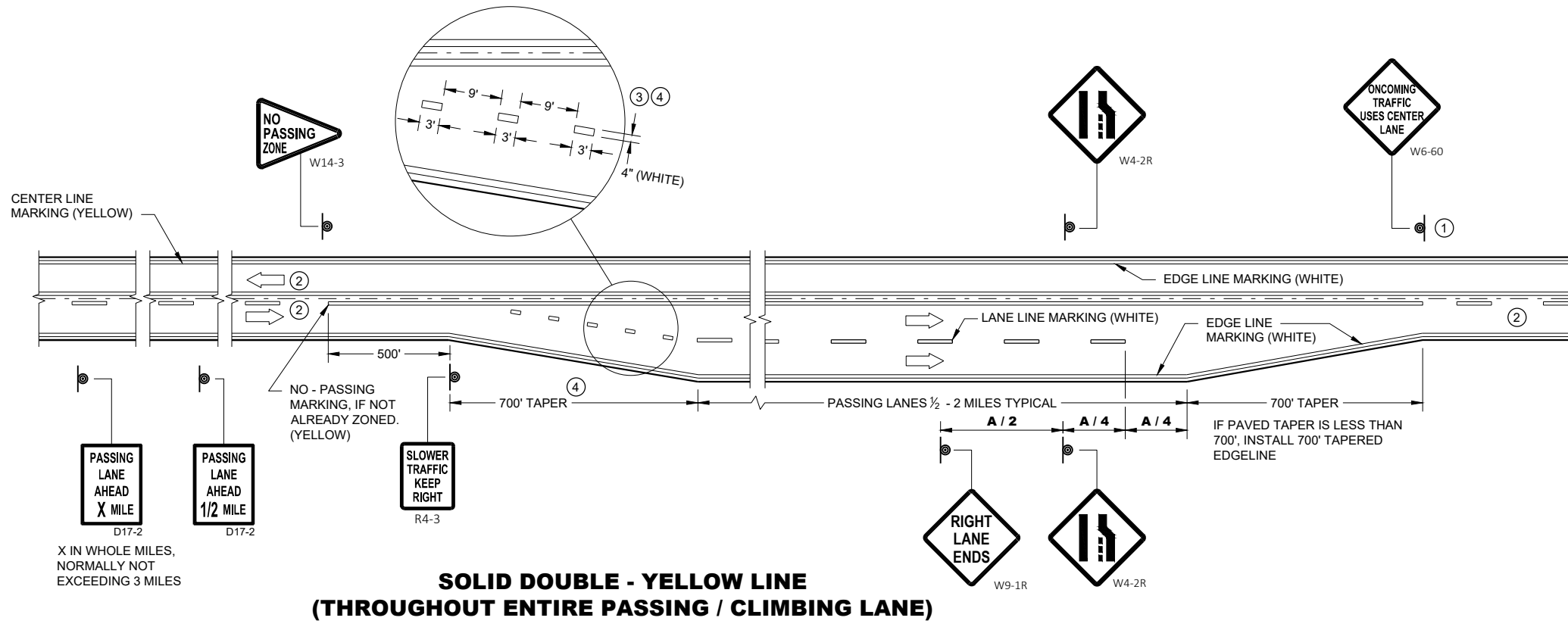
INTERSECTION ON OUTSIDE OF CURVE



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


**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



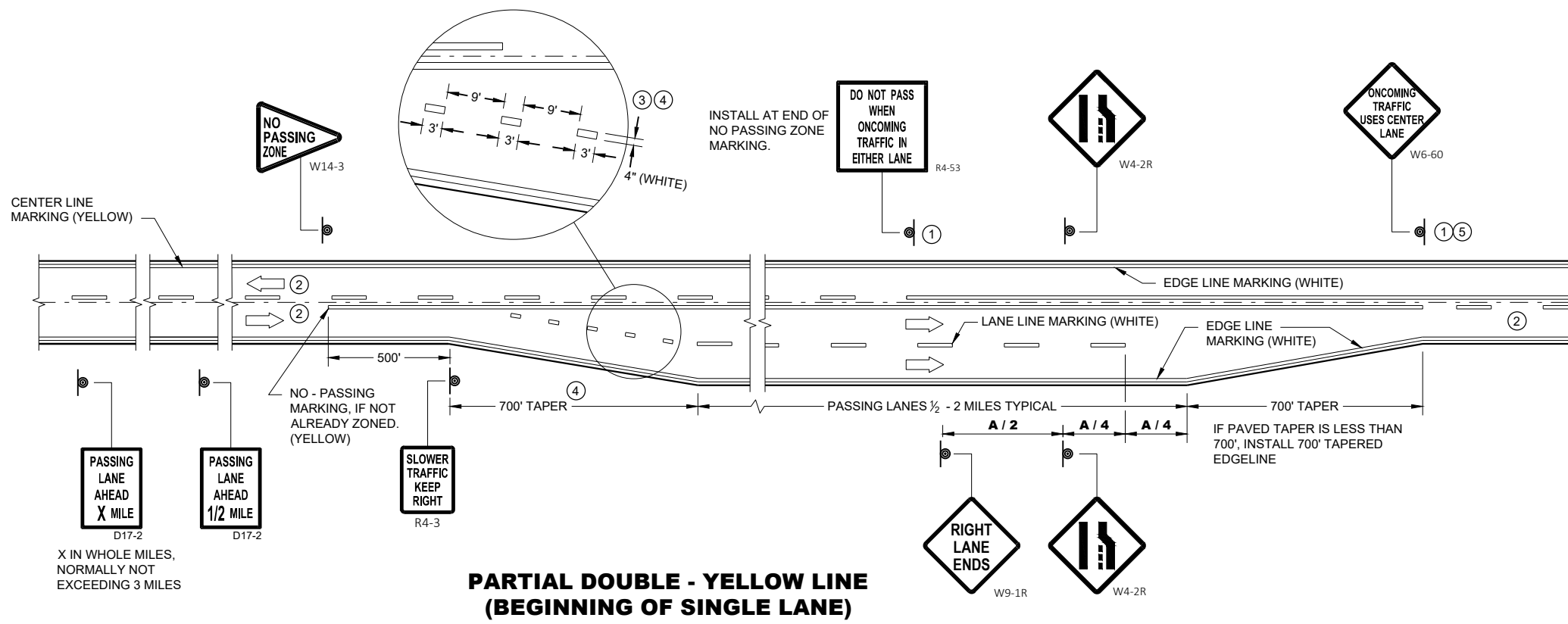
GENERAL NOTES

- SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- 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.
- 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.
- REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

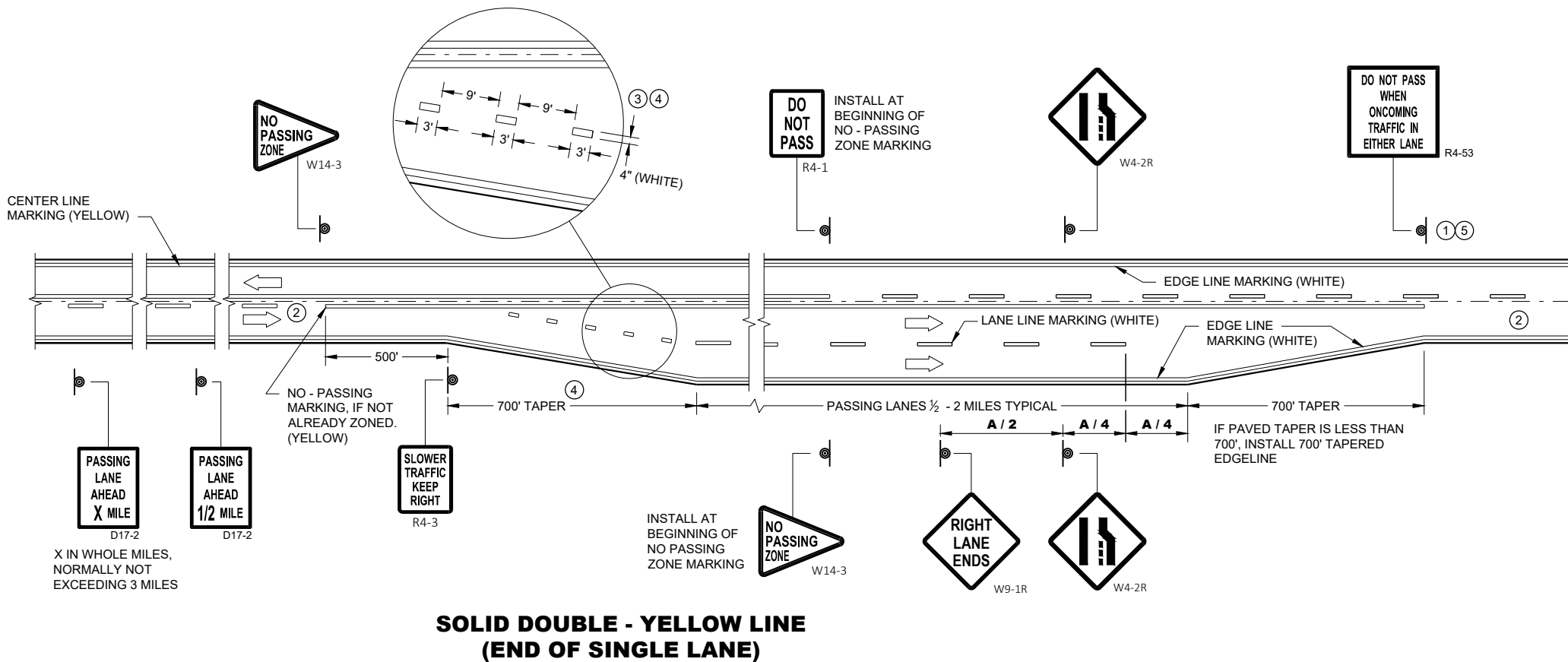
DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

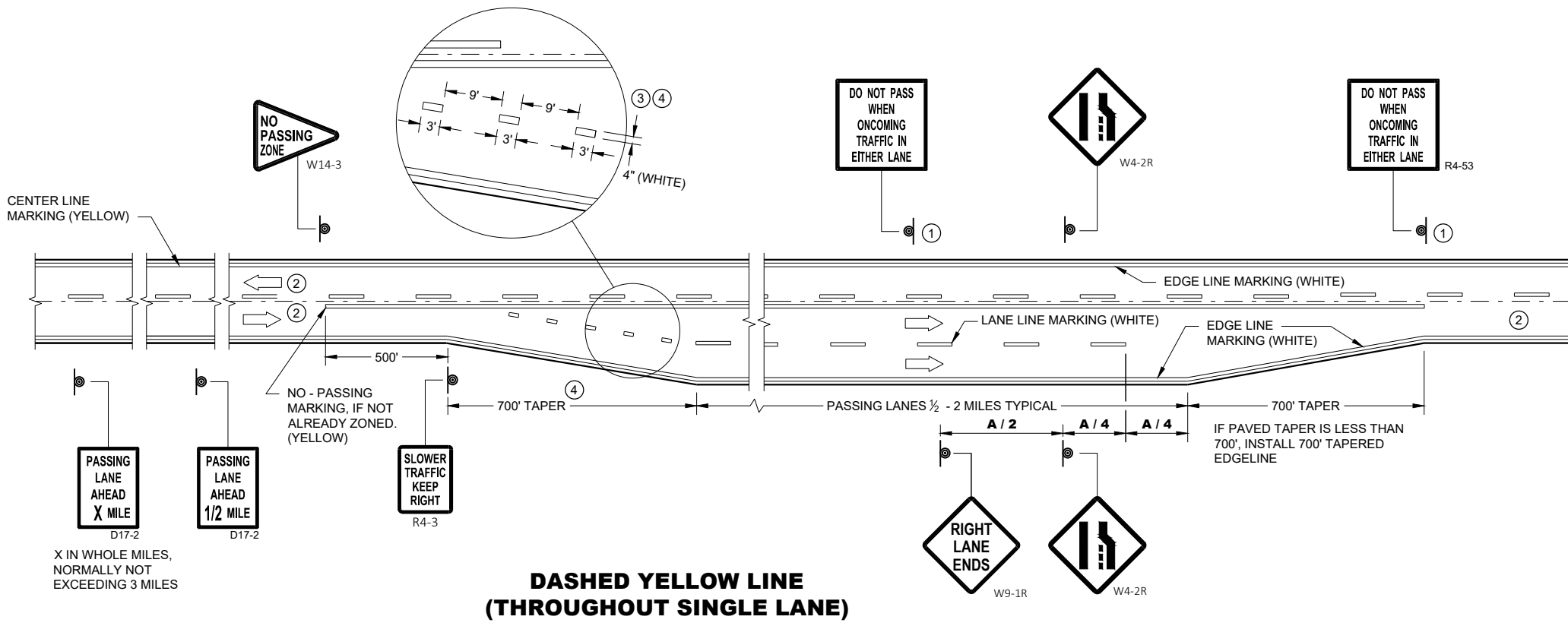


**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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



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

GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- ⑤ REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

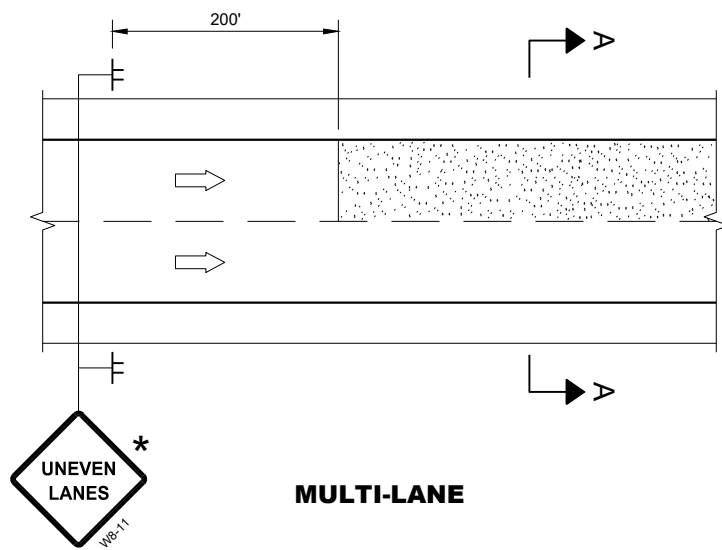
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

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

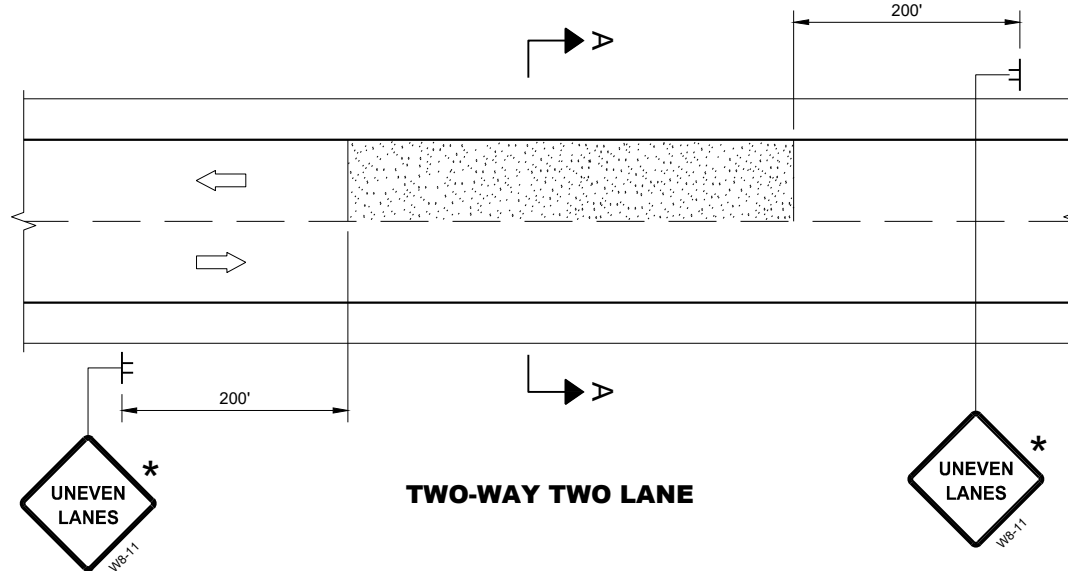
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

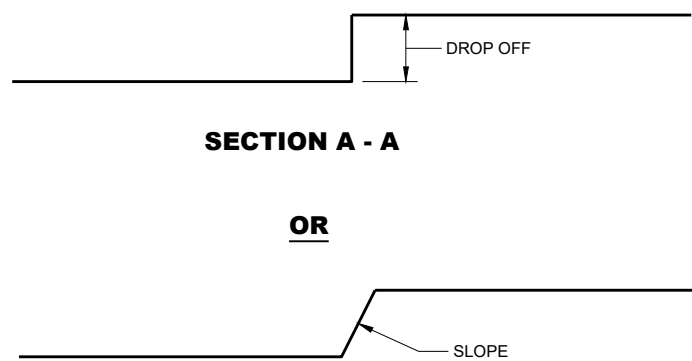
FHWA



MULTI-LANE



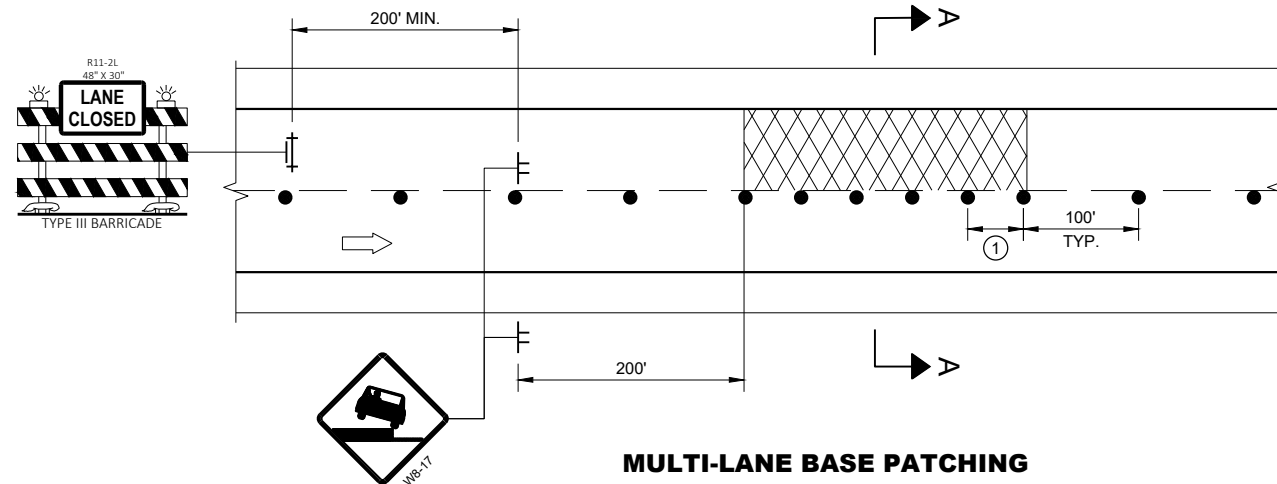
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

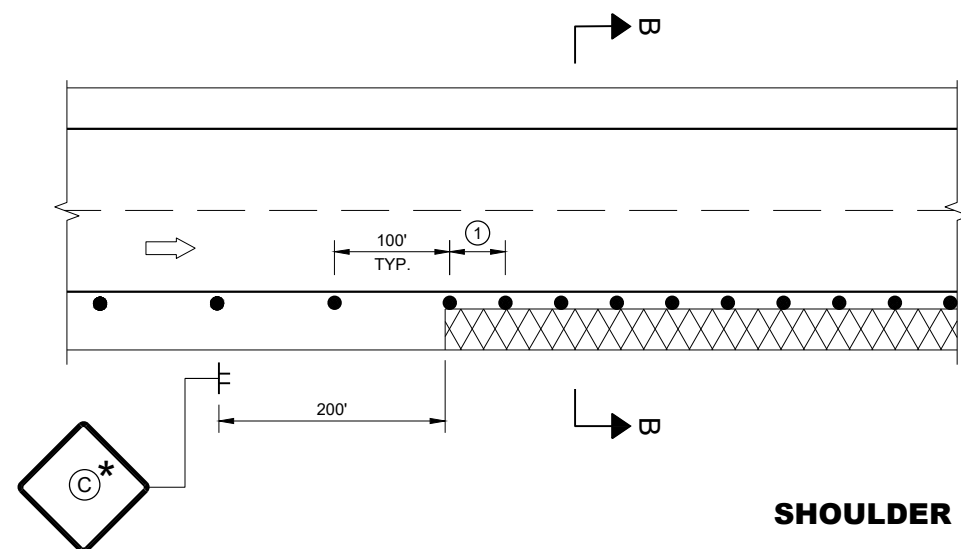
GENERAL NOTES

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

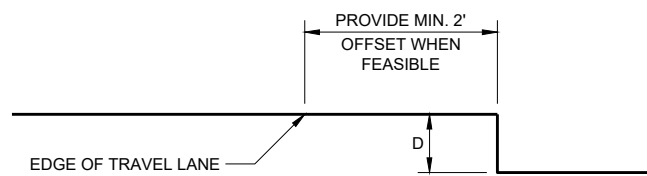
LEGEND

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

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	 W08-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT



SHOULDER DROP-OFFS



SECTION B - B

**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

GENERAL NOTES

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

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

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

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

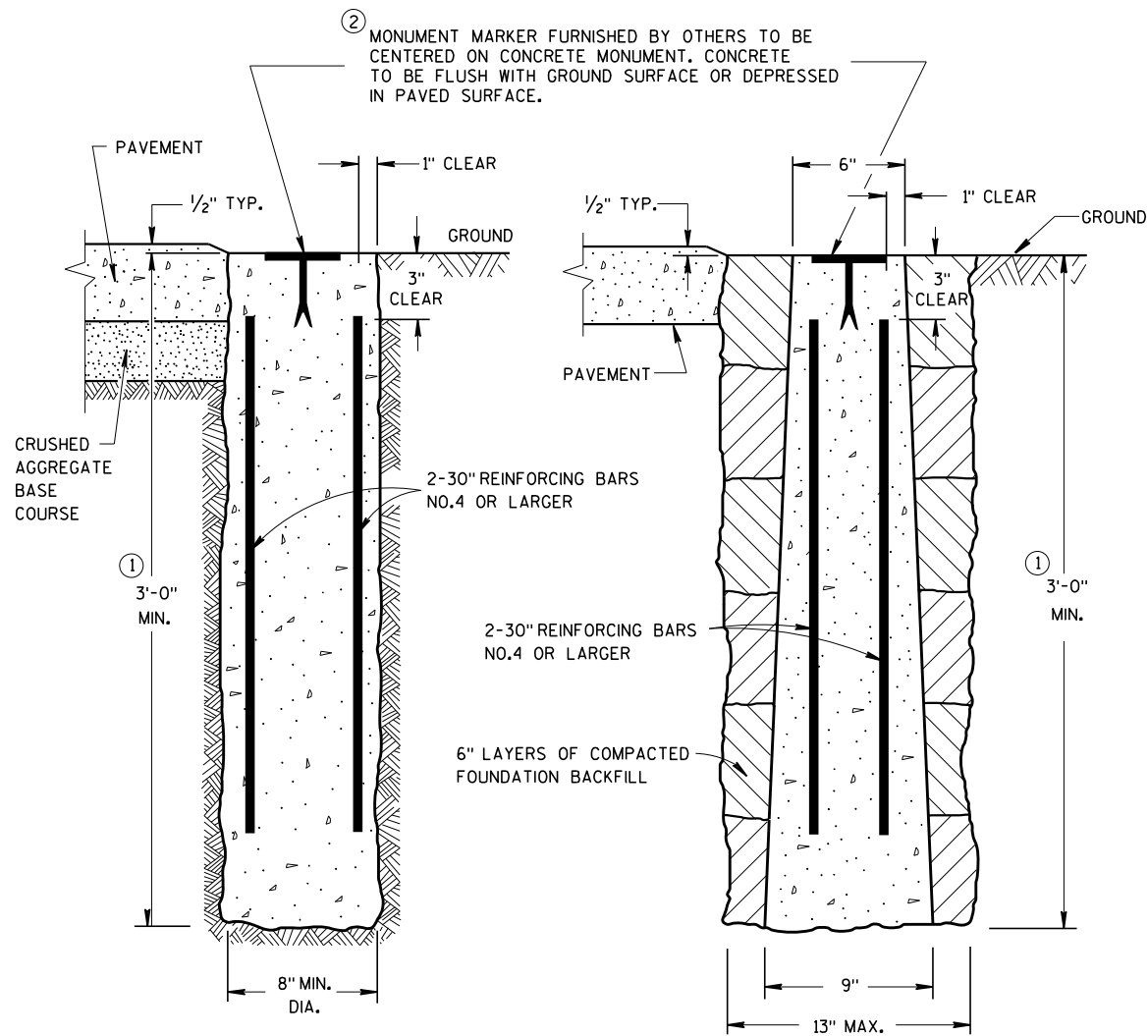
MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

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

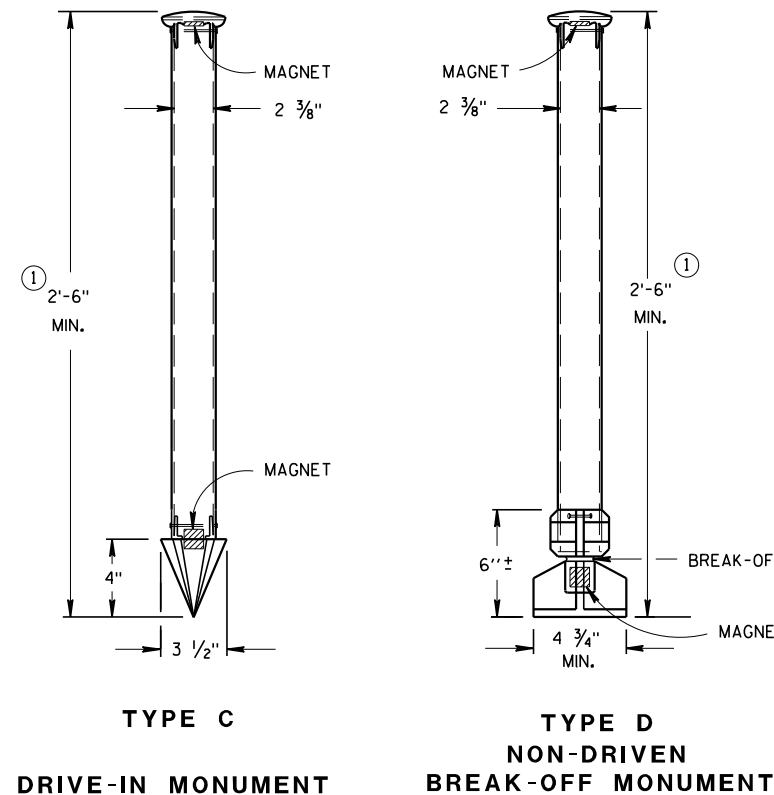
THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

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

- ① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.
- ② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



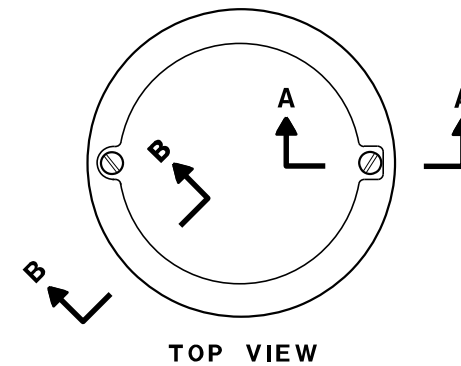
**CAST-IN-PLACE
CONCRETE MONUMENTS
TYPE A**



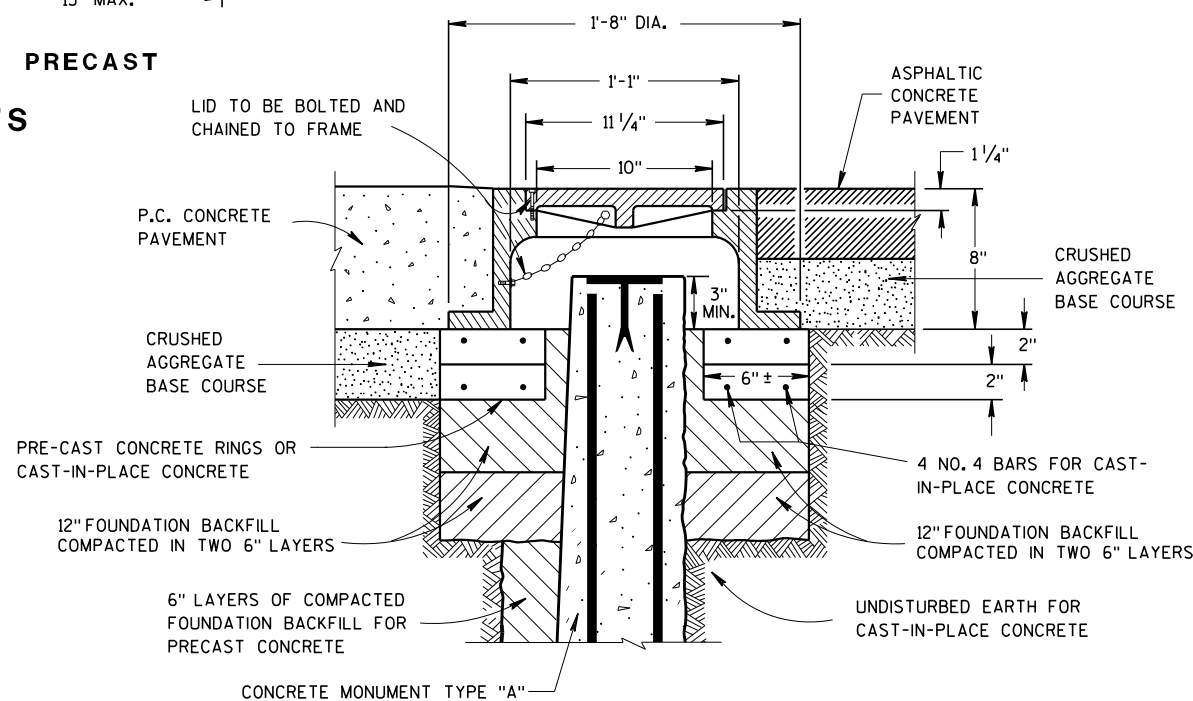
**TYPE C
DRIVE-IN MONUMENT**

**TYPE D
NON-DRIVEN
BREAK-OFF MONUMENT**

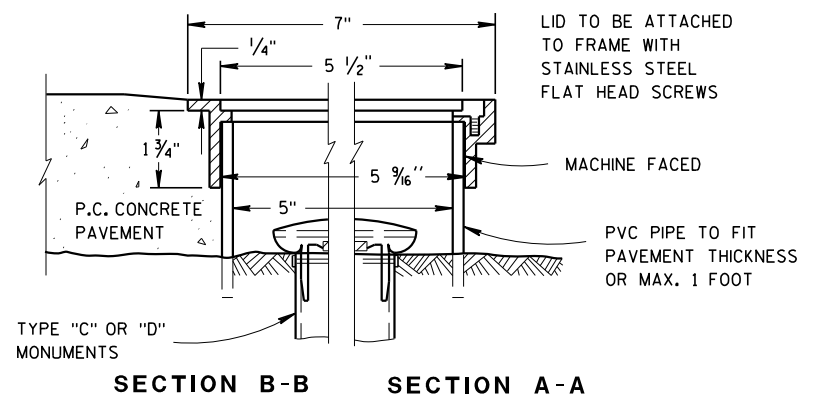
ALUMINUM MONUMENTS
(INCLUDES MARKER)



TOP VIEW

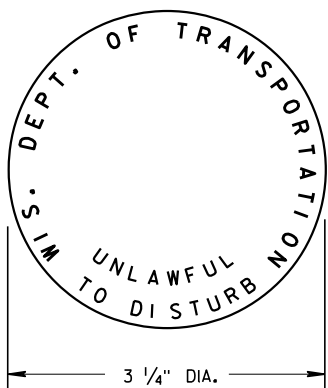


CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT 95 LBS)



ALUMINUM MONUMENT COVER

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

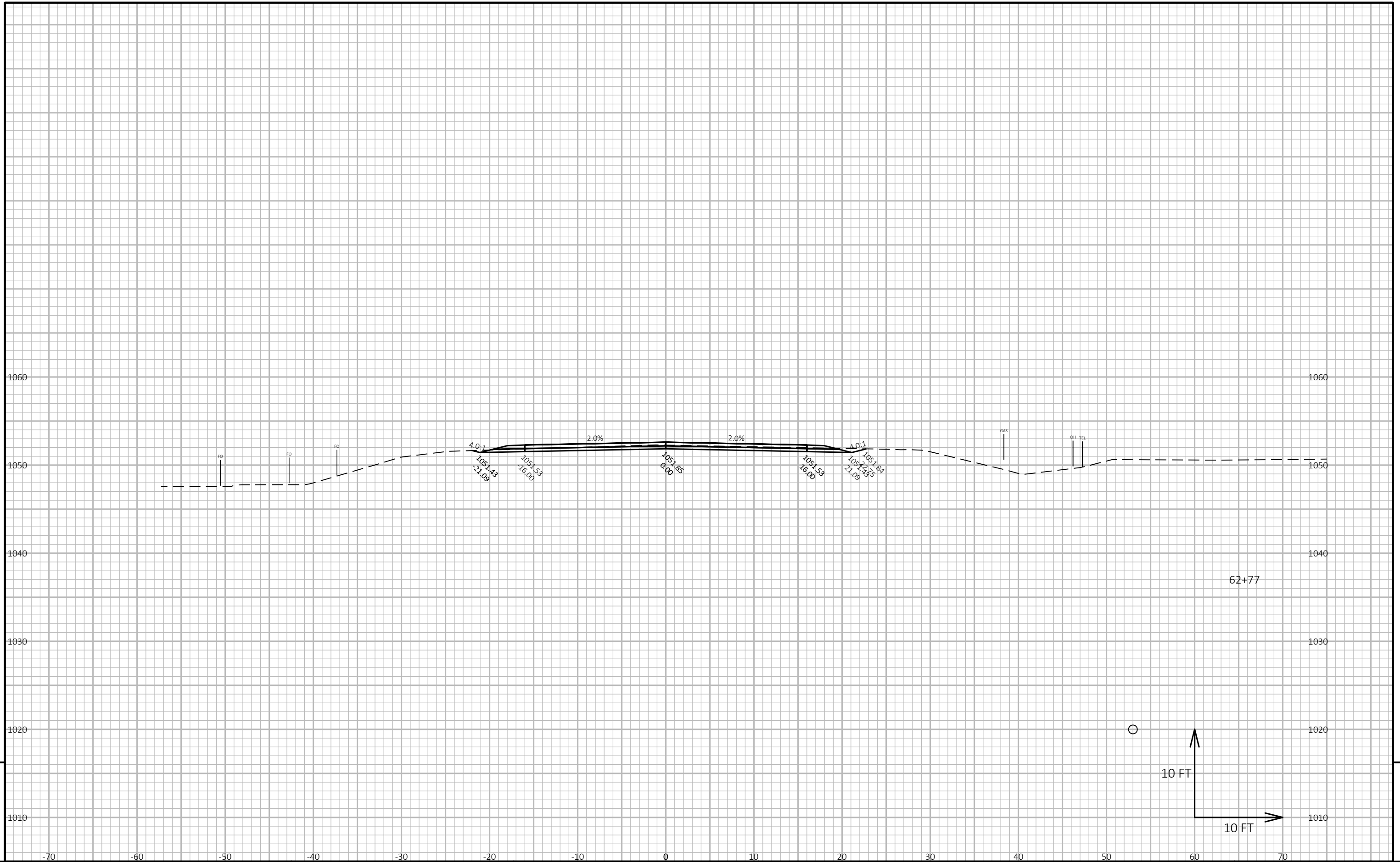


**WIS DOT MONUMENT
MARKER LOGO**
FOR TYPES "A", "C", & "D"

**LANDMARK REFERENCE
MONUMENTS AND COVERS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

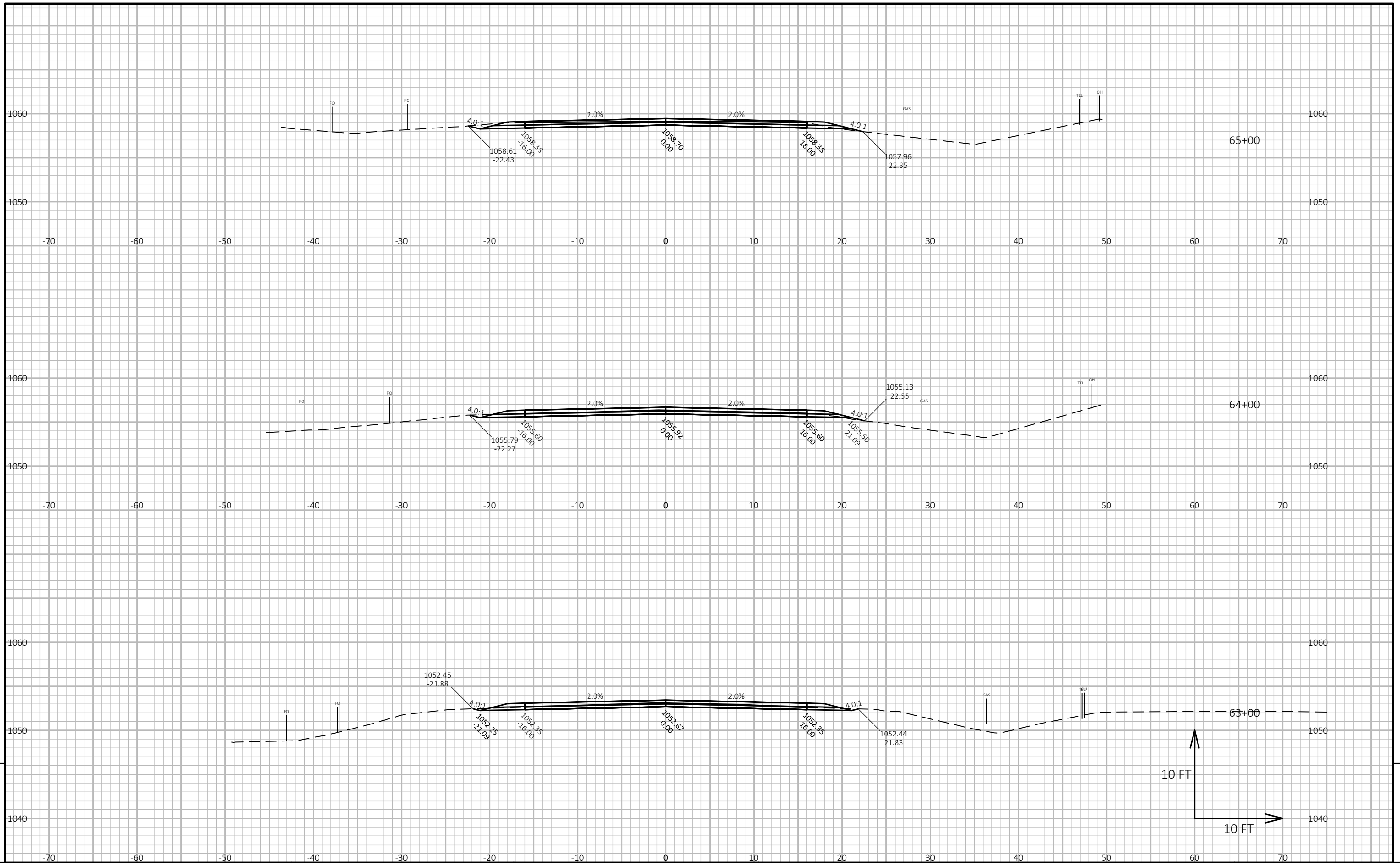
APPROVED
March 2018 /S/ Raymond A. Kumapayi
DATE CHIEF SURVEYING AND MAPPING ENGINEER
FHWA



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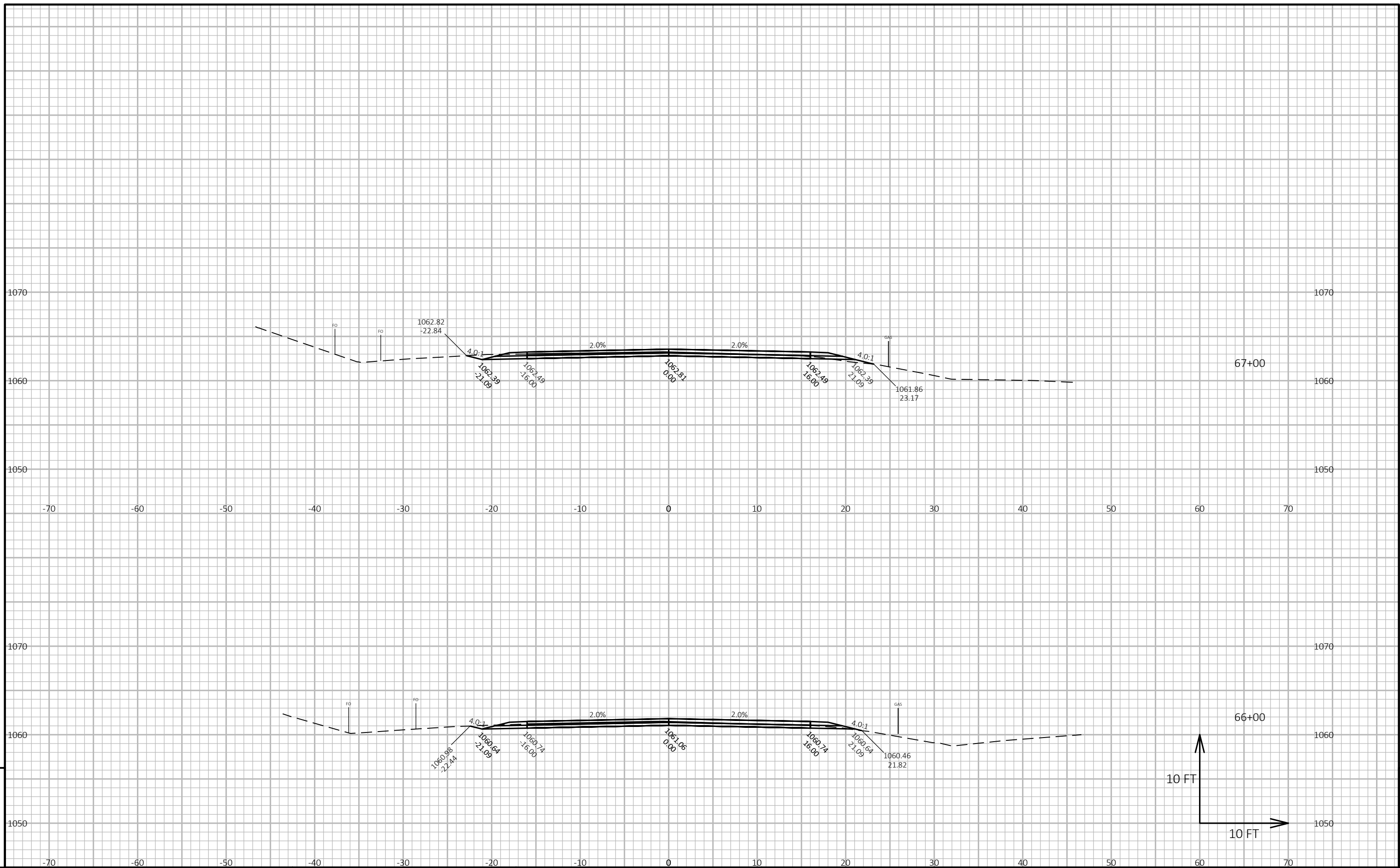
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2022 11:59 AM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - Section Sheet - (3)

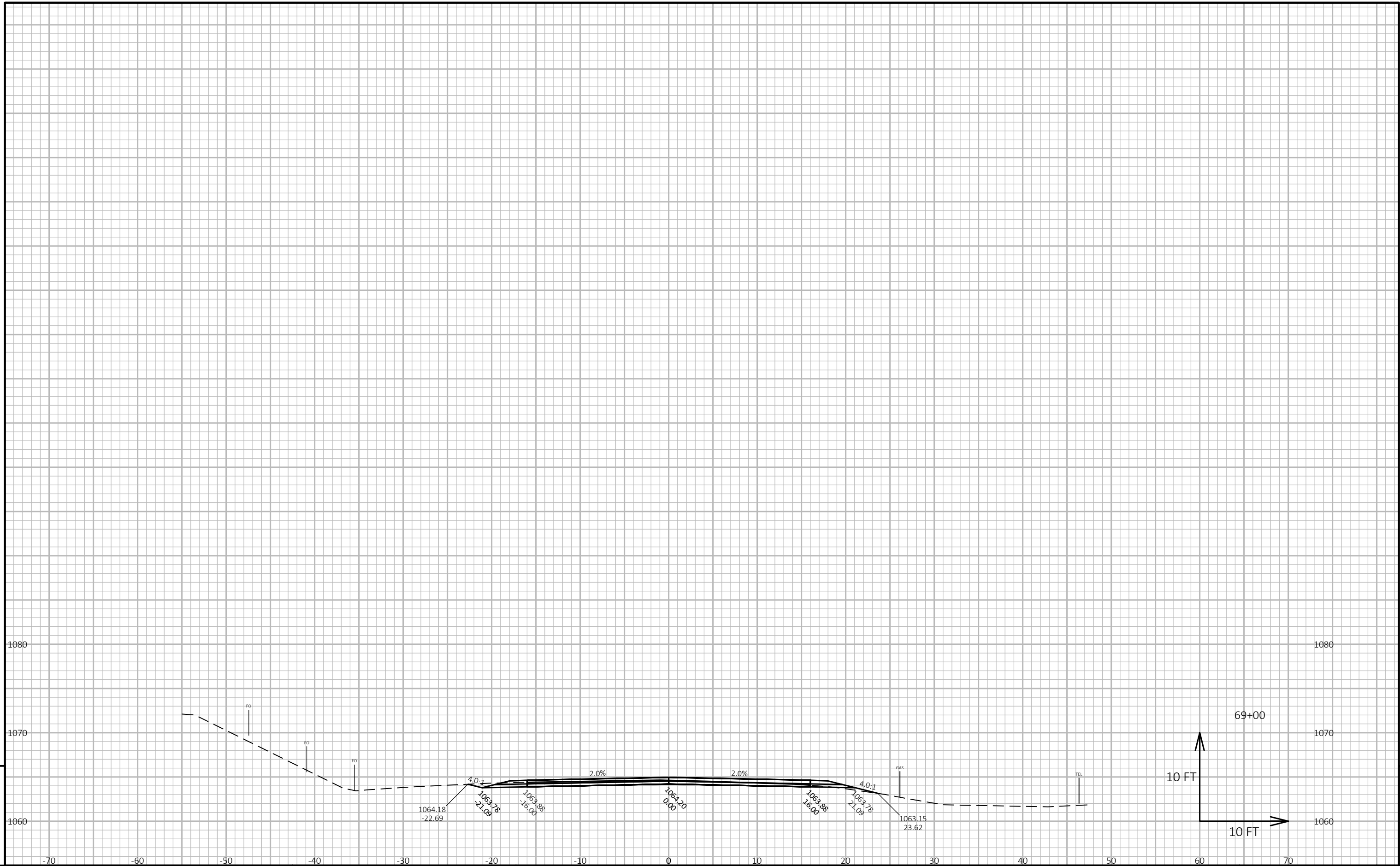


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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

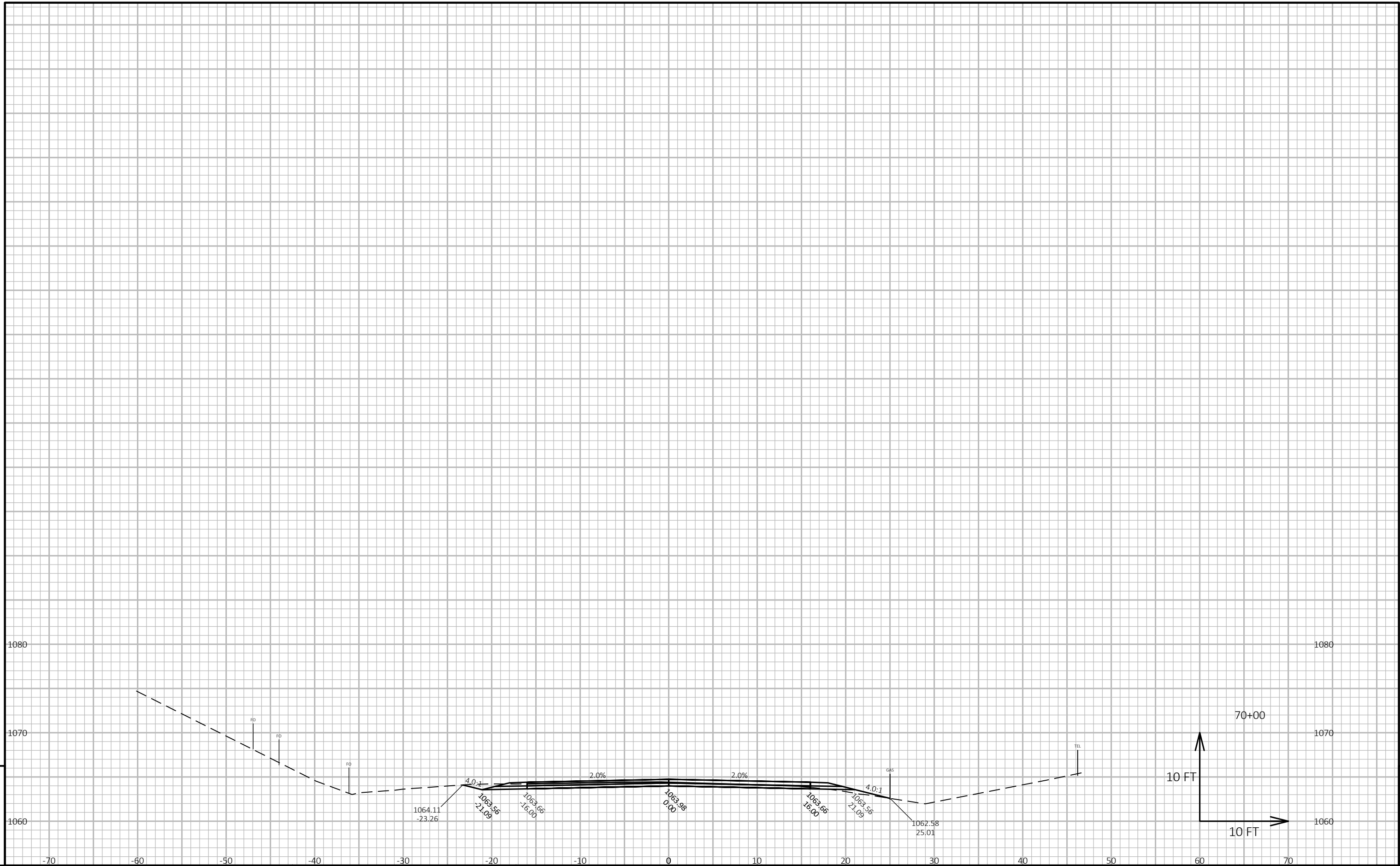
FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2022 12:00 PM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD5 SHEET 49



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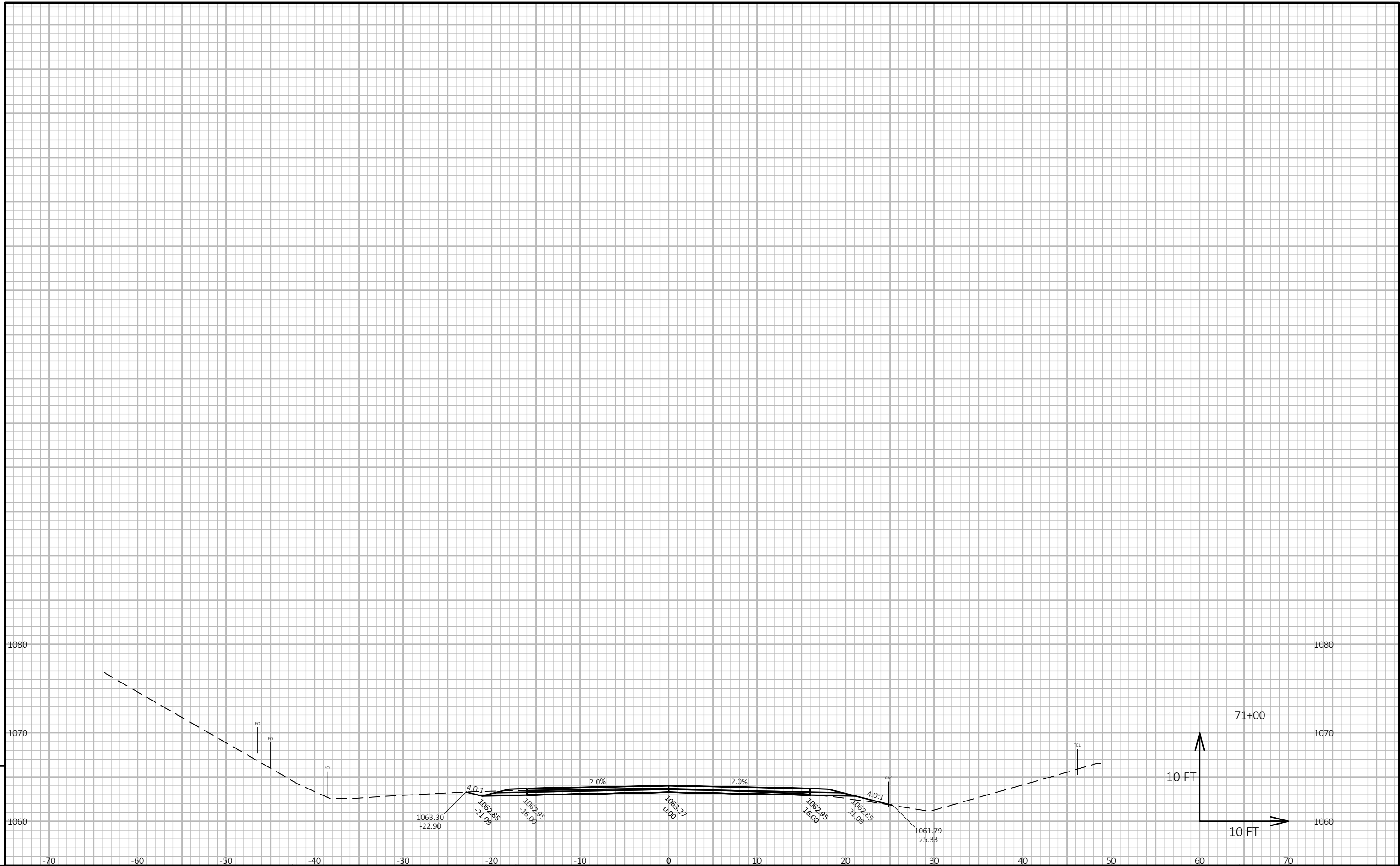
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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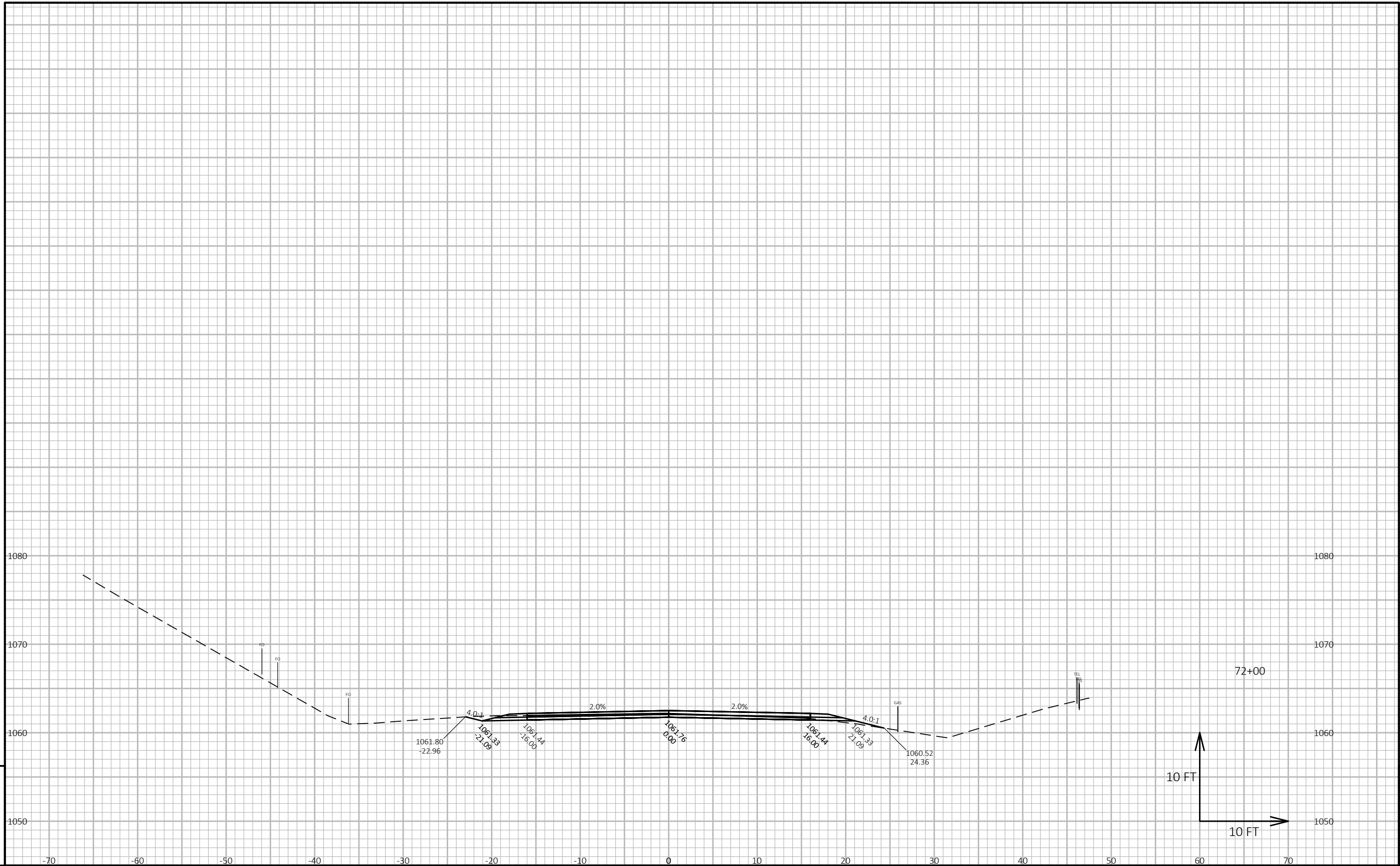


