

WKE
PROJECT ID: 1370-15-72
COUNTY: WAUKESHA

JUNE 2017

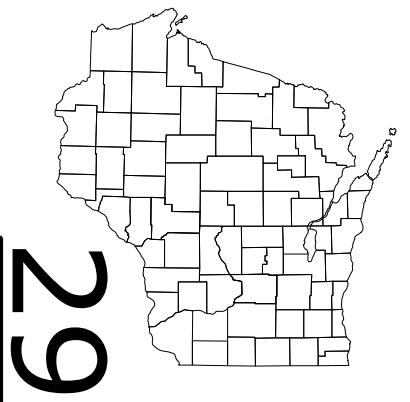
ORDER OF SHEETS

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

TOTAL SHEETS = 162

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
STH 16
CTH P TO CTH C / STH 190 TO IH-94 SPLT
STH 16
WAUKESHA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1370-15-72	WISC 2017342	1



DESIGN DESIGNATION	CTH P - CTH C	STH 190 - IH-94
A.A.D.T. (2009)	= 33,000	38,000
A.A.D.T. (2033)	= 44,000	47,000
D.H.V.	= 8.2%	8.2%
D.D.	= 58/42	58/42
T.	= 10.2%	10.2%
DESIGN SPEED	= 70 MPH	70 MPH
ESALS	= 9,526,5000	10,395,200

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

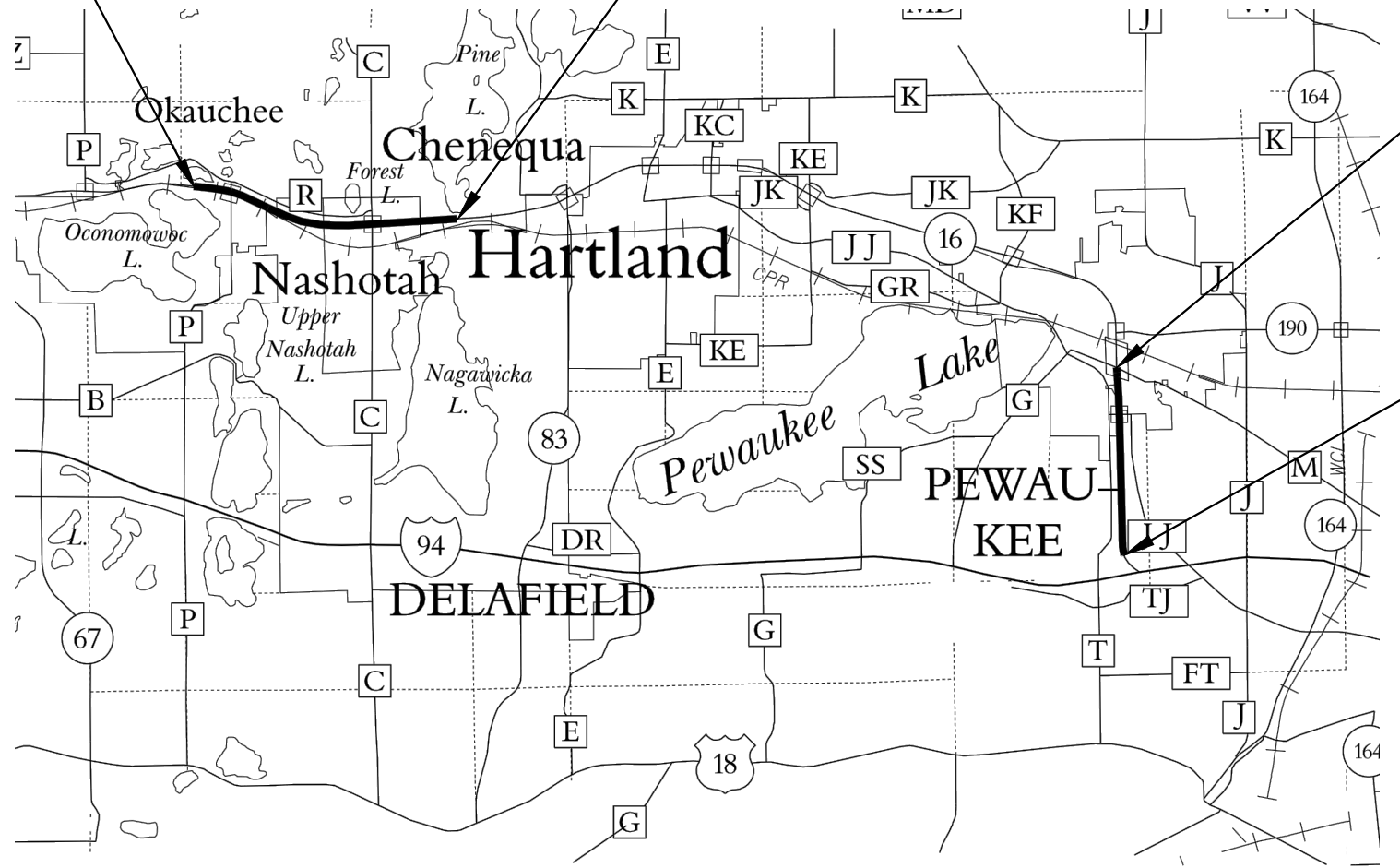
BEGIN PROJECT
STA. 122+50

STATE PROJECT NUMBER
1370-15-72

END CONSTRUCTION
STA. 283+50

BEGIN CONSTRUCTION
STA. 705+20

END PROJECT
STA. 805+00



GENERAL NOTES

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

THE CONTRACTOR SHALL NOTIFY DIGGER'S HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK.

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH/EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED AND MULCH.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED AND MULCH.

THE CONTRACTOR IS RESPONSIBLE FOR RESHAPING AND FINISHING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE THE NORMAL CONSTRUCTION LIMITS.

EROSION CONTROL DEVICES ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE EROSION CONTROL DEVICES ARE NO

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

UTILITY CONTACTS

Alper Kolcu AT&T Wisconsin 2005 Pewaukee Rd Waukesha, WI 53188 (262) 970-8494 Mobile:(262) 325-3791 ak308x@att.com	Jane Mueller City of Pewaukee DPW - Water W240 N3065 Pewaukee Rd Pewaukee, WI 53072 (262) 691-0804 Fax: (262) 691-1798 jem@pewaukee.wi.us	Matthew Schulte TDS Metrocom 16924 West Victor Road New Berlin, WI 53151 (262)754-3063 Mobile: (262)409-1177 matt.schulte@tdselecom.com	David Naze Village of Pewaukee Sewer 1000 Hickory Street Pewaukee, WI 53072 (262) 691-5694 Mobile: (414) 418-5694 dnaze@villageofpewaukee.com
Steve Cramer Charter Communications 1320 N. Martin Luther King Jr. Dr. Milwaukee, WI 53212 (414) 277-4045 Mobile: (414) 688-2385 steve.cramer@charter.com	Richard Trgovec Midwest Fiber Networks 6070 North Flint Road Glendale, WI 53209 (414)459-3554 Fax: (414) 226-2269 rtrgovec@midwestfibernetworks.com	Mark Herbst We Energies (Gas) S13W33800 STH 18 Delafield, WI 53018 (262) 968-5758 Mobile (262) 719-5268 mark.herbst@we-energies.com	
Paul Zellner City of Delafield DPW - Sewer 500 Genesee St Delafield, WI 53018 (262) 303-4627 Mobile: (414) 333-1437 pzellner@ci.delafield.wi.us	Thomas Koepp Lake Pewaukee Sanitary Dist. N25 W27534 Oack Street PO Box 111 Pewaukee, WI 53072 (262) 691-4485 Mobile: (414) 333-9603 thkoepp@wi.rr.com	Bryan Stoehr We Energies (Electric) 500 S. 116th Street West Allis, WI 53214 (414) 944-5516 Mobile: (414) 416-6059 bryan.stoehr@we-energies.com	

OTHER CONTACTS

Craig Webster WisDNR - SE Region 141 NW Barstow St, Room 180 Waukesha, WI 53187 (414) 303-3011 Fax (262) 574-2128 Craig.Webster@wisconsin.gov	Gary Evans, Eng. Services Mgr. Waukesha County DPW 1320 Pewaukee Road, Rm. 220 Waukesha, WI 53188 (262) 548-7740 Fax: (262) 896-8097 gevans@waukeshacounty.gov
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Jeff Madson
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433 W St. Paul Ave., STE 300
Milwaukee, WI 53203-3007
(414) 225-3723
jeffrey.madson@dot.wi.gov

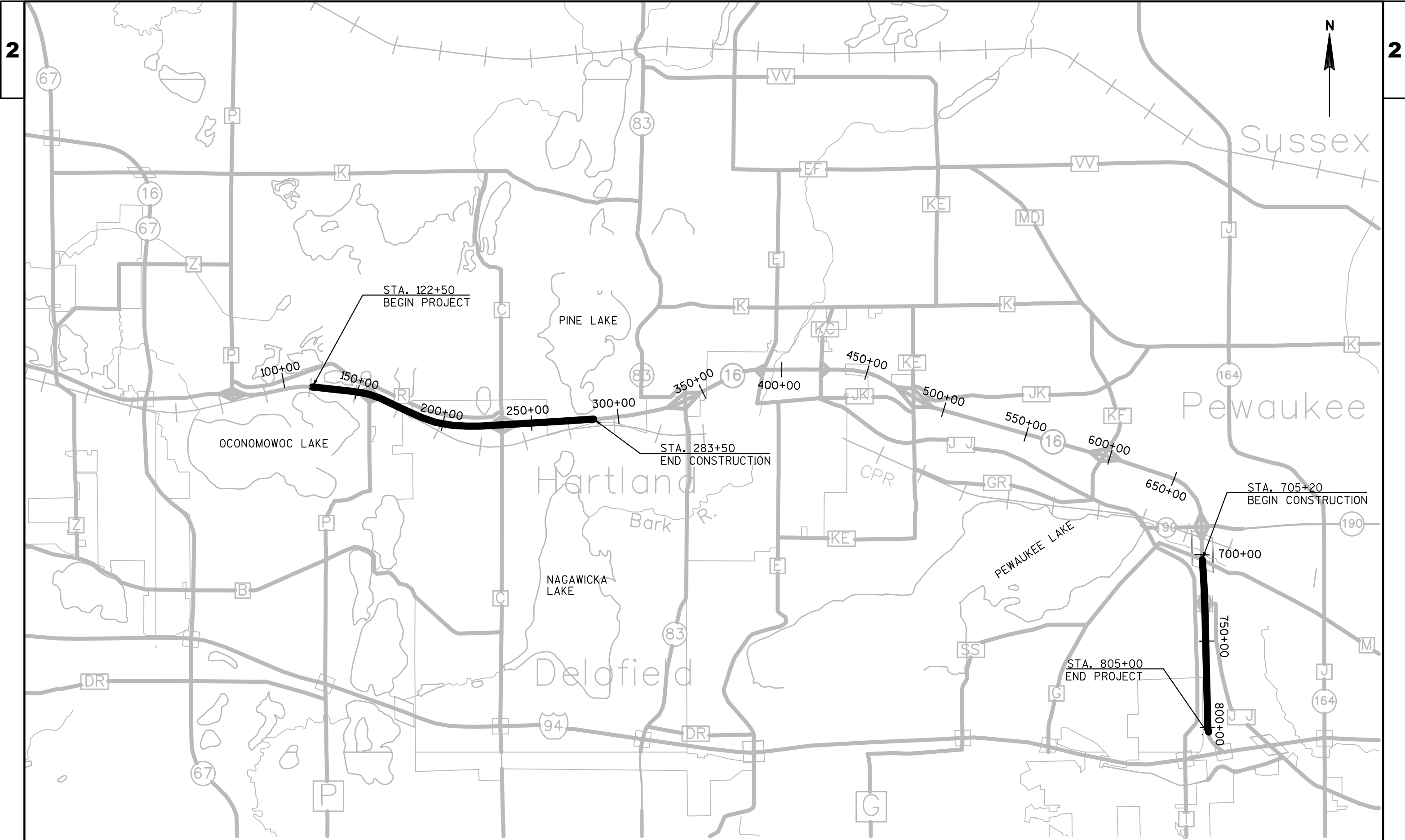
WISDOT CONTACTS
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(262) 548-5603
douglas.cain@dot.wi.gov

Steven Rotier
WisDOT Design Leader
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(262) 548-5679
steven.rotier@dot.wi.gov

SECTION 2 SHEET ORDER

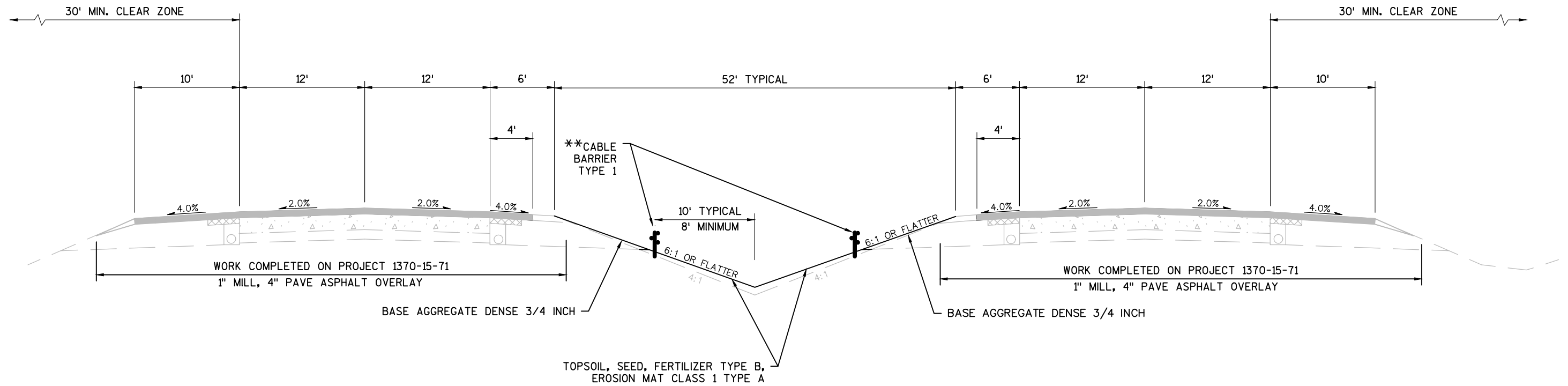
- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- EROSION CONTROL
- TRAFFIC CONTROL
- SOIL BORINGS



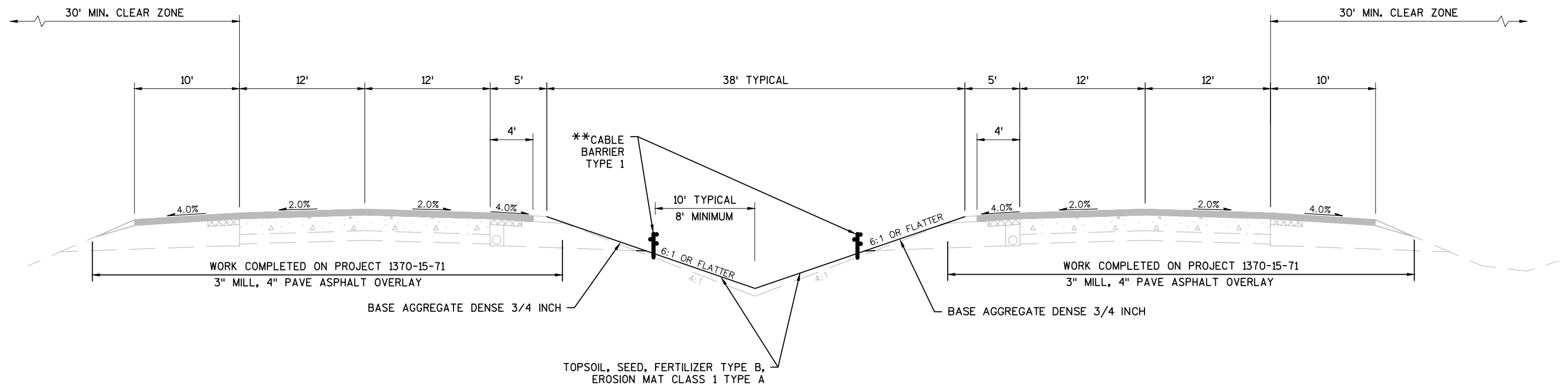


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2 |

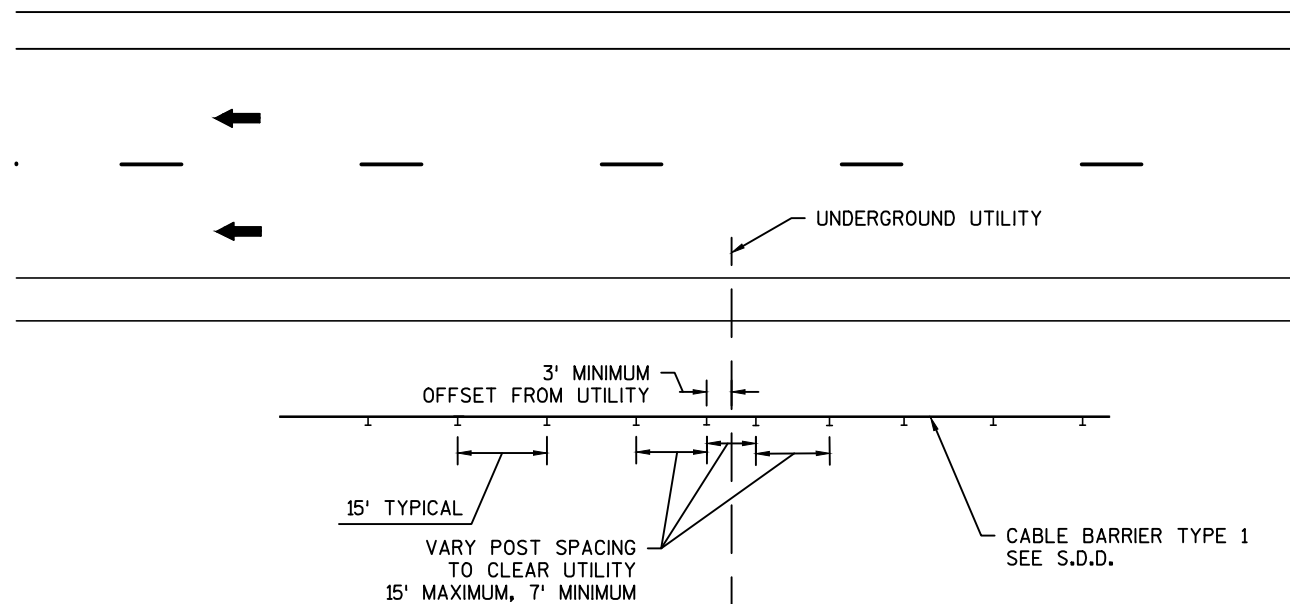


STH 16
TYPICAL FINISHED SECTION
STA 122+50 TO 283+50

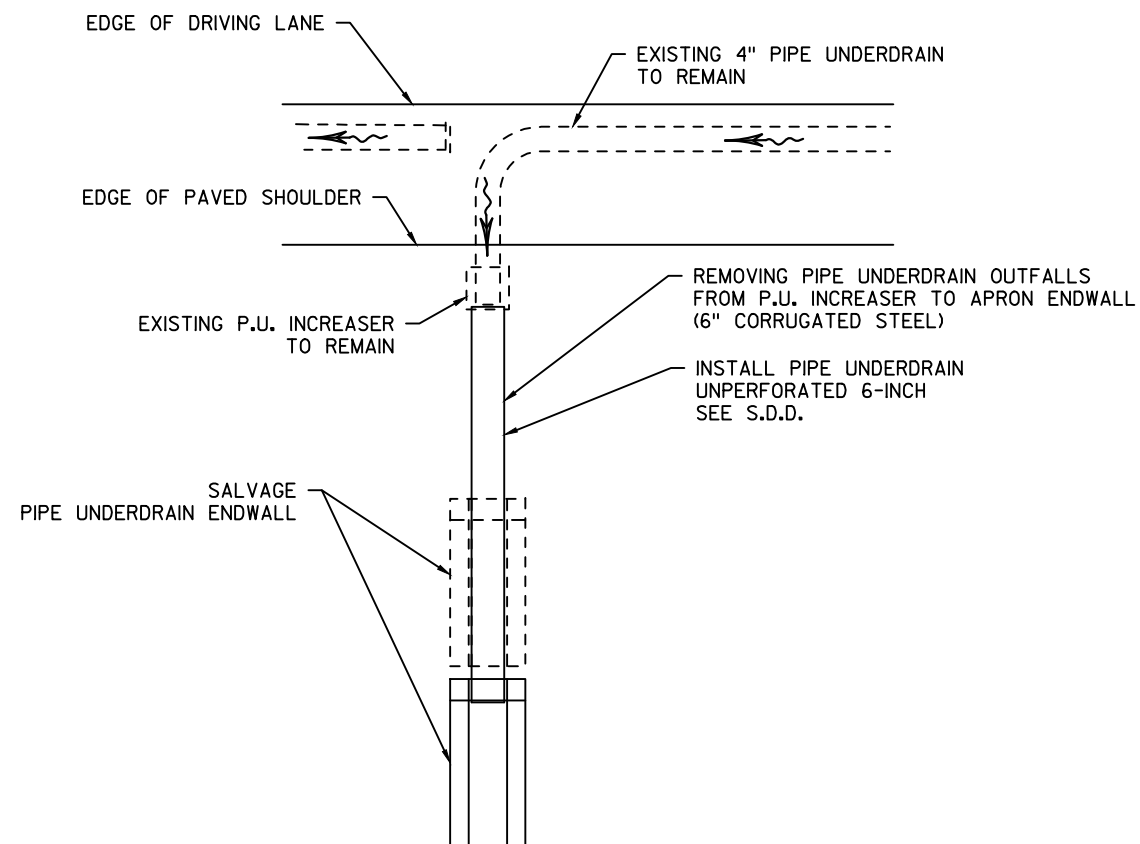


STH 16
TYPICAL FINISHED SECTION
STA 705+20 TO 805+00

** SEE PLAN DETAILS FOR LOCATION LEFT OR RIGHT OF DITCH



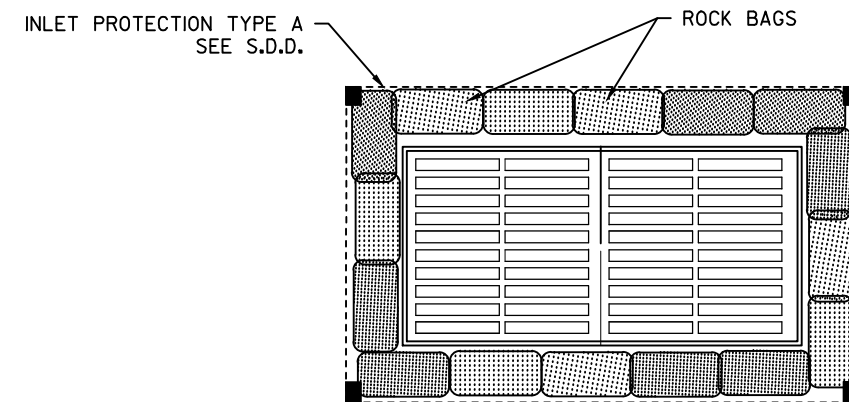
CABLE BARRIER AT
UNDERGROUND UTILITY



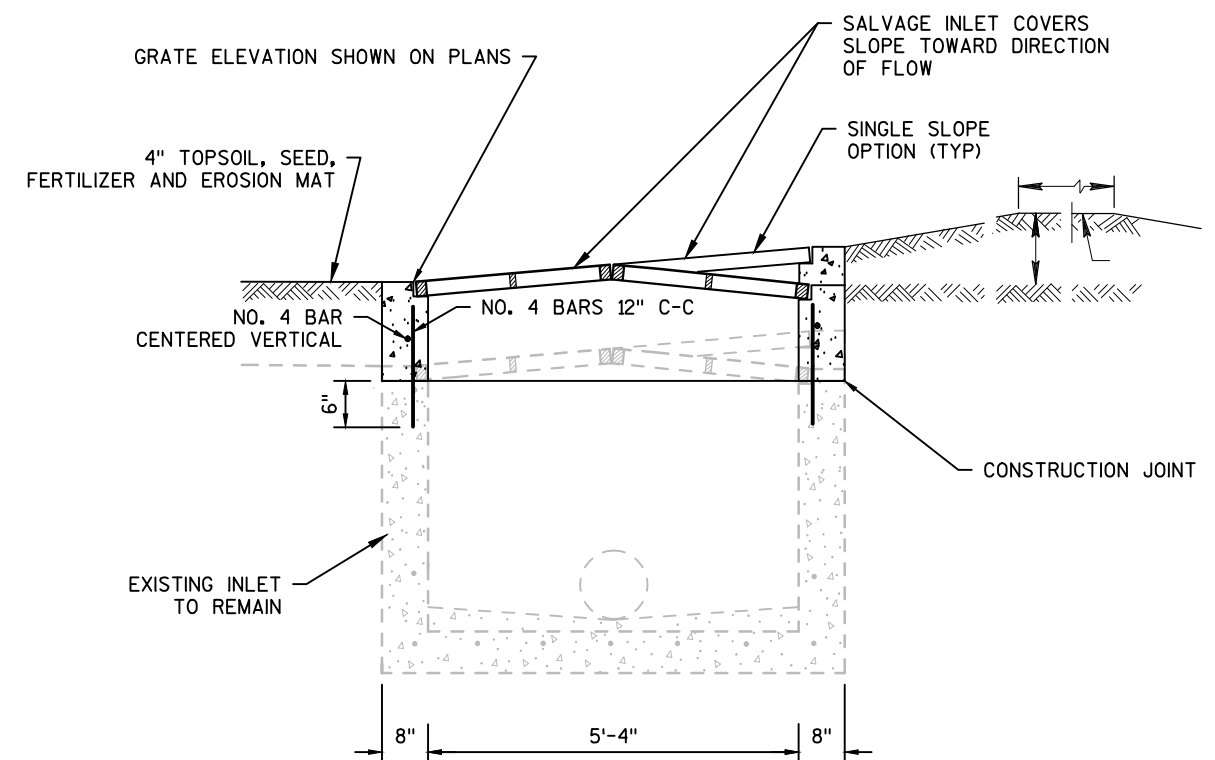
SALVAGE AND REPLACE
PIPE UNDERDRAIN ENDWALL

GENERAL NOTES:

SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS
OR AS DIRECTED BY FIELD ENGINEER.
FIELD VERIFY ALL PIPE UNDERDRAIN LOCATIONS.
SEE S.D.D. FOR MORE INFORMATION.



INLET PROTECTION TYPE A
WITH ROCK BAGS



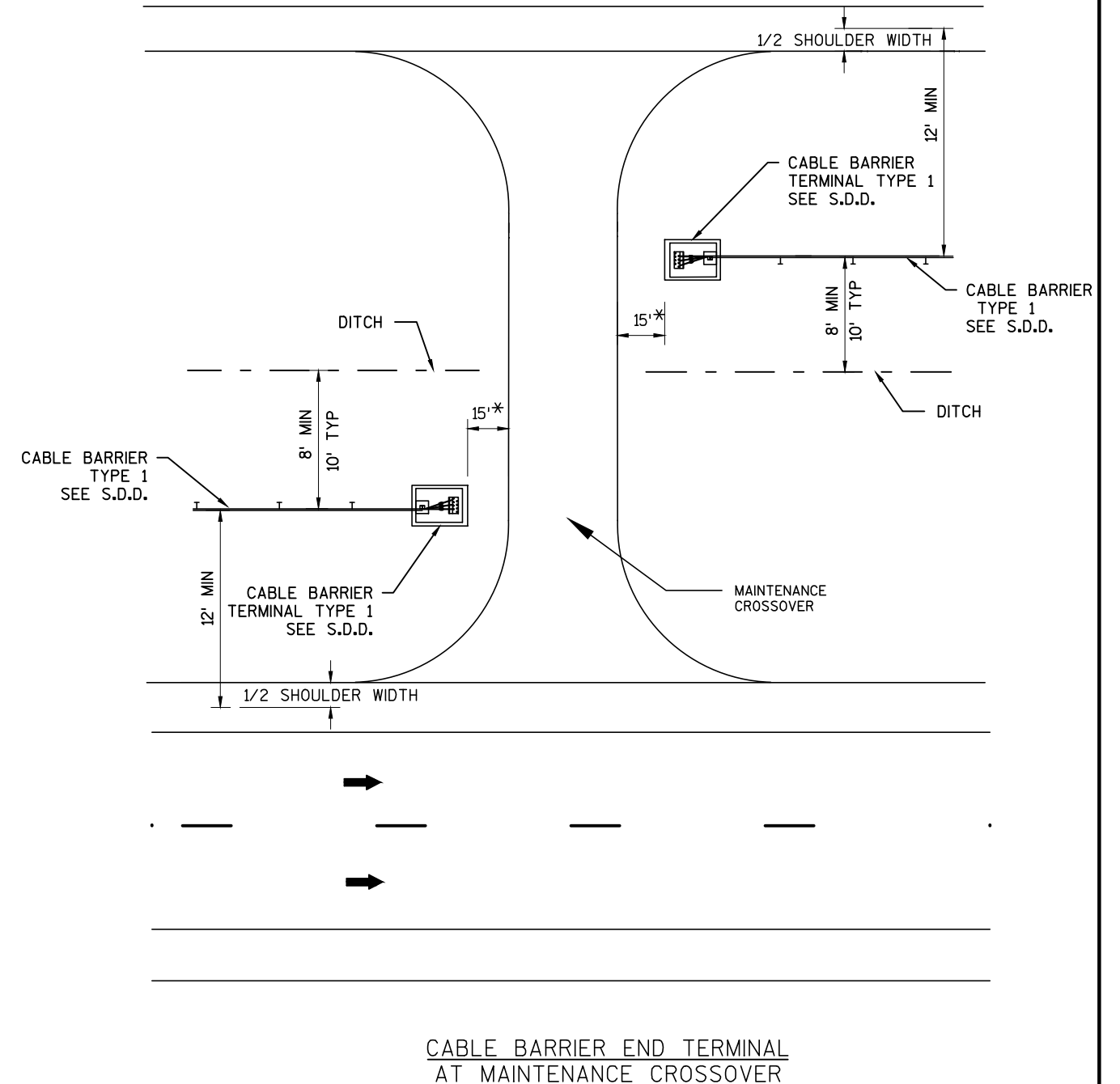
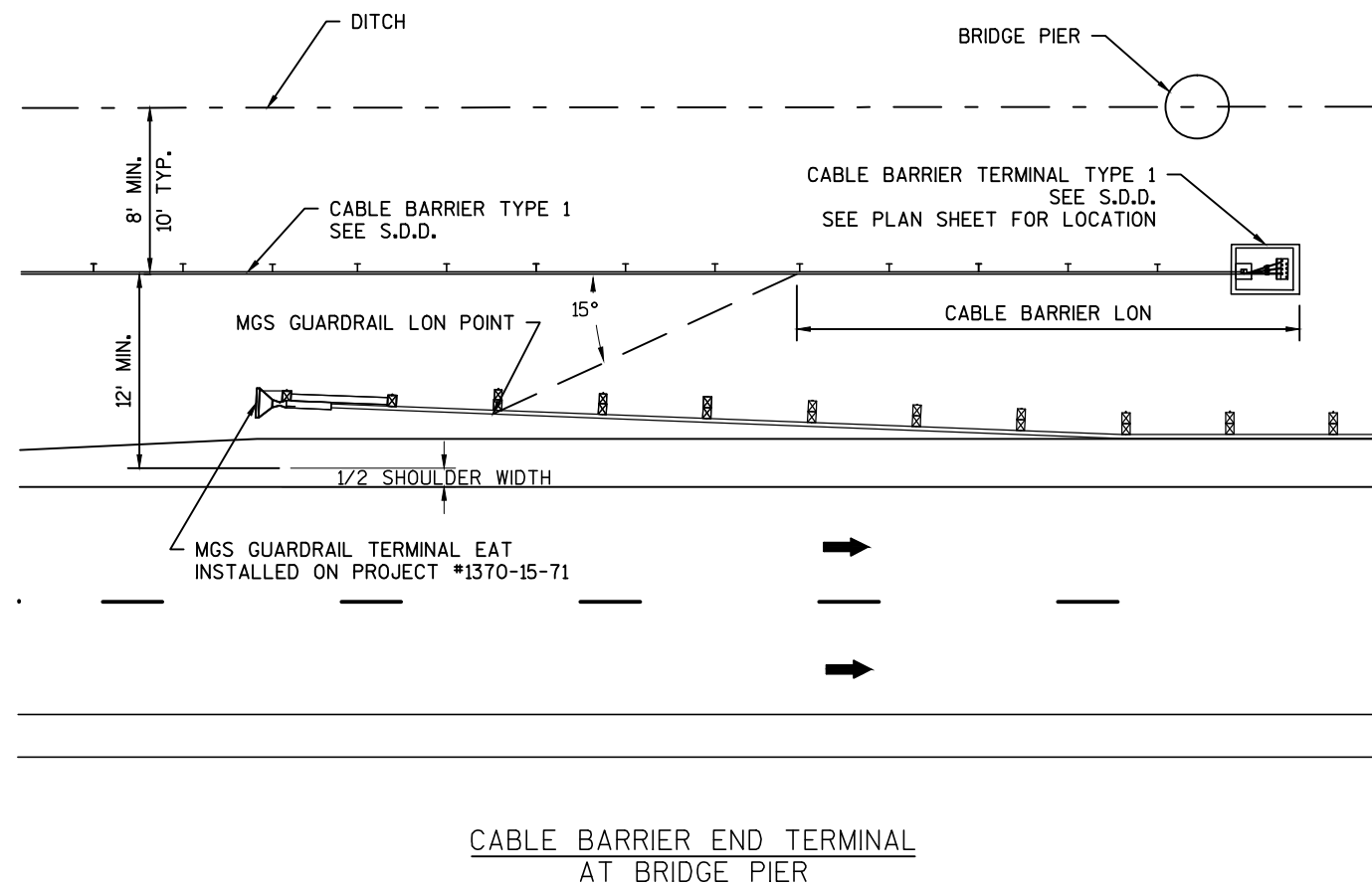
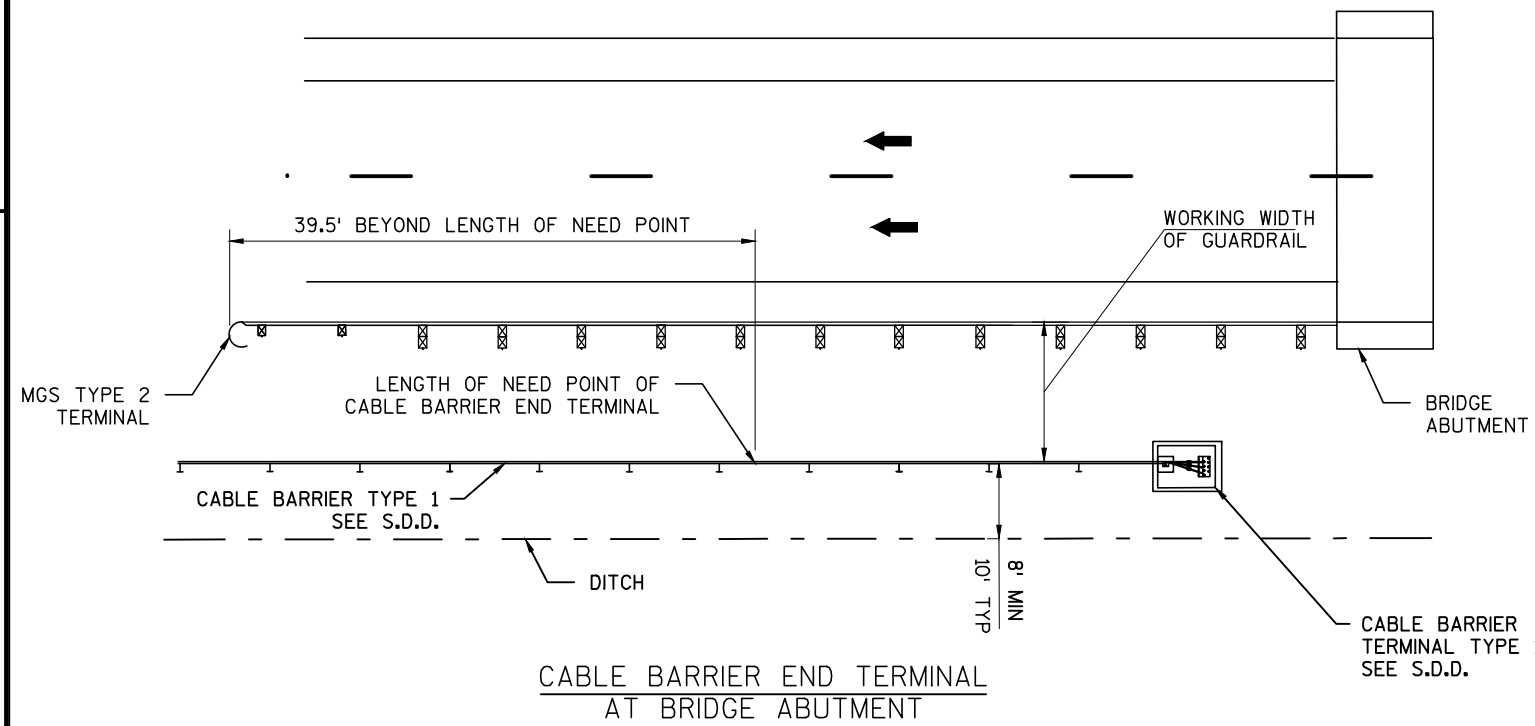
ADJUSTING INLETS MEDIAN 2 GRATE

GENERAL NOTES:

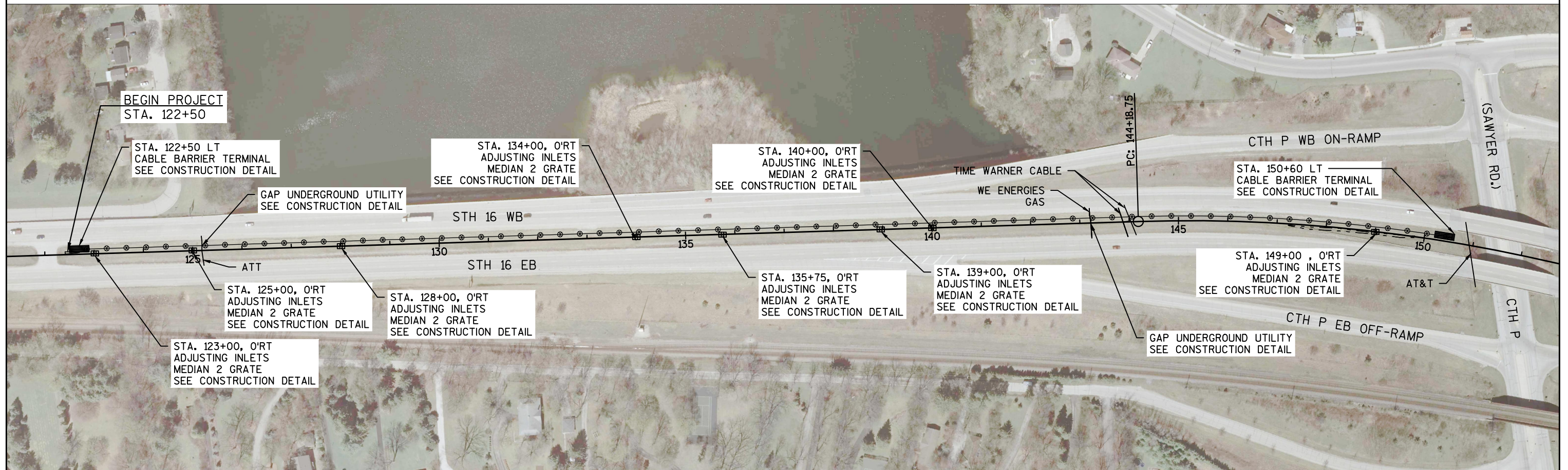
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE
PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

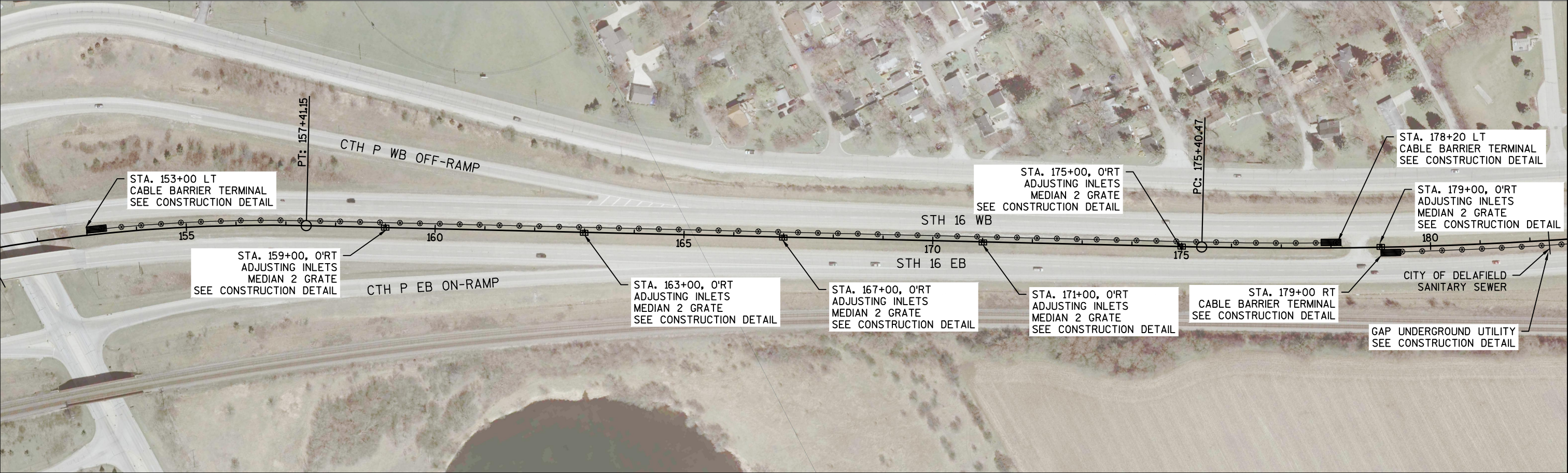
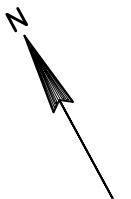
SEE S.D.D. "INLETS MEDIAN 1 & 2 GRATE" FOR MORE INFORMATION