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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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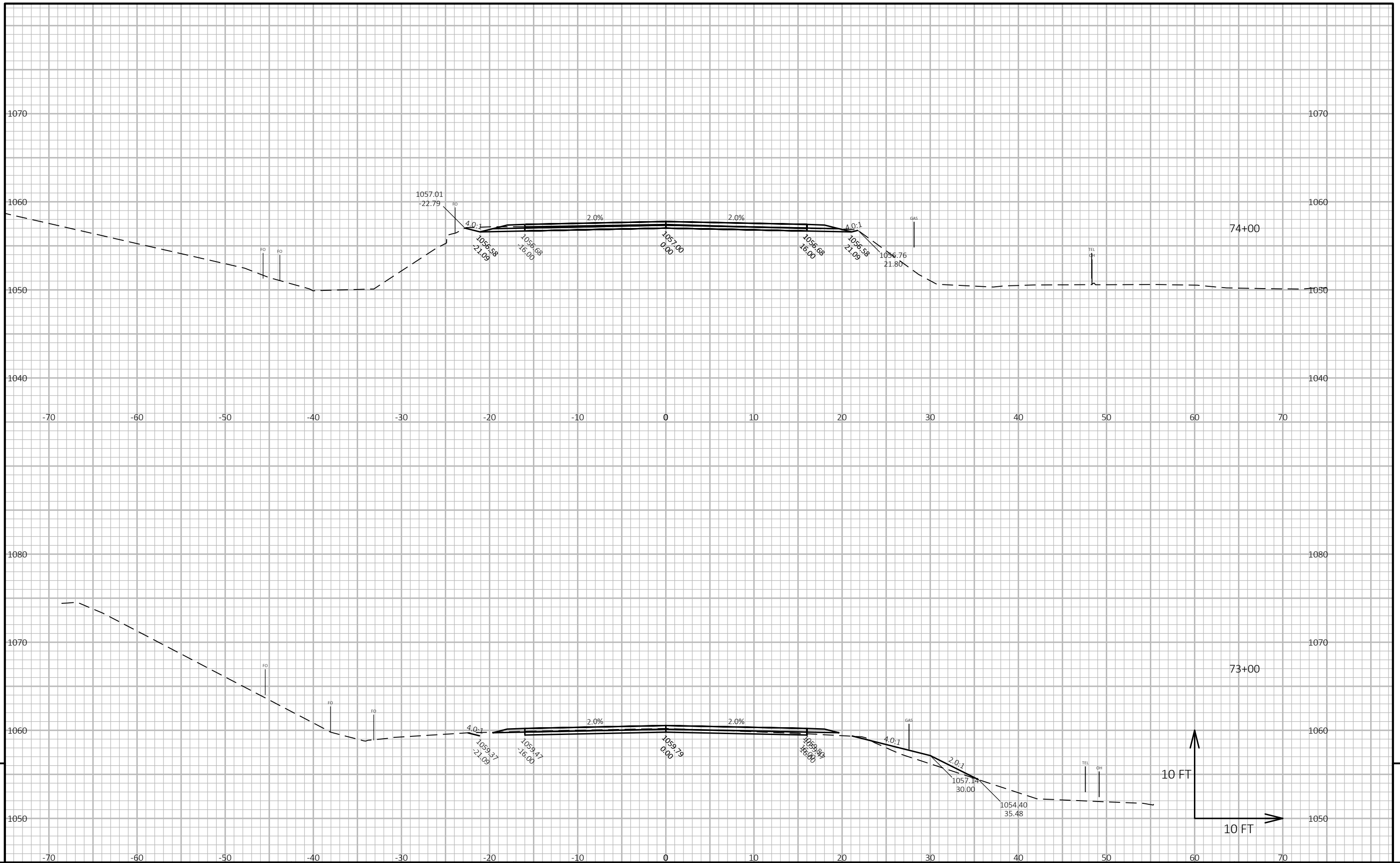
FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS.DWG
 LAYOUT NAME - Section Sheet - (7)
 PLOT DATE : 1/24/2022 12:02 PM
 PLOT BY : RACH, JEREMY
 PLOT NAME :
 PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
 WISDOT/CADD5 SHEET 49



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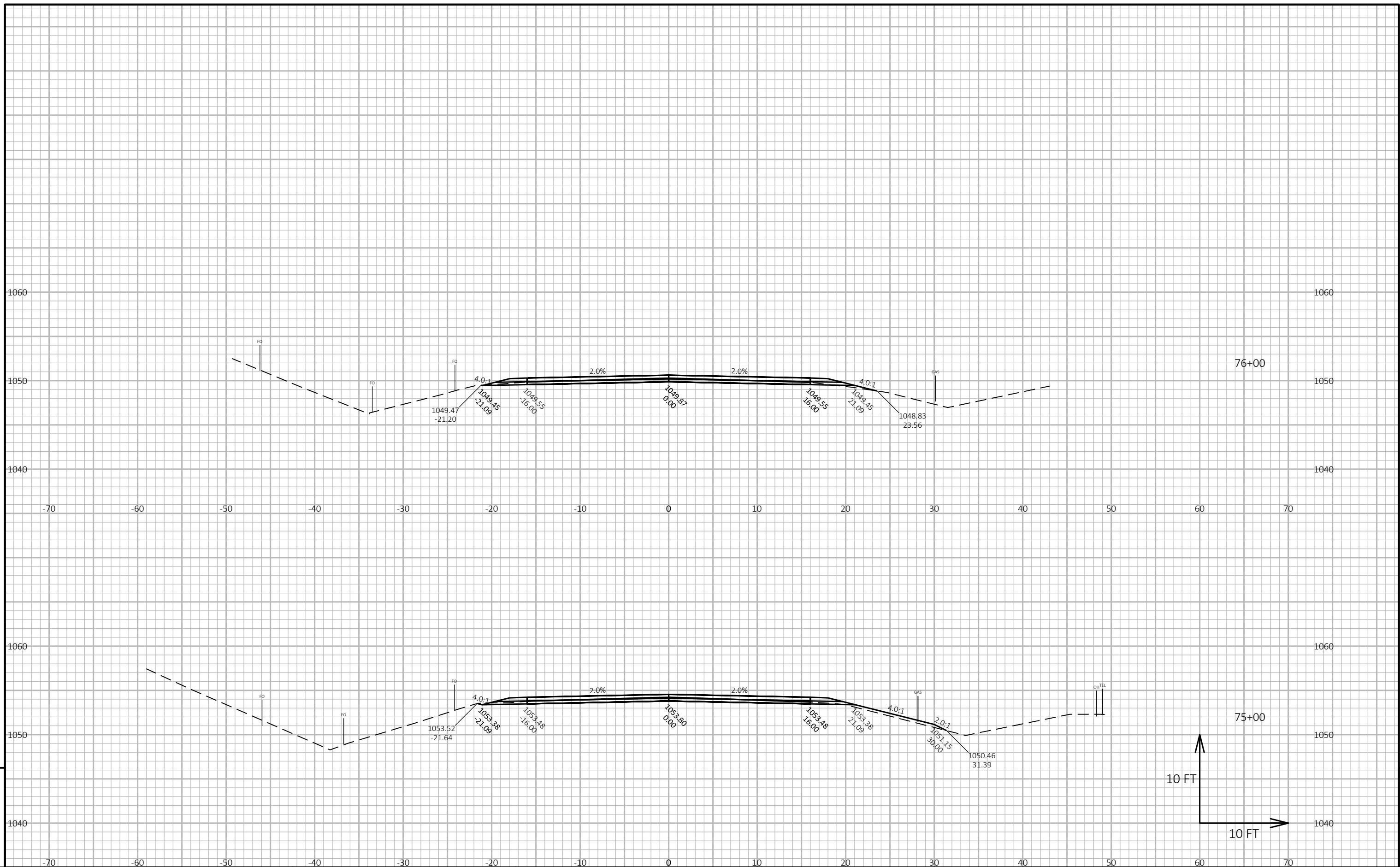
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



PROJECT NO: 6218-00-73

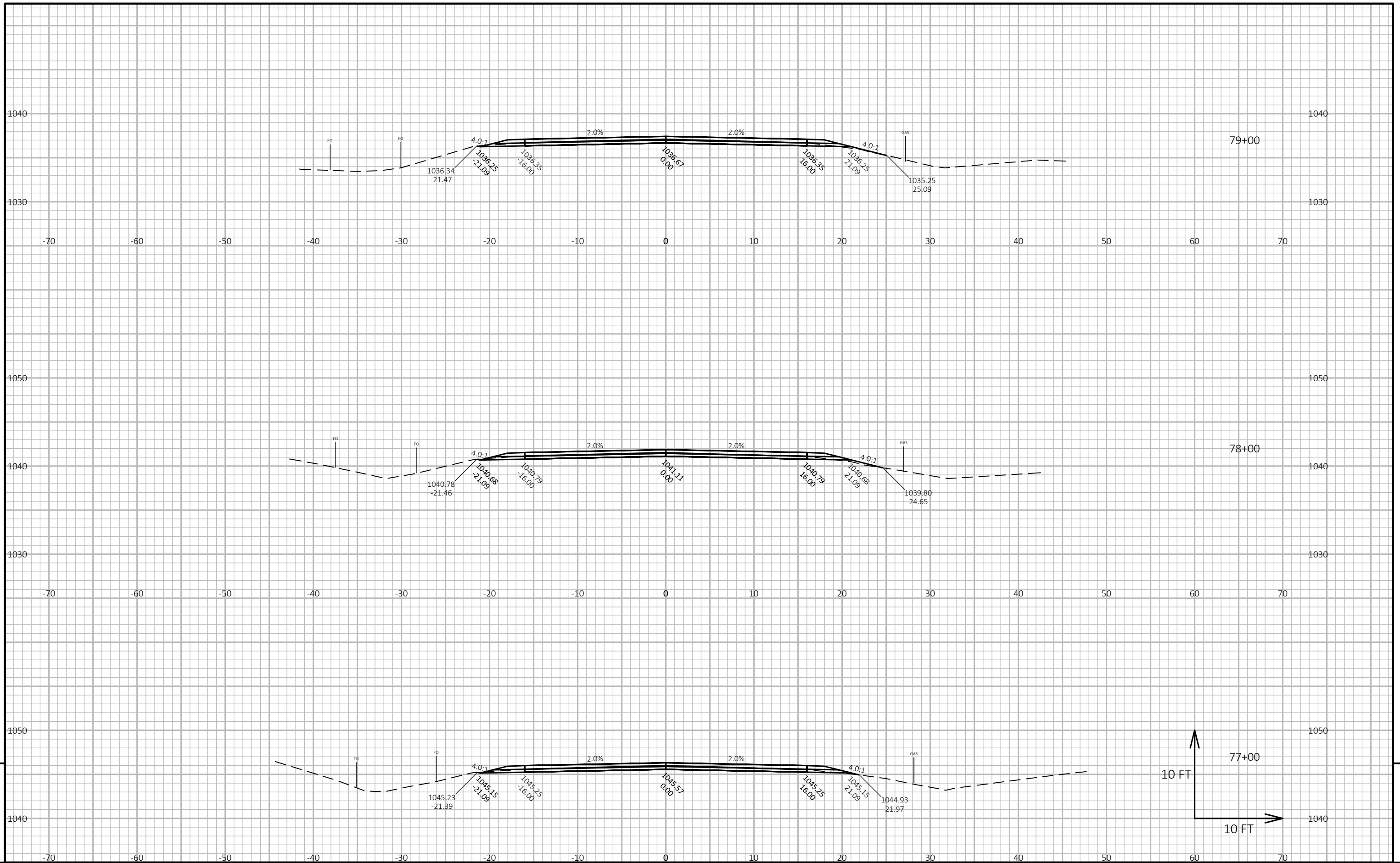
HWY: CTH V

COUNTY: DANE

CROSS SECTIONS: CTH V MAINLINE

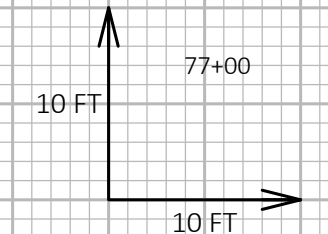
SHEET

E

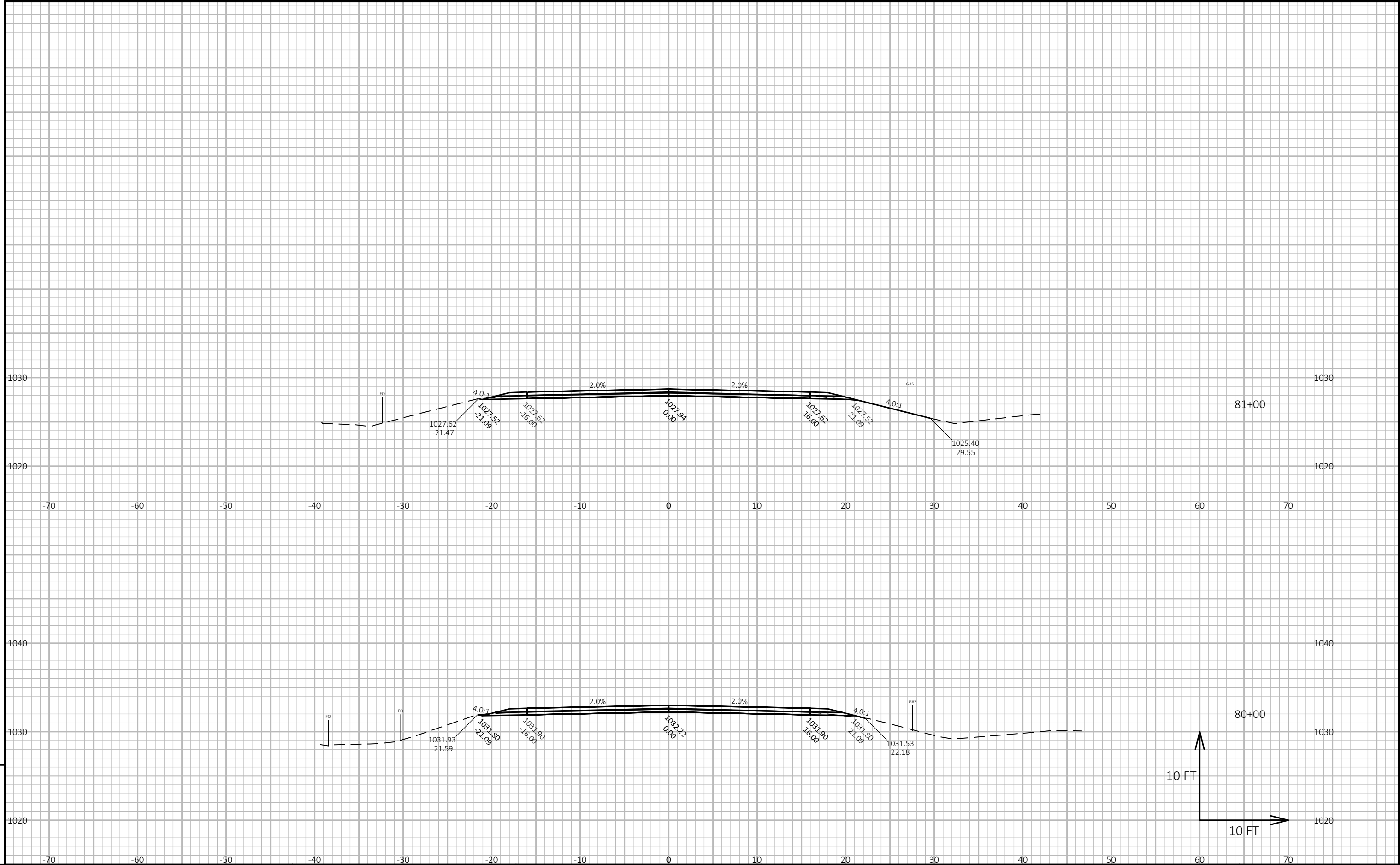


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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73

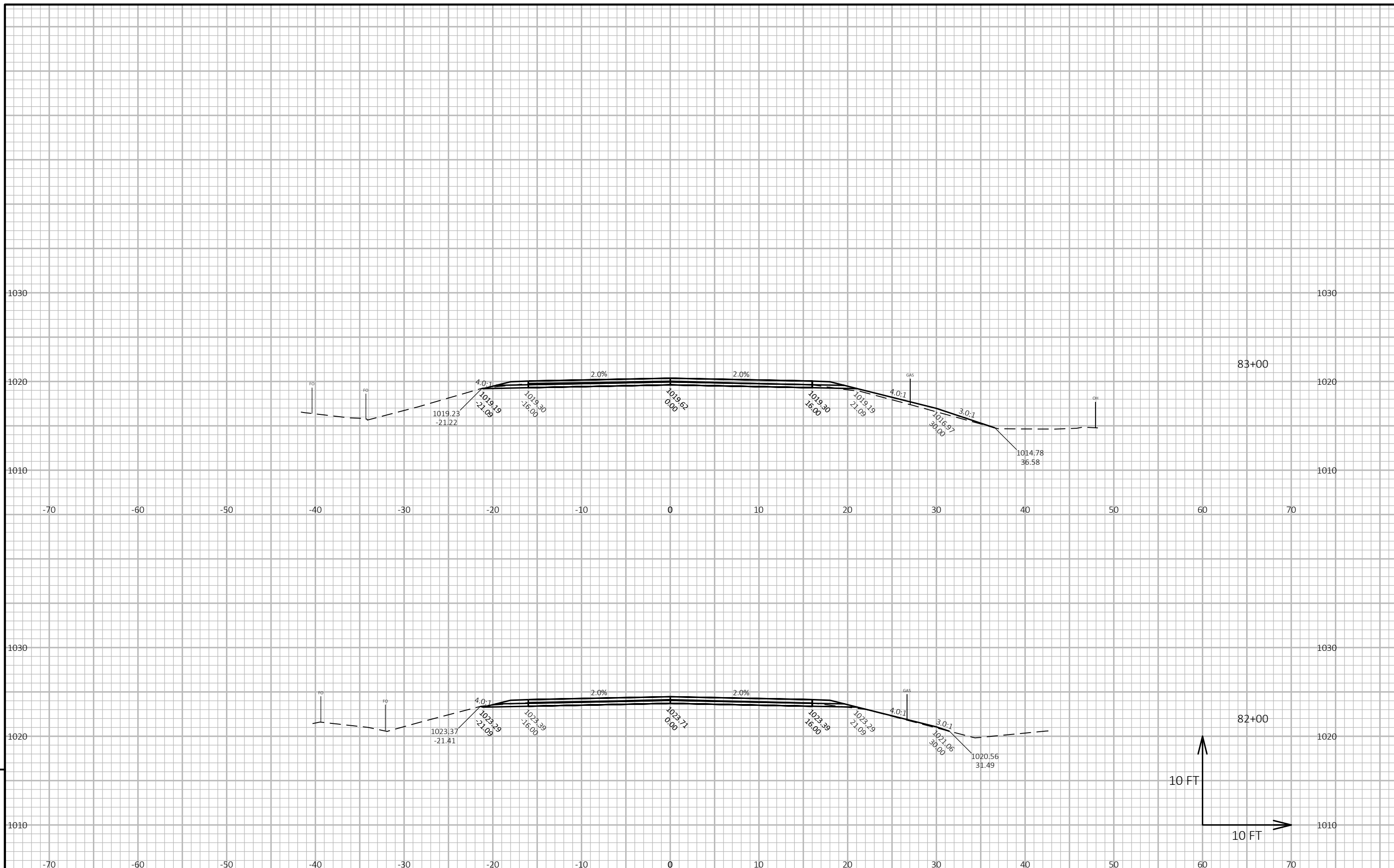
HWY: CTH V

COUNTY: DANE

CROSS SECTIONS: CTH V MAINLINE

SHEET

E

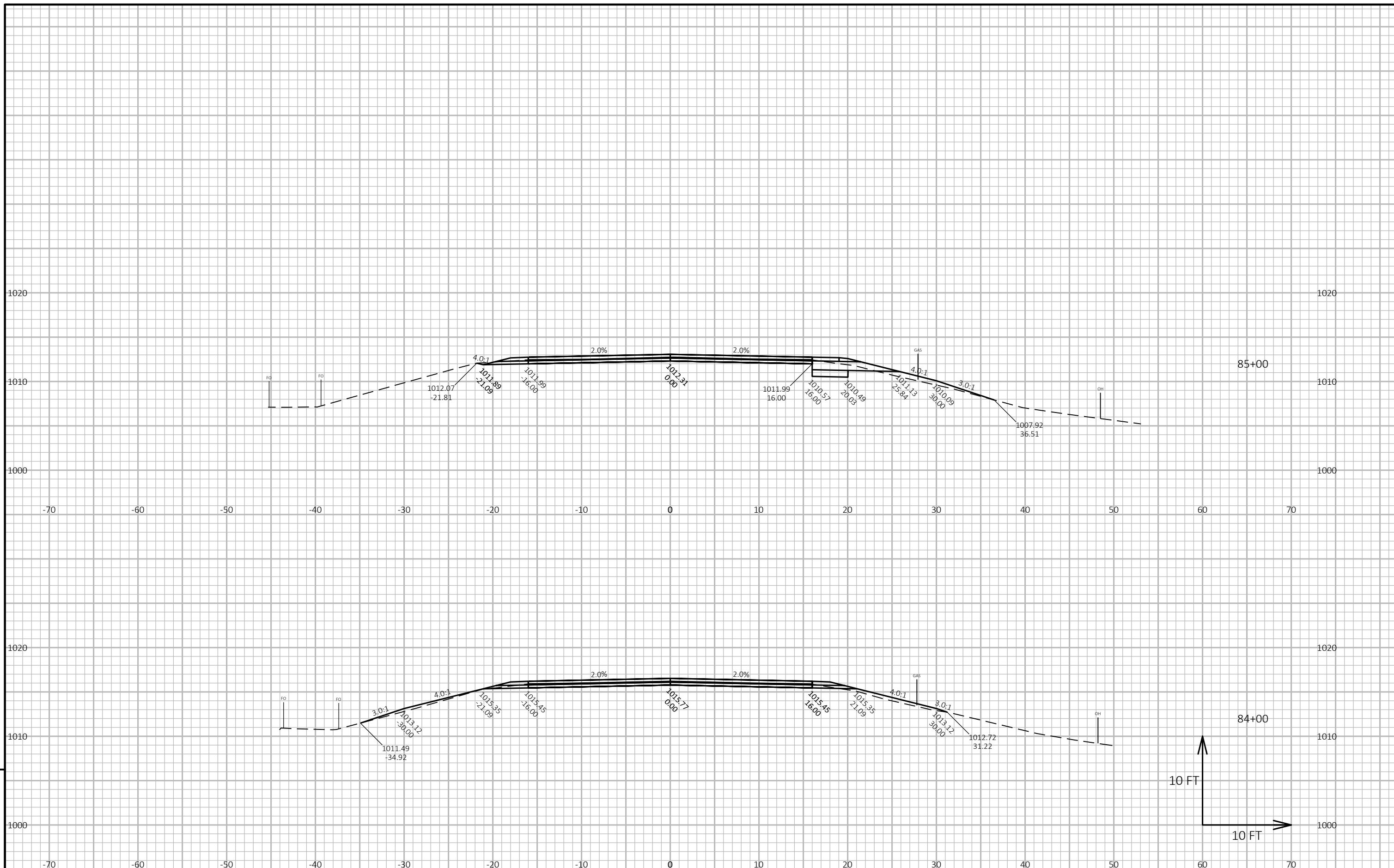


PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET
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E



PROJECT NO: 6218-00-73

HWY: CTH V

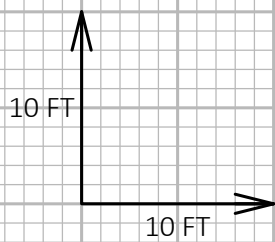
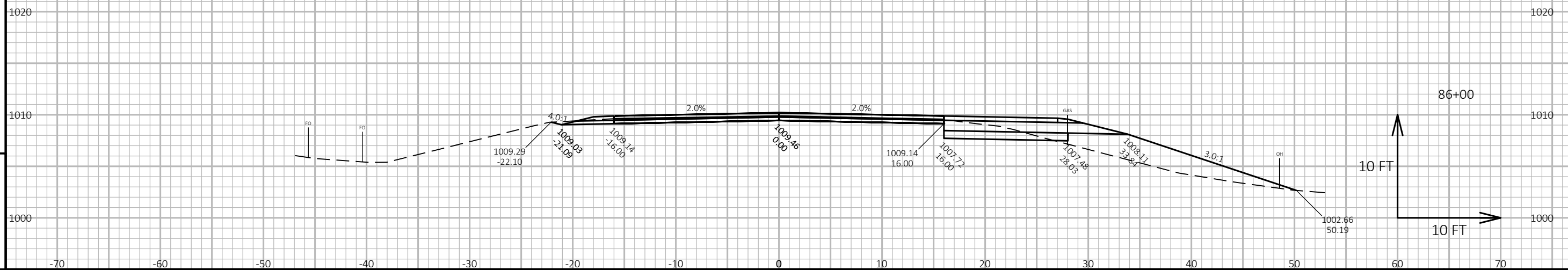
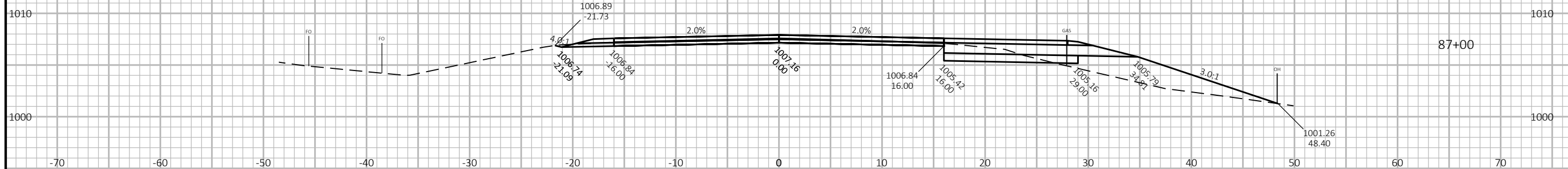
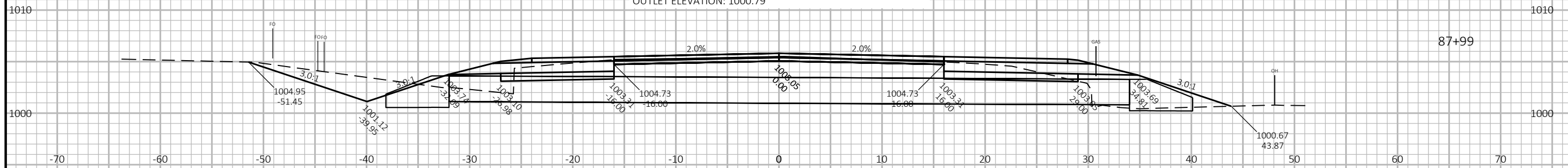
COUNTY: DANE

CROSS SECTIONS: CTH V MAINLINE

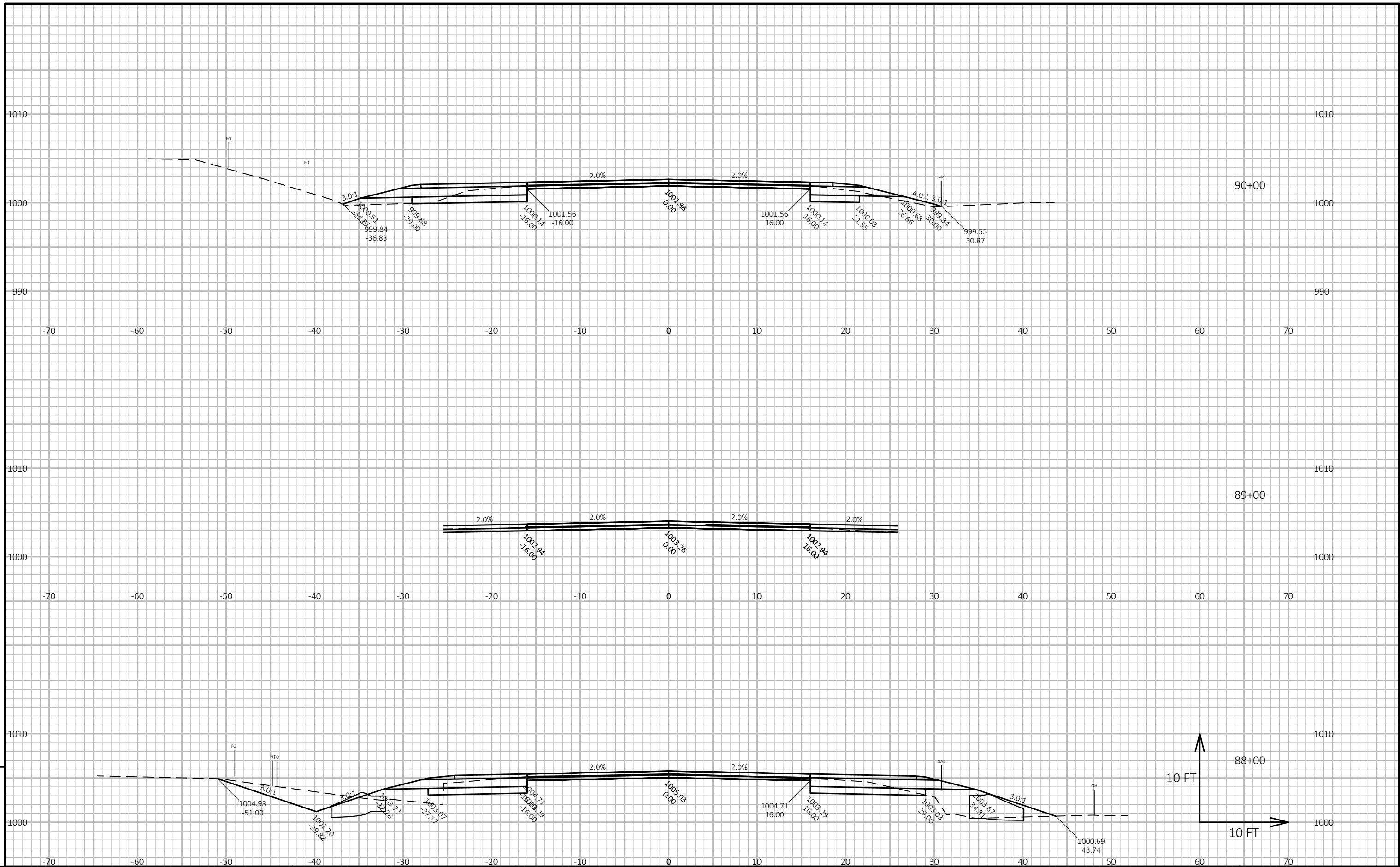
SHEET

E

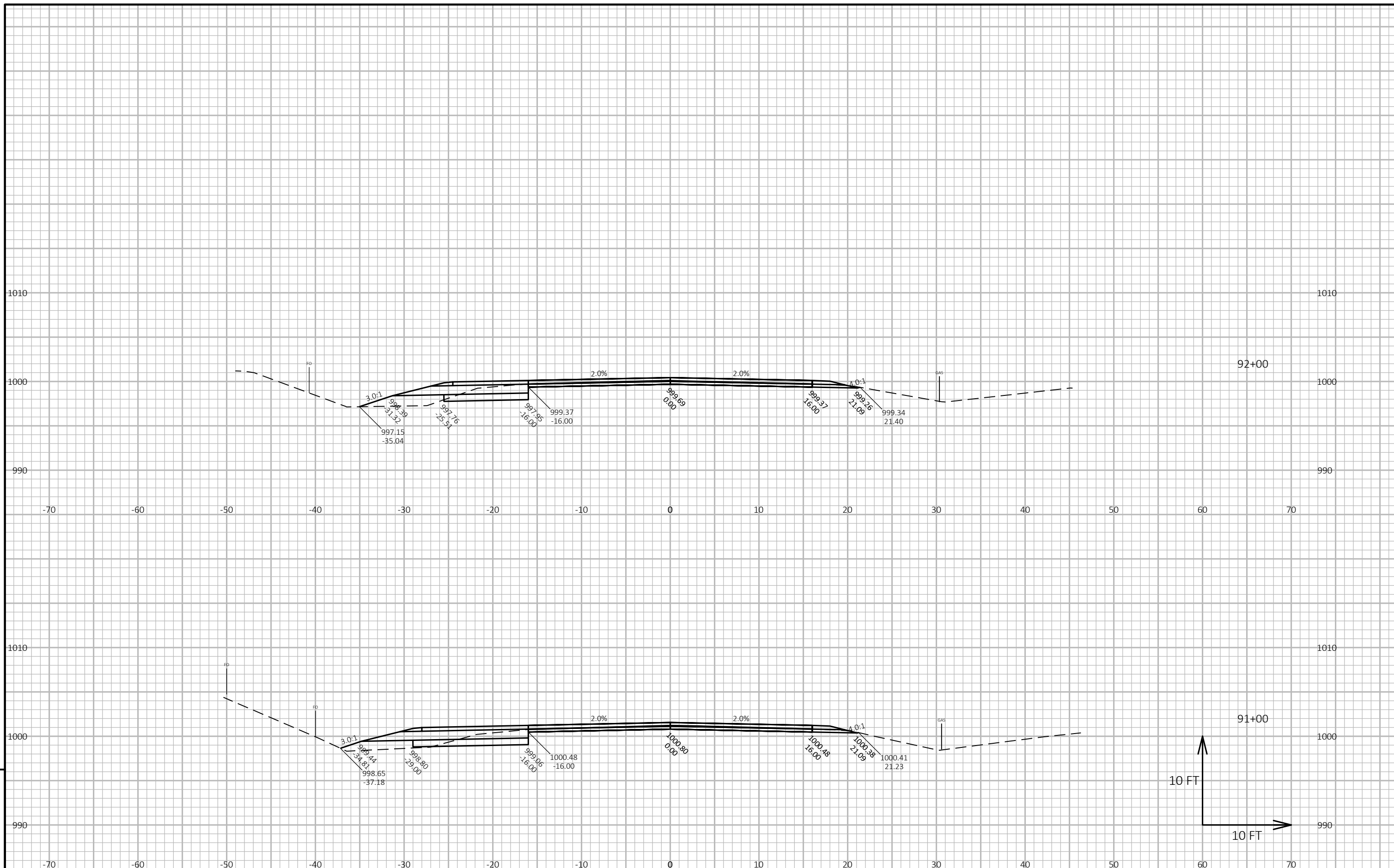
66' CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH
 2 - APRON ENDWALLS FOR CULVERT PIPE RENIFORCED 30-INCH
 INLET ELEVATION: 1001.12
 OUTLET ELEVATION: 1000.79



PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET 9



PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET 9



PROJECT NO: 6218-00-73

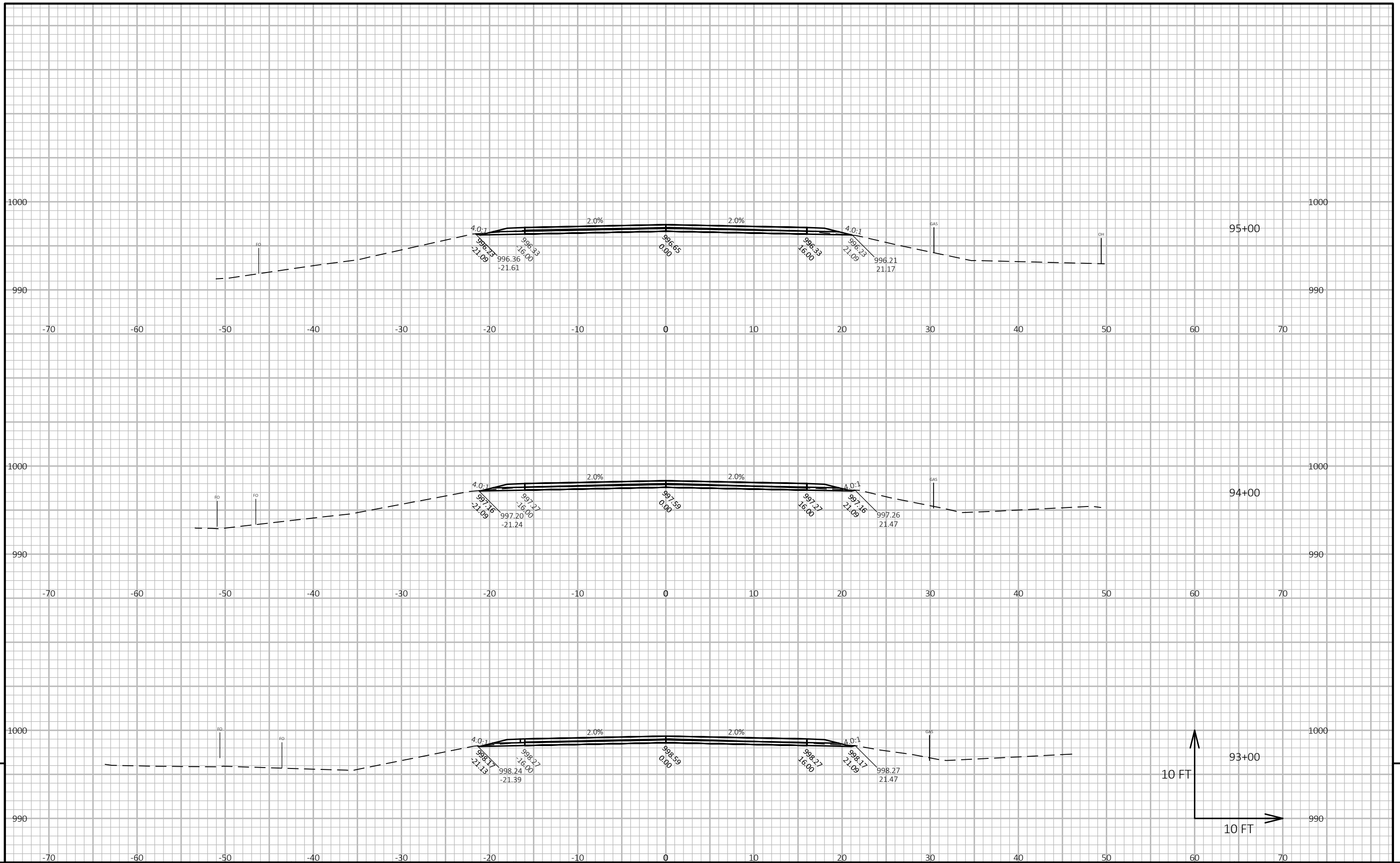
HWY: CTH V

COUNTY: DANE

CROSS SECTIONS: CTH V MAINLINE

SHEET

E



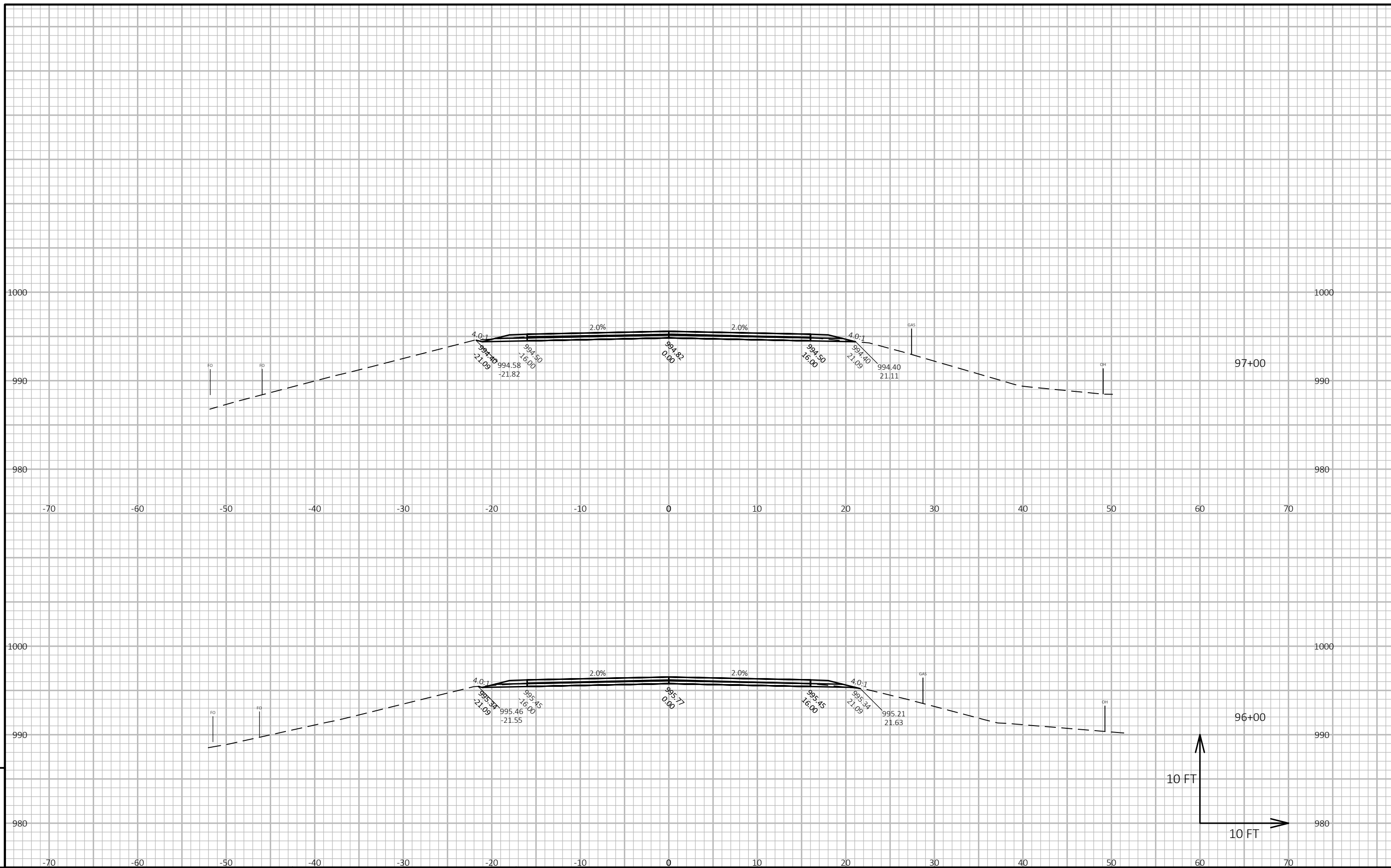
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2022 12:08 PM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

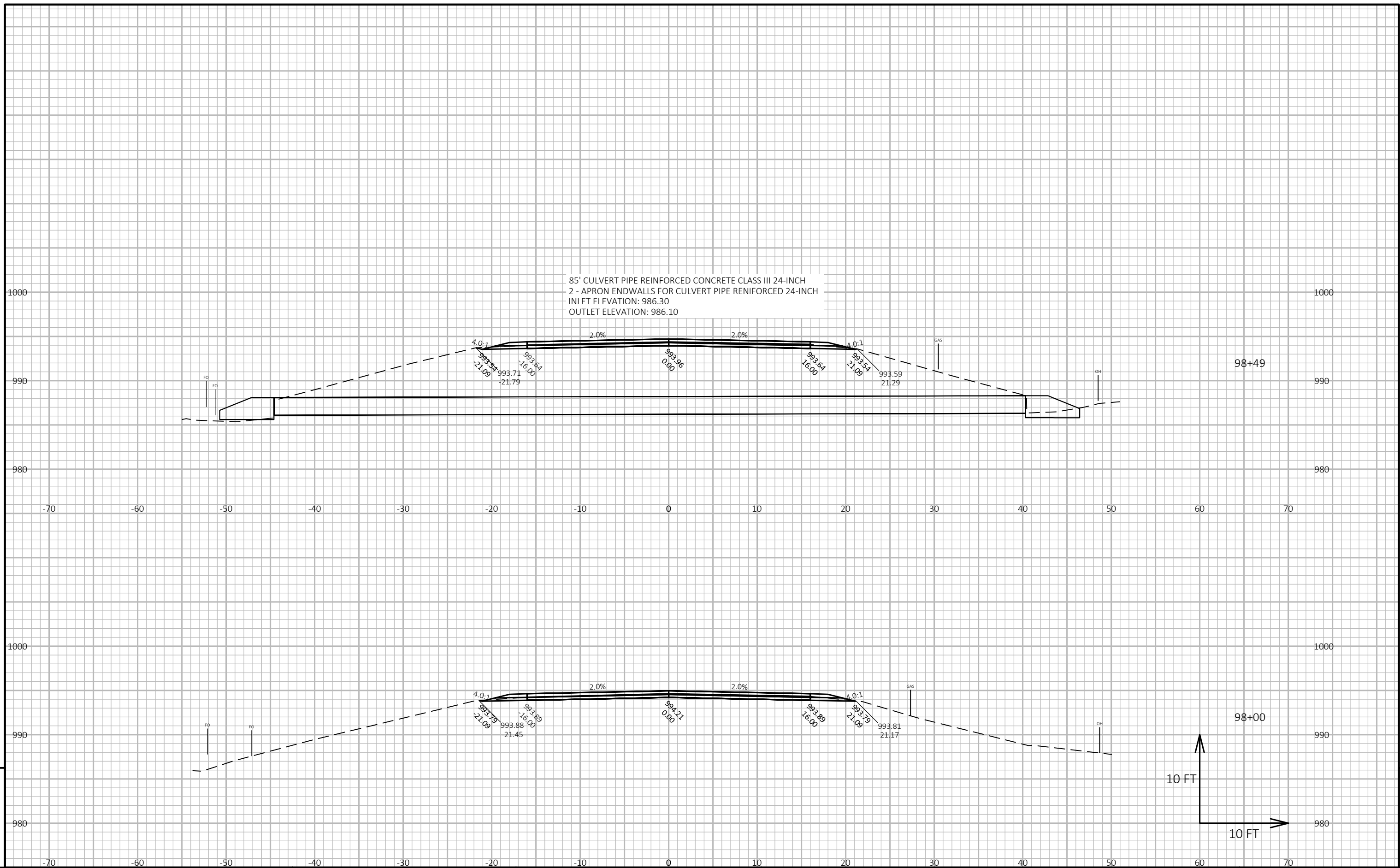
LAYOUT NAME - Section Sheet - (18)



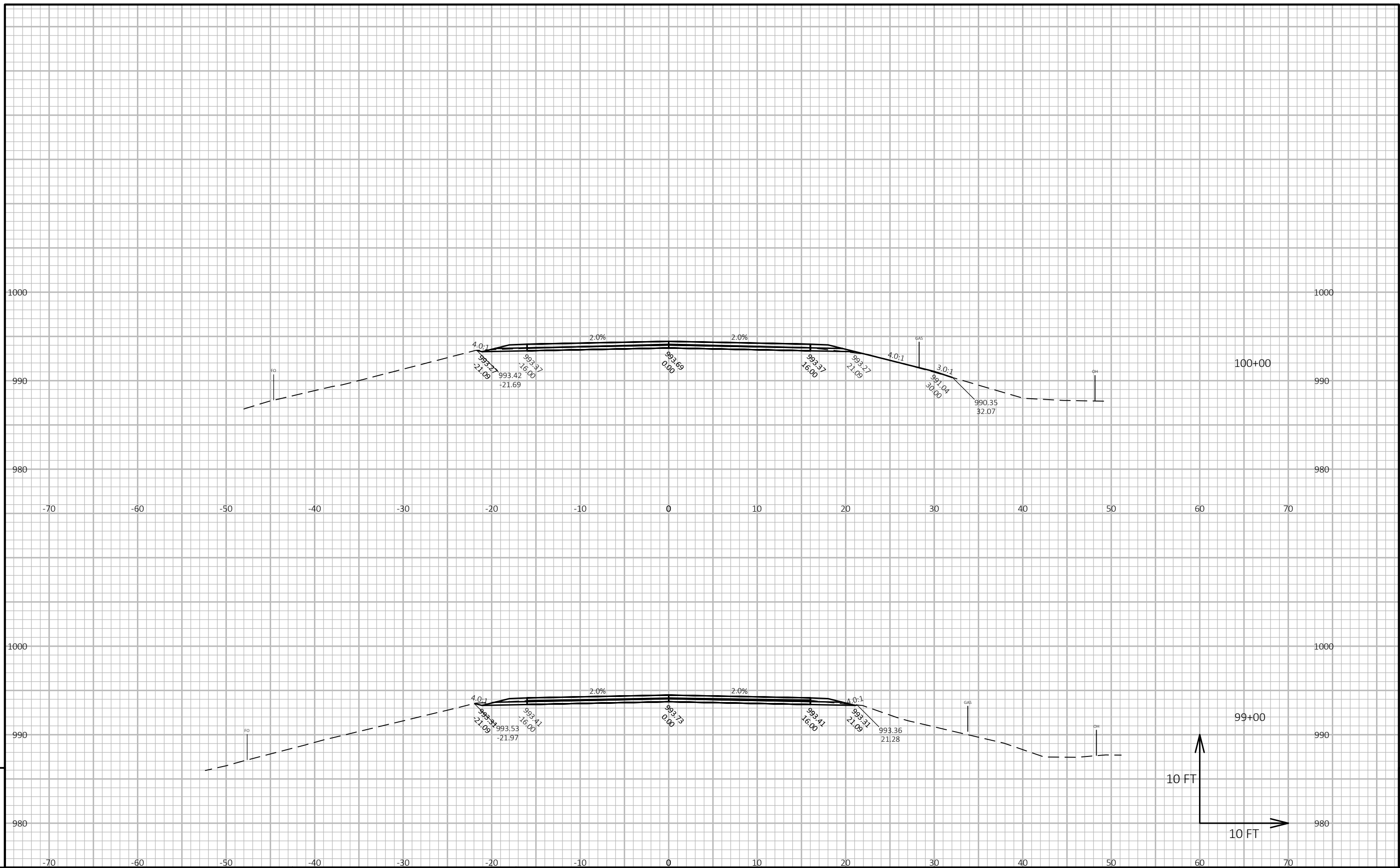
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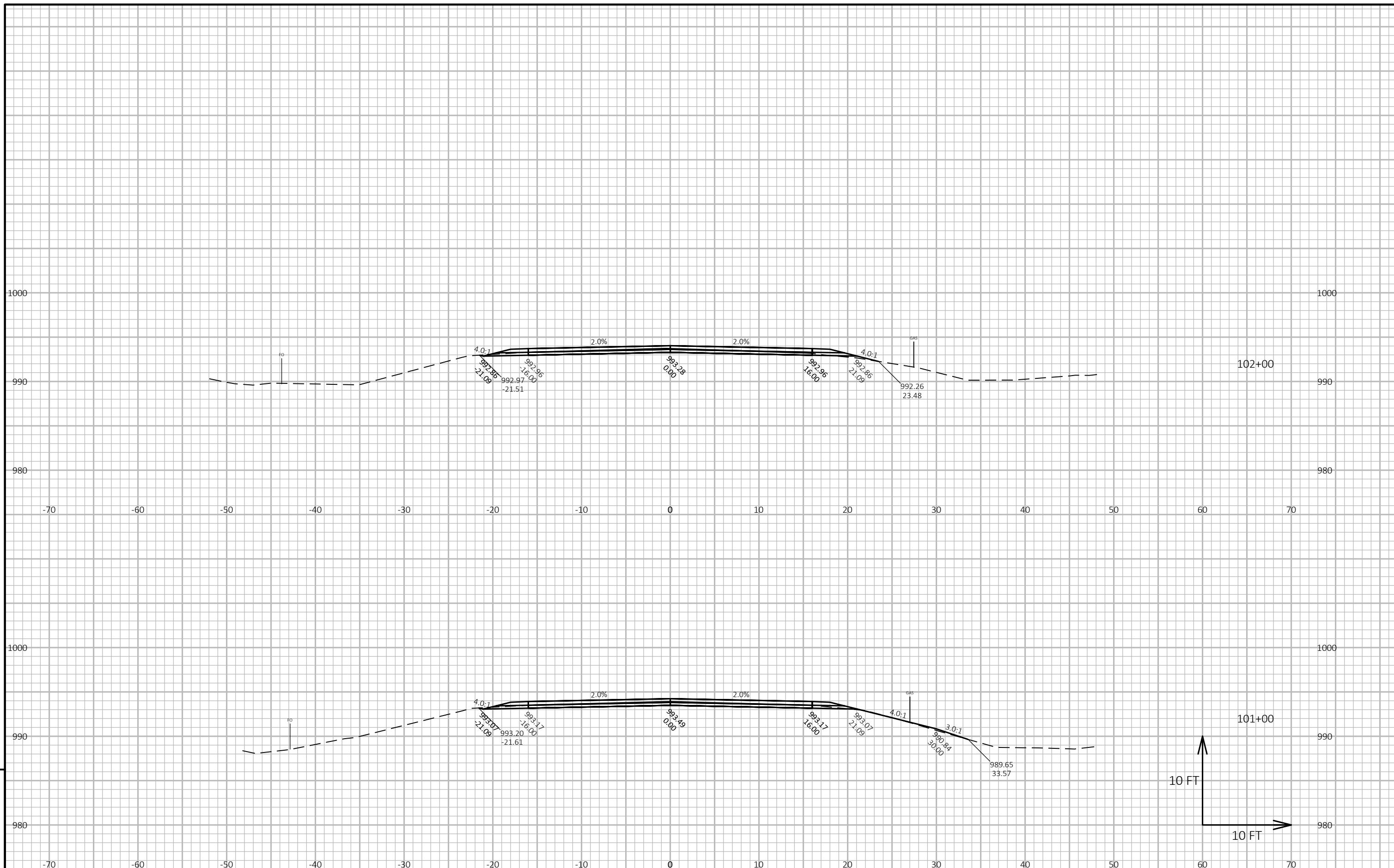
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET 9



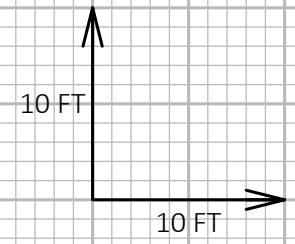
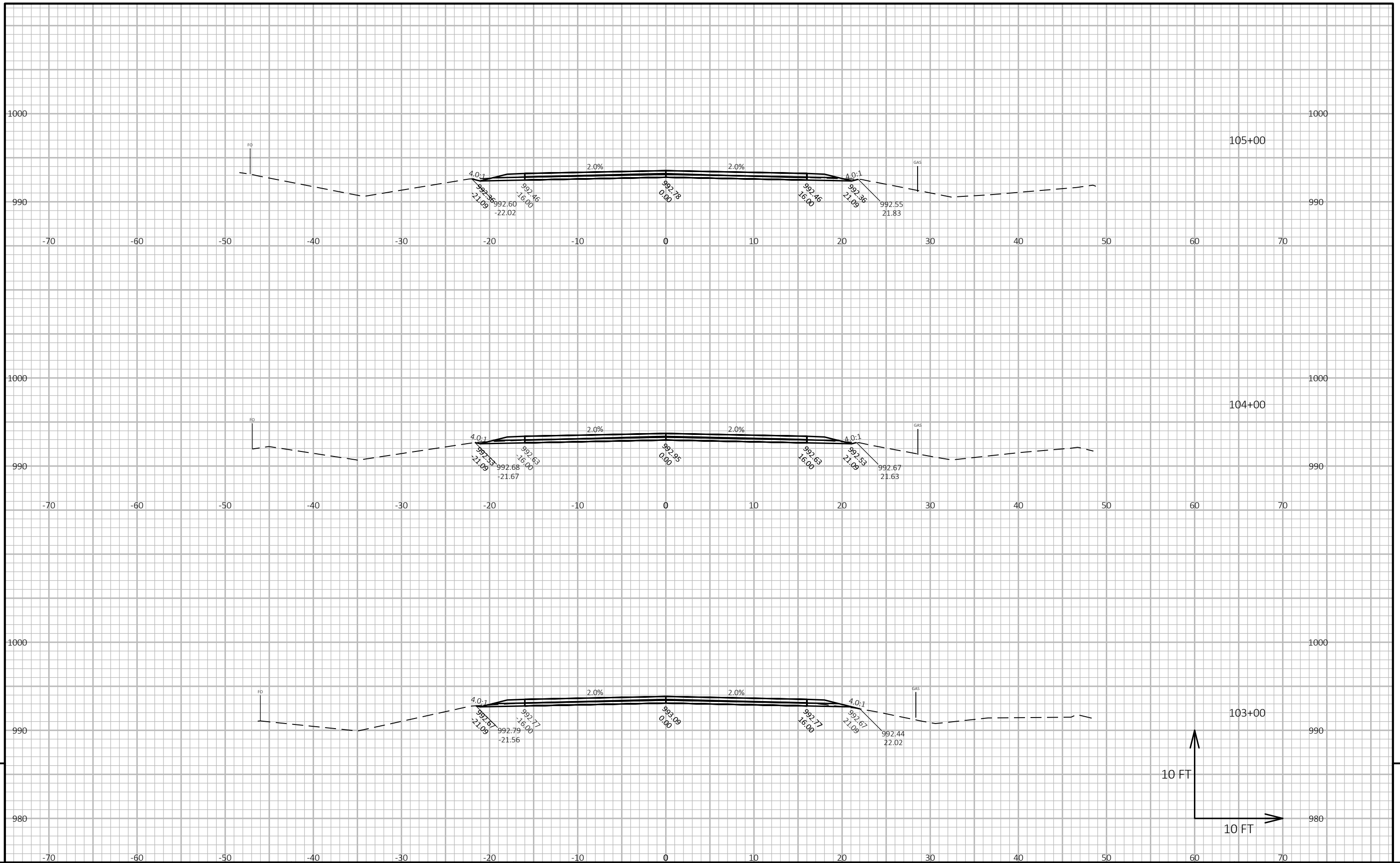
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

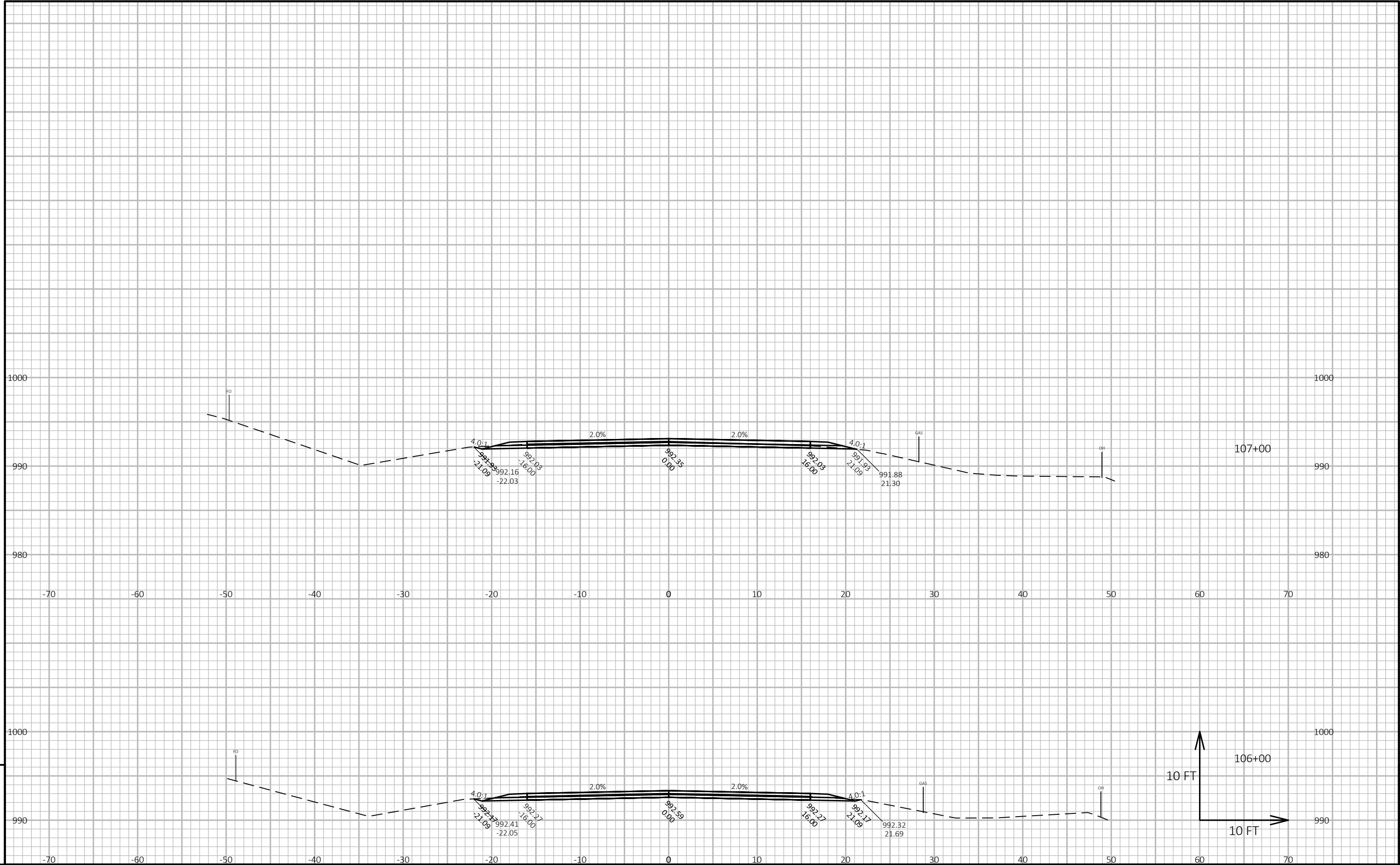


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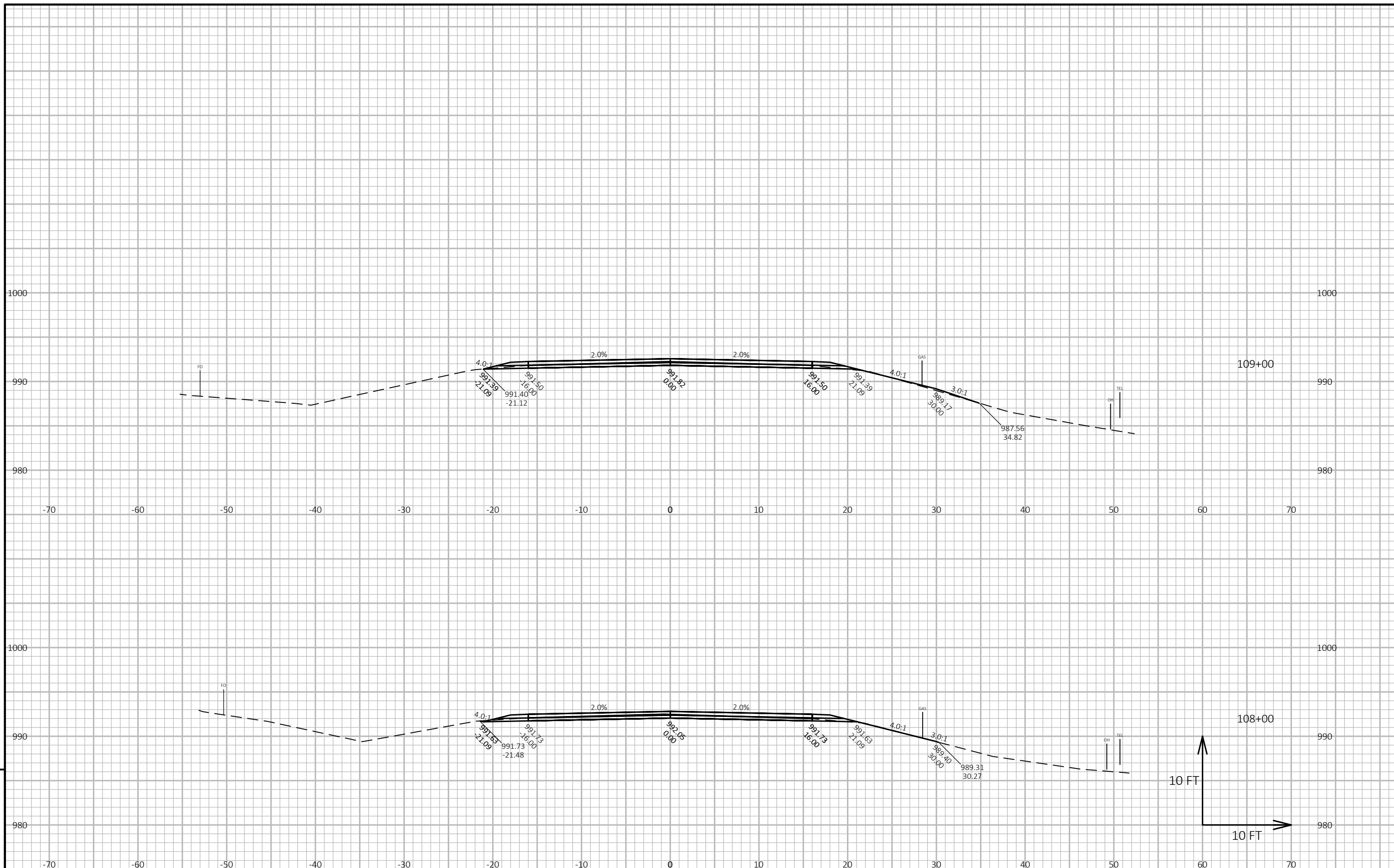
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

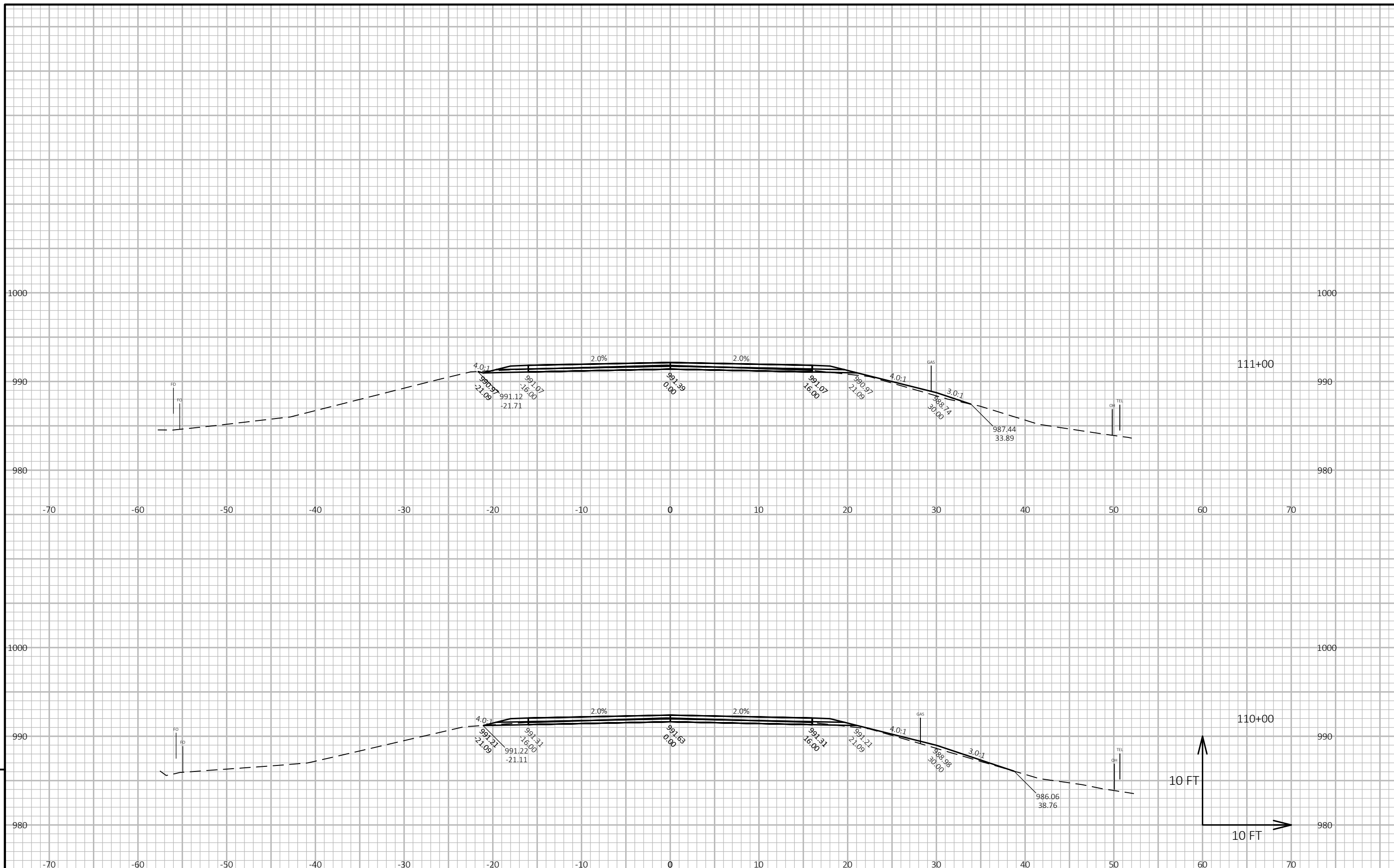


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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETS\PLAN\090201-XS.DWG PLOT DATE : 1/24/2022 12:11 PM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



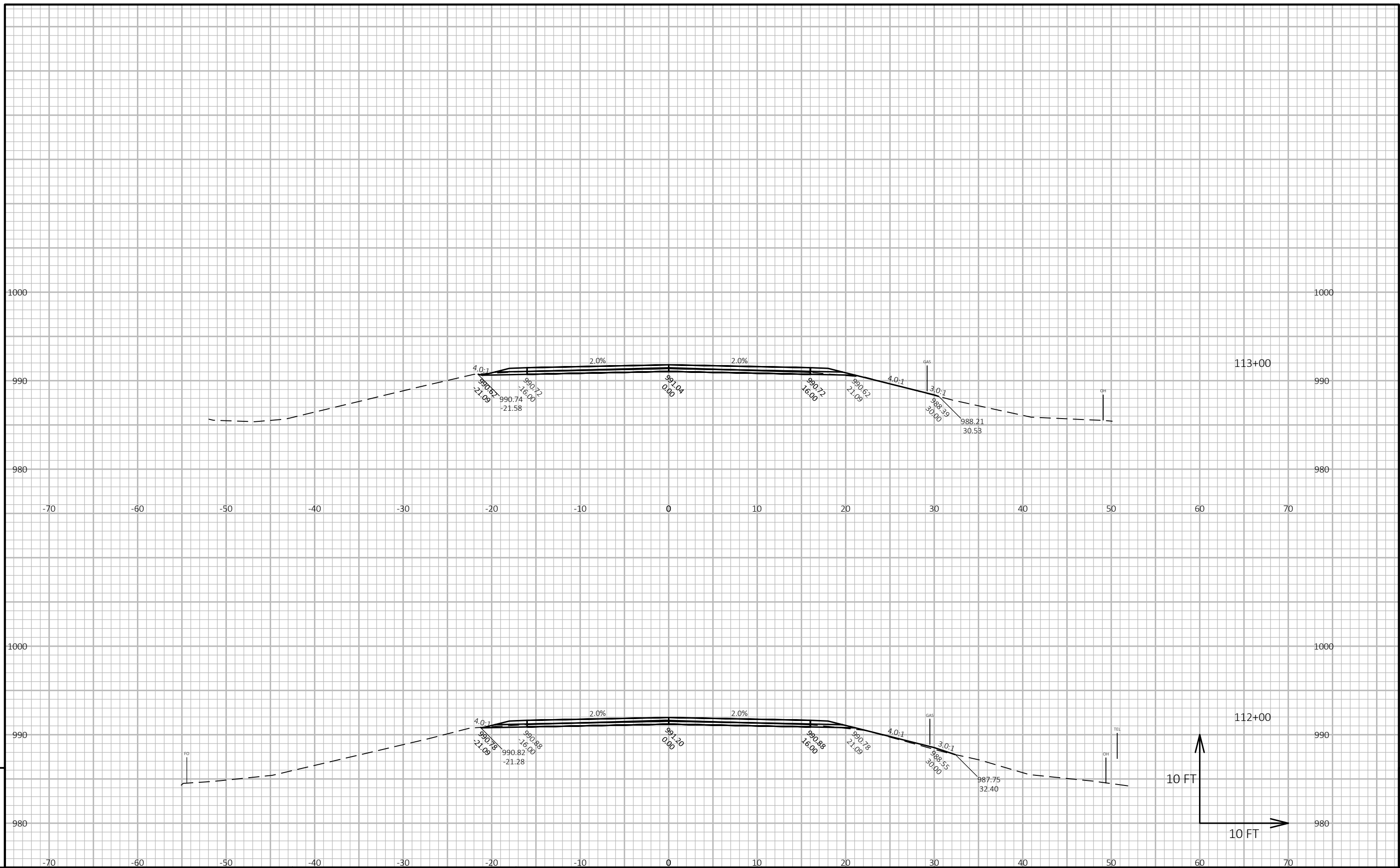
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2022 12:12 PM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD5 SHEET 49

LAYOUT NAME - Section Sheet - (26)



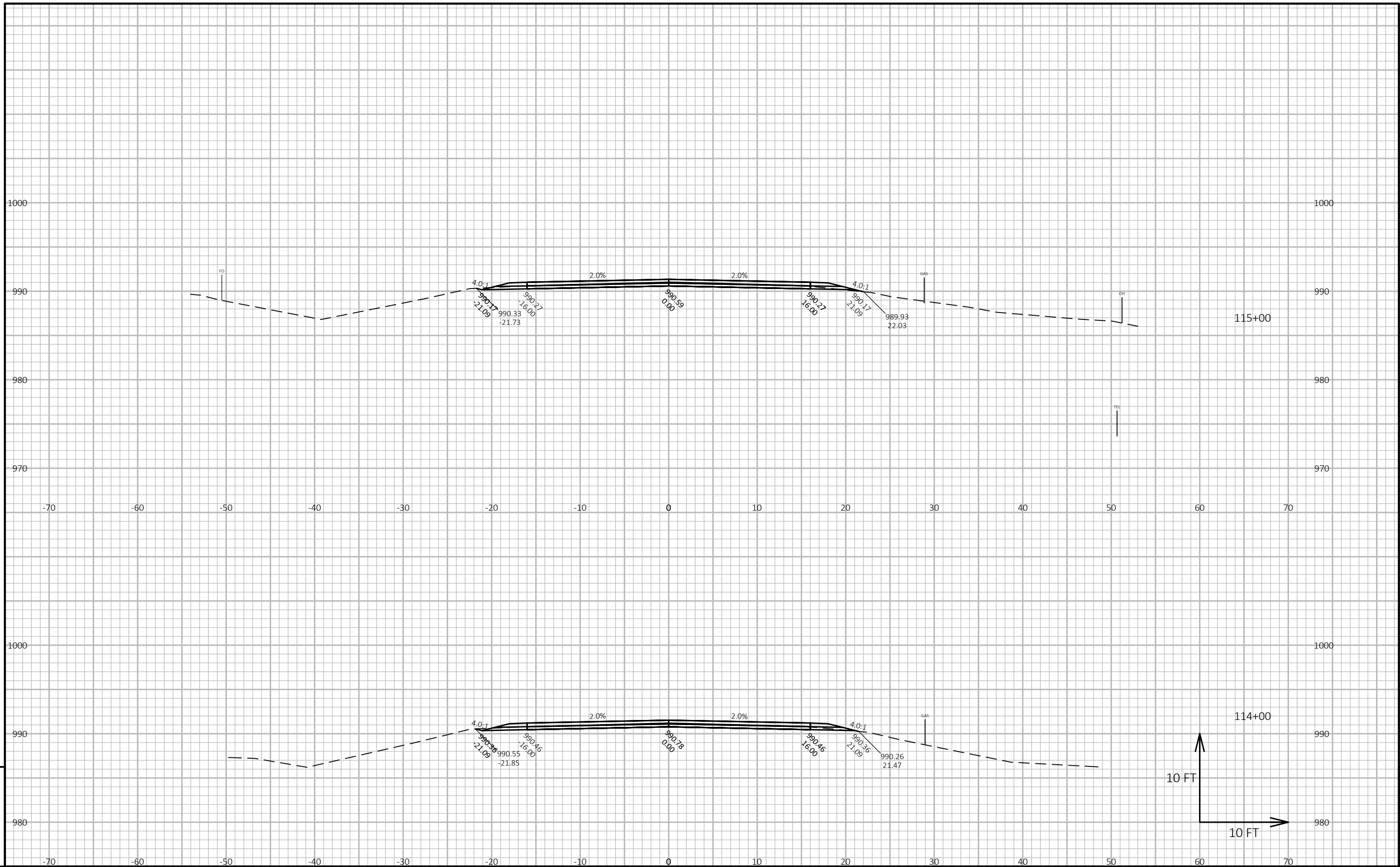
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2022 12:12 PM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - Section Sheet - (27)

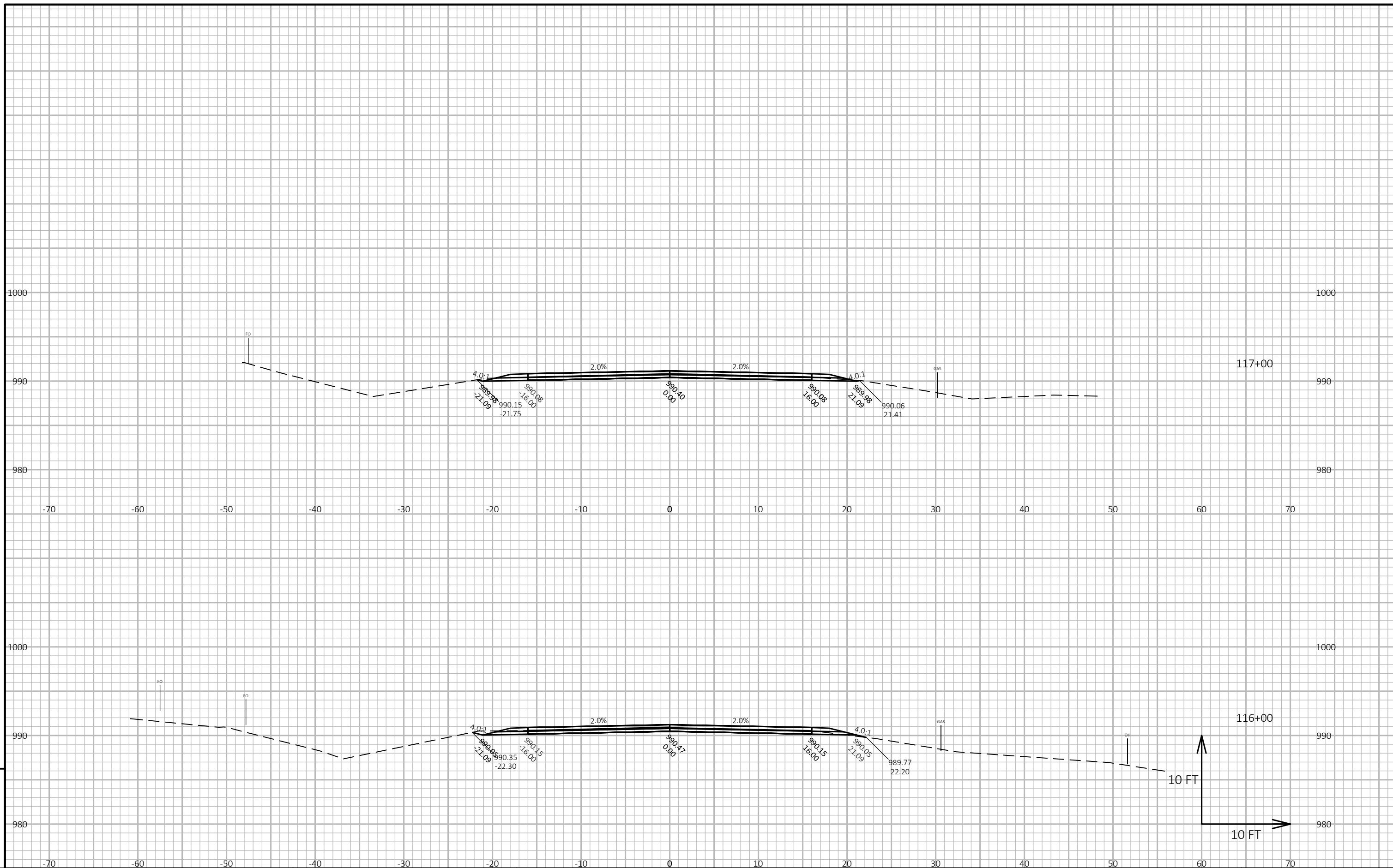


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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2022 12:13 PM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

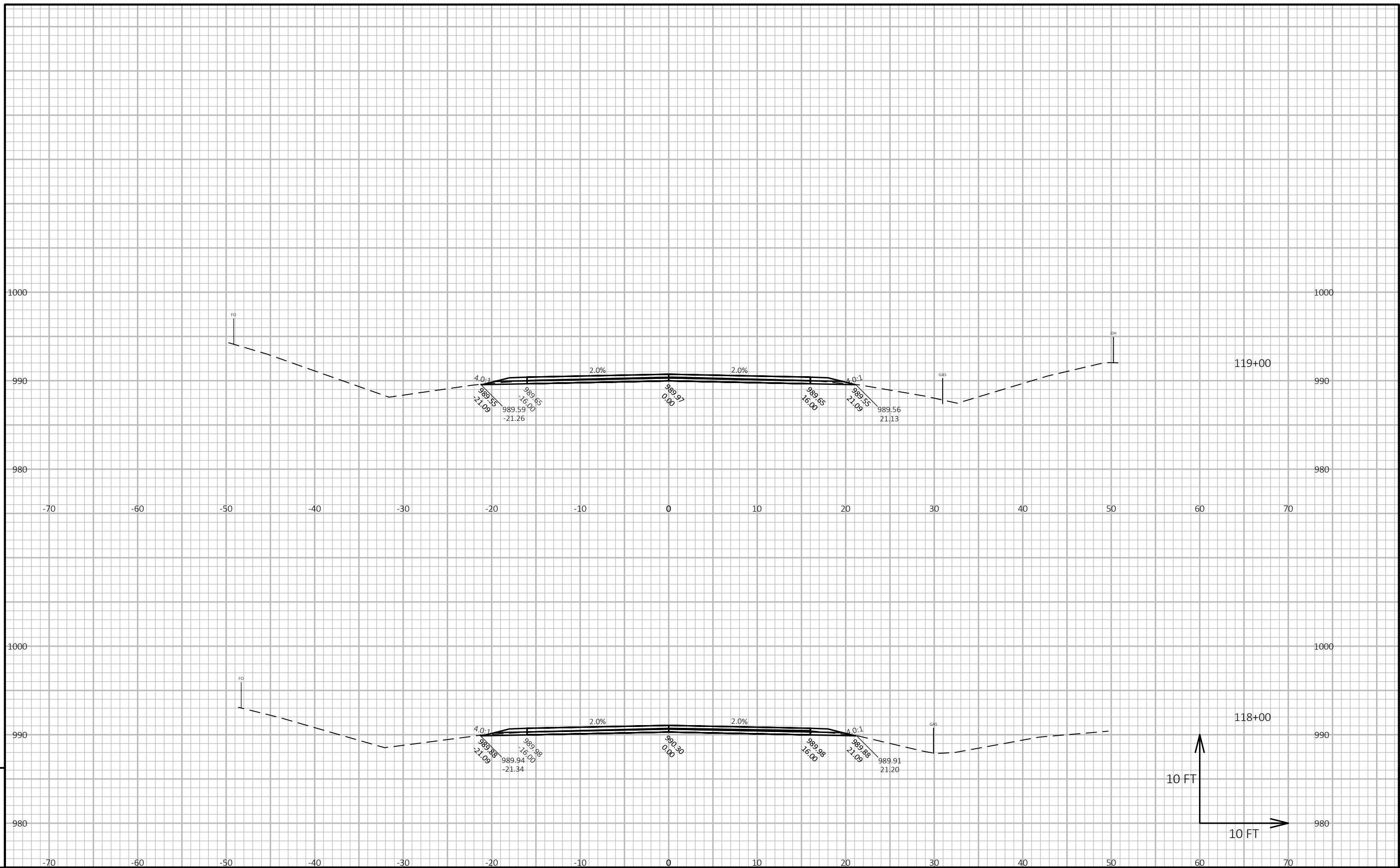


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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2022 12:13 PM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD5 SHEET 49



PROJECT NO: 6218-00-73

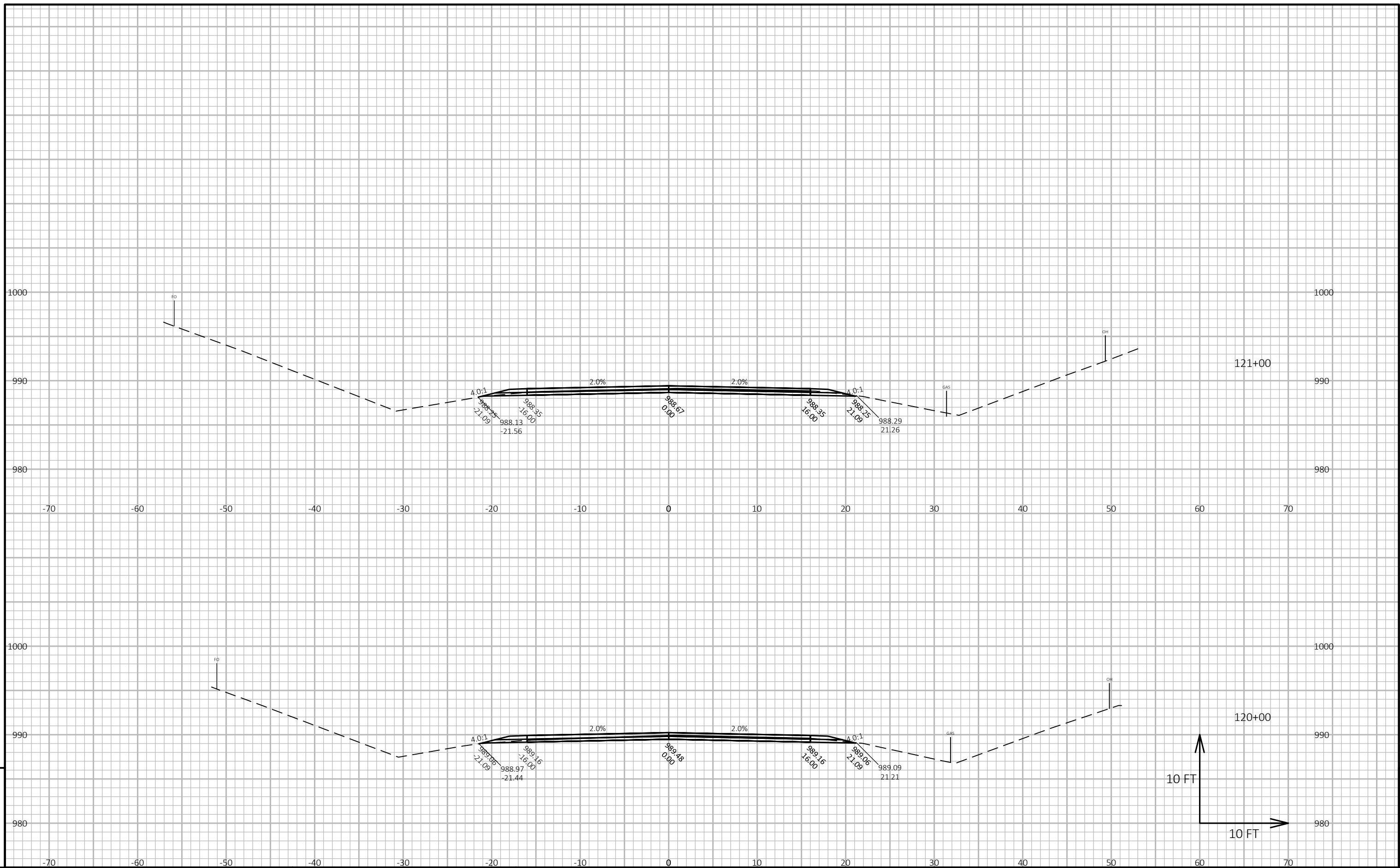
HWY: CTH V

COUNTY: DANE

CROSS SECTIONS: CTH V MAINLINE

SHEET

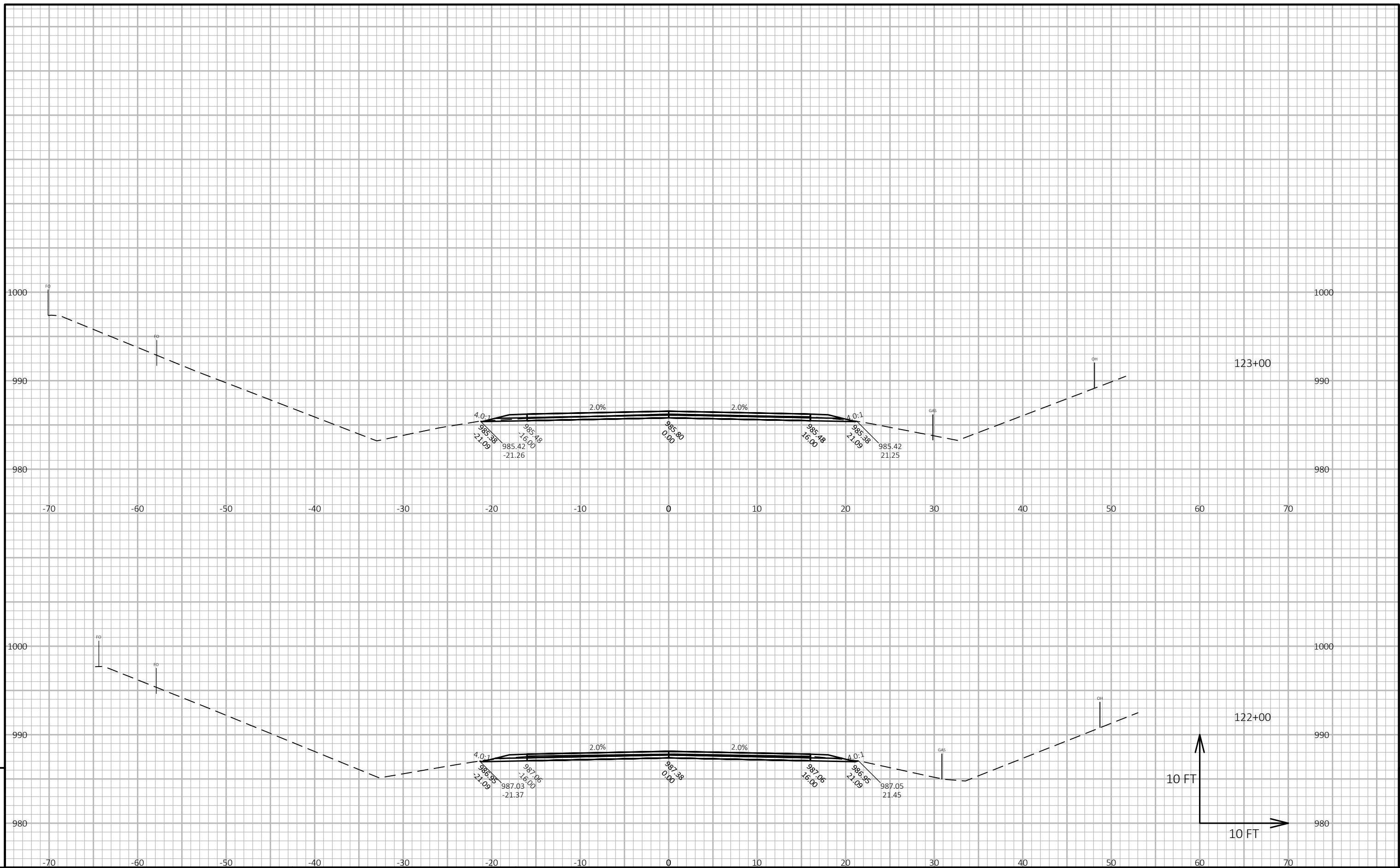
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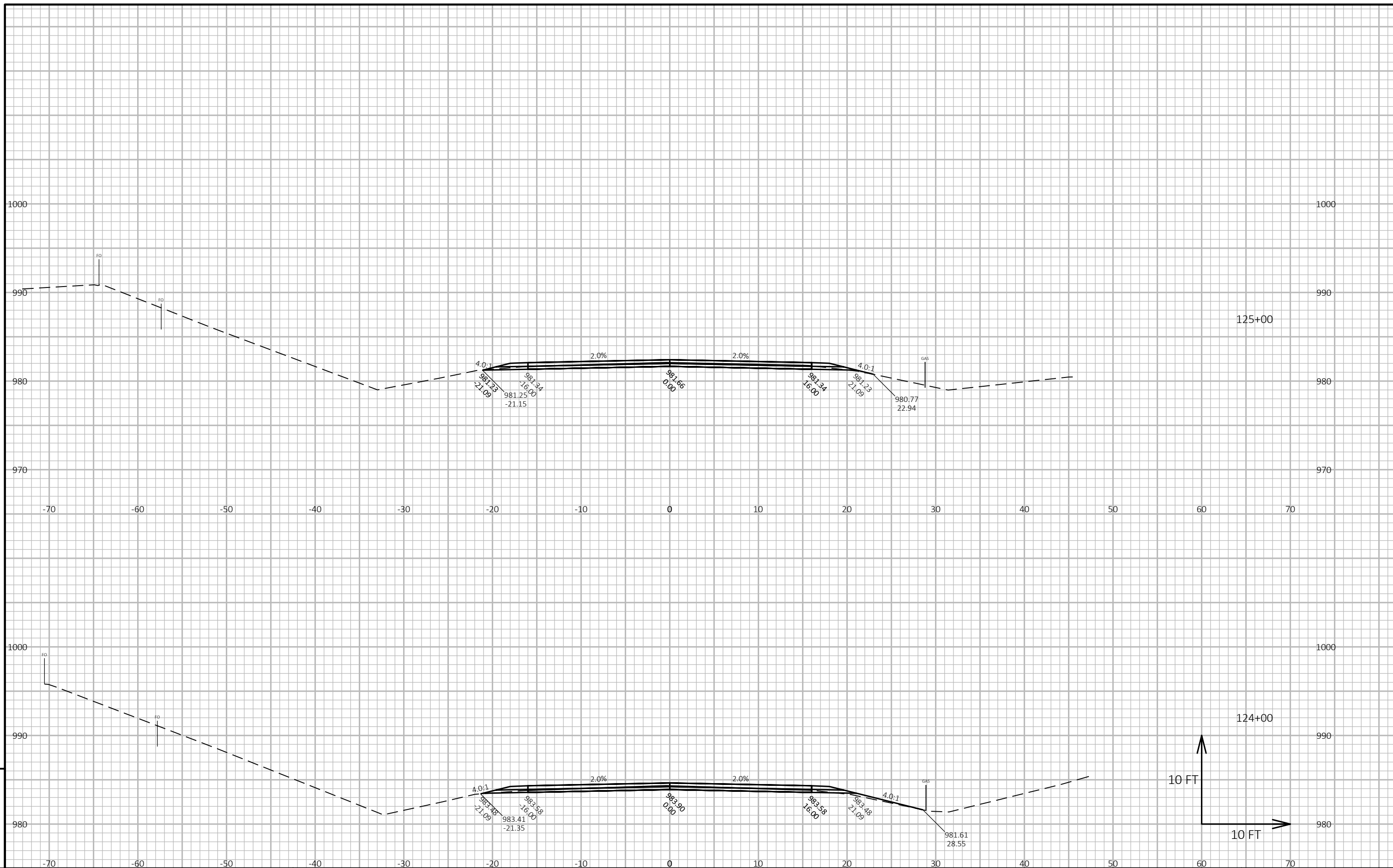
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



PROJECT NO: 6218-00-73

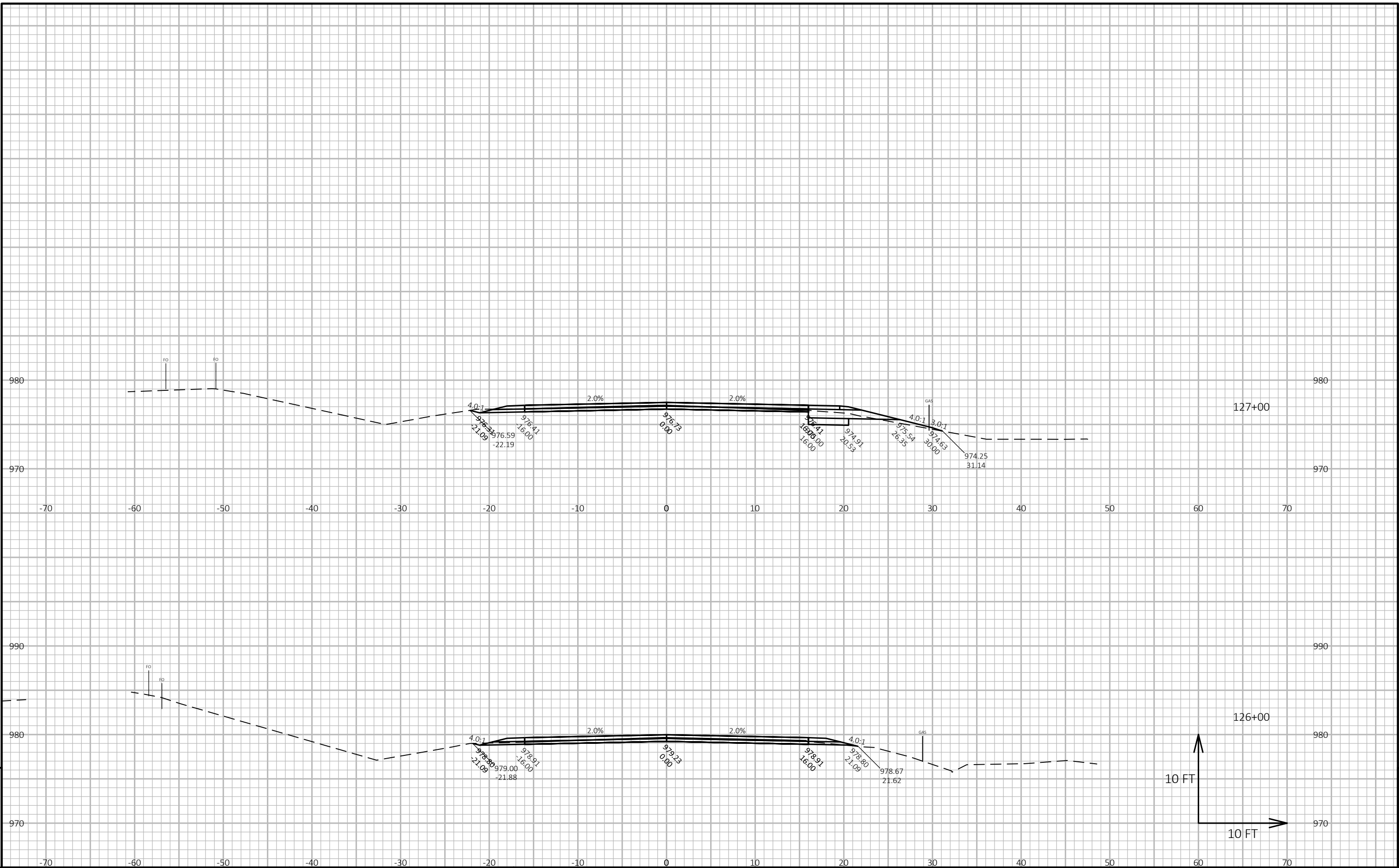
HWY: CTH V

COUNTY: DANE

CROSS SECTIONS: CTH V MAINLINE

SHEET

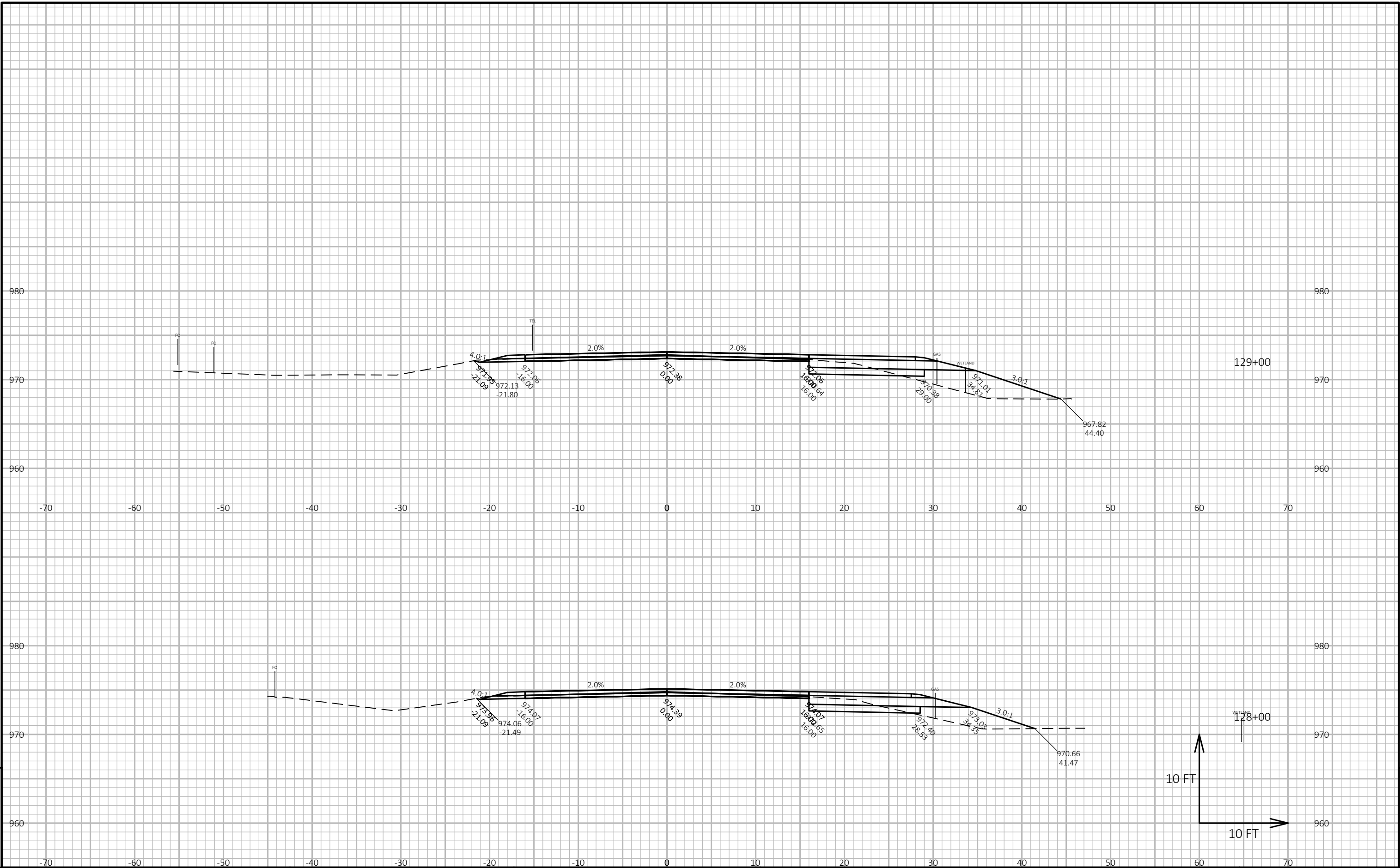
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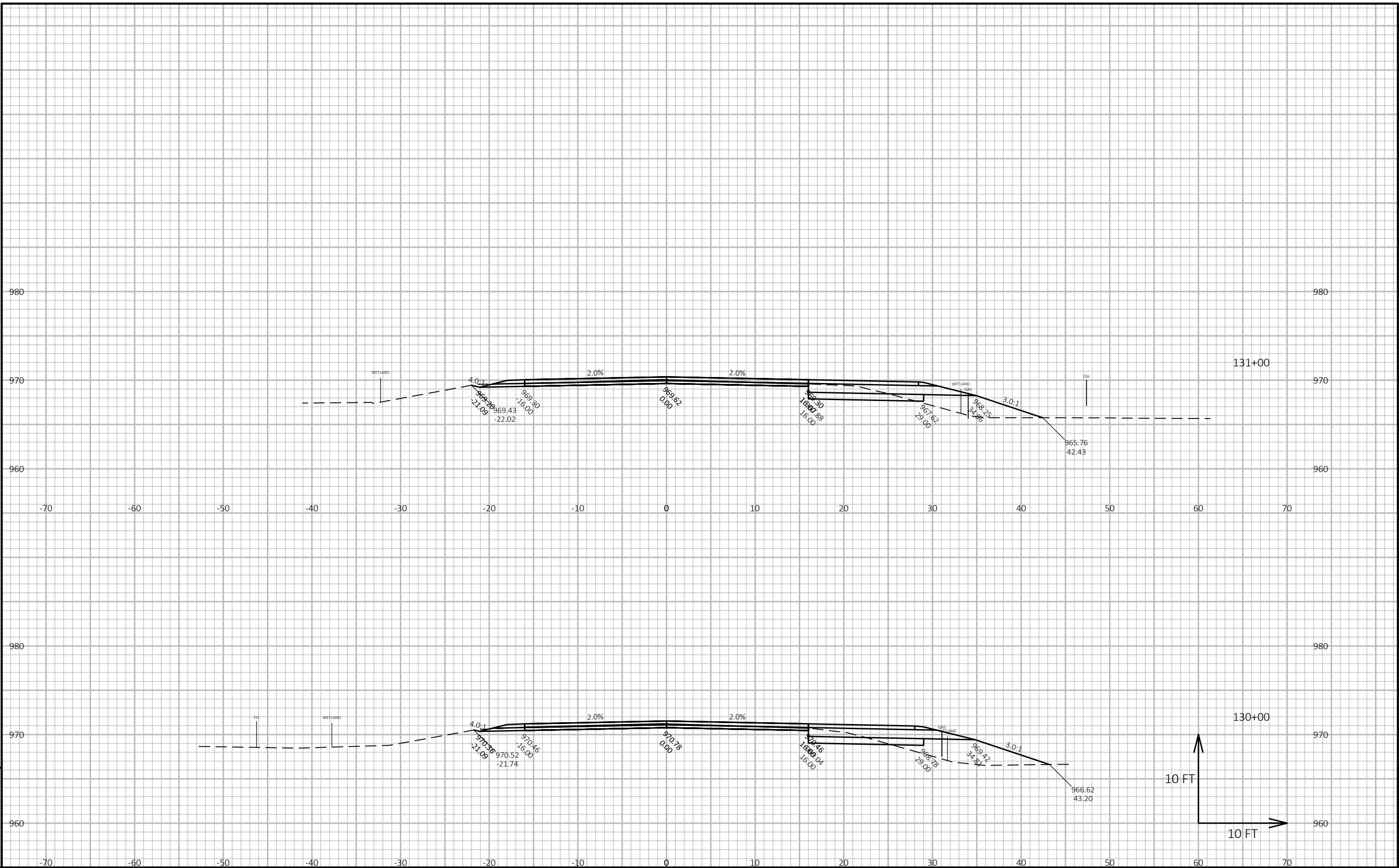
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



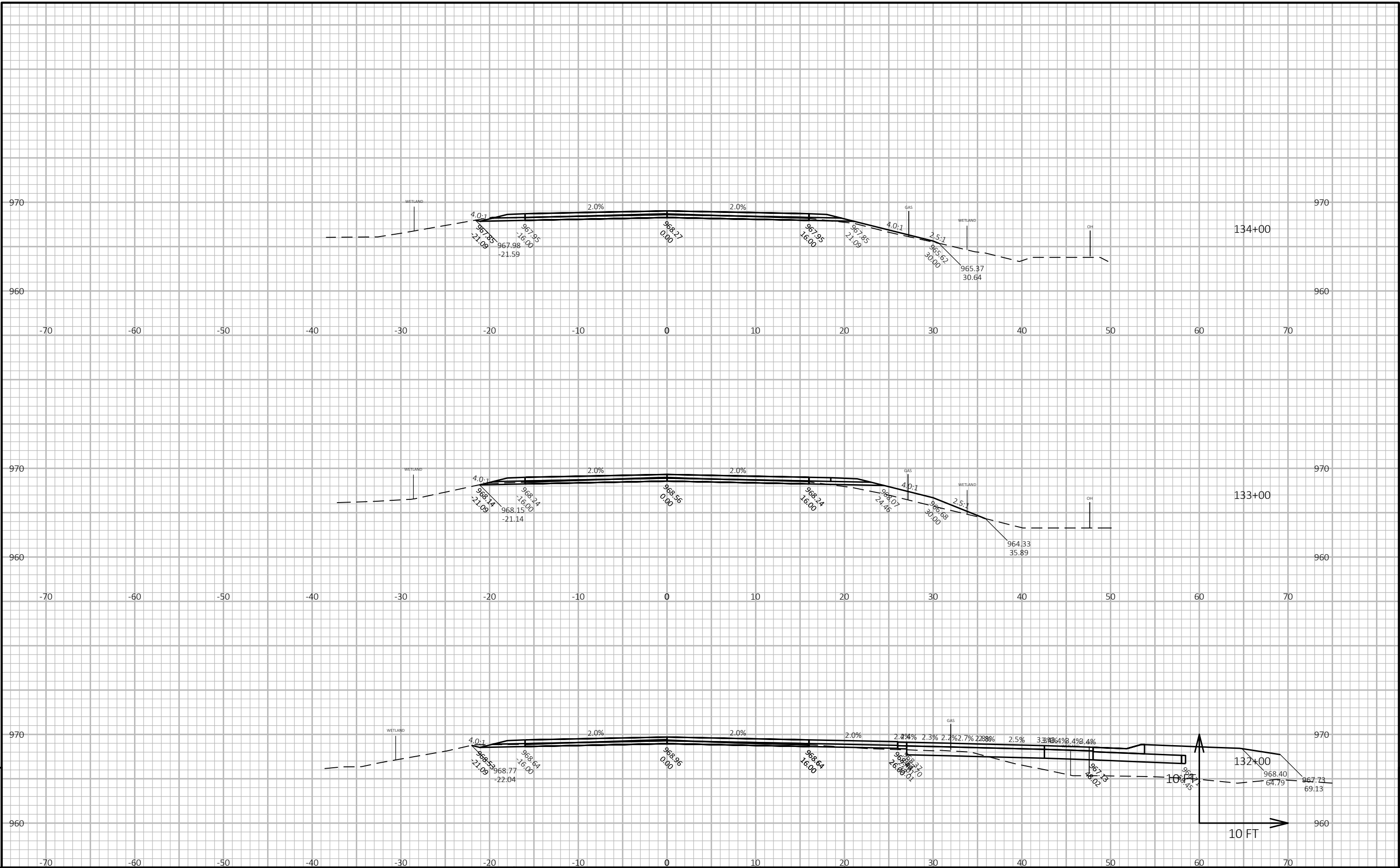
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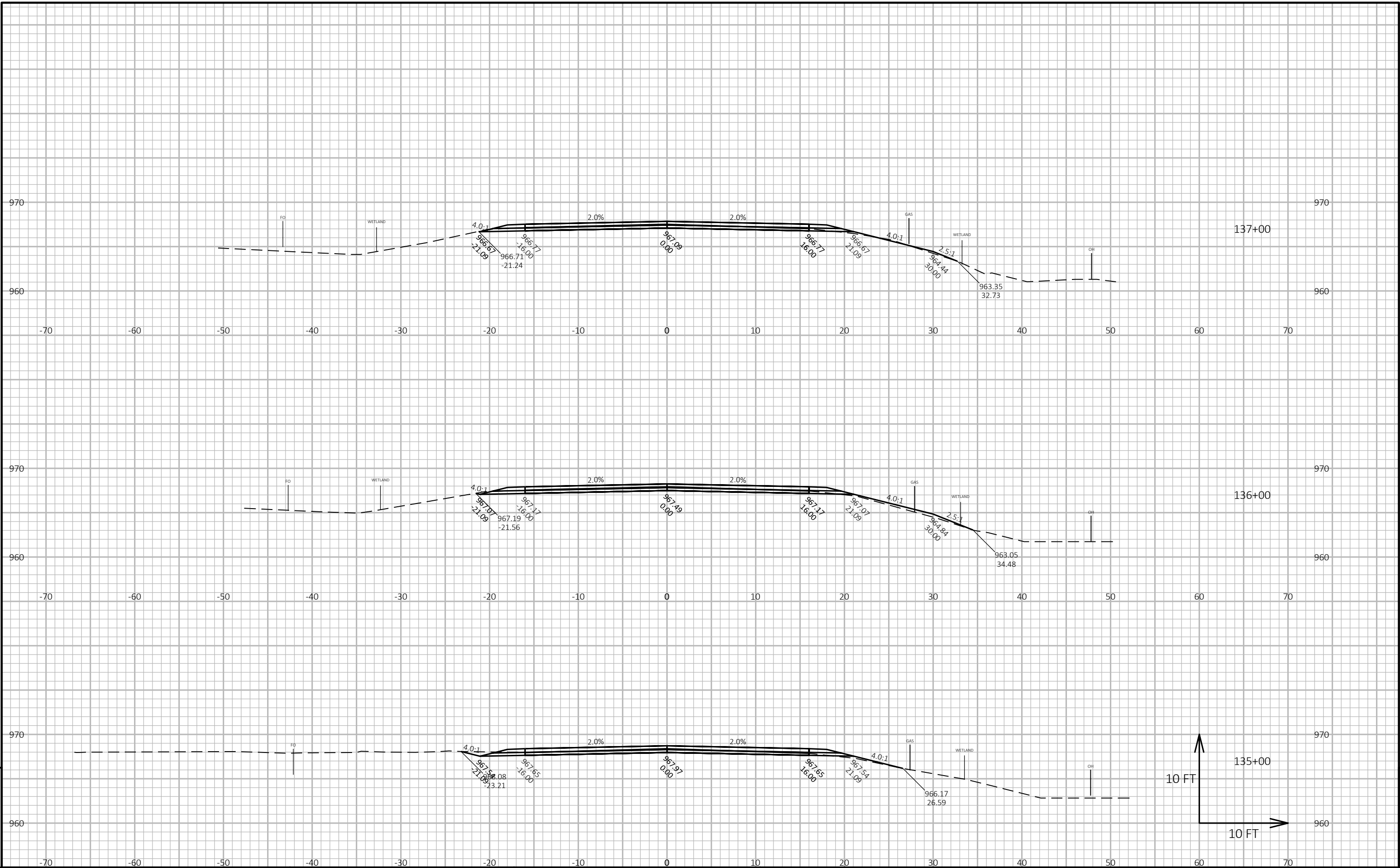
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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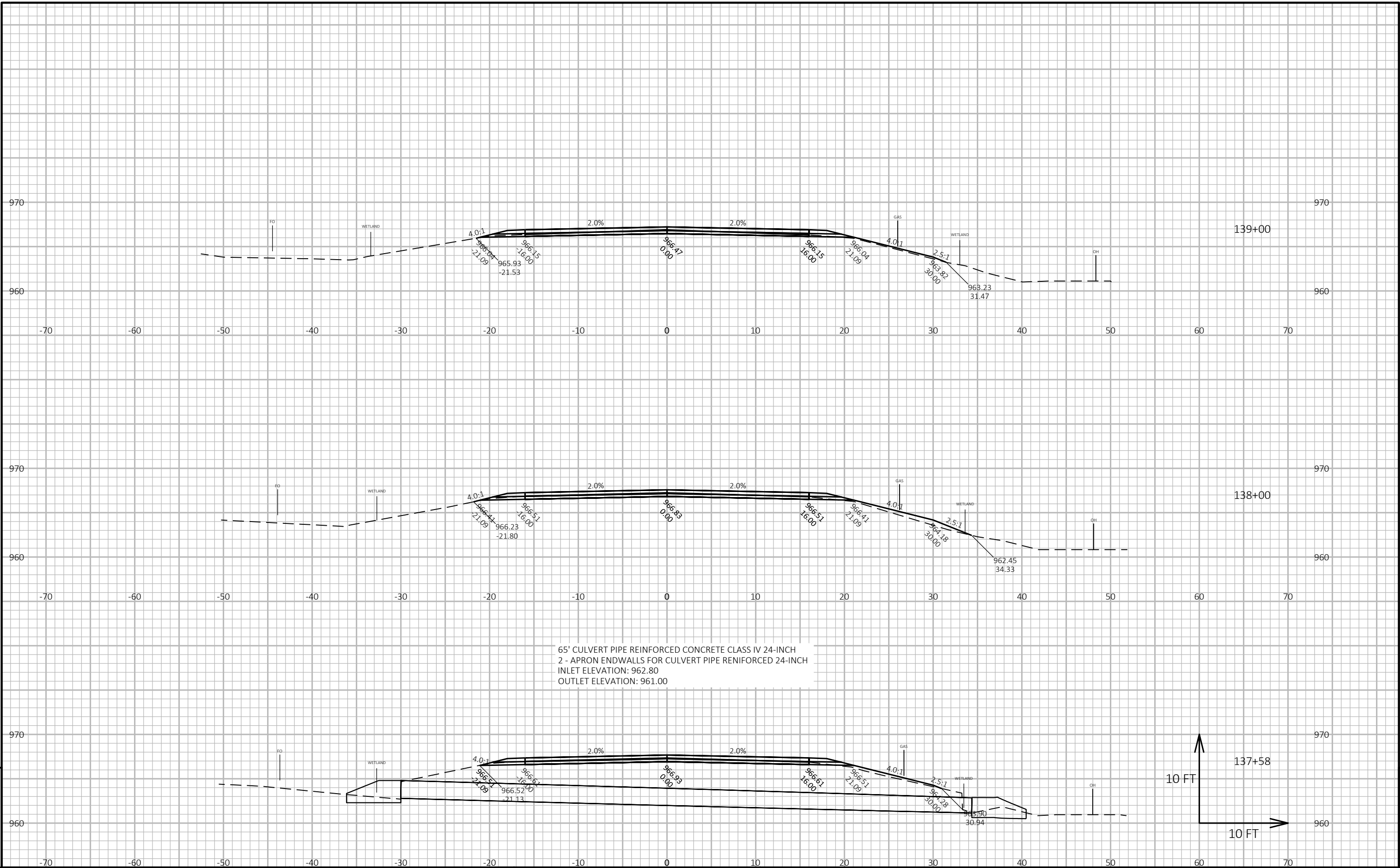
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET 9



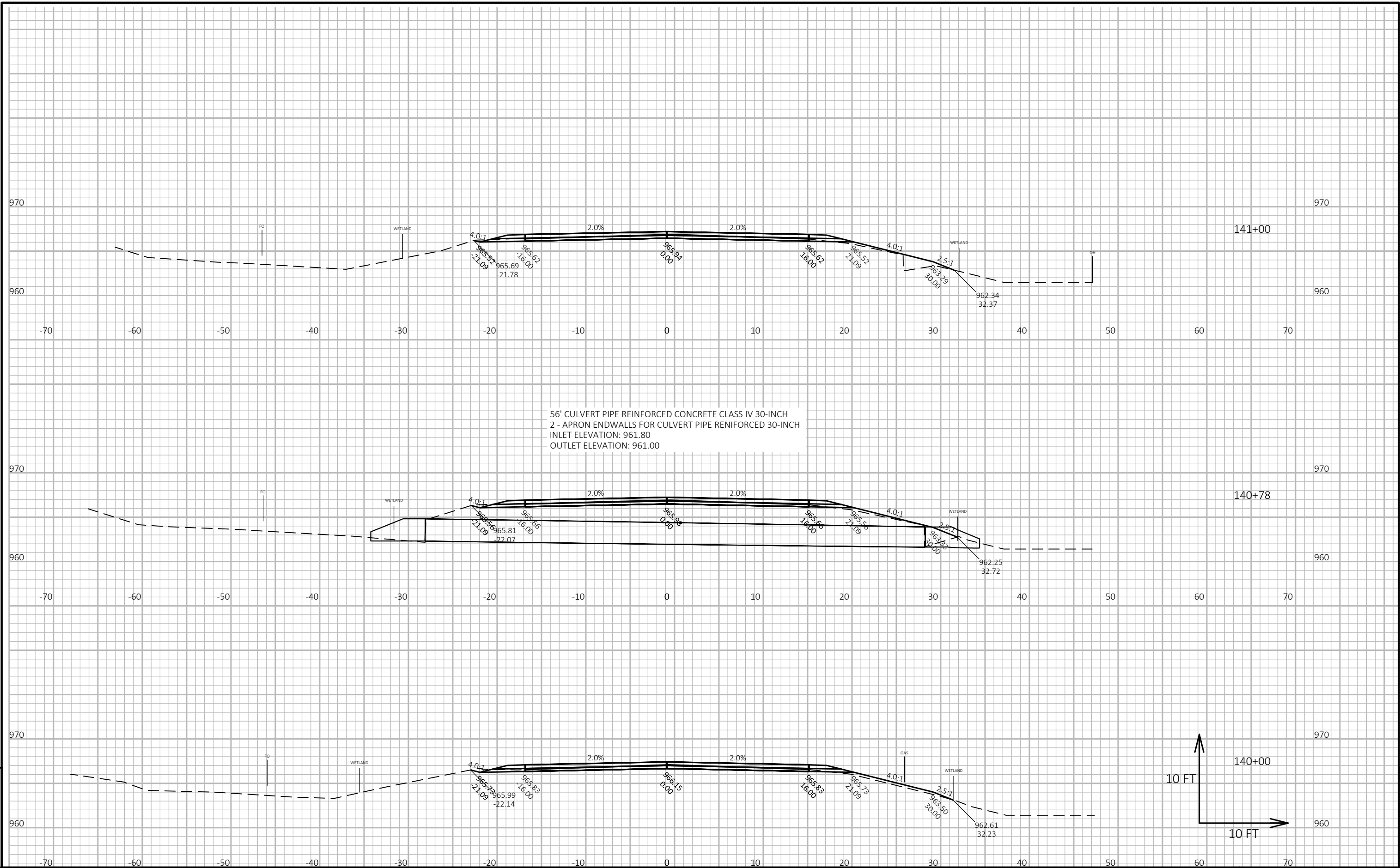
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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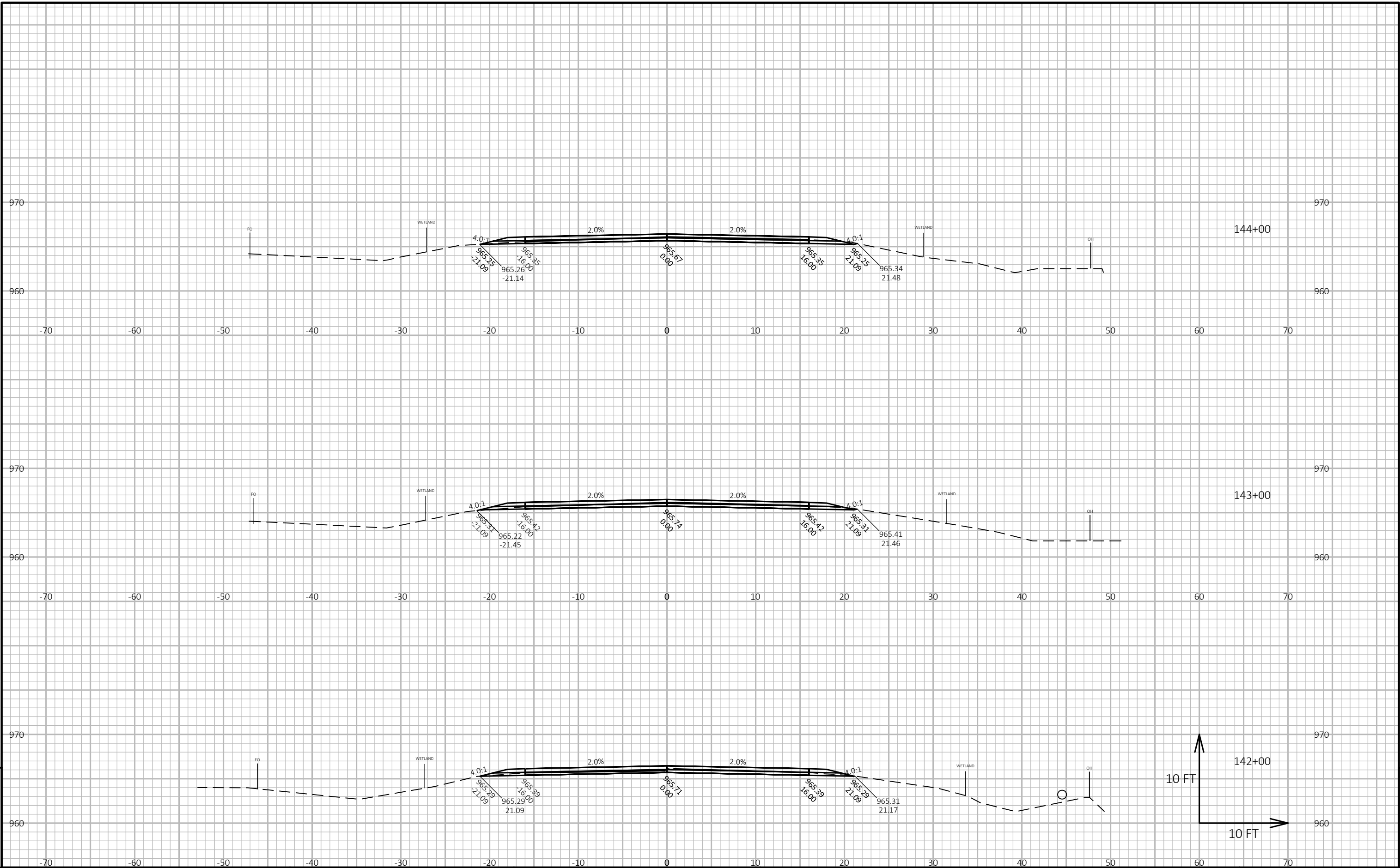
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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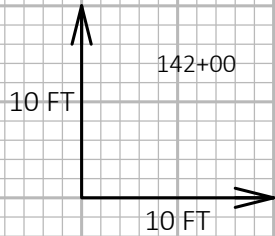


PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

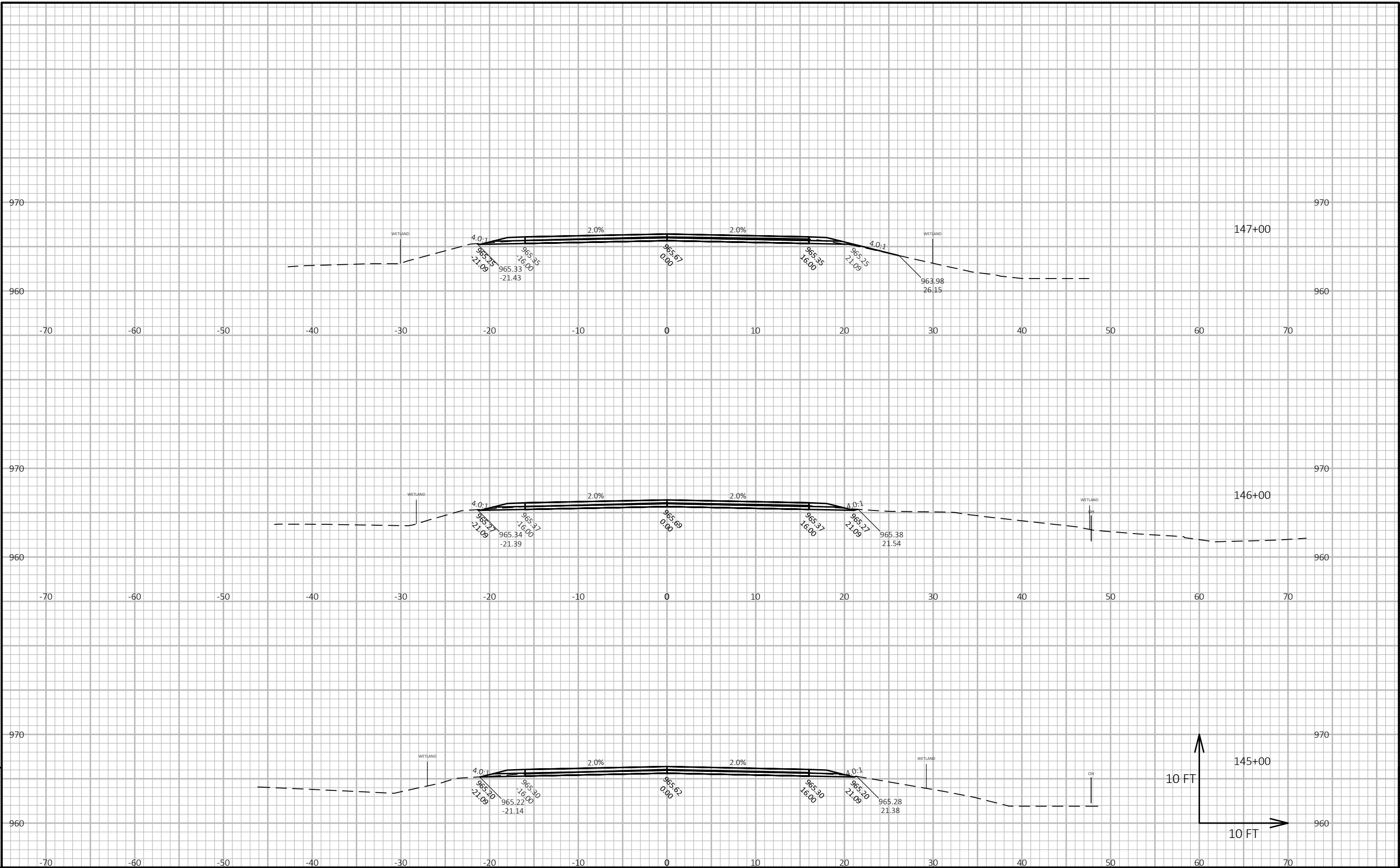


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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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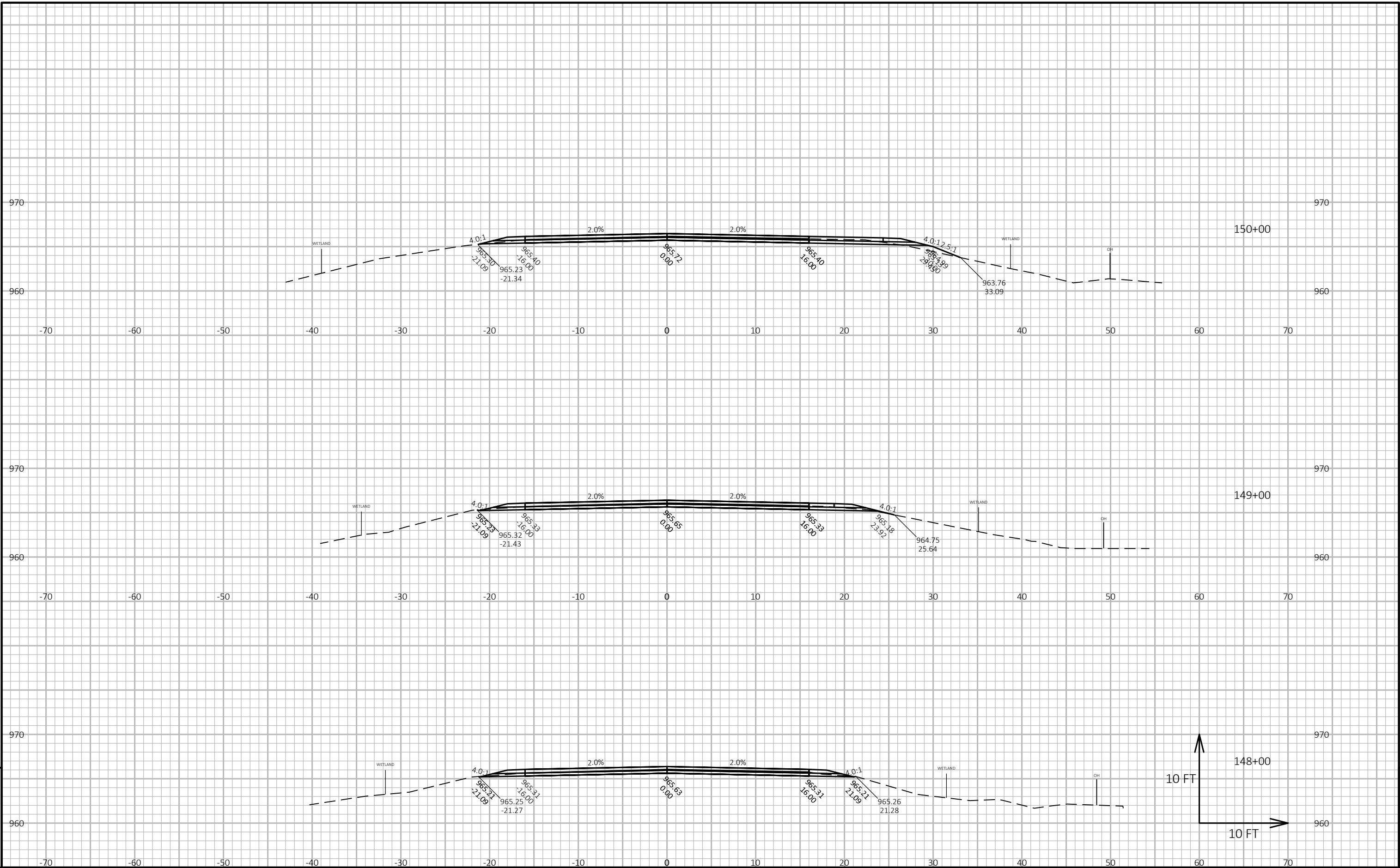


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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

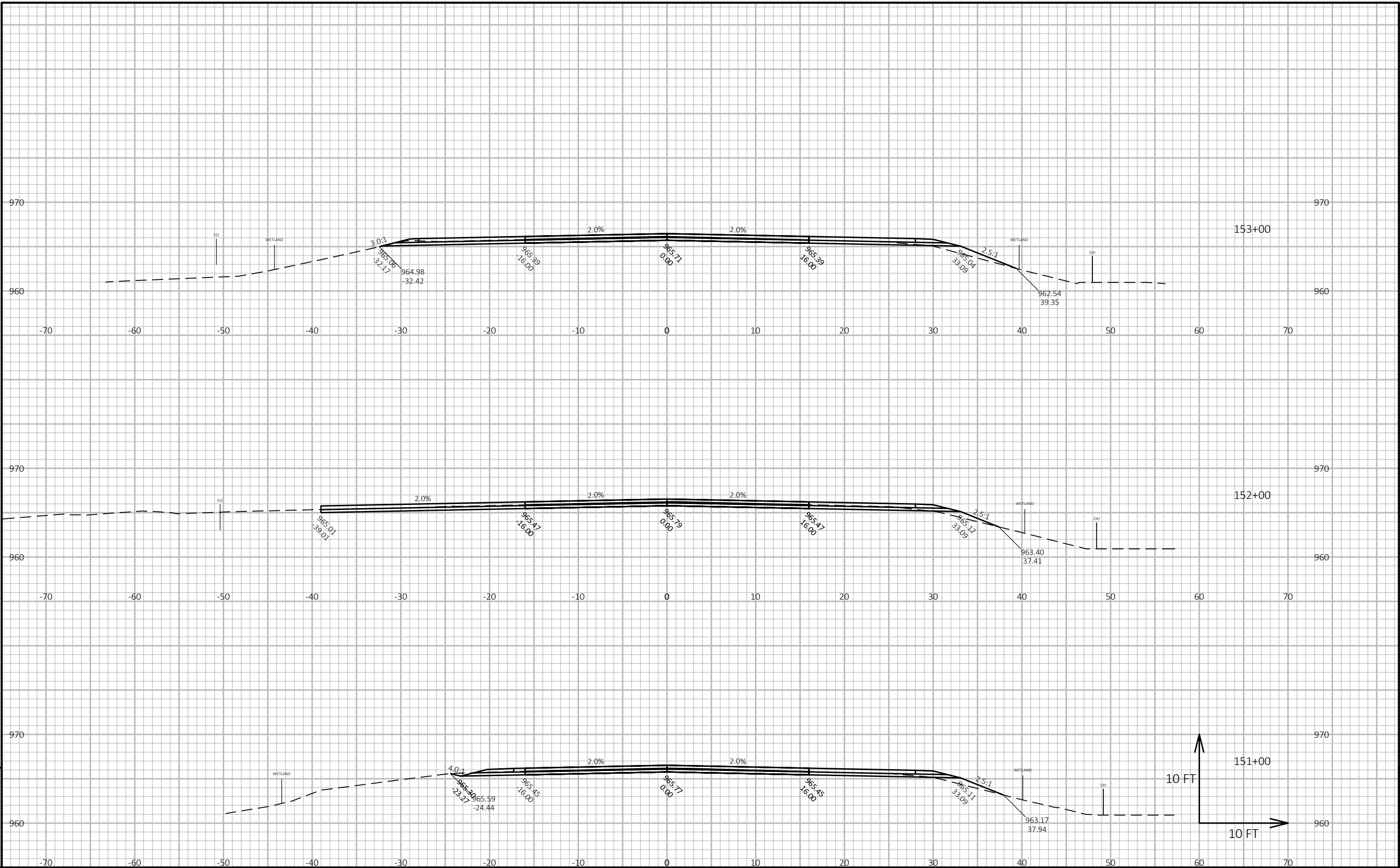
FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2022 12:20 PM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD5 SHEET 49



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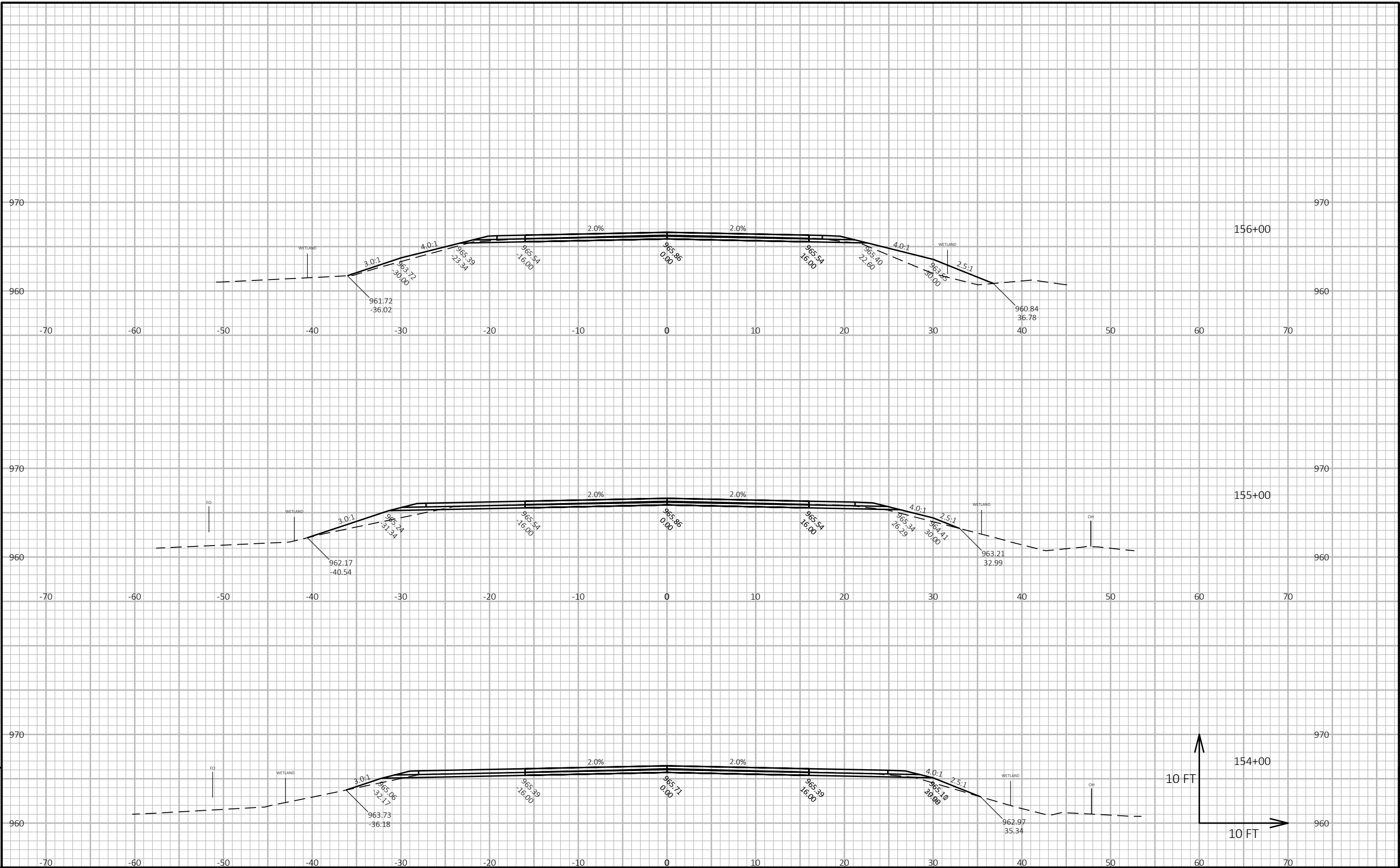
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



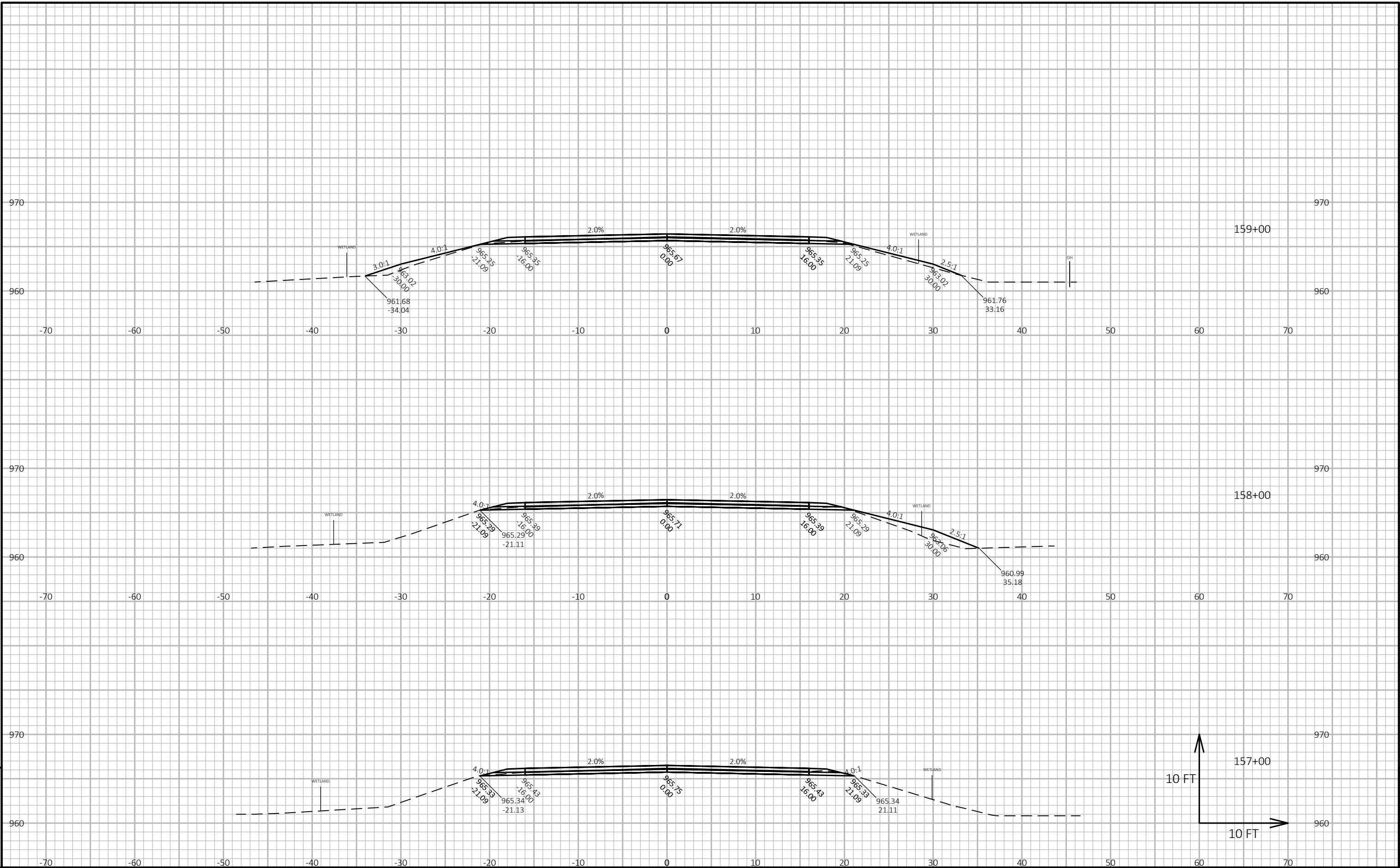
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET 9

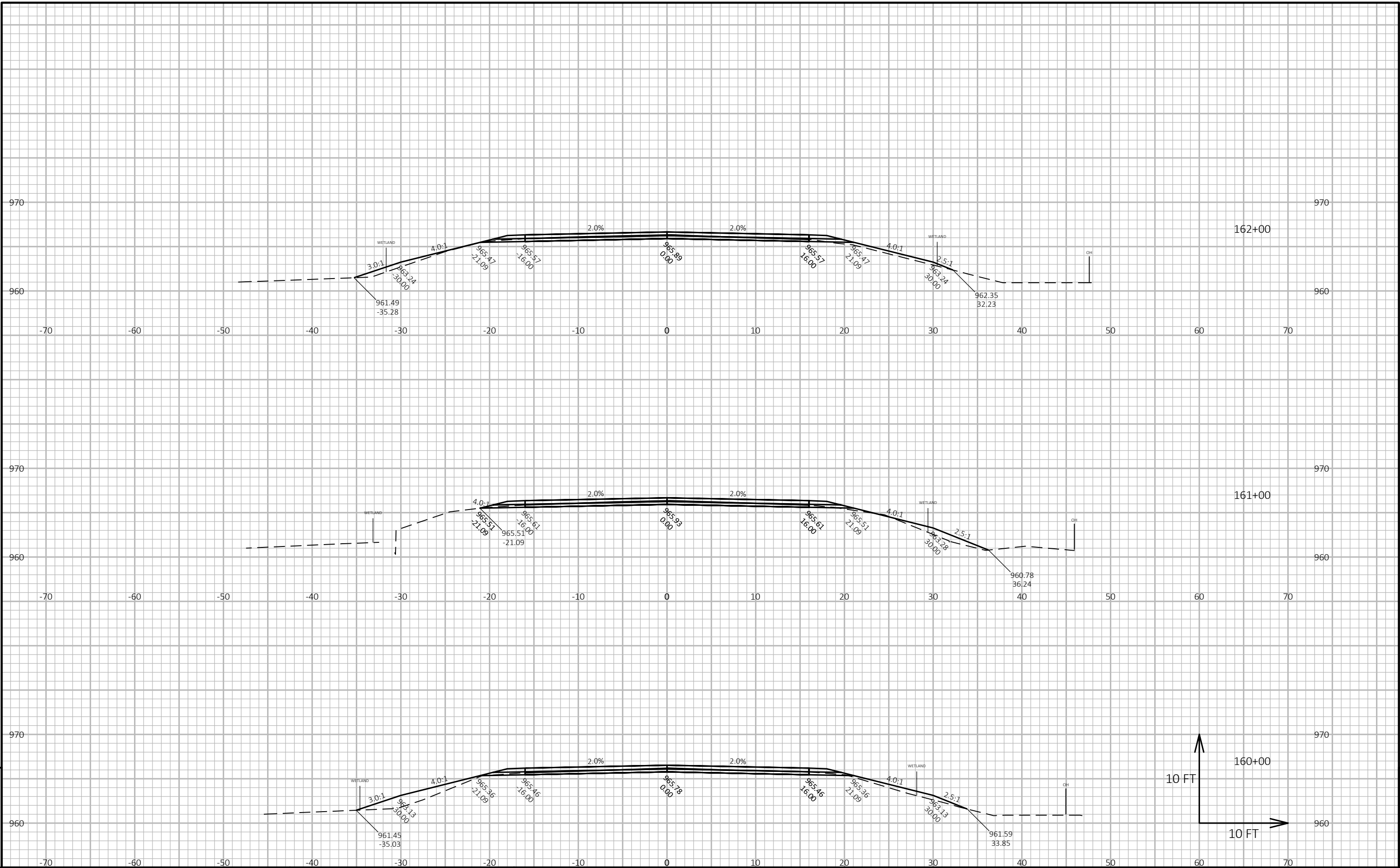


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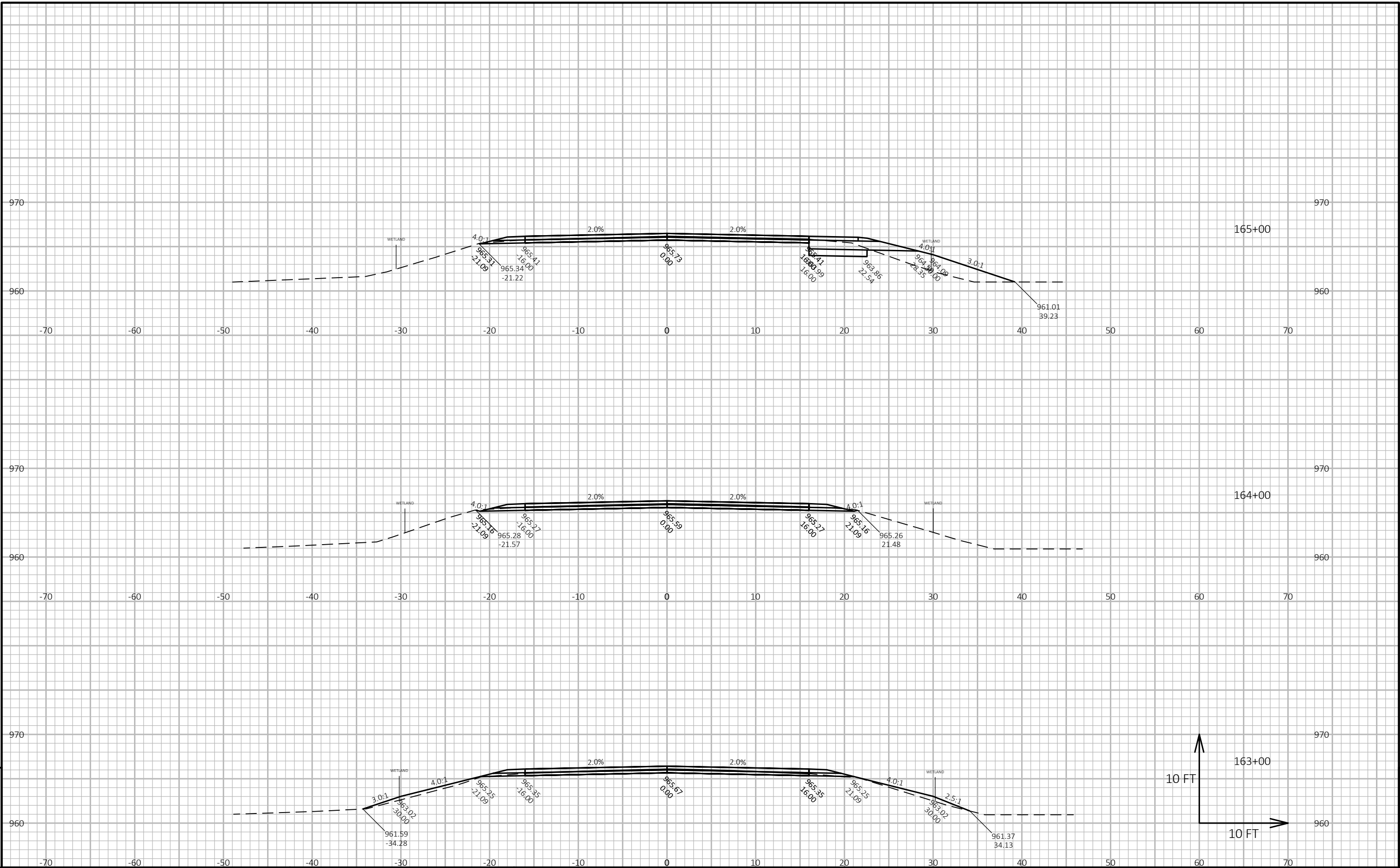
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2022 12:23 PM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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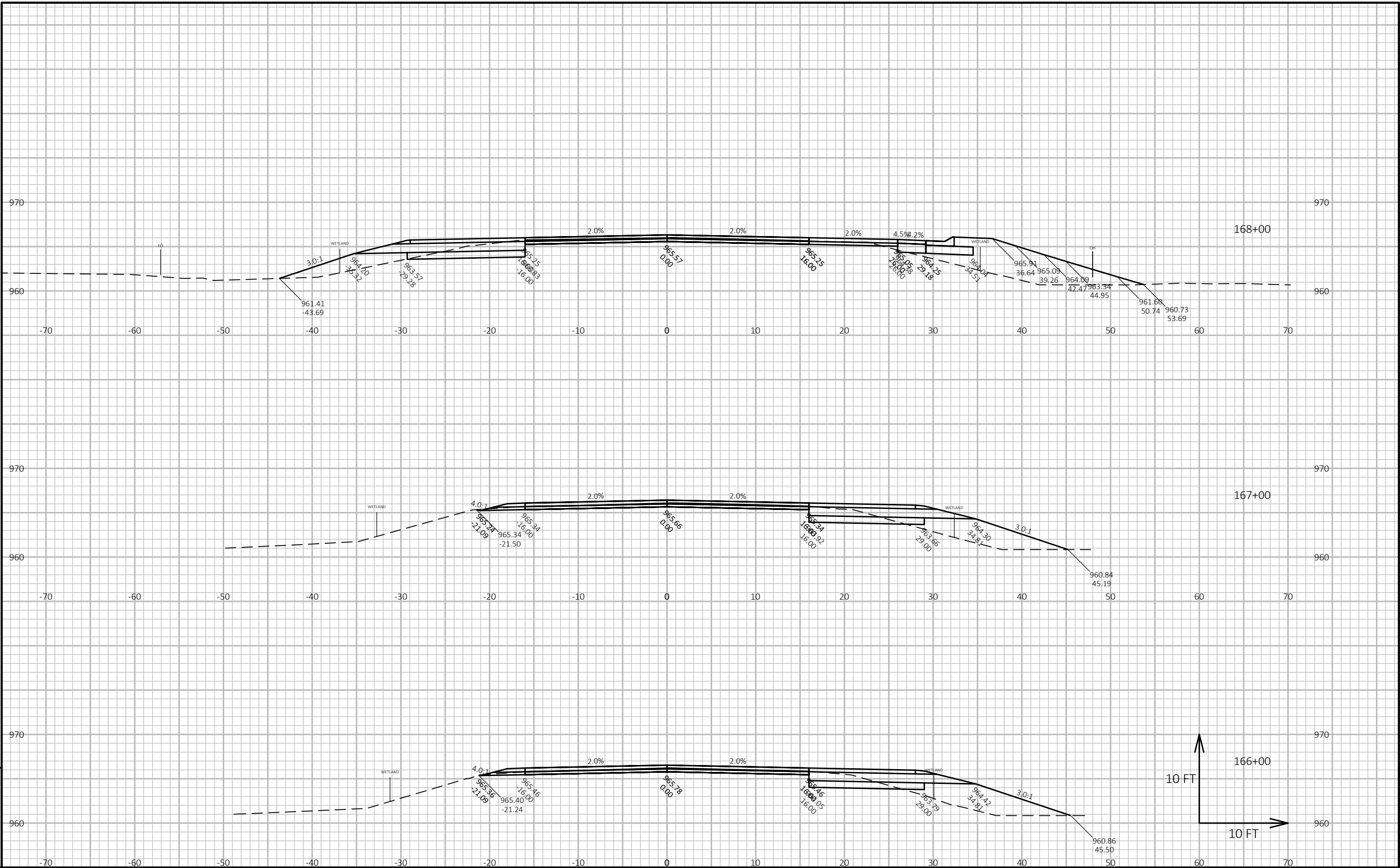
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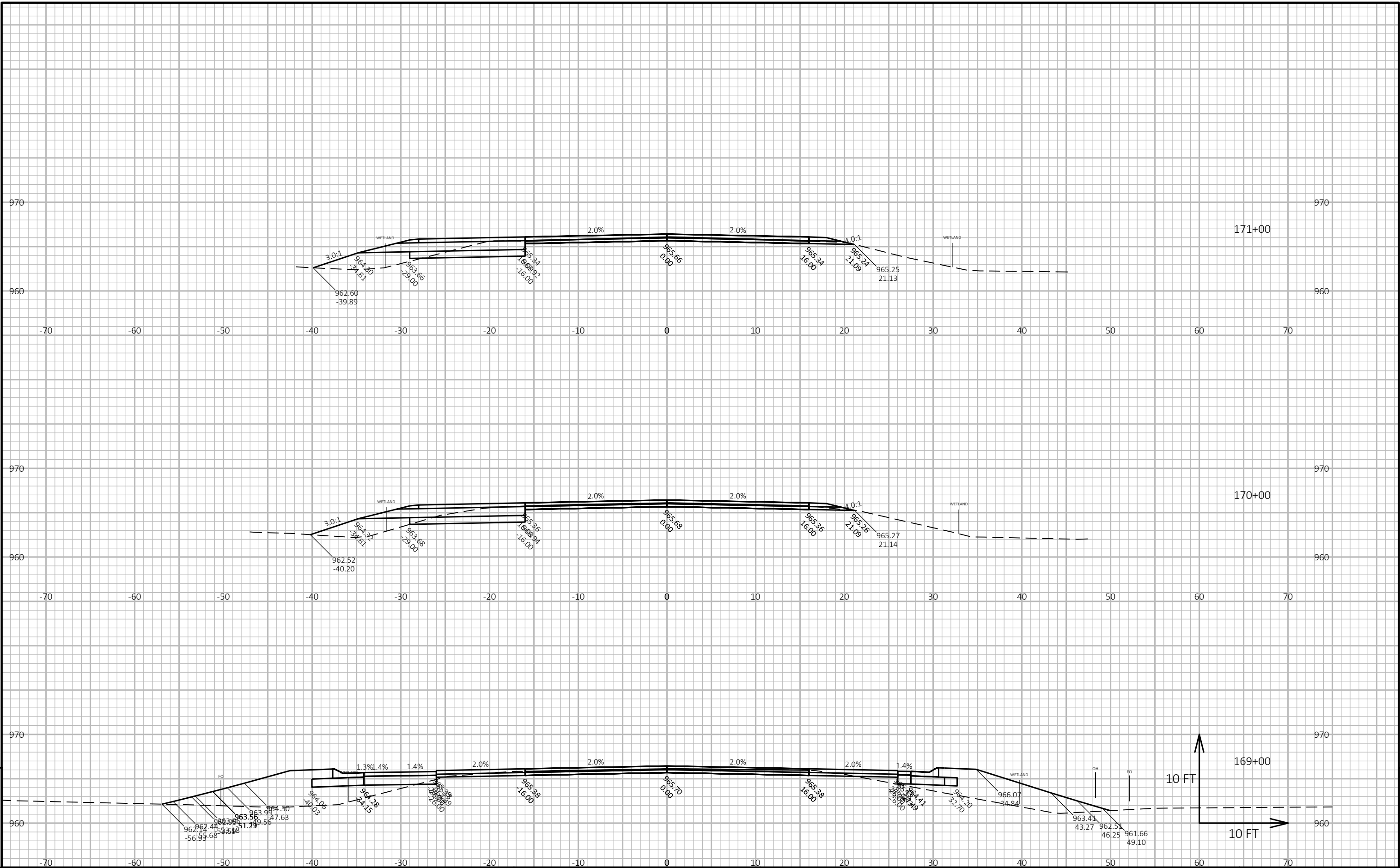
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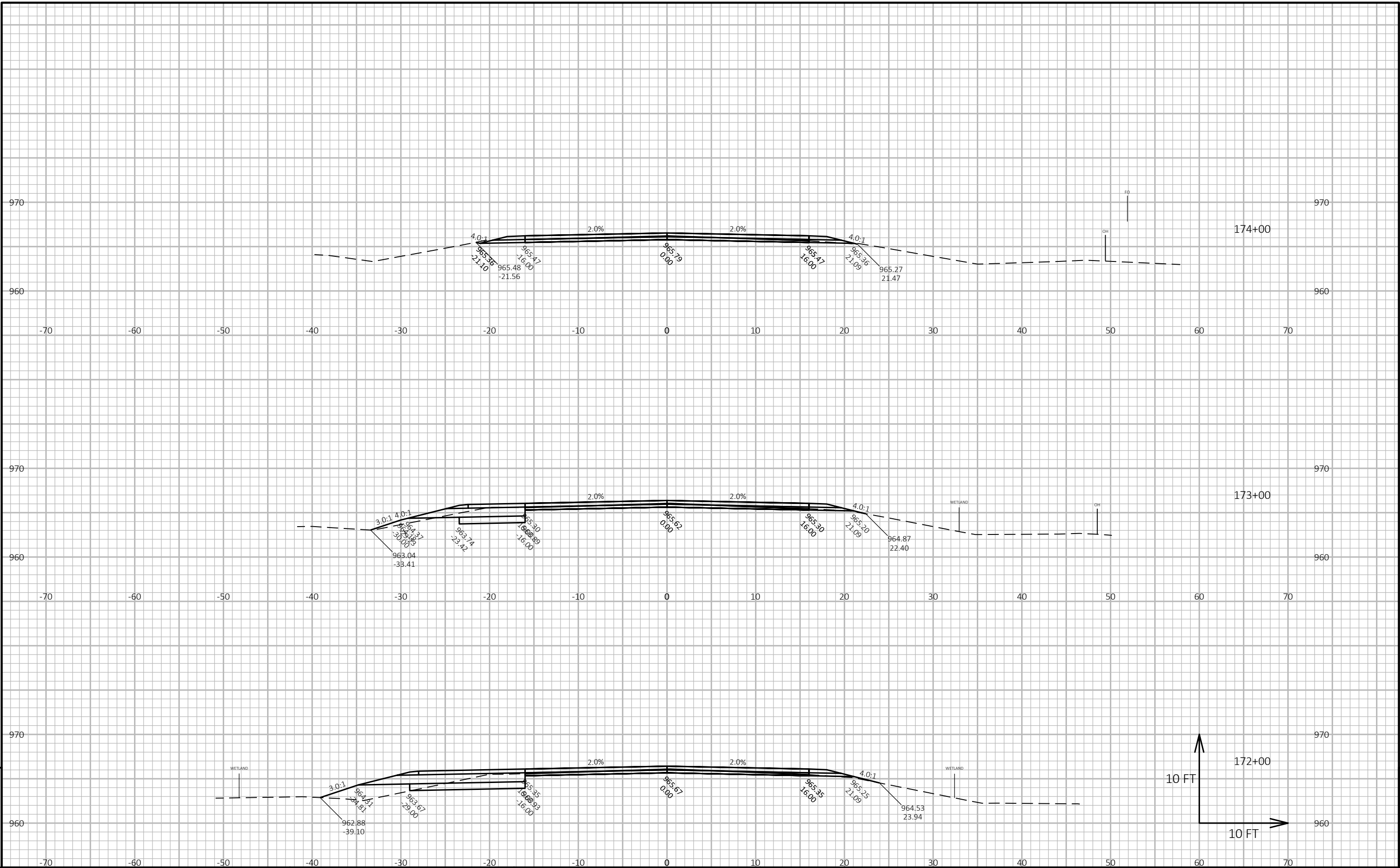
LAYOUT NAME - Section Sheet - (48)



PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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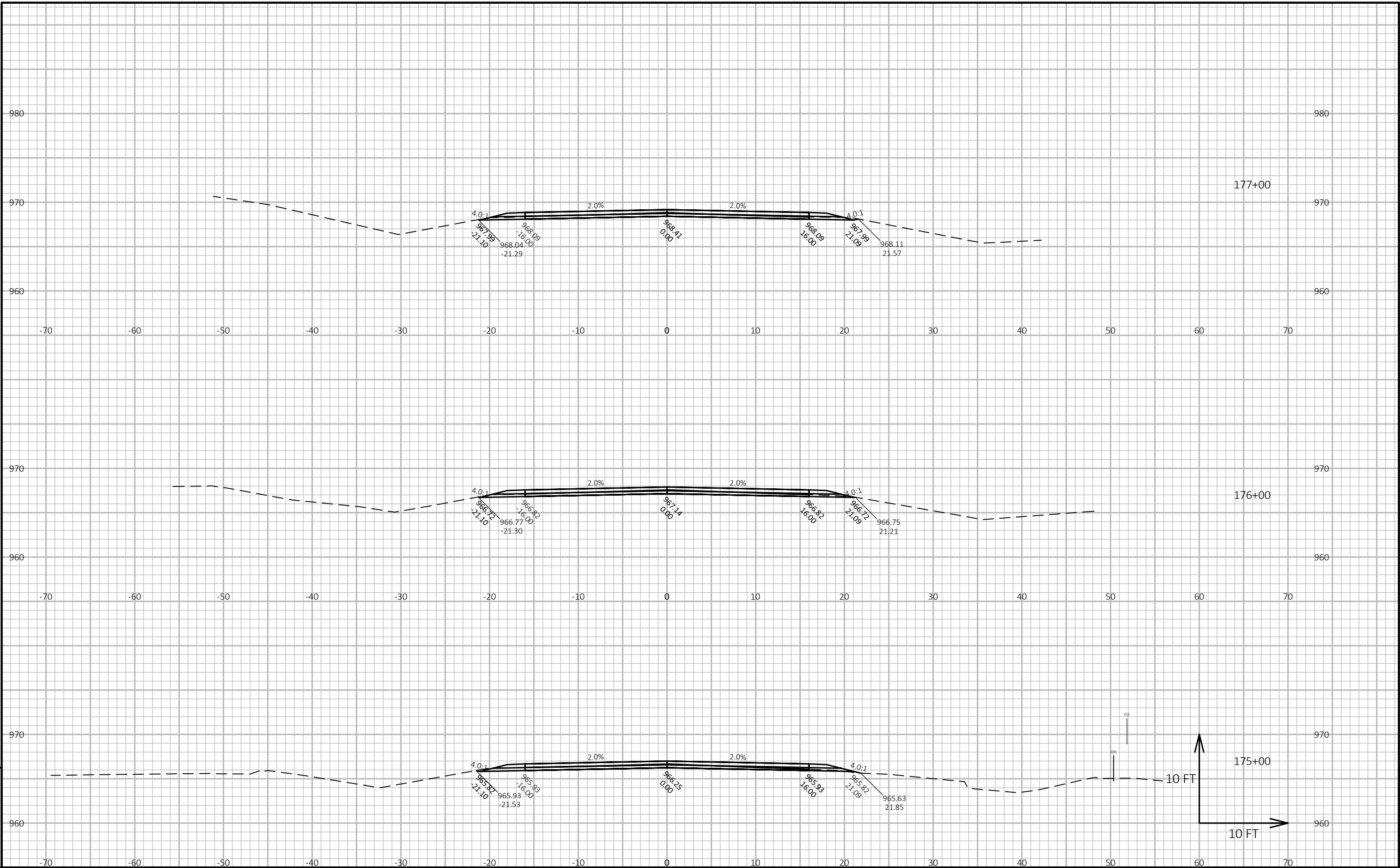
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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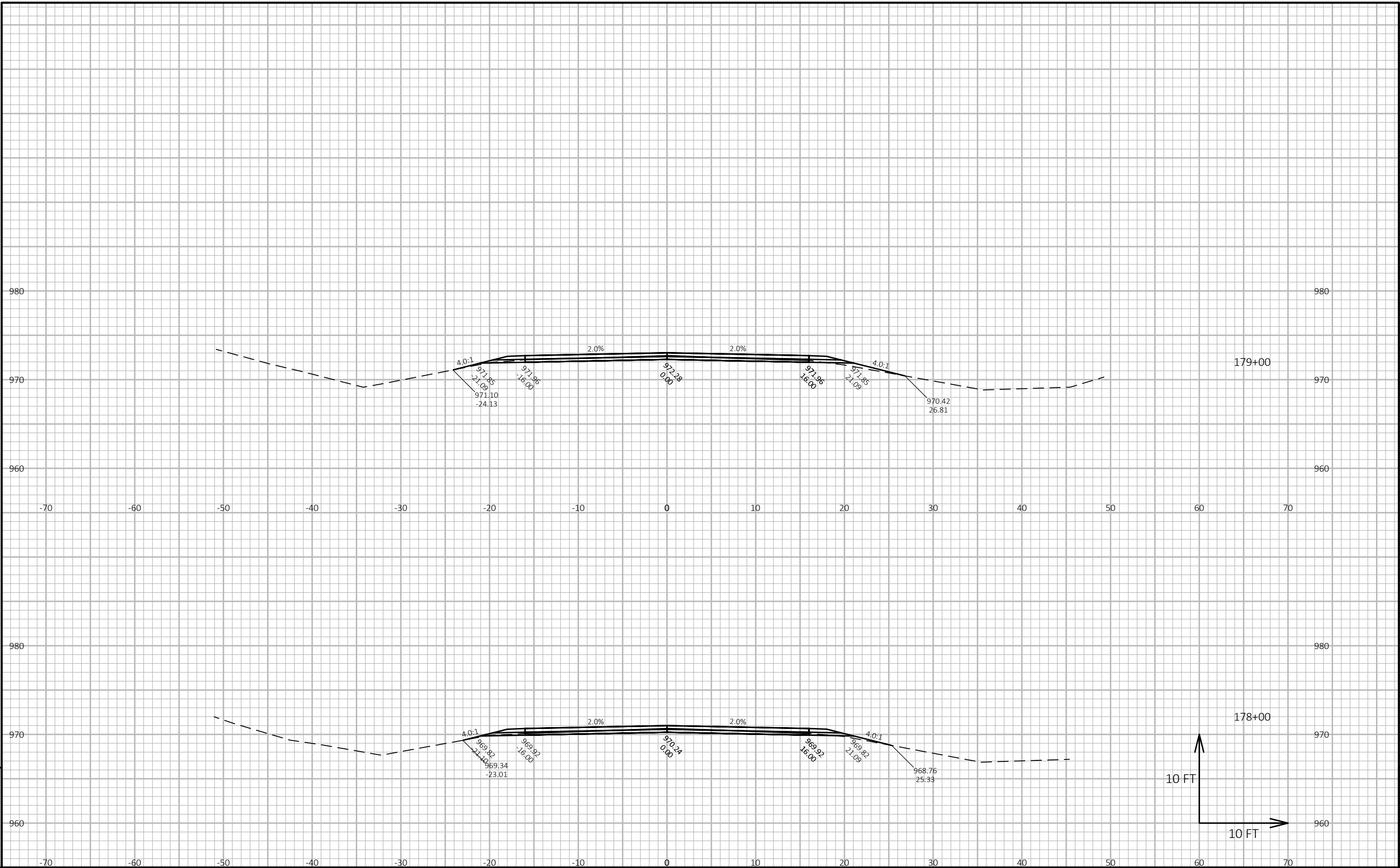
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

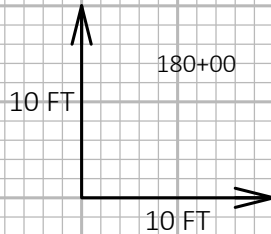
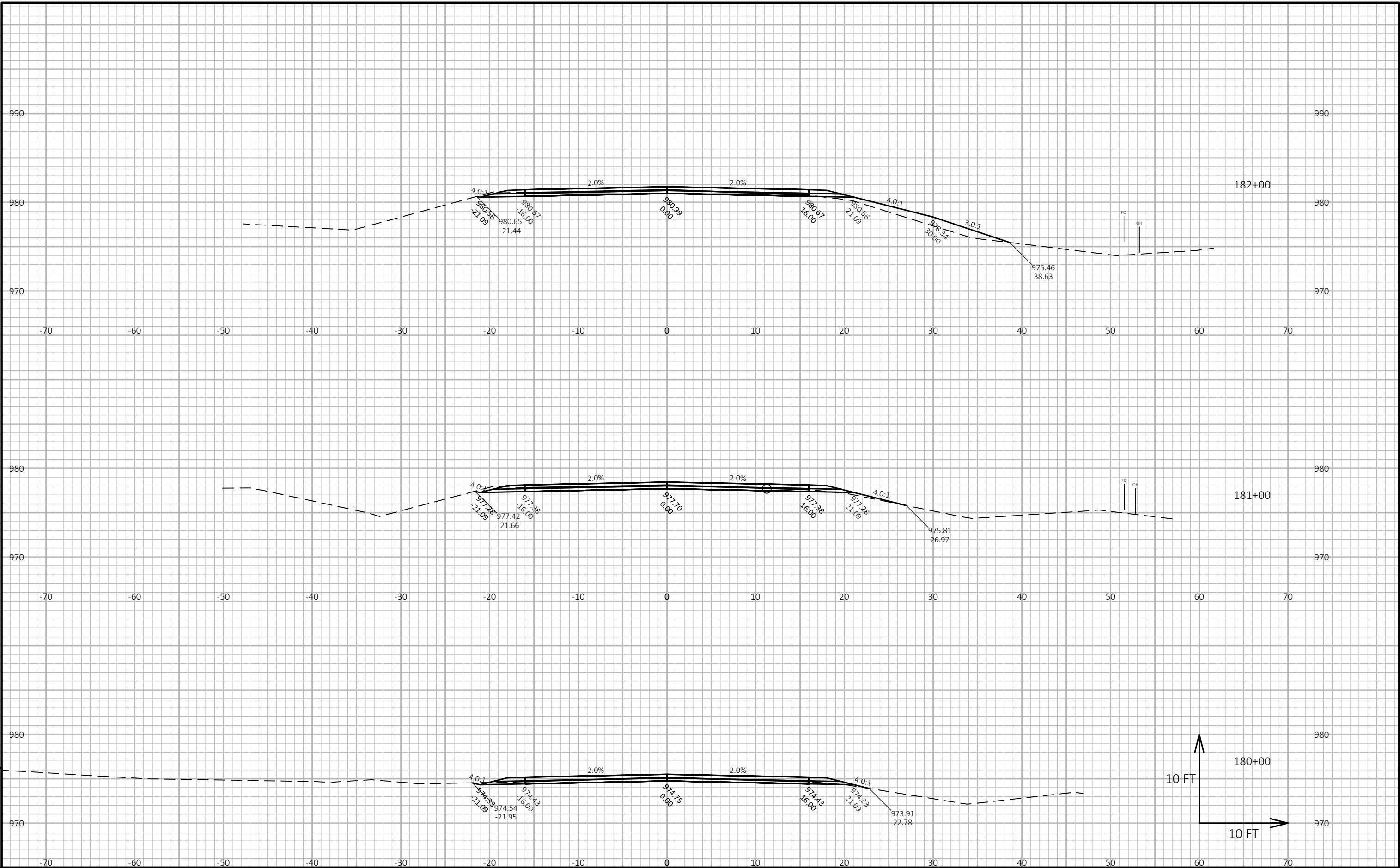


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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

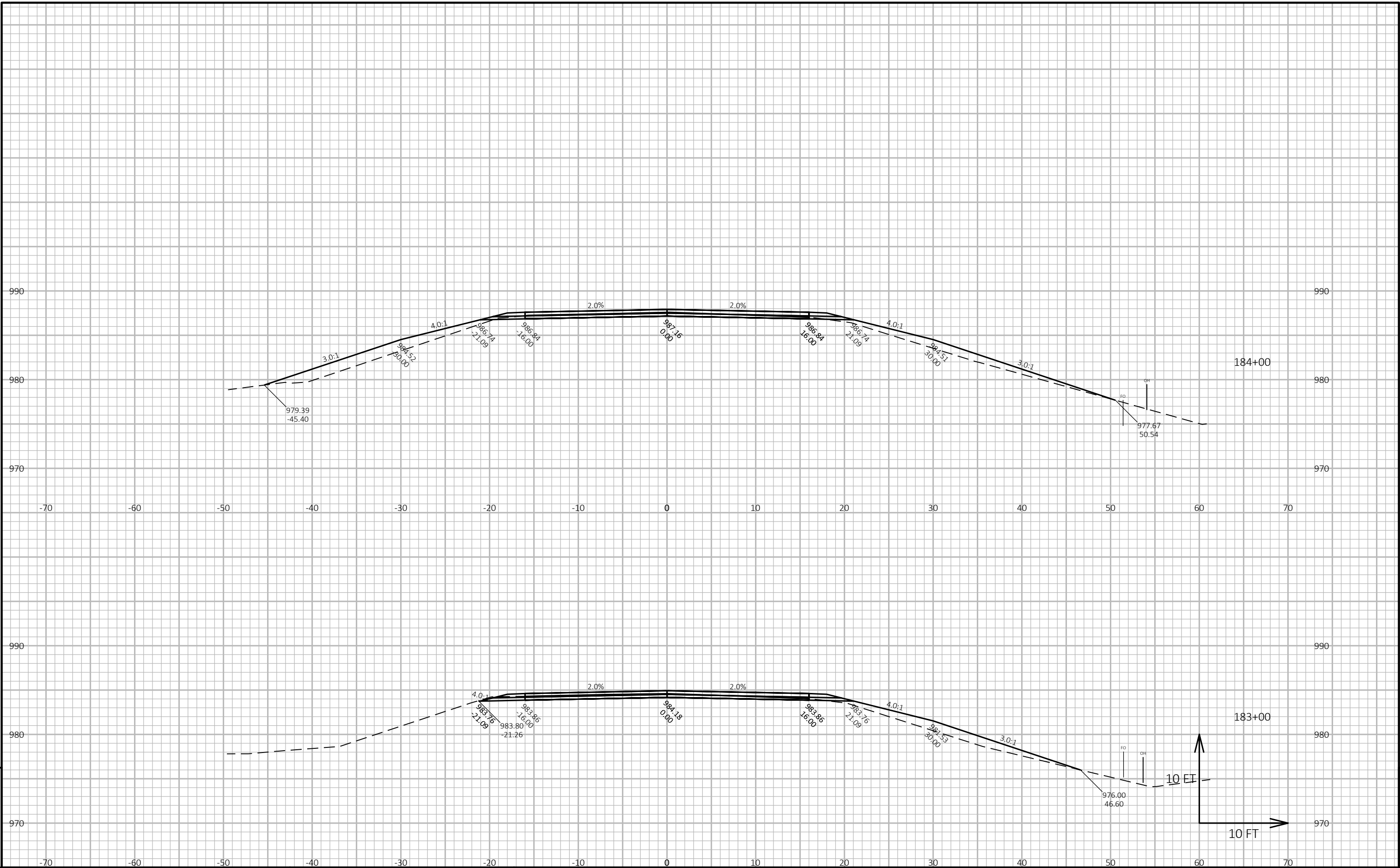
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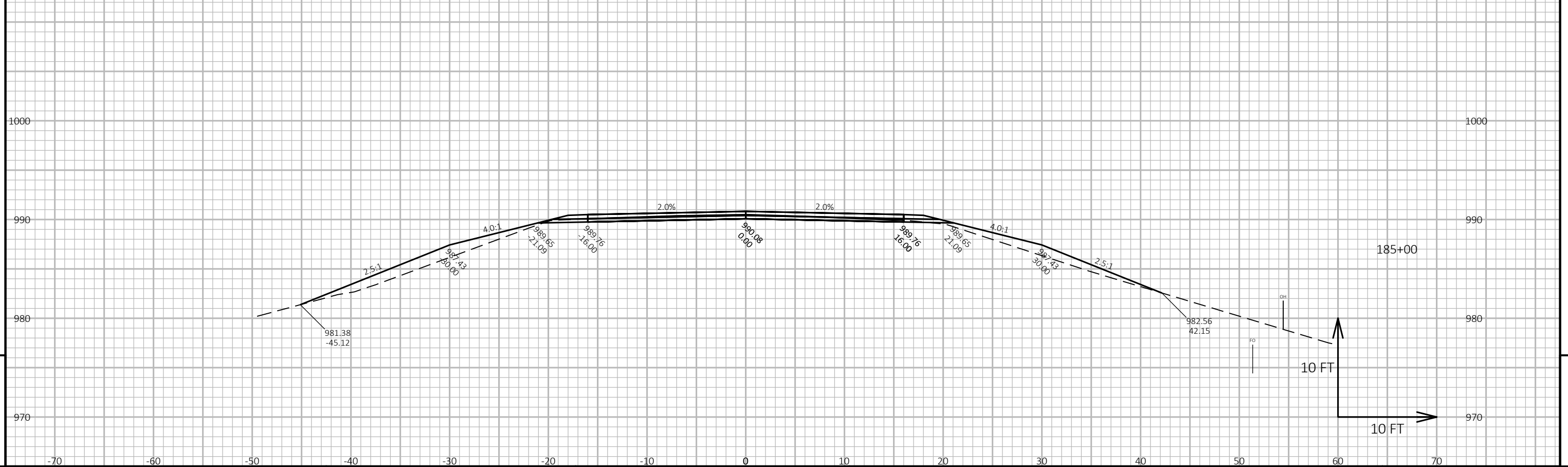
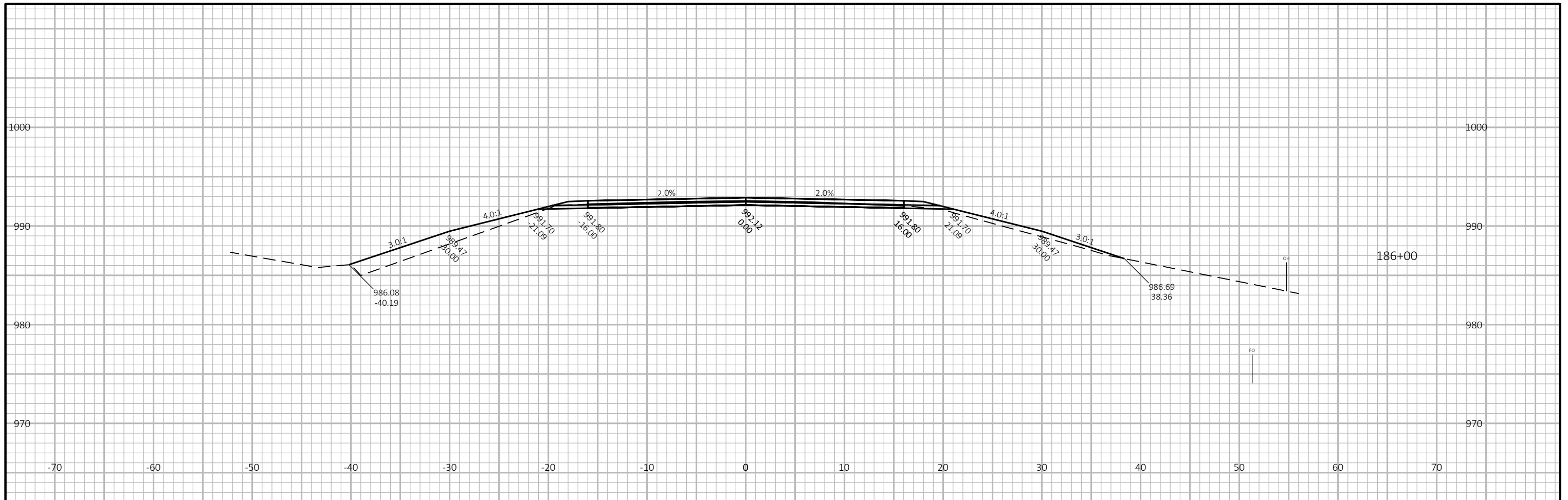
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