* DISTANCE MEASURED FROM
EDGE OF ASPHALT

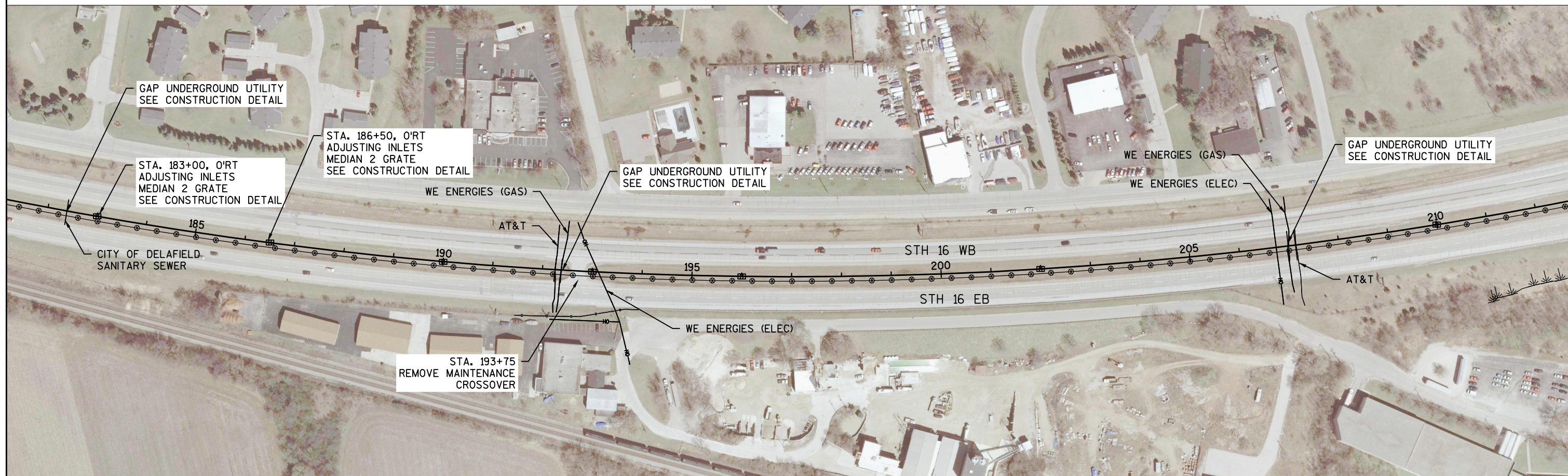
**LEGEND**

- CABLE BARRIER LINE POSTS
- CABLE BARRIER TERMINAL
- ↓ WETLAND
- ▣ EXISTING INLET
- - - WET DITCH



LEGEND

- CABLE BARRIER LINE POSTS
- CABLE BARRIER TERMINAL
- ⏏ WETLAND
- ▣ EXISTING INLET
- - - - WET DITCH

**LEGEND**

- CABLE BARRIER LINE POSTS
- CABLE BARRIER TERMINAL
- ⌋ WETLAND
- ▣ EXISTING INLET
- - - - WET DITCH

PROJECT NO:1370-15-72

HWY:STH 16

COUNTY:WAUKESHA

PLAN: PLAN DETAILS

SHEET .9

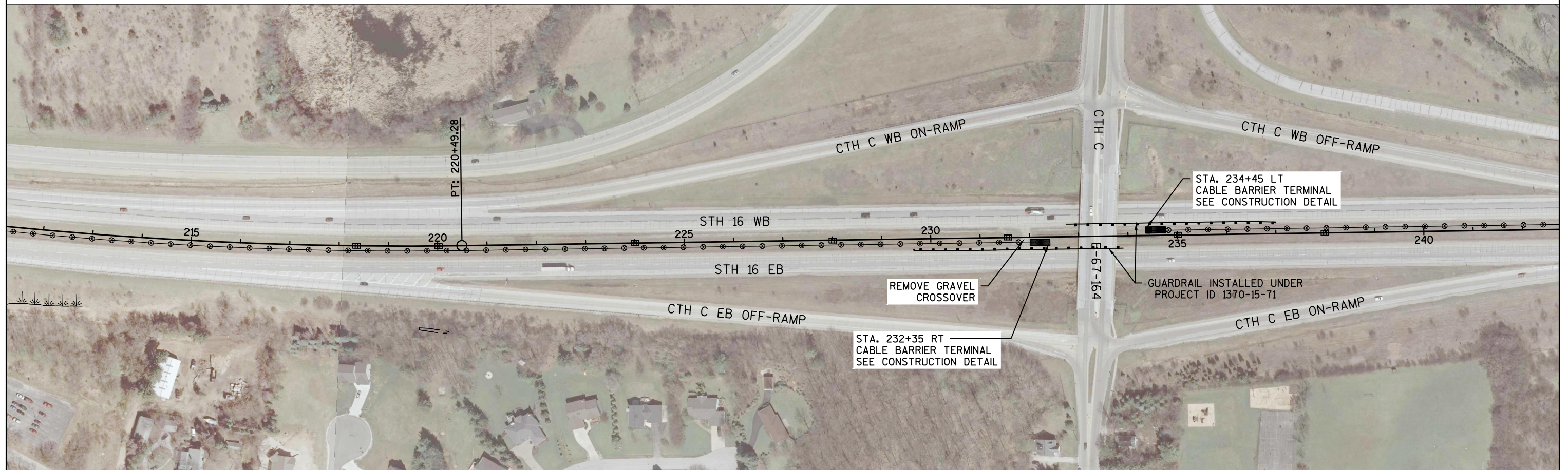
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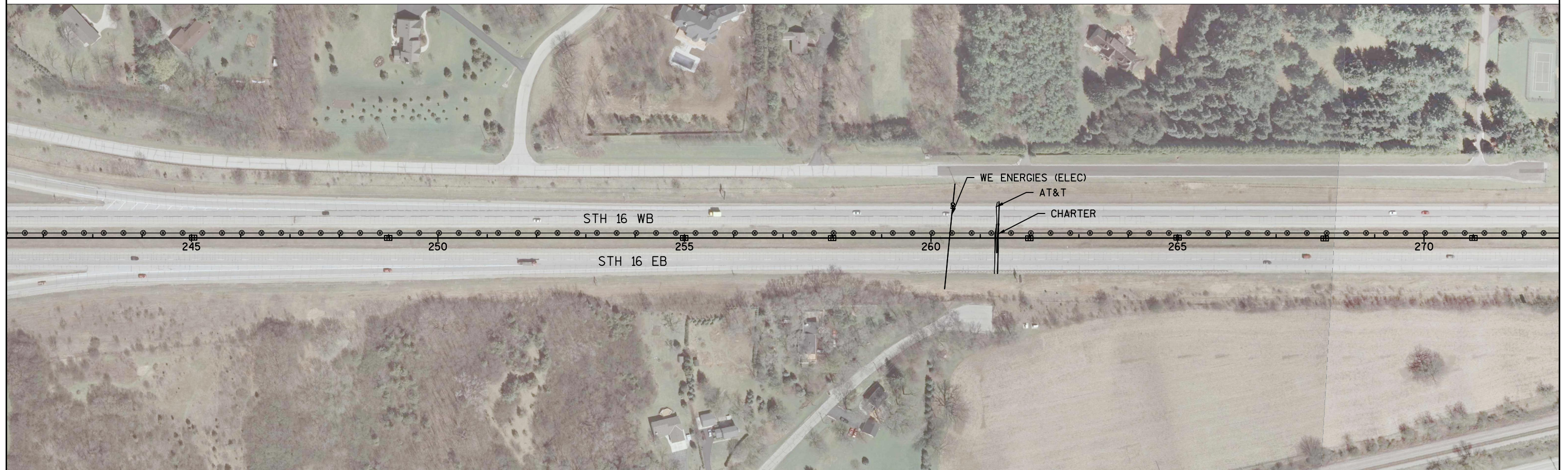
PLOT BY : ROTIER, STEVEN J

PLOT NAME : PLOT SCALE : *****

WISDOT/CADDs SHEET 42

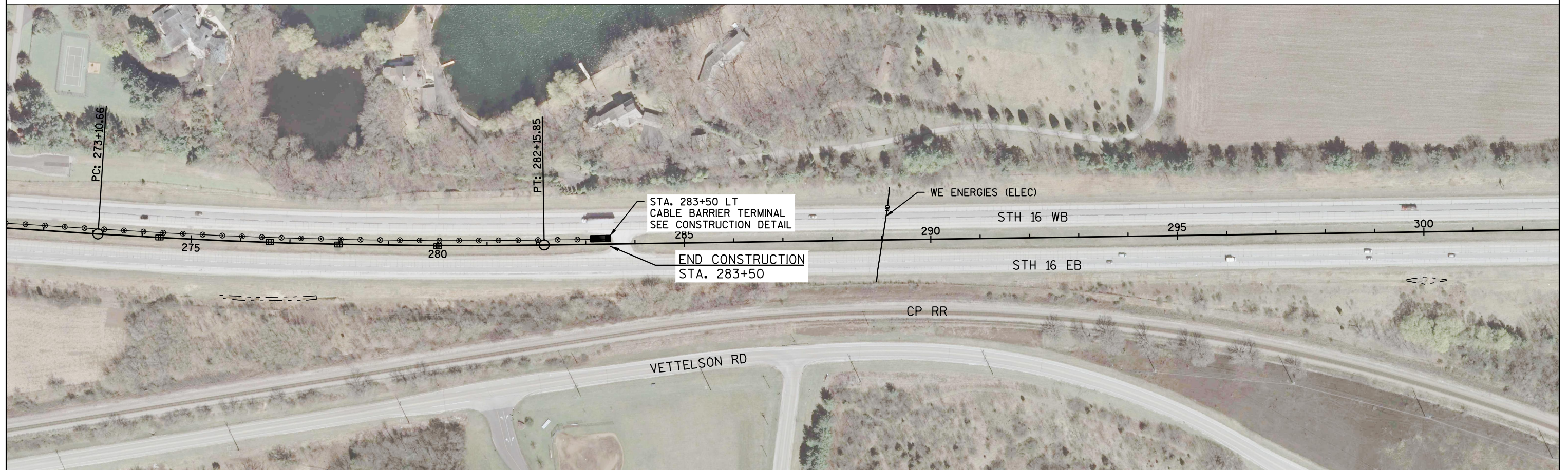
**LEGEND**

- CABLE BARRIER LINE POSTS
- CABLE BARRIER TERMINAL
- ↓ WETLAND
- ▣ EXISTING INLET
- - - - WET DITCH

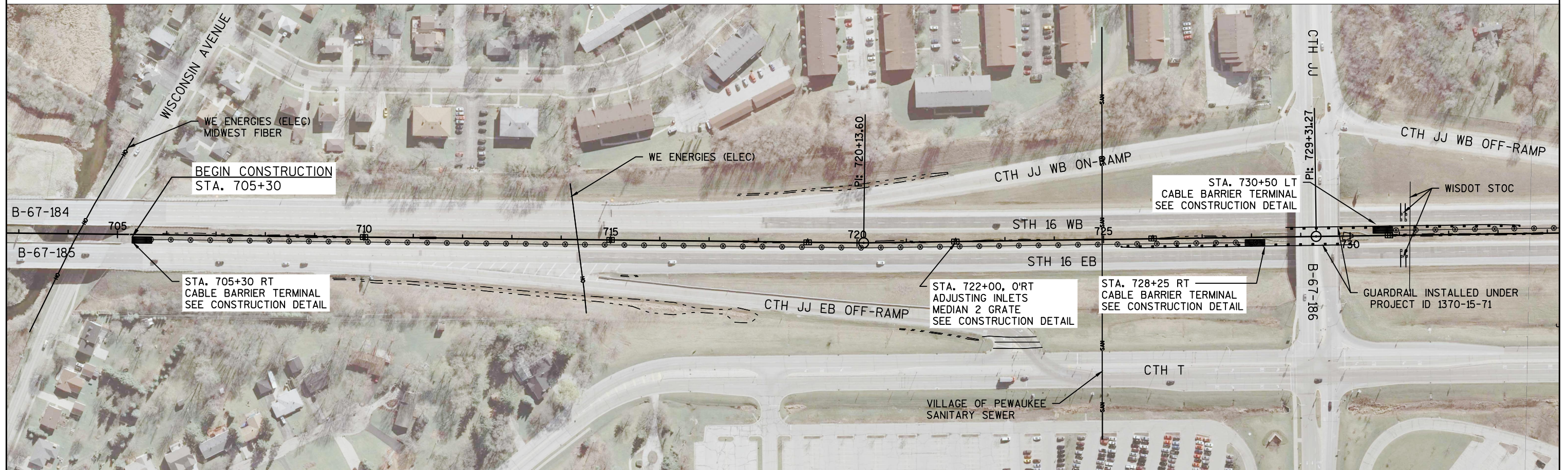


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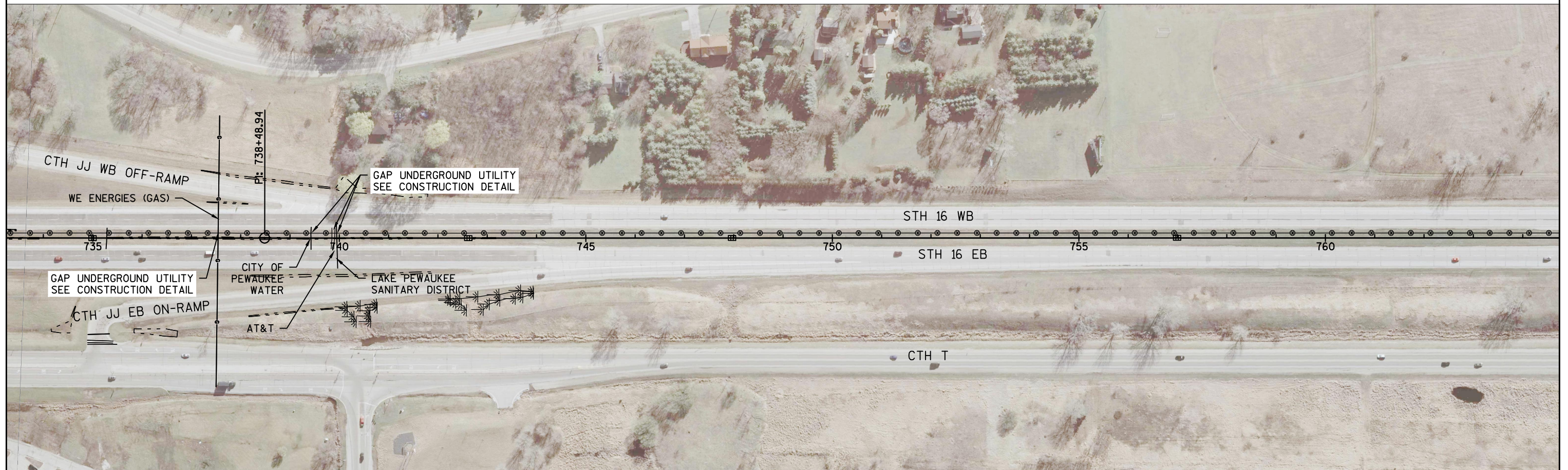
- CABLE BARRIER LINE POSTS
- CABLE BARRIER TERMINAL
- ↓ WETLAND
- ▣ EXISTING INLET
- - - WET DITCH

**LEGEND**

- CABLE BARRIER LINE POSTS
- CABLE BARRIER TERMINAL
- ▨ WETLAND
- ▣ EXISTING INLET
- - - - WET DITCH

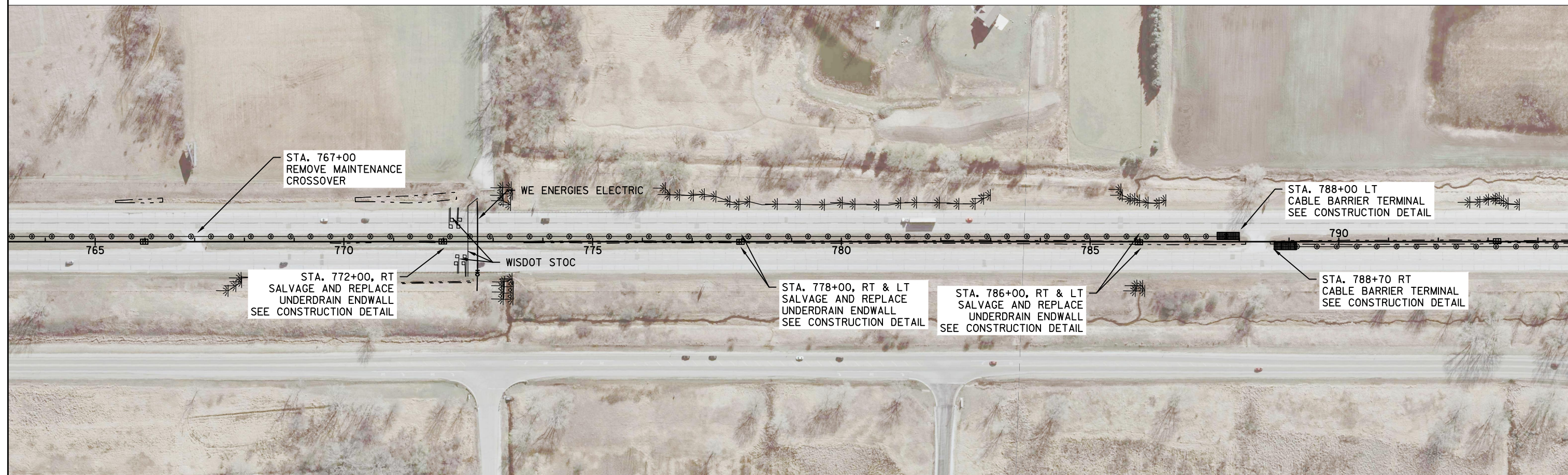


 CABLE BARRIER LINE POSTS
 CABLE BARRIER TERMINAL
 WETLAND
 EXISTING INLET
 WET DITCH

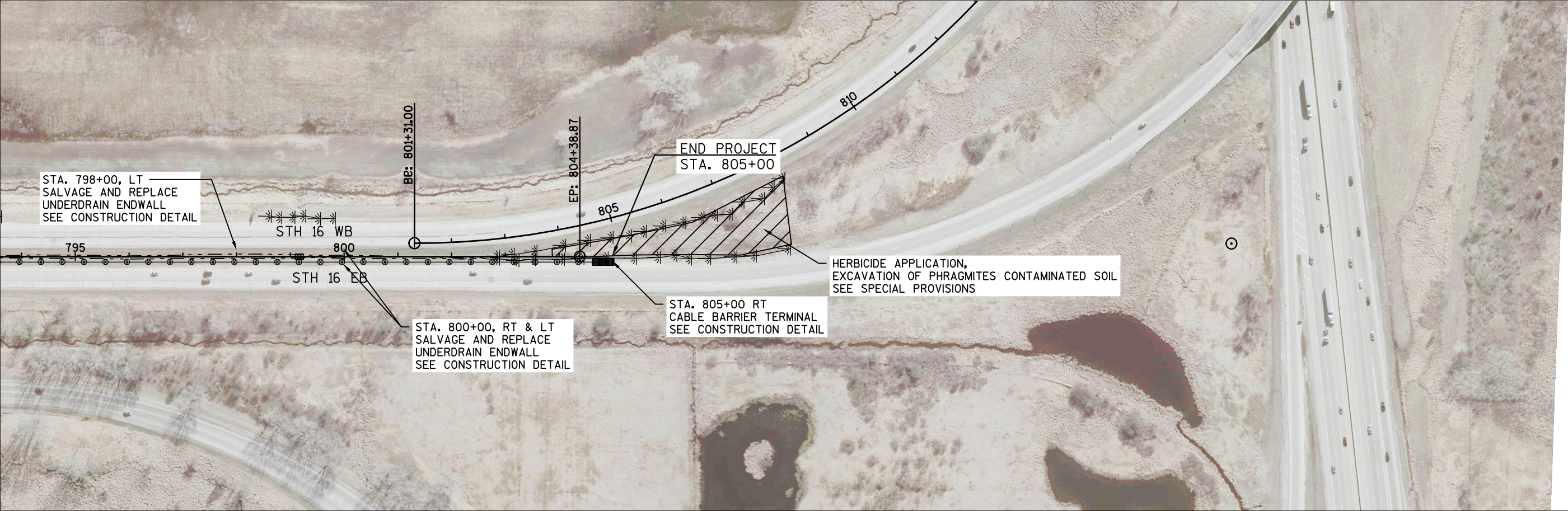


LEGEND

-  CABLE BARRIER LINE POSTS
-  CABLE BARRIER TERMINAL
-  WETLAND
-  EXISTING INLET
-  WET DITCH

**LEGEND**

- CABLE BARRIER LINE POSTS
- CABLE BARRIER TERMINAL
- ↓ WETLAND
- ▣ EXISTING INLET
- - - - WET DITCH



LEGEND

- CABLE BARRIER LINE POSTS
- CABLE BARRIER TERMINAL
- ⬇ WETLAND
- ▣ EXISTING INLET
- - - - WET DITCH

**LEGEND**

- SILT FENCE
-  INLET PROTECTION TYPE A WITH ROCK BAGS, SEE CONSTRUCTION DETAIL
-  INLET PROTECTION TYPE B
-  WETLAND
-  TEMPORARY DITCH CHECK
- WET DITCH
-  SURFACE WATER FLOW
-  ROCK BAGS

PROJECT NO:1370-15-72

HWY:STH 16

COUNTY:WAUKESHA

EROSION CONTROL

SHEET 17

E

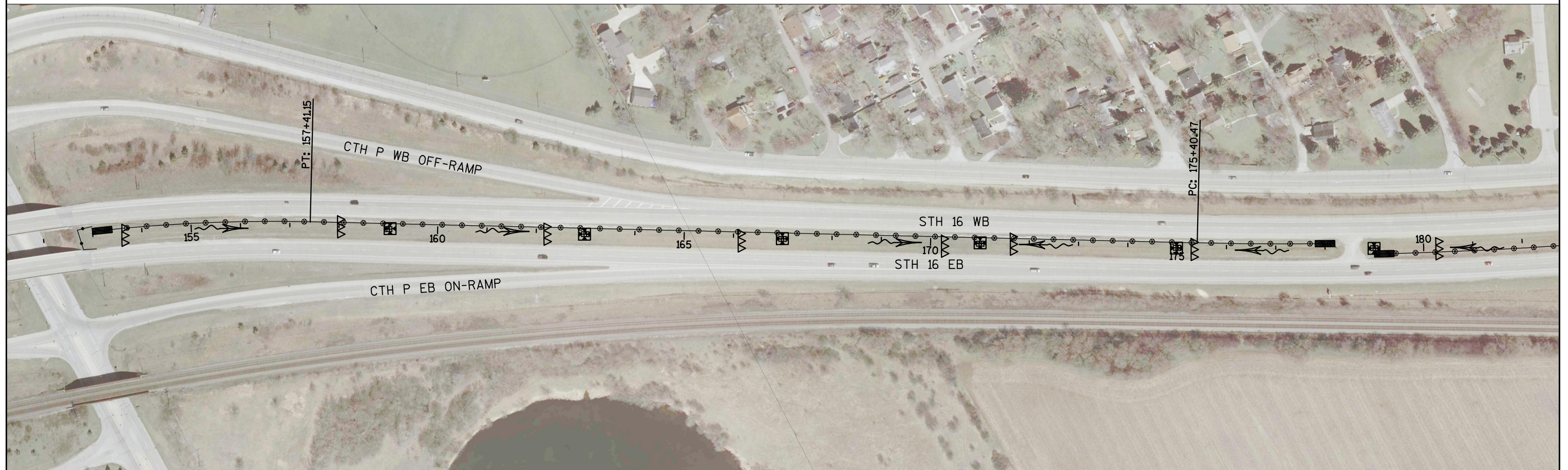
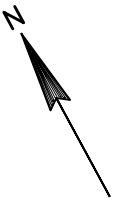
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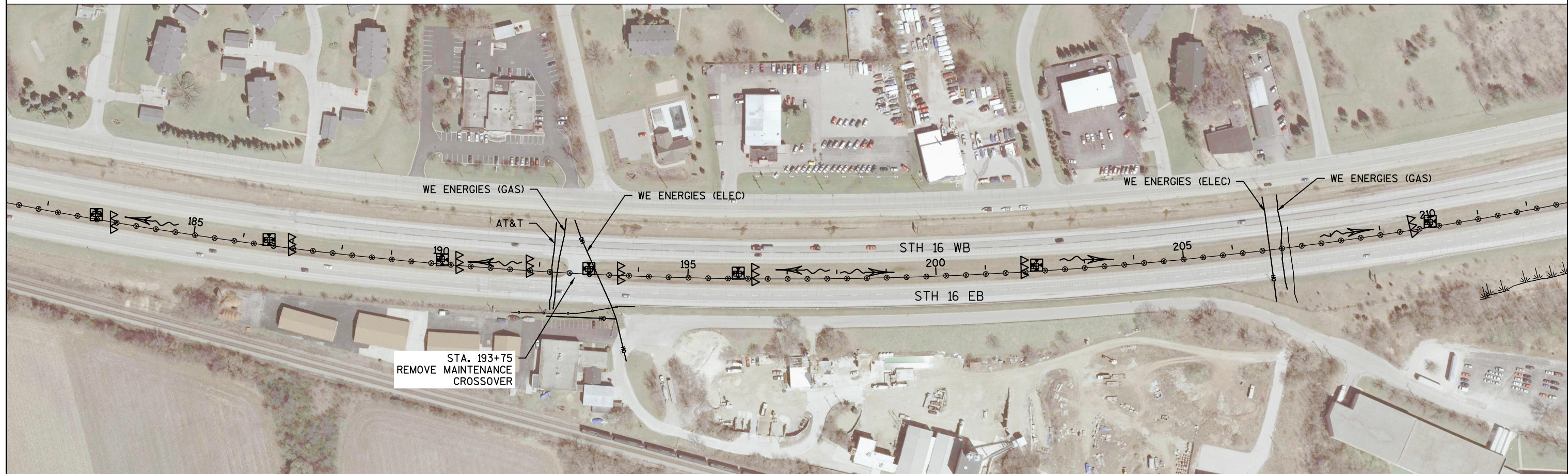
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WISDOT/CADDs SHEET 42



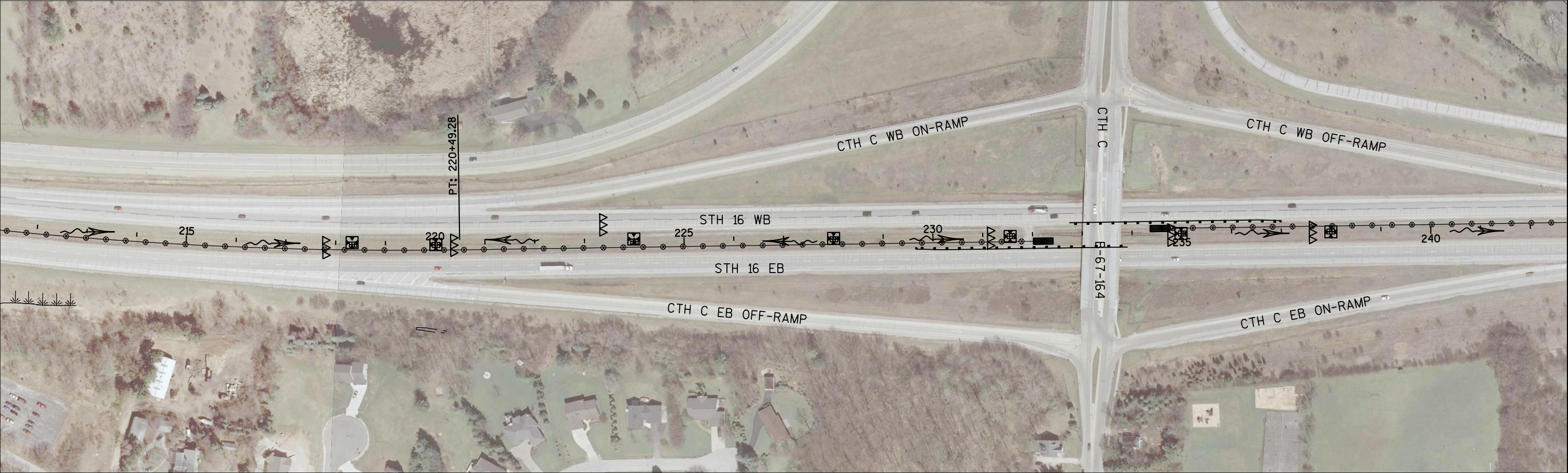
LEGEND

- SILT FENCE
-  INLET PROTECTION TYPE A WITH ROCK BAGS, SEE CONSTRUCTION DETAIL
-  INLET PROTECTION TYPE B
-  WETLAND
-  TEMPORARY DITCH CHECK
- WET DITCH
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-  ROCK BAGS



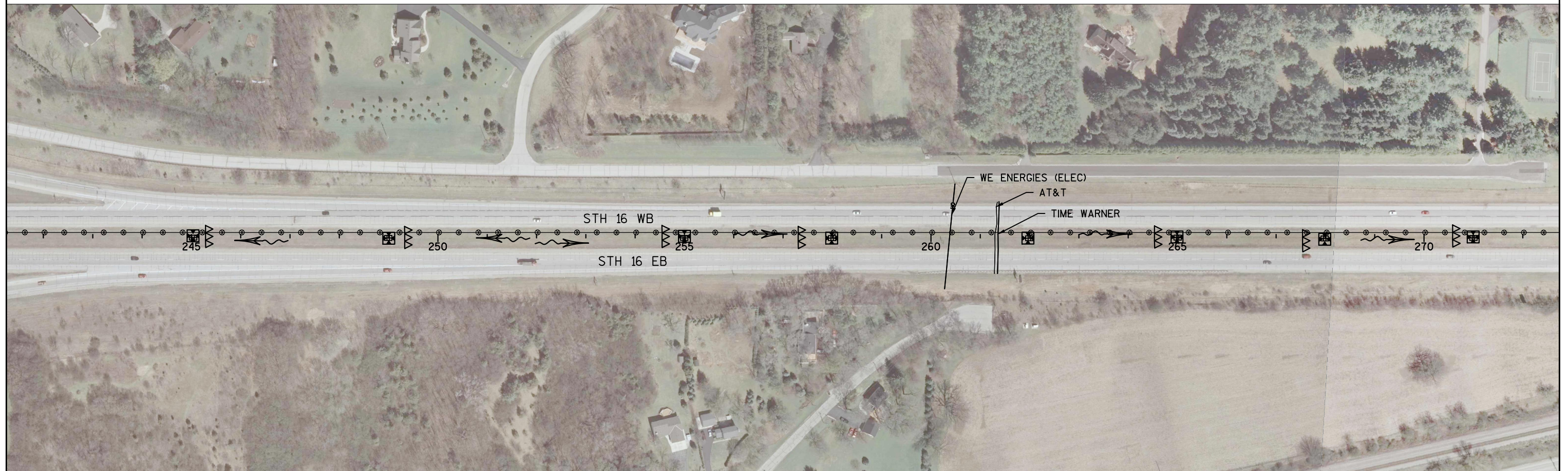
LEGEND

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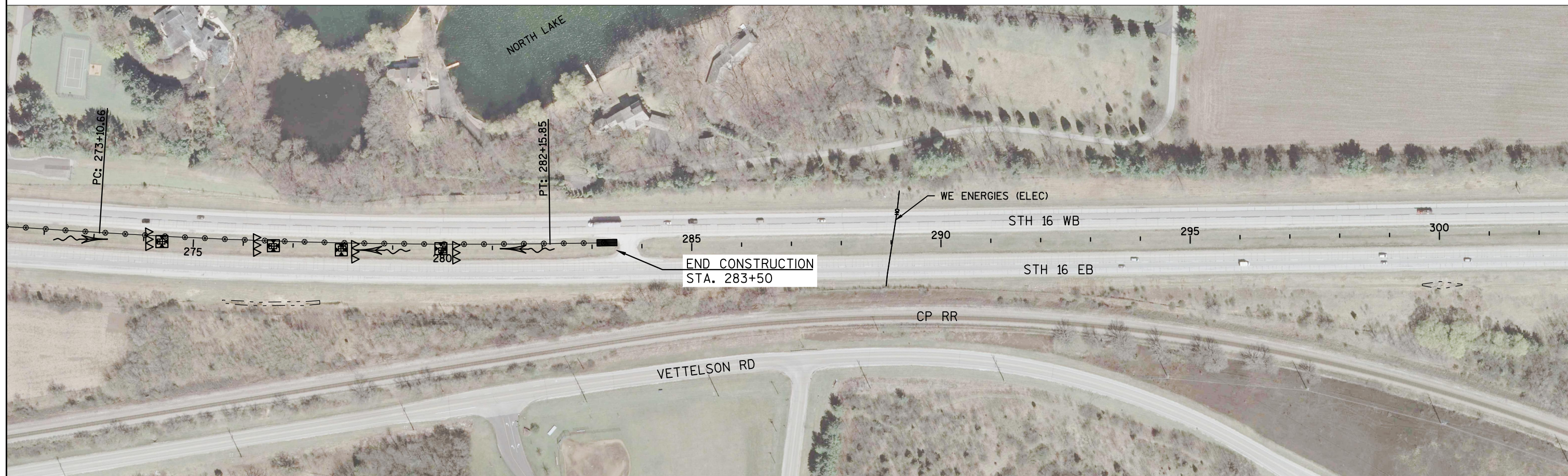
LEGEND

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-  SURFACE WATER FLOW
-  ROCK BAGS

PROJECT NO:1370-15-72

HWY:STH 16

COUNTY:WAUKESHA

EROSION CONTROL

SHEET 22

E

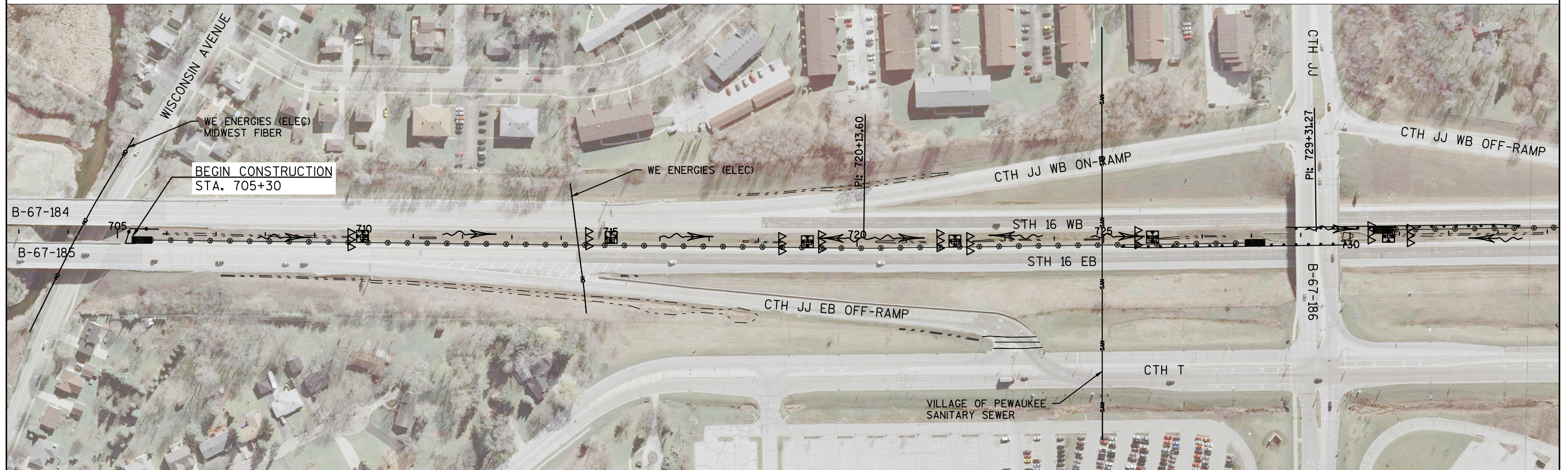
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PLOT BY : ROTIER, STEVEN J

PLOT NAME : PLOT SCALE : *****

WISDOT/CADDs SHEET 42



—●— SILT FENCE

 INLET PROTECTION TYPE A WITH ROCK BAGS, SEE CONSTRUCTION DETAIL

 INLET PROTECTION TYPE B

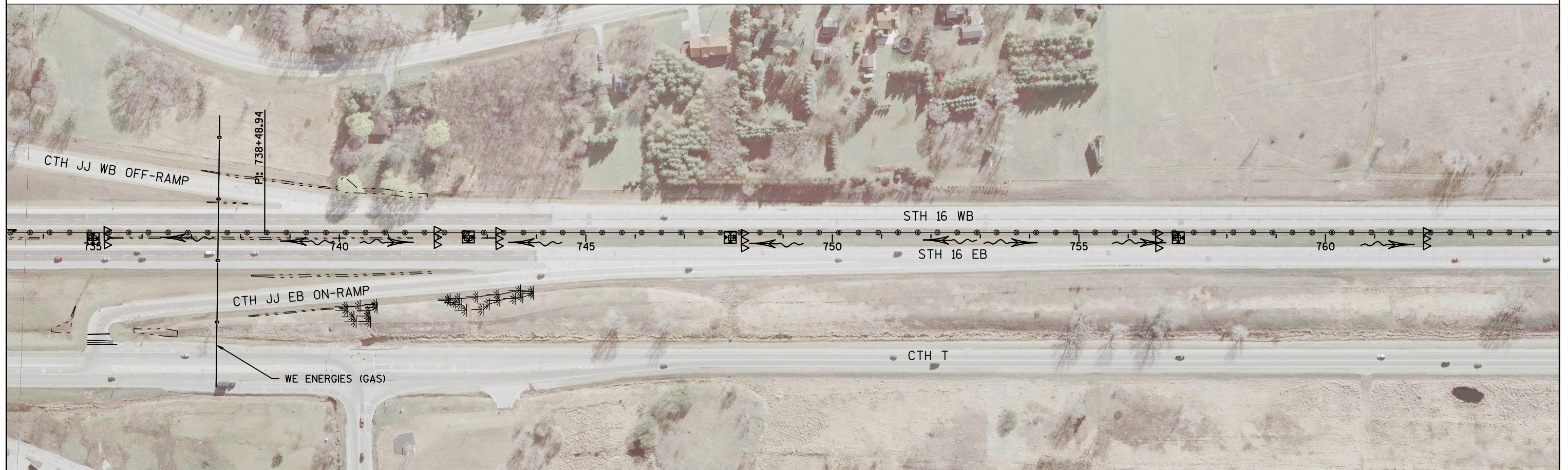
 WETLAND

 TEMPORARY DITCH CHECK

— — — — WET DITCH

 SURFACE WATER FLOW

 ROCK BAGS



LEGEND

- SILT FENCE
-  INLET PROTECTION TYPE A WITH ROCK BAGS, SEE CONSTRUCTION DETAIL
-  INLET PROTECTION TYPE B
-  WETLAND
-  TEMPORARY DITCH CHECK
- WET DITCH
-  SURFACE WATER FLOW
-  ROCK BAGS

PROJECT NO:1370-15-72

HWY:STH 16

COUNTY:WAUKESHA

EROSION CONTROL

SHEET 24

E

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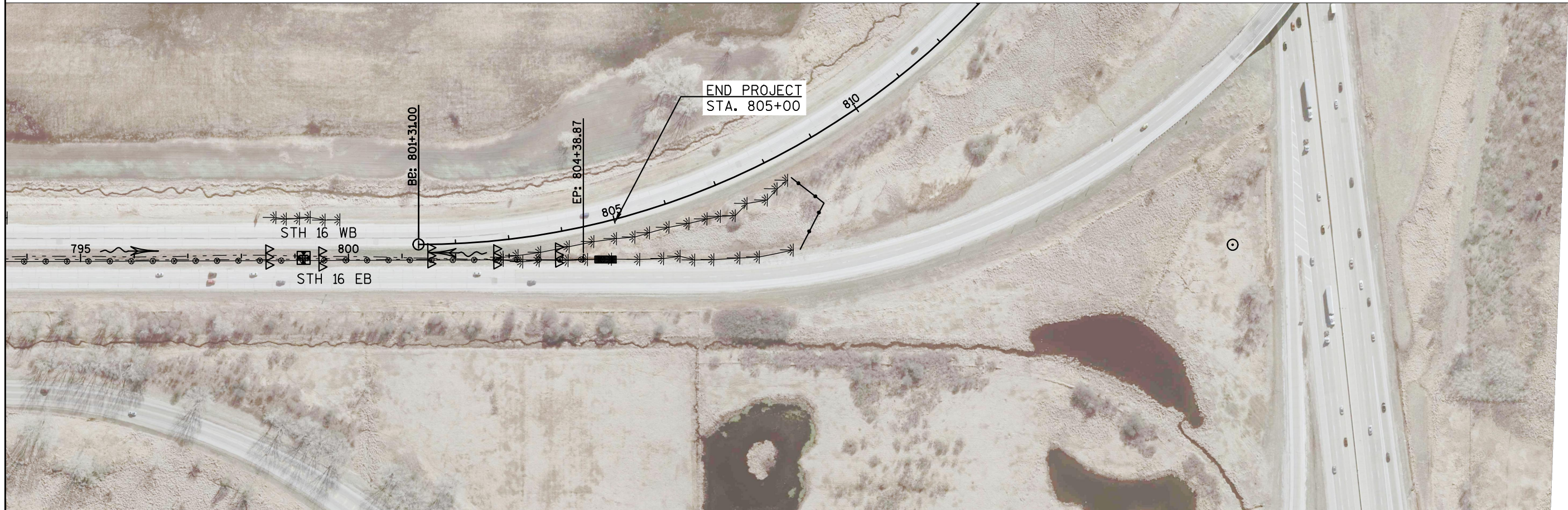
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WISDOT/CADDs SHEET 42



LEGEND

- SILT FENCE
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—●— SILT FENCE

 INLET PROTECTION TYPE A WITH ROCK BAGS, SEE CONSTRUCTION DETAIL

 INLET PROTECTION TYPE B

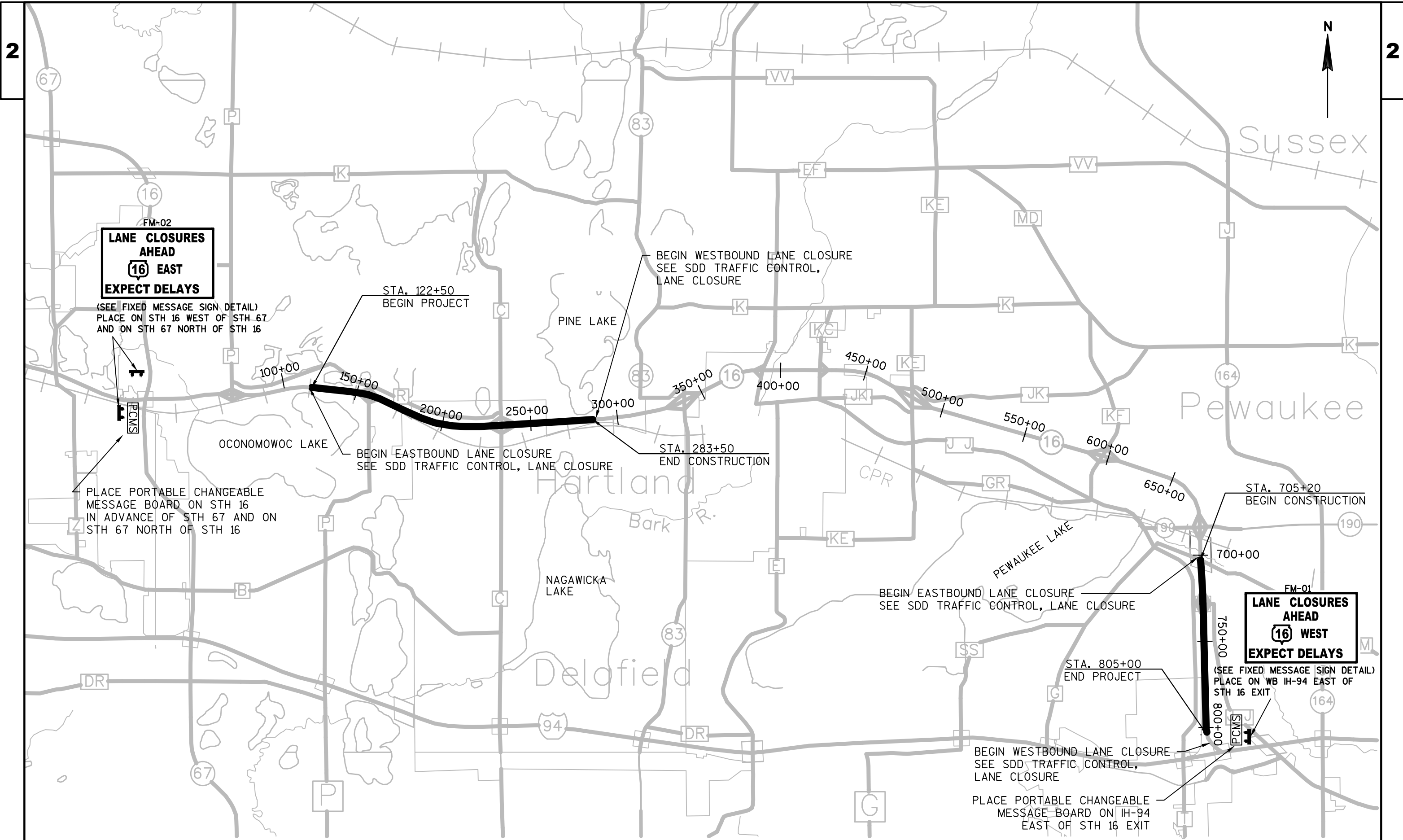
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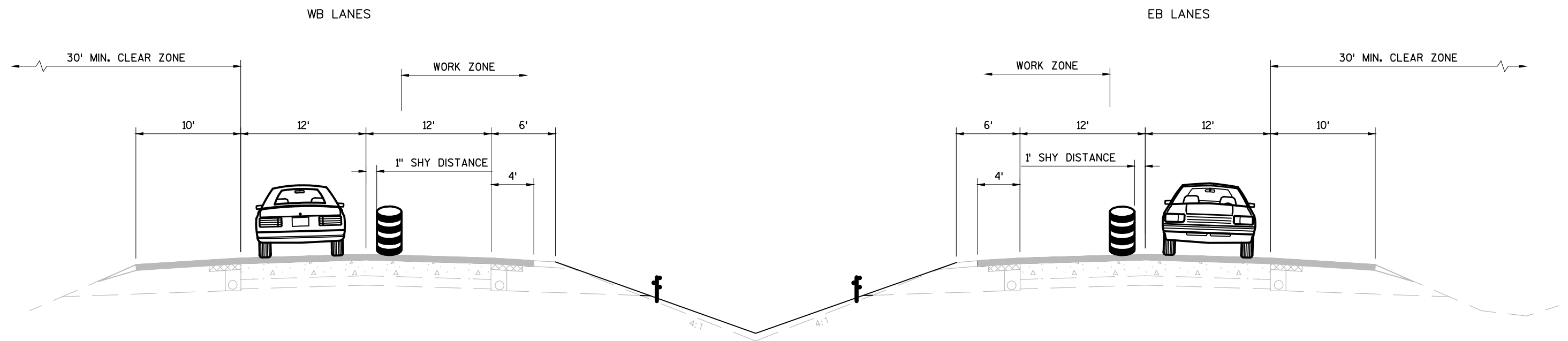
 TEMPORARY DITCH CHECK

— — — — WET DITCH

 SURFACE WATER FLOW

 ROCK BAGS





SINGLE LANE CLOSURES ALLOWED
DURING OFF PEAK HOURS, SEE
SPECIAL PROVISIONS.