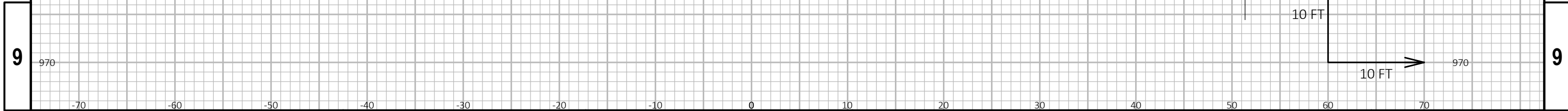
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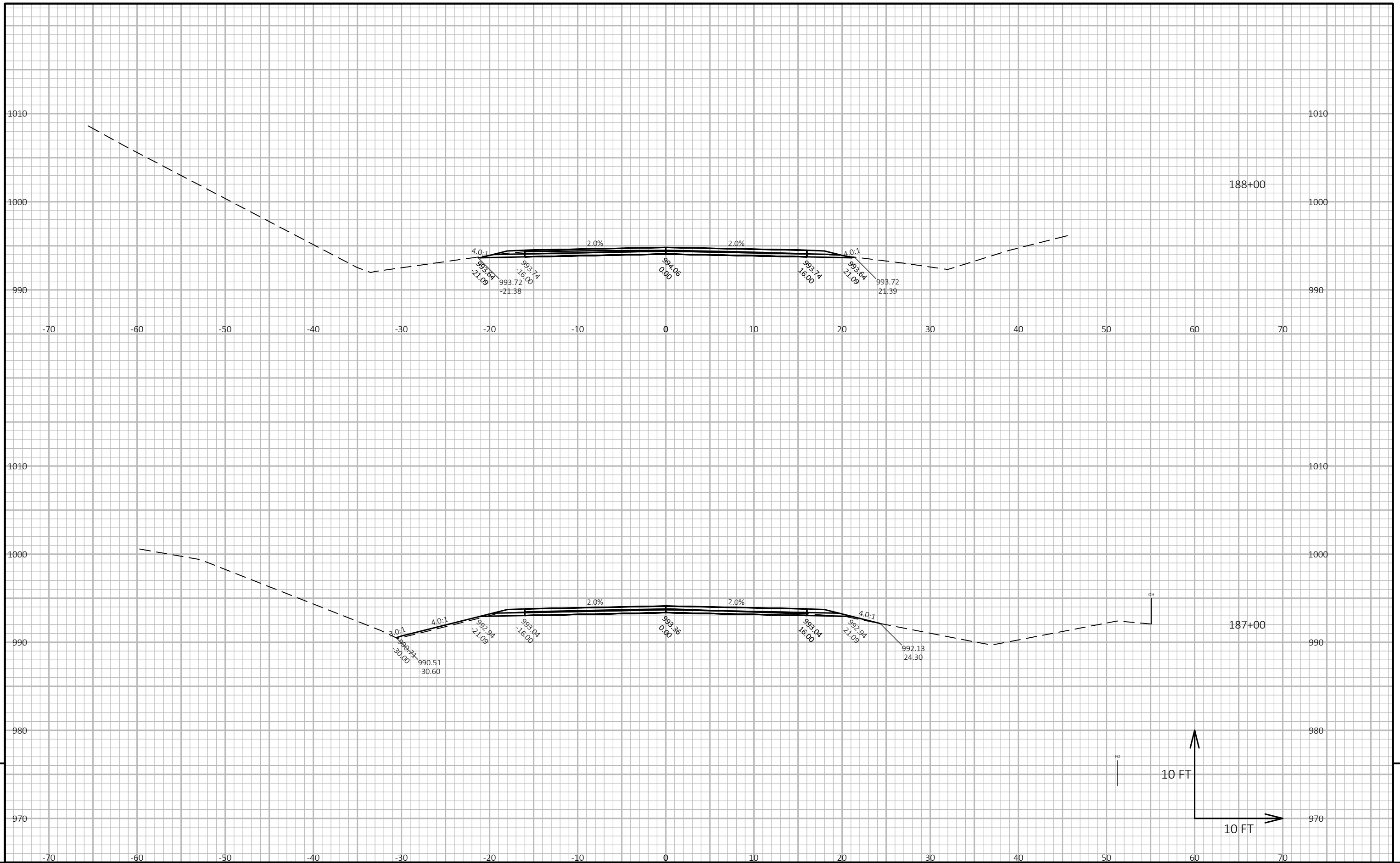
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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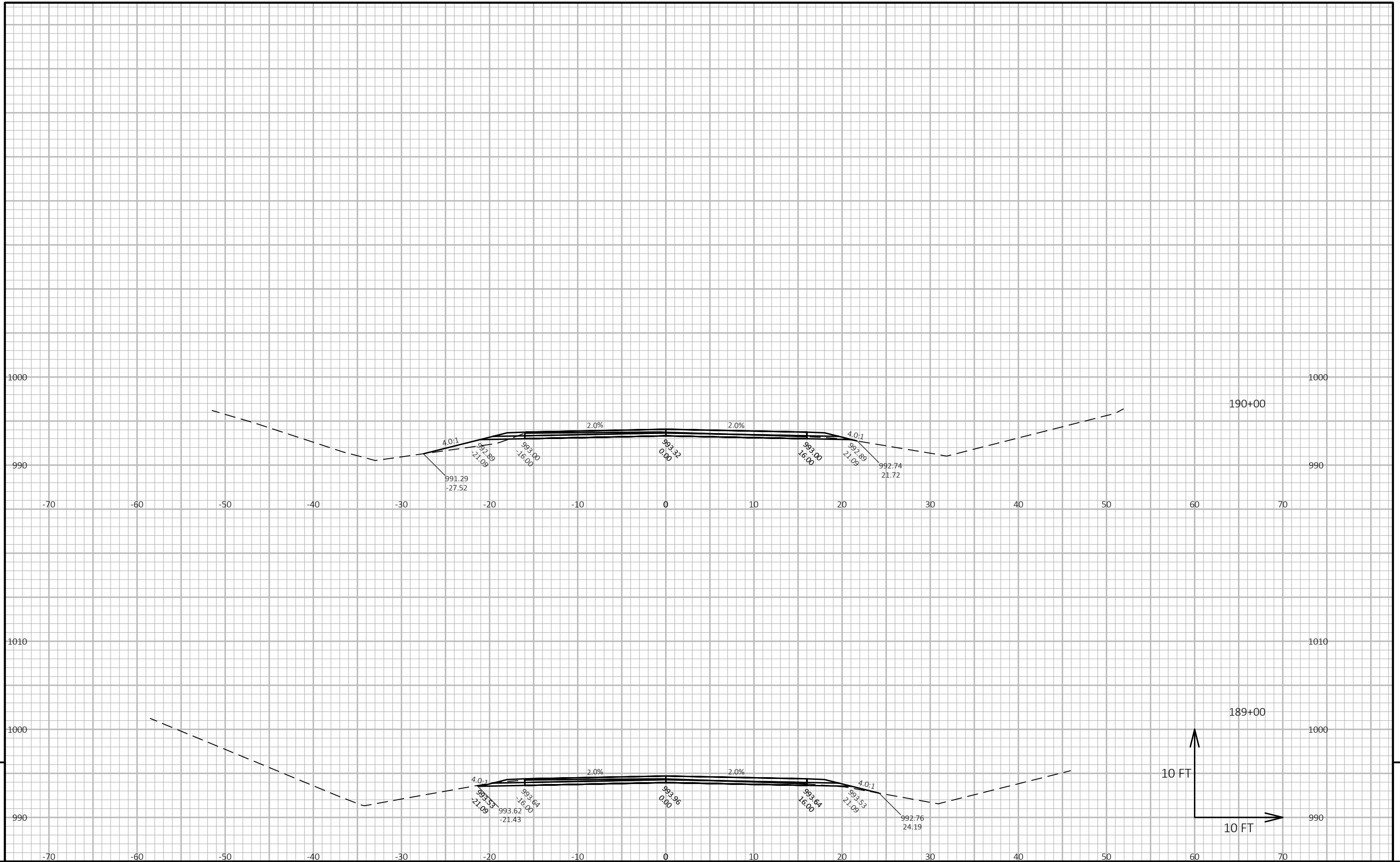


PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET
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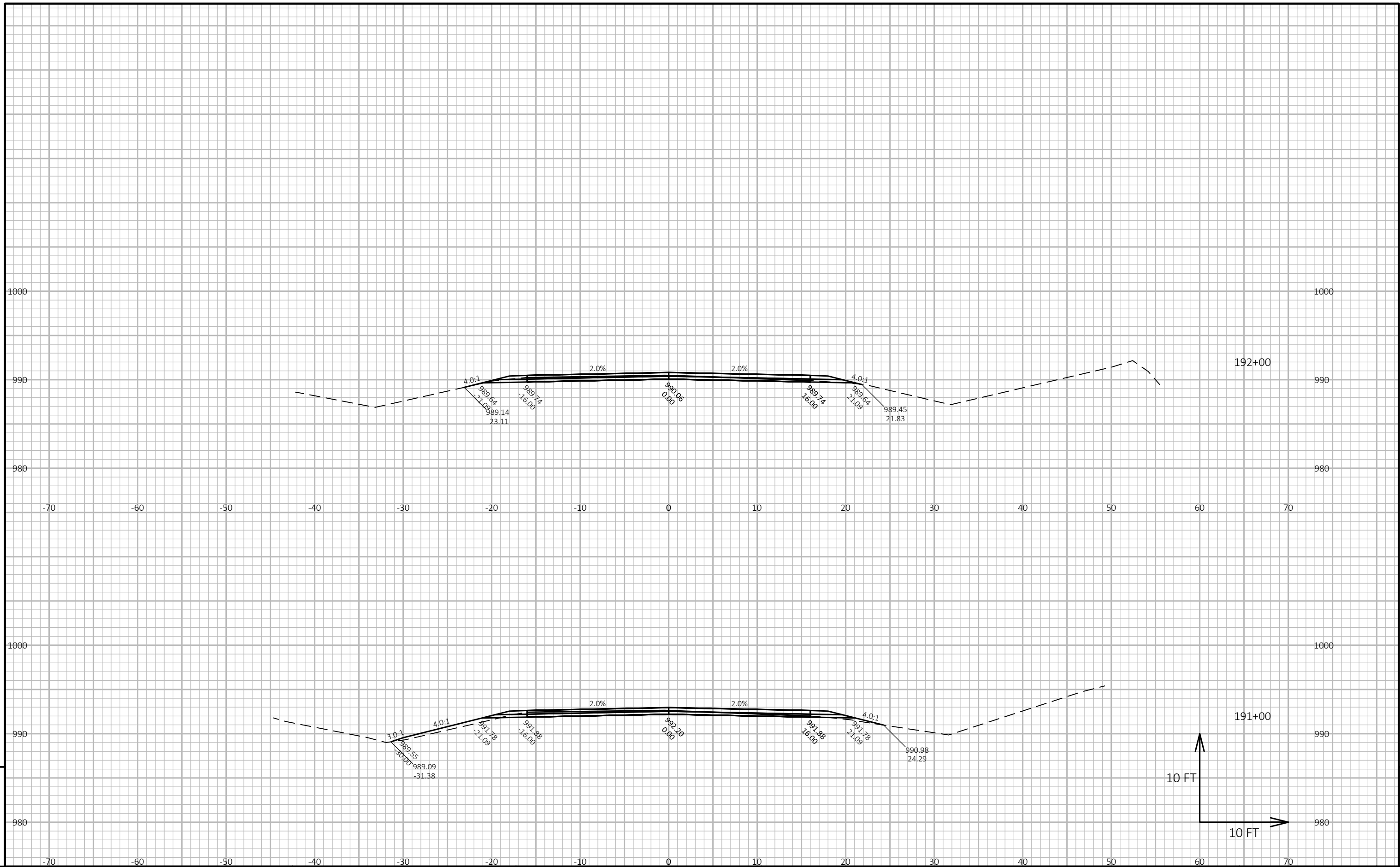
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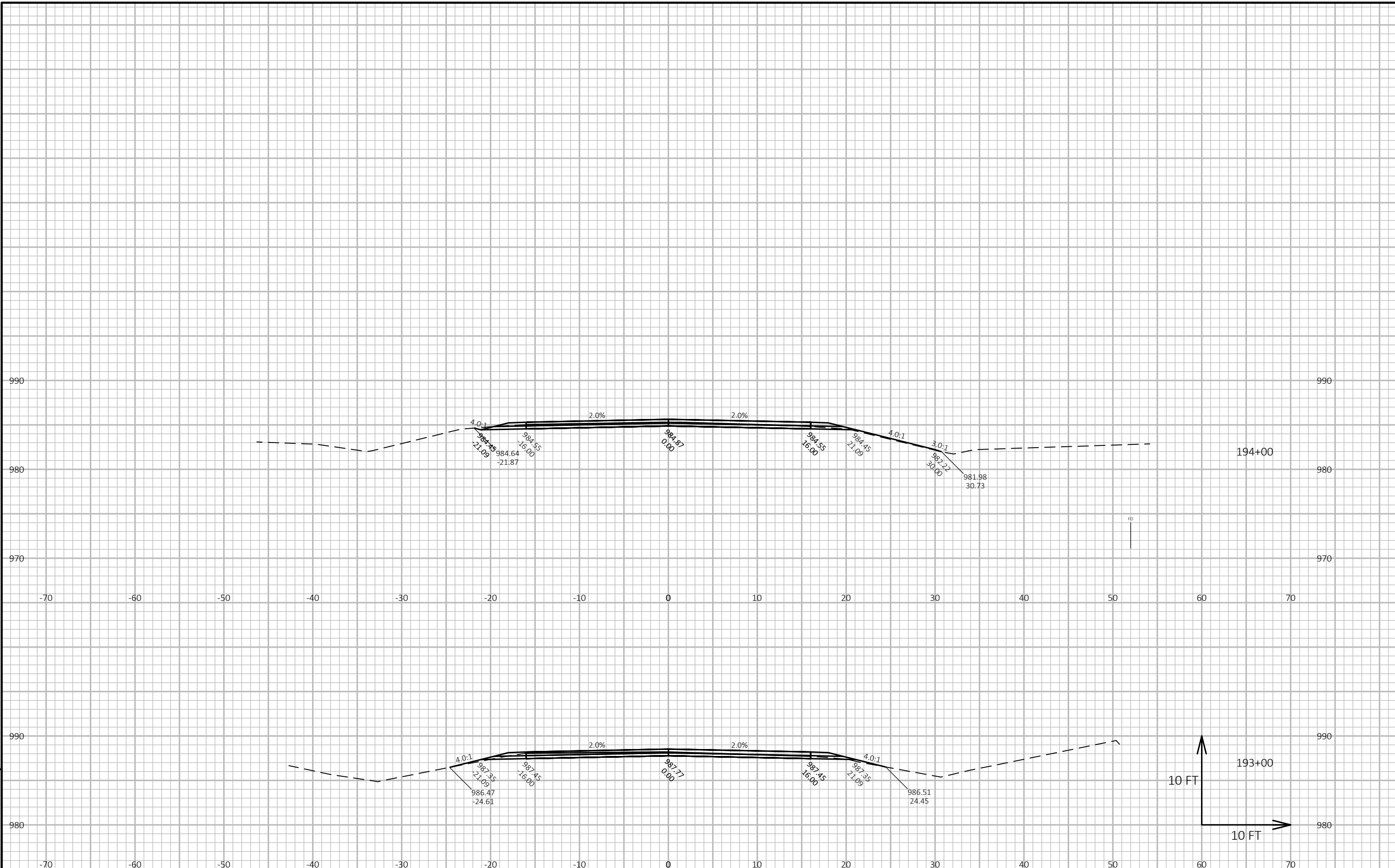
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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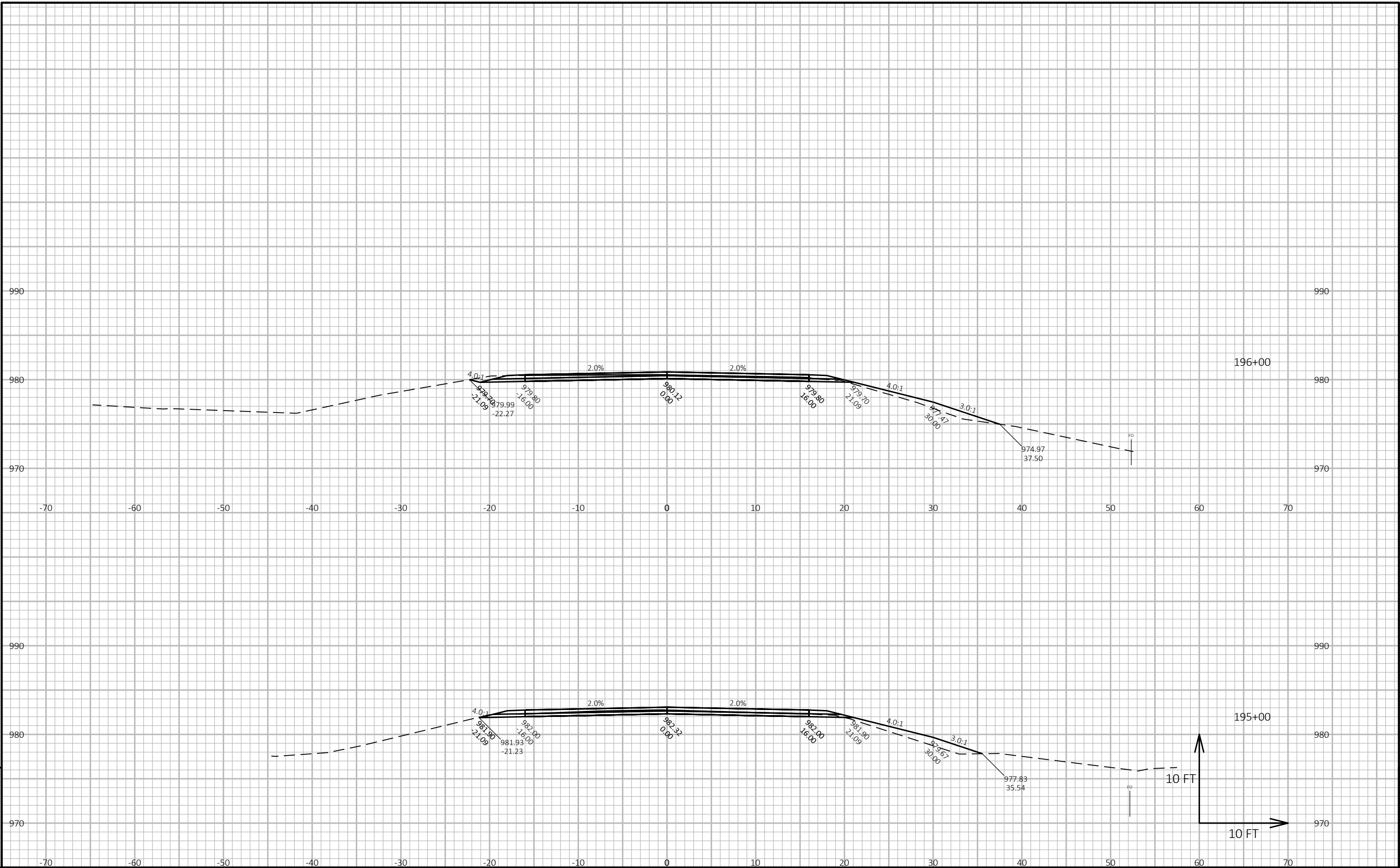
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET 9



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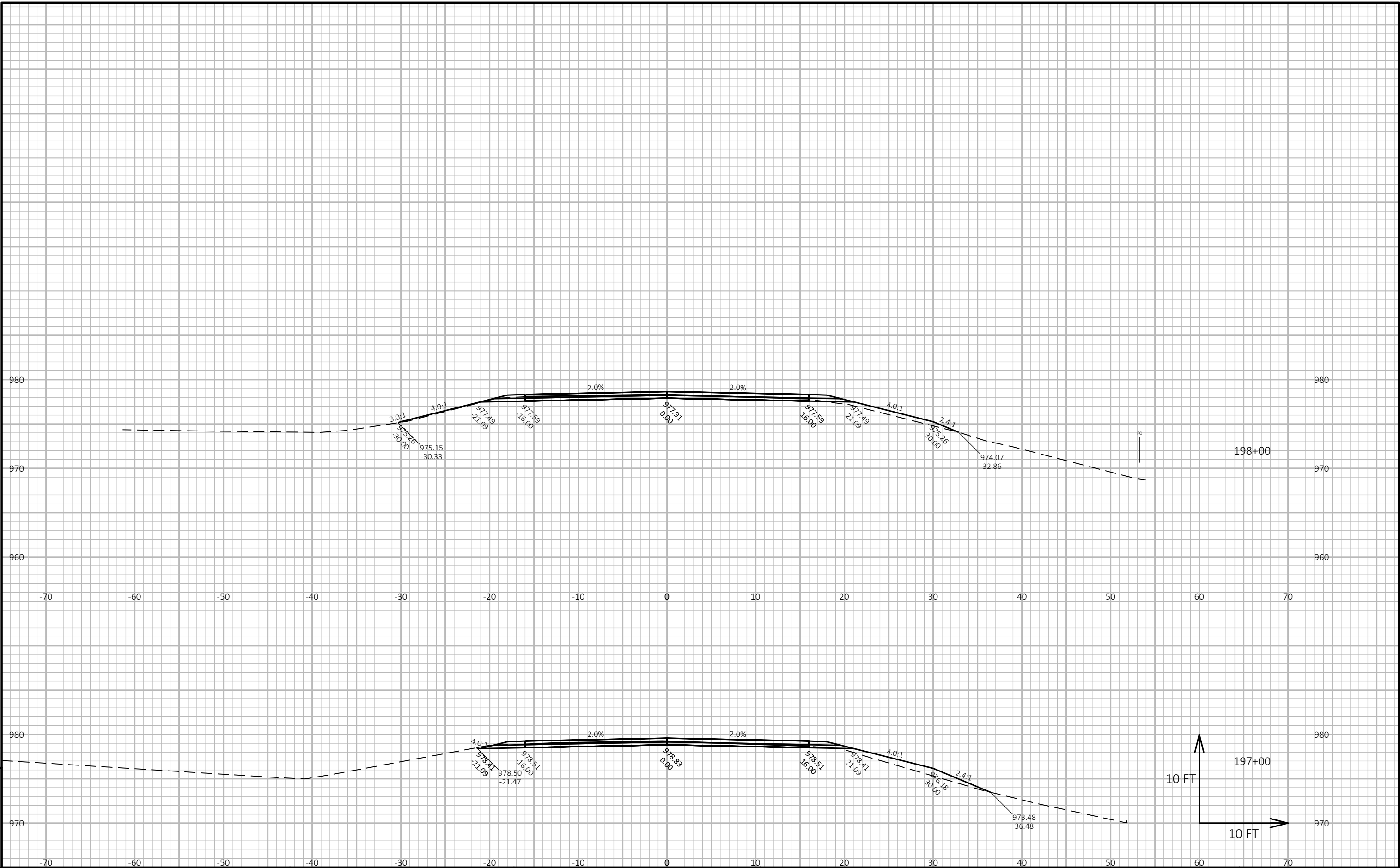
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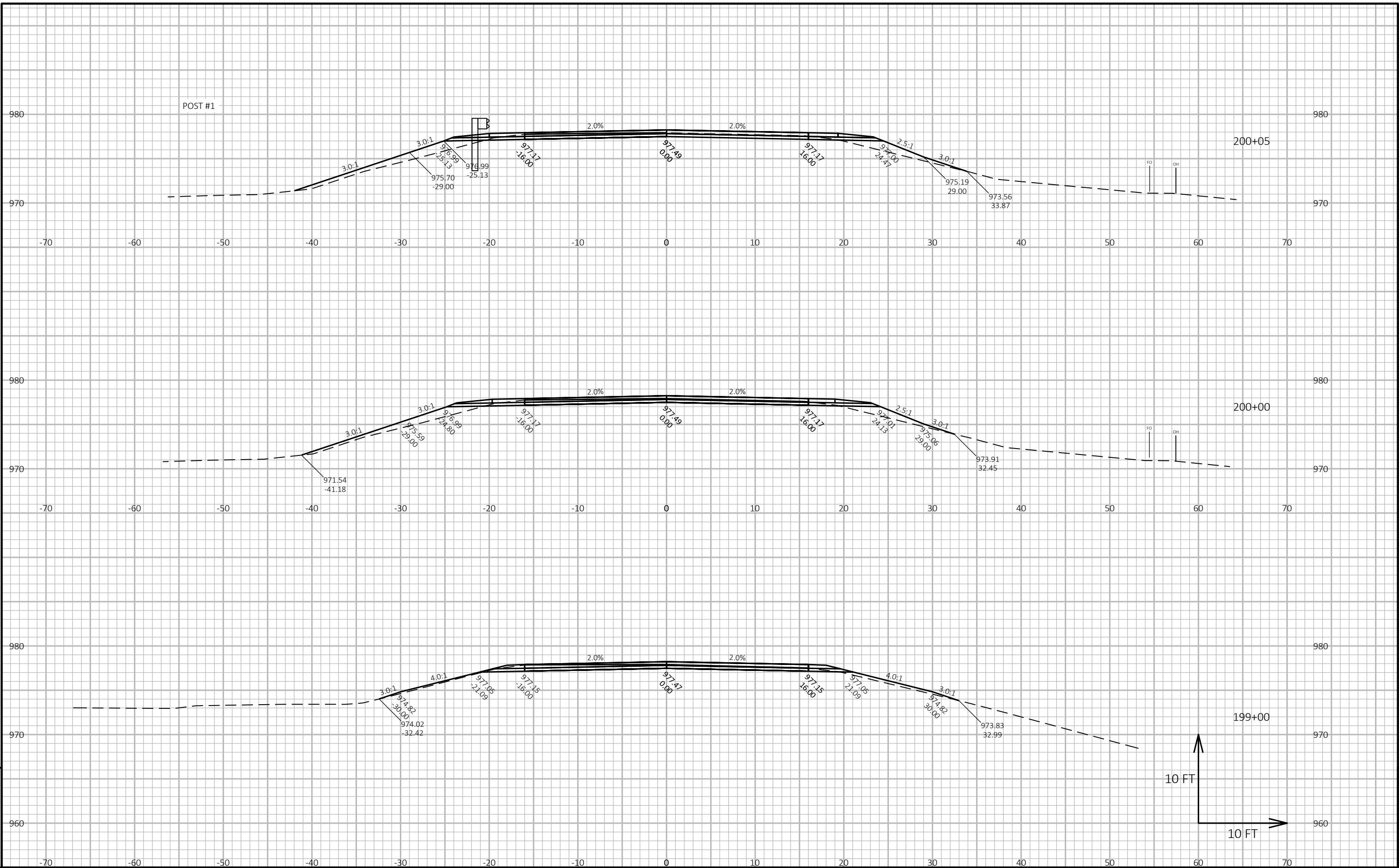
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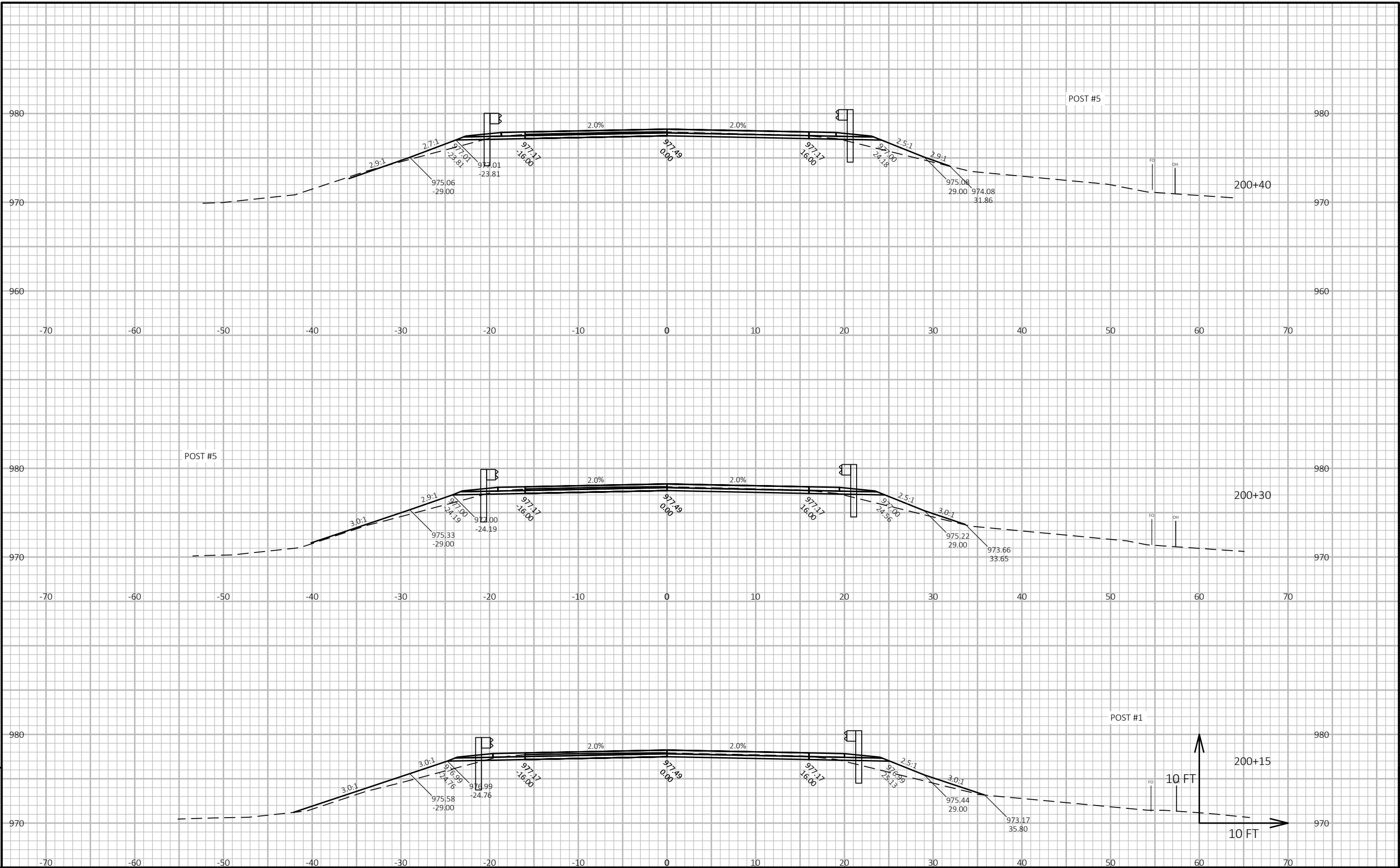
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



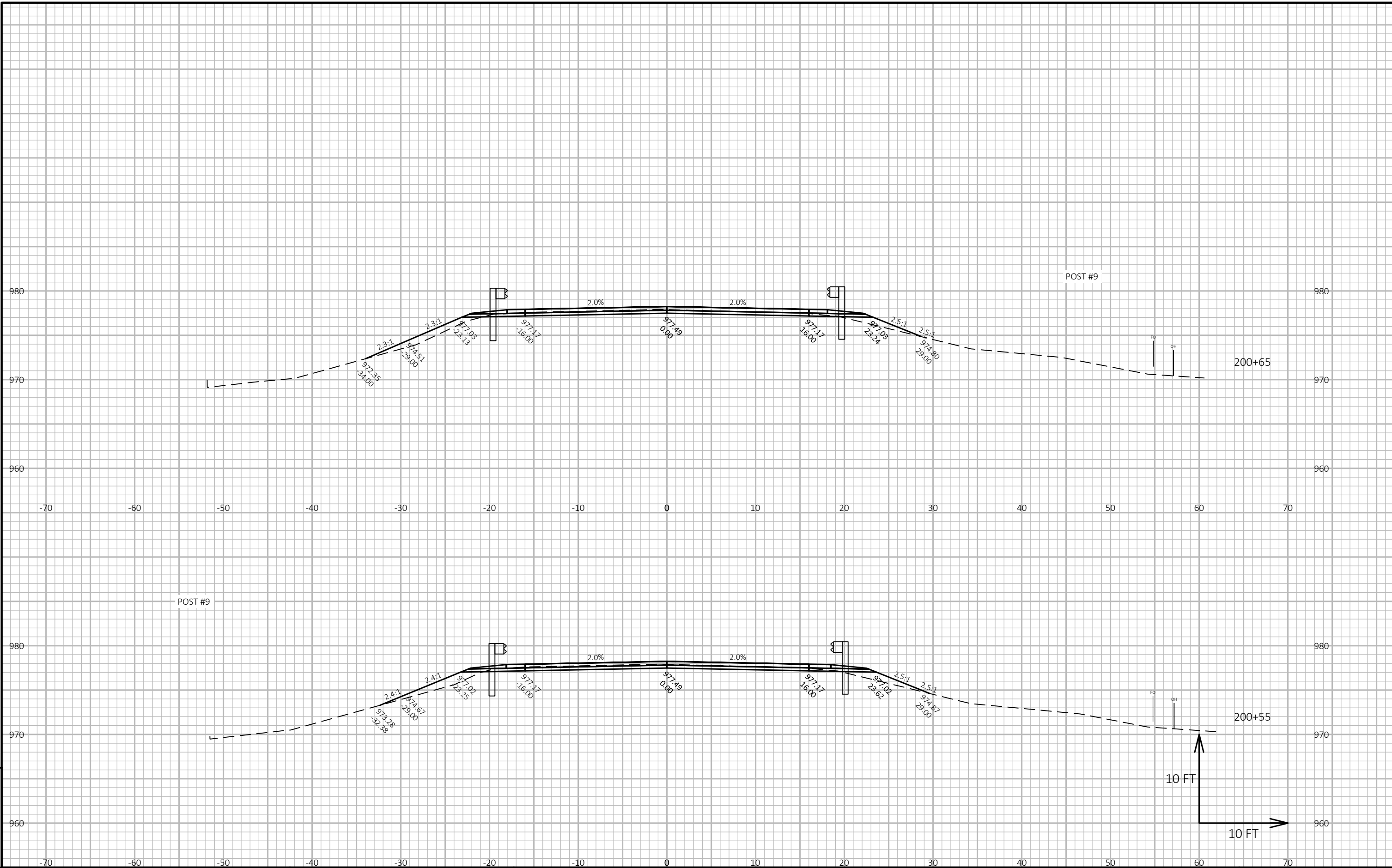
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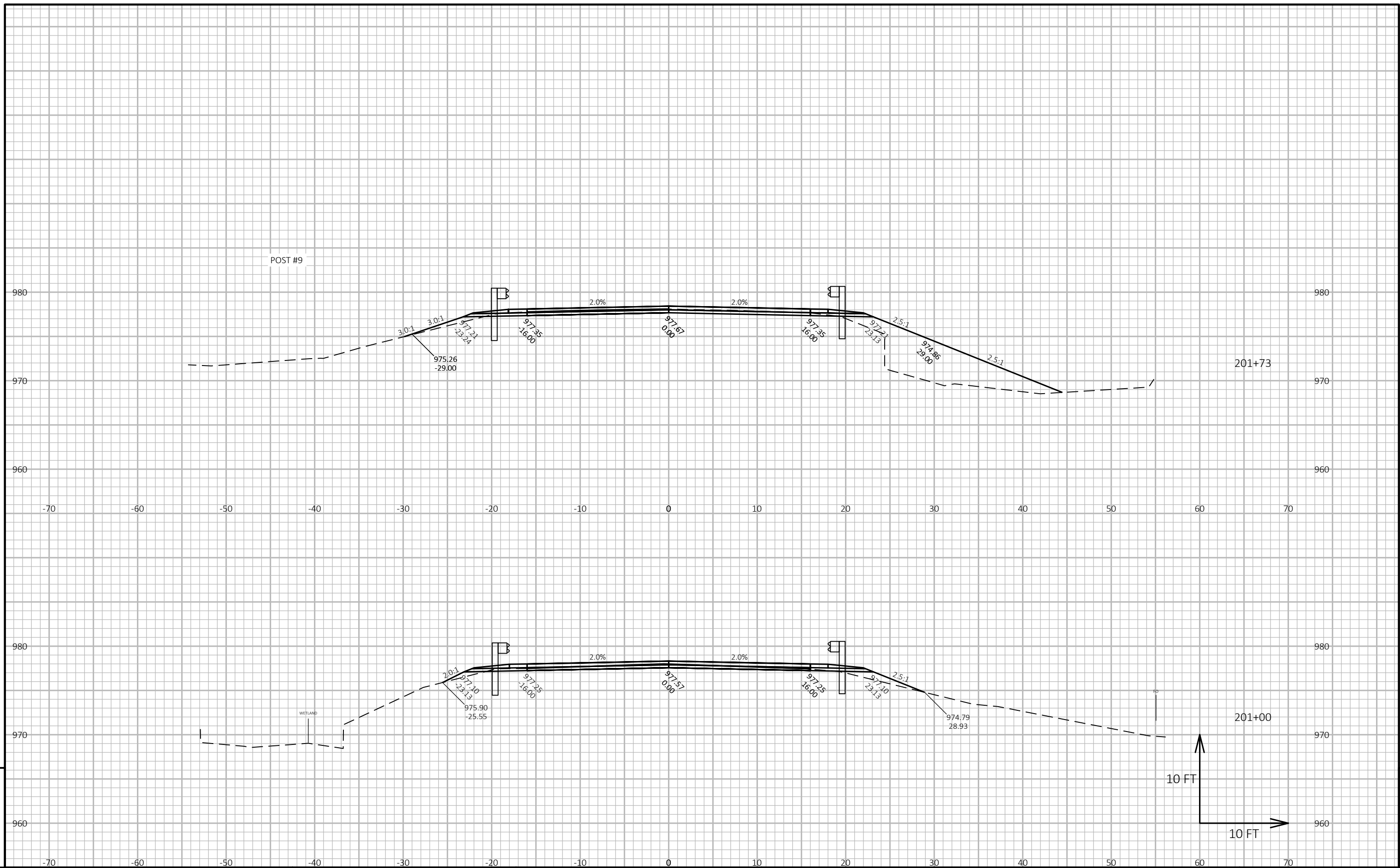
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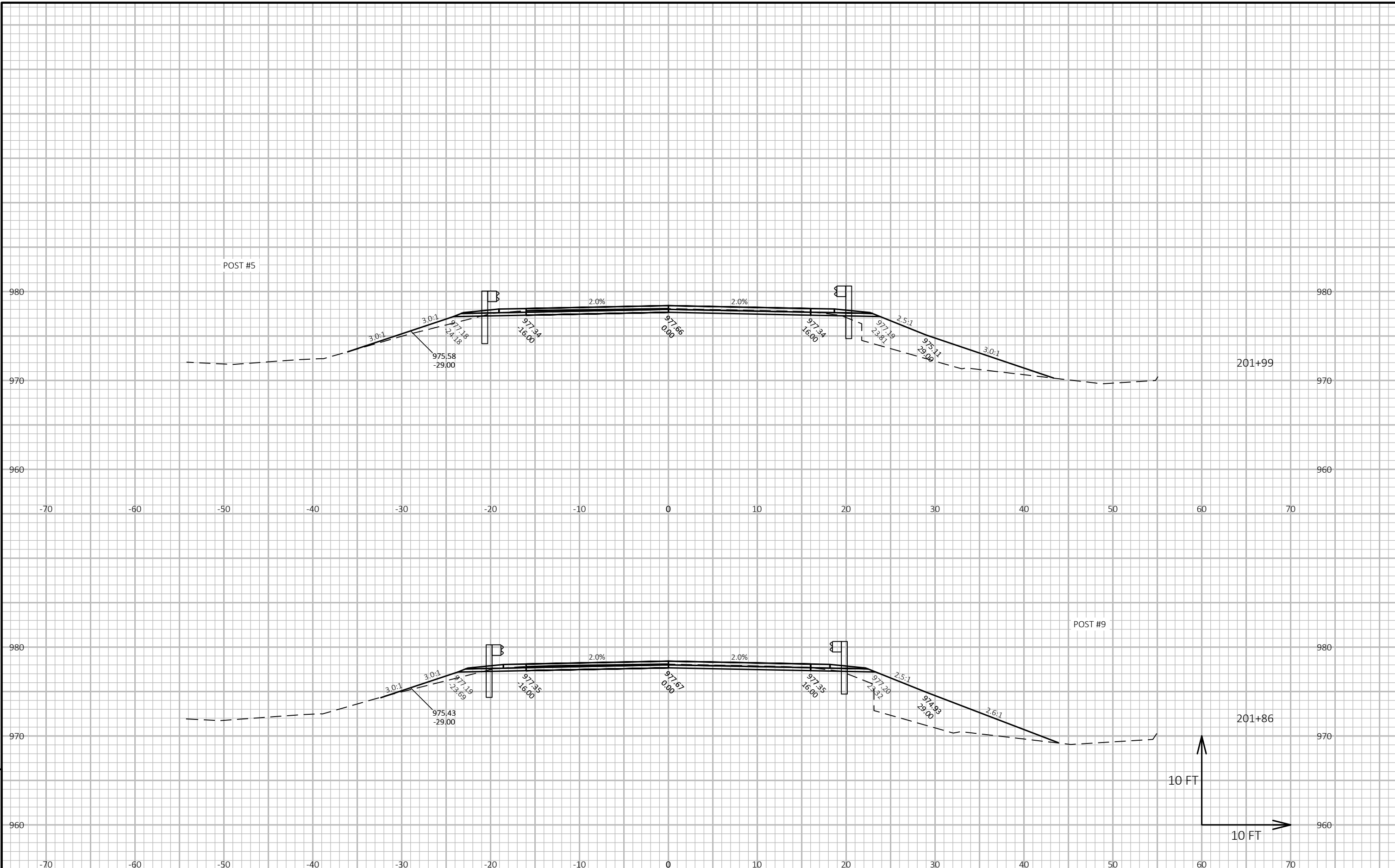
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET 9



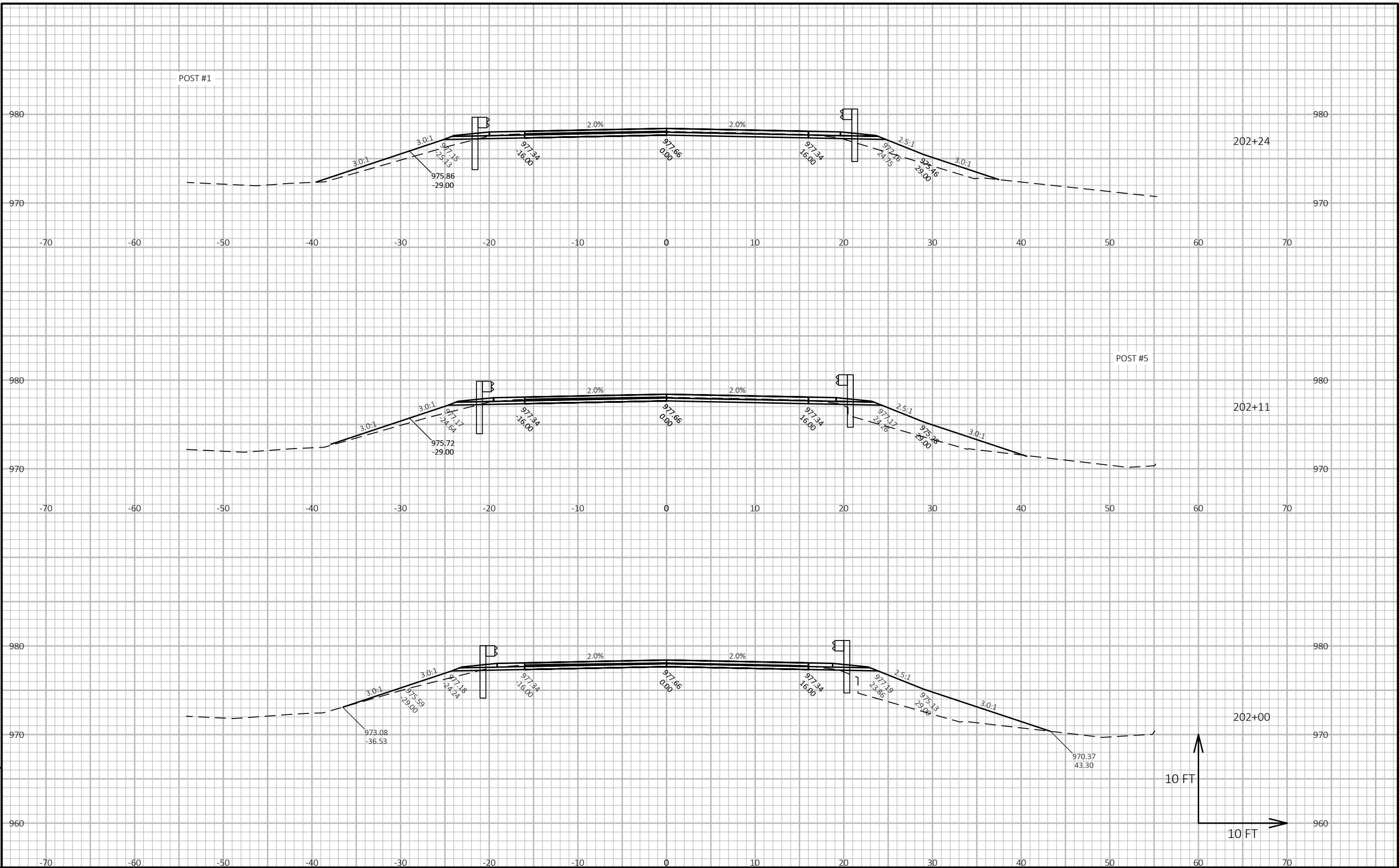
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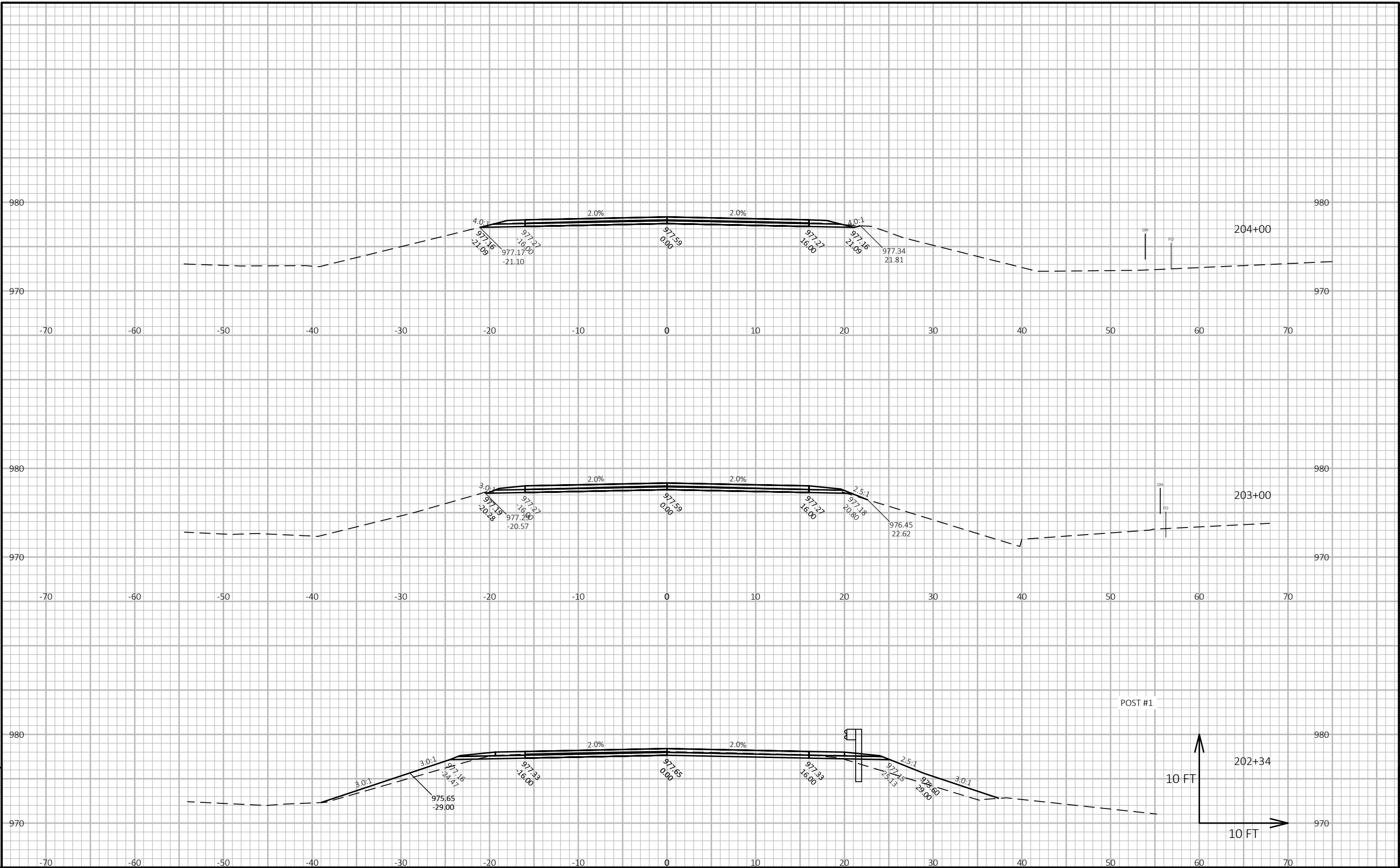
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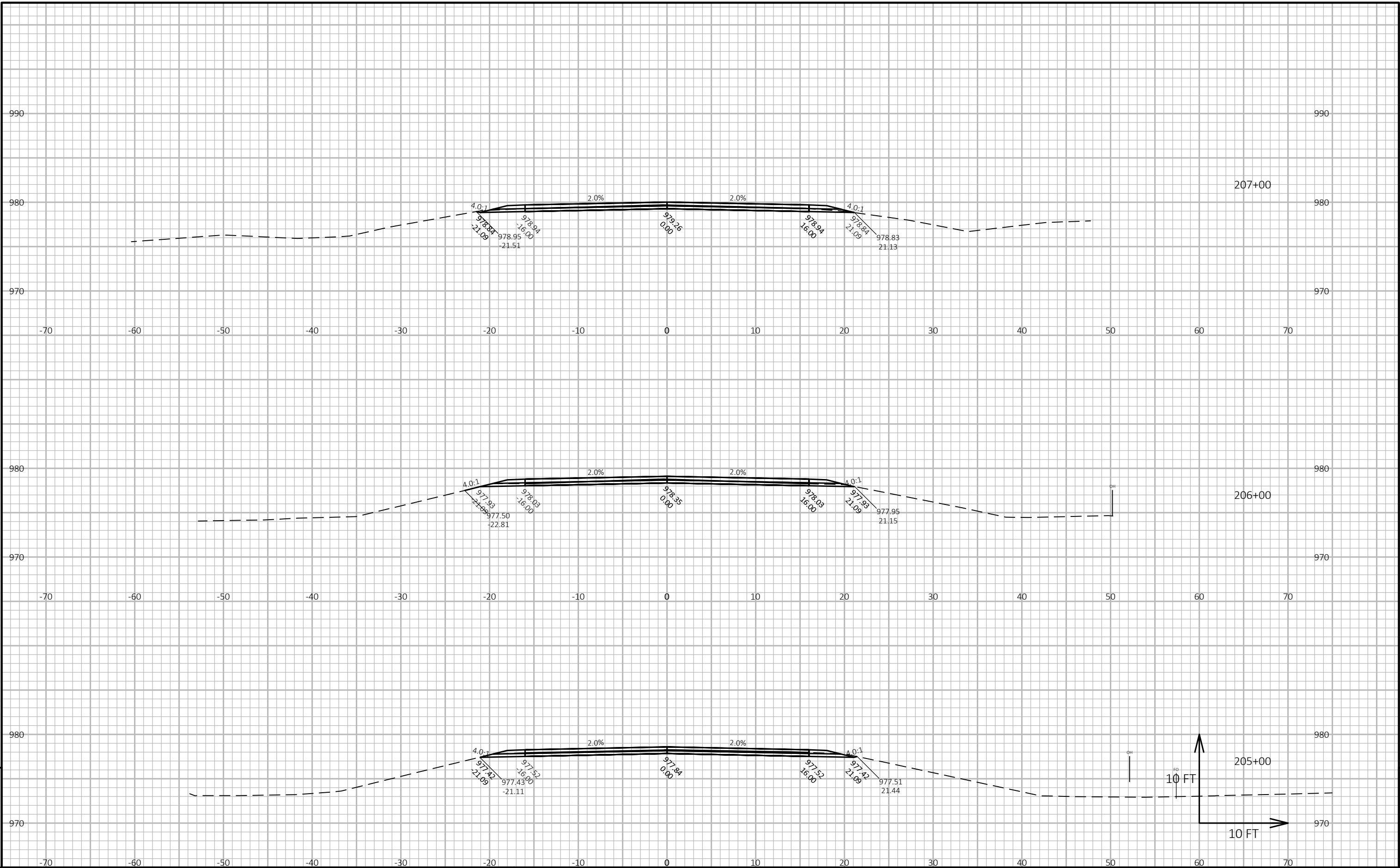
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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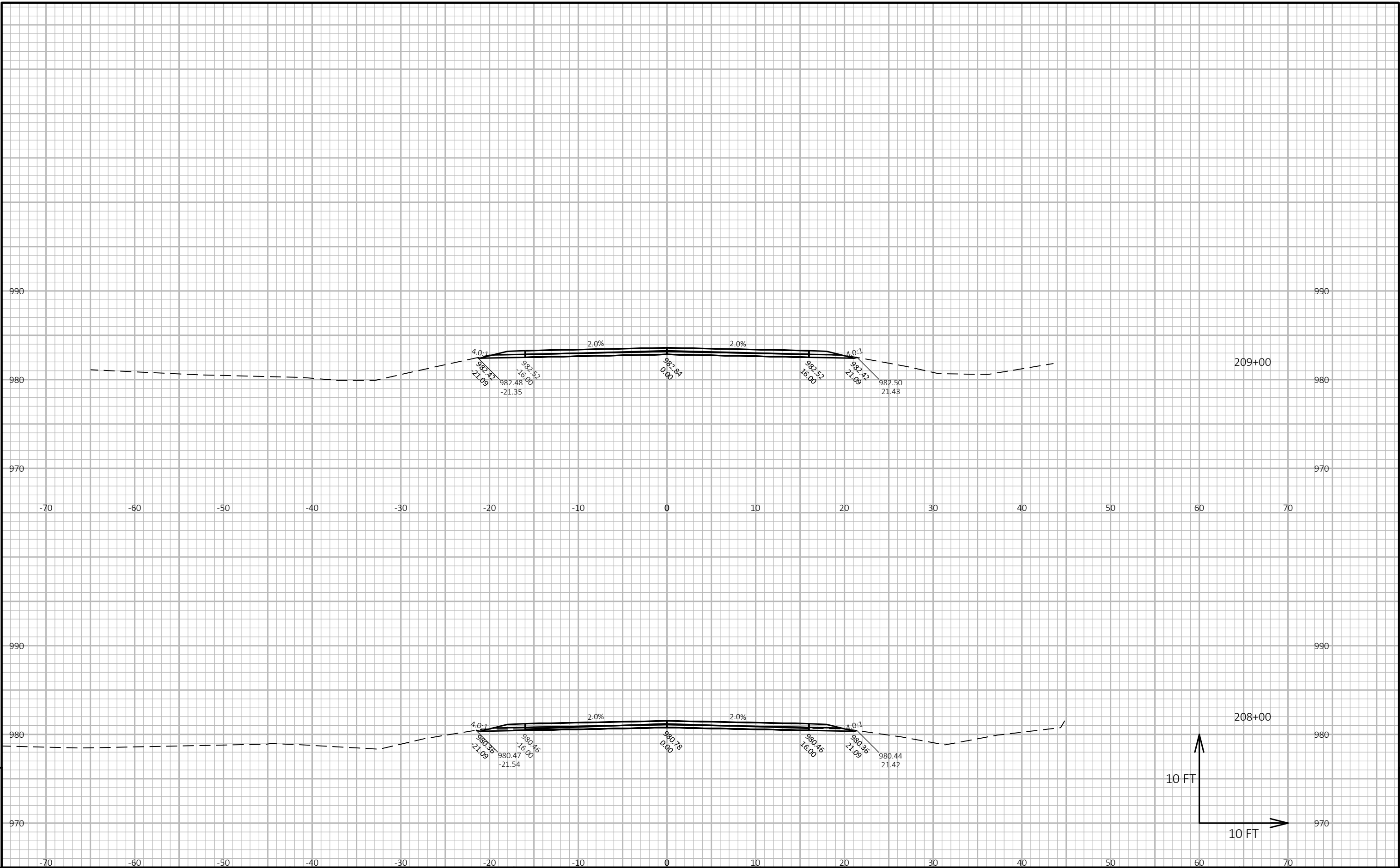
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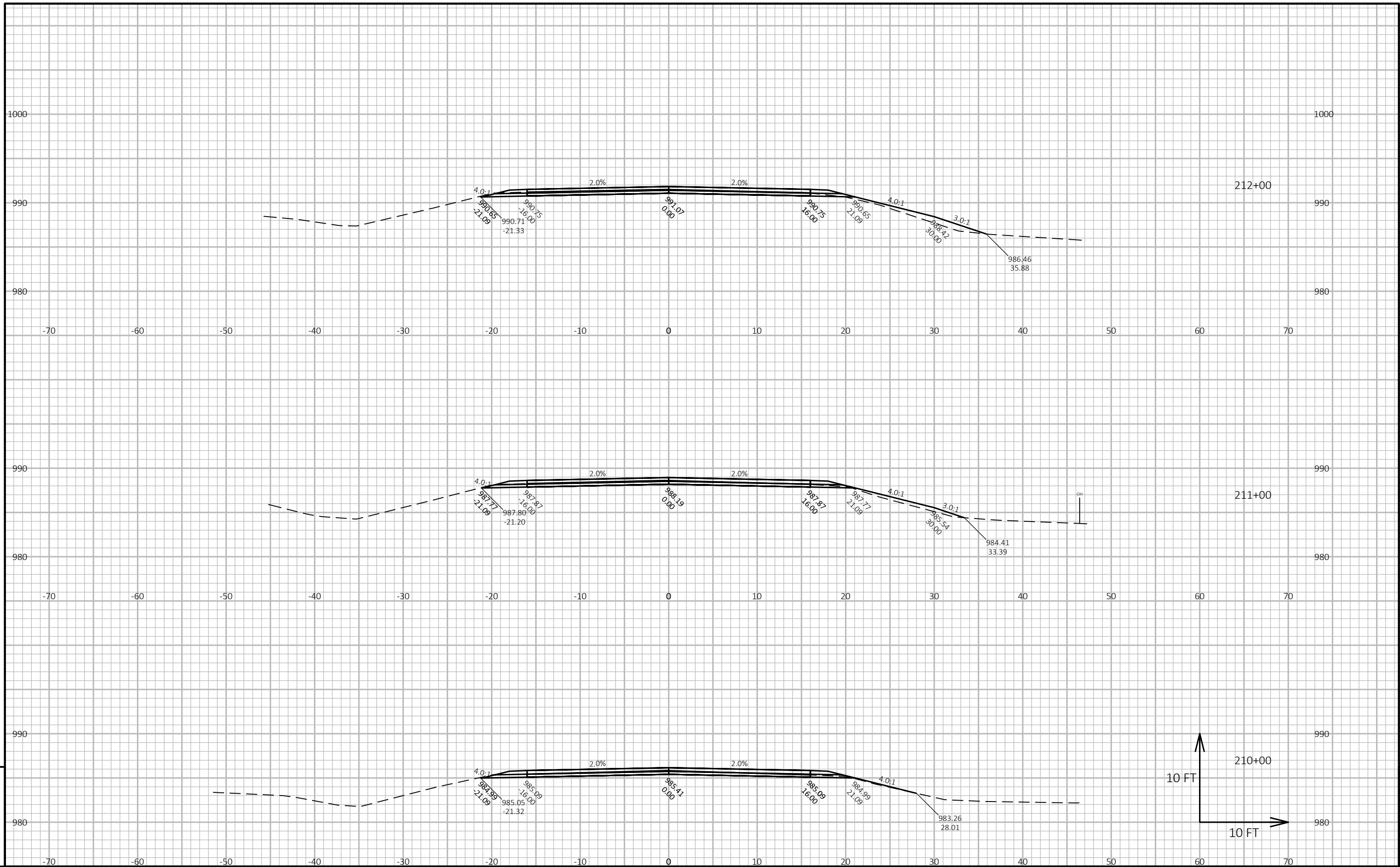
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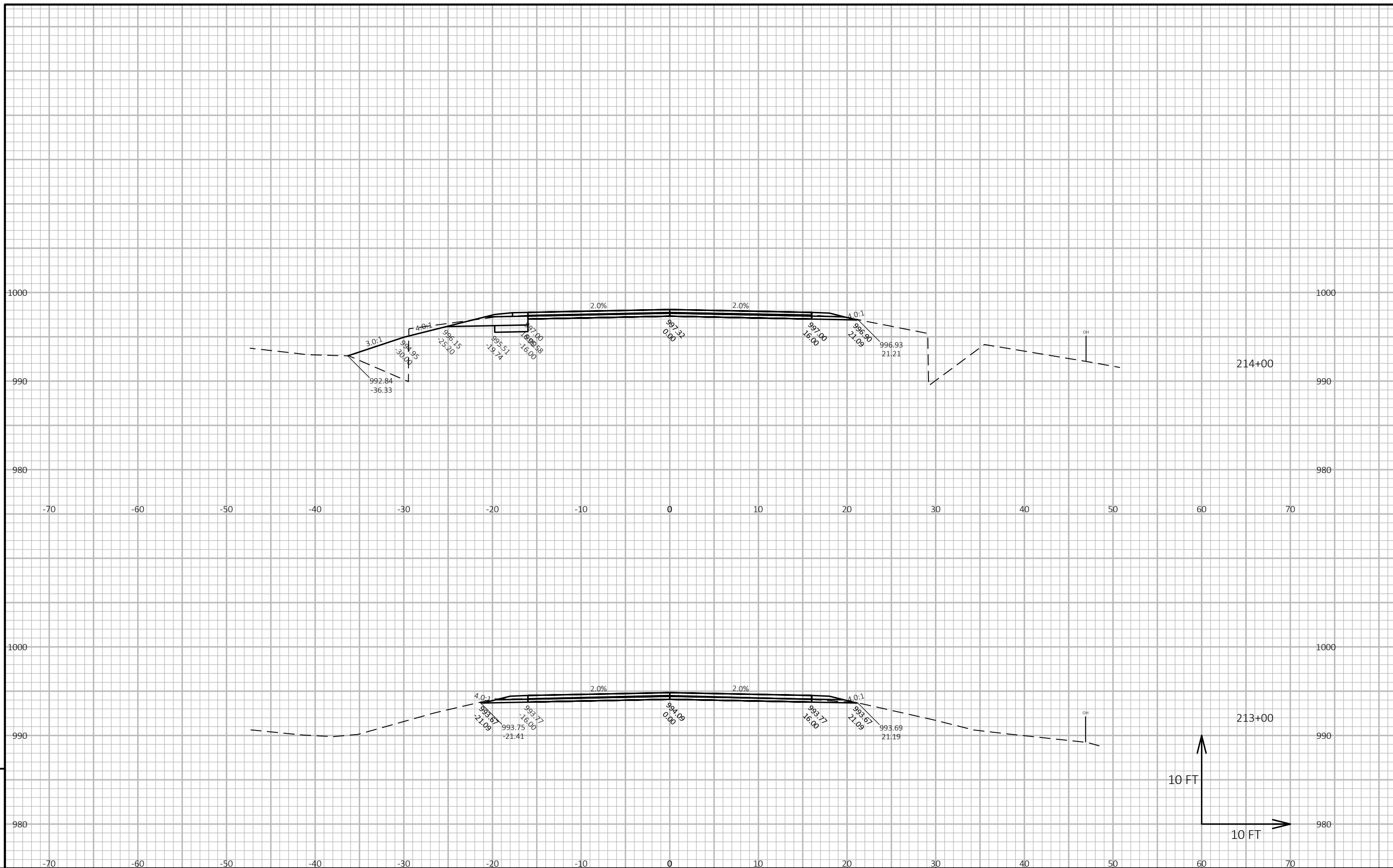
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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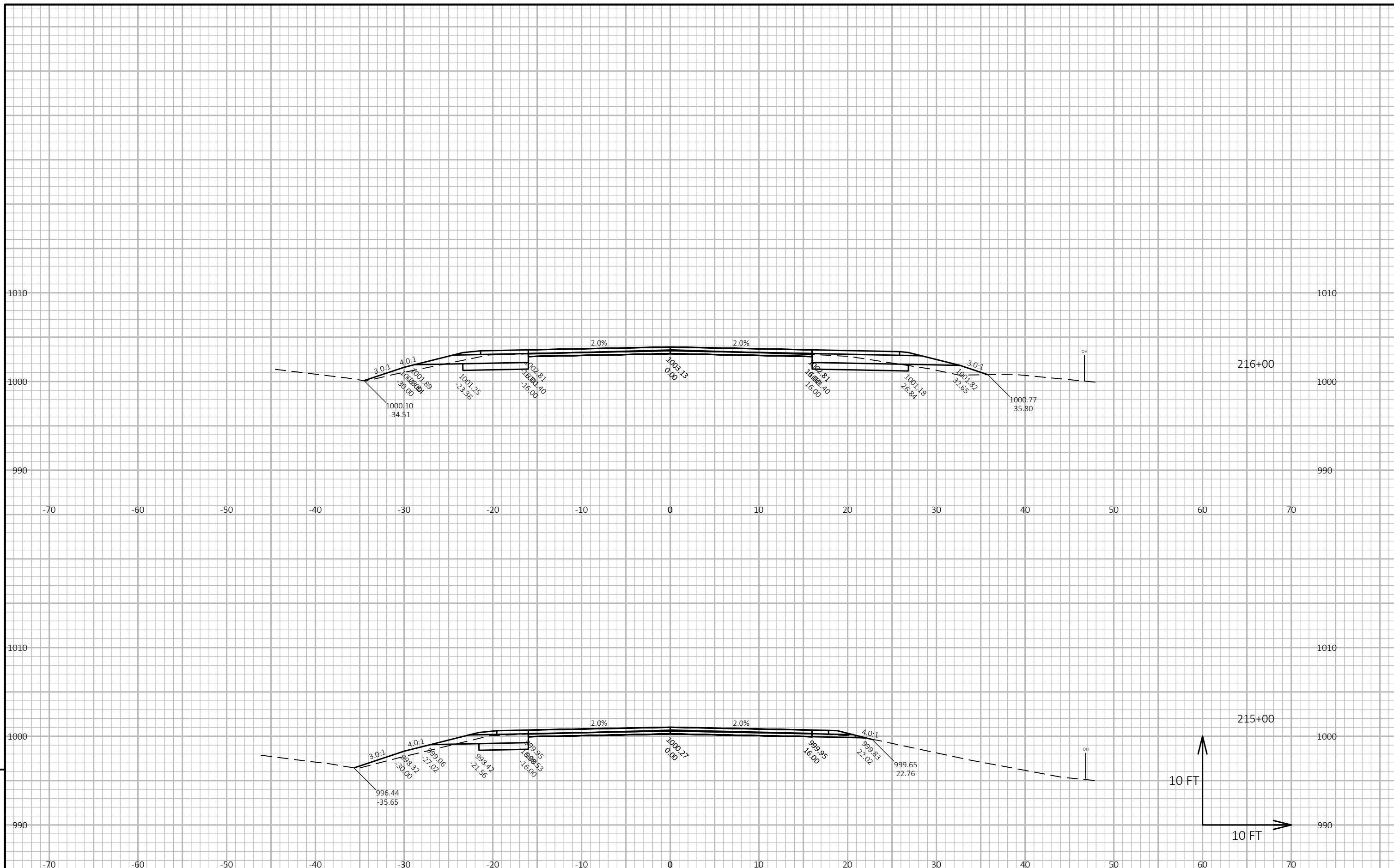
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