STH 16
STAGING TYPICAL SECTION OFF PEAK HOURS

FIXED MESSAGE SIGNS (DETAILS SHEETS)

GENERAL NOTES:

- 1. AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE PROJECT ENGINEER SHALL VERIFY EACH SIGN LOCATION.
- 2. ALL SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4"x6") (FREEWAY) OR TUBULAR. STEEL POSTS OR 4X6 WOOD POSTS (NON FREEWAY). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN.
- 3. SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "FIXED MESSAGE SIGNS."
- 4. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE FLUORESCENT REFLECTIVE BACKGROUND PER SPEC 643 & 637.
- 5. ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
12" CAPS SHALL BE SERIES "D"
6" CAPS SHALL BE SERIES "C" – UNLESS OTHERWISE SHOWN
- 6. ALL SIGNS SHALL HAVE BORDER & RADIUS OF BORDERS AS FOLLOWS:

SIGN AREA	WIDTH OF BORDER
GREATER THAN 150 SQ FT	3"
60-150 SQ FT	2"
LESS THAN 60 SQ FT	1"

RADIUS	CORNER RADIUS
SMALLEST OUTSIDE DIMENSION	
> 8 FT	12"
≥ 6 FT	9"
≥ 4 FT	6"
LESS THAN 4 FT	3"
- 7. BEGIN XXX XX SIGNS SHALL BE SEPARATE PANELS, BUT SHALL BE CONSIDERED AS PART OF THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD.
- 8. SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 643 & 637.

(X) = SIGN NUMBER

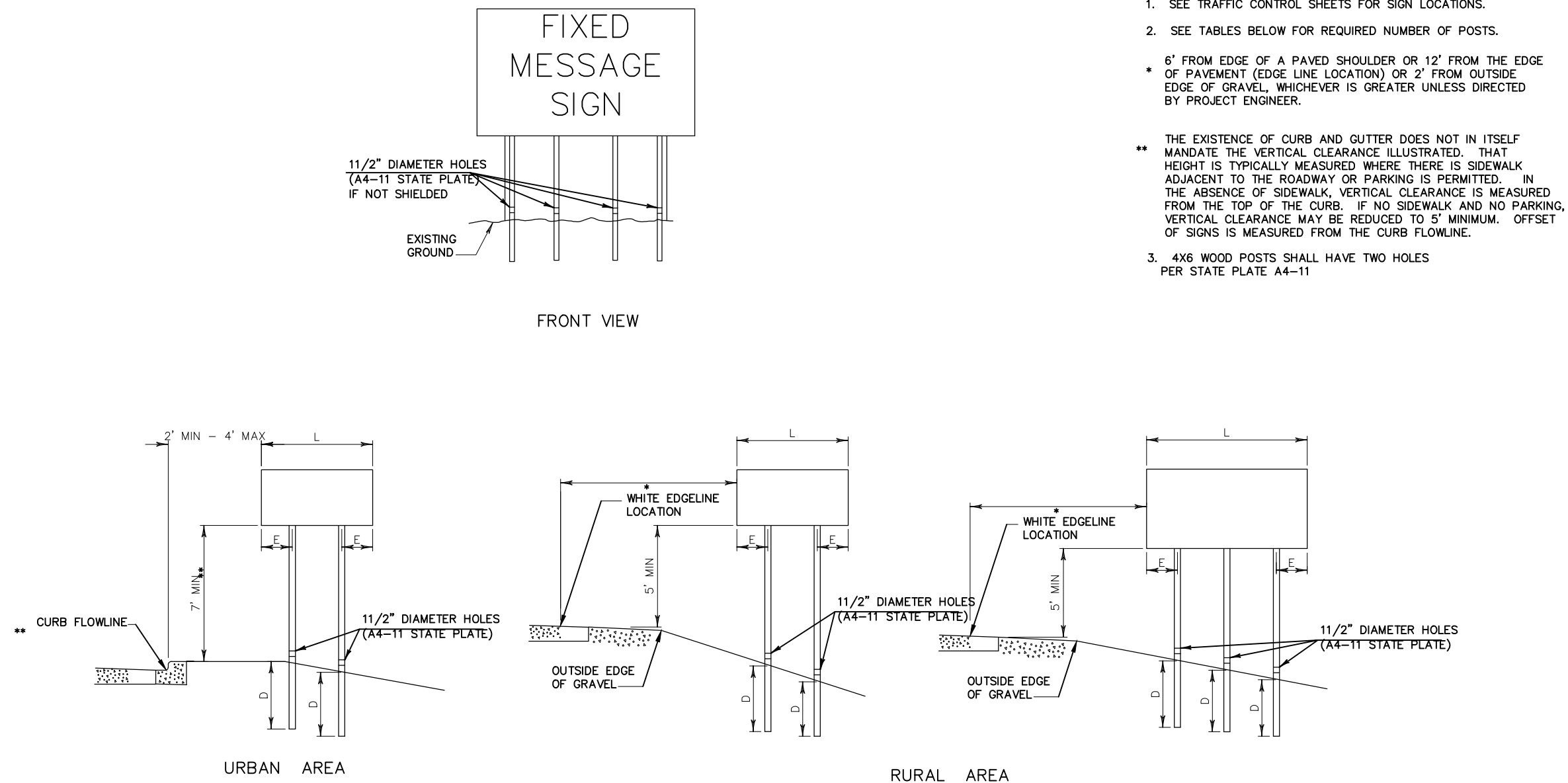
FOR PLAN SHEETS

LEGEND: FIXED MESSAGE SIGNS

-  EXISTING GUIDE SIGN TO BE COVERED
-  FIXED MESSAGE SIGN(S) ON WOOD POST SUPPORTS OR TUBULAR STEEL POSTS
-  FIXED MESSAGE SIGN NUMBER
-  CONTRACTOR SHALL COVER AS DIRECTED BY THE ENGINEER ALL ROUTE MARKINGS PERTAINING TO THE PROJECT. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
-  CHANGEABLE MESSAGE SIGN

NOTES: FIXED MESSAGE SIGNS

- 1. CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE "I" SIGN.
- 2. ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE FLORESCENT REFLECTIVE BACKGROUND PER SPEC 643 & 637.
- 3. SEE FIXED MESSAGE SIGNS AND SPECIAL MESSAGE SIGNS LAYOUT SHEETS FOR MORE INFORMATION.



NOTES

1. SEE TRAFFIC CONTROL SHEETS FOR SIGN LOCATIONS.
2. SEE TABLES BELOW FOR REQUIRED NUMBER OF POSTS.
- * 6' FROM EDGE OF A PAVED SHOULDER OR 12' FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) OR 2' FROM OUTSIDE EDGE OF GRAVEL, WHICHEVER IS GREATER UNLESS DIRECTED BY PROJECT ENGINEER.
- ** THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5' MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
3. 4X6 WOOD POSTS SHALL HAVE TWO HOLES PER STATE PLATE A4-11

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
GREATER THAN 48" LESS THAN 60"	12"
60" TO 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
GREATER THAN 120" LESS THAN 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" AND GREATER	12"

POST EMBEDMENT DEPTH

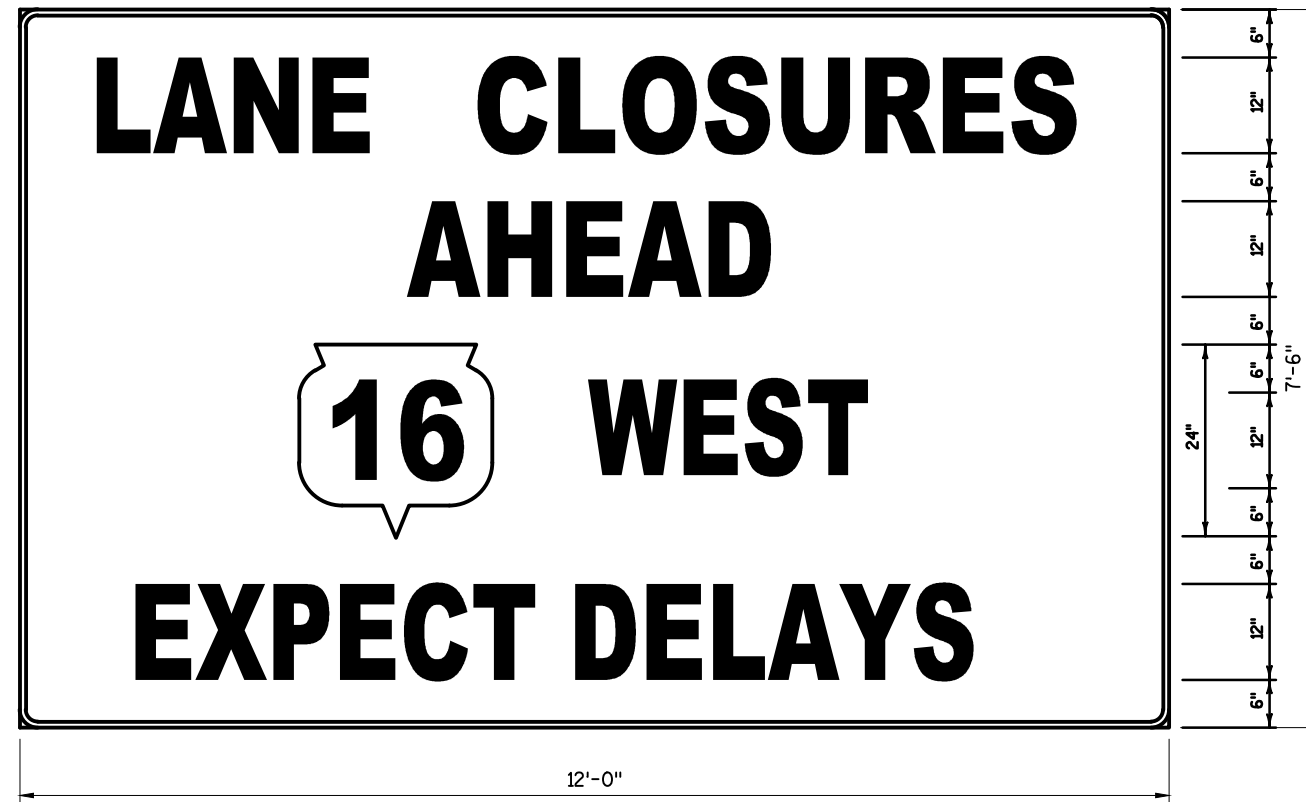
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

NOTE TO DESIGNERS: SHOW POSTS ON FMS SIGN DETAILS.

POST MOUNTING DETAIL FOR TRAFFIC CONTROL FIXED MESSAGE SIGNS

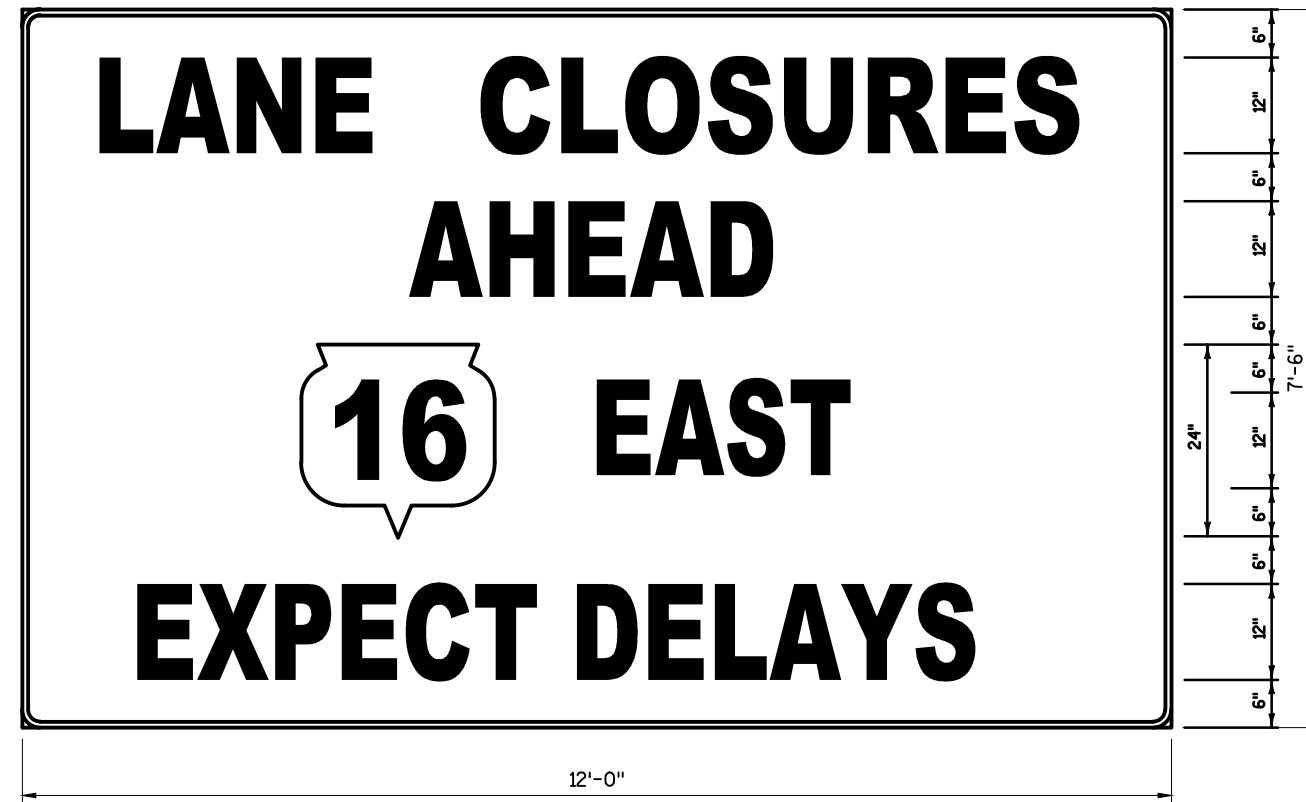
FM-01

A= 90 SQ. FT.
BORDER= 2"
RADIUS= 9"



FM-02

A= 90 SQ. FT.
BORDER= 2"
RADIUS= 9"

**GENERAL NOTES:**

ALL SIGNS TO HAVE STANDARD REFLECTIVE SHEETING - REFERENCE: "WIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.

AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.

ALL SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4"X6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN.

THE SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "FIXED MESSAGE SIGNS".

SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND PER SPEC 643.2.9.3.

ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
12" CAPS SHALL BE SERIES "D"
6" CAPS SHALL BE SERIES "C"

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.

SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

CONTRACTOR TO LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE "I" SIGNS.

Estimate Of Quantities

1370-15-72					
Line	Item	Item Description	Unit	Total	Qty
0010	205.0100	Excavation Common	CY	148.000	148.000
0020	213.0100	Finishing Roadway (project) 01. 1370-15-72	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,860.000	3,860.000
0040	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	120.000	120.000
0050	613.1100.S	Cable Barrier Type 1	LF	25,245.000	25,245.000
0060	613.1200.S	Cable Barrier End Terminal Type 1	EACH	14.000	14.000
0070	619.1000	Mobilization	EACH	1.000	1.000
0080	624.0100	Water	MGAL	38.600	38.600
0090	625.0105	Topsoil	CY	5,140.000	5,140.000
0100	627.0200	Mulching	SY	1,500.000	1,500.000
0110	628.1504	Silt Fence	LF	250.000	250.000
0120	628.1520	Silt Fence Maintenance	LF	250.000	250.000
0130	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0140	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0150	628.2002	Erosion Mat Class I Type A	SY	33,840.000	33,840.000
0160	628.7005	Inlet Protection Type A	EACH	10.000	10.000
0170	628.7010	Inlet Protection Type B	EACH	53.000	53.000
0180	628.7504	Temporary Ditch Checks	LF	1,740.000	1,740.000
0190	628.7570	Rock Bags	EACH	312.000	312.000
0200	629.0210	Fertilizer Type B	CWT	21.200	21.200
0210	630.0130	Seeding Mixture No. 30	LB	605.000	605.000
0220	630.0160	Seeding Mixture No. 60	LB	16.000	16.000
0230	630.0200	Seeding Temporary	LB	50.000	50.000
0240	642.5201	Field Office Type C	EACH	1.000	1.000
0250	643.0100	Traffic Control (project) 01. 1370-15-72	EACH	1.000	1.000
0260	643.0300	Traffic Control Drums	DAY	28,400.000	28,400.000
0270	643.0420	Traffic Control Barricades Type III	DAY	552.000	552.000
0280	643.0800	Traffic Control Arrow Boards	DAY	96.000	96.000
0290	643.0900	Traffic Control Signs	DAY	1,512.000	1,512.000
0300	643.1000	Traffic Control Signs Fixed Message	SF	270.000	270.000
0310	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0320	SPV.0060	Special 01. Adjusting Inlets Median 2 Grate	EACH	21.000	21.000
0330	SPV.0060	Special 02. Salvage and Replace Pipe Underdrain Endwall	EACH	10.000	10.000
0340	SPV.0180	Special 01. Excavation of Phragmites Contaminated Soil	SY	705.000	705.000
0350	SPV.0180	Special 02. Herbicide Application	SY	705.000	705.000

Division	From/To Station	Location	205.0100 Common Excavation	Available Material	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Borrow (15)	Comment:
			Cut			Factor 1.25			
Division 1									
	122+50 to 283+50	STH 16 Median	133	133	2,496	3,120	-2,987	2,987	(15) PAID AS TOPSOIL
Division 1 Subtotal			133	133	2,496	3,120	-2,987		
Division 2									
	704+20 to 805+00	STH 16 Median	15	15	1,735	2,168	-2,154	2,154	(15) PAID AS TOPSOIL
Division 2 Subtotal			15	15	1,735	2,168	-2,154		
Grand Total			148	148	4,231	5,288	-5,140	5,140	(15) PAID AS TOPSOIL
Total Common Exc			148						

Notes:

(13) Expanded Fill Factor = 1.25

Depending on selections:

Or

Or

Or

Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor

Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced EBS) * Fill Factor

Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced Marsh) * Fill Factor

Expanded Fill = (Unexpanded Fill - Rock * Rock Factor) * Fill Factor

(14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

(15) Borrow paid under 625.0105 Topsoil

BASE AGGREGATE

305.0110				
BASE AGGREGATE DENSE 3/4-INCH				
STA	TO	STA	TON	
122+50	TO	283+50	RT/LT	2,470
705+20	TO	805+00	RT	1,040
UNDISTRIBUTED				350
TOTAL				3,860

CABLE BARRIER

		613.1100.S		613.1200.S
		CABLE BARRIER TYPE 1		CABLE BARRIER END TERMINAL TYPE 1
STA	TO	STA	LF	EACH
122+50	TO	150+60	2,810	2
153+00	TO	178+20	2,520	2
179+00	TO	232+35	5,335	2
234+45	TO	283+50	4,905	2
705+30	TO	728+25	2,295	2
730+50	TO	788+00	5,750	2
788+70	TO	805+00	1,630	2
TOTAL			25,245	14

EROSION CONTROL

			628.1504	628.1520	628.1905	628.1910	628.2002	628.7005	628.7010	628.7504	628.7570	629.0210	630.0130	630.0160	630.0200	627.0200
			MOBILIZATIONS													
				MOBILIZATIONS	EROSION	EROSION	EROSION MAT	INLET	INLET	TEMPORARY		FERTILIZER	SEEDING	SEEDING	SEEDING	
			SILT FENCE	SILT FENCE	EROSION	CONTROL	CLASS I	PROTECTION	PROTECTION	DITCH CHECKS	ROCK BAGS	TYPE B	MIXTURE NO. 30	MIXTURE NO. 60	TEMPORARY	MULCHING
STA	TO	STA	LF	LF	EACH	EACH	SY	EACH	EACH	LF	EACH	CWT	LB	LB	LB	SY
122+50	TO	150+60	50	50	--	--	8,450	8	--	180	112	5.3	152	1	--	--
153+00	TO	178+20	50	50	--	--	6,900	--	5	210	--	4.3	124	--	--	--
179+00	TO	232+35	--	--	--	--	1,850	--	13	360	--	1.2	33	--	--	--
234+45	TO	283+50	--	--	--	--	6,700	--	14	390	--	4.2	121	--	--	--
705+30	TO	728+25	50	50	--	--	1,750	--	5	126	--	1.1	32	--	--	--
730+50	TO	780+00	--	--	--	--	5,190	--	9	234	--	3.3	93	1	--	--
788+70	TO	805+00	--	--	--	--	2,750	--	2	90	--	1.7	50	14	--	--
UNDISTRIBUTED			100	100	2	2	250	2	5	150	200	--	--	--	50	1,500
TOTAL			250	250	2	2	33,840	10	53	1,740	312	21.2	605	16	50	1,500

NOTES:

SEEDING MIXTURE #60 TO BE USED AT WETLAND AND WET DITCH DISTURBANCE AREAS
NO FERTILIZER IN WET DITCH OR WETLAND RESTORATION

TRAFFIC CONTROL

		643.0100	643.0300	643.0420	643.0800	643.0900	643.1000	643.1050
		(PROJECT)			BARRICADES	ARROW	SIGNS	SIGNS
		1370-15-71	# OF DAYS	DRUMS	TYPE III	BOARDS	FIXED	MESSAGE
STA	TO	STA	EACH	DAY	DAY	DAY	SF	SIGNS PCMS
122+50	TO	283+50	--	28	19,600	392	56	672
705+20	TO	805+00	--	20	8,800	160	40	480
PROJECT			1	--	--	--	--	--
TOTAL			1	28,400	552	96	1,152	270

ADJUSTING INLETS MEDIAN 2 GRATE

SPV.0060.01		
	ADJUSTING INLETS MEDIAN 2 GRATE EACH	RIM ELEVATION
STATION		
123+00	1	895.95
125+00	1	897.10
128+00	1	898.07
134+00	1	901.04
135+75	1	901.23
139+00	1	902.71
140+00	1	902.98
149+00	1	906.17
159+00	1	901.80
163+00	1	899.11
167+00	1	896.17
171+00	1	893.70
175+00	1	896.41
179+00	1	900.85
183+00	1	905.00
186+50	1	909.00
722+00	1	861.00
UNDISTRIBUTED	4	
21		

SALVAGE AND REPLACE UNDERDRAIN ENDWALL

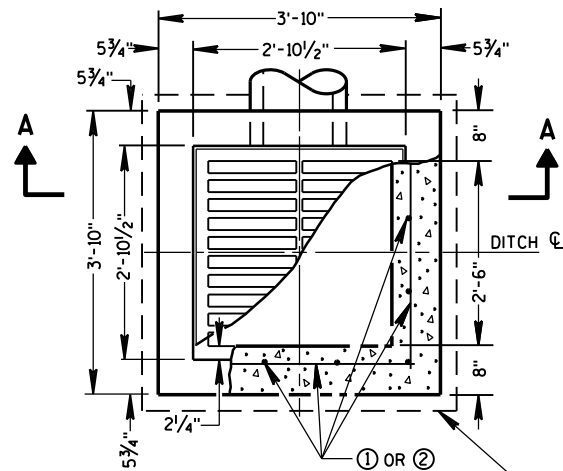
		612.0206	SPV.0060.02
		PIPE	SALVAGE AND REPLACE
		UNDERDRAIN	PIPE UNDERDRAIN
		UNPERFORATED	ENDWALL
STATION	LOCATION	LF	EACH
123+00	RT	12	1
125+00	RT & LT	24	2
128+00	RT & LT	24	2
134+00	LT	12	1
135+75	RT & LT	24	2
UNDISTRIBUTED		24	2
TOTAL		120	10

EXCAVATION OF PHARGMITES CONTAMINATED SOIL

		SPV.0180.01	SPV.0180.02
		EXCAVATION OF PHRAGMITES	HERBICIDE
		CONTAMINATED SOIL	APPLICATION
STA	TO	STA	SY
802+75	TO	808+50	680
UNDISTRIBUTED		25	25
TOTAL		705	705

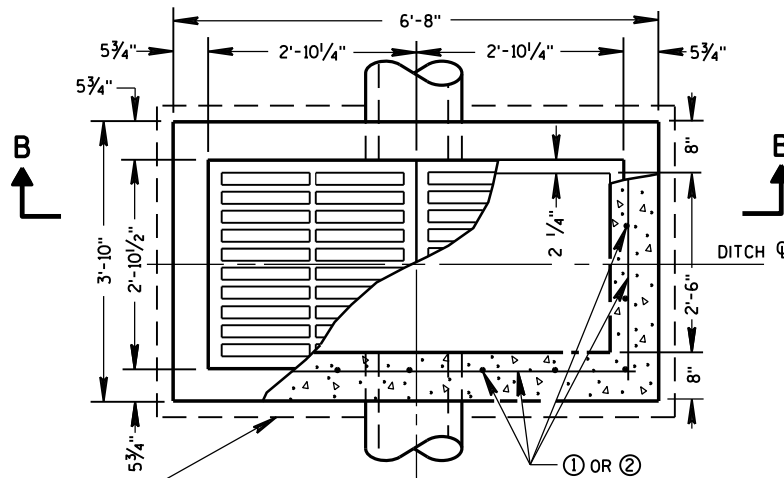
Standard Detail Drawing List

08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
14B52-01A	CABLE BARRIER TYPE 1 LAYOUT
14B52-01B	CABLE BARRIER TYPE 1 LAYOUT
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

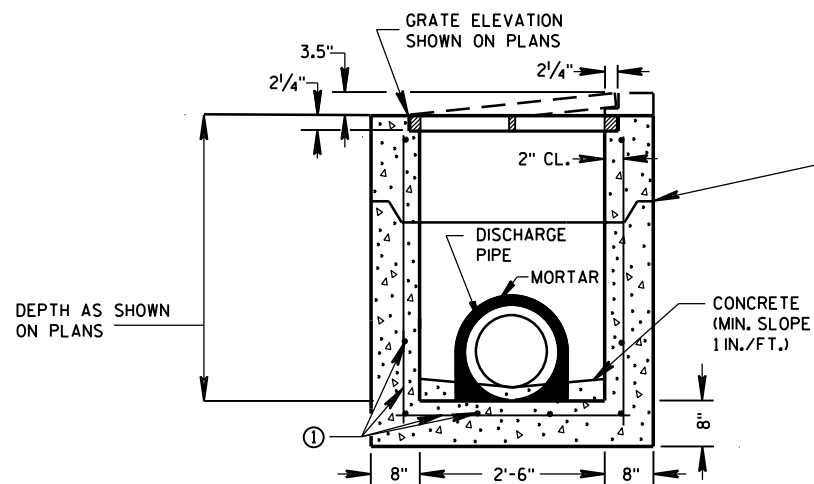


PLAN VIEW

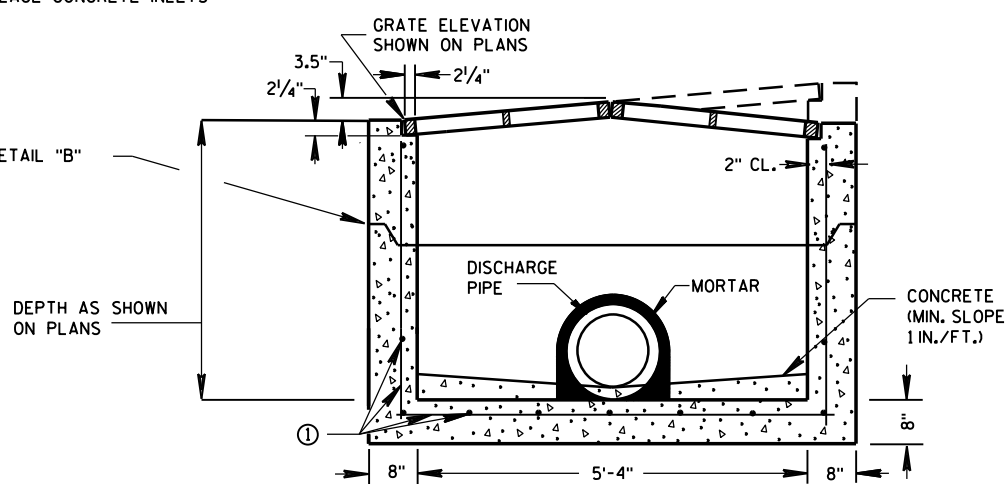
4" OVERHANGING BASE ON REINFORCED
CAST-IN-PLACE CONCRETE INLETS



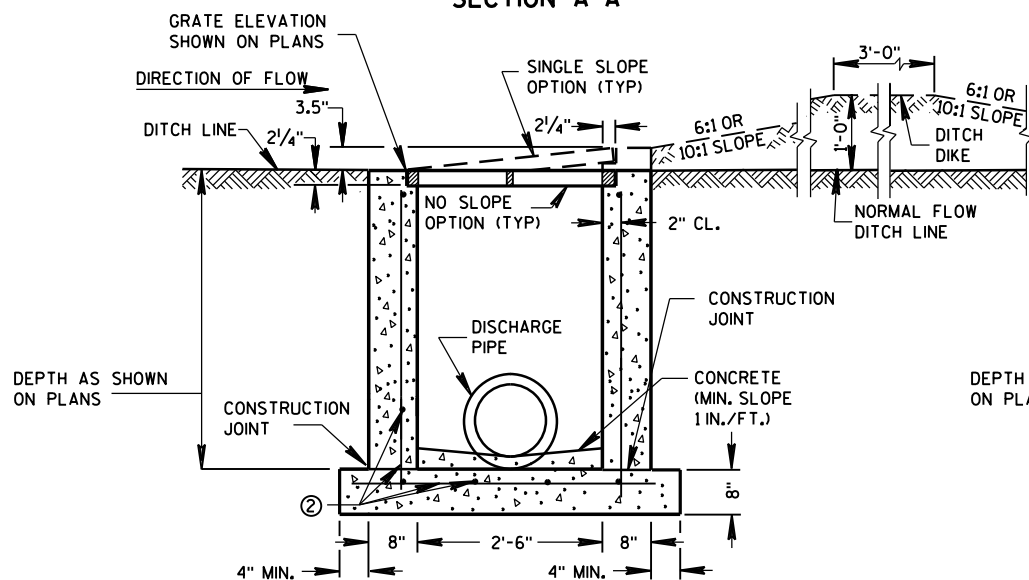
PLAN VIEW



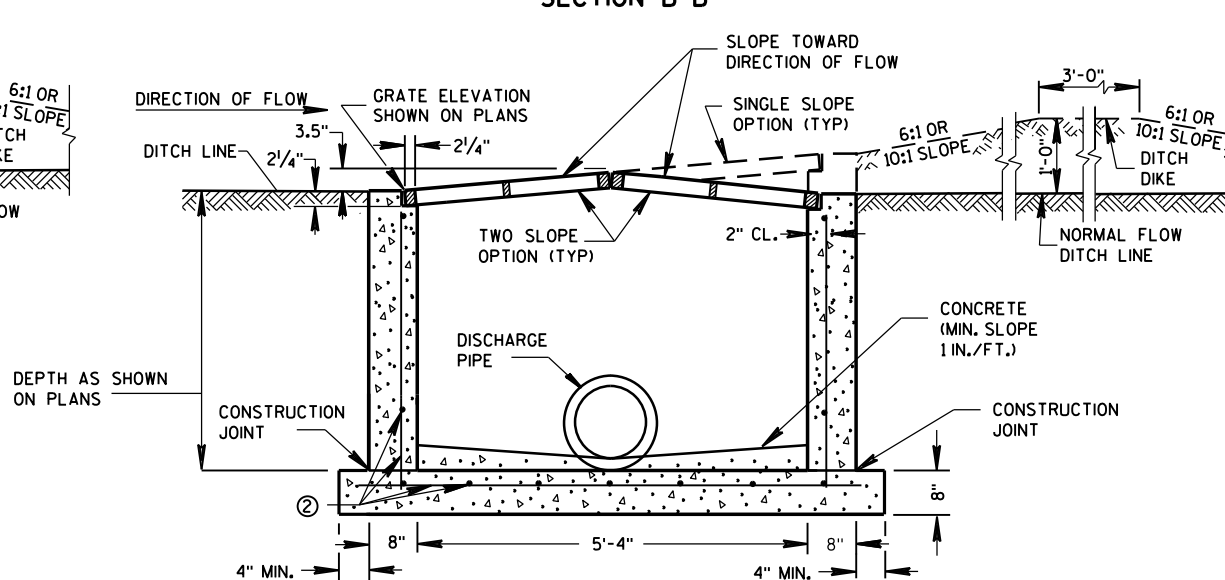
PRECAST REINFORCED CONCRETE
SECTION A-A



PRECAST REINFORCED CONCRETE
SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE
SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE
SECTION B-B

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, IG-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT. BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

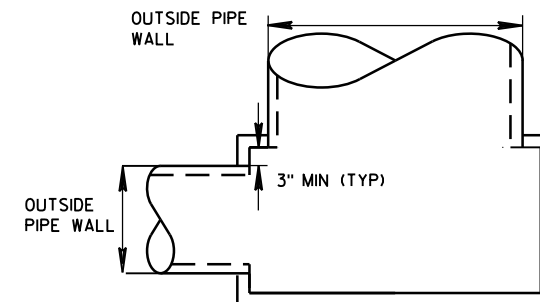
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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

- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

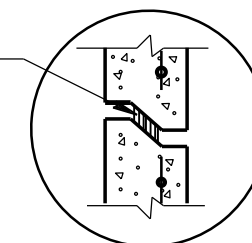
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

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



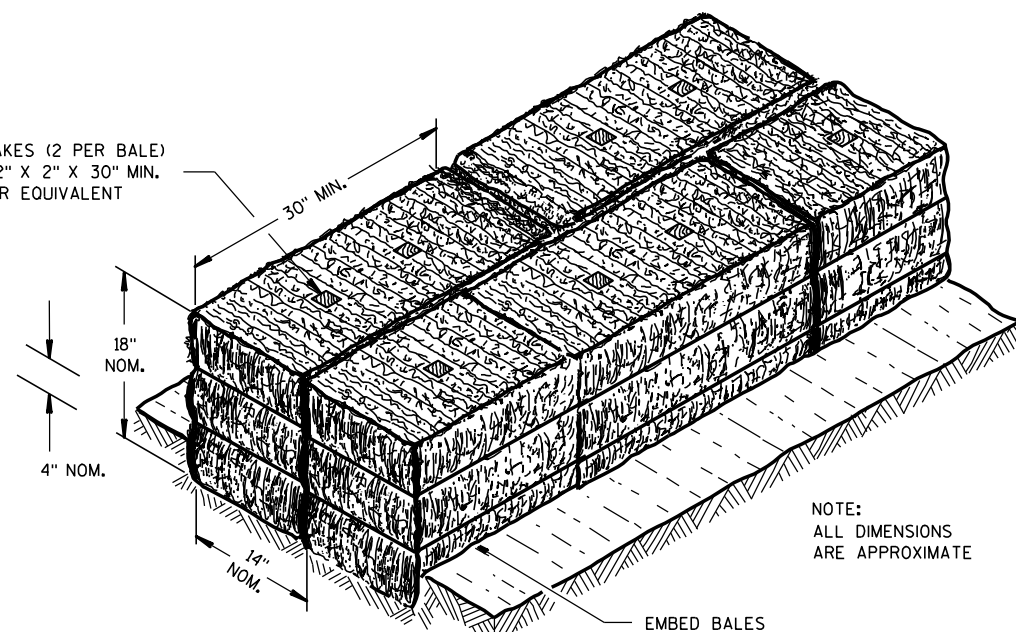
DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

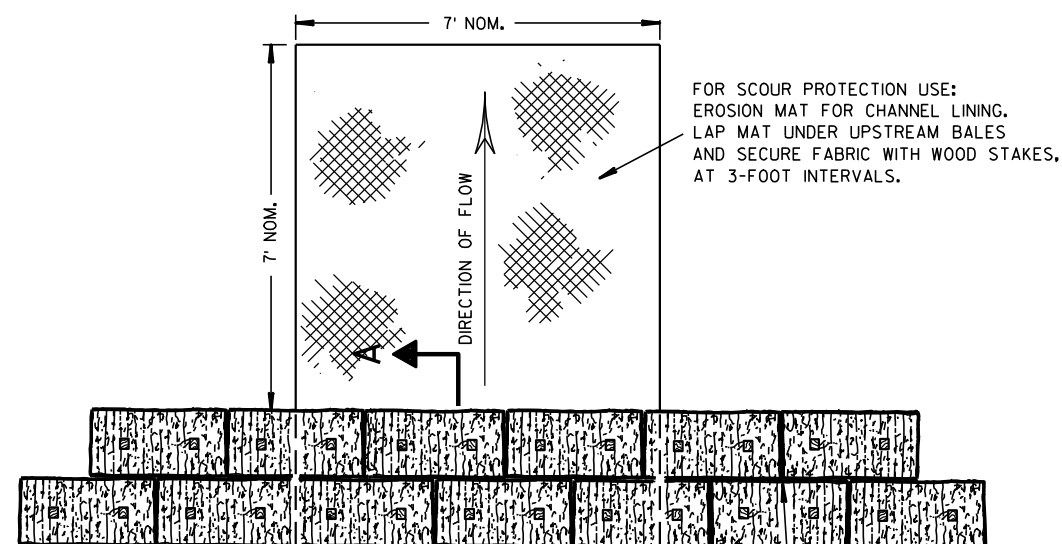
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

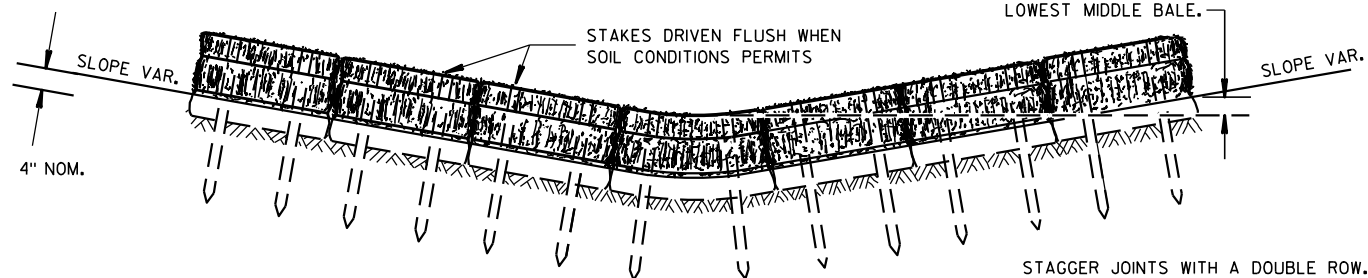
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



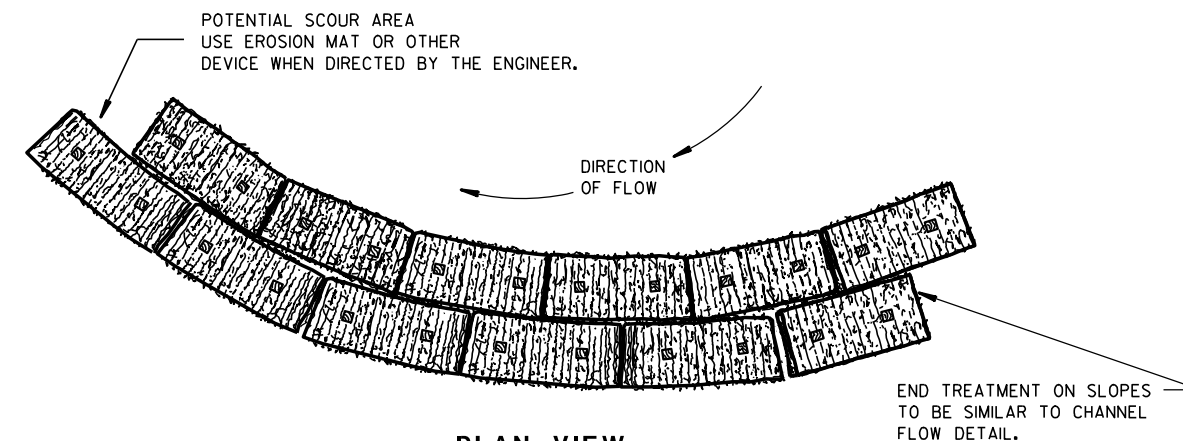
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

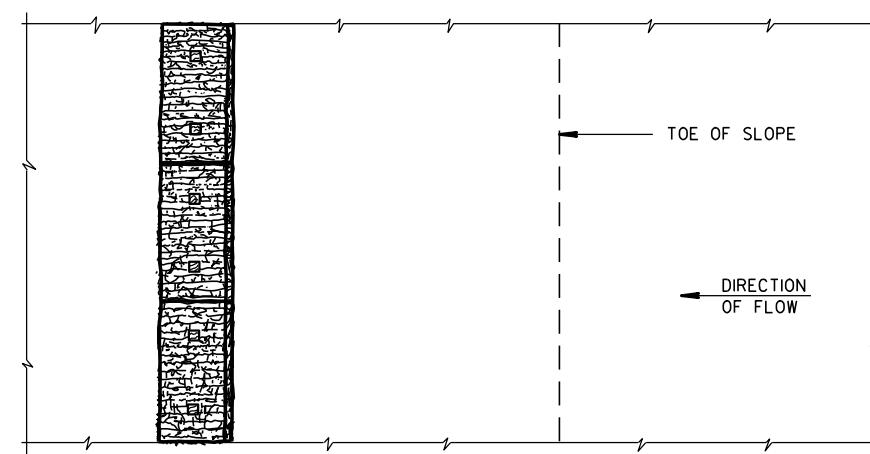
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- 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.