PROJECT NO: 6218-00-73

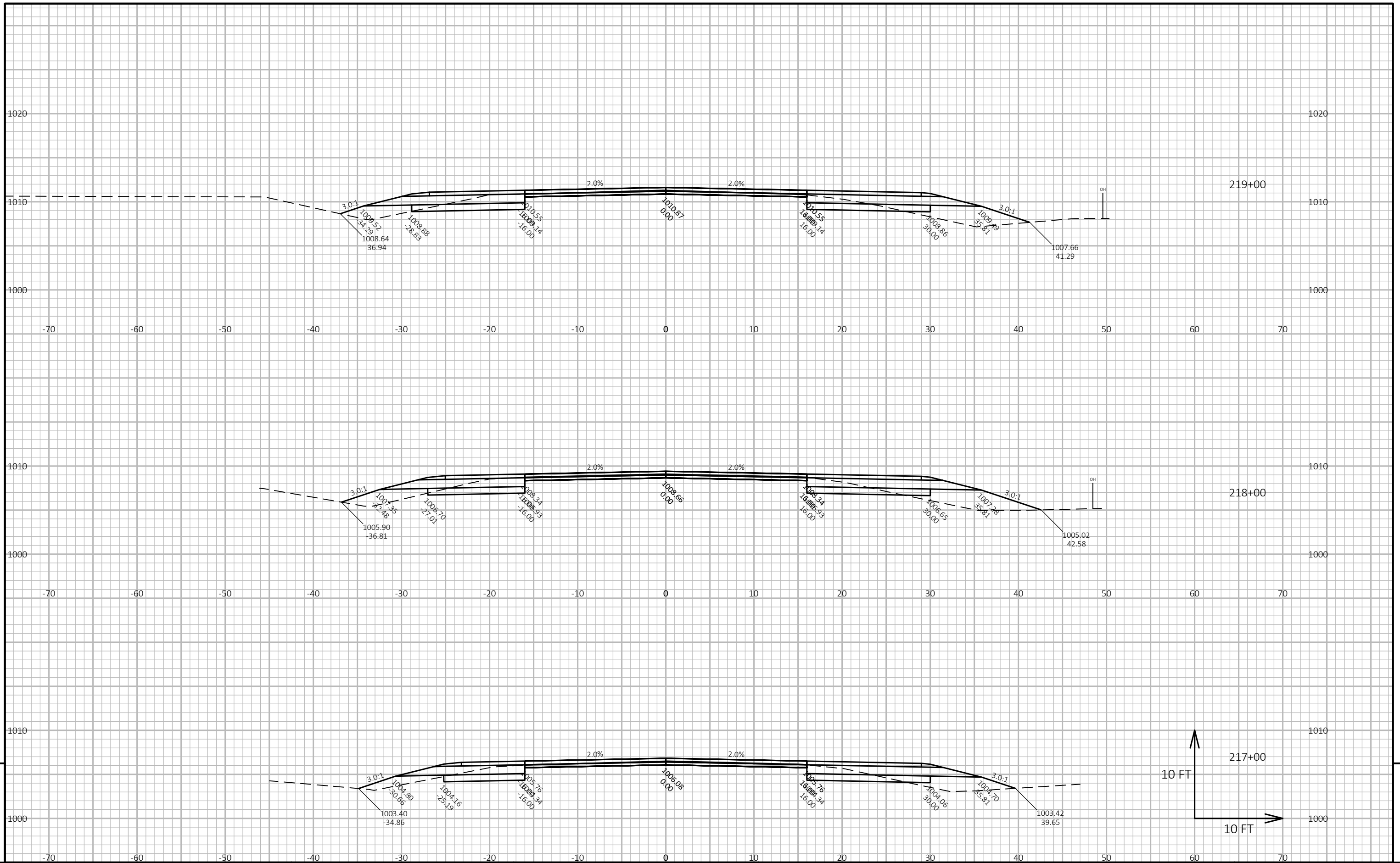
HWY: CTH V

COUNTY: DANE

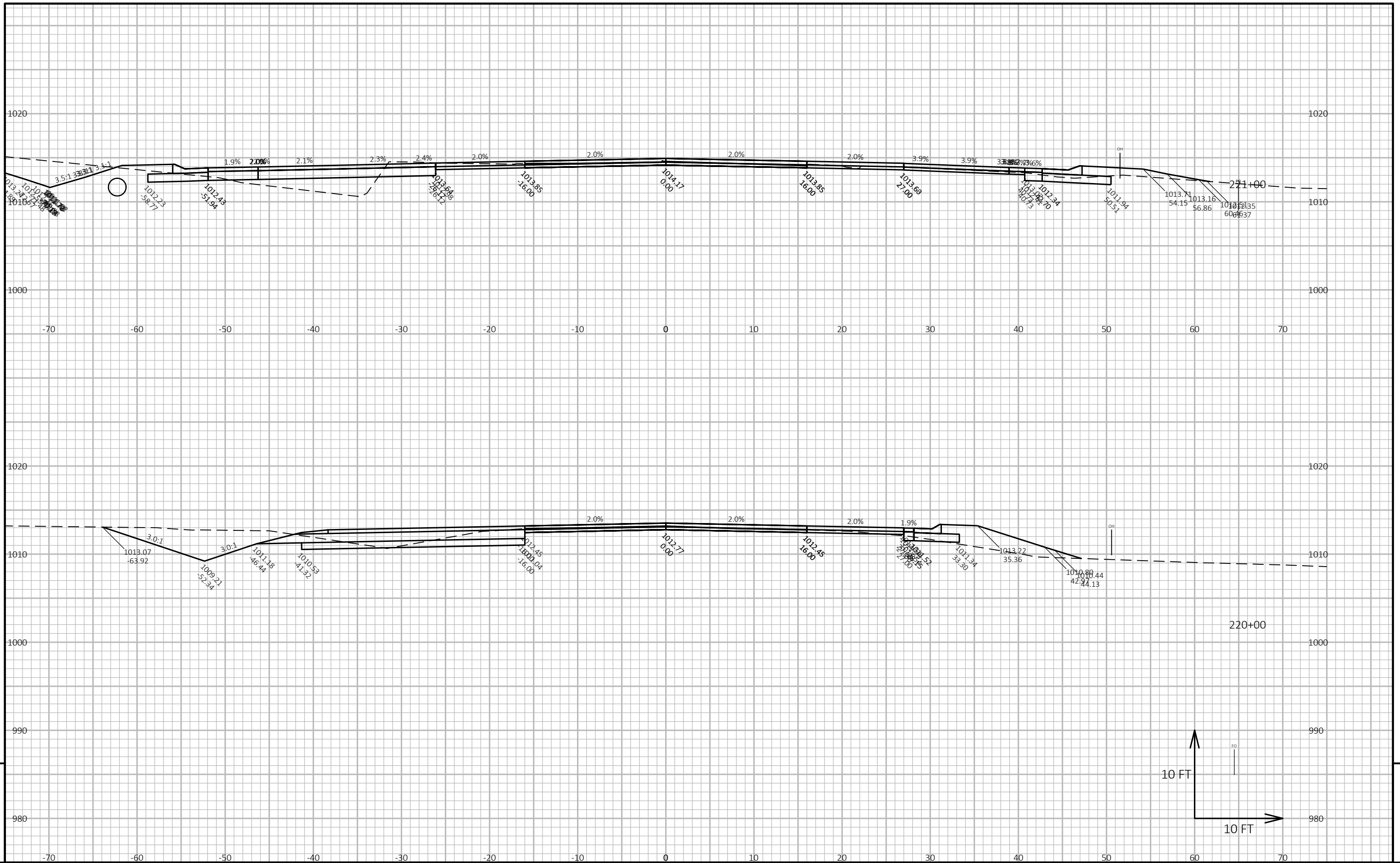
CROSS SECTIONS: CTH V MAINLINE

SHEET

E



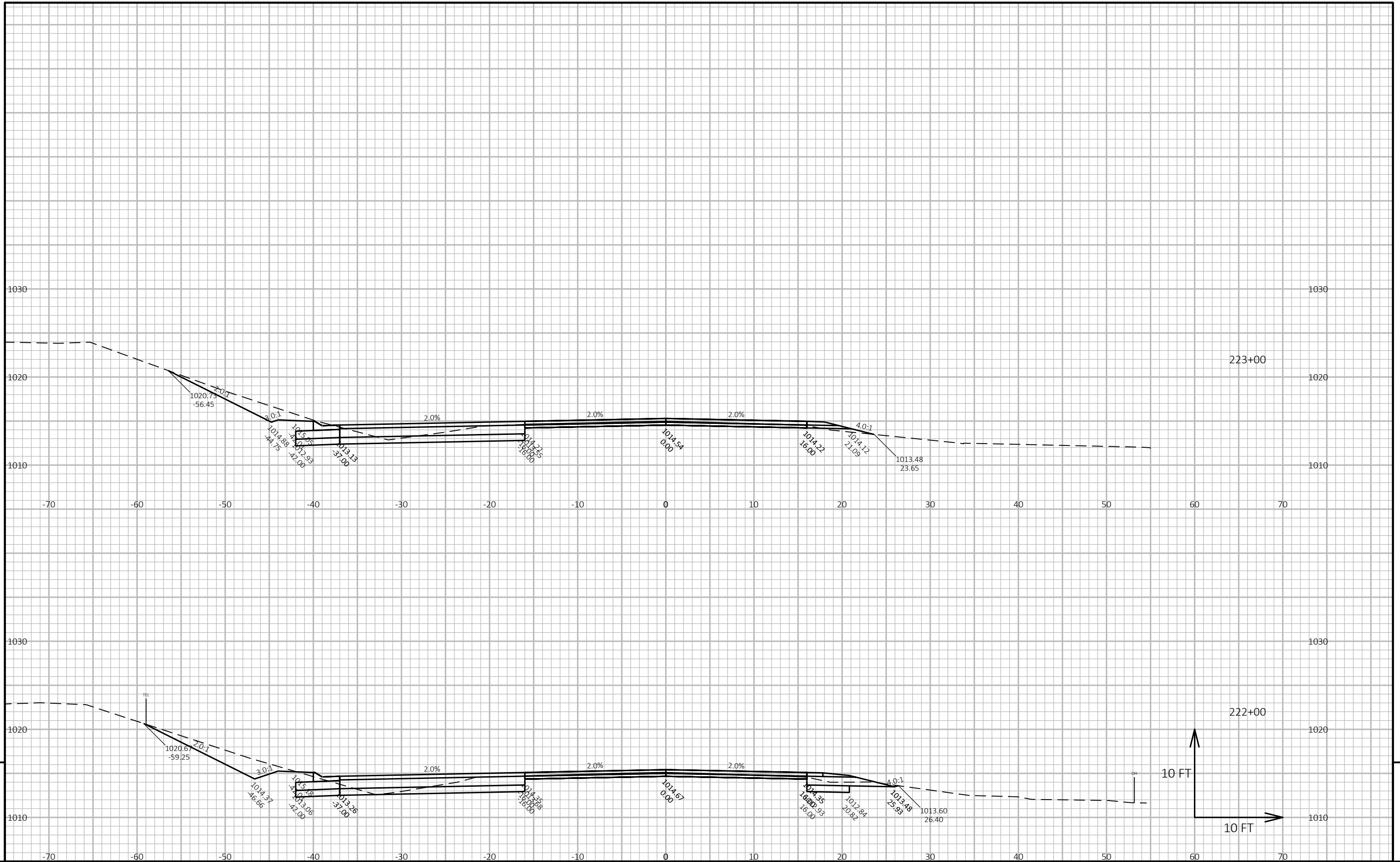
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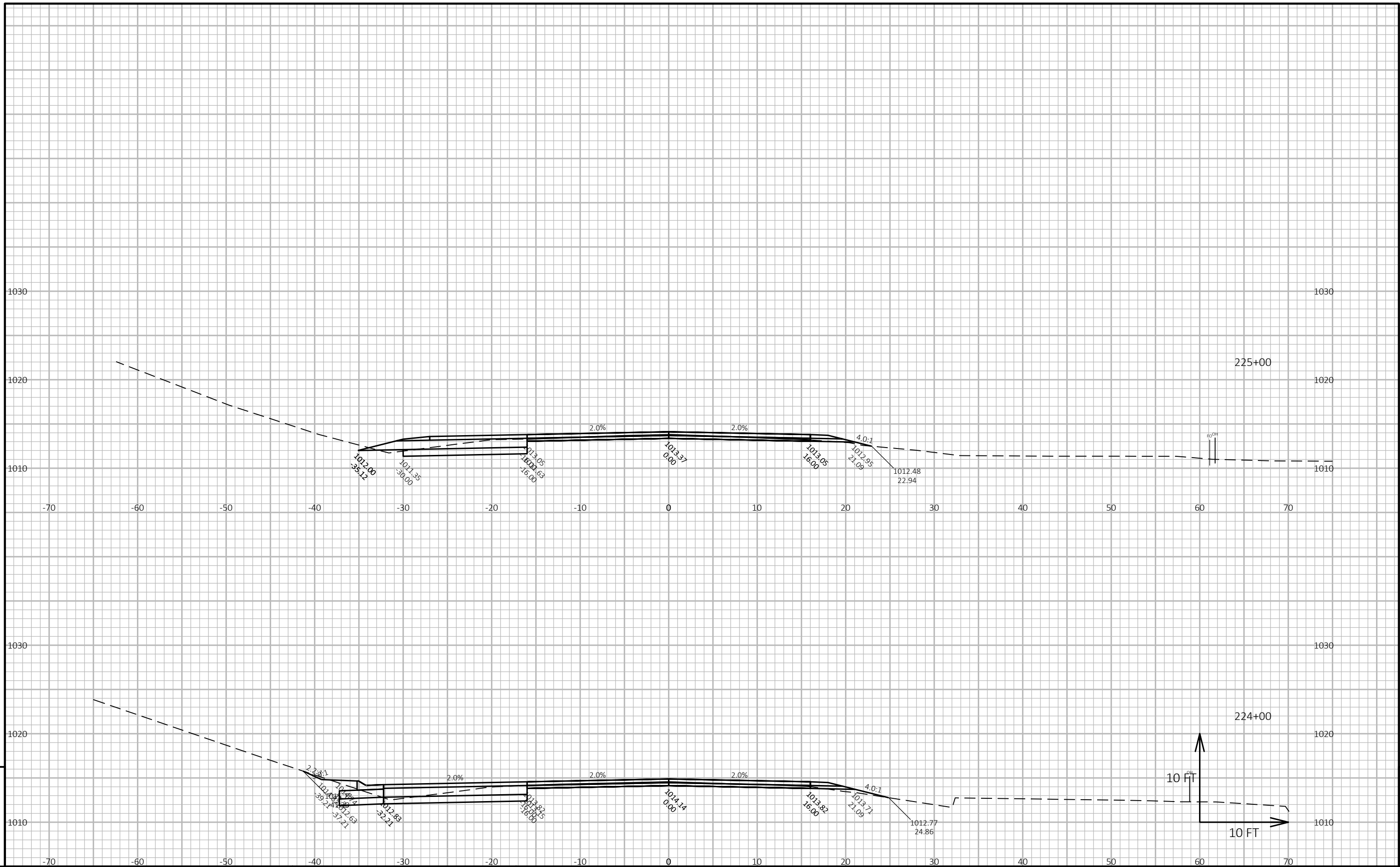
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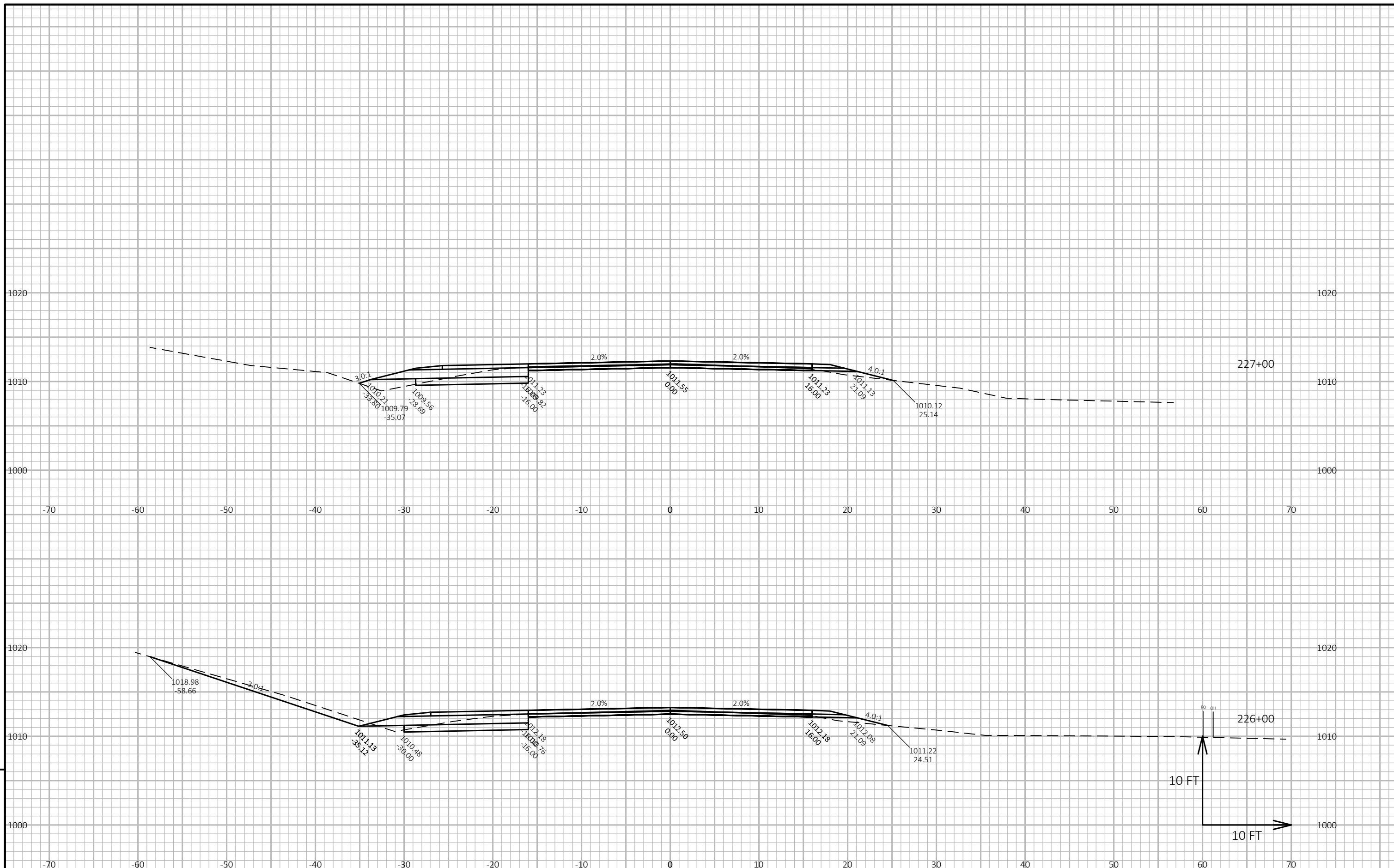
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET
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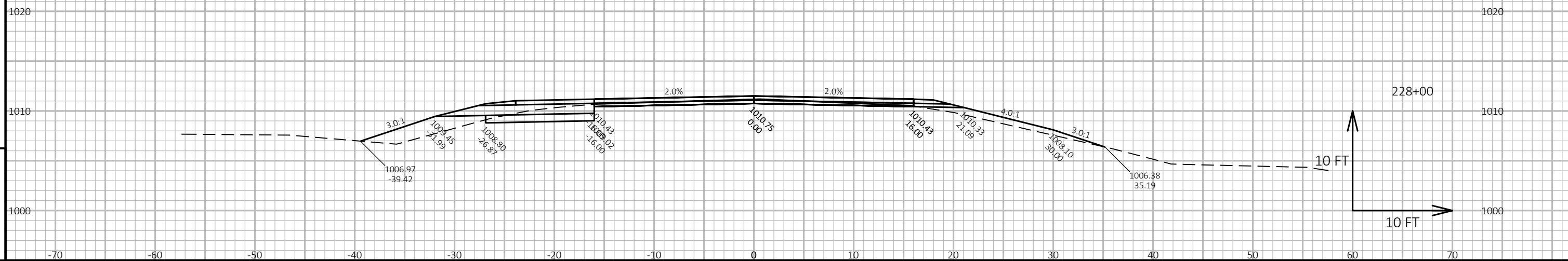
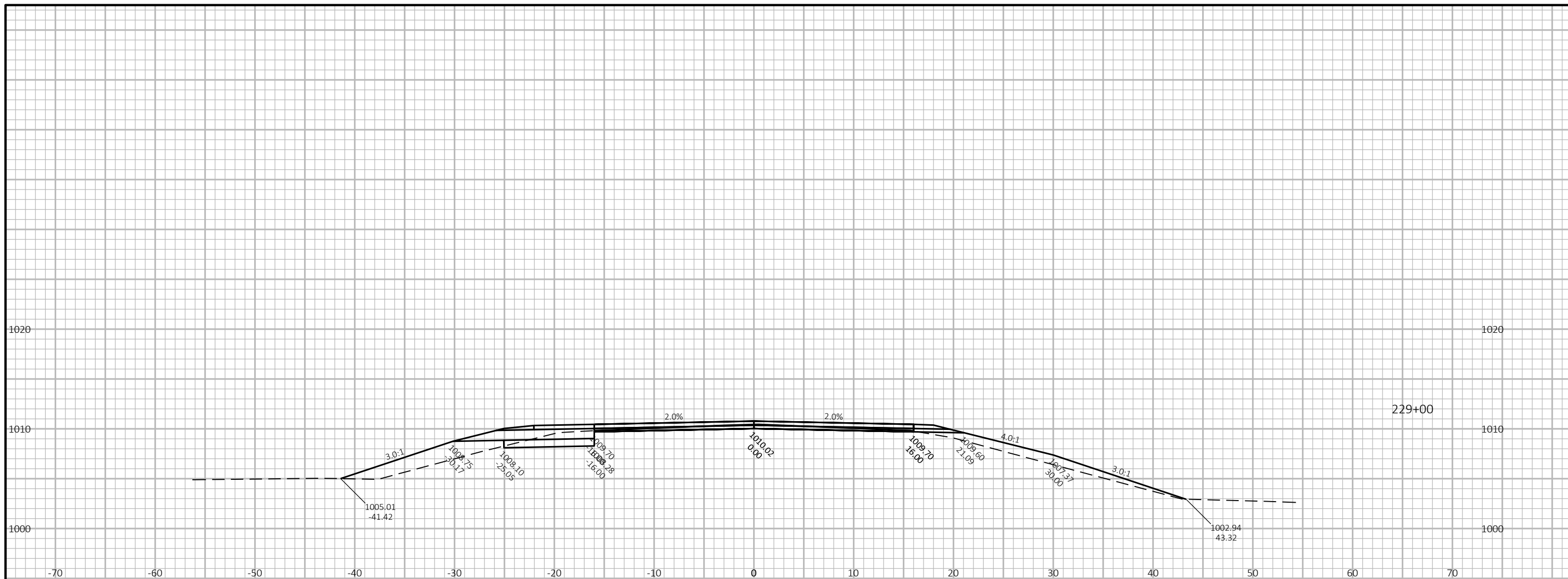
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73

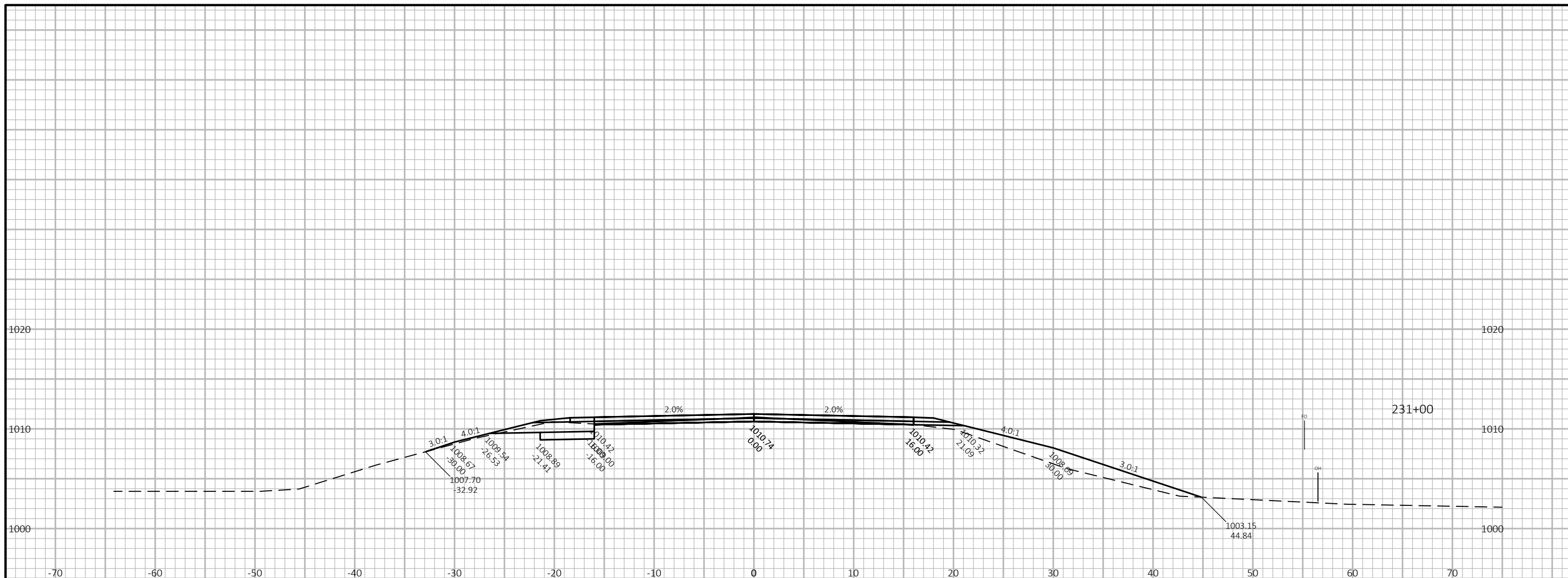
HWY: CTH V

COUNTY: DANE

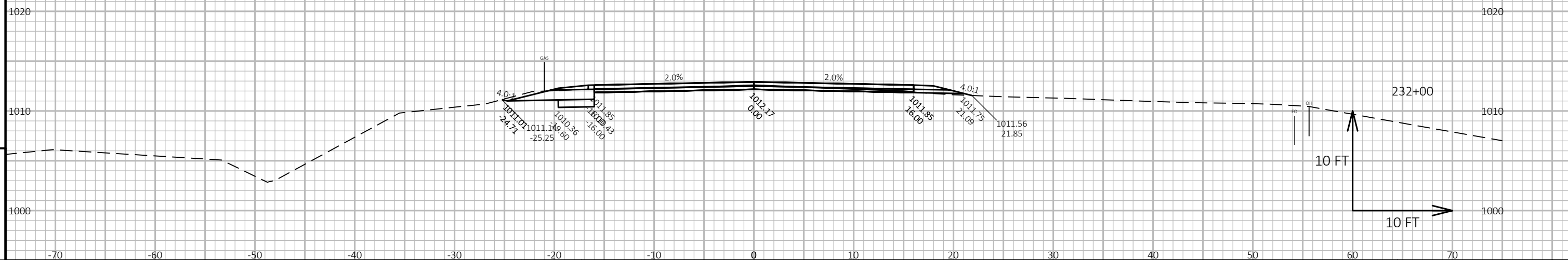
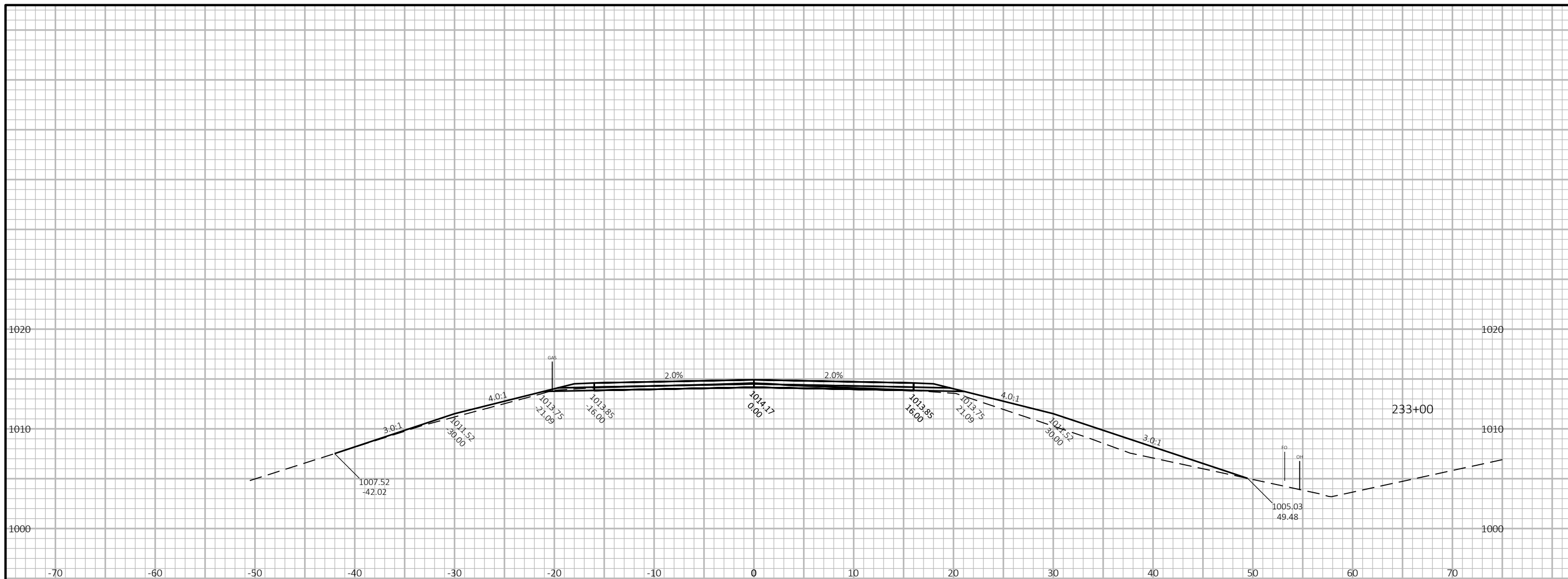
CROSS SECTIONS: CTH V MAINLINE

SHEET

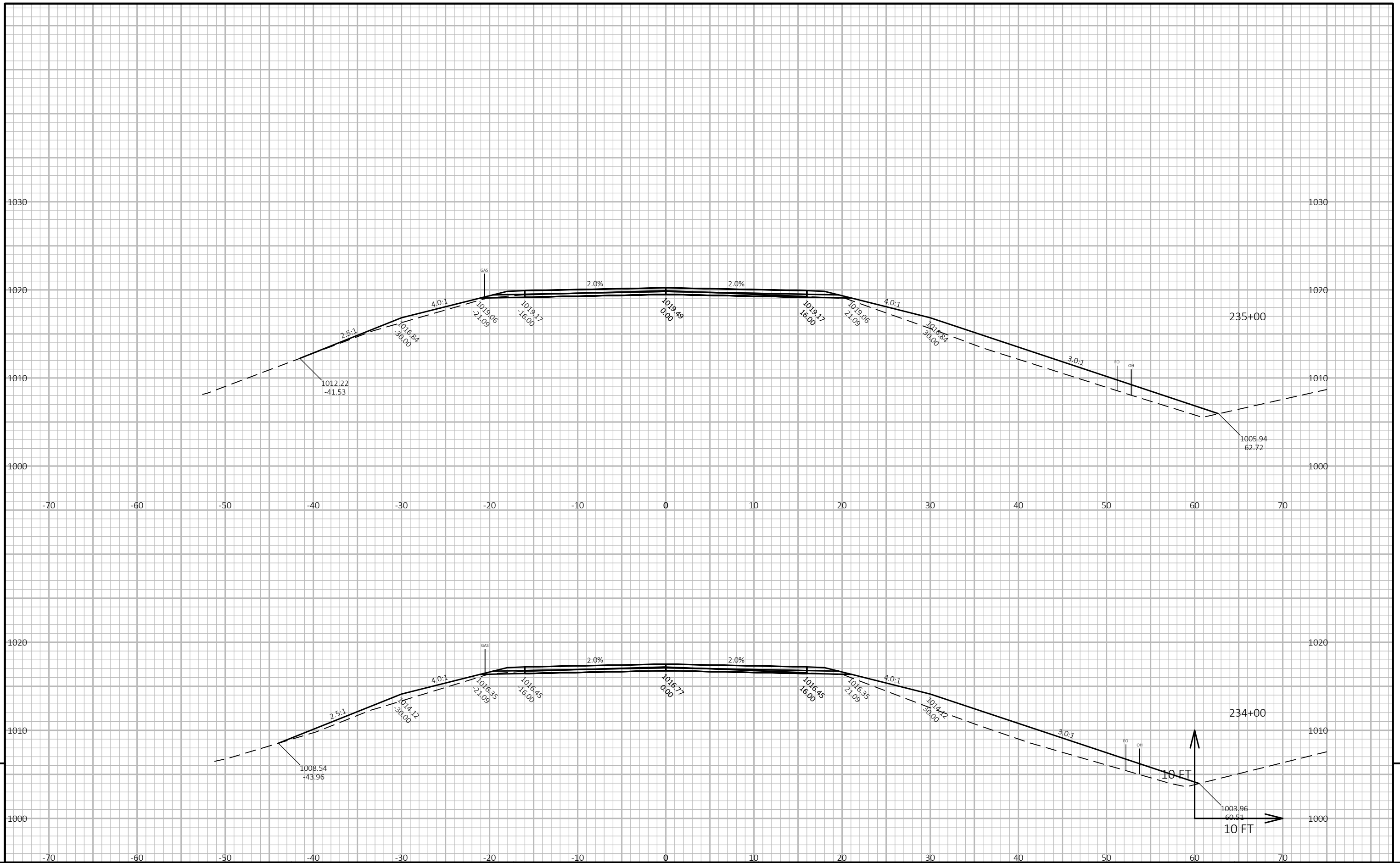
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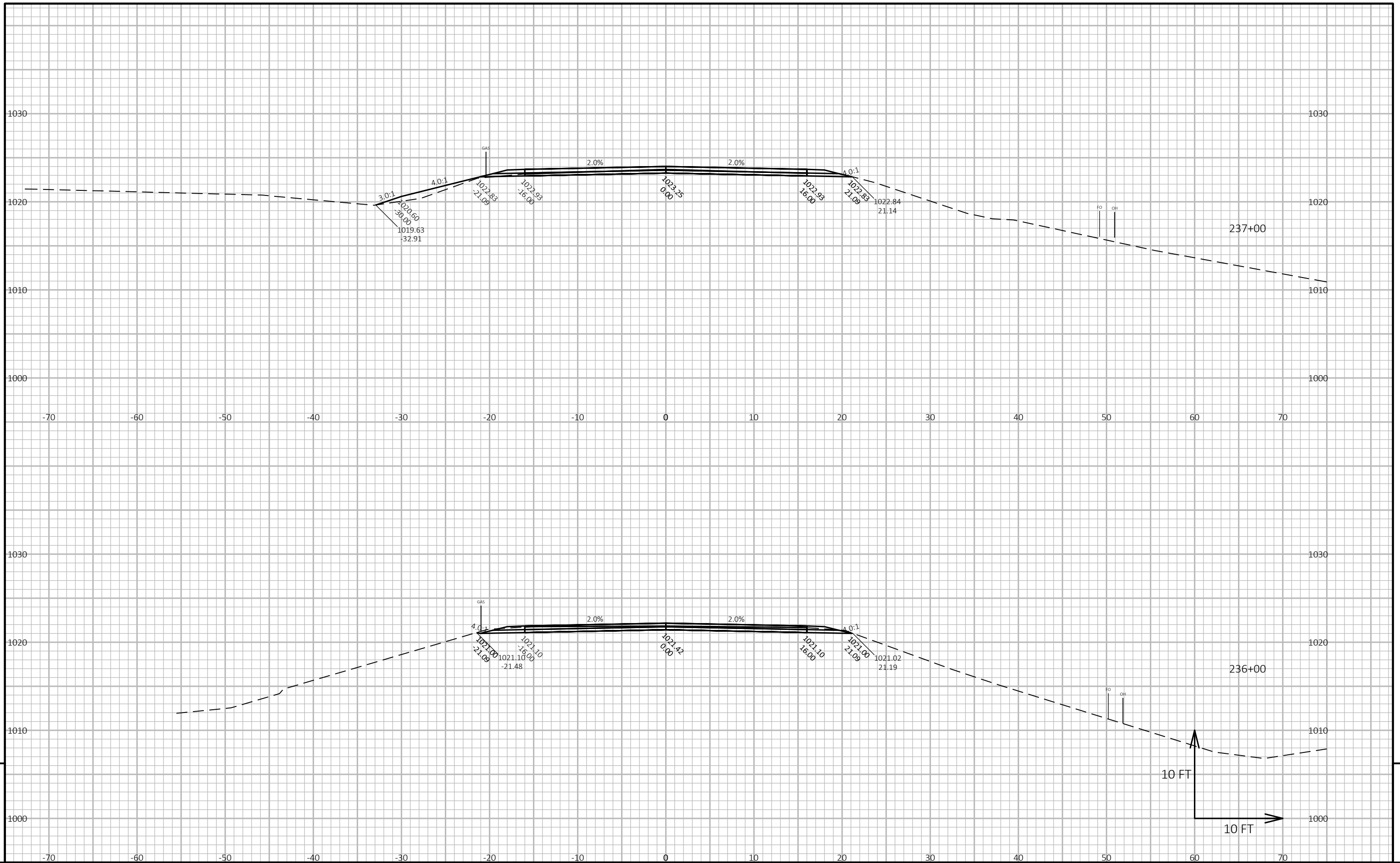
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET
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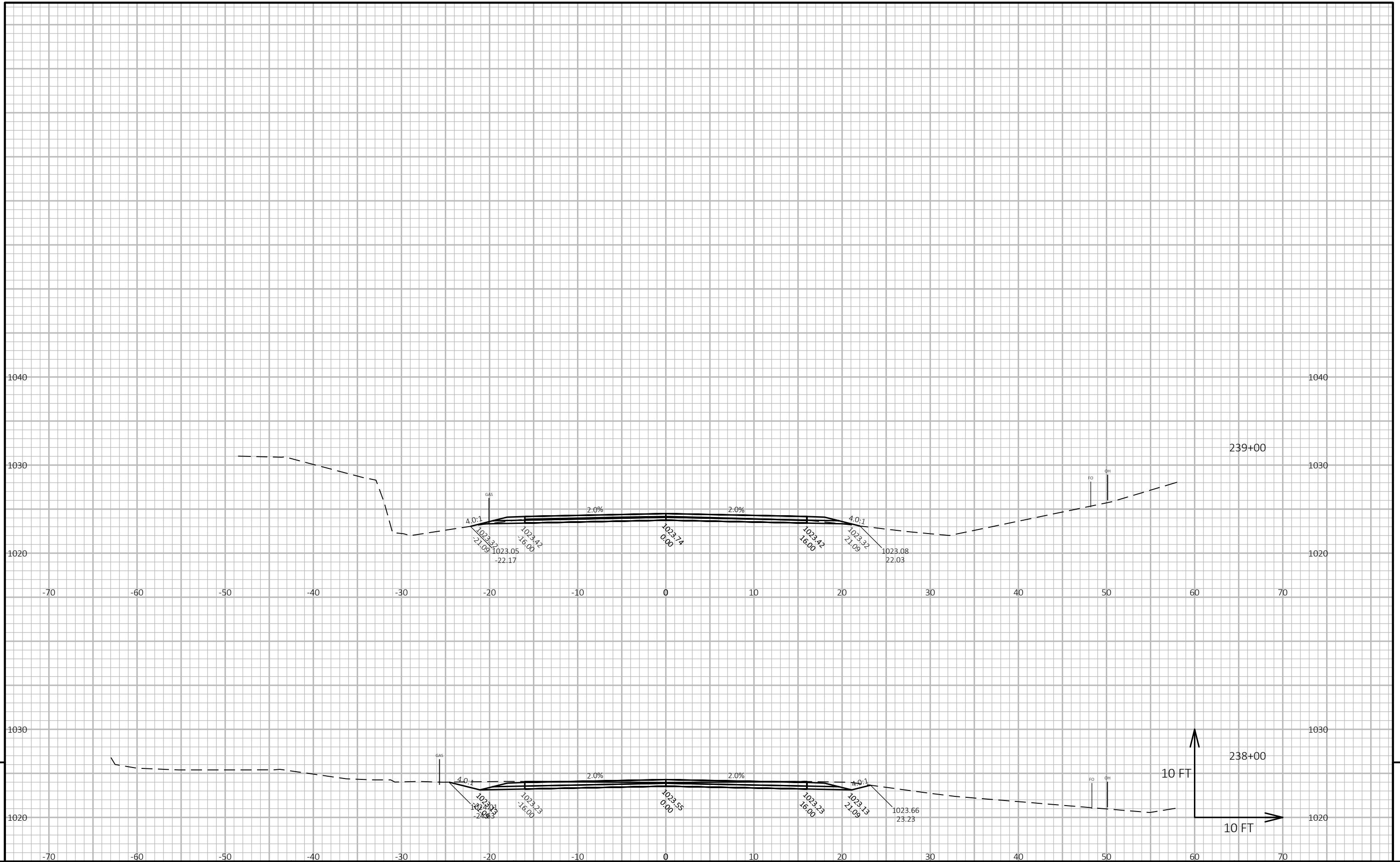
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



PROJECT NO: 6218-00-73

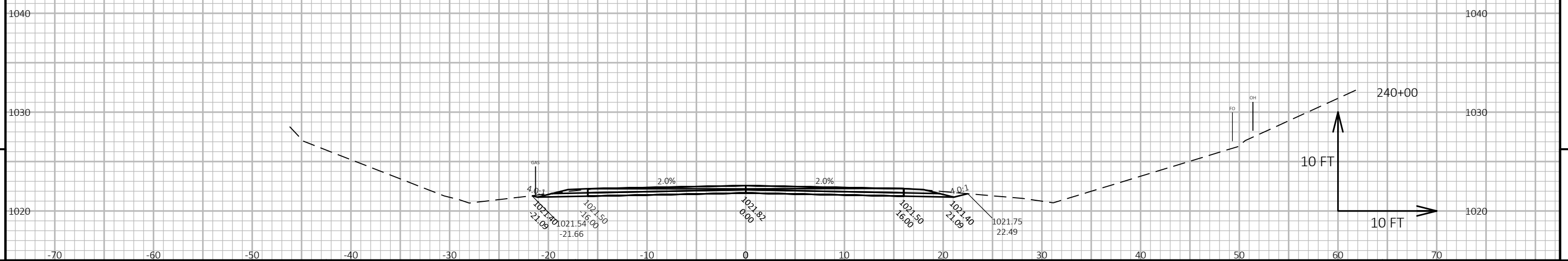
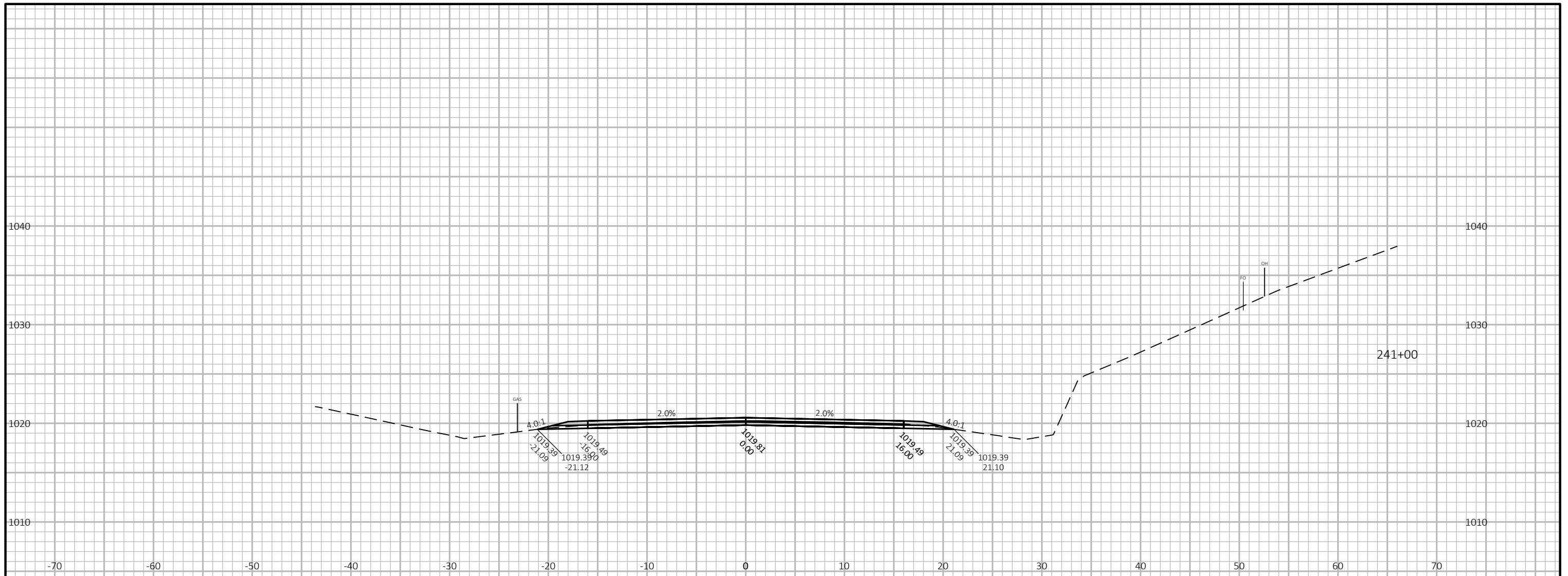
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COUNTY: DANE

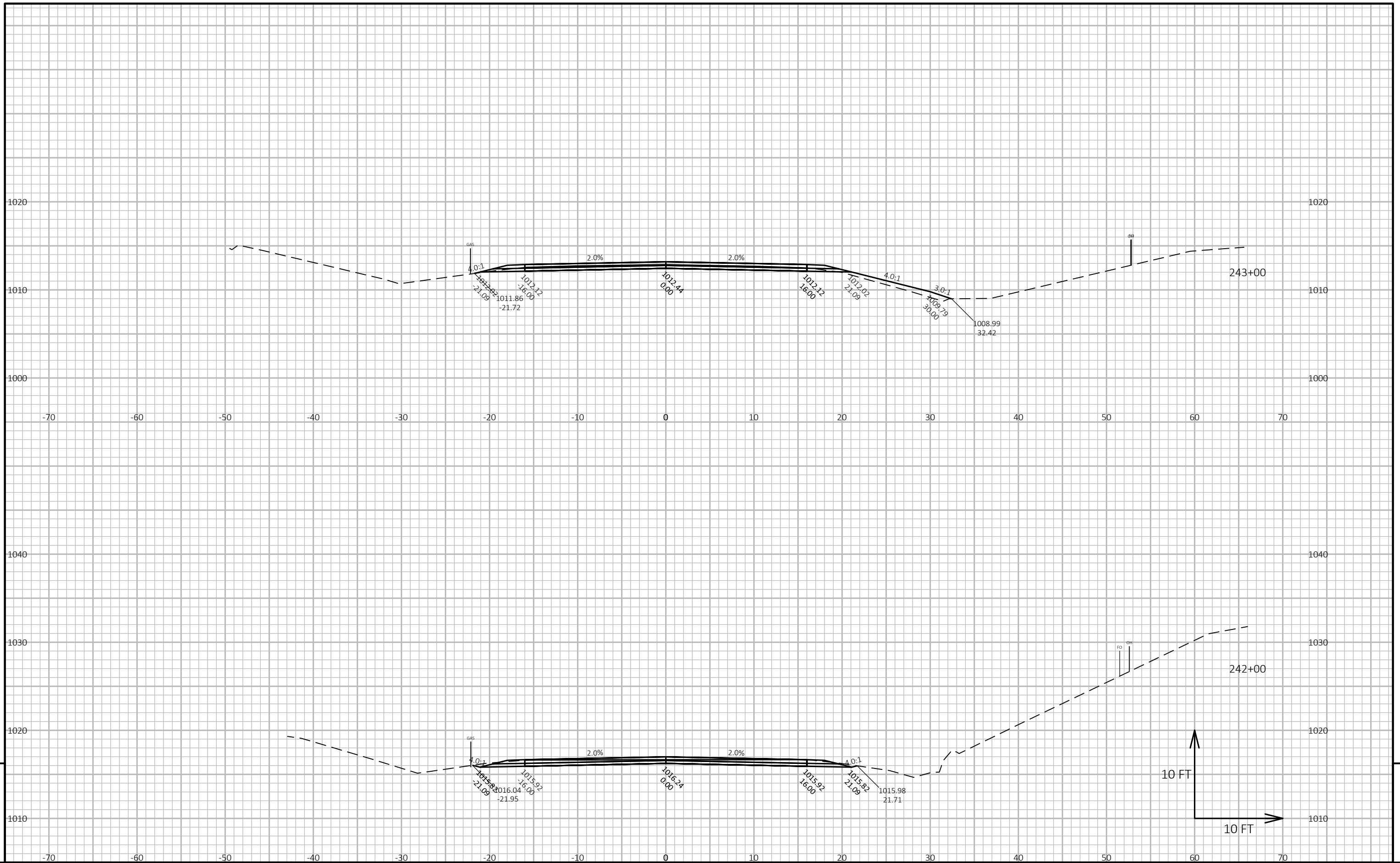
CROSS SECTIONS: CTH V MAINLINE

SHEET

E



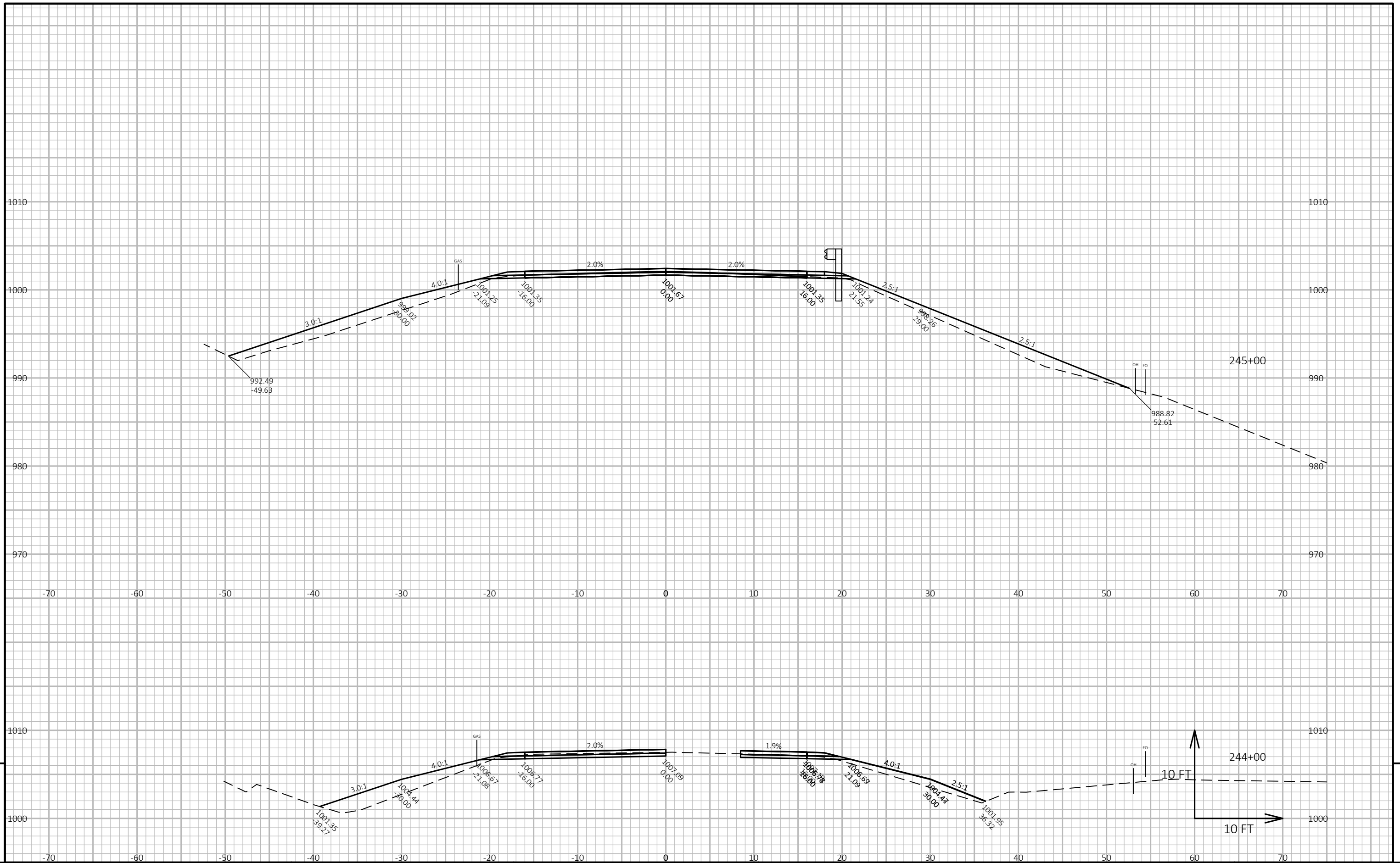
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



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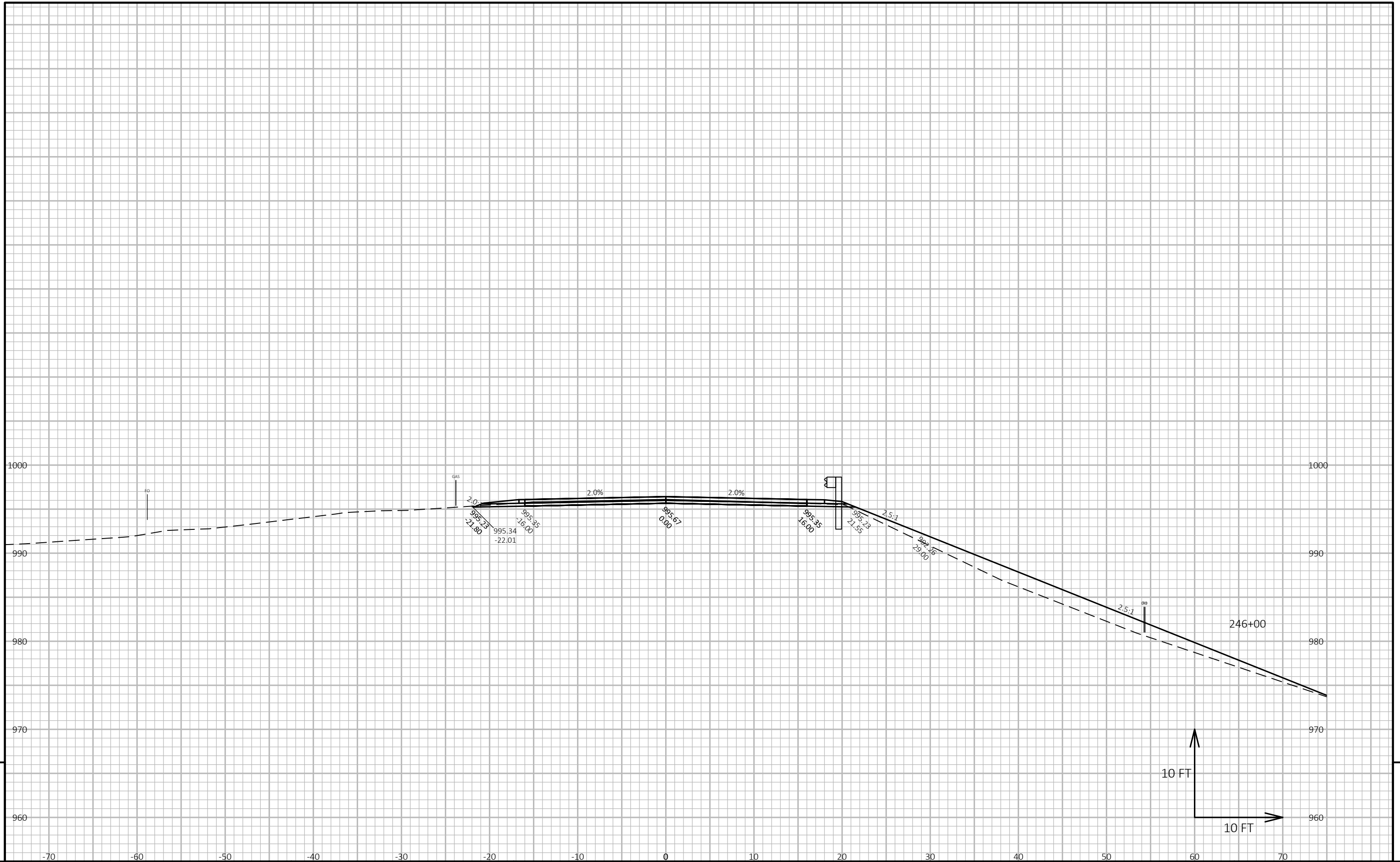
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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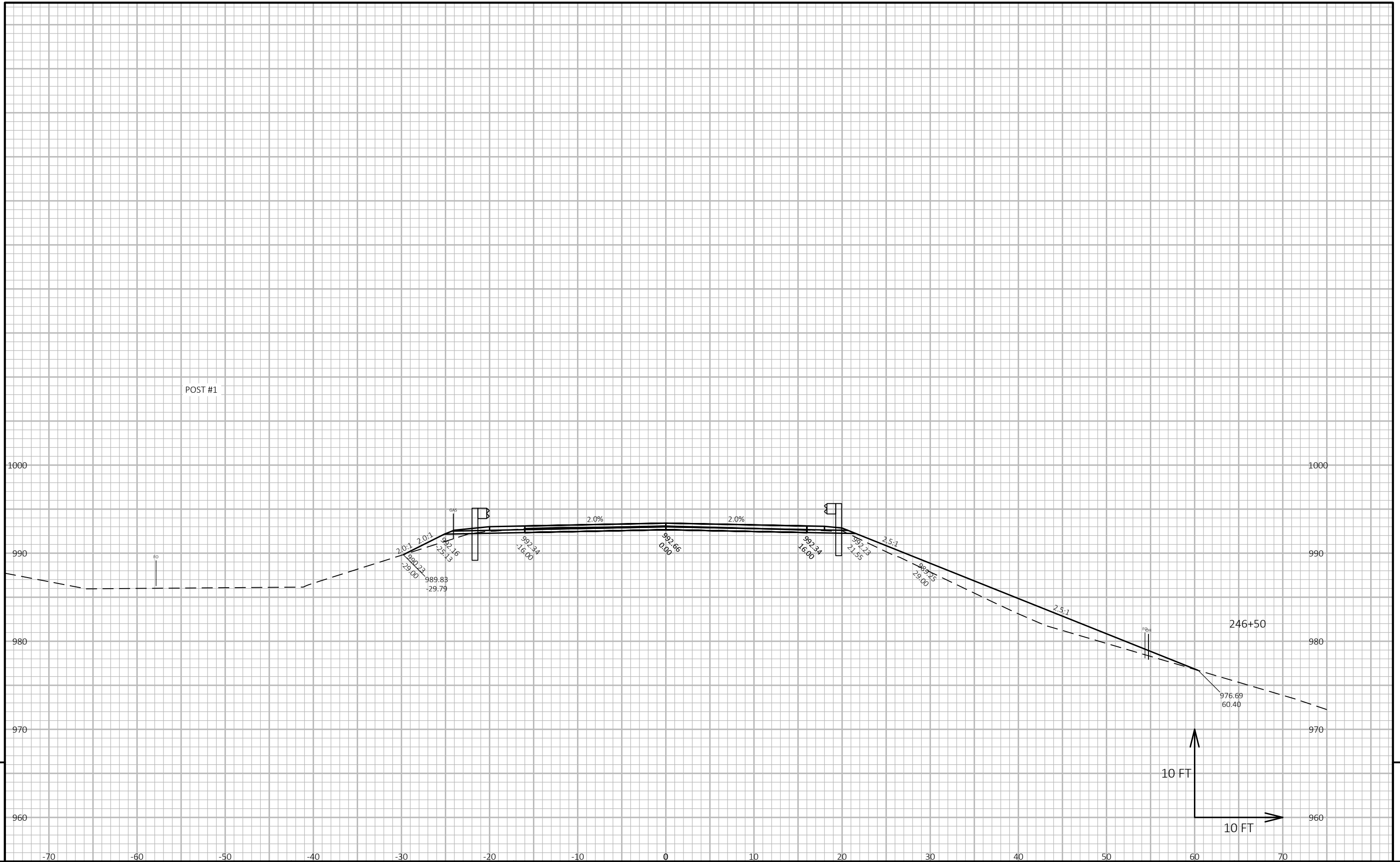
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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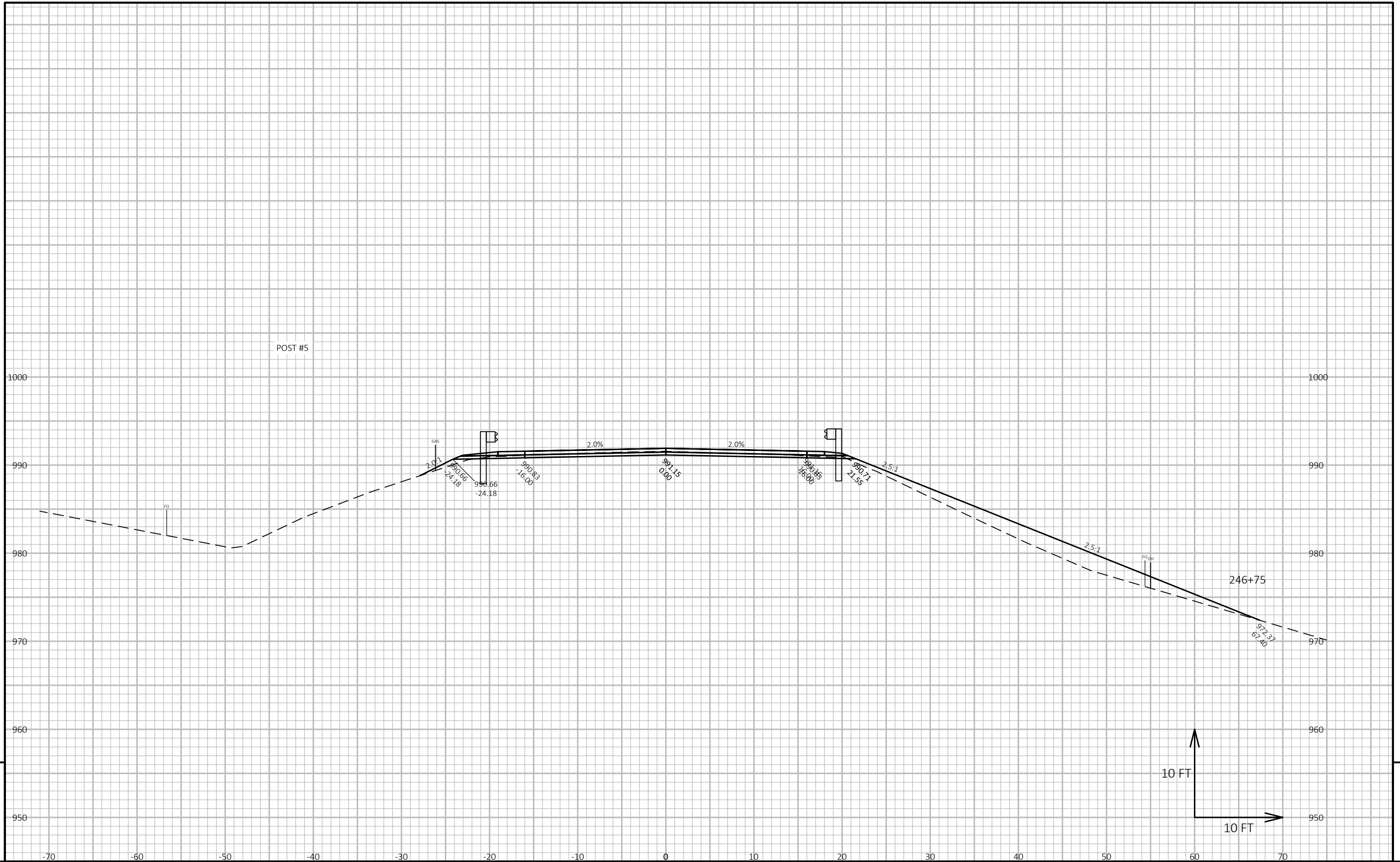
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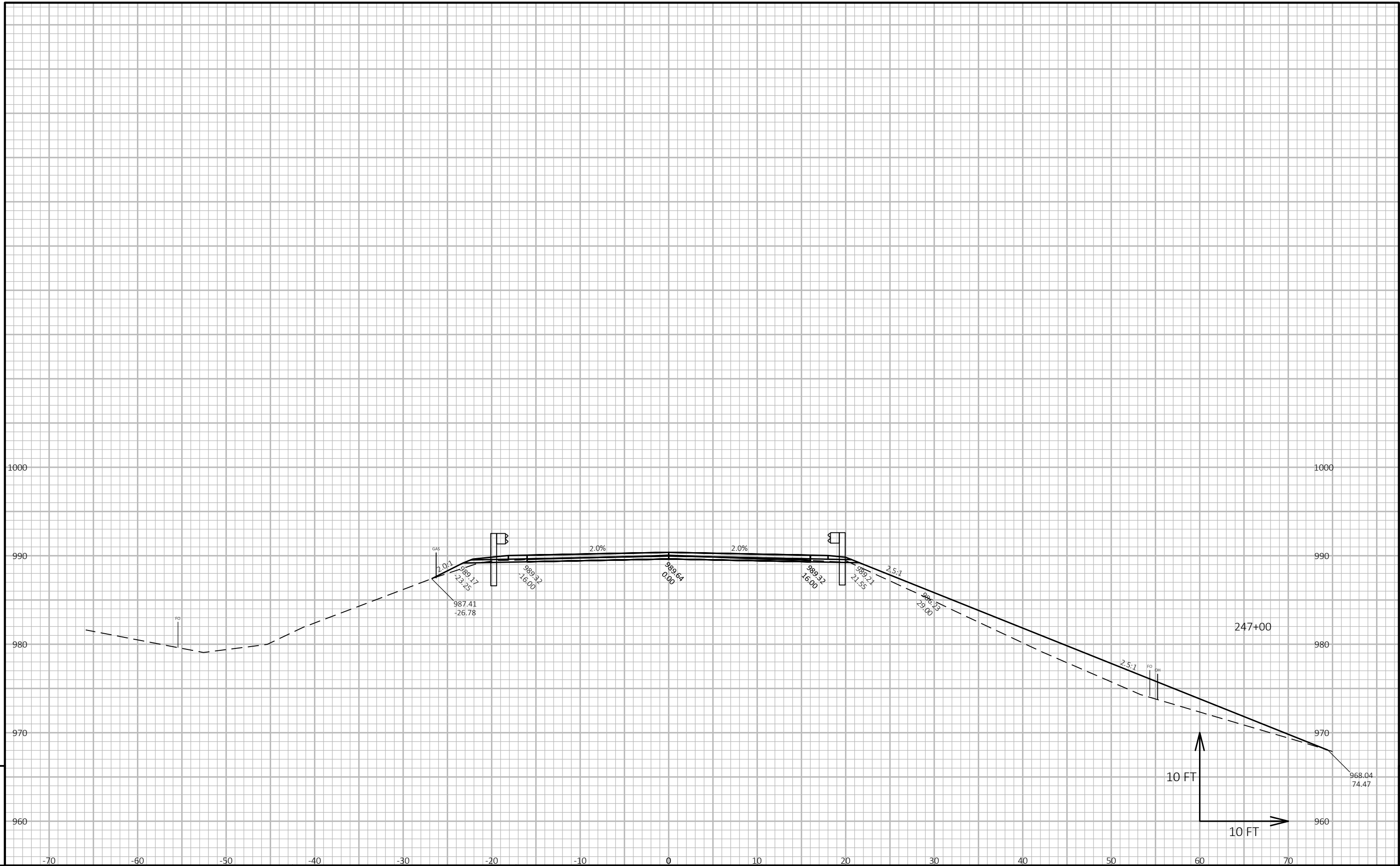
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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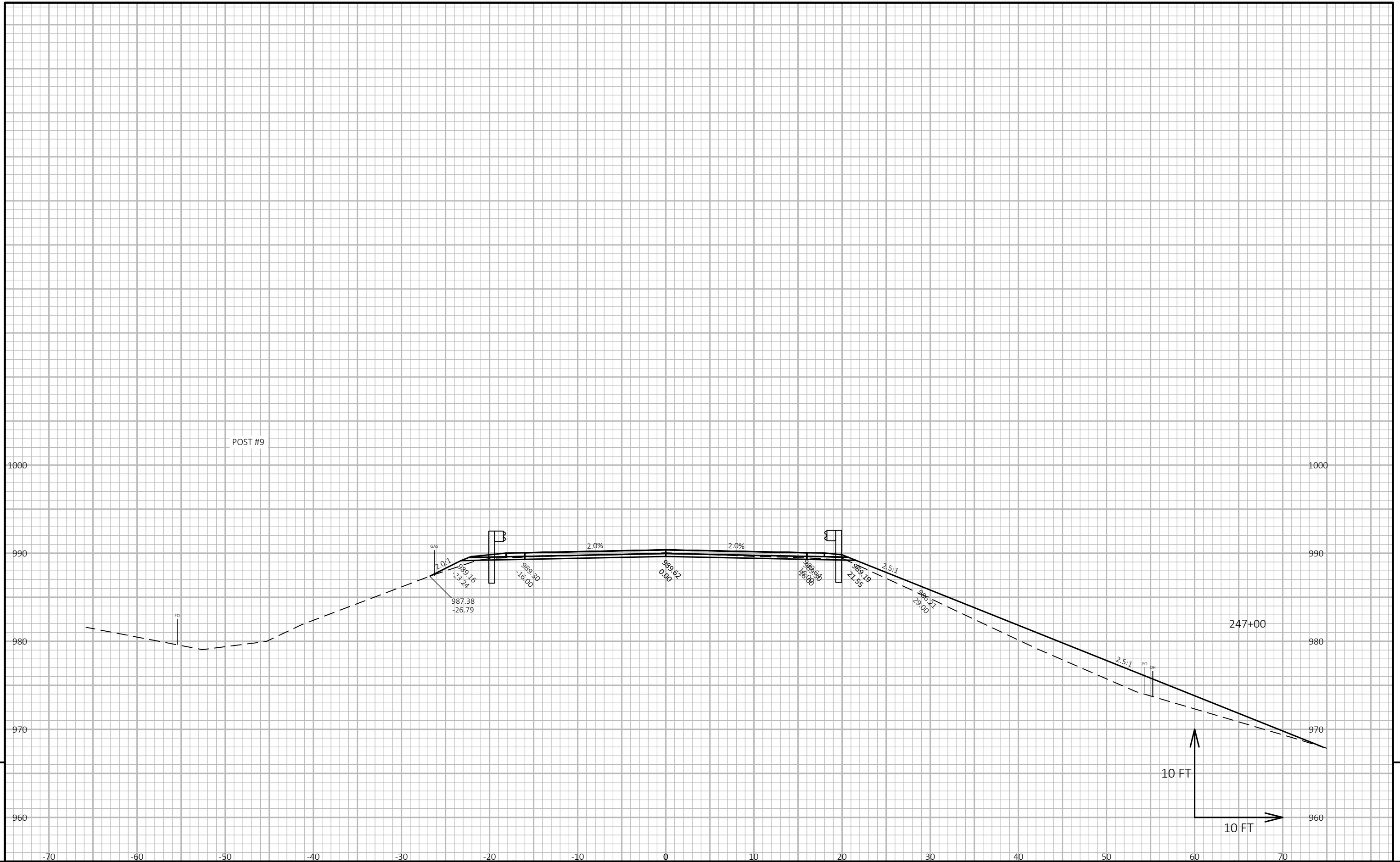
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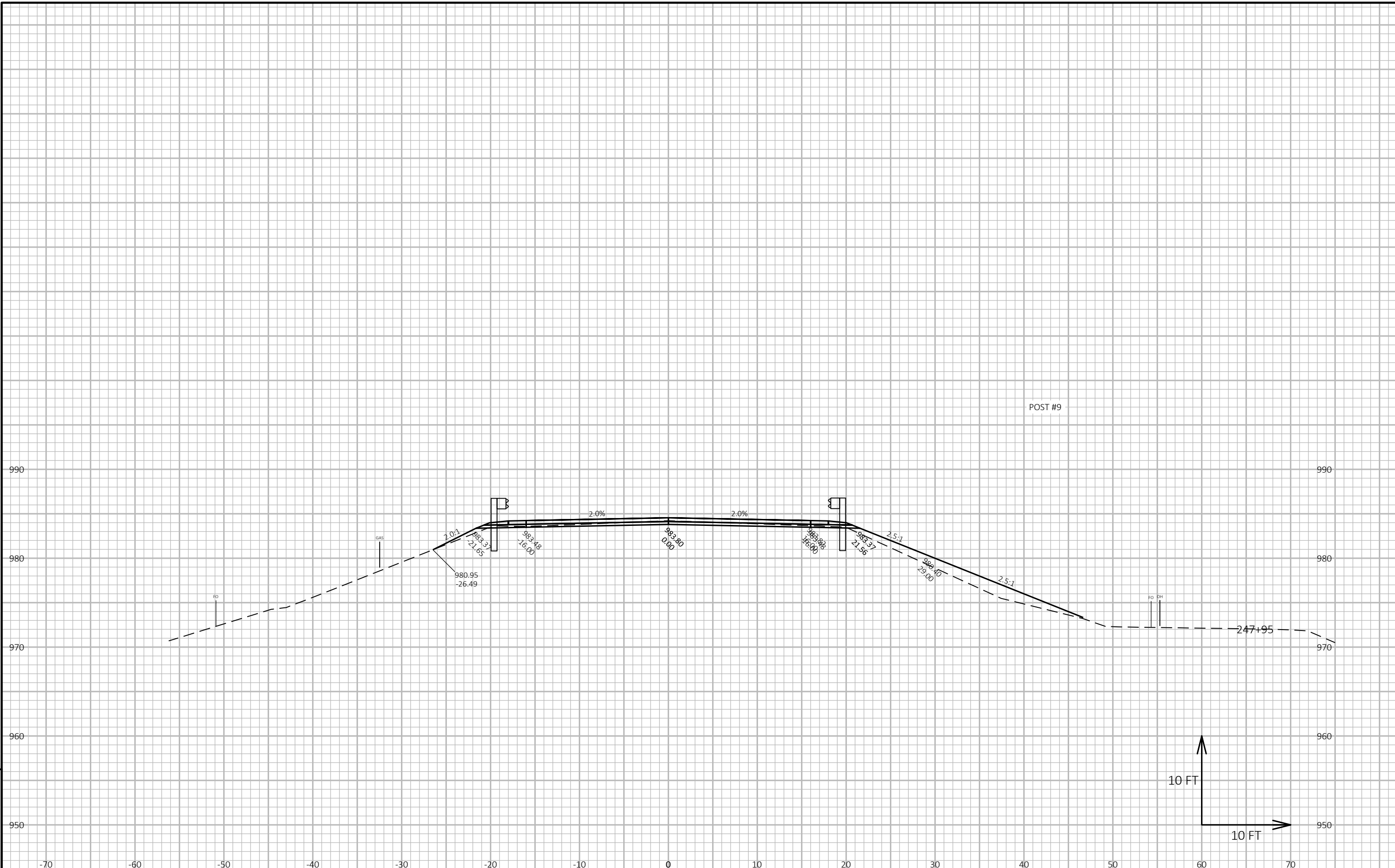
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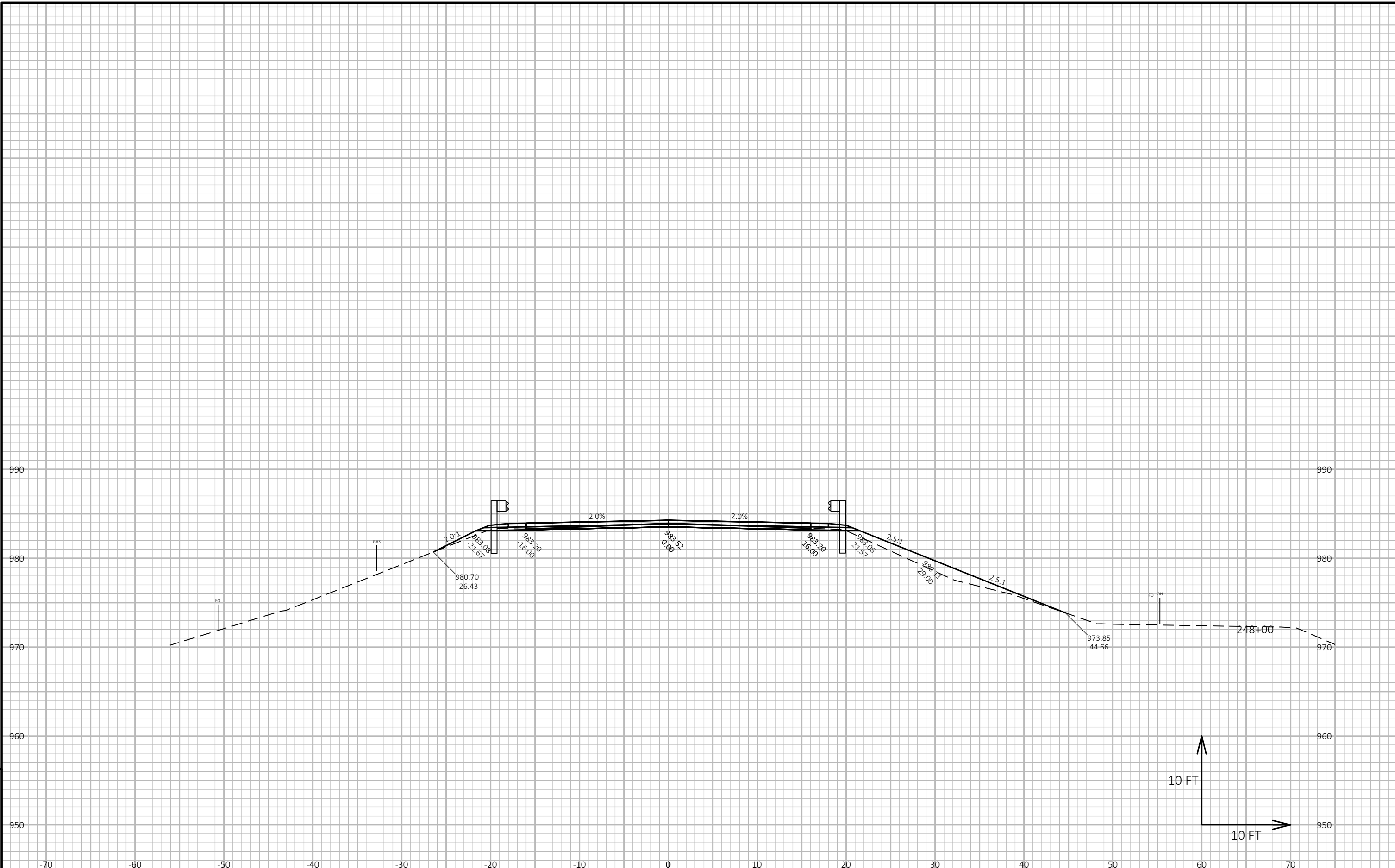
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73

HWY: CTH V

COUNTY: DANE

CROSS SECTIONS: CTH V MAINLINE

SHEET E

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LAYOUT NAME - Section Sheet - (95)

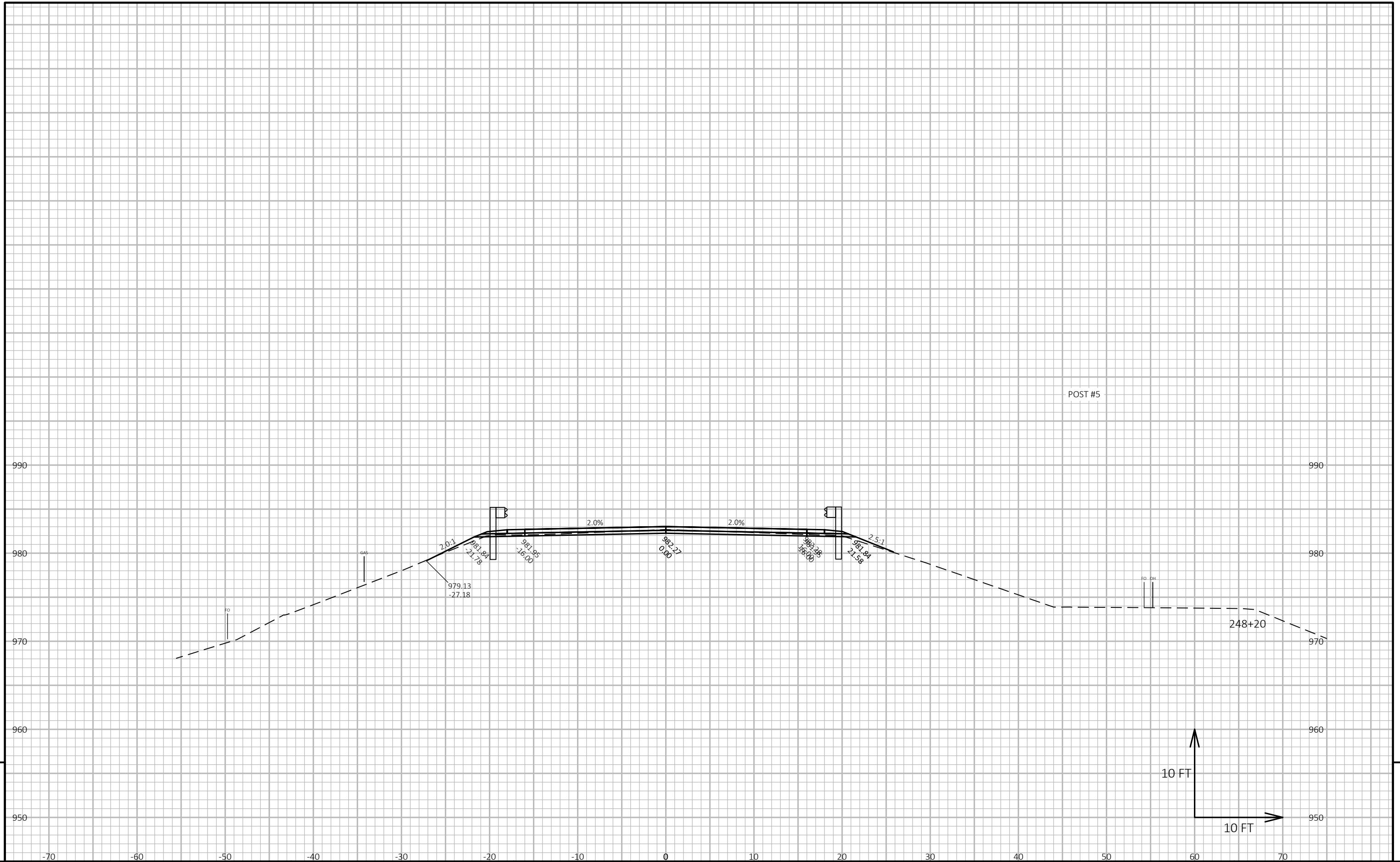
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PLOT BY : RACH, JEREMY

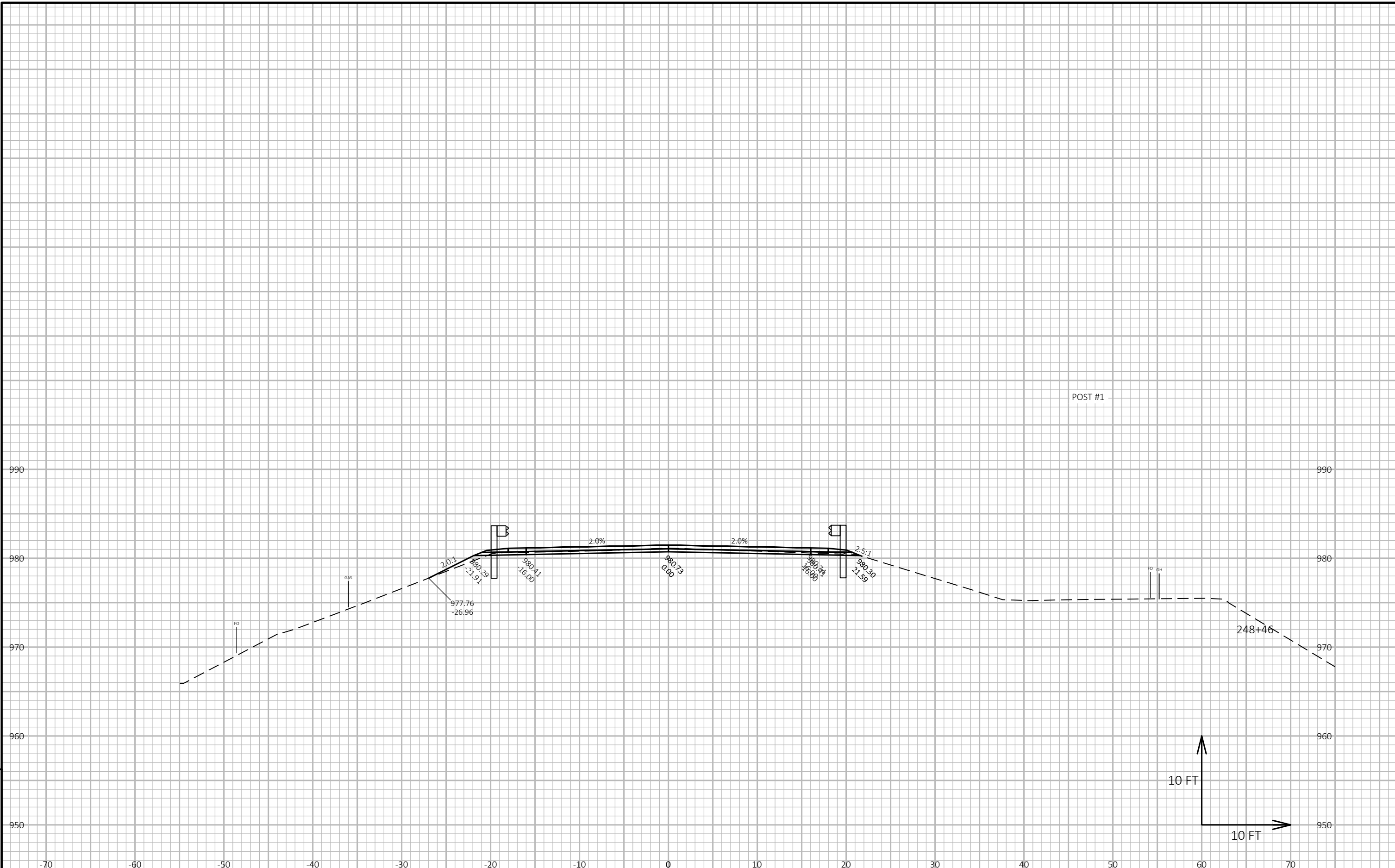
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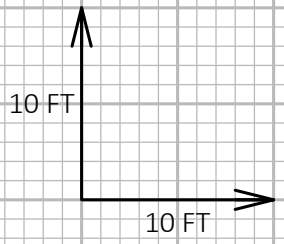
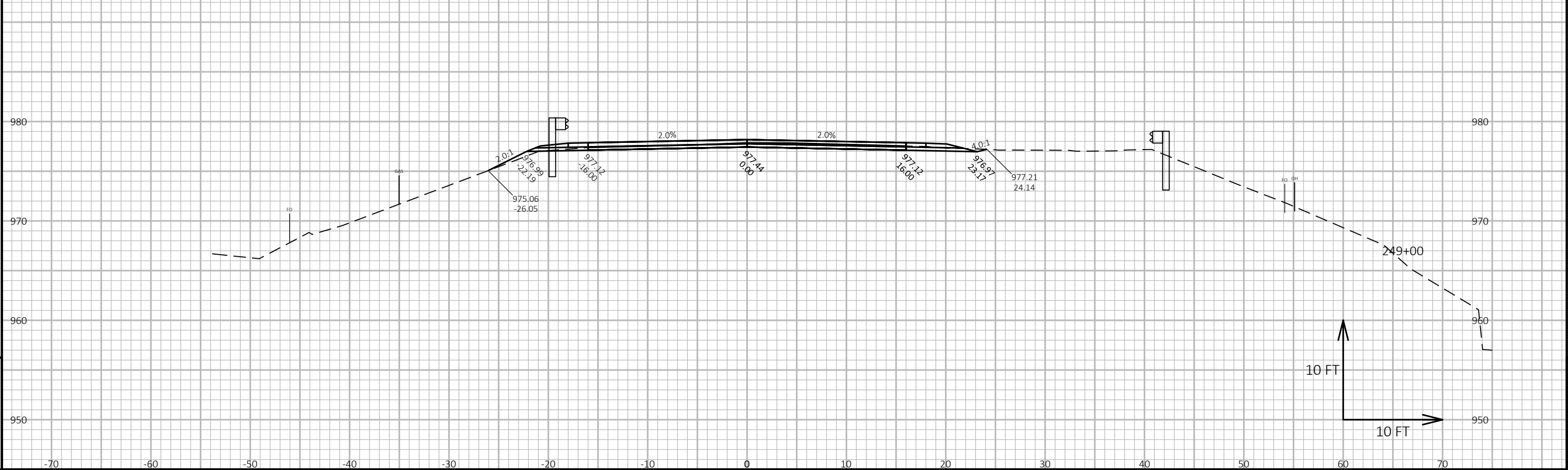
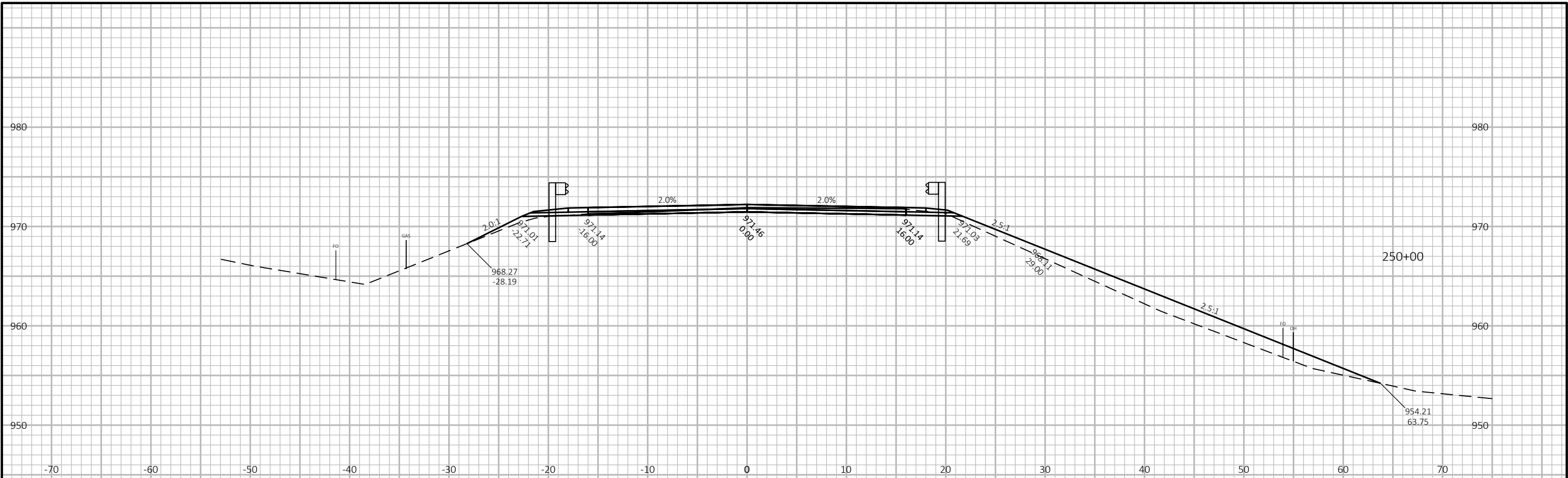
WISDOT/CADD5 SHEET 49



PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



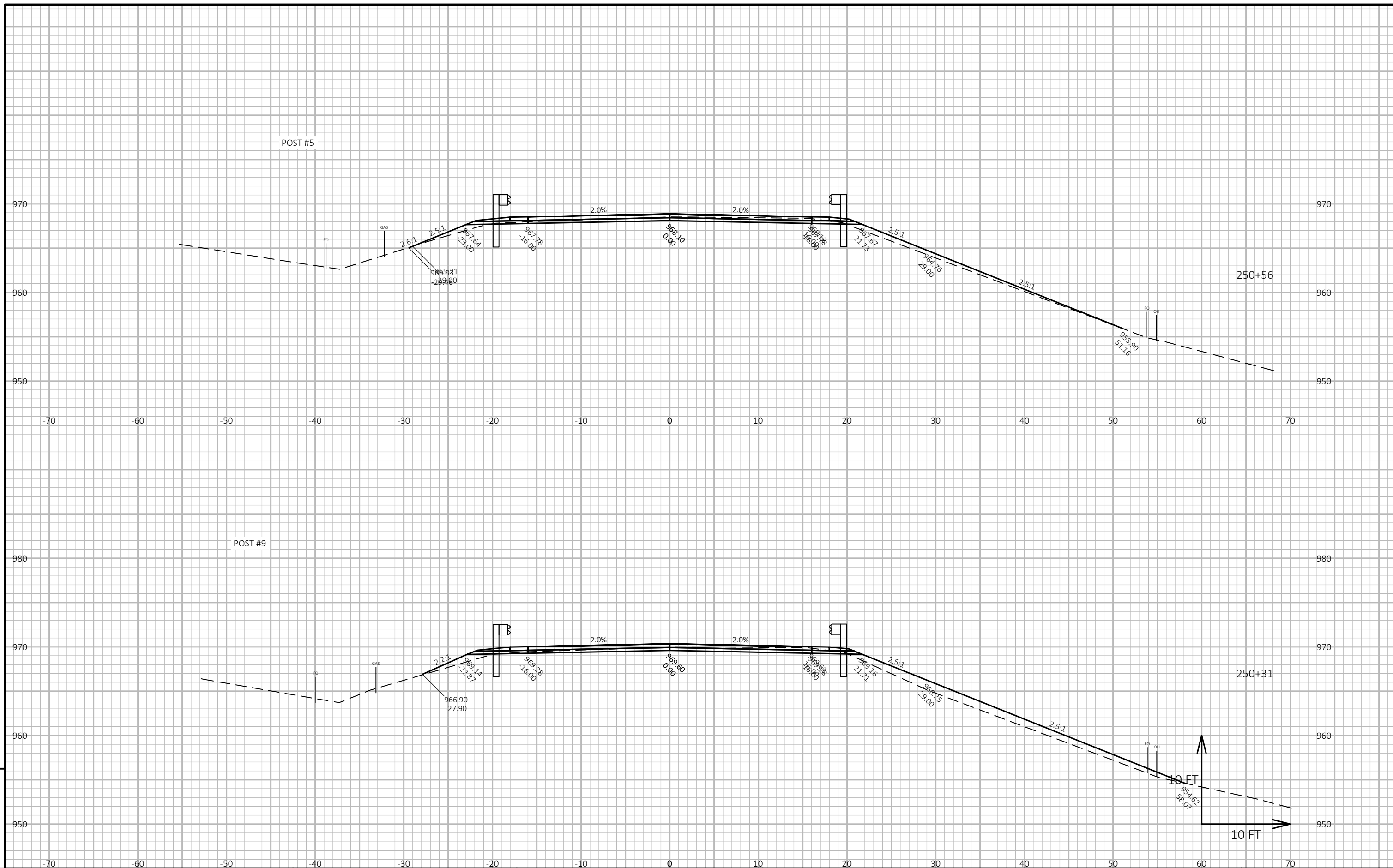
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET
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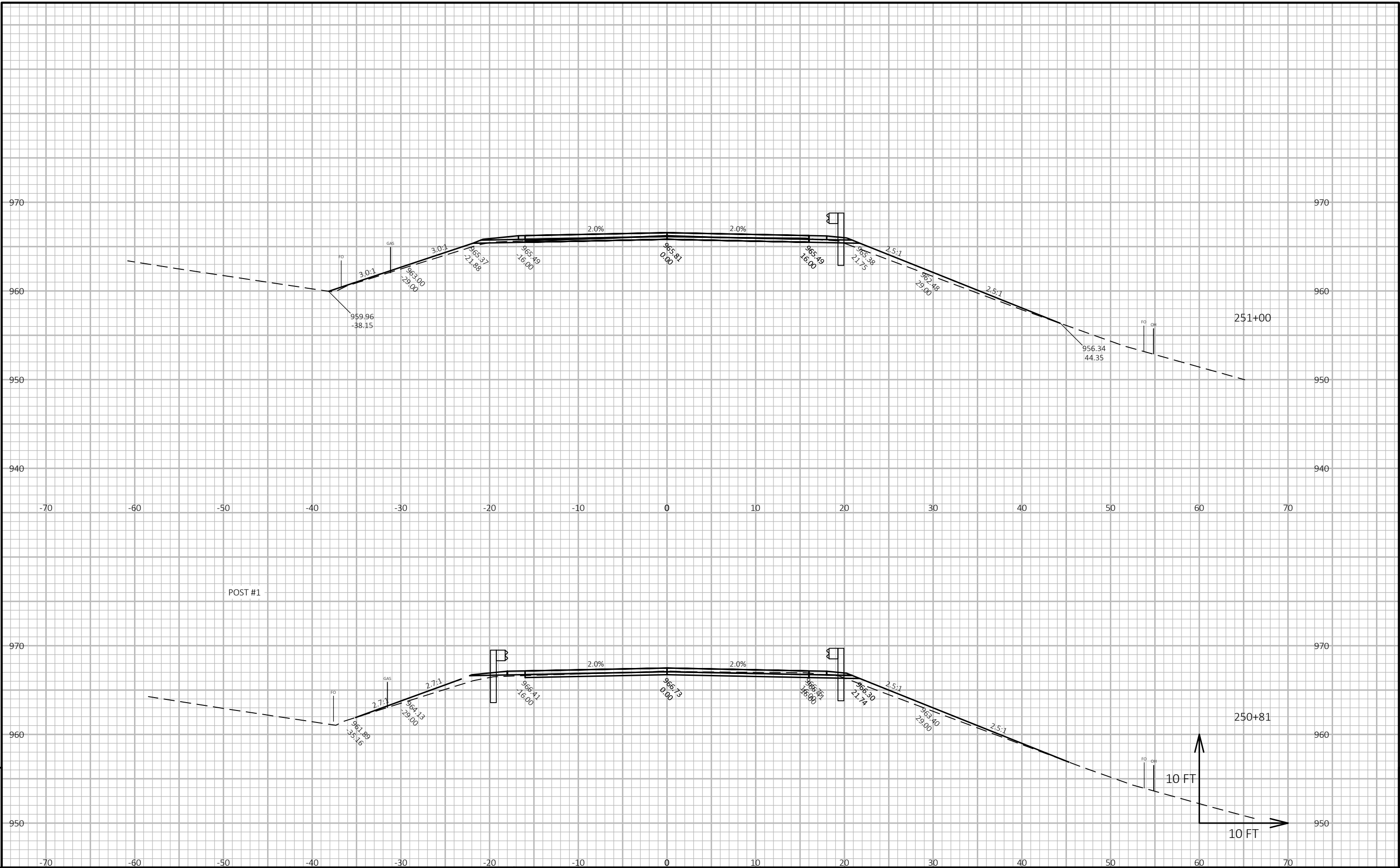
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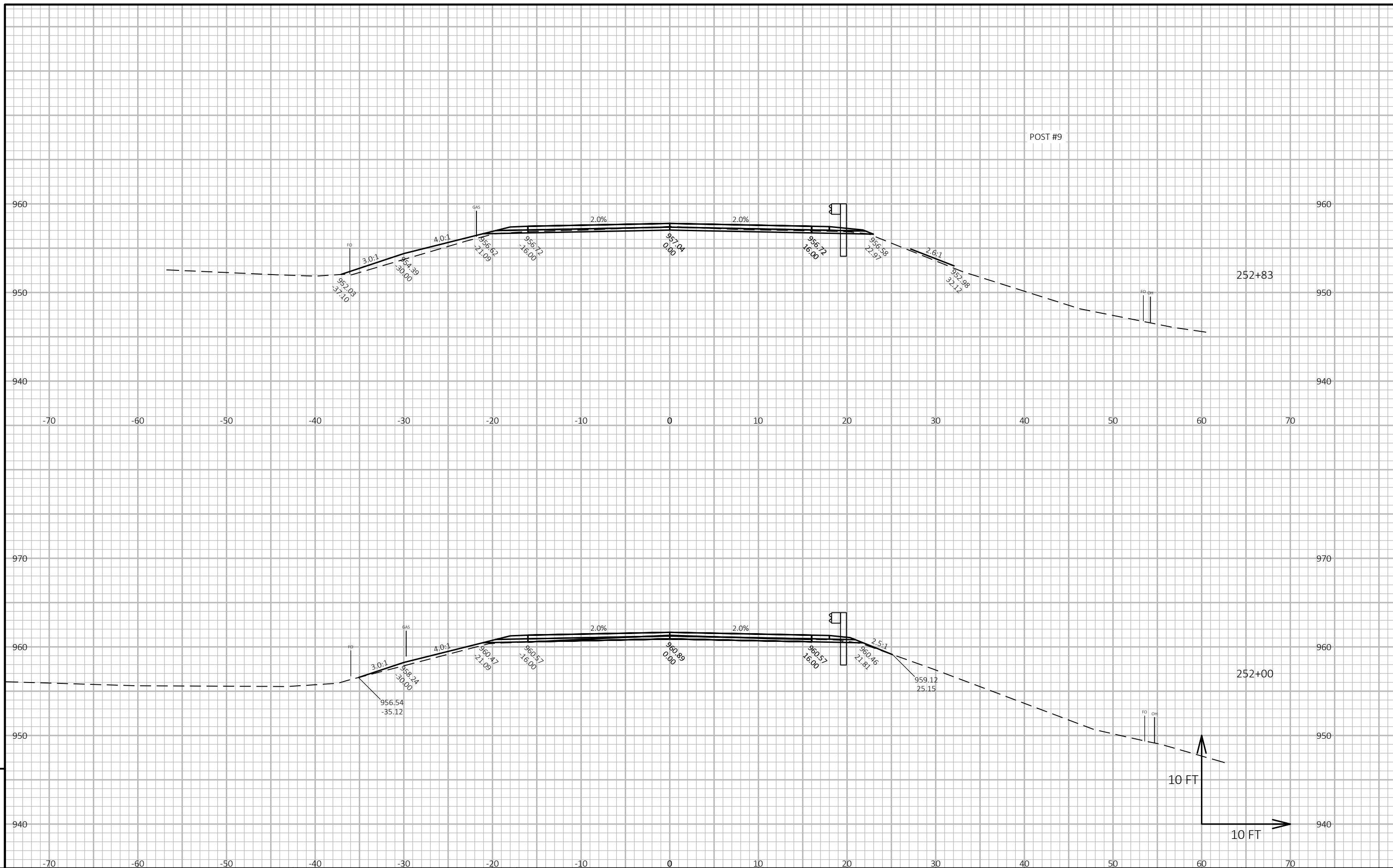
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



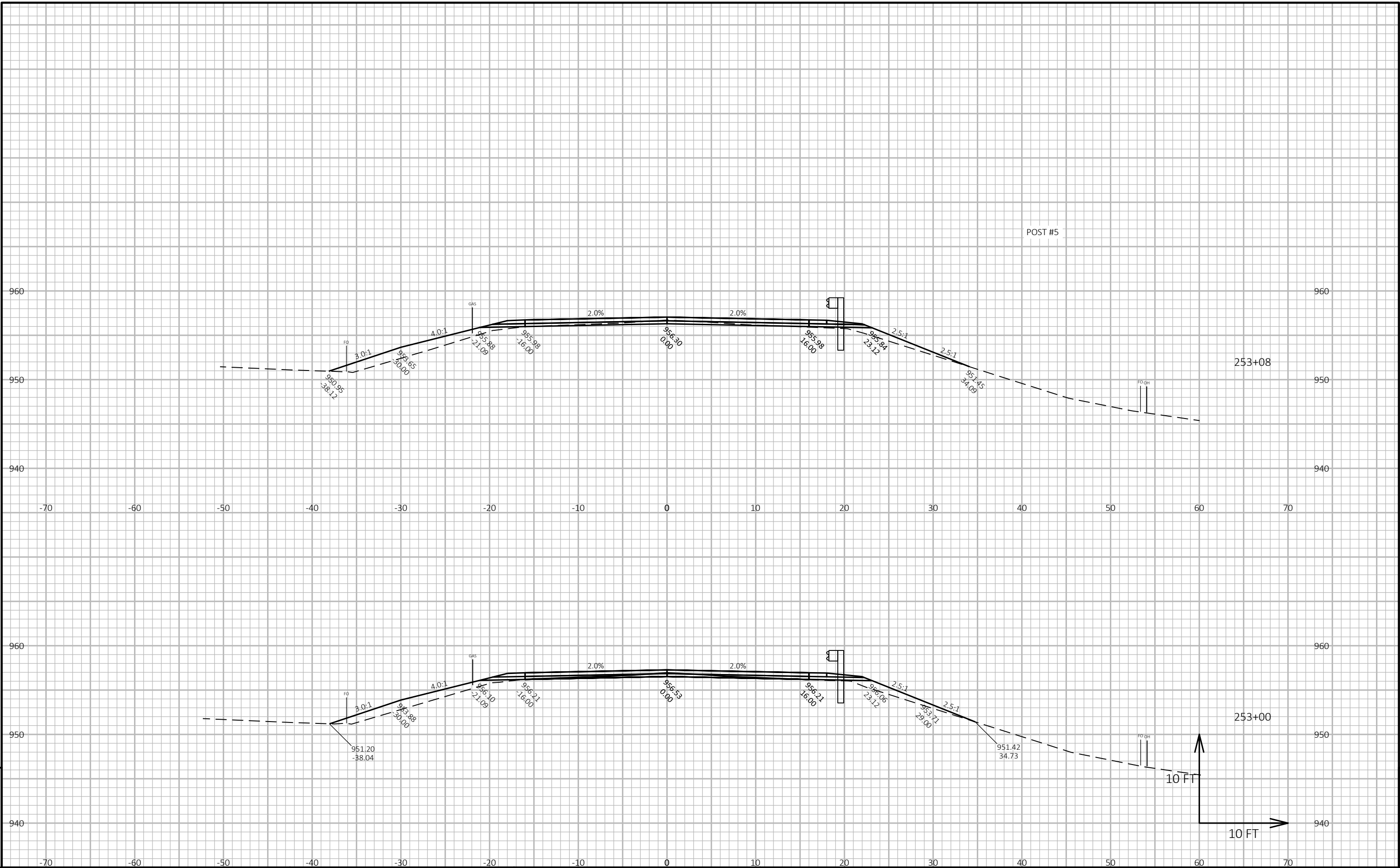
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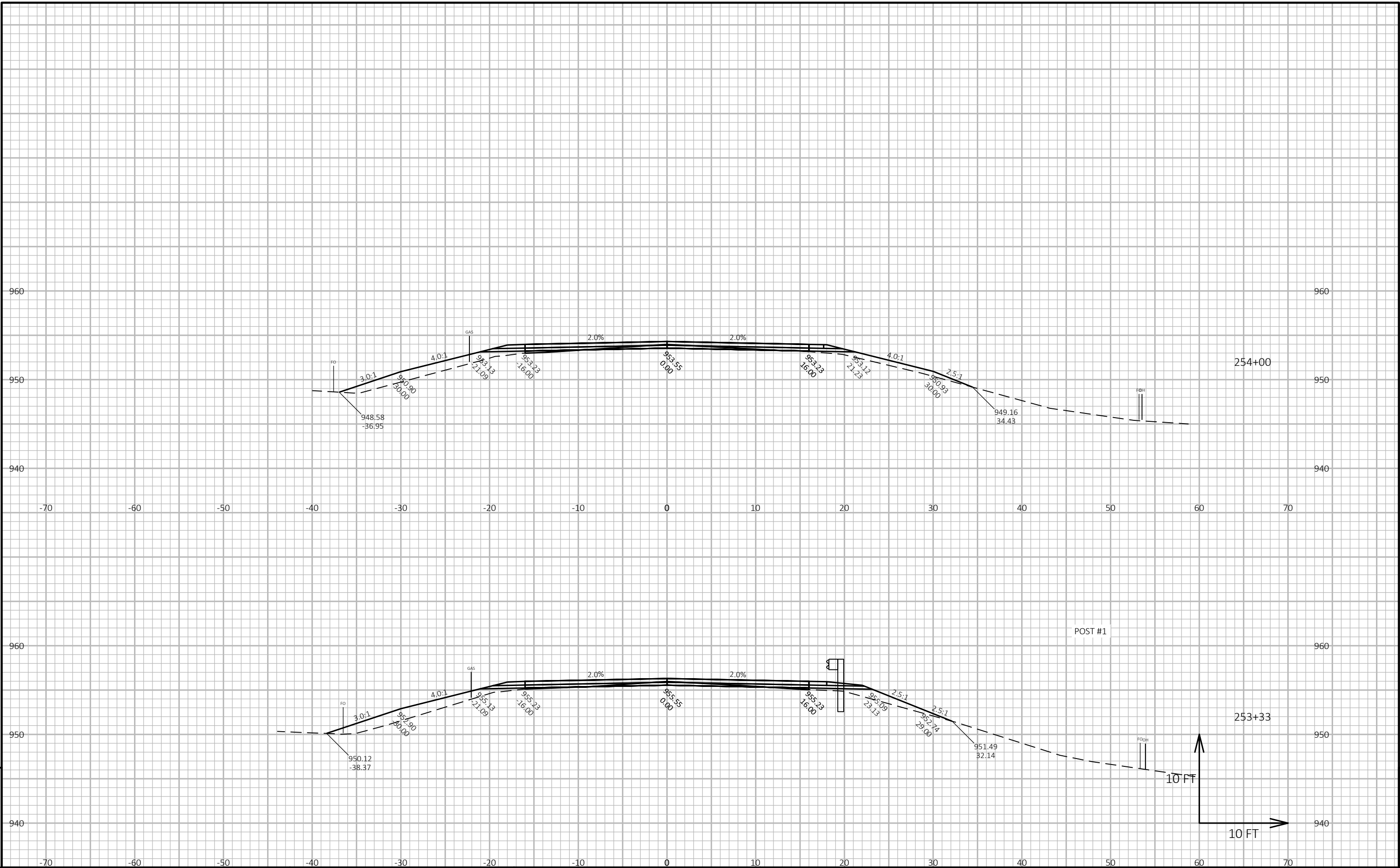
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E