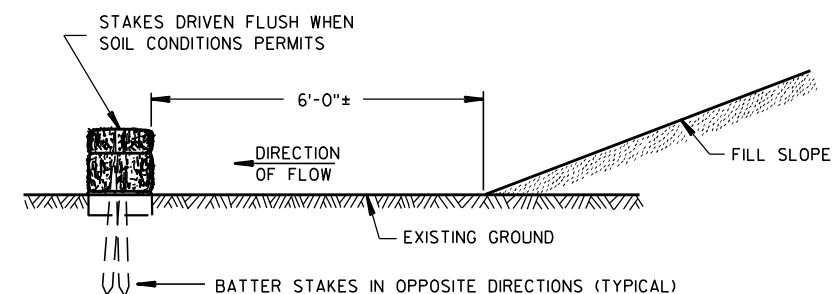


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

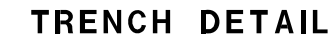
6/04/02
DATE

/S/ Beth Conn
CHIEF ROADWAY DEVELOPER 37

FHWA



- 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 1½" X 1½" 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.

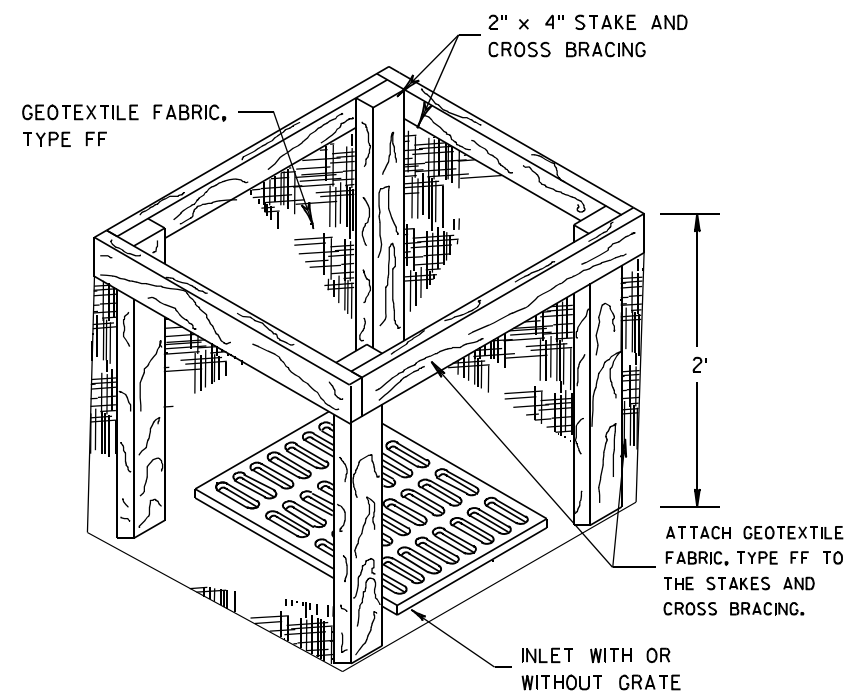
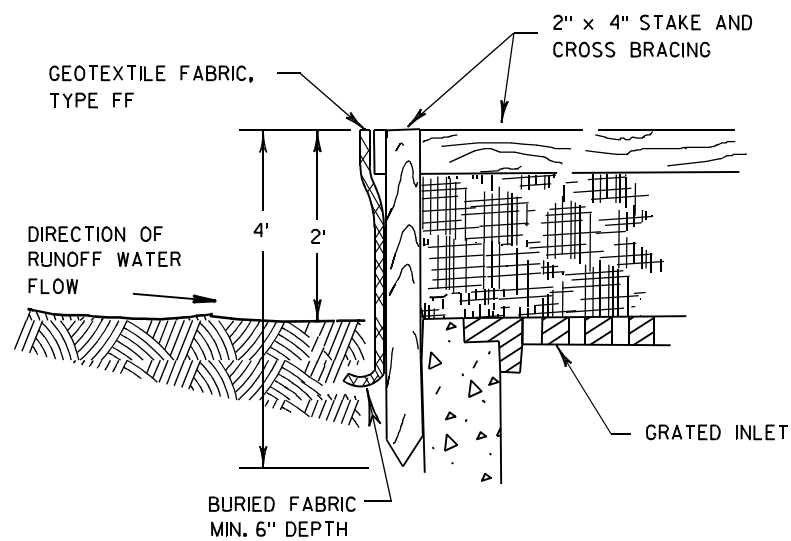


SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05
DATE /S/ Beth Cannata
CHIEF ROADWAY DEVELOPMENT **38** INCHES

FHWA



INLET PROTECTION, TYPE A

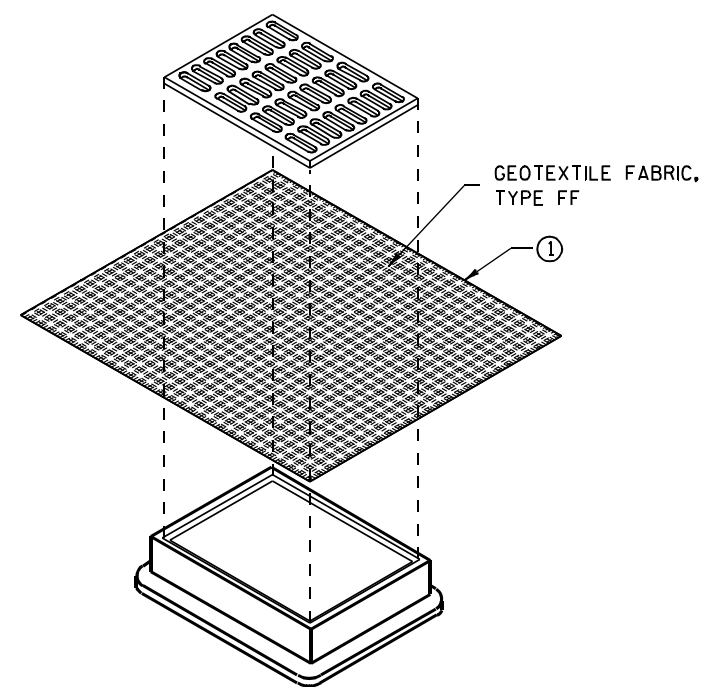
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

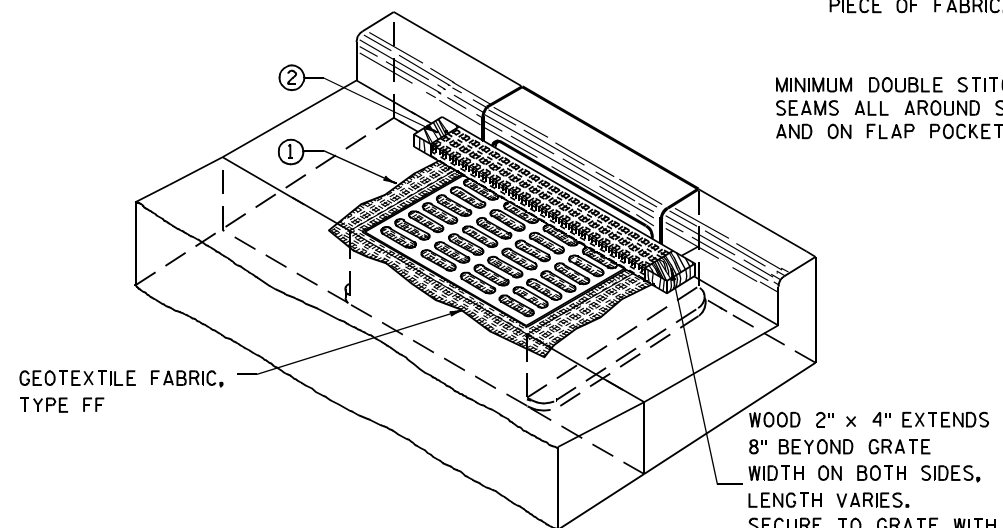
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

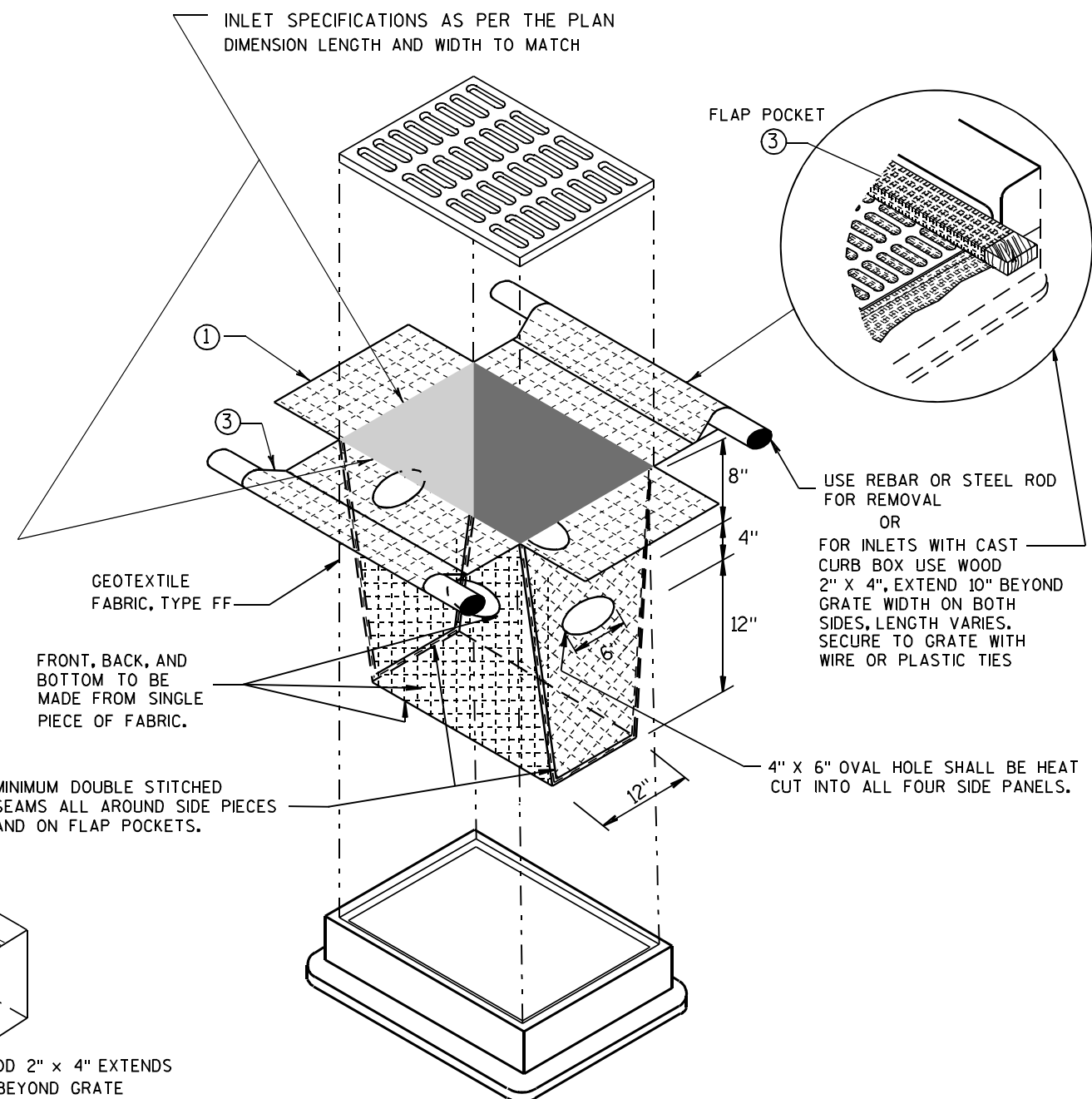
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



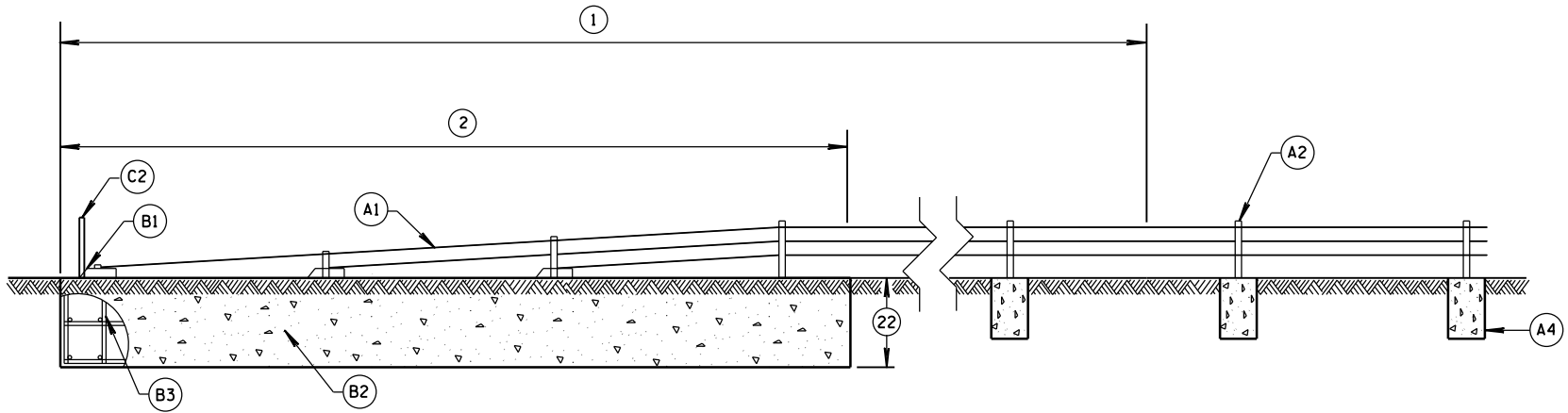
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

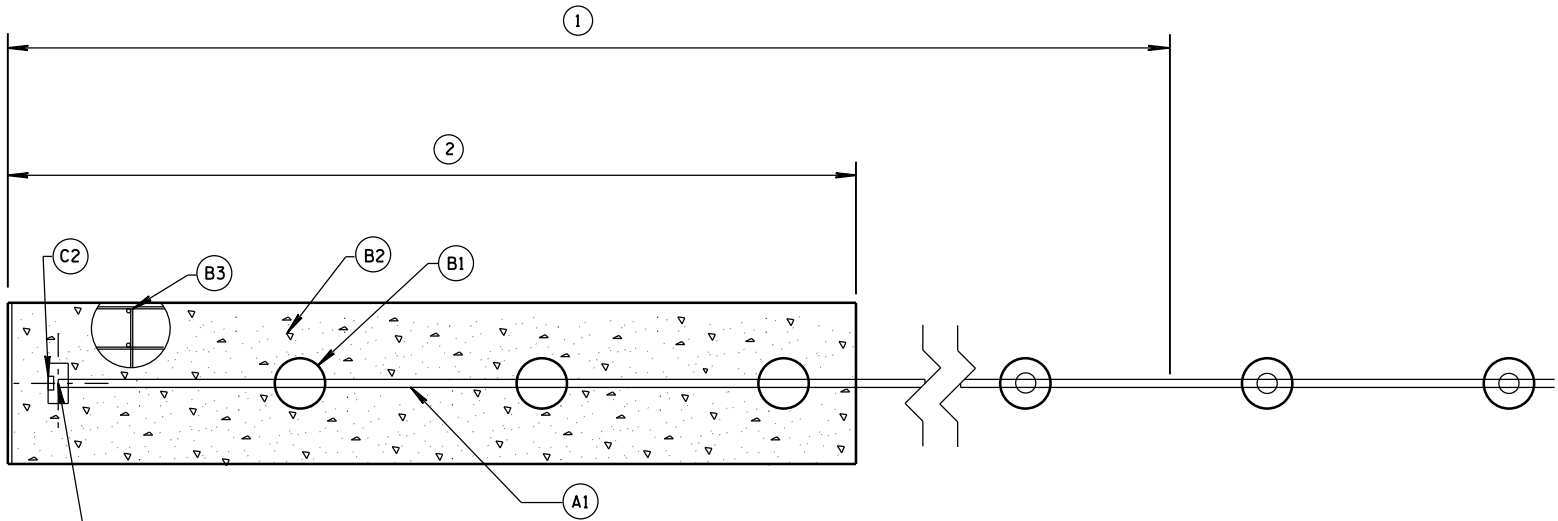
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Connolly
DATE 39
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER

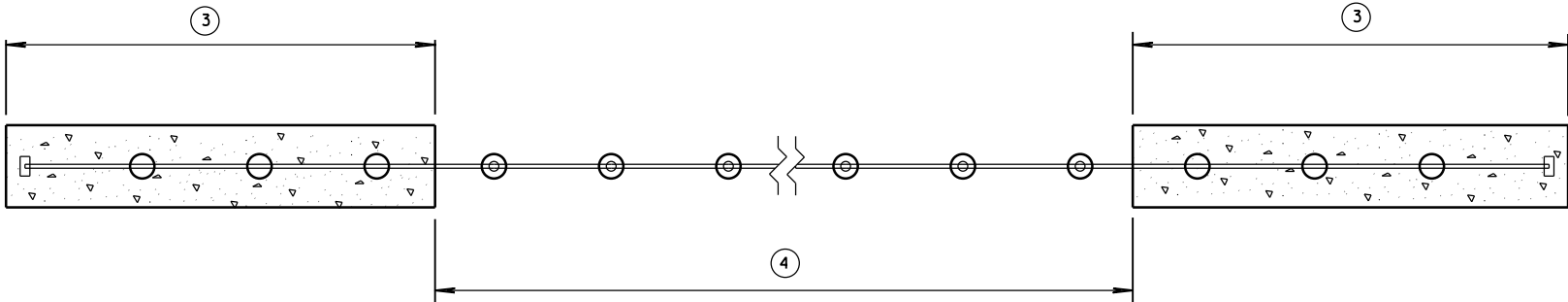


PROFILE VIEW



PLAN VIEW

TRANSITION FROM CABLE BARRIER
TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW

GENERAL NOTES

- DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.
- PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.
- INSTALL LINE POST PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.
- PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.
- PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICTED IN PLAN.
- PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.
- PROVIDE A WISCONSIN PROFESSIONAL ENGINEERS STAMPED ANALYSIS THAT THE LINE POST AND CABLE BARRIER END TERMINAL FOOTINGS ARE DESIGNED FOR THE SOIL CONDITIONS PRESENT. THE WISCONSIN P.E. STAMP ANALYSIS IS TO INCLUDE, BUT IS NOT LIMITED TO: DESIGN IMPACT LOADS, FOUNDATION DESIGN METHODOLOGY USED, FACTORS OF SAFETY, SOIL TYPE, SOIL CONDITIONS, AND TEMPERATURE RANGES.
- DESIGN LINE POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A TL-3 SMALL CAR.

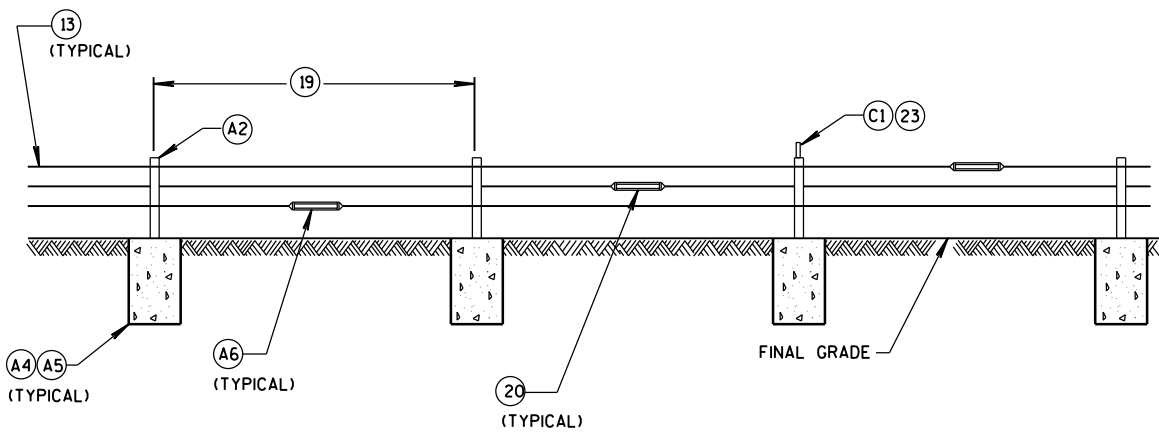
BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
A1	3 OR 4	3/4" 3x7 PRESTRESSED GALVANIZED STEEL WIRE ROPE	ASTM A741 MIN. BREAKING STRENGTH 39,000 LBS. AASHTO M30 TYPE 1 CLASS A (GALVANATION).
			MINIMUM WIRE ROPE MODULUS OF ELASTICITY OF 19,000 PSI ACCORDING TO ISO 12067-202 WIRE ROPE MODULUS OF ELASTICITY "INITIAL" (AS MANUFACTURED), WITH NO BEDDING OR PRESTRECHING OF THE ROPE PERMITTED DURING TESTING.
A2	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
A3	1 PER LINE POST	GALVANIZED METAL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
A4	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA, A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES. STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE. SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
A5	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
A6	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS. MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE. TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS.
B1	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
B2	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA, A-T, OR A-IP OF STANDARD SPECIFICATION 501.2. STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
B3	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
C1	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST YELLOW.
C2	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN.

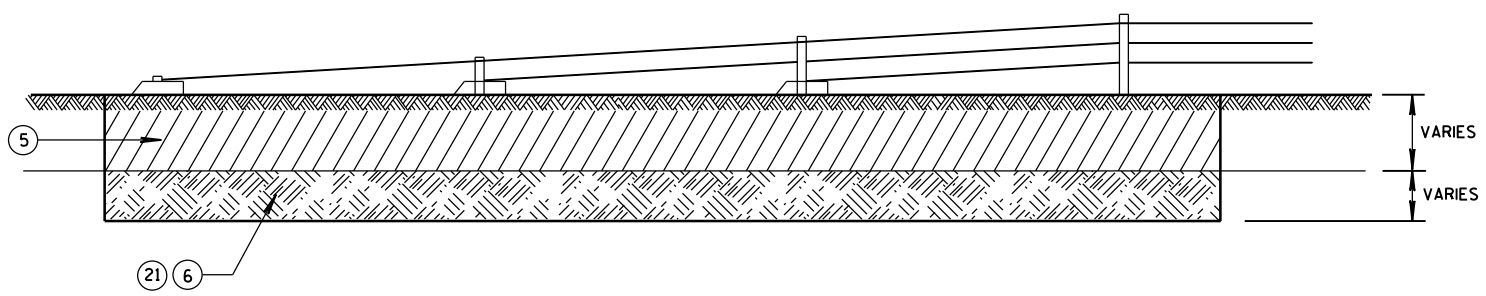
- 1 LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 2 PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 3 CABLE BARRIER END TERMINAL
- 4 CABLE BARRIER AND LINE POSTS

CABLE BARRIER TYPE 1
LAYOUT

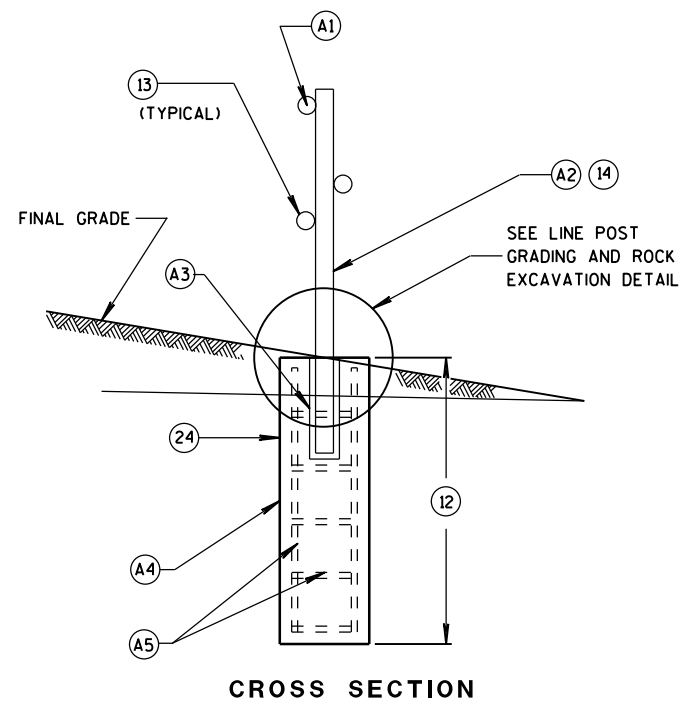
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



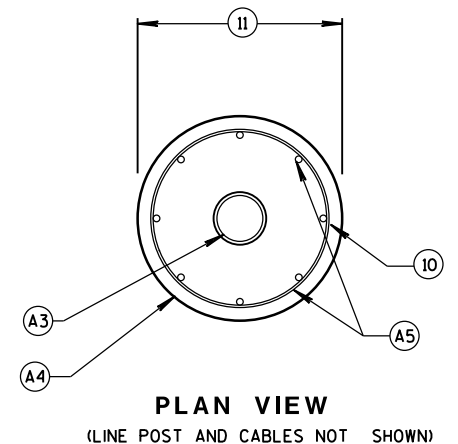
**PROFILE VIEW
LINE POST INSTALLATION**



**CABLE BARRIER END
TERMINAL ROCK EXCAVATION DETAIL**



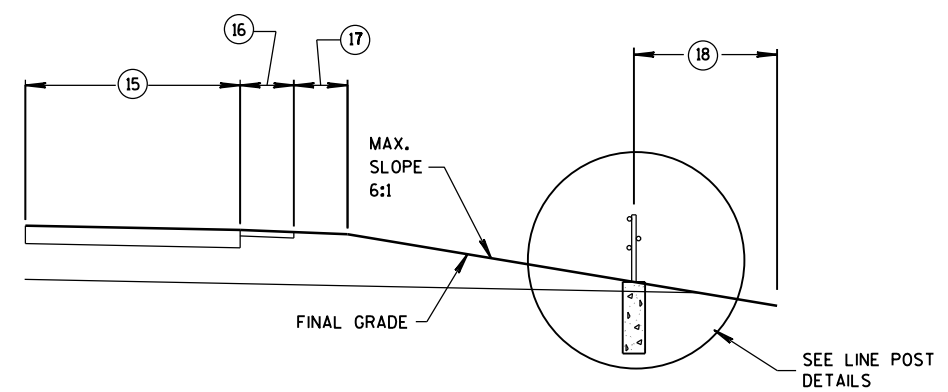
CROSS SECTION



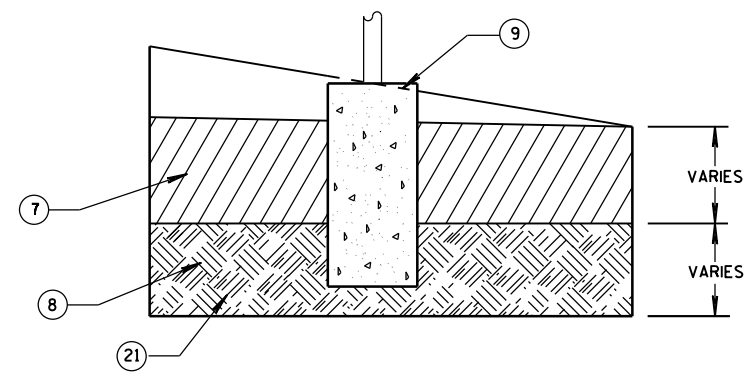
**PLAN VIEW
(LINE POST AND CABLES NOT SHOWN)**

LINE POST DETAILS

- ⑤ SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).
- ⑥ ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).
- ⑦ SOIL TO BE EXCAVATED FOR LINE POST (VARIES).
- ⑧ ROCK TO BE EXCAVATED FOR LINE POST (VARIES).
- ⑨ EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5' FOOT CHORD.
- ⑩ 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.
- ⑪ DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURER'S INFORMATION.
- ⑫ MINIMUM DEPTH OF LINE POST FOOTING IS 48 INCHES IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.
- ⑬ NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURER'S INFORMATION.
- ⑭ LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURER'S INFORMATION.
- ⑮ LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.
- ⑯ PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- ⑰ GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- ⑱ CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.
- ⑲ MAXIMUM POST SPACING IS 15 FEET.
- ⑳ STAGGER TURNBUCKLES (TYPICAL).
- ㉑ SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.
- ㉒ IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.
- ㉓ LINE POST DELINEATOR SPACING IS 100 FEET.
- ㉔ LINE POST FOOTINGS ARE REQUIRED TO HAVE LESS THAN 1 INCH OF MOVEMENT WHEN LINE POST IS IMPACTED BY A NCHRP 350 SMALL CAR UNDER TL-3 TEST CONDITIONS.



CABLE BARRIER OFFSET FROM DITCH LINE



**LINE POST GRADING
AND ROCK EXCAVATION DETAIL**

CABLE BARRIER TYPE 1 LAYOUT		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED June, 2015 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS ENGINEER	41 ENT
FHWA		

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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

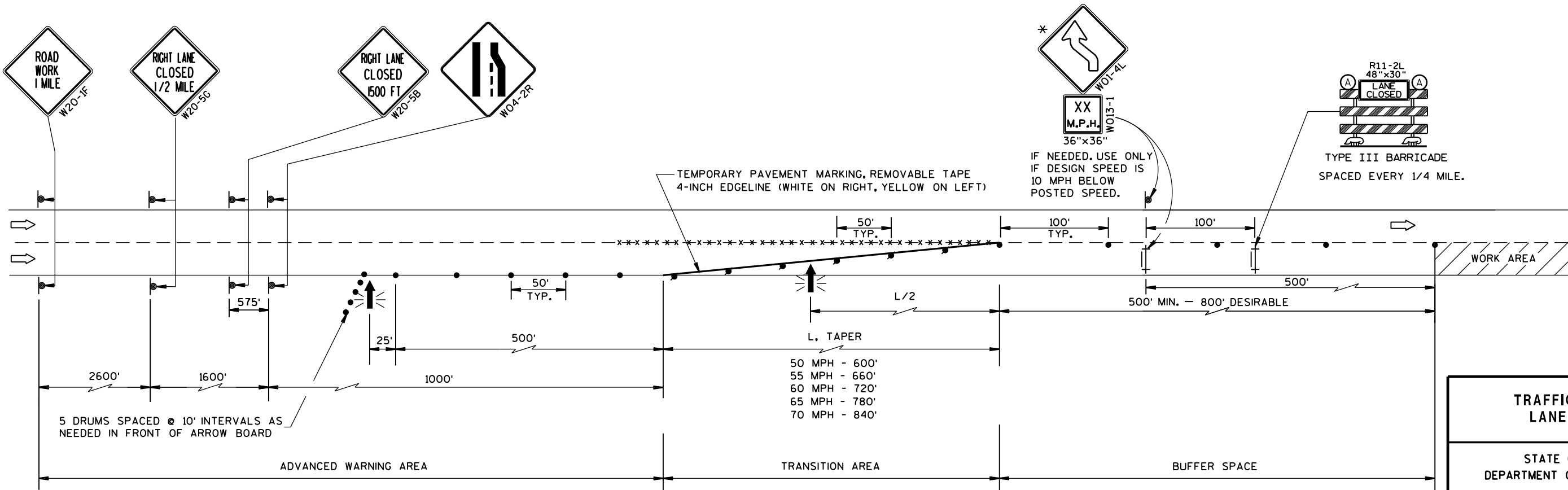
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA	

LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

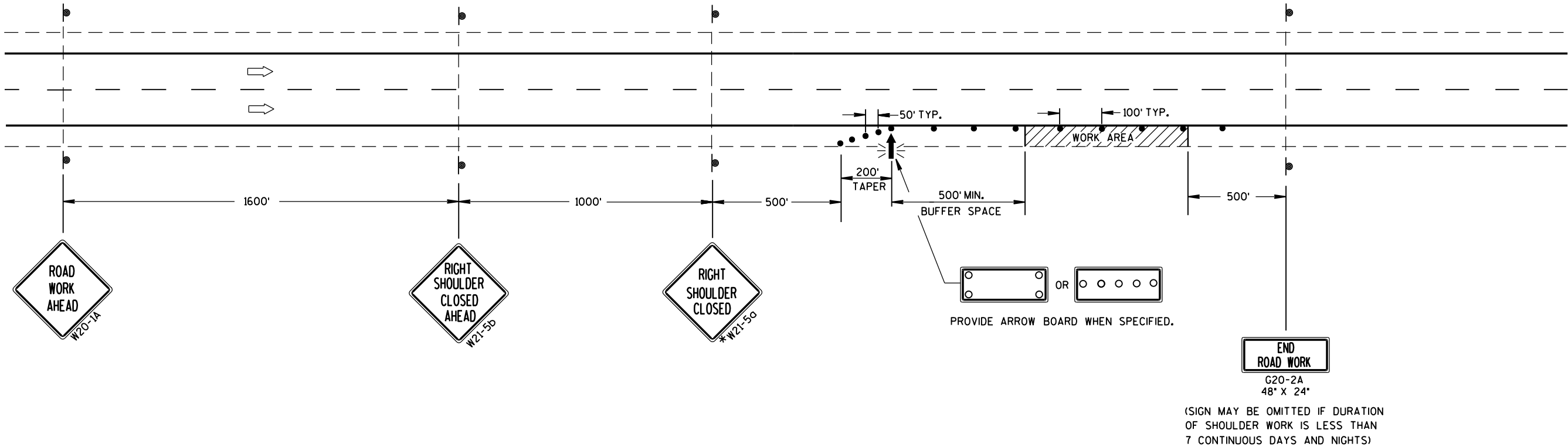
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A 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.

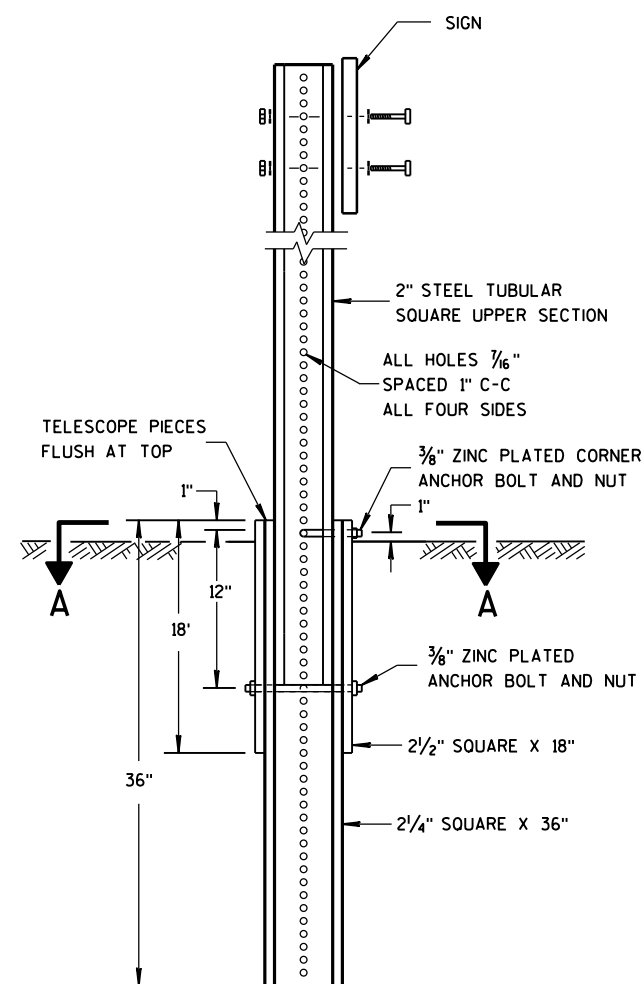
*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL
SHOULDER CLOSURE ON DIVIDED
ROADWAY, SPEEDS GREATER
THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE 43
FHWA SAFETY ENGINEER



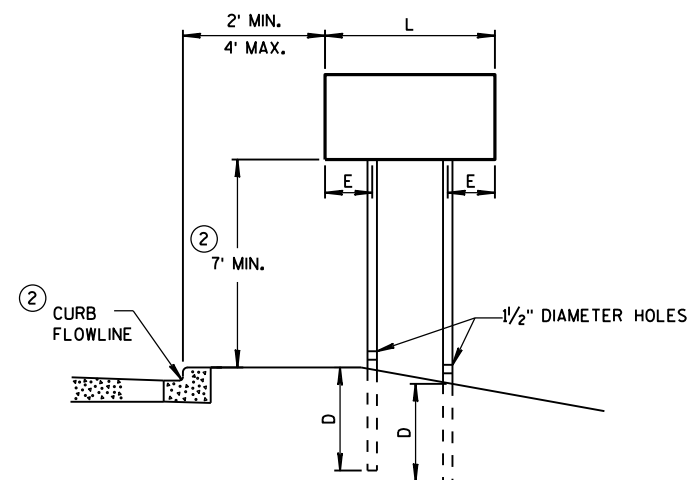
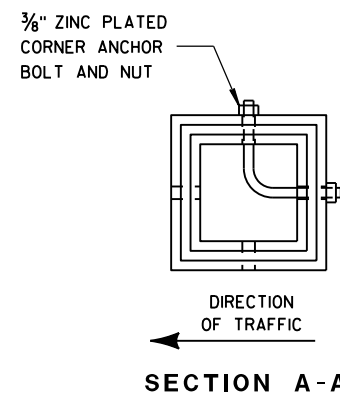
DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

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

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ.FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

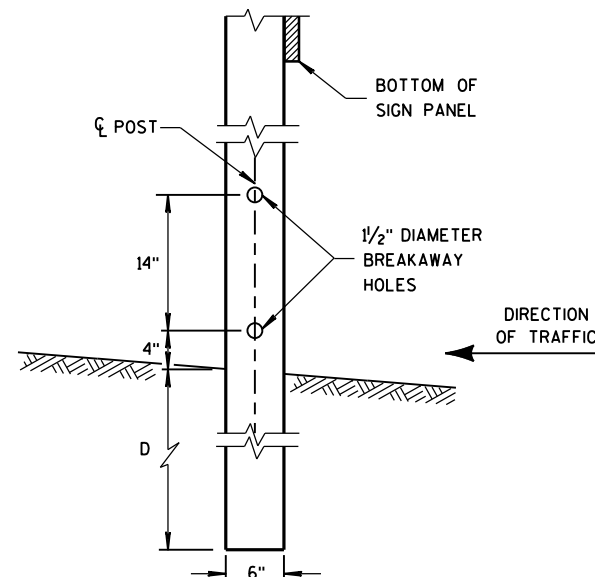


URBAN AREA

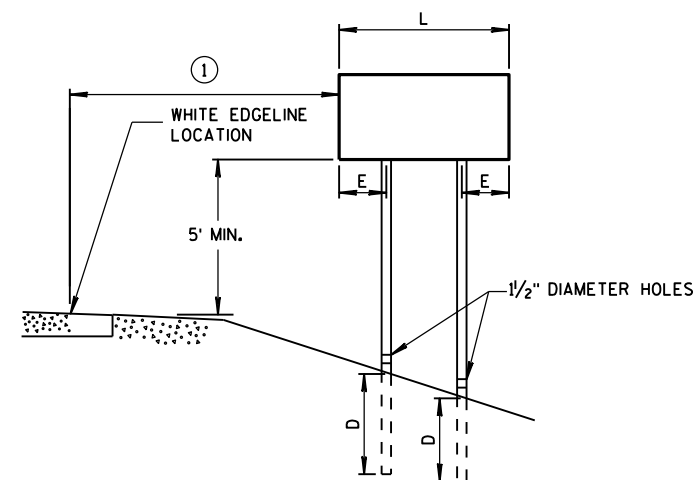
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

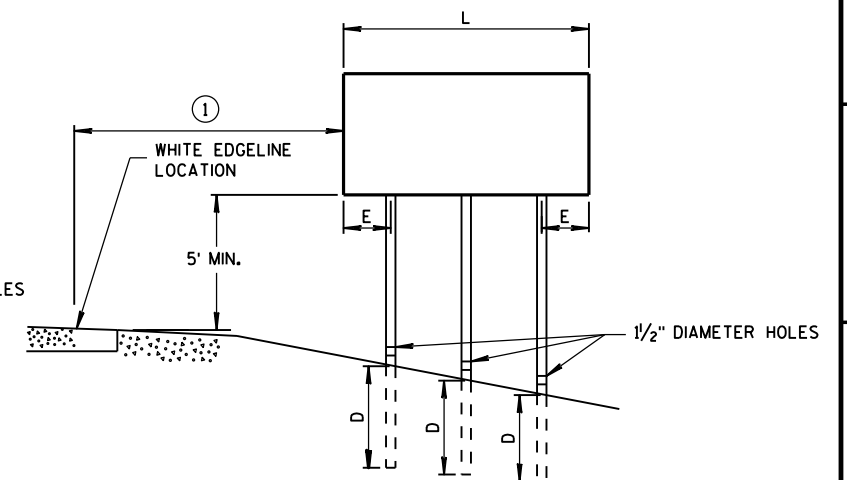
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4"x6" WOOD POST MODIFICATION



RURAL AREA



4" X 6" WOOD POST

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

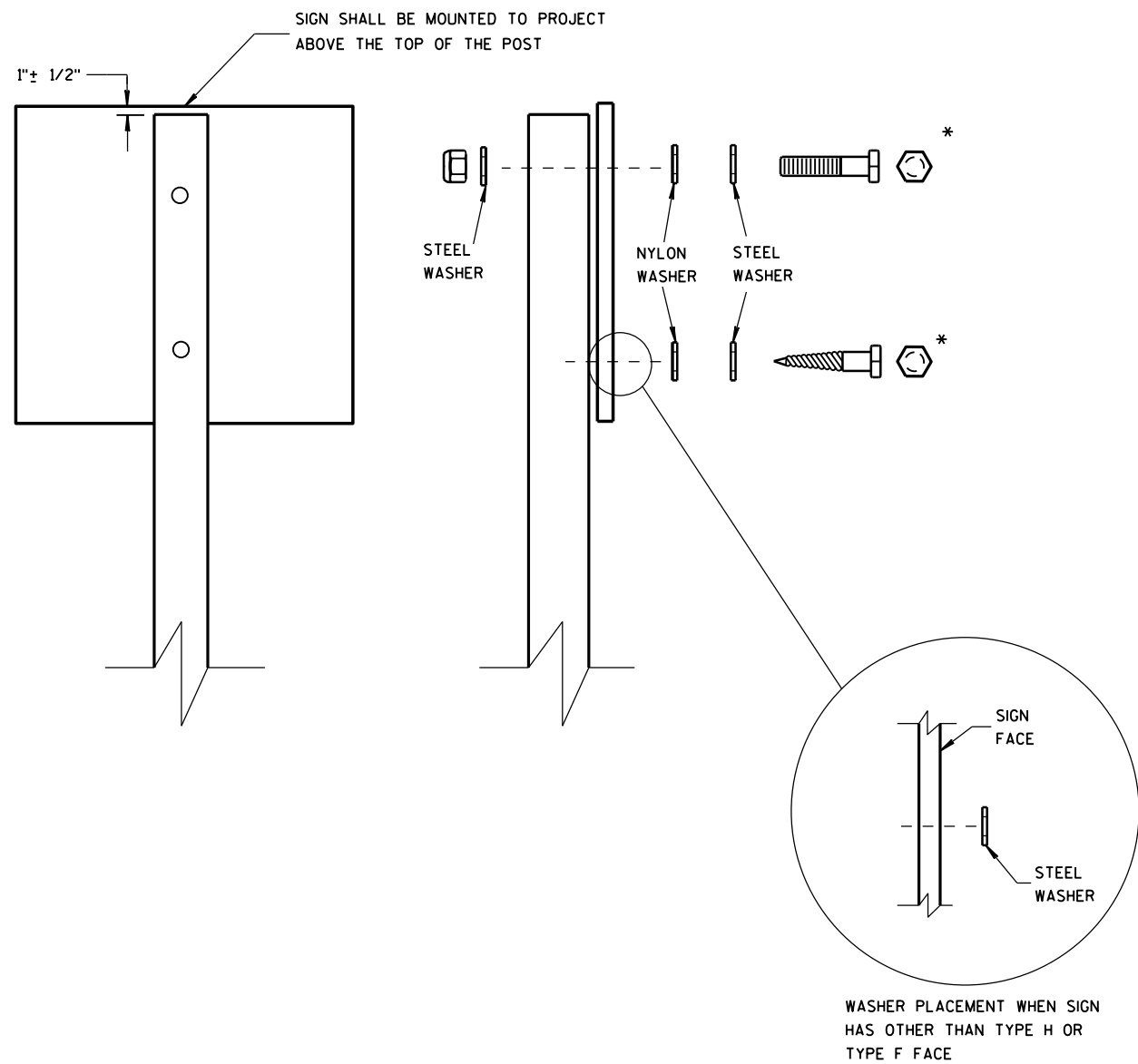
SEE NOTE (3)

GENERAL NOTES

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

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION⁴⁴



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

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

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

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

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

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

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

ATTACHMENT OF SIGNS TO POSTS		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED Feb. 2015	/S/ Travis Feltes	
DATE	STATE TRAFFIC ENGINE 45	SIGN
FHWA		

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 3	Note 1		Note 8
123+00	0.00	0.00	0.00	3.50	0	0	0	0	0
124+00	100.00	0.00	0.00	7.85	0	21	0	26	-26
125+00	100.00	0.06	0.00	15.54	0	43	0	80	-80
126+00	100.00	0.01	0.00	1.71	0	32	0	120	-120
127+00	100.00	0.00	0.00	17.81	0	36	0	166	-165
128+00	100.00	0.05	0.00	21.44	0	73	0	256	-256
129+00	100.00	0.00	0.00	12.23	0	62	0	334	-334
130+00	100.00	0.00	0.00	7.61	0	37	0	380	-380
131+00	100.00	0.00	0.00	25.39	0	61	0	457	-456
132+00	100.00	0.00	0.00	14.30	0	74	0	549	-548
133+00	100.00	0.01	0.00	3.24	0	32	1	589	-589
134+00	100.00	0.00	0.00	11.23	0	27	1	623	-622
135+00	100.00	0.01	0.00	8.38	0	36	1	668	-667
136+00	100.00	0.00	0.00	11.41	0	37	1	714	-713
137+00	100.00	0.00	0.00	7.99	0	36	1	759	-758
138+00	100.00	0.03	0.00	8.16	0	30	1	796	-796
139+00	100.00	0.00	0.00	22.66	0	57	1	867	-867
140+00	100.00	0.05	0.00	6.28	0	54	1	934	-934
141+00	100.00	0.00	0.00	5.34	0	22	1	961	-960
142+00	100.00	0.01	0.00	4.30	0	18	1	984	-983
143+00	100.00	0.00	0.00	4.68	0	17	1	1,004	-1,004
144+00	100.00	8.01	0.00	7.32	15	22	16	1,032	-1,016
145+00	100.00	3.40	0.00	9.33	21	31	37	1,071	-1,034
146+00	100.00	0.03	0.00	7.33	6	31	43	1,109	-1,066
147+00	100.00	0.21	0.00	5.65	0	24	44	1,139	-1,096
148+00	100.00	0.37	0.00	7.83	1	25	45	1,171	-1,126
149+00	100.00	0.00	0.00	25.54	1	62	45	1,248	-1,202
150+00	100.00	0.01	0.00	9.52	0	65	45	1,329	-1,284
151+00	100.00	0.00	0.00	0.00	0	18	45	1,351	-1,306
152+00	100.00	0.00	0.00	0.00	0	0	45	1,351	-1,306
153+00	100.00	0.00	0.00	0.00	0	0	45	1,351	-1,306
154+00	100.00	0.00	0.00	0.00	0	0	45	1,351	-1,306
155+00	100.00	0.00	0.00	0.00	0	0	45	1,351	-1,306
156+00	100.00	0.00	0.00	1.52	0	3	45	1,355	-1,309
157+00	100.00	0.00	0.00	3.65	0	10	45	1,367	-1,321
158+00	100.00	10.62	0.00	4.03	20	14	65	1,384	-1,319
159+00	100.00	0.00	0.00	21.61	20	47	85	1,444	-1,359
160+00	100.00	0.00	0.00	13.61	0	65	85	1,525	-1,440
161+00	100.00	0.26	0.00	23.73	0	69	85	1,612	-1,526
162+00	100.00	0.51	0.00	22.66	1	86	87	1,719	-1,632
163+00	100.00	1.51	0.00	4.08	4	50	91	1,781	-1,690
164+00	100.00	0.05	0.00	7.77	3	22	93	1,808	-1,715
165+00	100.00	0.00	0.00	16.10	0	44	93	1,864	-1,770
166+00	100.00	8.26	0.00	11.02	15	50	109	1,926	-1,818
167+00	100.00	0.01	0.00	16.63	15	51	124	1,990	-1,866

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 3	Note 1		Note 8
168+00	100.00	0.01	0.00	4.69	0	39	124	2,040	-1,916
169+00	100.00	0.00	0.00	4.32	0	17	124	2,061	-1,937
170+00	100.00	0.11	0.00	2.05	0	12	124	2,075	-1,951
171+00	100.00	0.00	0.00	28.83	0	57	125	2,147	-2,022
172+00	100.00	0.42	0.00	4.45	1	62	125	2,224	-2,099
173+00	100.00	0.00	0.00	1.29	1	11	126	2,237	-2,111
174+00	100.00	0.28	0.00	0.55	1	3	127	2,241	-2,115
175+00	100.00	0.76	0.00	11.60	2	23	129	2,270	-2,141
176+00	100.00	0.03	0.00	17.64	1	54	130	2,337	-2,207
177+00	100.00	0.00	0.00	19.44	0	69	130	2,423	-2,293
178+00	100.00	0.00	0.00	10.37	0	55	130	2,492	-2,362
179+00	100.00	0.00	0.00	22.06	0	60	130	2,567	-2,437
180+00	100.00	0.00	0.00	20.20	0	78	130	2,665	-2,535
181+00	100.00	0.00	0.00	14.25	0	64	130	2,745	-2,615
182+00	100.00	0.32	0.00	13.58	1	52	131	2,809	-2,679
183+00	100.00	0.00	0.00	29.16	1	79	131	2,908	-2,777
184+00	100.00	0.02	0.00	2.24	0	58	131	2,981	-2,850
185+00	100.00	0.05	0.00	0.30	0	5	131	2,987	-2,855
186+00	100.00	0.24	0.00	0.31	1	1	132	2,988	-2,856
187+00	100.00	0.22	0.00	15.19	1	29	133	3,024	-2,891
188+00	100.00	0.01	0.00	12.46	0	51	133	3,088	-2,955
189+00	100.00	0.03	0.00	0.69	0	24	133	3,118	-2,985
190+00	100.00	0.00	0.00	0.00	0	1	133	3,120	-2,987
191+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
192+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
193+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
194+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
195+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
196+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
197+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
198+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
199+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
200+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
201+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
202+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
203+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
204+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
205+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
206+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
207+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
208+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
209+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
210+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
211+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
212+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987

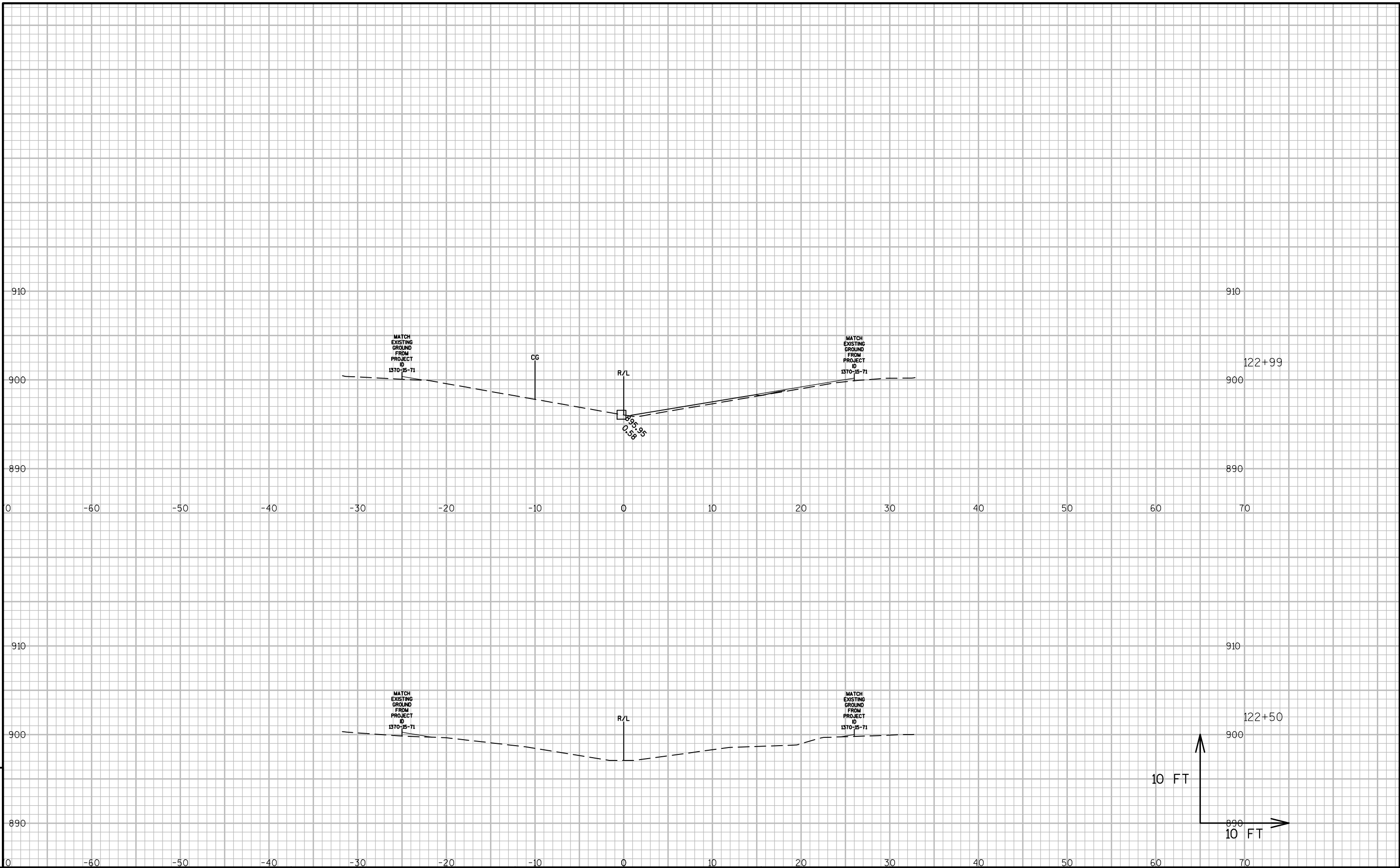
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 3	Note 1		Note 8
213+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
214+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
215+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
216+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
217+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
218+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
219+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
220+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
221+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
222+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
223+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
224+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
225+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
226+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
227+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
228+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
229+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
230+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
231+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
232+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
233+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
234+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
235+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
236+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
237+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
238+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
239+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
240+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
241+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
242+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
243+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
244+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
245+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
246+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
247+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
248+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
249+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
250+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
251+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
252+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
253+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
254+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
255+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
256+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
257+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987

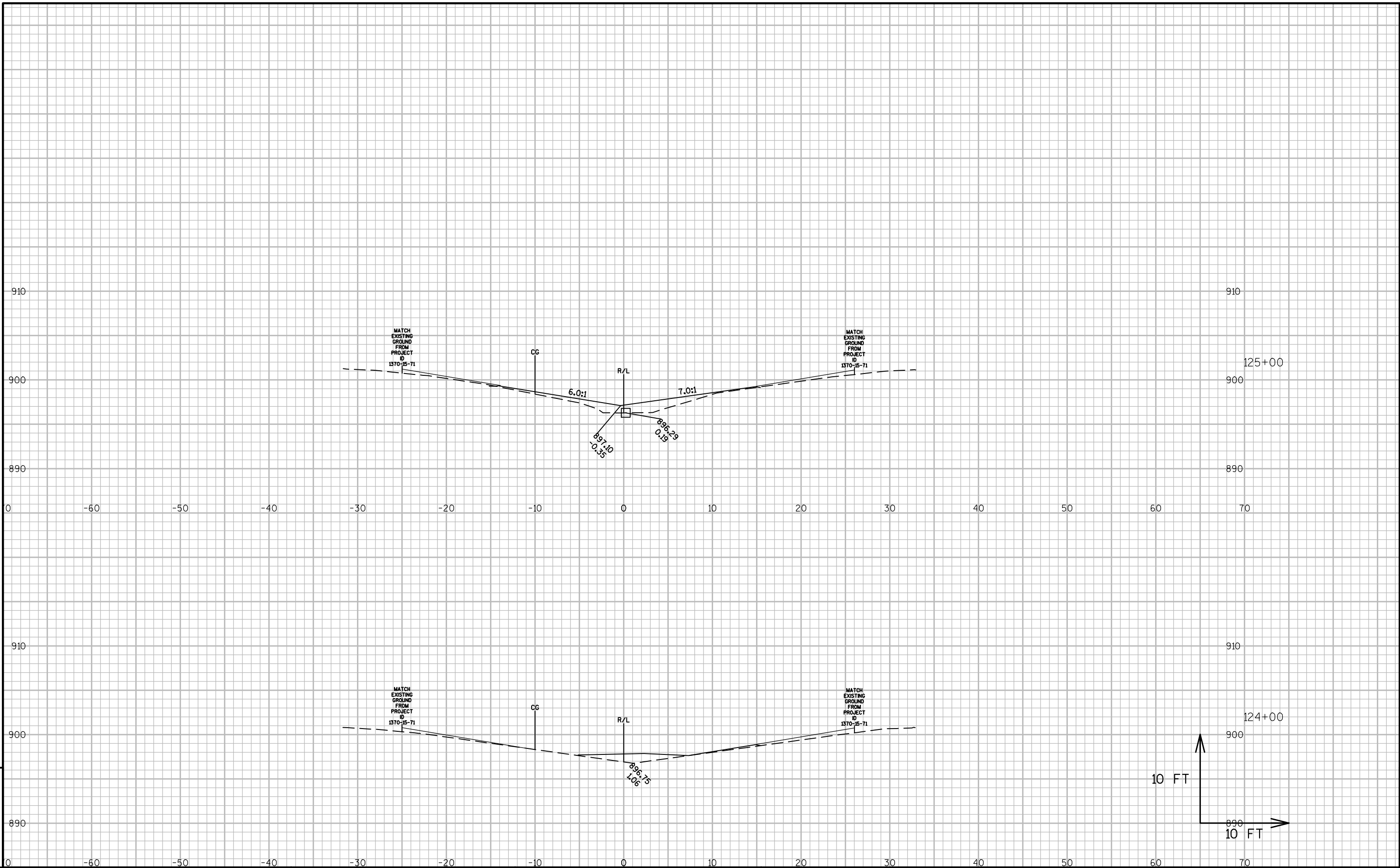
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 3	Note 1		Note 8
258+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
259+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
260+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
261+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
262+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
263+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
264+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
265+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
266+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
267+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
268+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
269+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
270+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
271+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
272+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
273+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
274+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
275+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
276+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
277+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
278+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
279+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
280+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
281+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
282+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
283+00	100.00	0.00	0.00	0.00	0	0	133	3,120	-2,987
TOTAL					133	2,496			

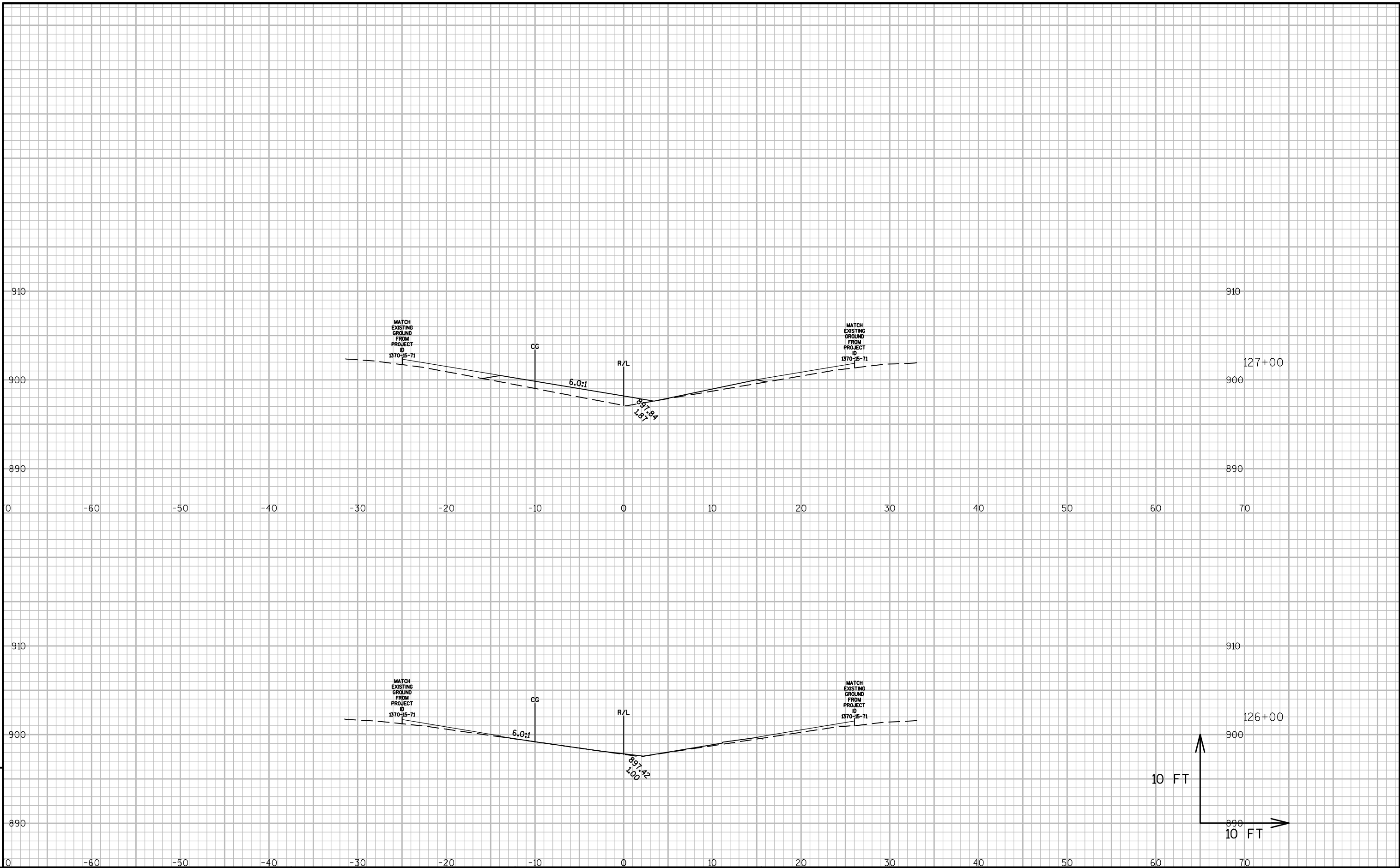
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
706+00	0.00	0.00	0.00	2.32	0	0	0	0	0
707+00	100.00	0.38	0.00	2.54	1	9	1	11	-11
708+00	100.00	0.00	0.00	8.99	1	21	1	38	-37
709+00	100.00	0.00	0.00	8.46	0	32	1	78	-77
710+00	100.00	1.81	0.00	8.03	3	31	5	117	-112
711+00	100.00	0.00	0.00	4.18	3	23	8	145	-137
712+00	100.00	0.00	0.00	2.62	0	13	8	161	-152
713+00	100.00	0.00	0.00	7.28	0	18	8	183	-175
714+00	100.00	0.00	0.00	5.42	0	24	8	213	-205
715+00	100.00	0.00	0.00	14.79	0	37	8	260	-251
716+00	100.00	0.00	0.00	5.43	0	37	8	306	-298
717+00	100.00	0.00	0.00	5.22	0	20	8	331	-323
718+00	100.00	0.00	0.00	9.30	0	27	8	365	-357
719+00	100.00	0.00	0.00	9.64	0	35	8	409	-400
720+00	100.00	0.00	0.00	10.78	0	38	8	456	-448
721+00	100.00	0.00	0.00	6.93	0	33	8	497	-489
722+00	100.00	0.00	0.00	14.02	0	39	8	545	-537
723+00	100.00	0.00	0.00	7.80	0	40	8	596	-588
724+00	100.00	0.00	0.00	4.85	0	23	8	625	-617
725+00	100.00	0.00	0.00	5.68	0	20	8	649	-641
726+00	100.00	0.00	0.00	11.08	0	31	8	688	-680
727+00	100.00	0.00	0.00	2.17	0	25	8	719	-711
728+00	100.00	0.00	0.00	0.82	0	6	8	726	-718
729+00	100.00	0.00	0.00	0.00	0	2	8	728	-720
730+00	100.00	0.00	0.00	0.00	0	0	8	728	-720
731+00	100.00	0.00	0.00	7.31	0	14	8	745	-737
732+00	100.00	0.00	0.00	3.07	0	19	8	769	-761
733+00	100.00	0.00	0.00	3.32	0	12	8	783	-775
734+00	100.00	0.00	0.00	4.44	0	14	8	801	-793
735+00	100.00	0.00	0.00	8.79	0	25	8	832	-824
736+00	100.00	0.00	0.00	2.12	0	20	8	857	-849
737+00	100.00	0.00	0.00	3.00	0	9	8	869	-861
738+00	100.00	0.00	0.00	6.87	0	18	8	892	-884
739+00	100.00	0.00	0.00	4.84	0	22	8	919	-911
740+00	100.00	0.00	0.00	4.75	0	18	8	941	-933
741+00	100.00	0.00	0.00	6.14	0	20	8	966	-958
742+00	100.00	0.00	0.00	4.16	0	19	8	990	-982
743+00	100.00	0.00	0.00	3.34	0	14	8	1,008	-1,000
744+00	100.00	0.00	0.00	0.88	0	8	8	1,017	-1,009
745+00	100.00	0.00	0.00	0.31	0	2	8	1,020	-1,012
746+00	100.00	0.00	0.00	0.37	0	1	8	1,022	-1,014
747+00	100.00	0.00	0.00	0.51	0	2	8	1,024	-1,016
748+00	100.00	0.00	0.00	0.73	0	2	8	1,027	-1,019
749+00	100.00	0.00	0.00	0.47	0	2	8	1,029	-1,021
750+00	100.00	0.00	0.00	0.30	0	1	8	1,031	-1,023

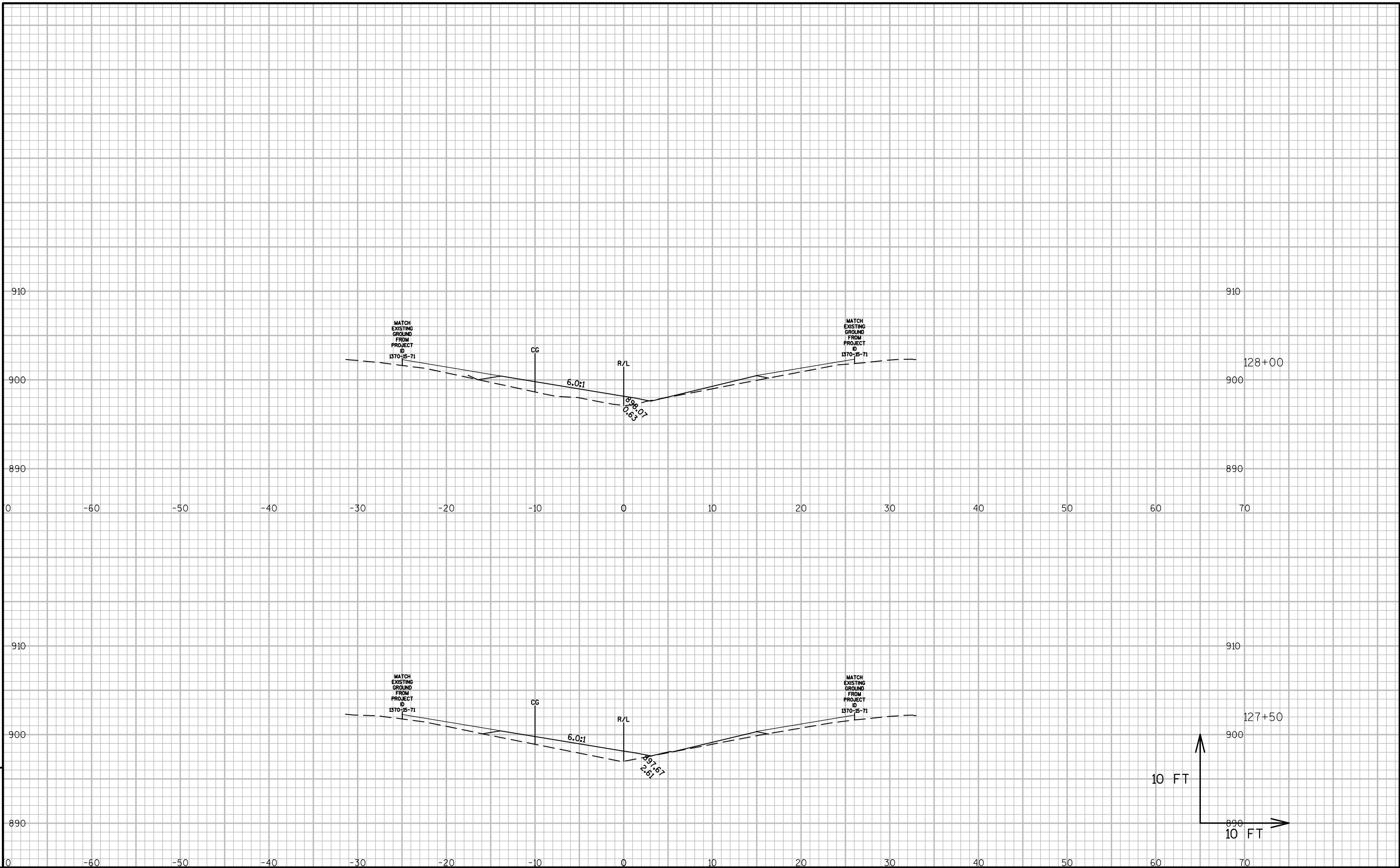
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
751+00	100.00	0.00	0.00	0.37	0	1	8	1,033	-1,025
752+00	100.00	0.00	0.00	0.30	0	1	8	1,034	-1,026
753+00	100.00	0.00	0.00	0.46	0	1	8	1,036	-1,028
754+00	100.00	0.00	0.00	0.88	0	2	8	1,039	-1,031
755+00	100.00	0.00	0.00	1.64	0	5	8	1,045	-1,037
756+00	100.00	0.00	0.00	2.18	0	7	8	1,054	-1,046
757+00	100.00	0.00	0.00	6.92	0	17	8	1,075	-1,067
758+00	100.00	0.00	0.00	0.99	0	15	8	1,093	-1,085
759+00	100.00	0.00	0.00	0.71	0	3	8	1,097	-1,089
760+00	100.00	0.00	0.00	1.31	0	4	8	1,102	-1,094
761+00	100.00	0.00	0.00	0.95	0	4	8	1,107	-1,099
762+00	100.00	0.00	0.00	0.68	0	3	8	1,111	-1,103
763+00	100.00	0.00	0.00	2.21	0	5	8	1,118	-1,109
764+00	100.00	0.00	0.00	1.10	0	6	8	1,125	-1,117
765+00	100.00	0.00	0.00	1.73	0	5	8	1,132	-1,124
766+00	100.00	0.54	0.00	4.89	1	12	9	1,147	-1,138
767+00	100.00	0.19	0.00	0.00	1	9	10	1,158	-1,148
768+00	100.00	0.00	0.00	0.20	0	0	11	1,159	-1,148
769+00	100.00	0.00	0.00	1.14	0	2	11	1,162	-1,151
770+00	100.00	0.00	0.00	2.39	0	7	11	1,170	-1,159
771+00	100.00	0.00	0.00	4.33	0	12	11	1,186	-1,175
772+00	100.00	0.00	0.00	10.29	0	27	11	1,219	-1,209
773+00	100.00	0.00	0.00	1.48	0	22	11	1,247	-1,236
774+00	100.00	0.00	0.00	1.51	0	6	11	1,254	-1,243
775+00	100.00	0.00	0.00	4.44	0	11	11	1,267	-1,257
776+00	100.00	0.00	0.00	4.61	0	17	11	1,288	-1,278
777+00	100.00	0.00	0.00	8.58	0	24	11	1,319	-1,308
778+00	100.00	0.21	0.00	9.66	0	34	11	1,361	-1,350
779+00	100.00	0.00	0.00	8.91	0	34	12	1,404	-1,392
780+00	100.00	0.01	0.00	3.25	0	23	12	1,432	-1,421
781+00	100.00	0.00	0.00	3.78	0	13	12	1,448	-1,437
782+00	100.00	0.00	0.00	1.95	0	11	12	1,462	-1,450
783+00	100.00	0.00	0.00	4.73	0	12	12	1,477	-1,466
784+00	100.00	0.09	0.00	5.02	0	18	12	1,500	-1,488
785+00	100.00	0.00	0.00	10.23	0	28	12	1,535	-1,523
786+00	100.00	0.00	0.00	13.98	0	45	12	1,591	-1,579
787+00	100.00	0.00	0.00	11.44	0	47	12	1,650	-1,638
788+00	100.00	0.00	0.00	3.14	0	27	12	1,684	-1,672
789+00	100.00	0.00	0.00	9.42	0	23	12	1,713	-1,701
790+00	100.00	0.01	0.00	1.80	0	21	12	1,739	-1,727
791+00	100.00	0.00	0.00	9.04	0	20	12	1,764	-1,752
792+00	100.00	0.01	0.00	3.68	0	24	12	1,793	-1,781
793+00	100.00	0.03	0.00	8.92	0	23	12	1,822	-1,810
794+00	100.00	0.02	0.00	2.19	0	21	12	1,848	-1,836
795+00	100.00	0.00	0.00	5.43	0	14	12	1,866	-1,853

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 3	Note 1		Note 8
796+00	100.00	0.17	0.00	2.28	0	14	13	1,884	-1,871
797+00	100.00	0.00	0.00	9.86	0	22	13	1,912	-1,899
798+00	100.00	0.00	0.00	11.69	0	40	13	1,962	-1,949
799+00	100.00	0.00	0.00	11.61	0	43	13	2,016	-2,003
800+00	100.00	0.02	0.00	11.95	0	44	13	2,070	-2,057
801+00	100.00	0.00	0.00	3.72	0	29	13	2,106	-2,093
802+00	100.00	0.00	0.00	3.64	0	14	13	2,123	-2,110
803+00	100.00	0.49	0.00	2.08	1	11	14	2,137	-2,123
804+00	100.00	0.01	0.00	11.65	1	25	15	2,168	-2,154
TOTAL					15	1,735			