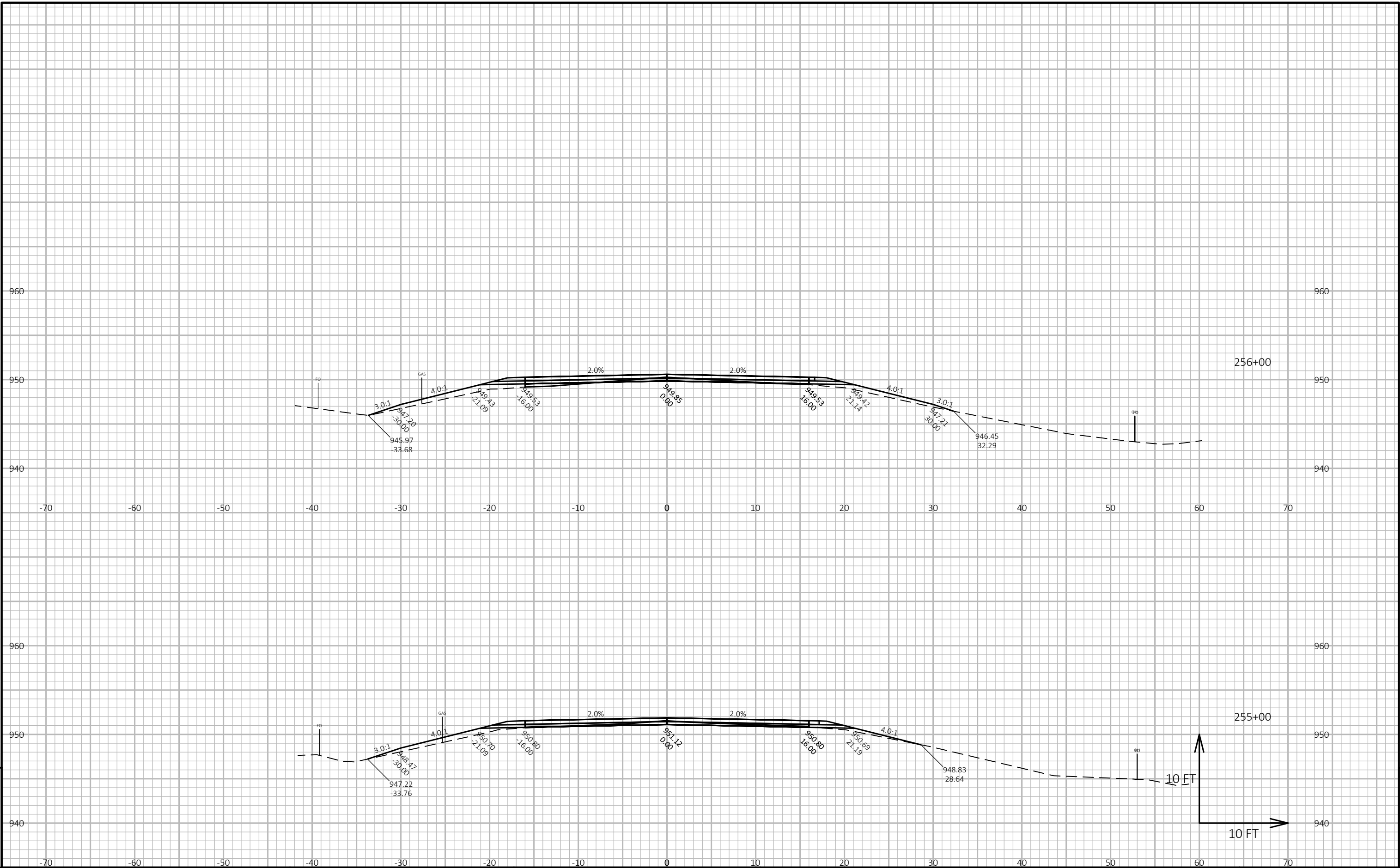
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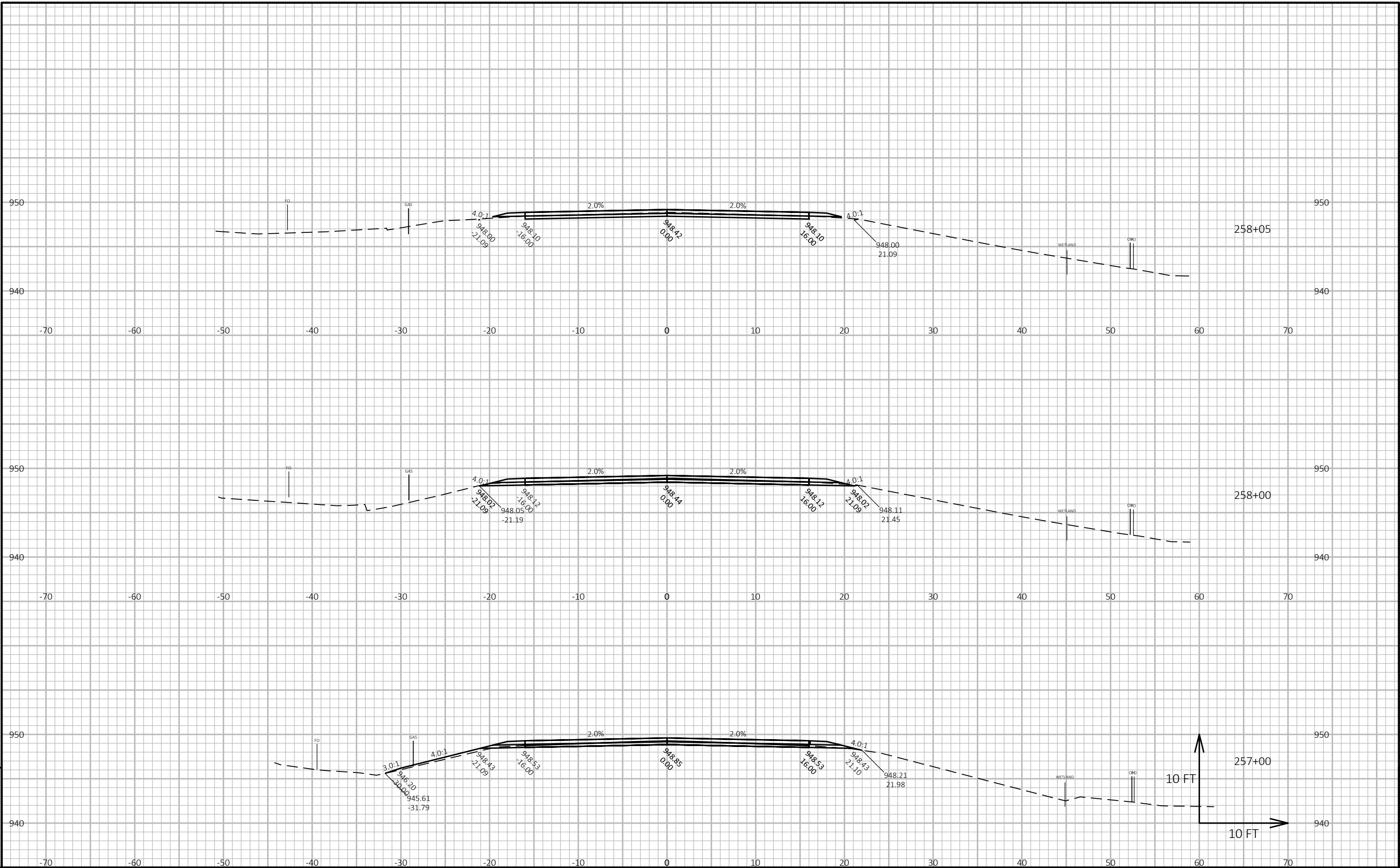
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH V MAINLINE	SHEET	E
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET 9



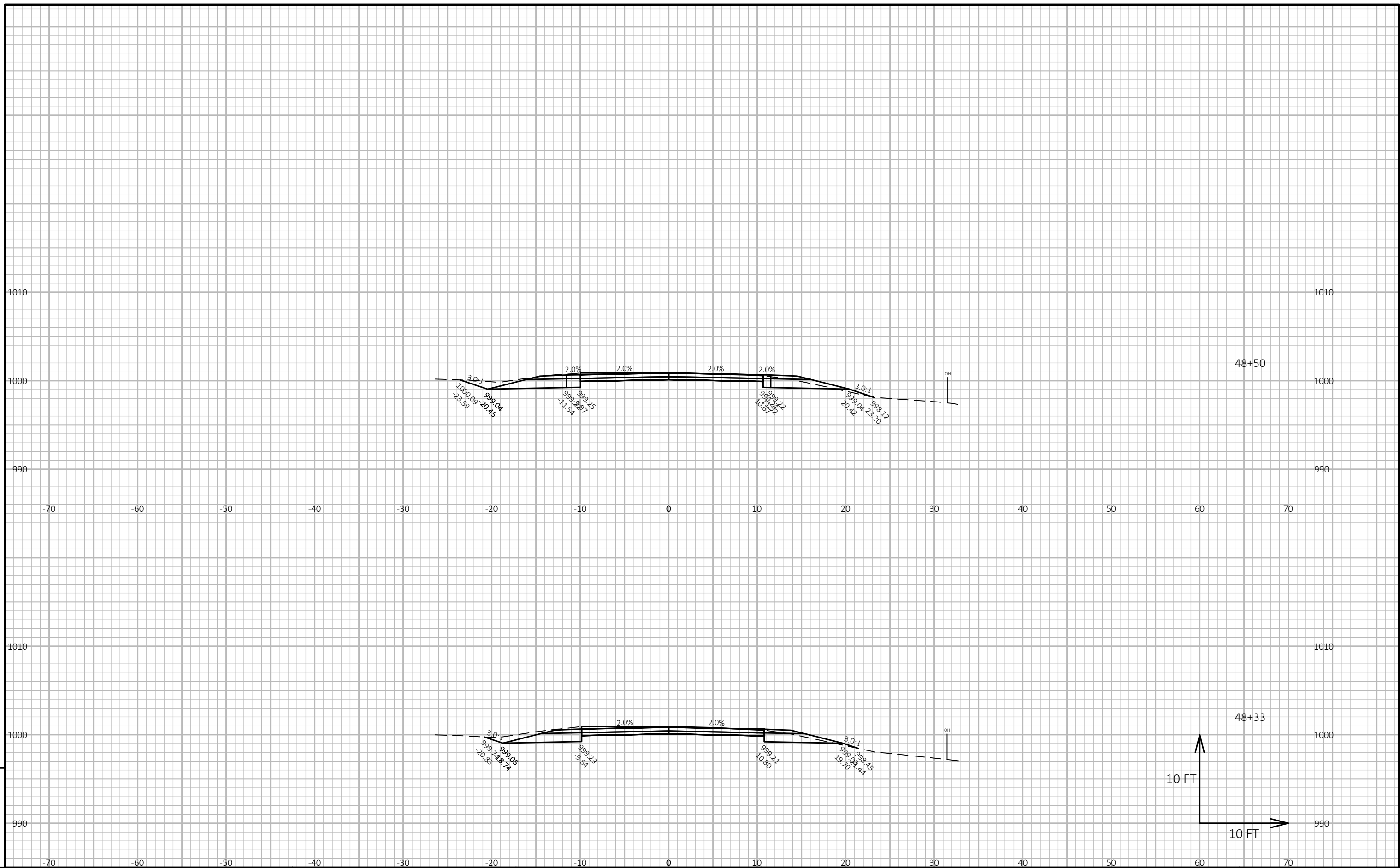
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH V MAINLINE SHEET E

FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETS\PLAN\090201-XS.DWG PLOT DATE : 1/24/2022 12:55 PM PLOT BY : RACH, JEREMY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

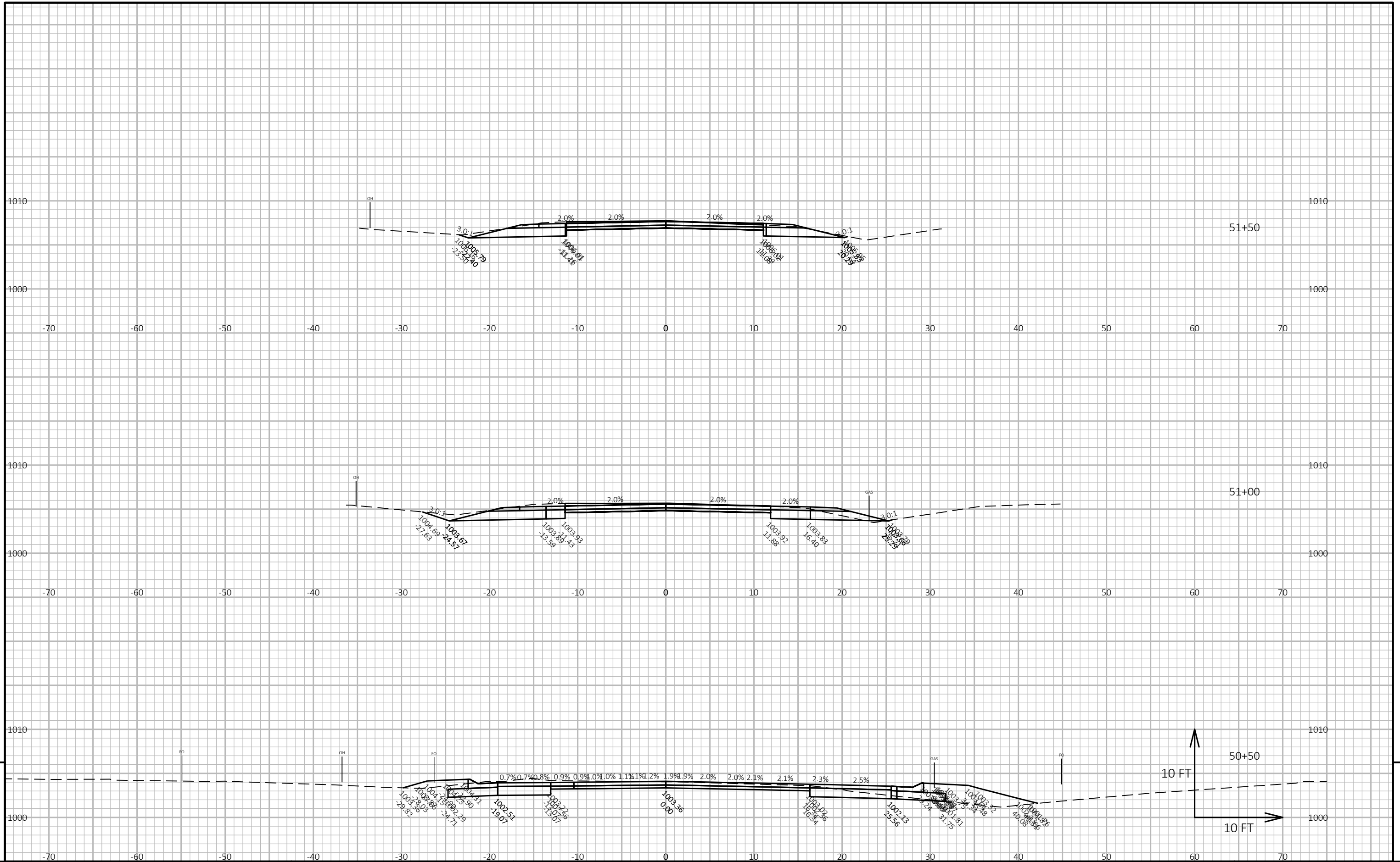
LAYOUT NAME - Section Sheet - (208)



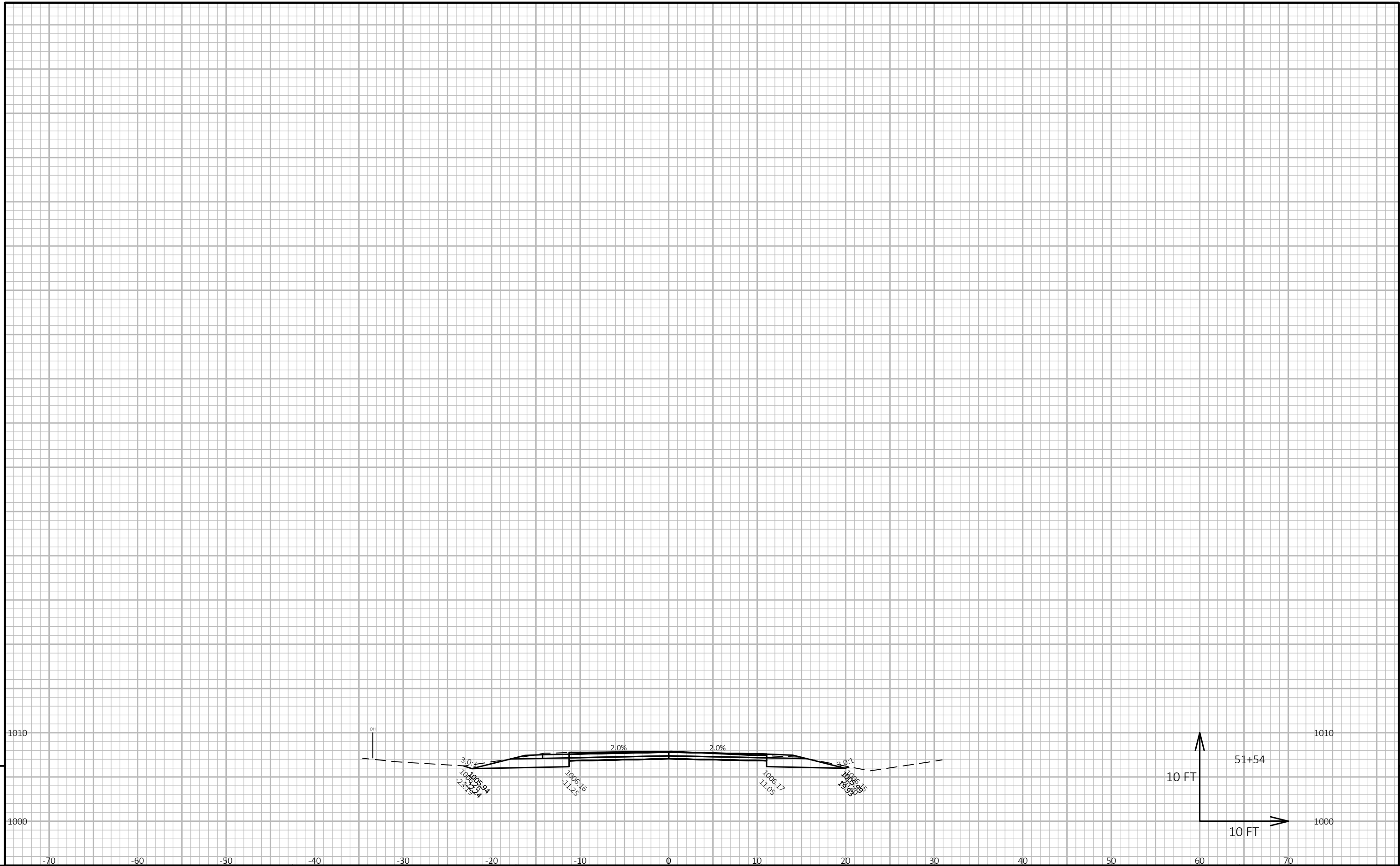
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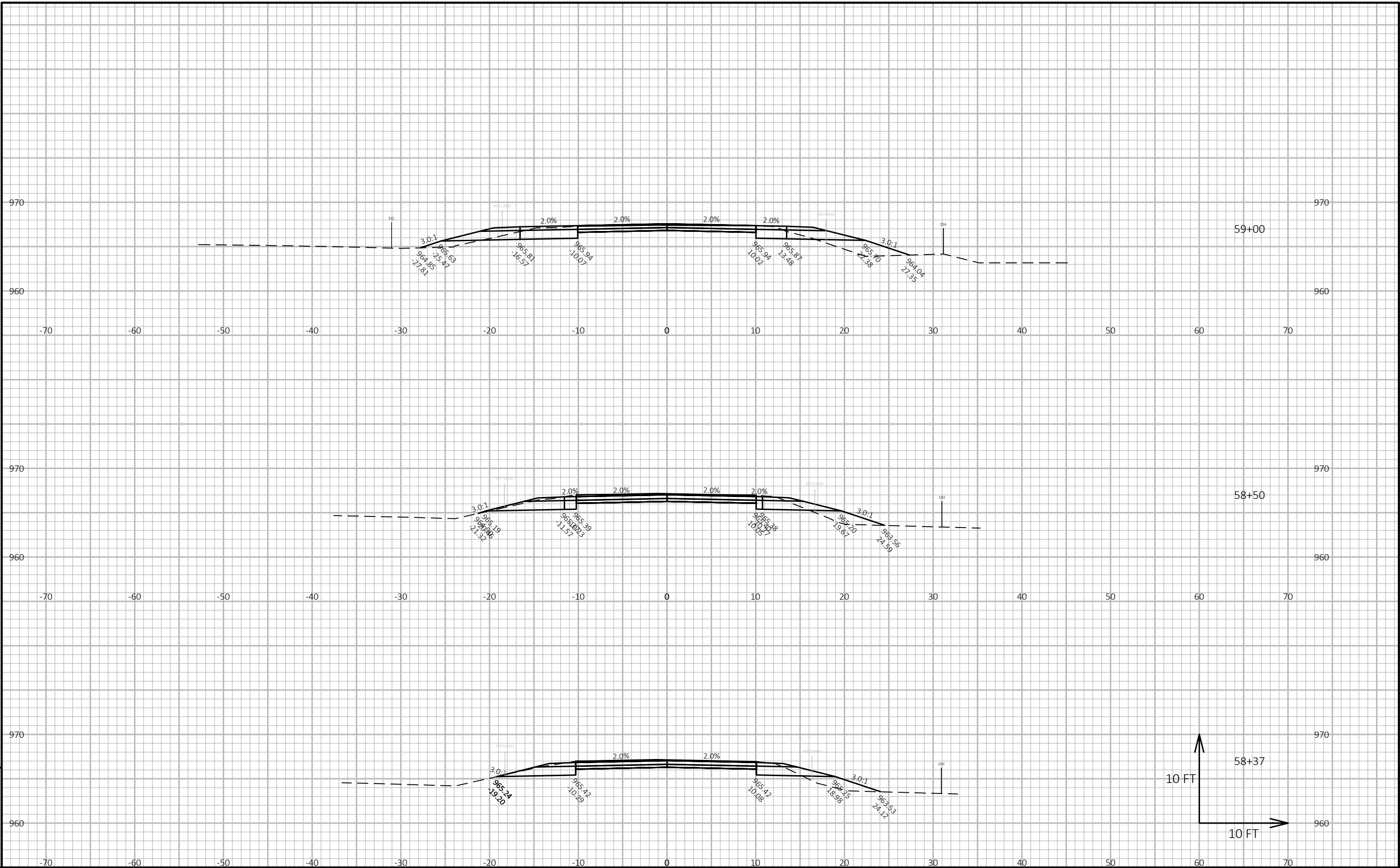
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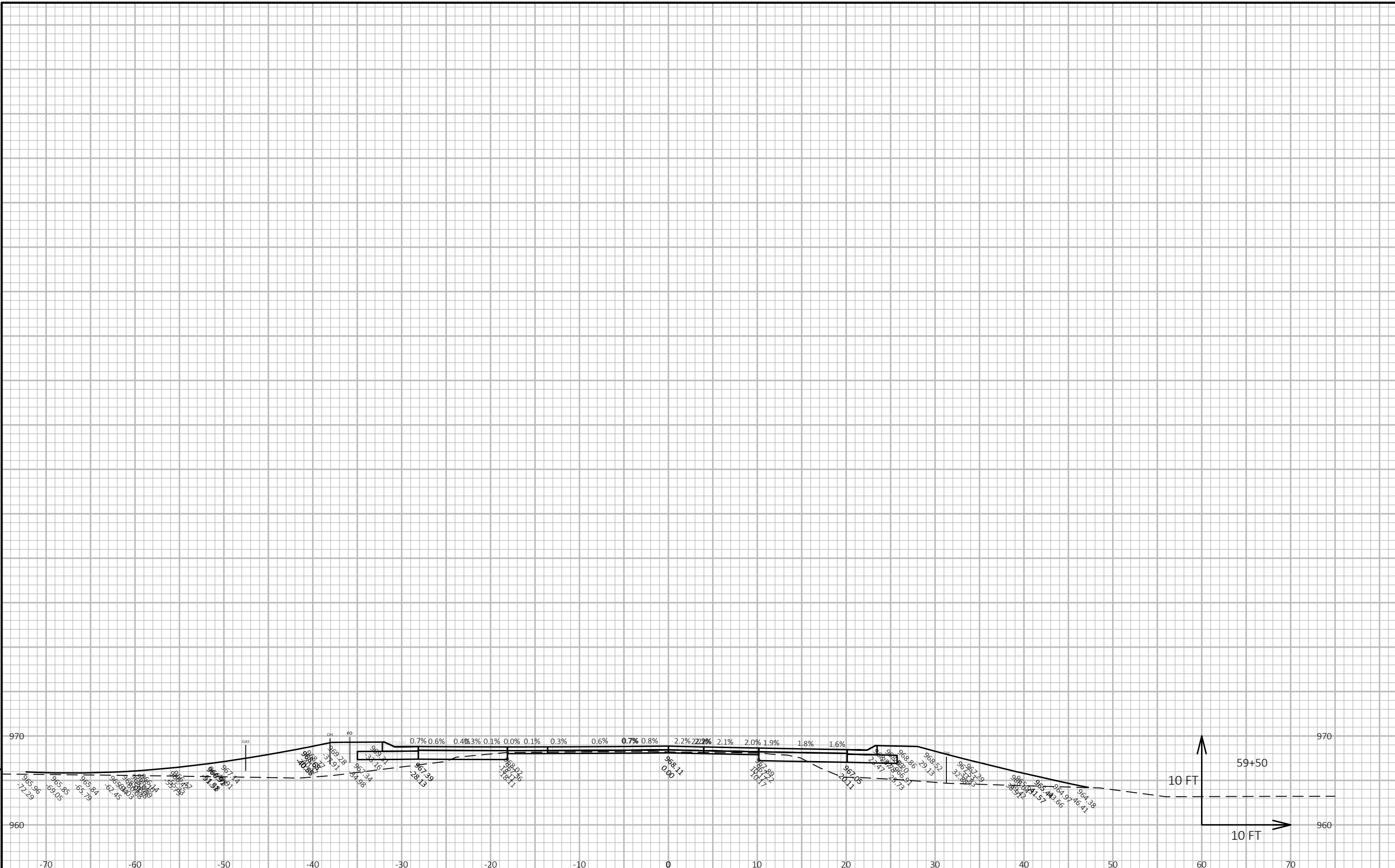
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: MADIGAN ROAD NORTH	SHEET	E
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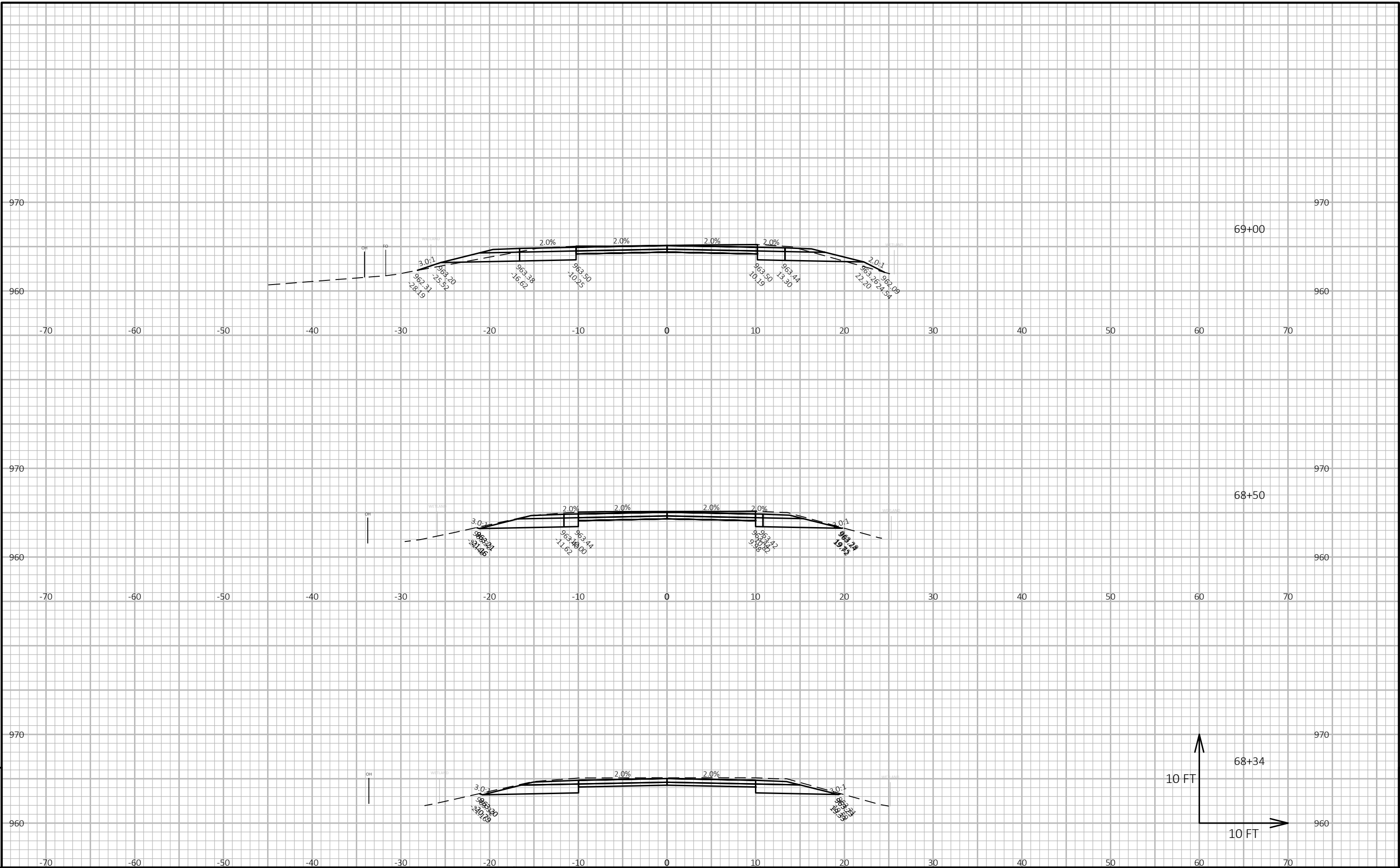
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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: SCHUMACHER ROAD SHEET E



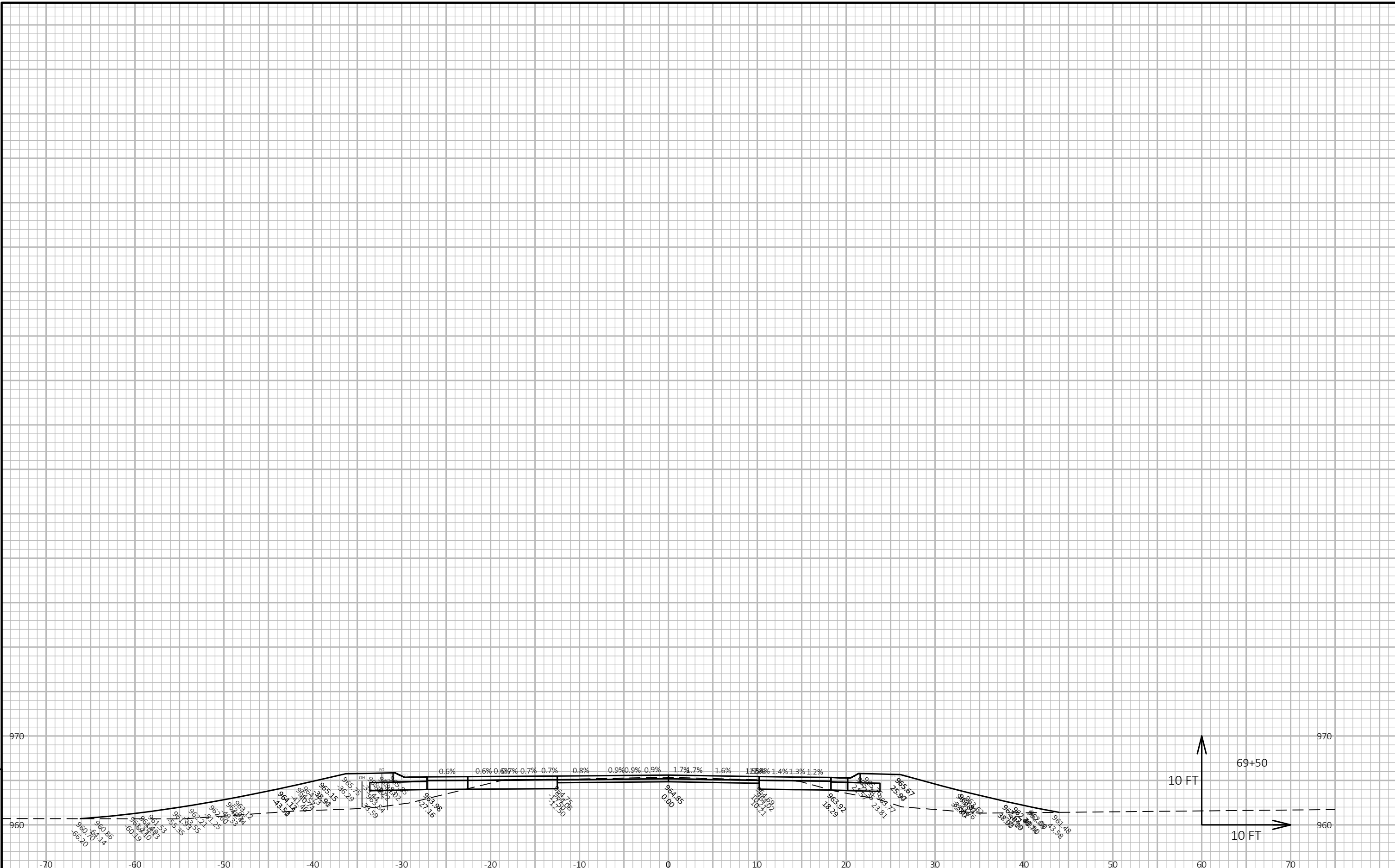
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: SCHUMACHER ROAD SHEET E



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PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: PATTON ROAD SOUTH SHEET E



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PROJECT NO: 6218-00-73

HWY: CTH V

COUNTY: DANE

CROSS SECTIONS: PATTON ROAD SOUTH

SHEET

E

FILE NAME : H:\ENGINEER\ACAD-DWG\PROJECT\CTH-VV2021\SHEETSPLAN\090201-XS_SIDEROADS.DWG
LAYOUT NAME - Section Sheet - (6)

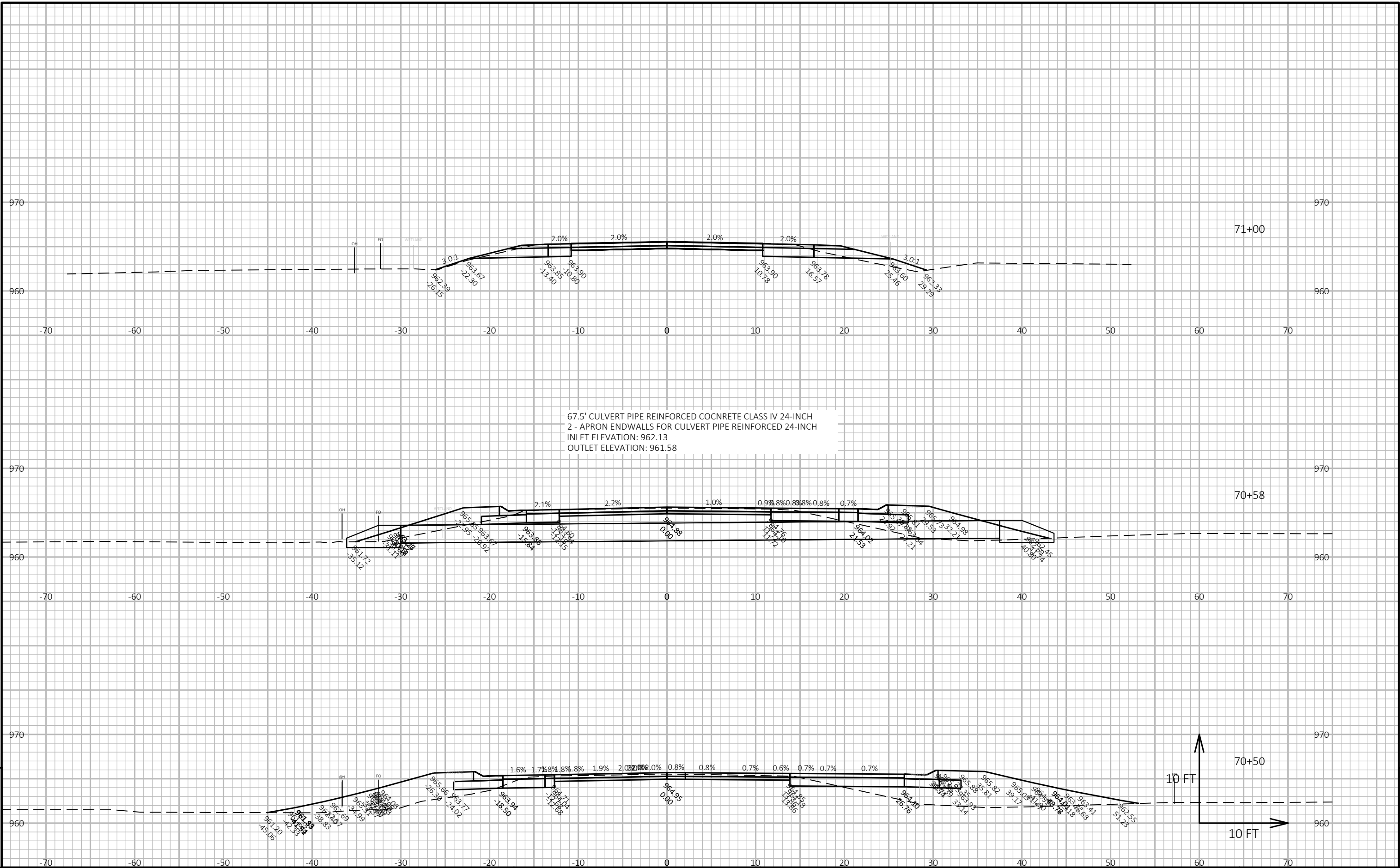
PLOT DATE : 1/25/2022 11:32 AM

PLOT BY : RACH, JEREMY

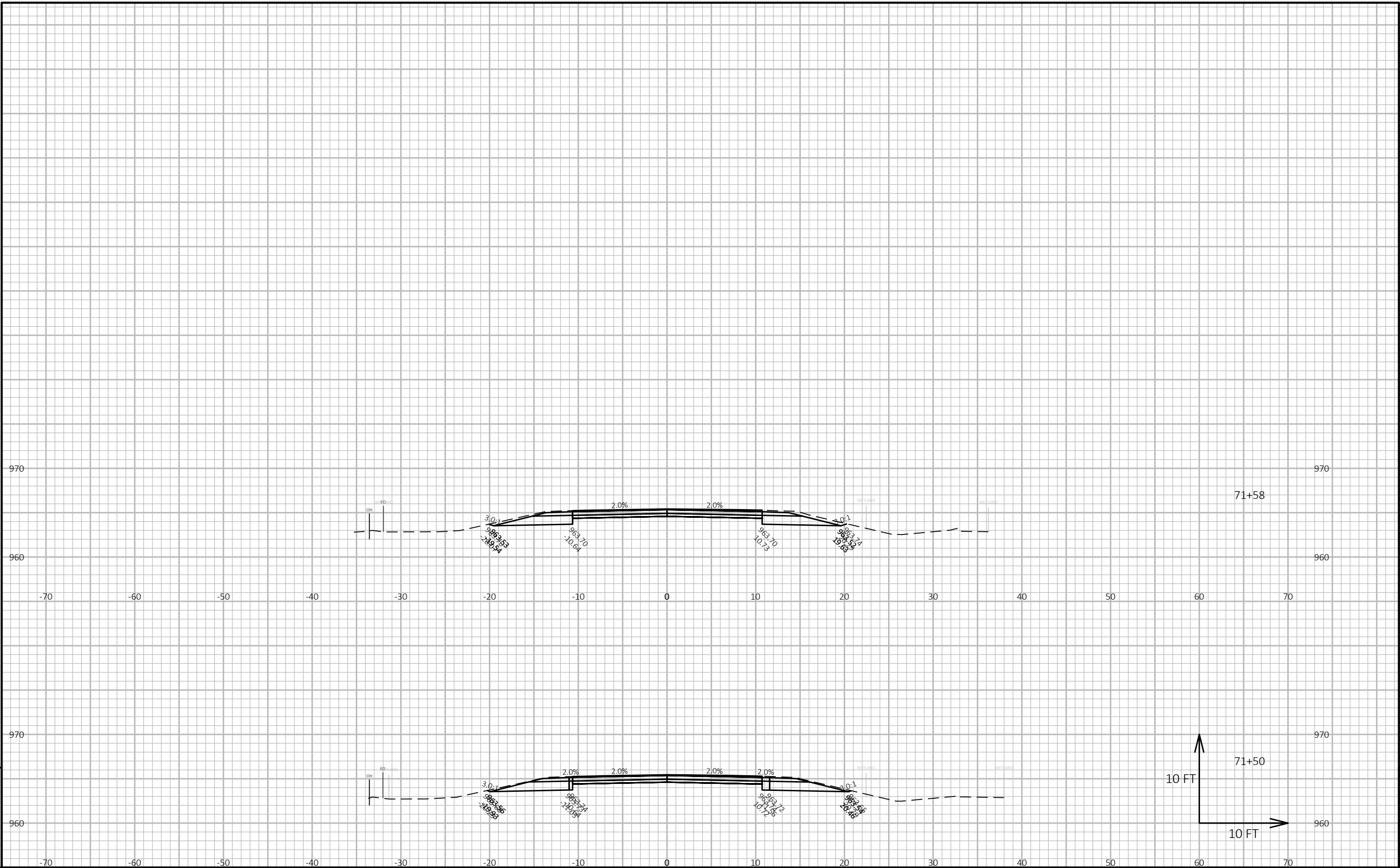
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADD SHEET 49



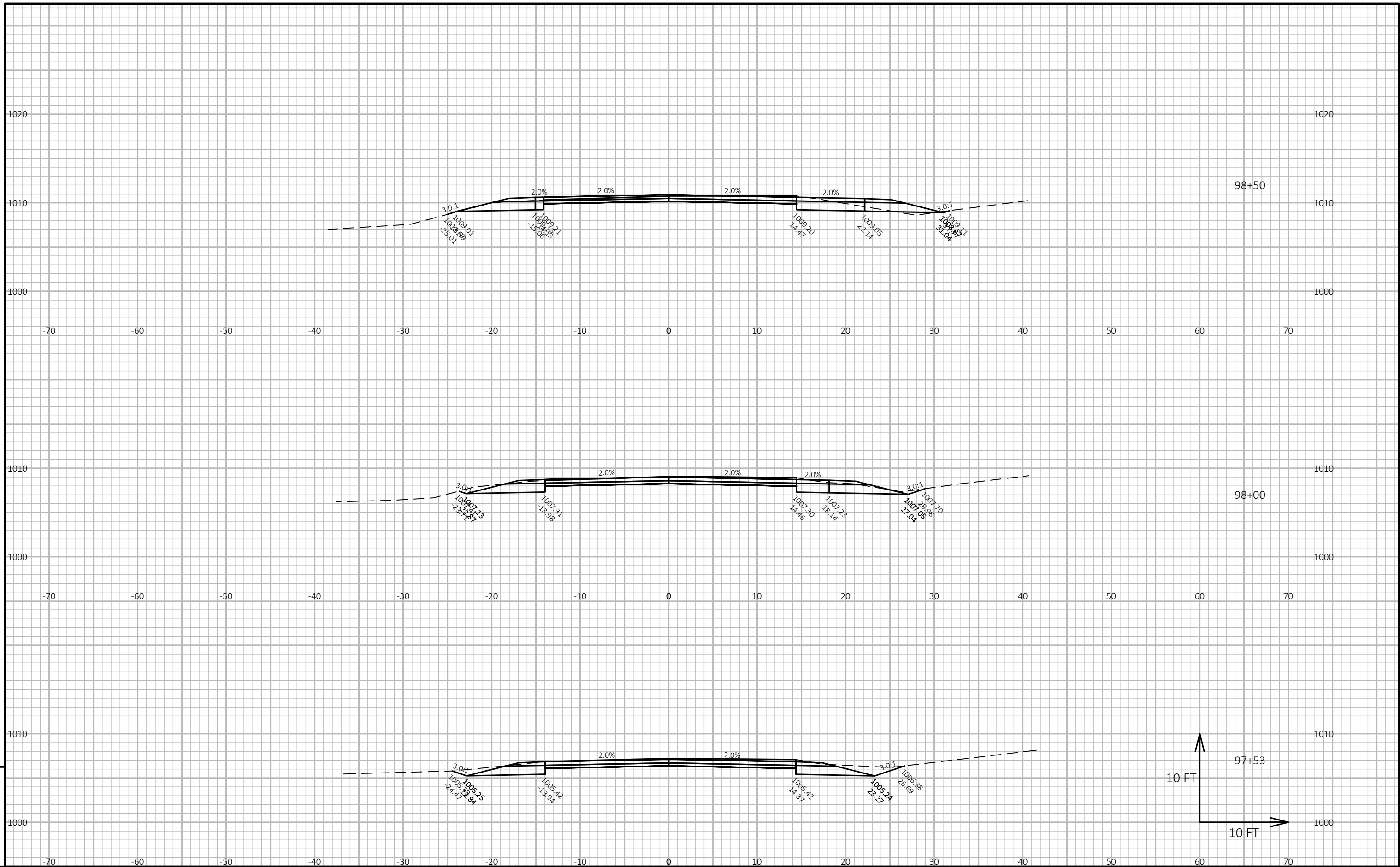
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: PATTON ROAD NORTH	SHEET 9
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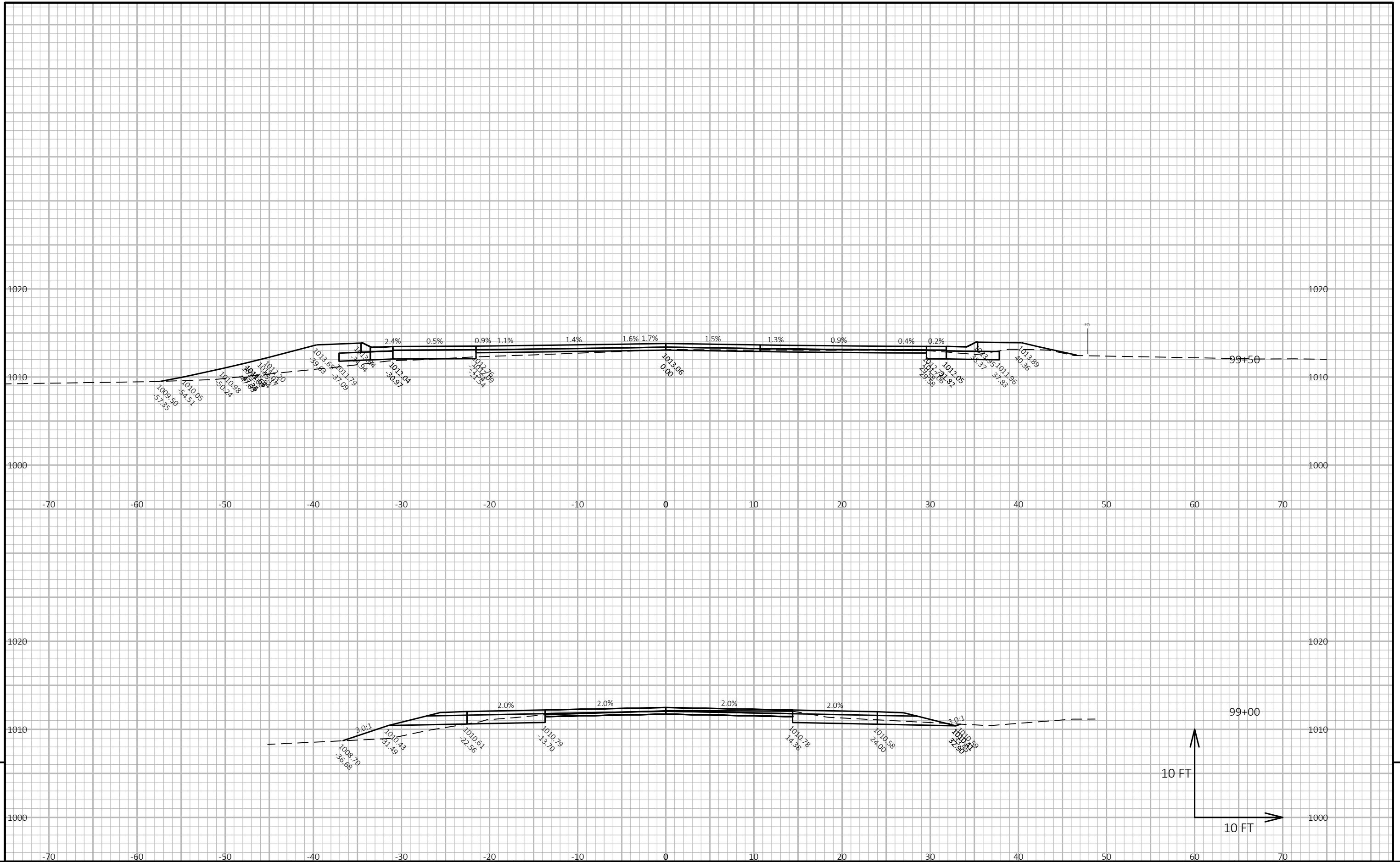
PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: PATTON ROAD NORTH	SHEET	E
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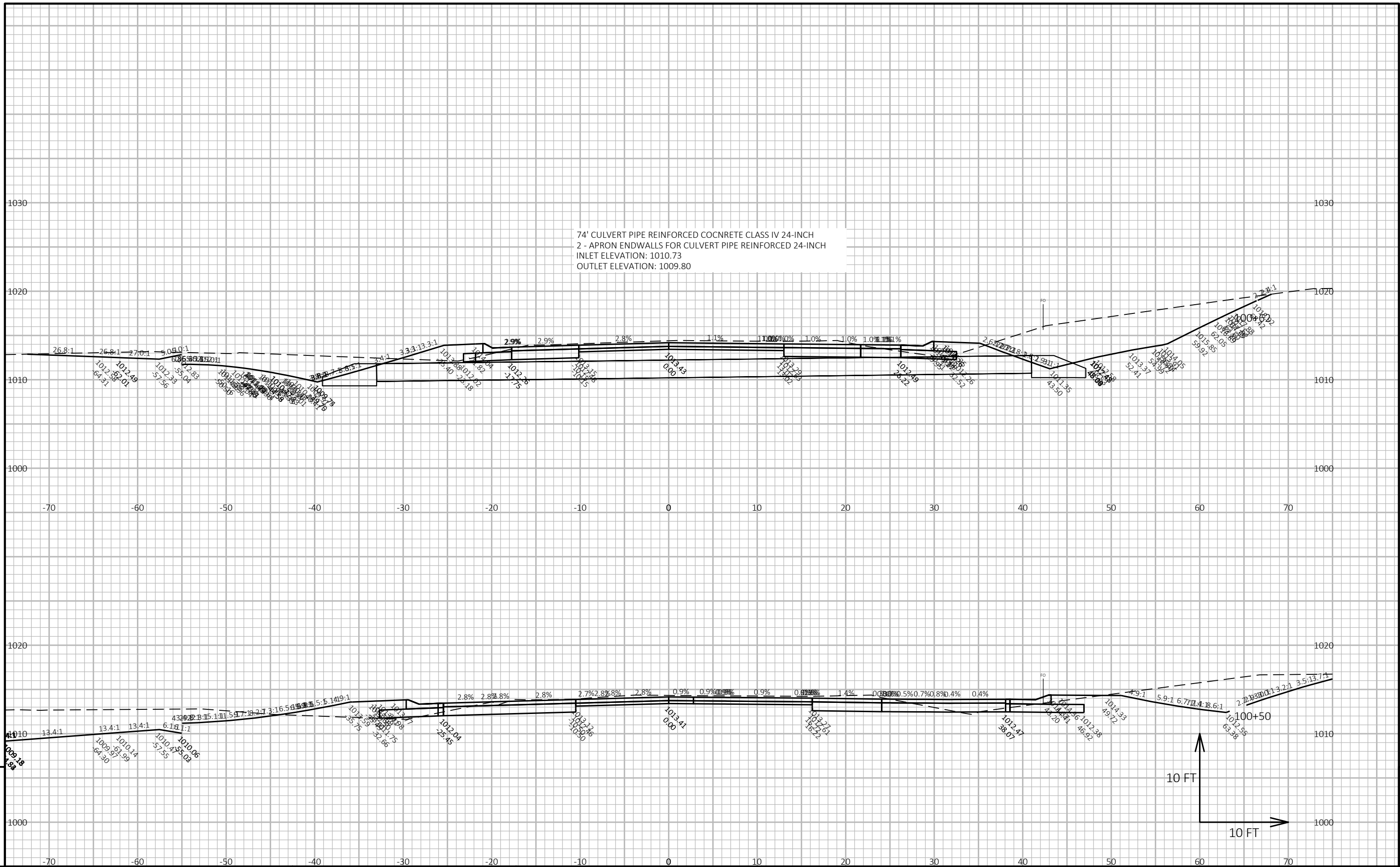
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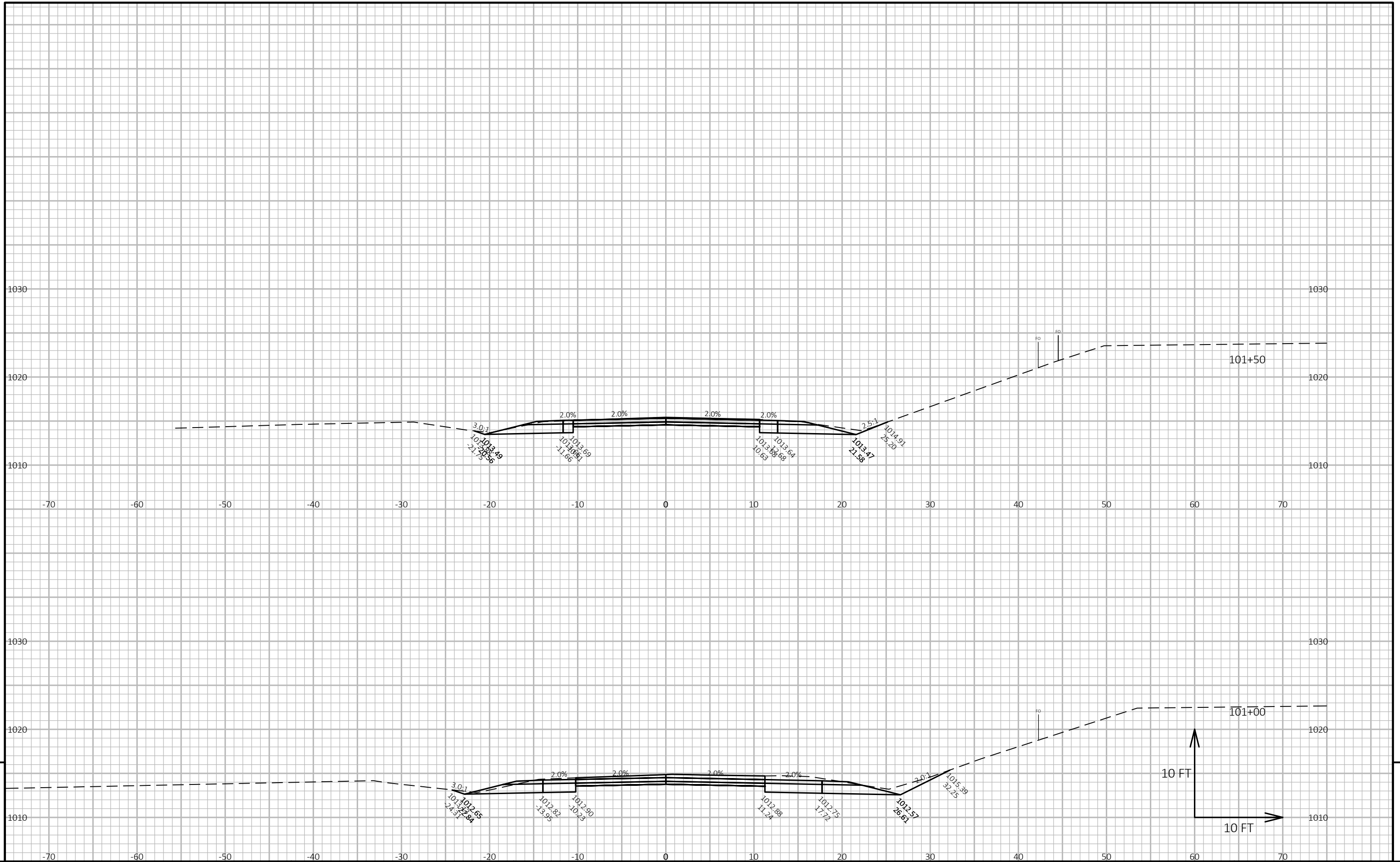
PROJECT NO: 6218-00-73 HWY: CTH V COUNTY: DANE CROSS SECTIONS: CTH I SOUTH SHEET E



PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: CTH I SOUTH	SHEET	E
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: W.I.B.U. ROAD	SHEET	E
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PROJECT NO: 6218-00-73

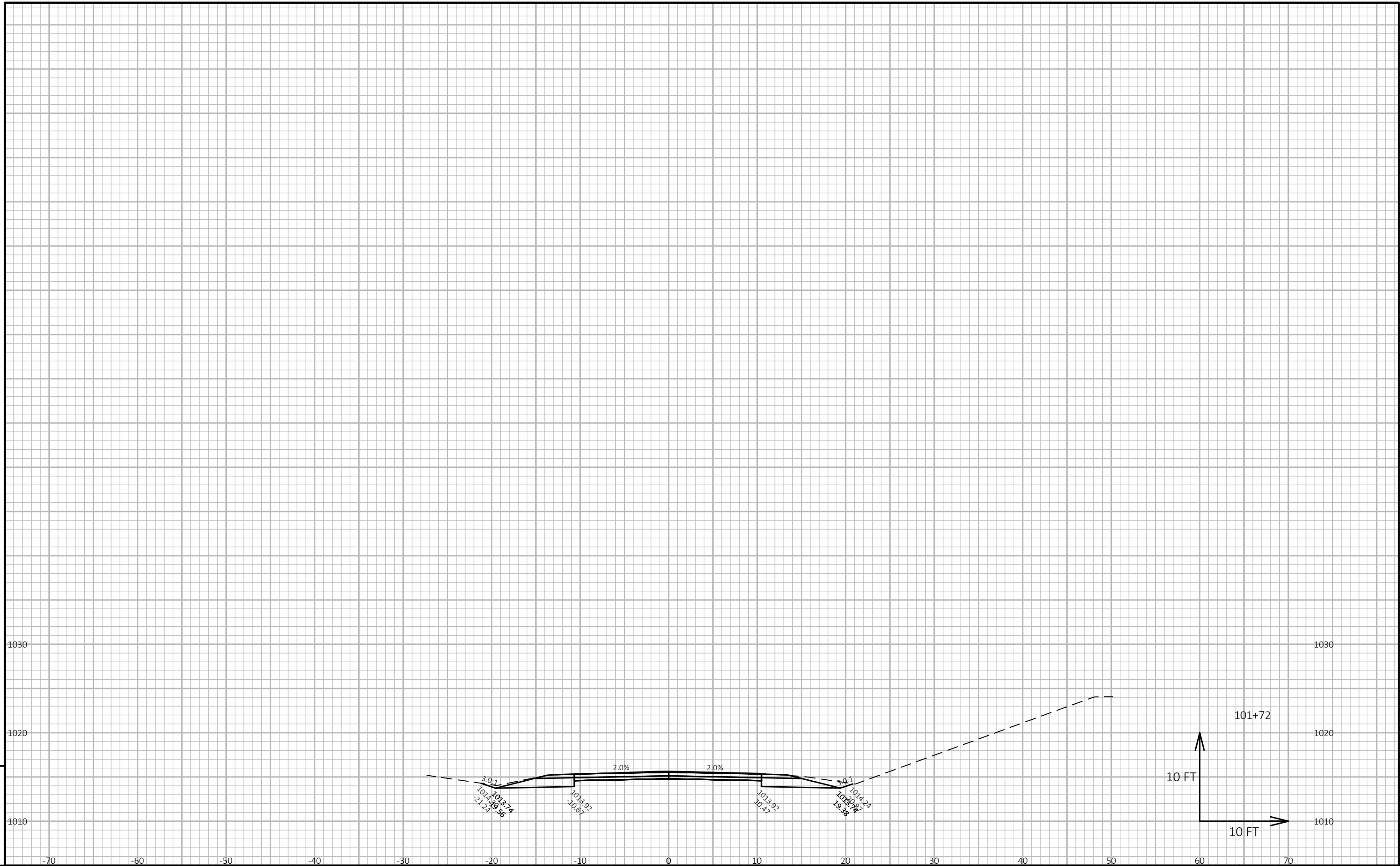
HWY: CTH V

COUNTY: DANE

CROSS SECTIONS: W.I.B.U. ROAD

SHEET

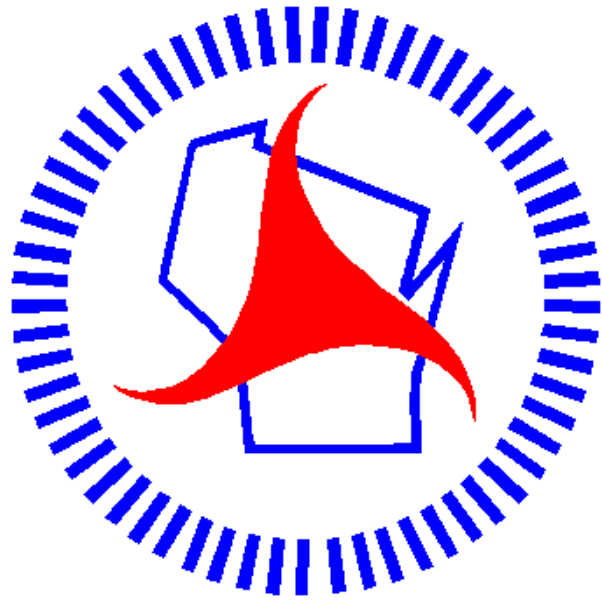
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PROJECT NO: 6218-00-73	HWY: CTH V	COUNTY: DANE	CROSS SECTIONS: W.I.B.U. ROAD	SHEET	E
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Wisconsin Department of Transportation

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