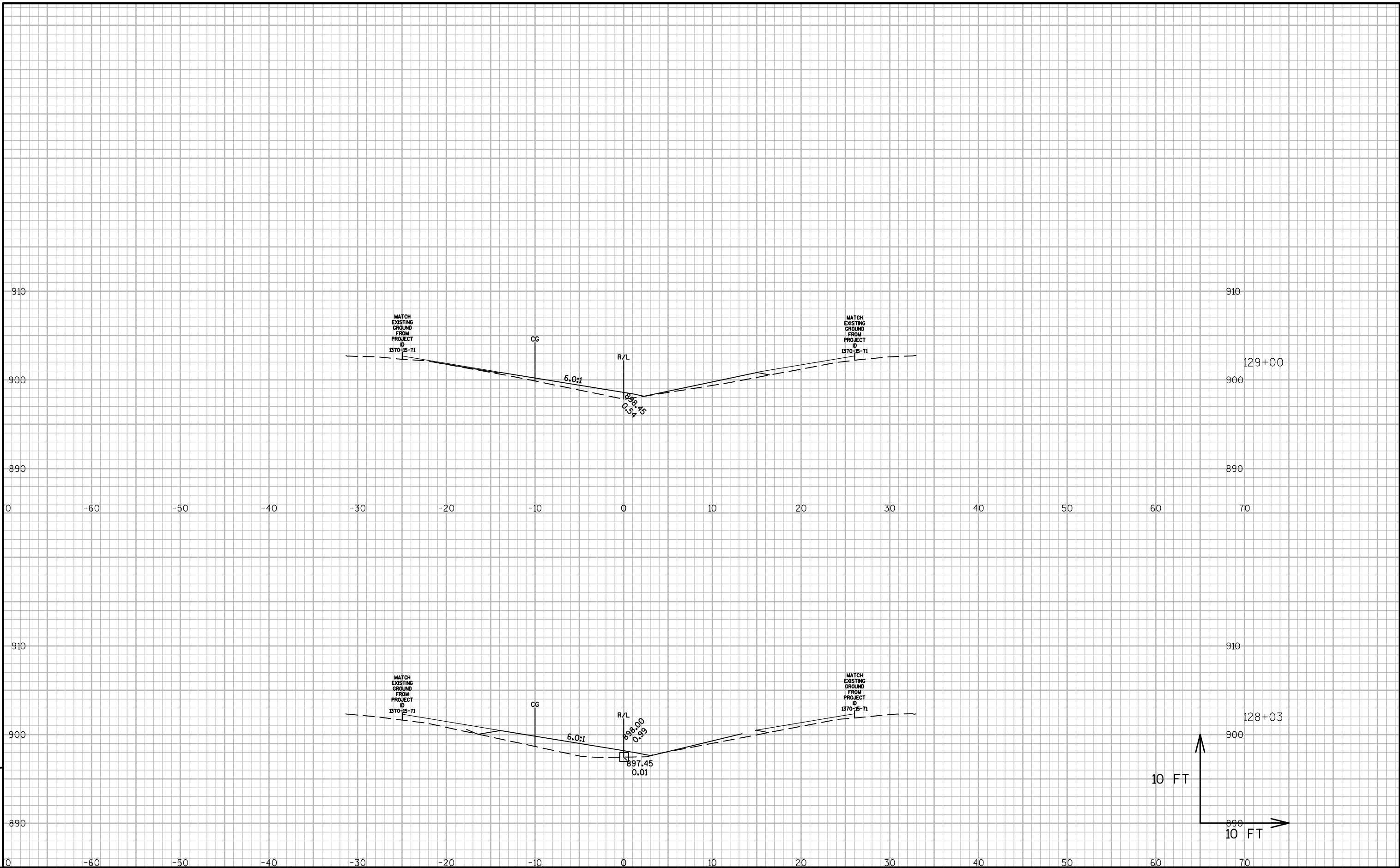


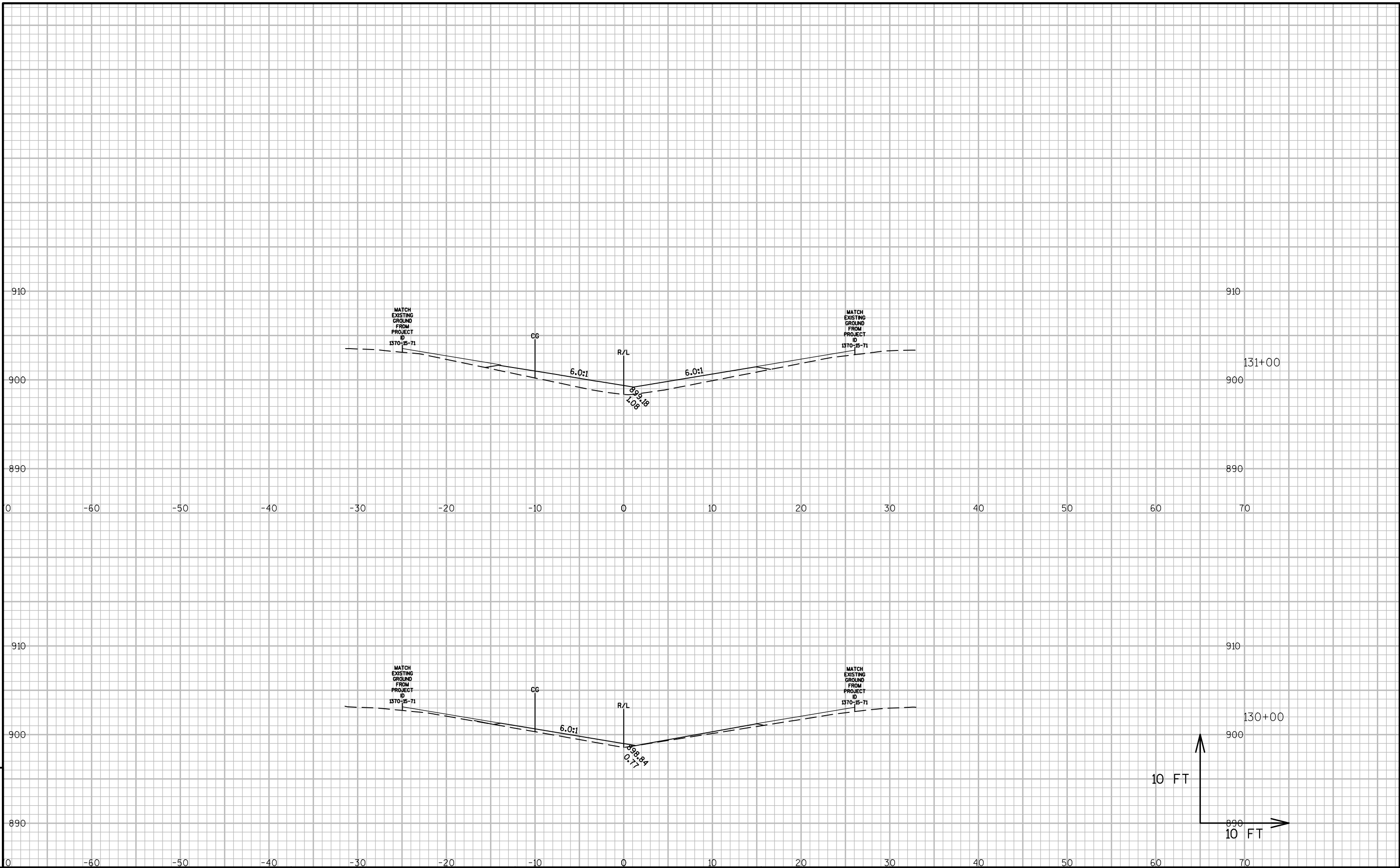


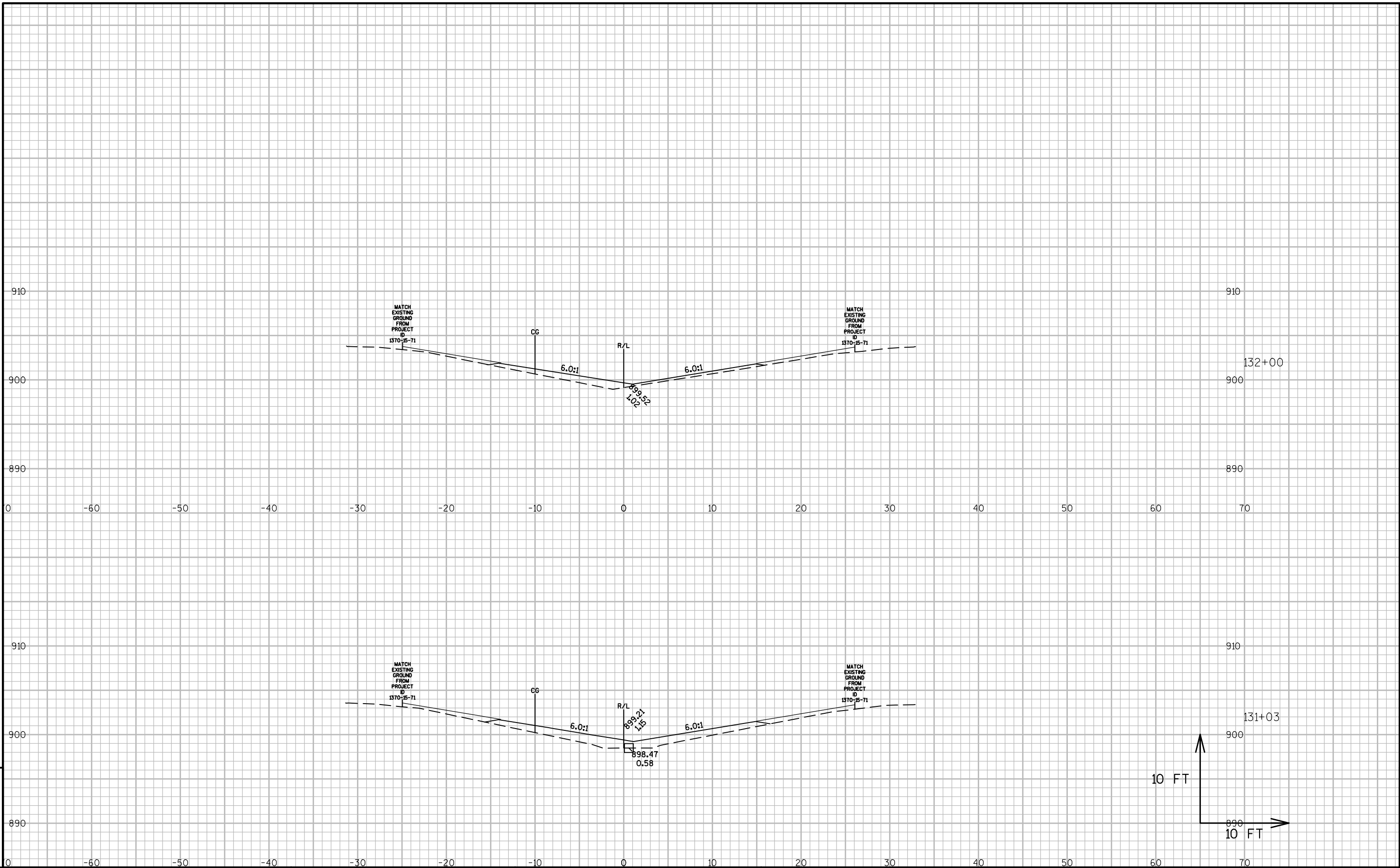


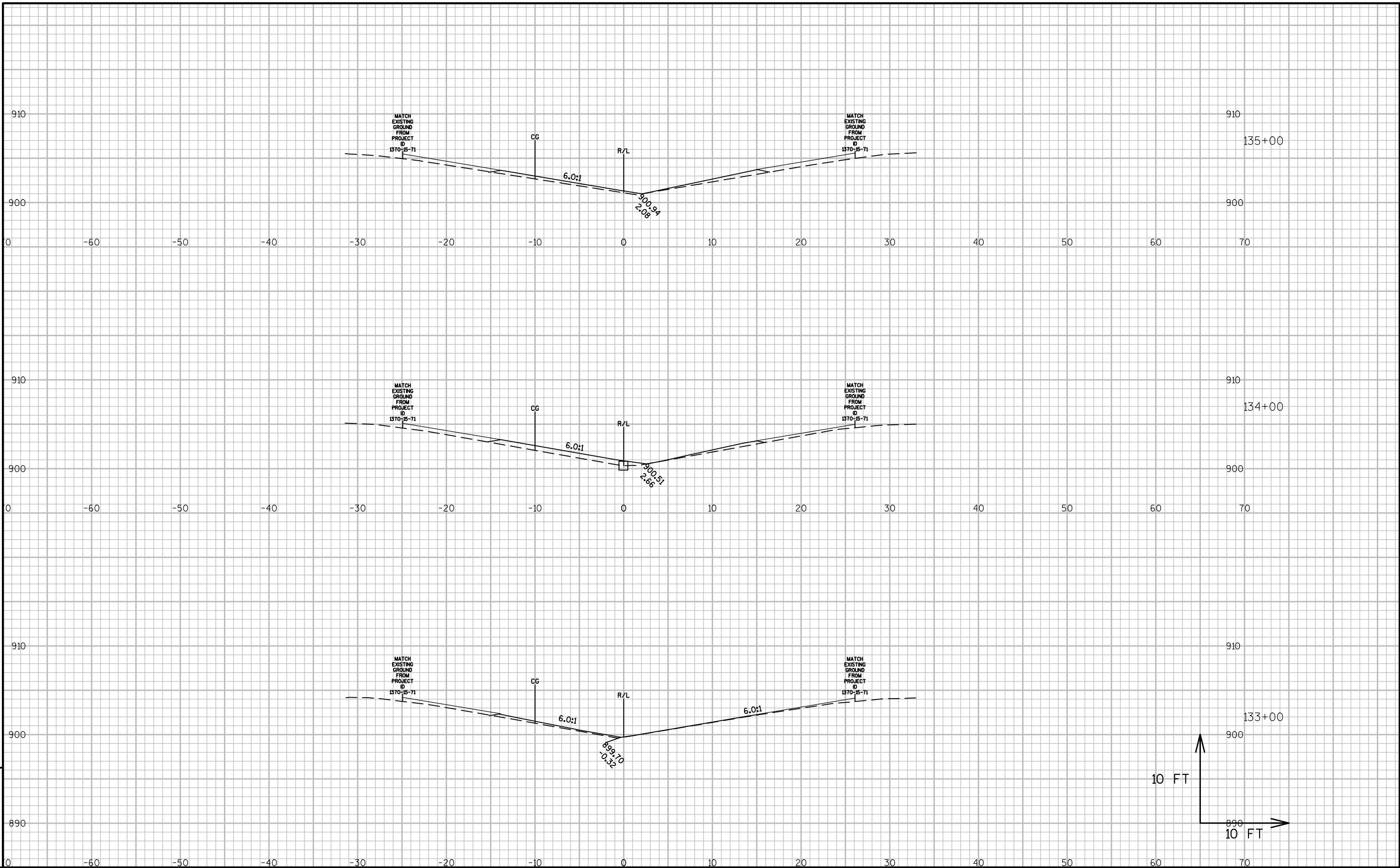
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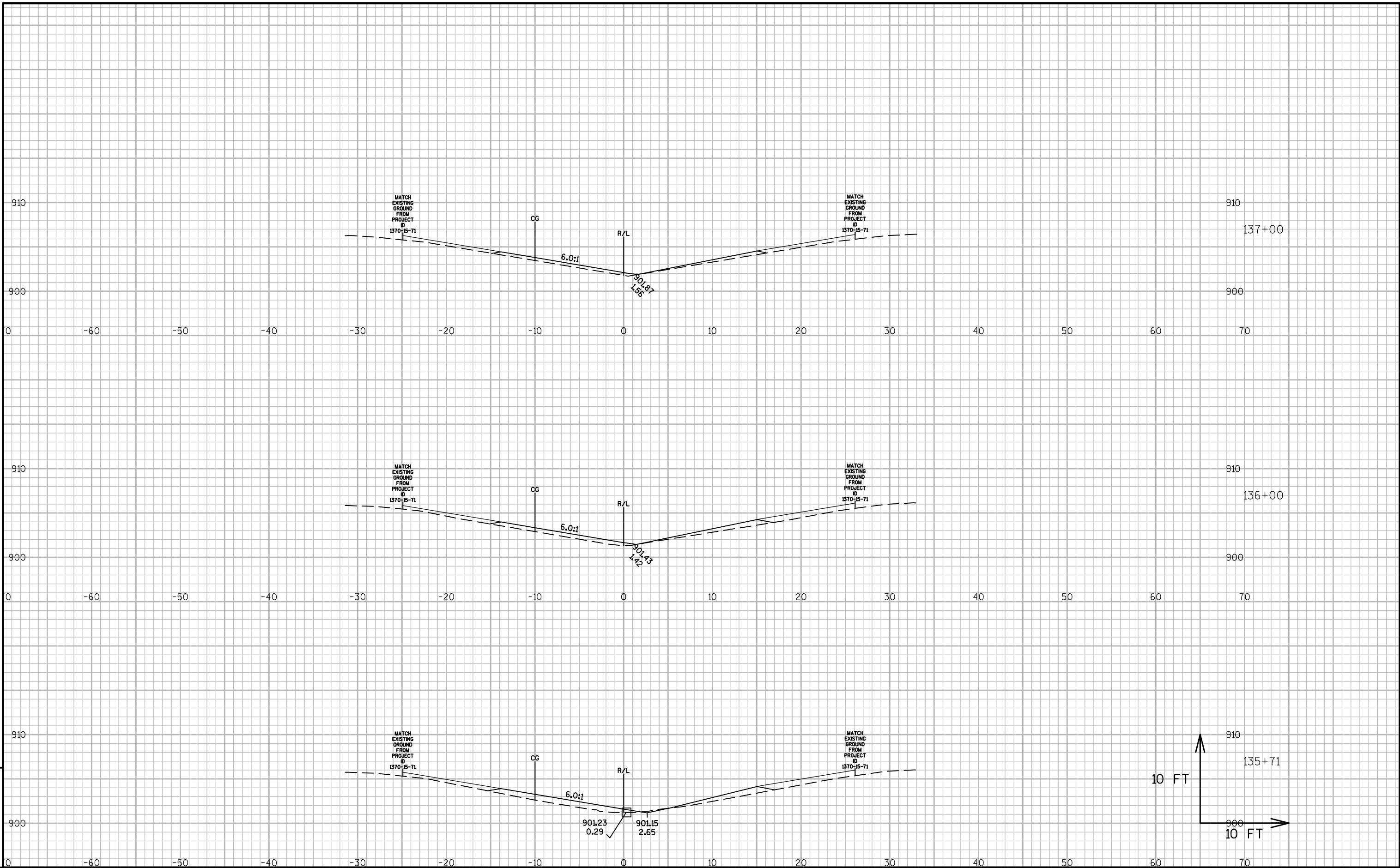
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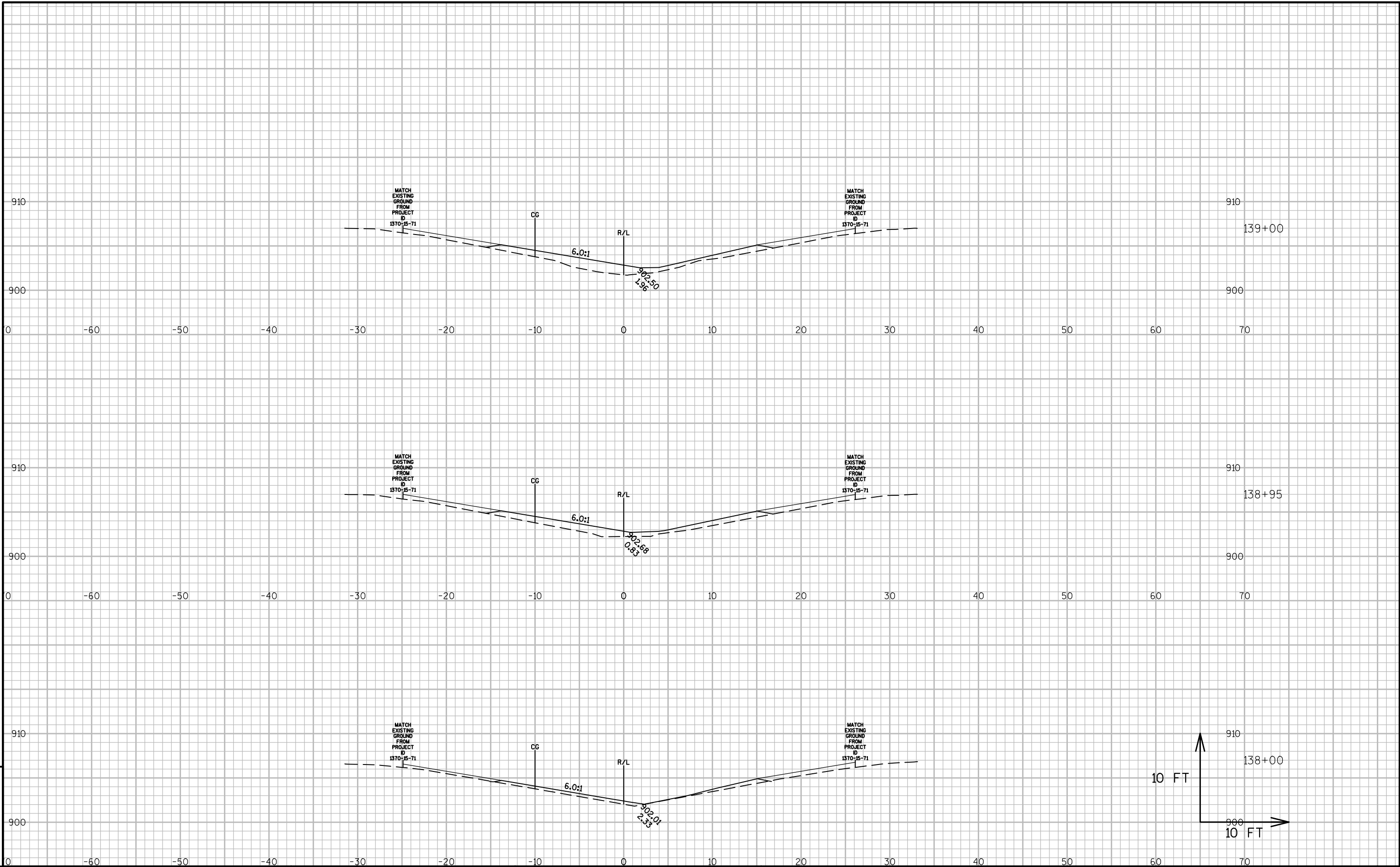


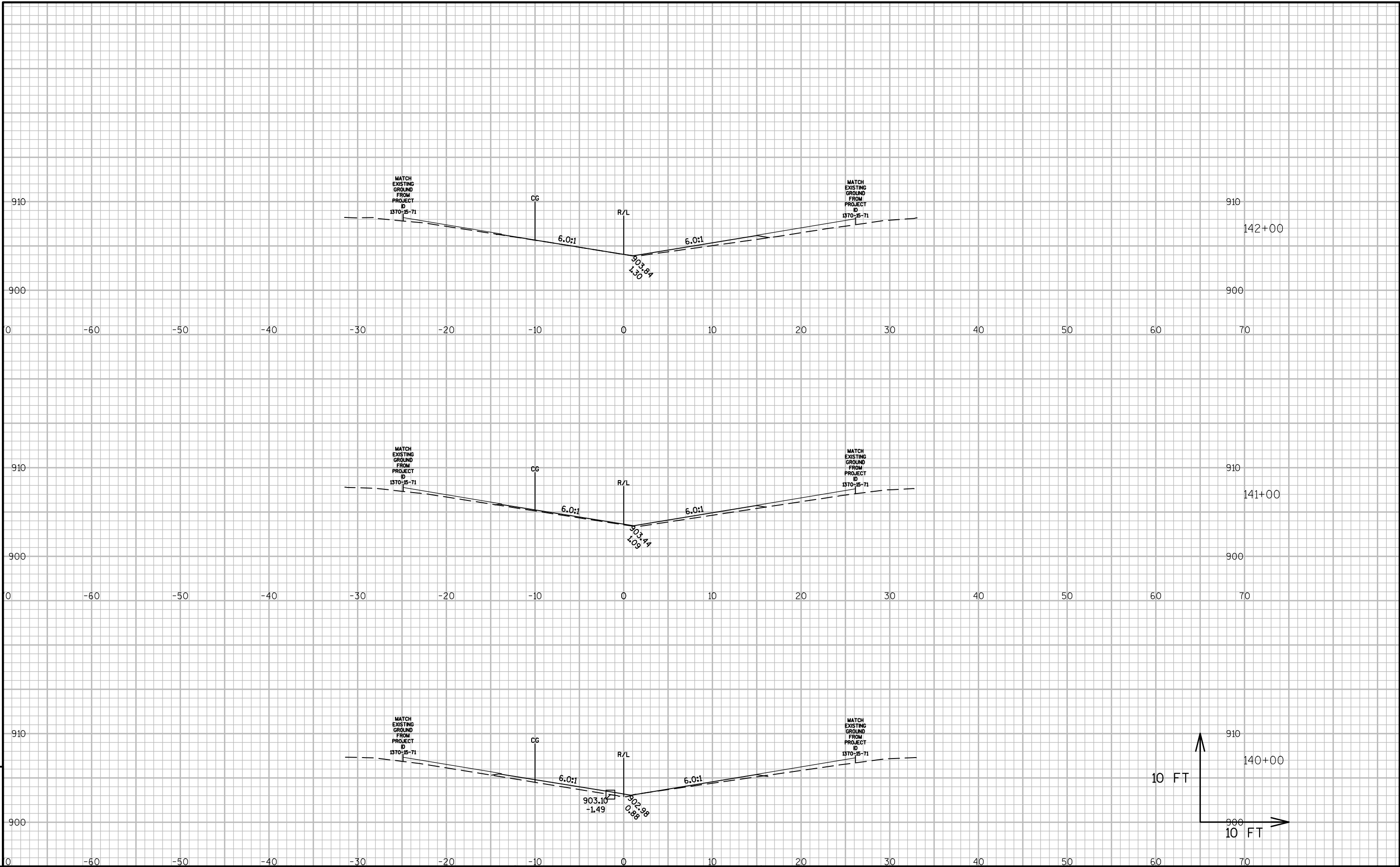


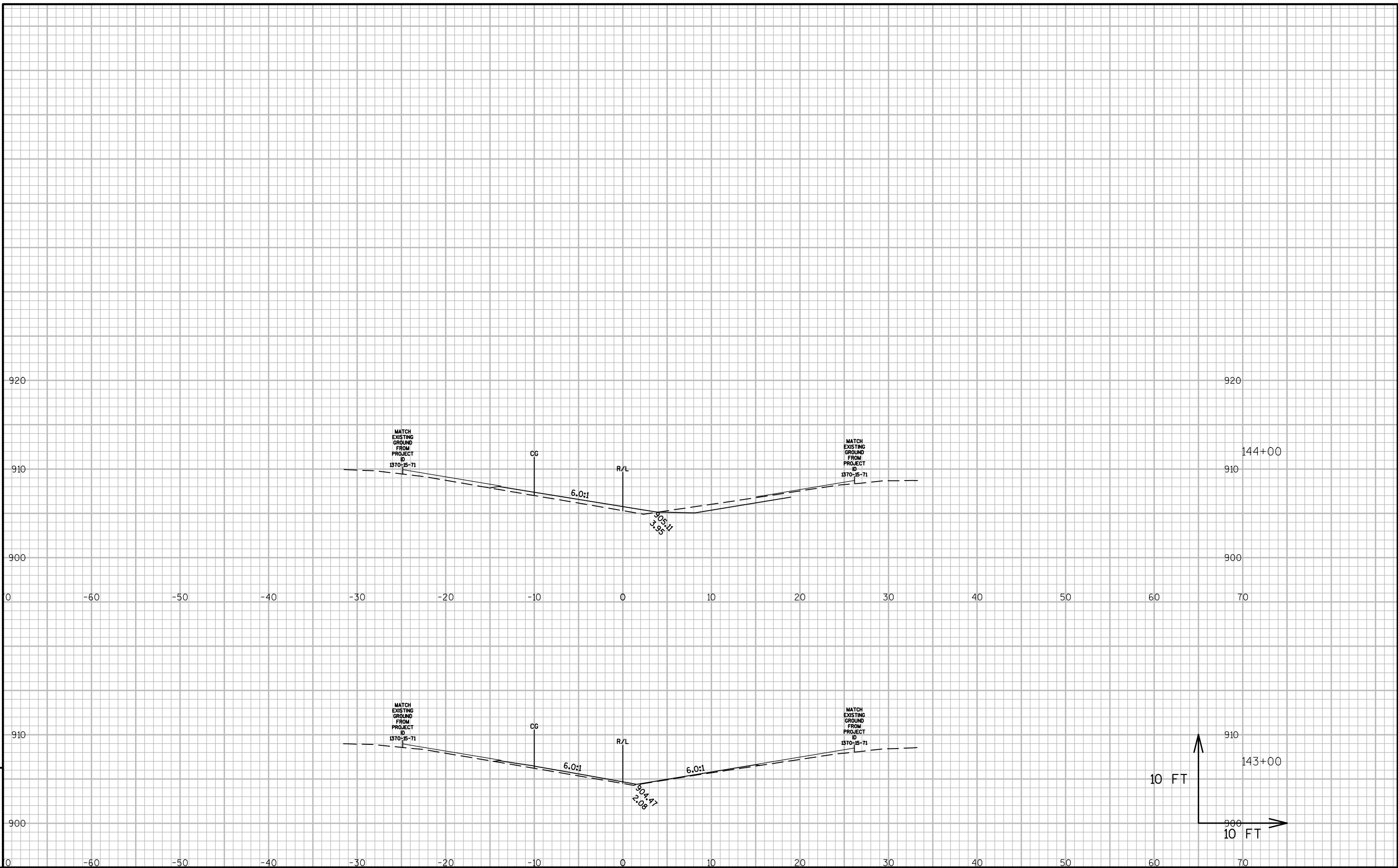


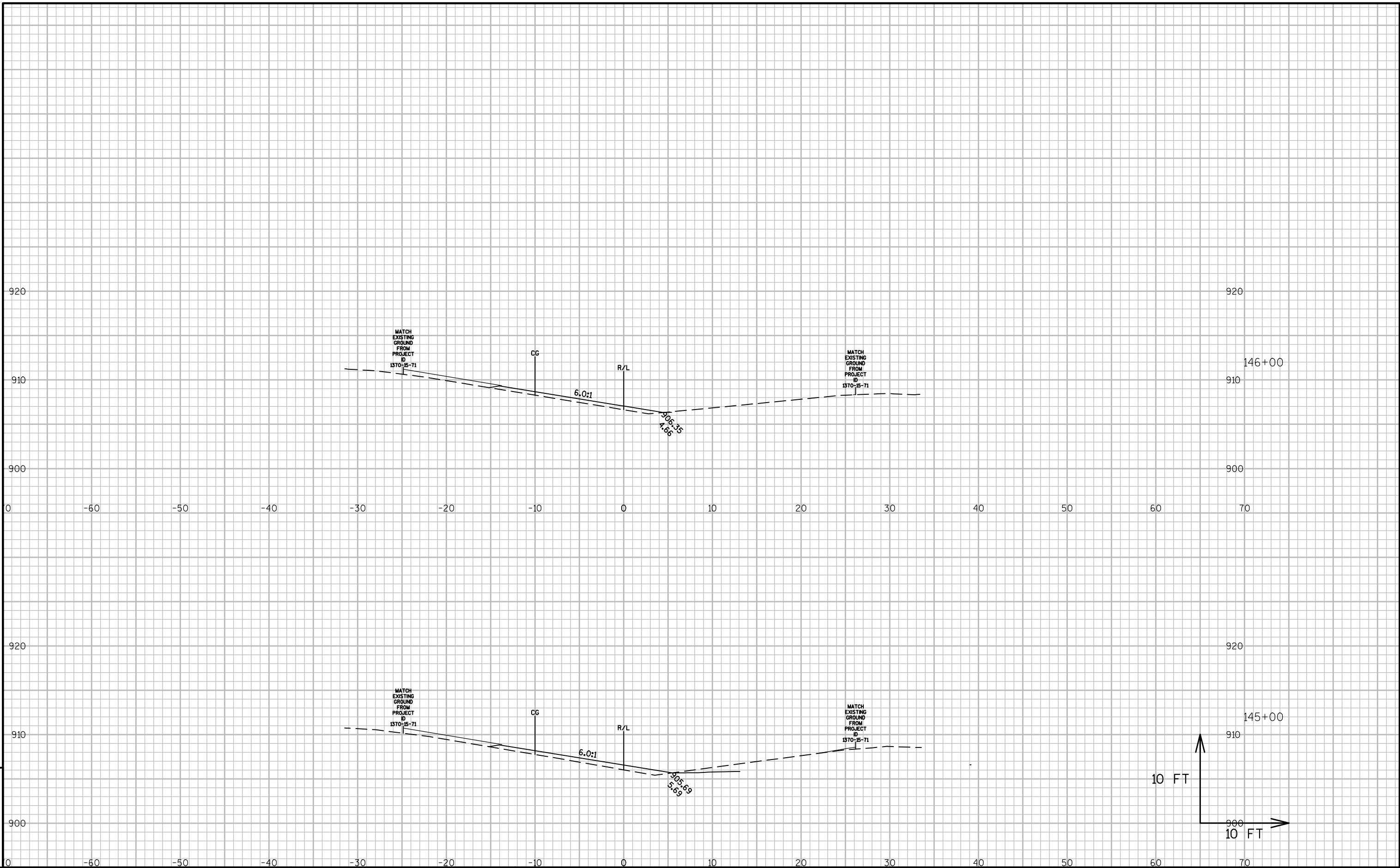


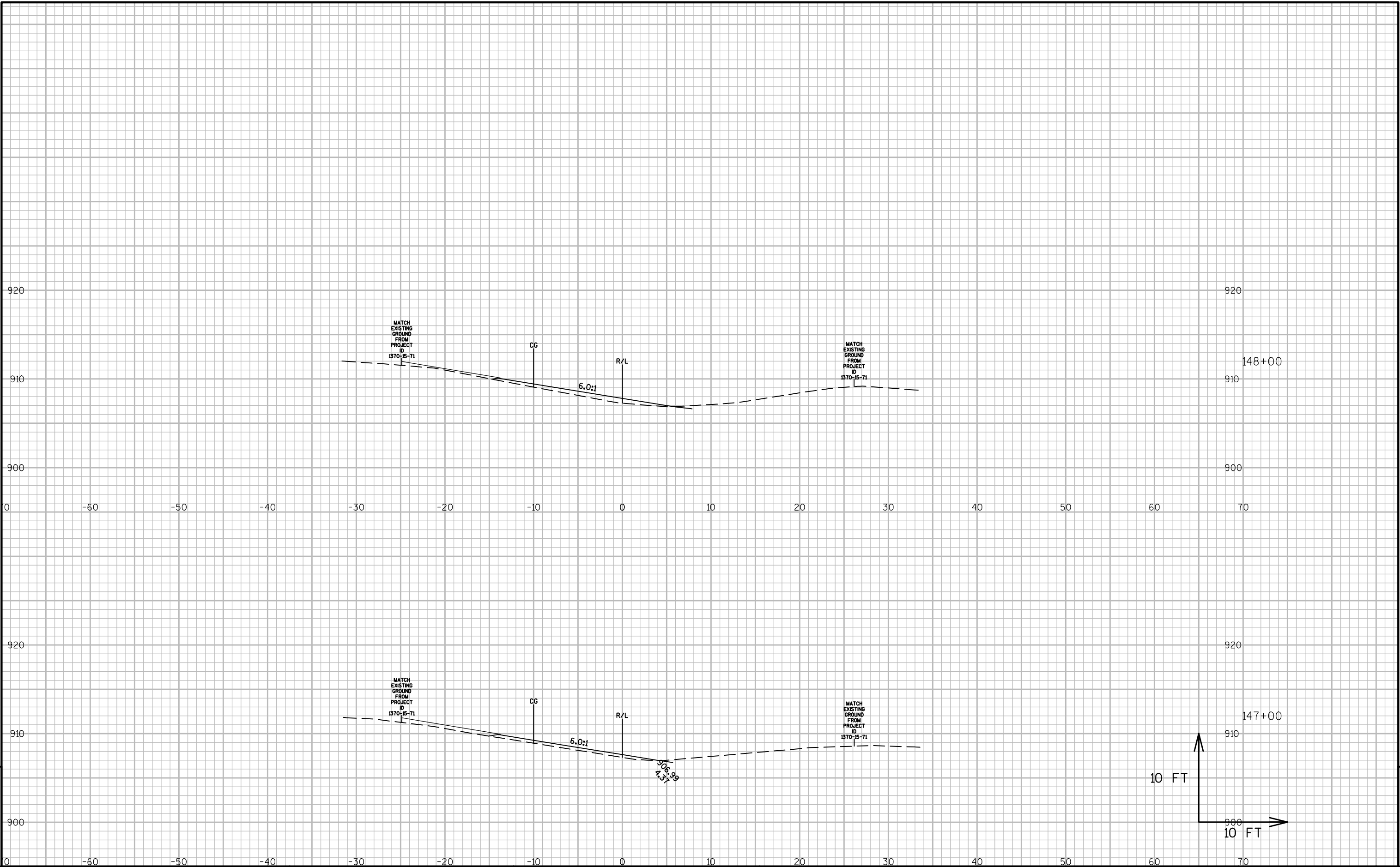


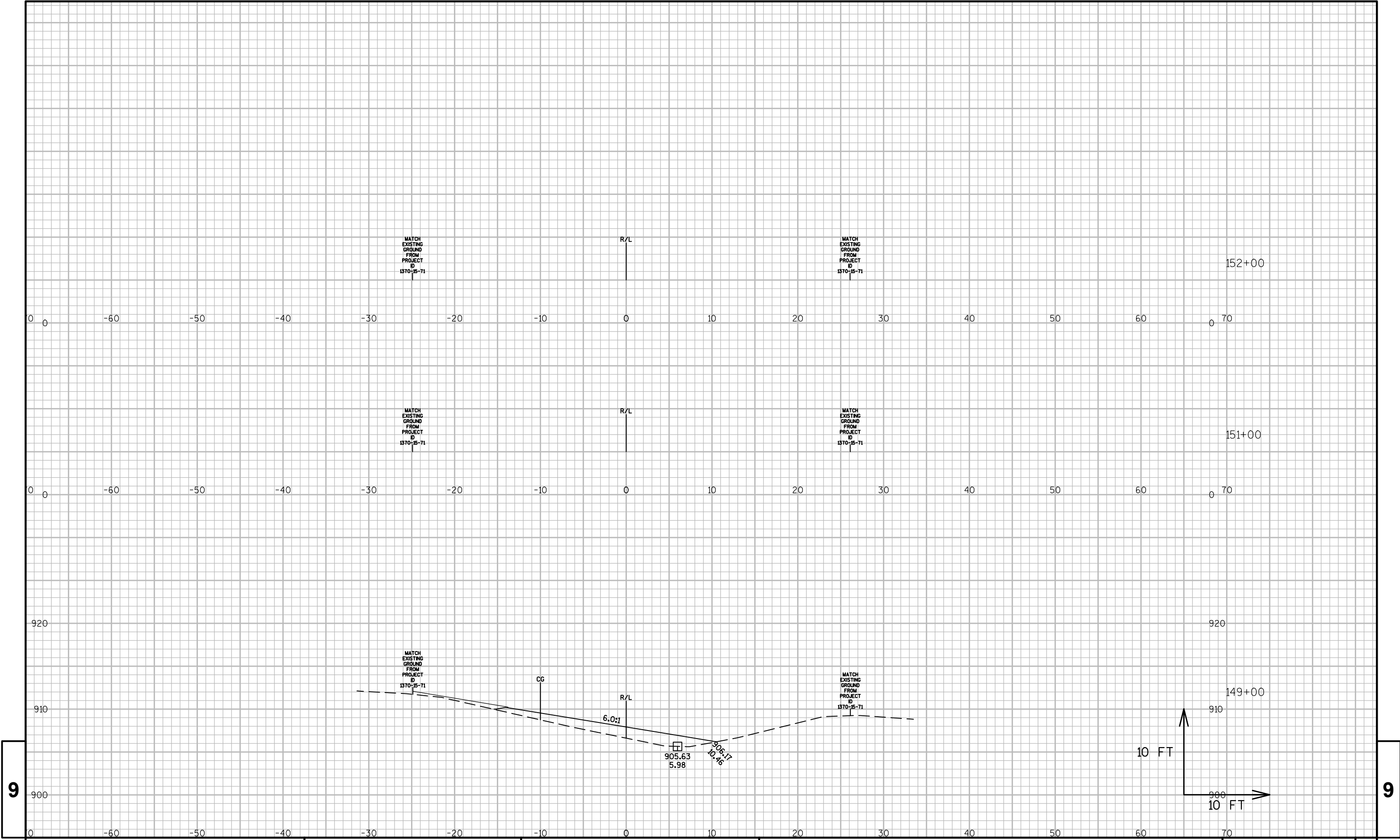






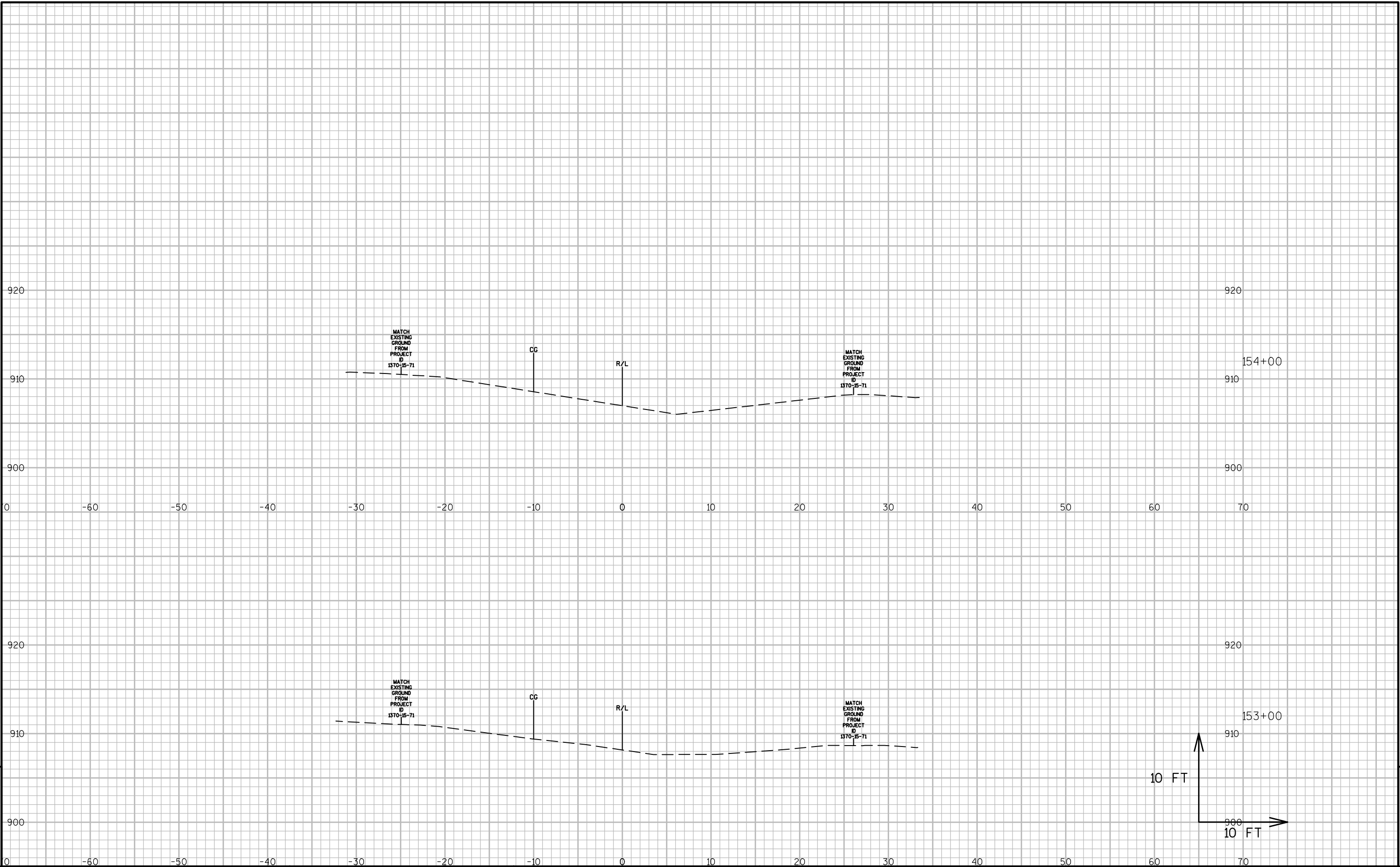


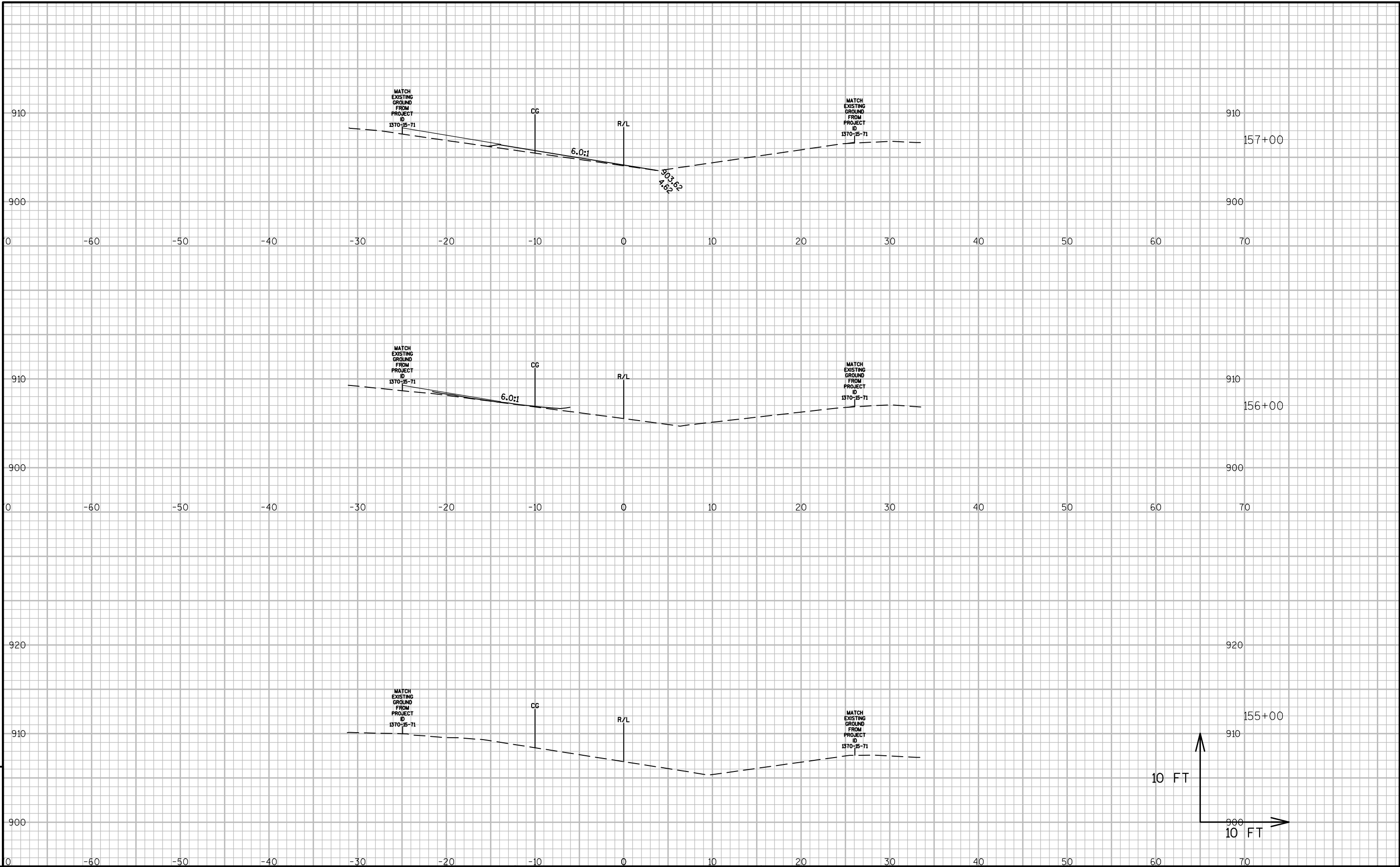


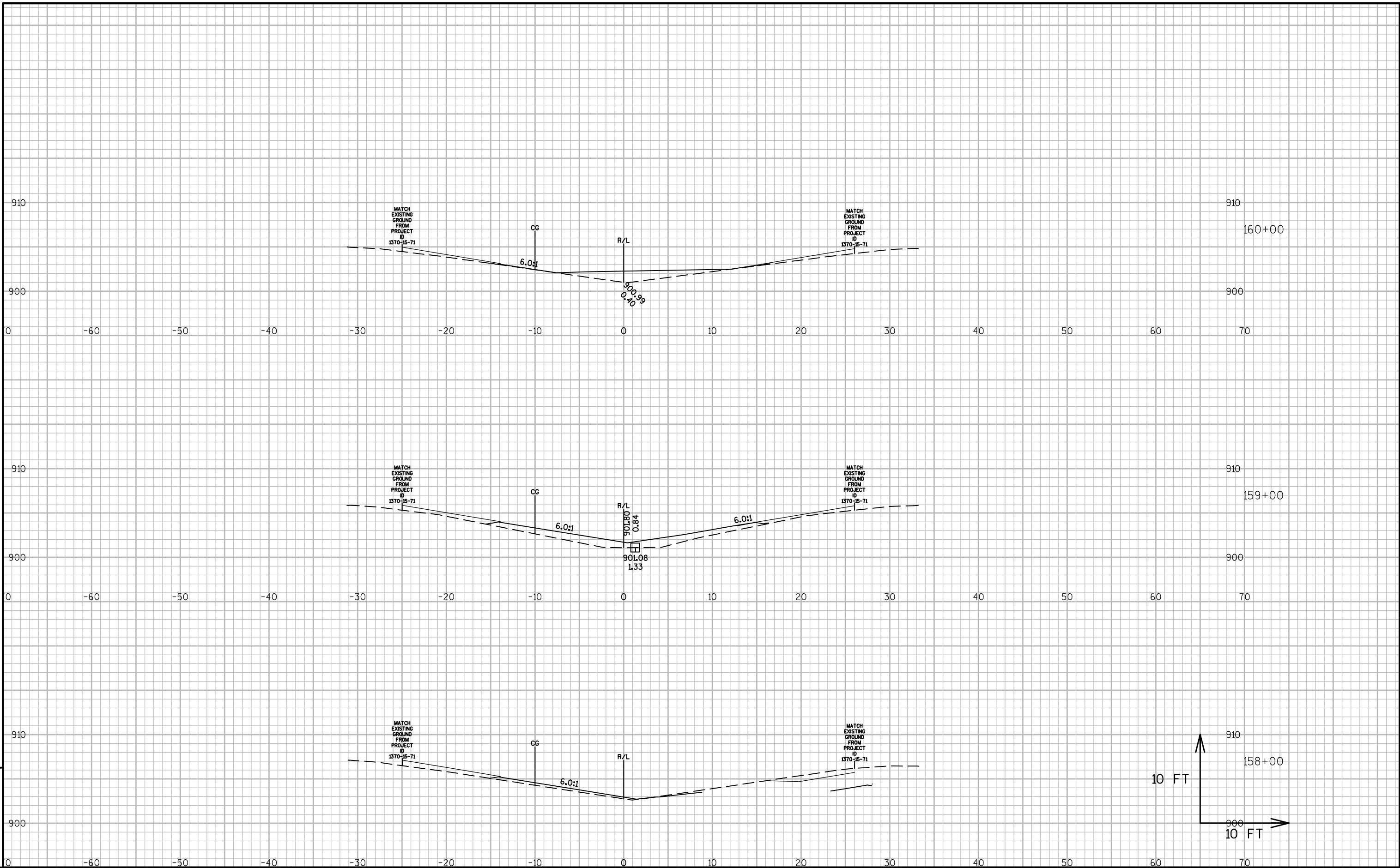


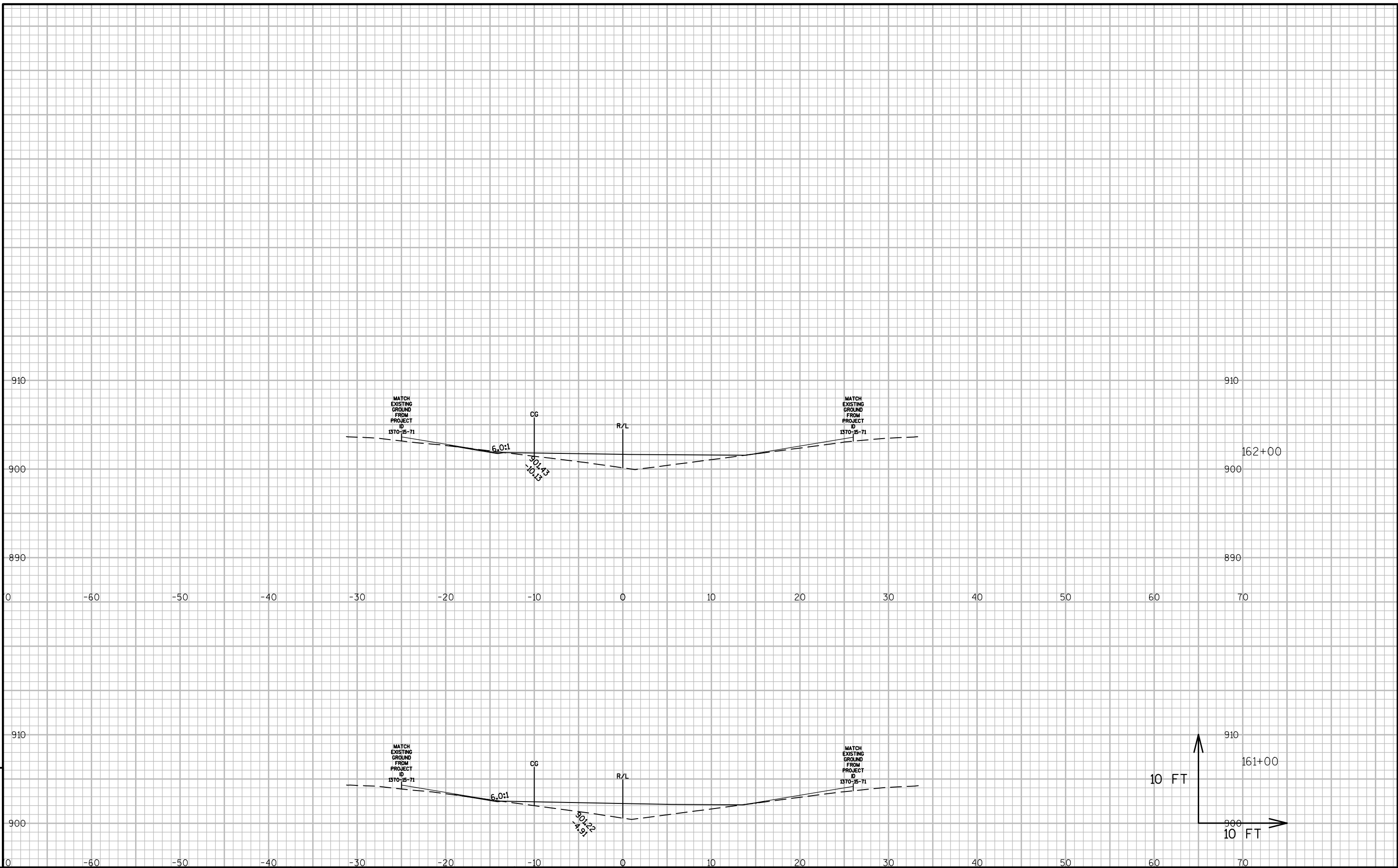
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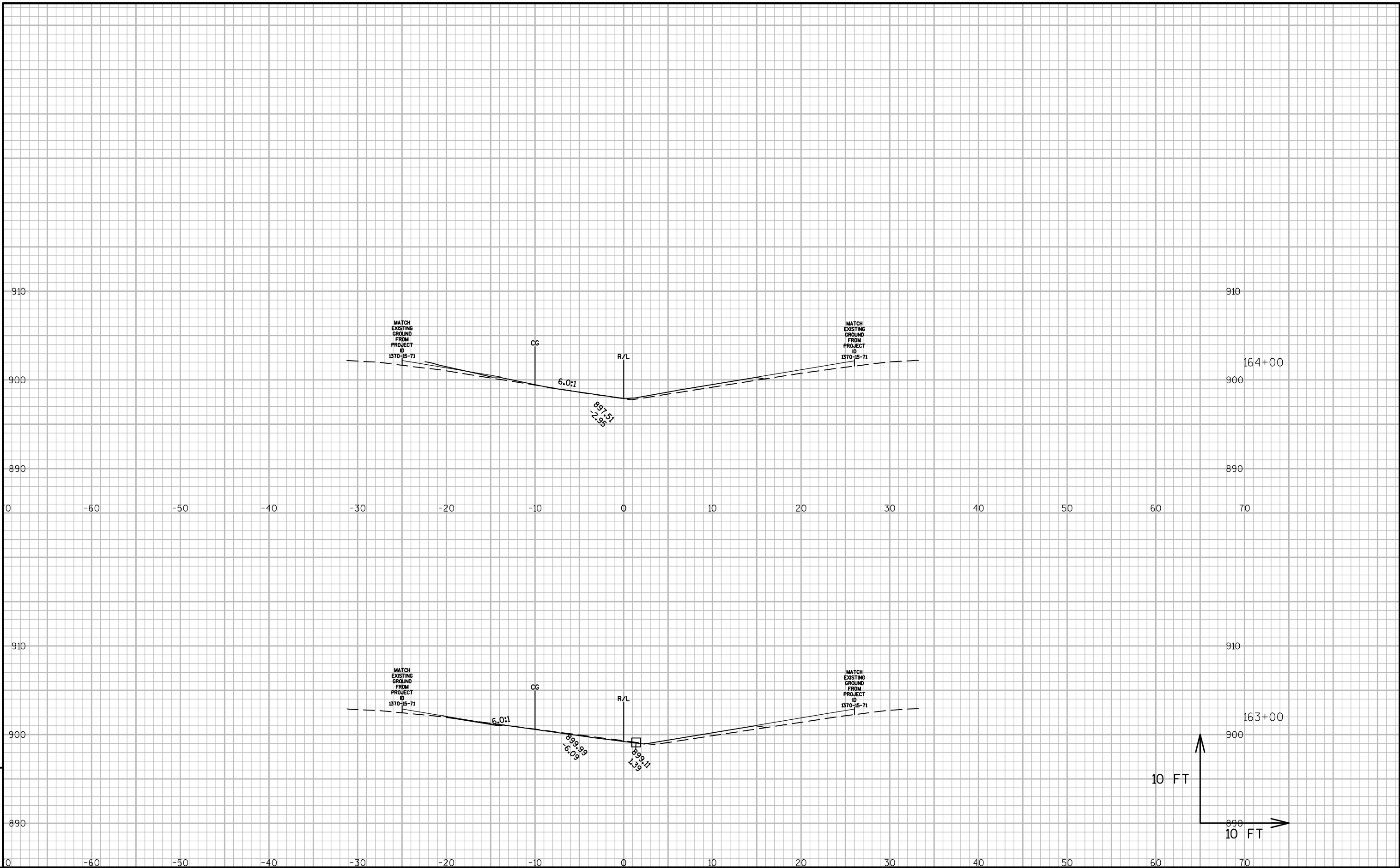
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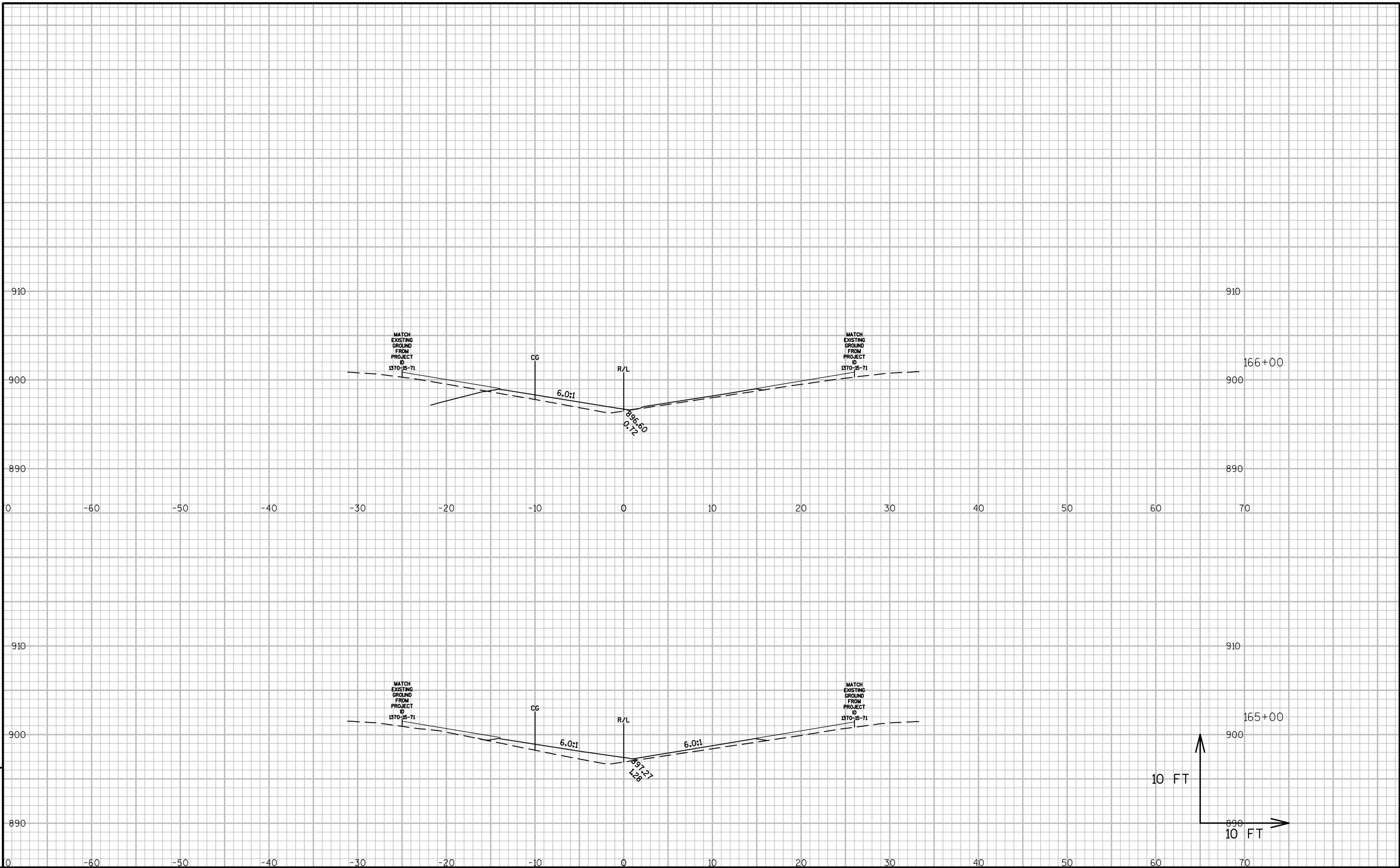


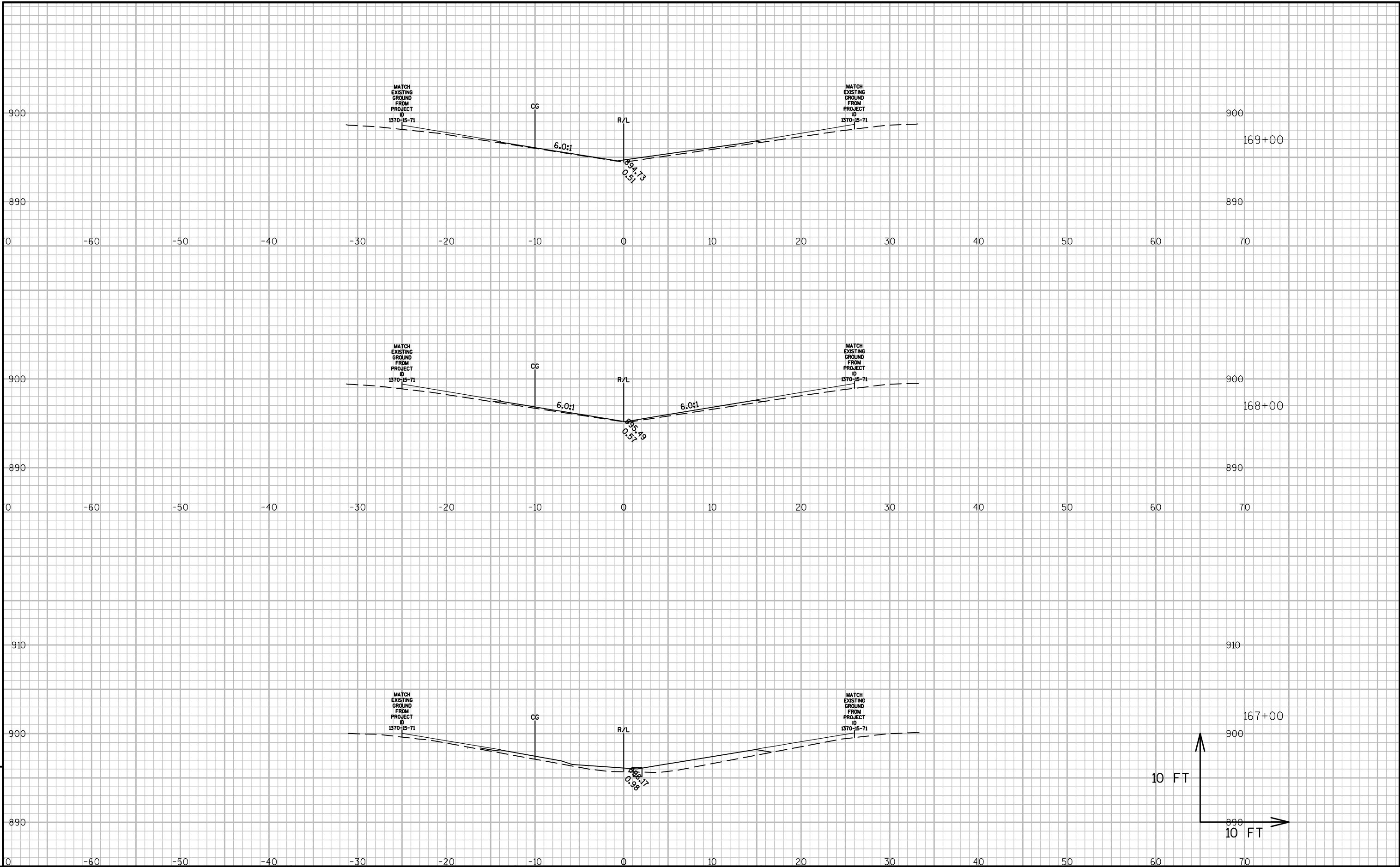


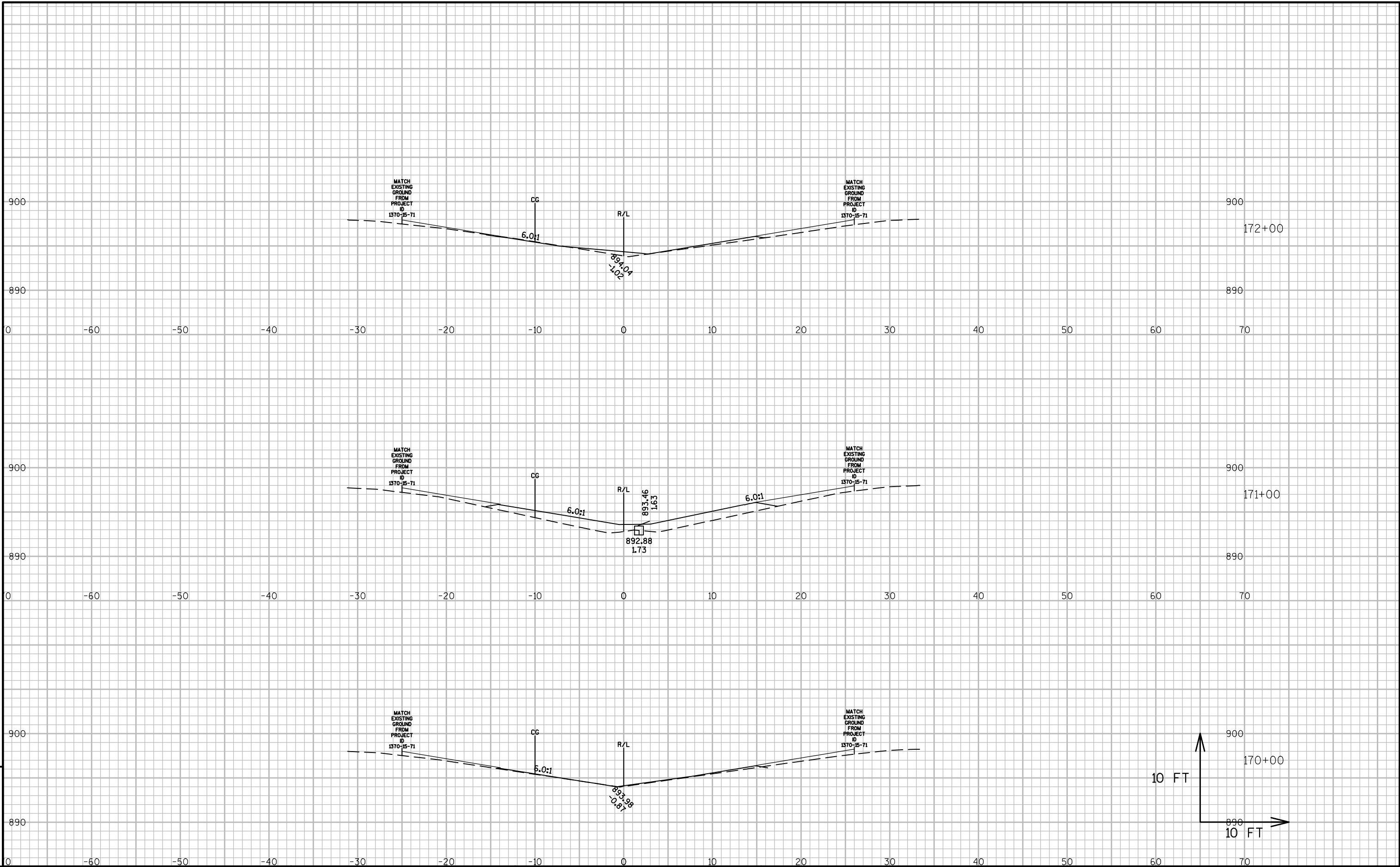


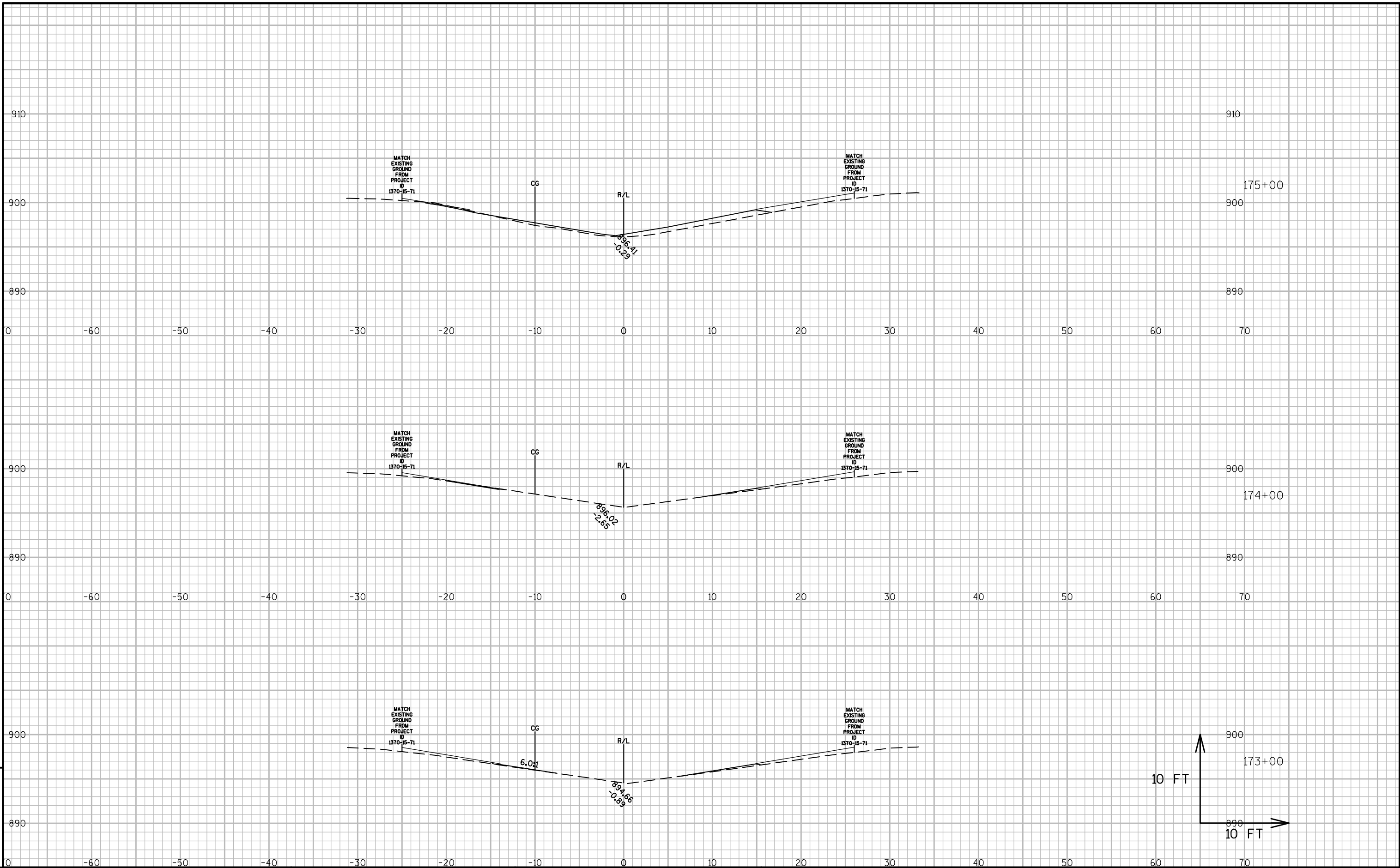


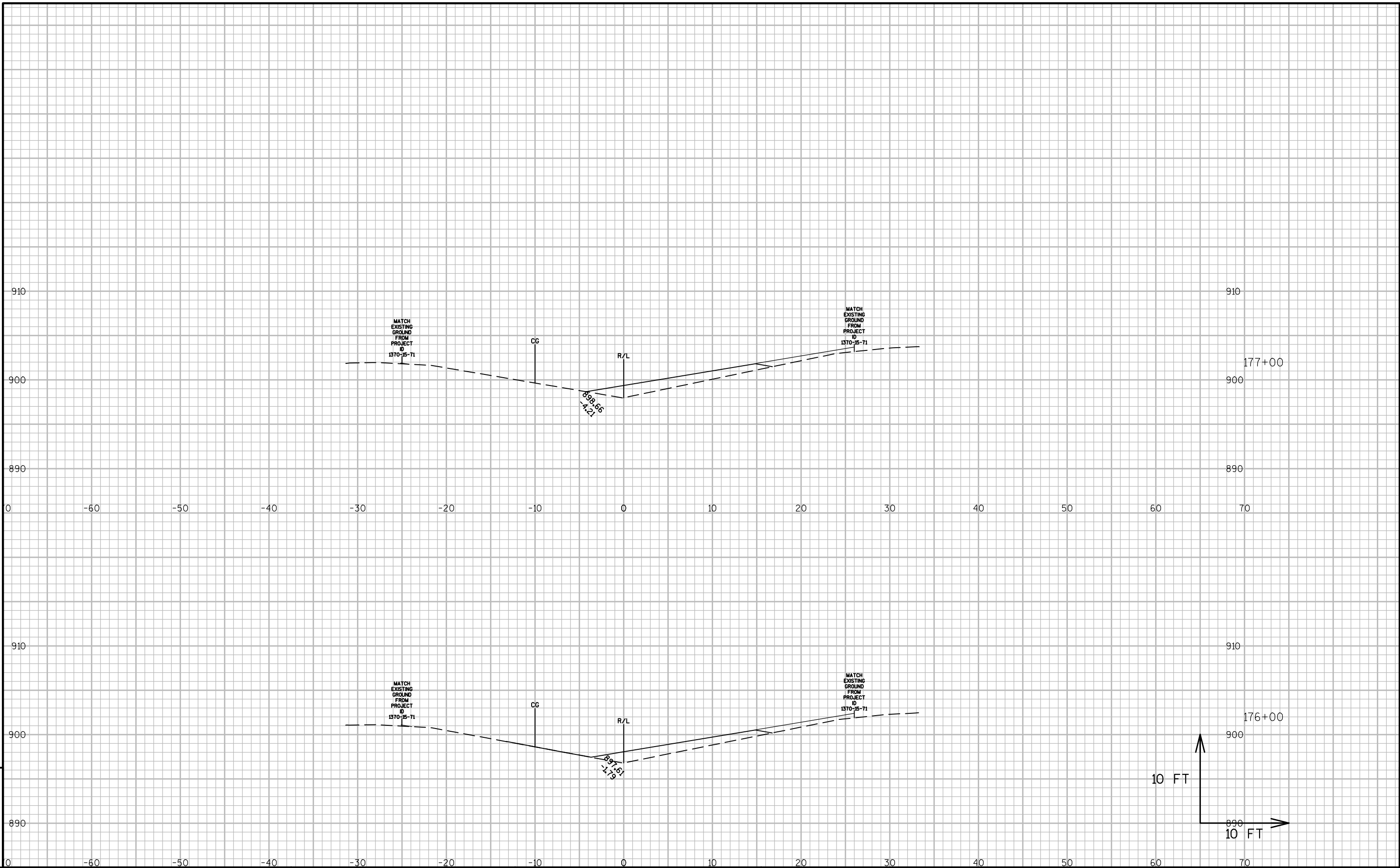


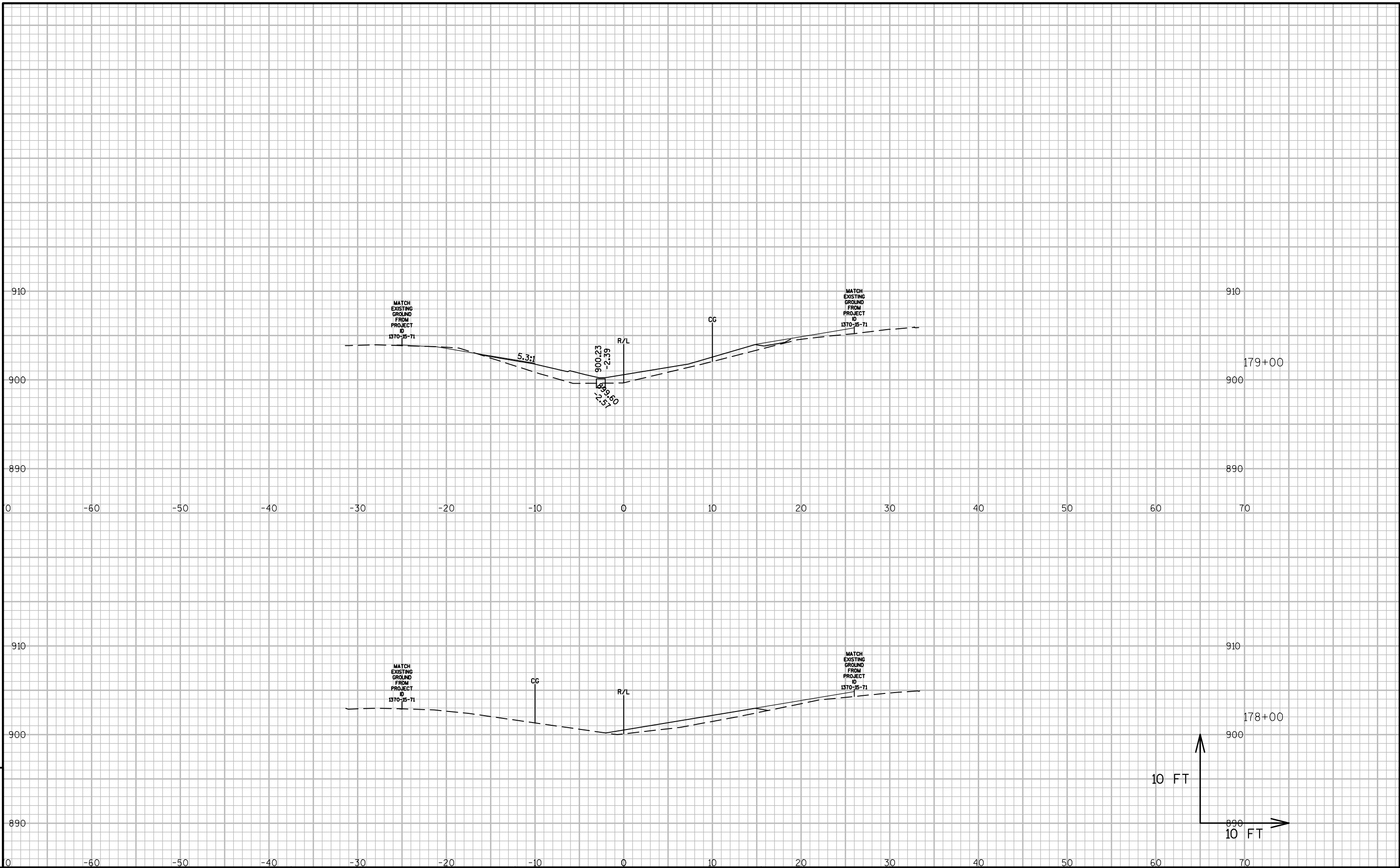


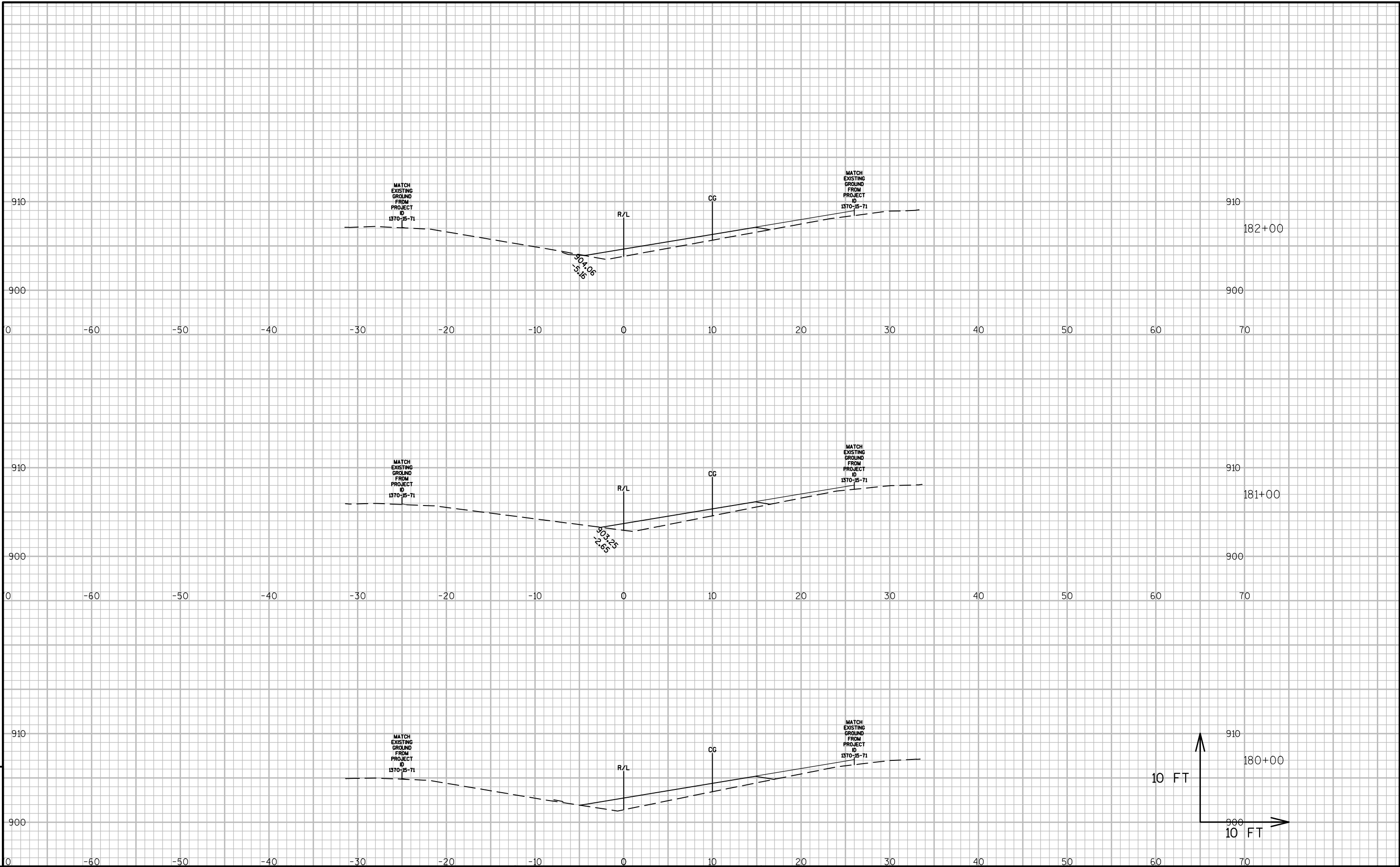


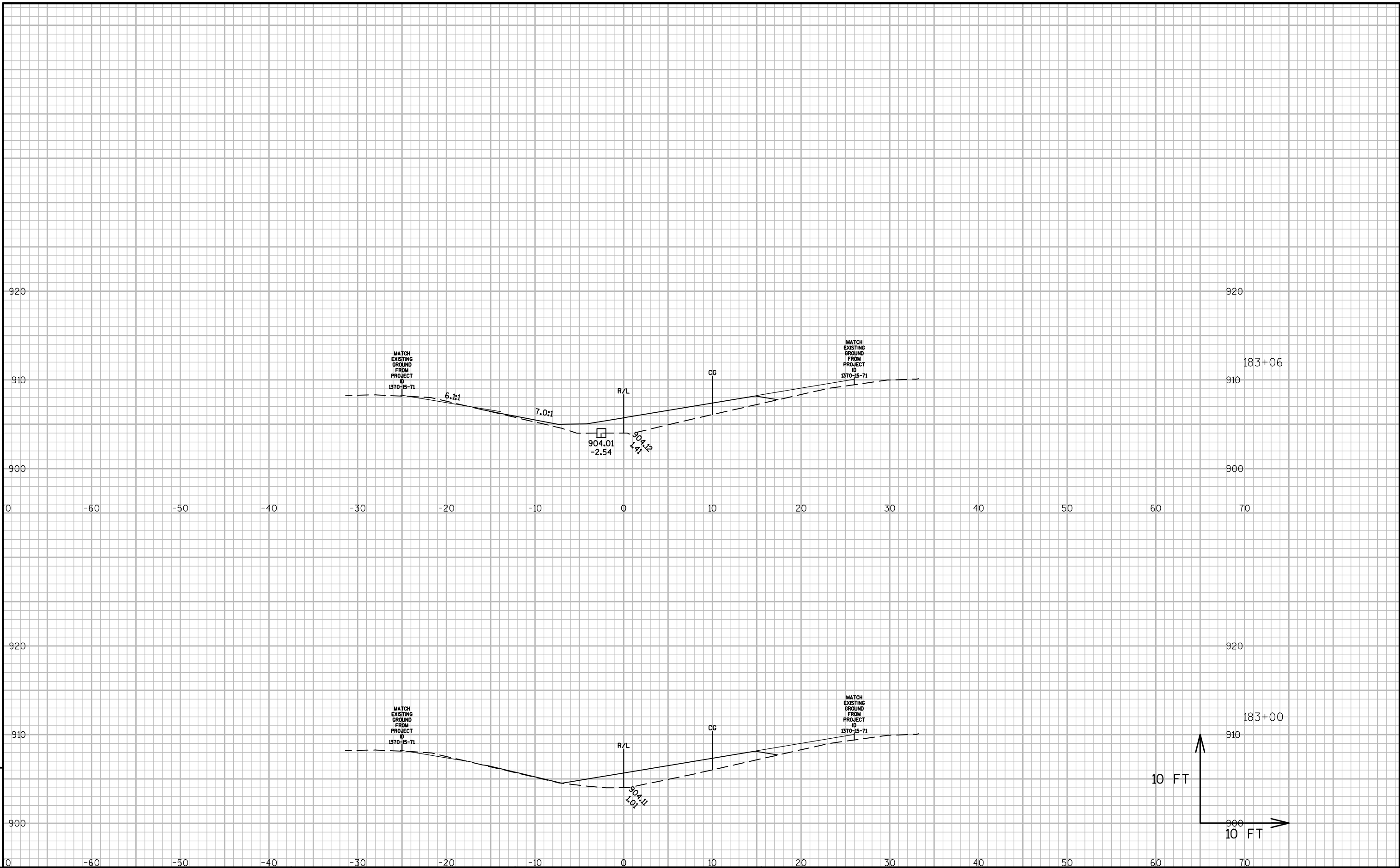


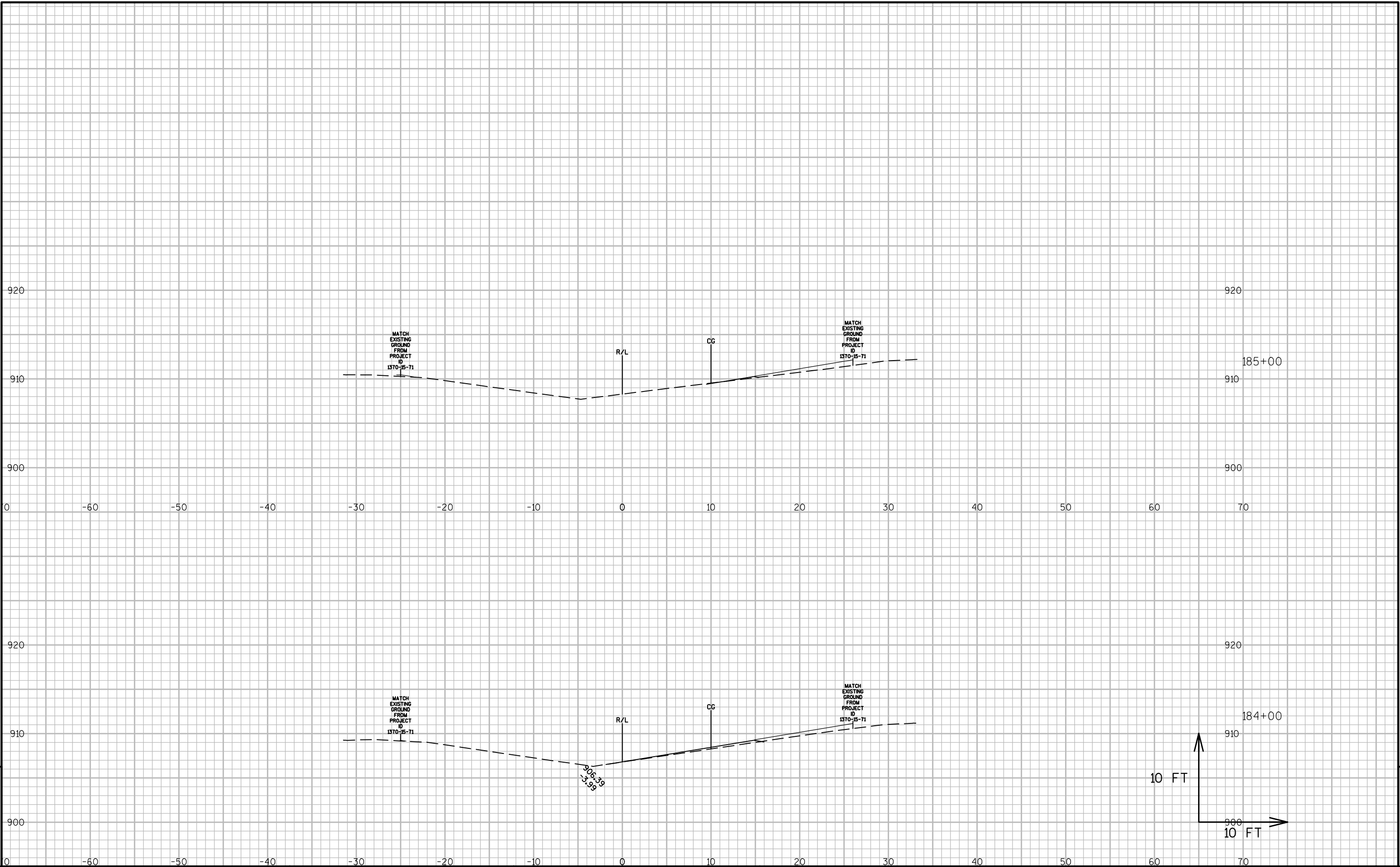


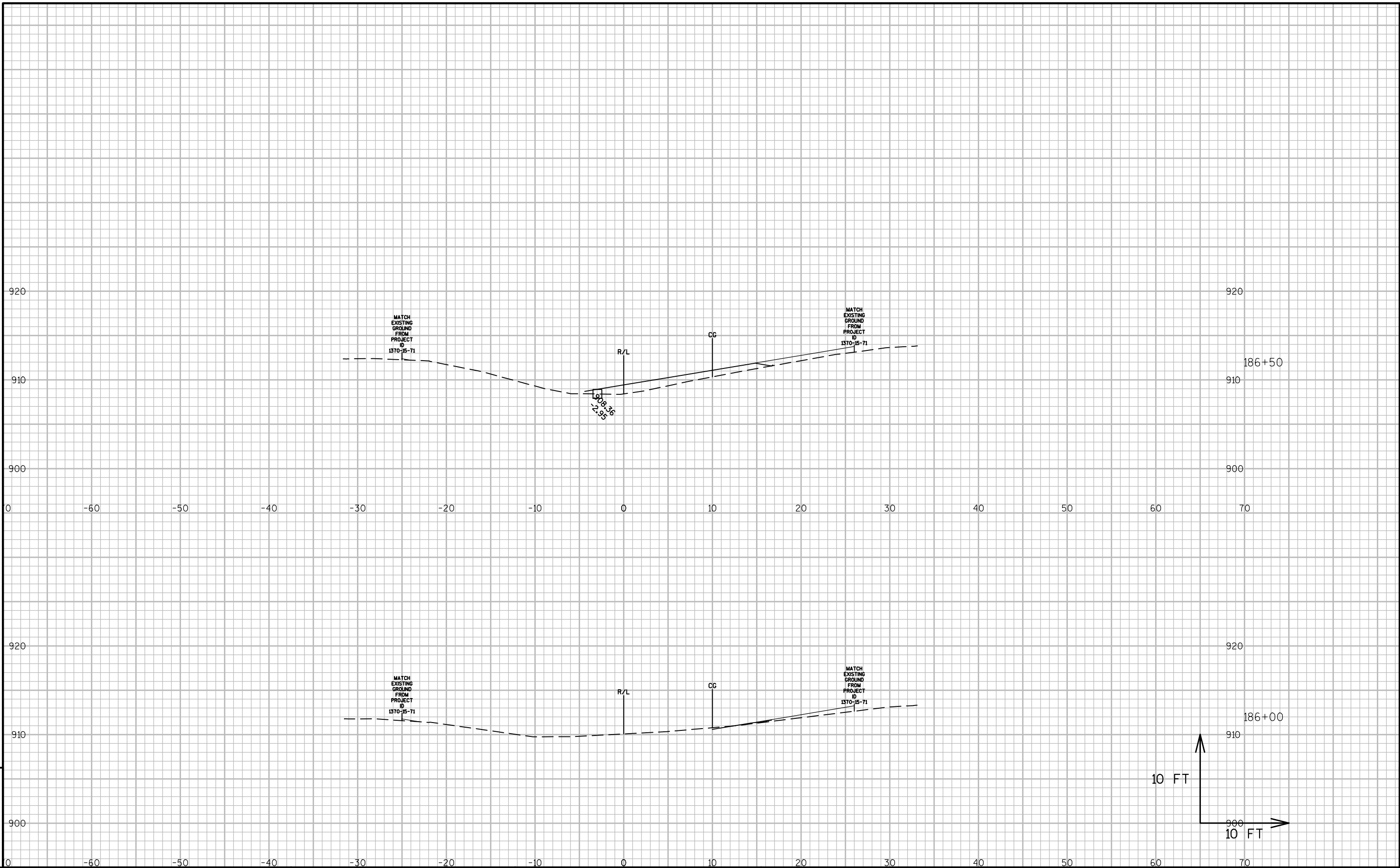


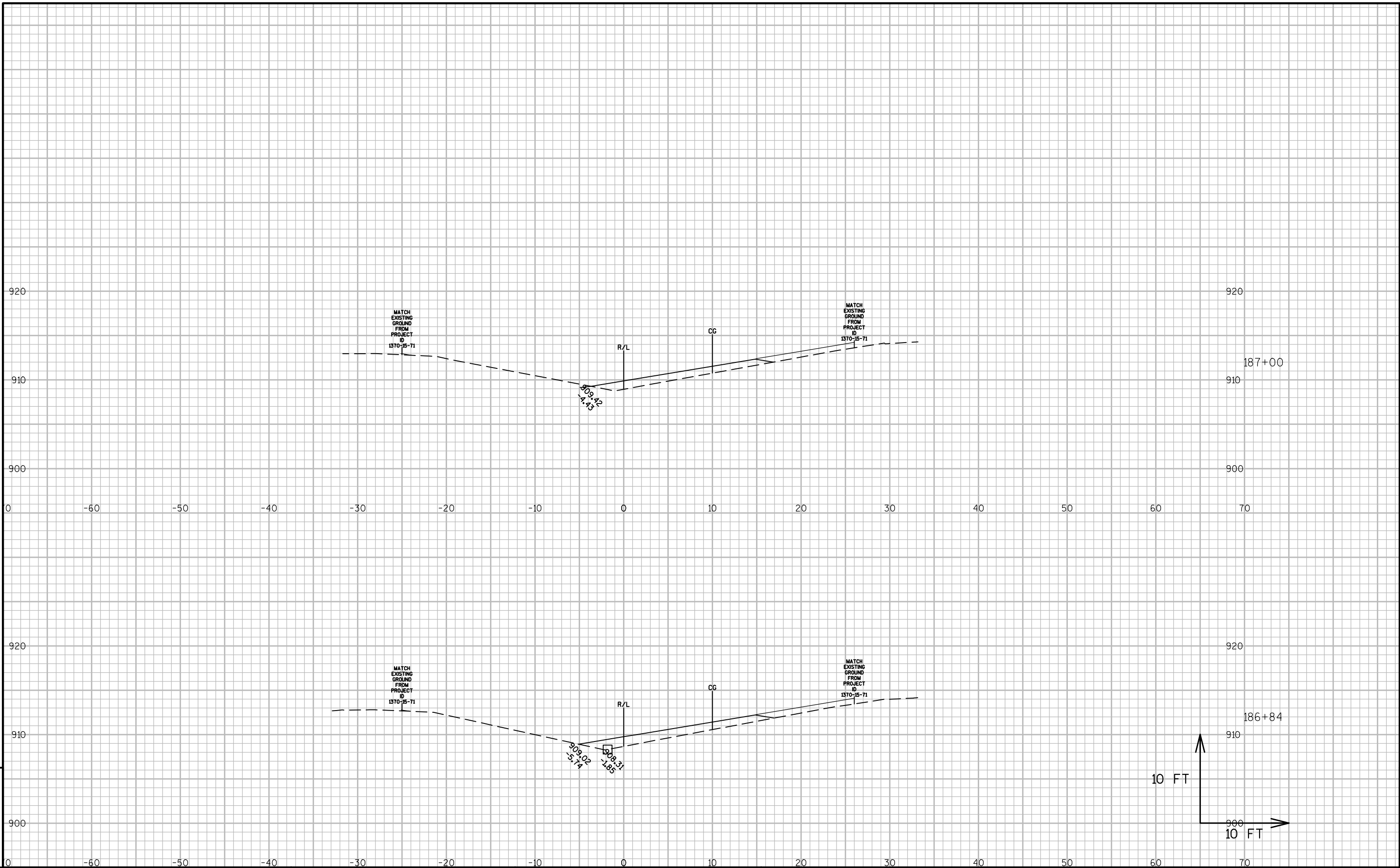


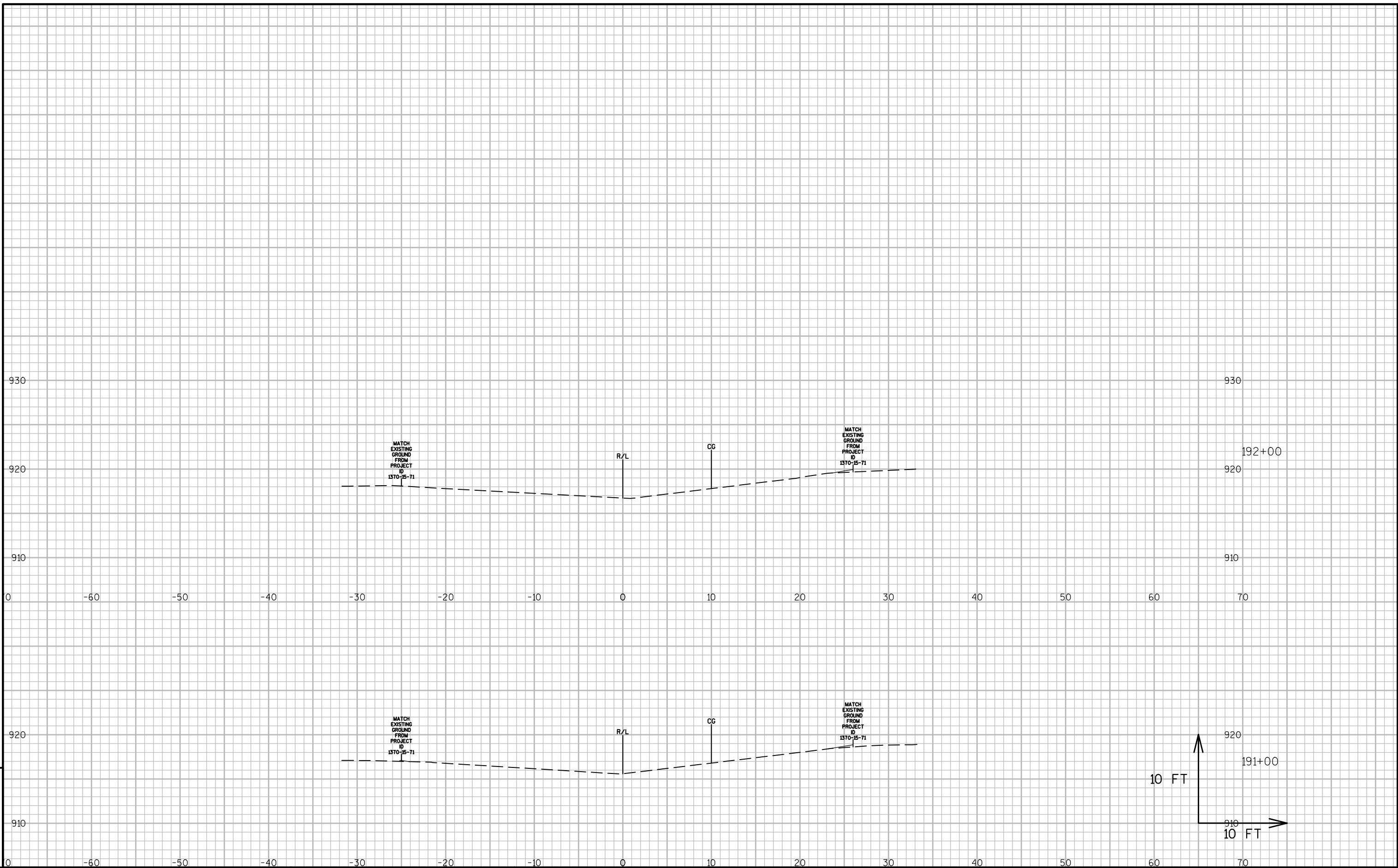


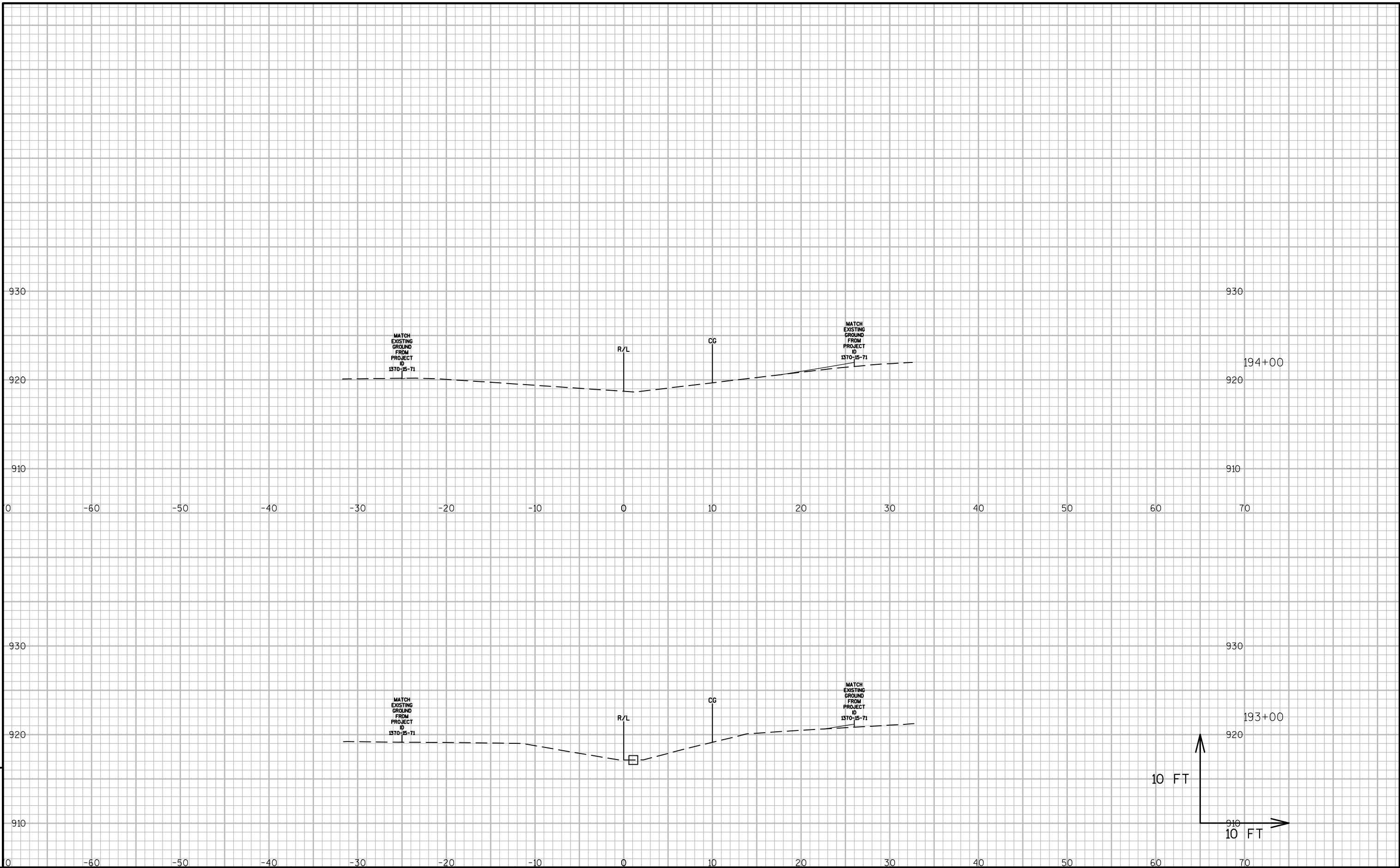


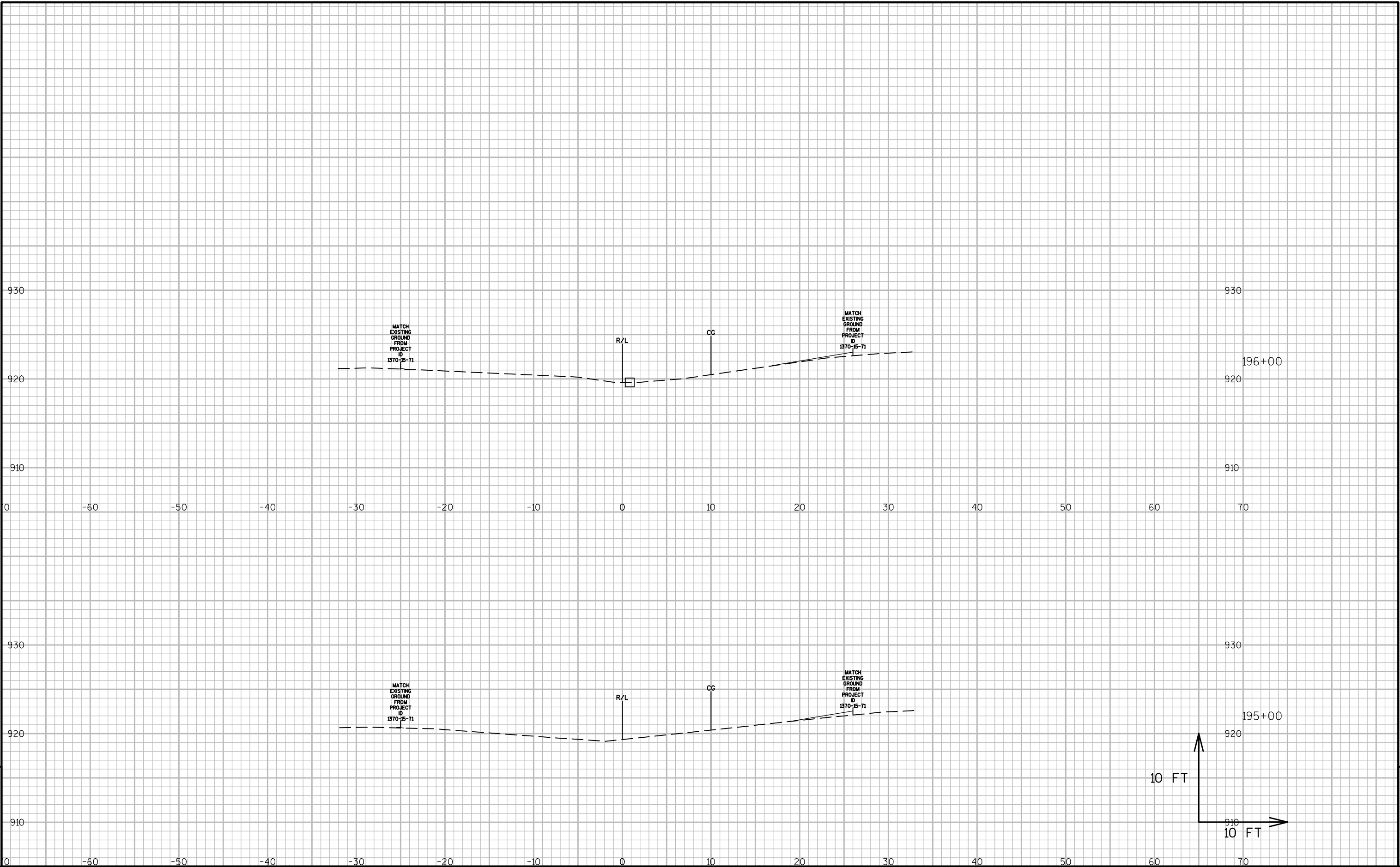


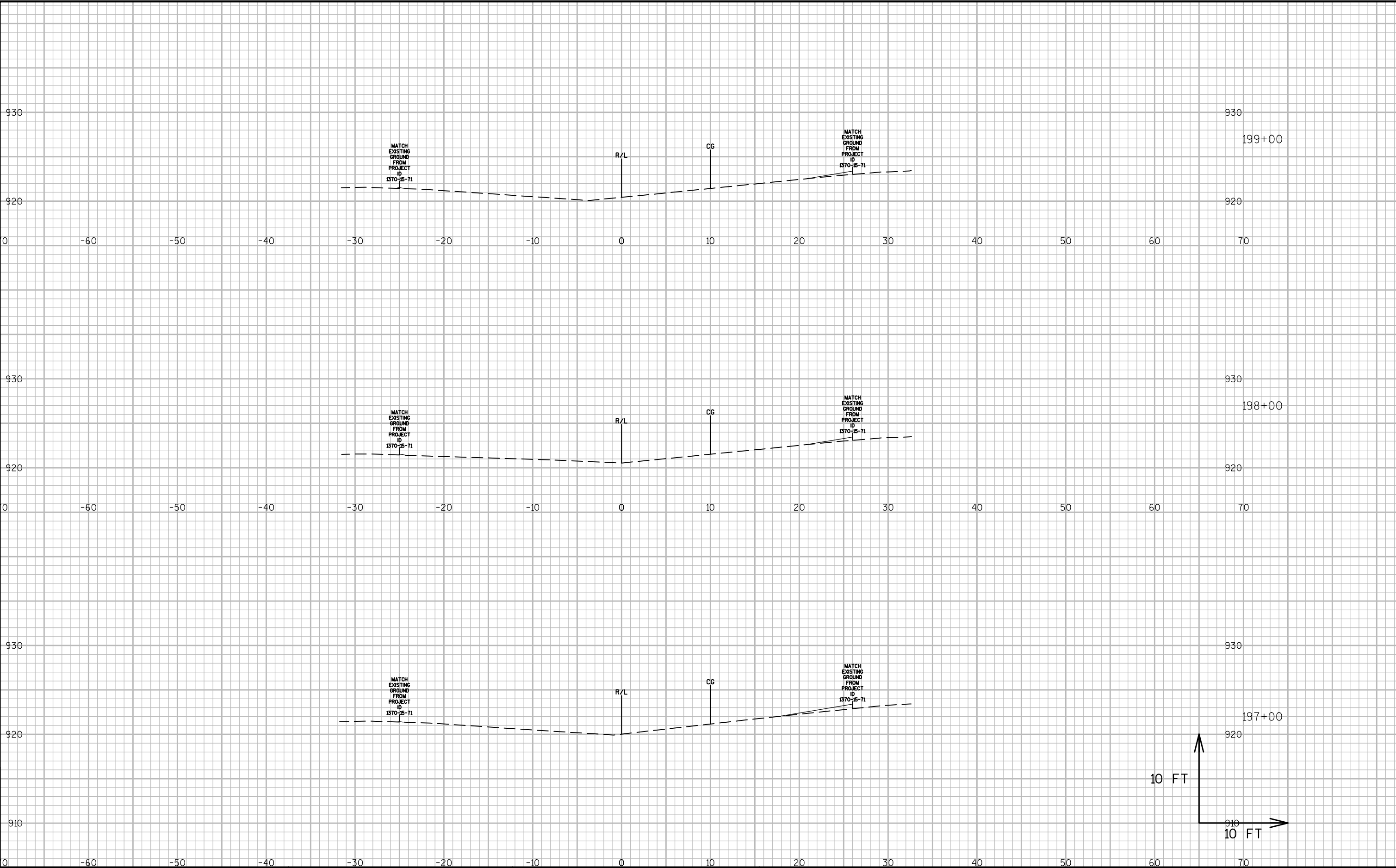


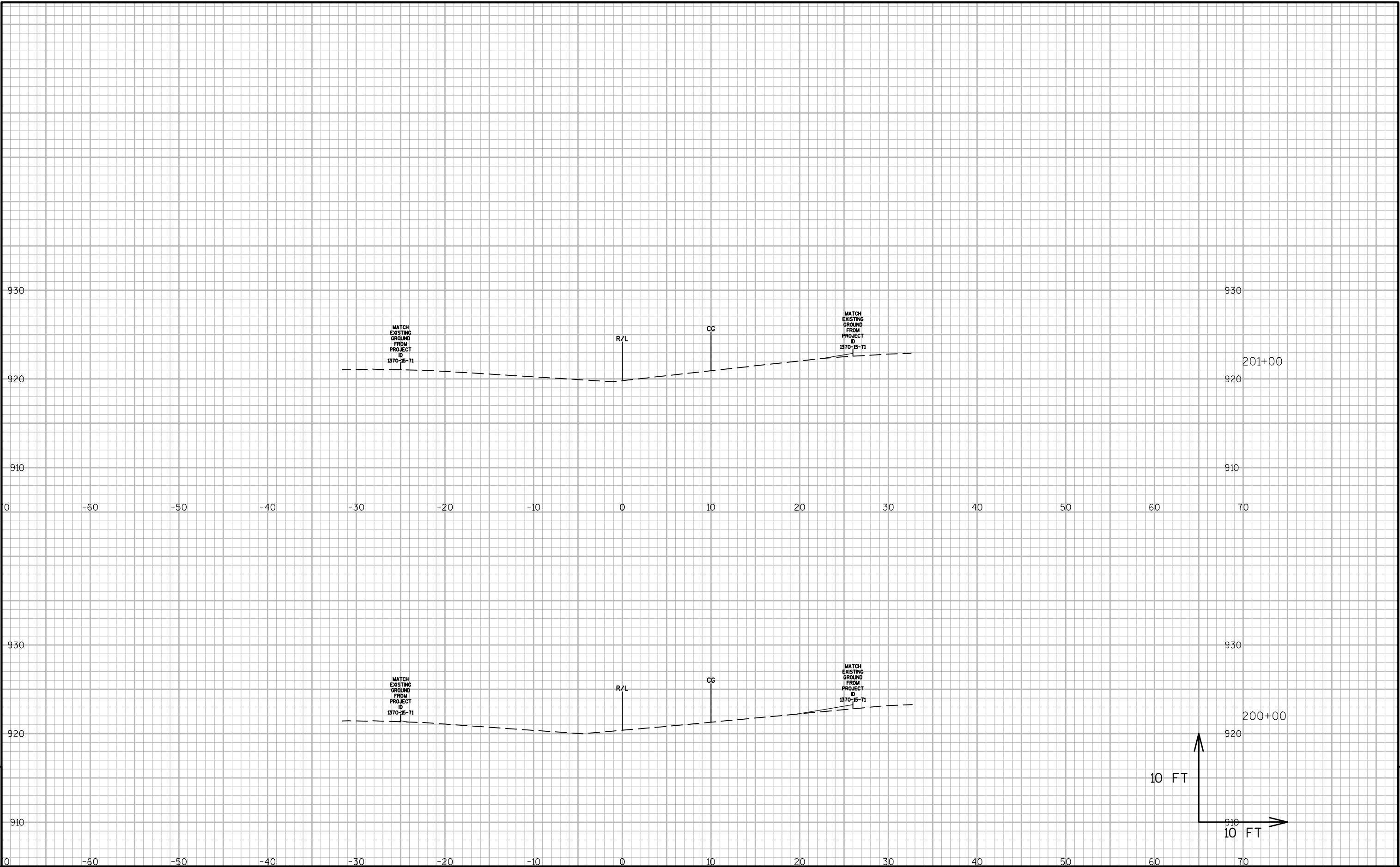


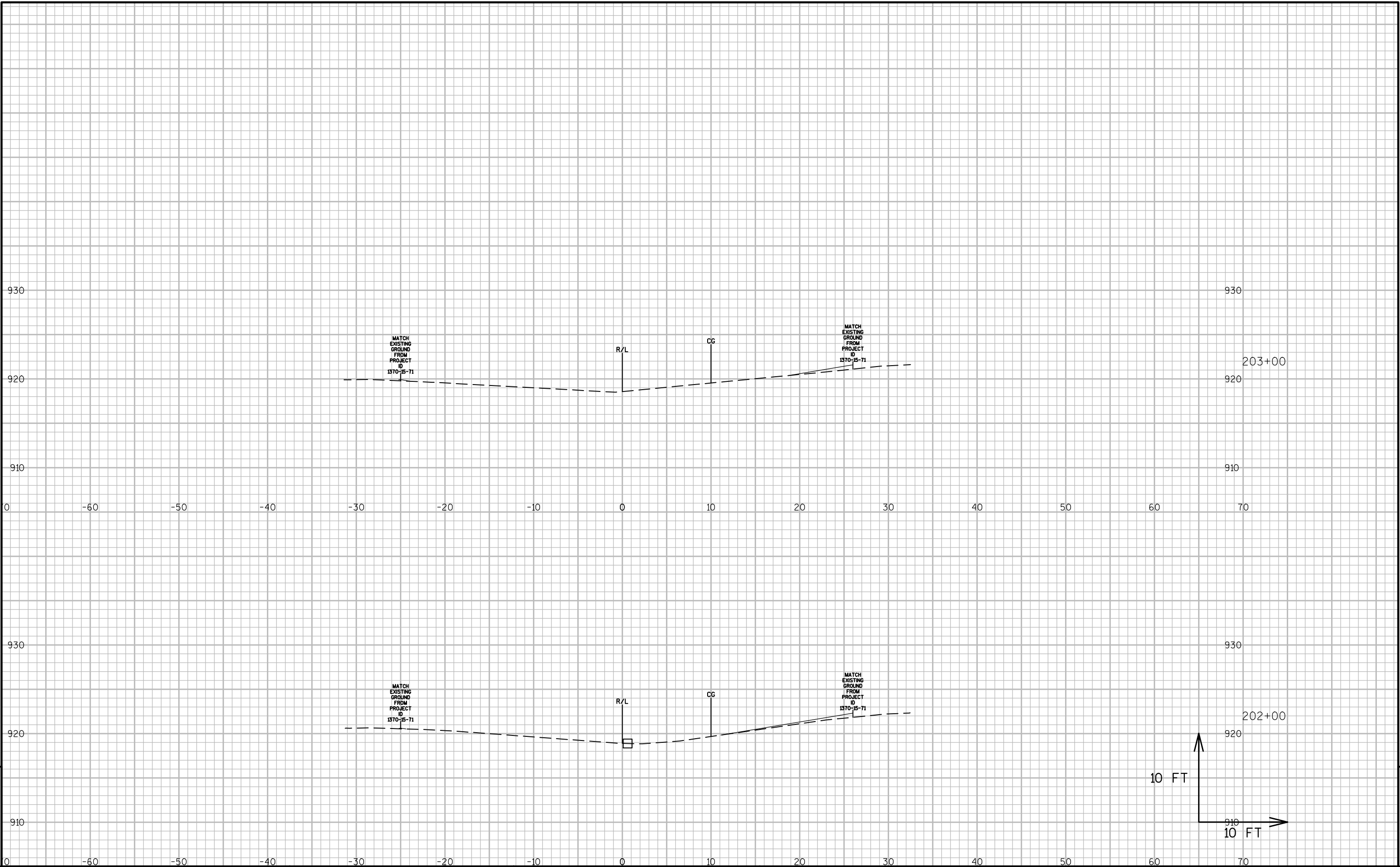


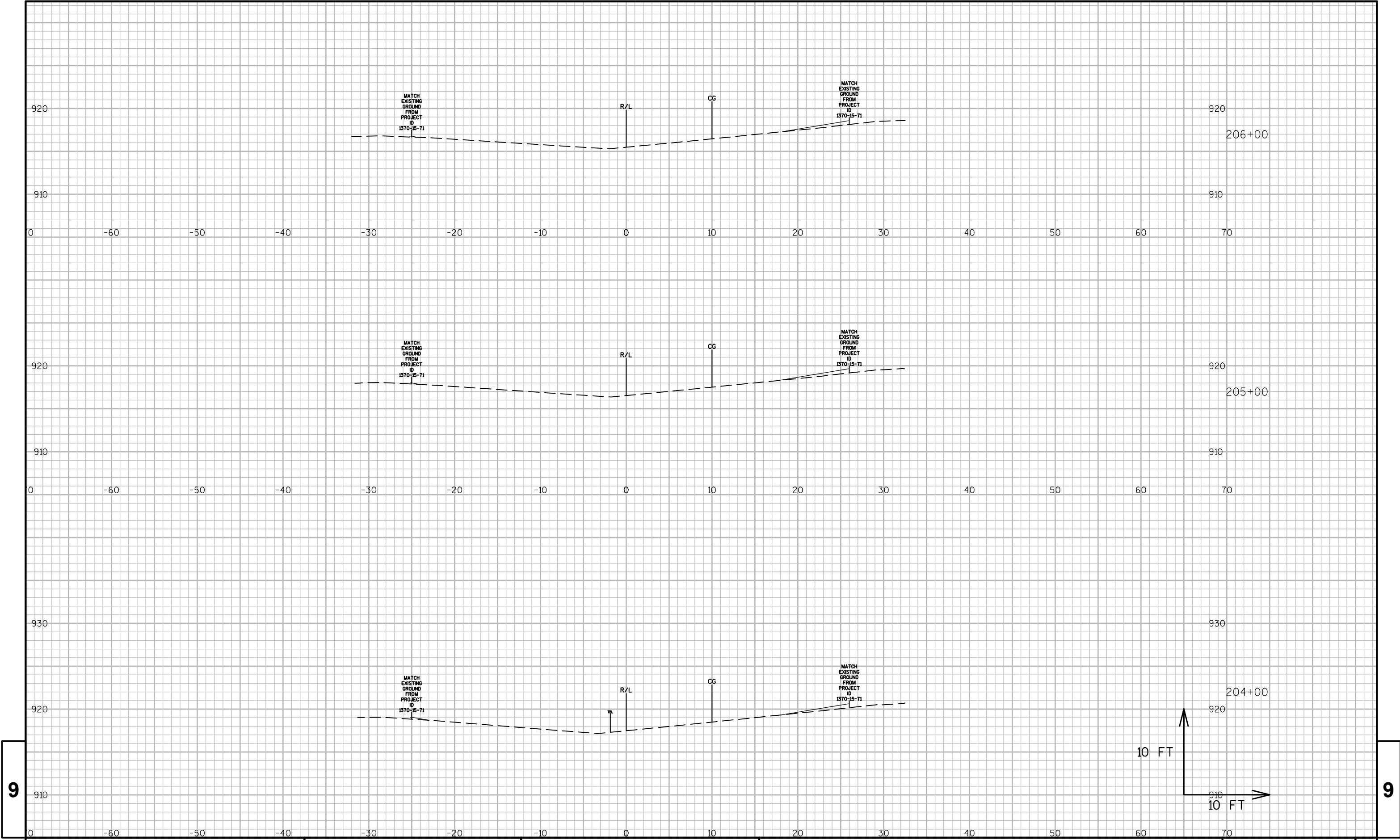






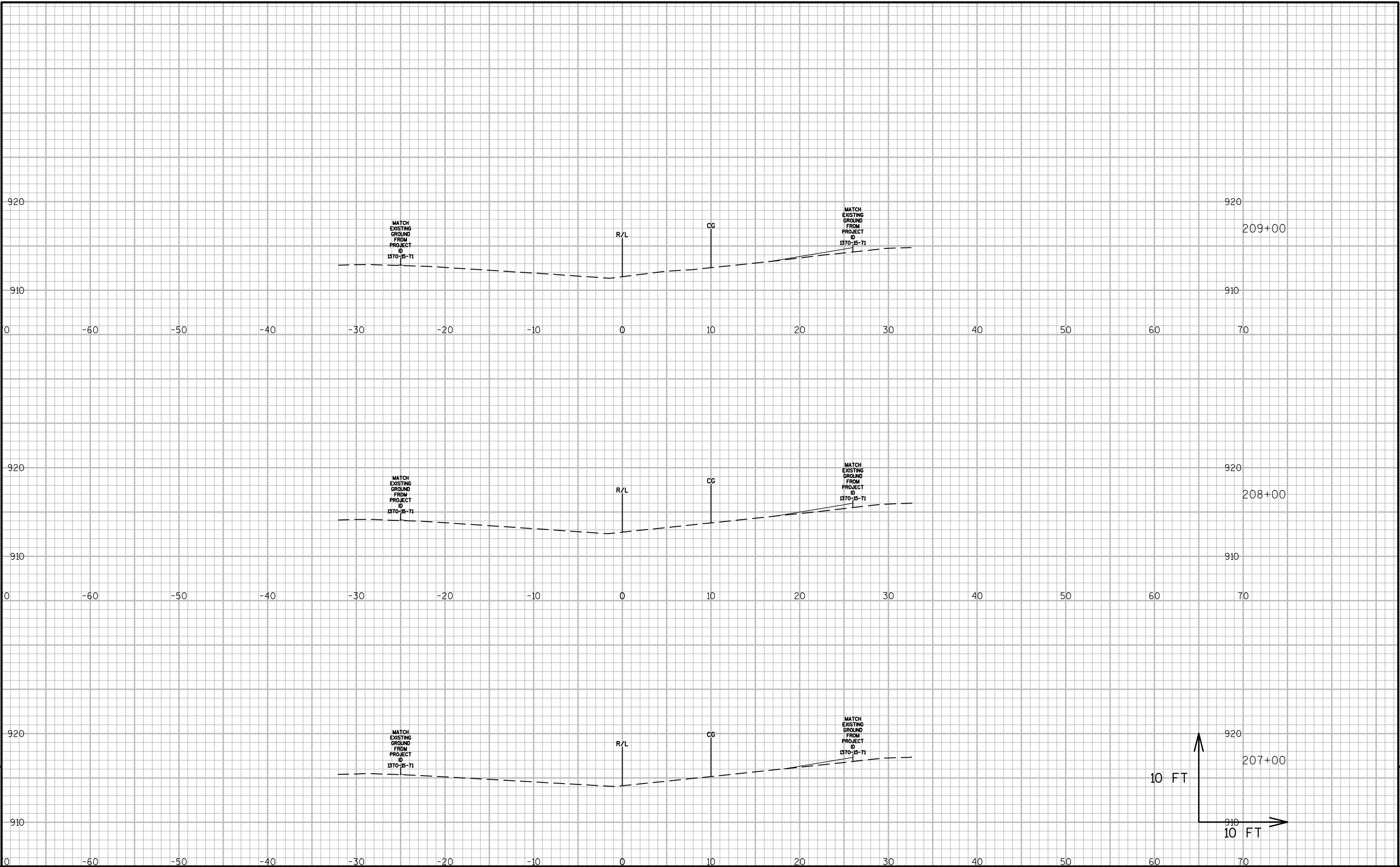


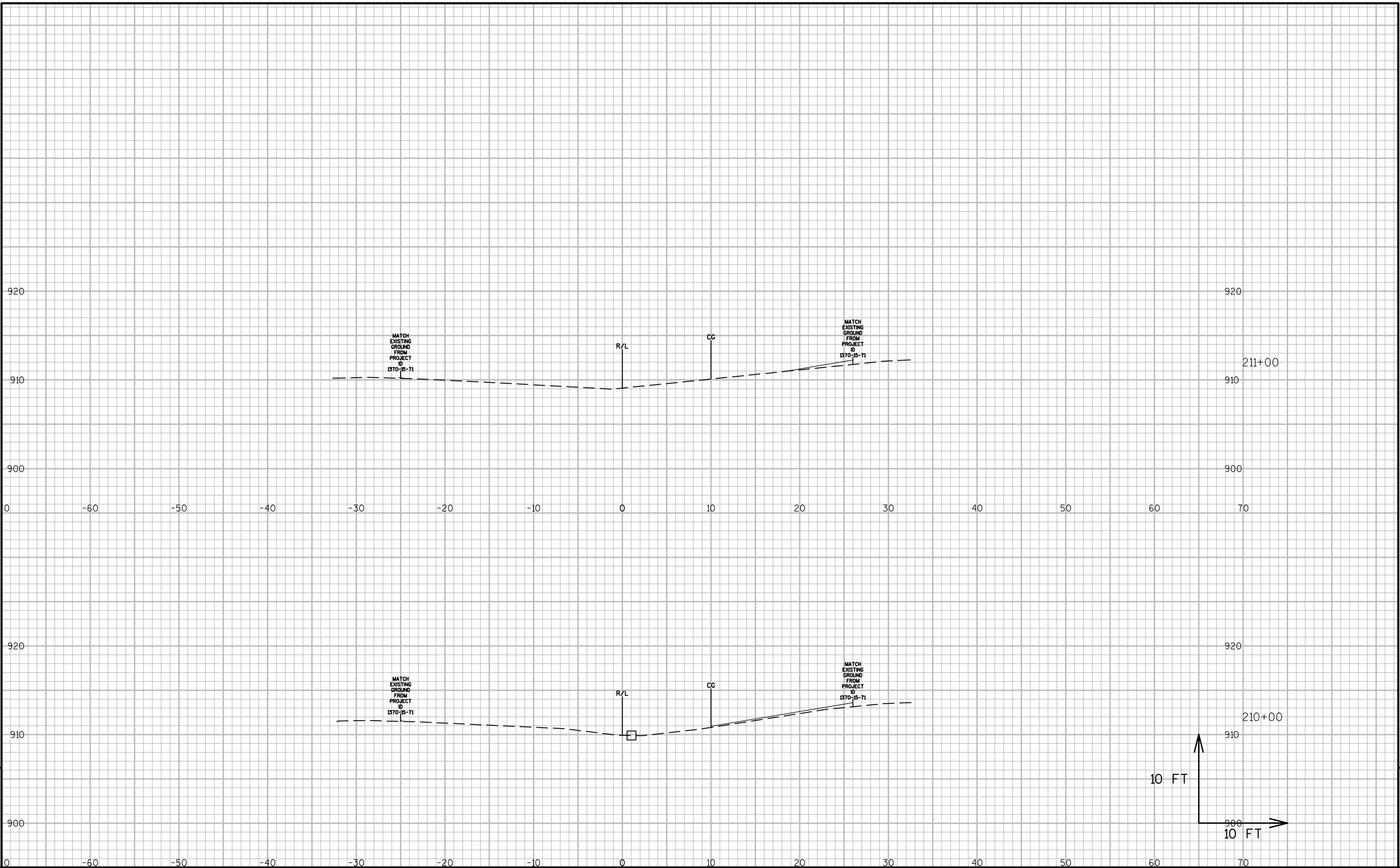


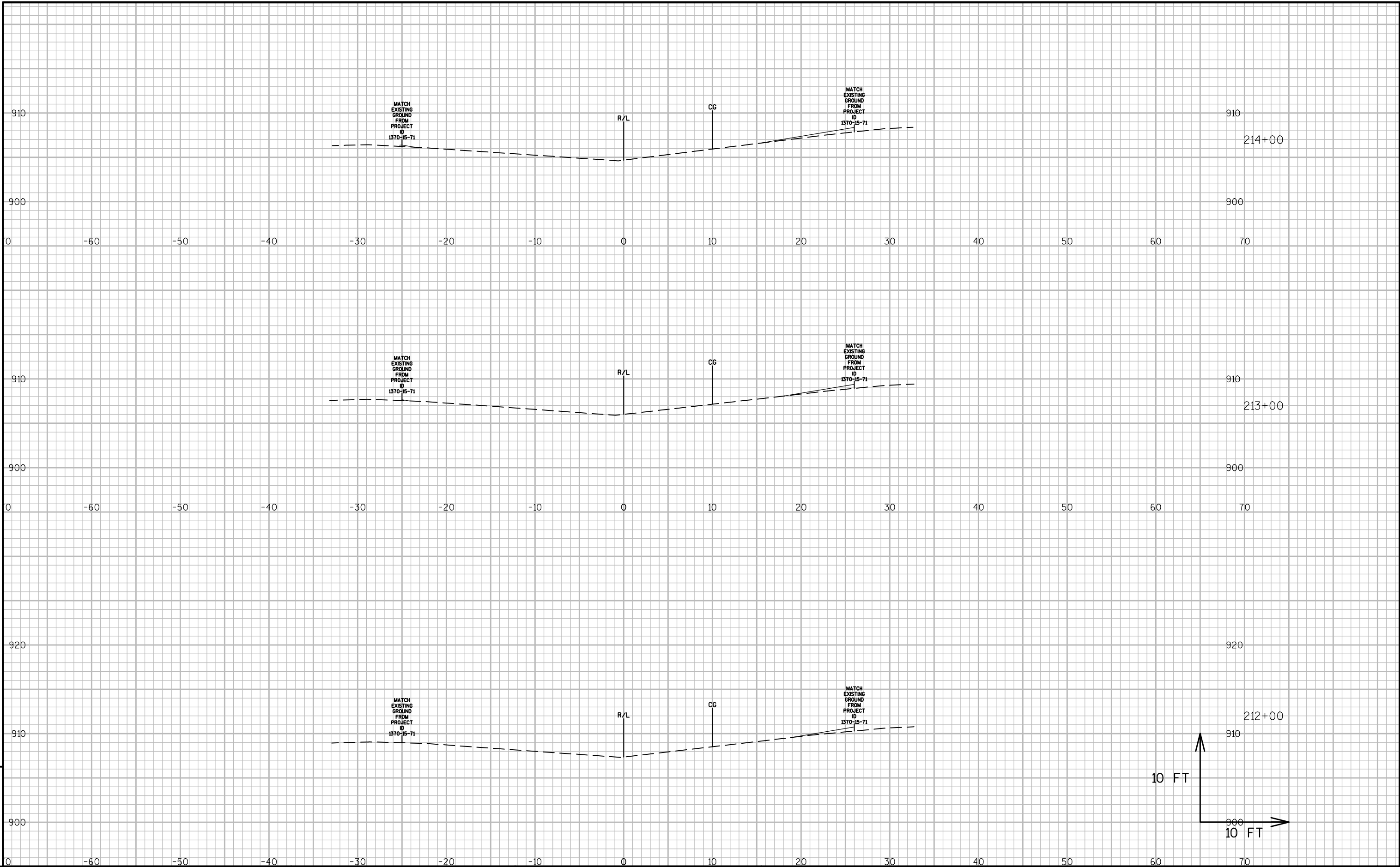


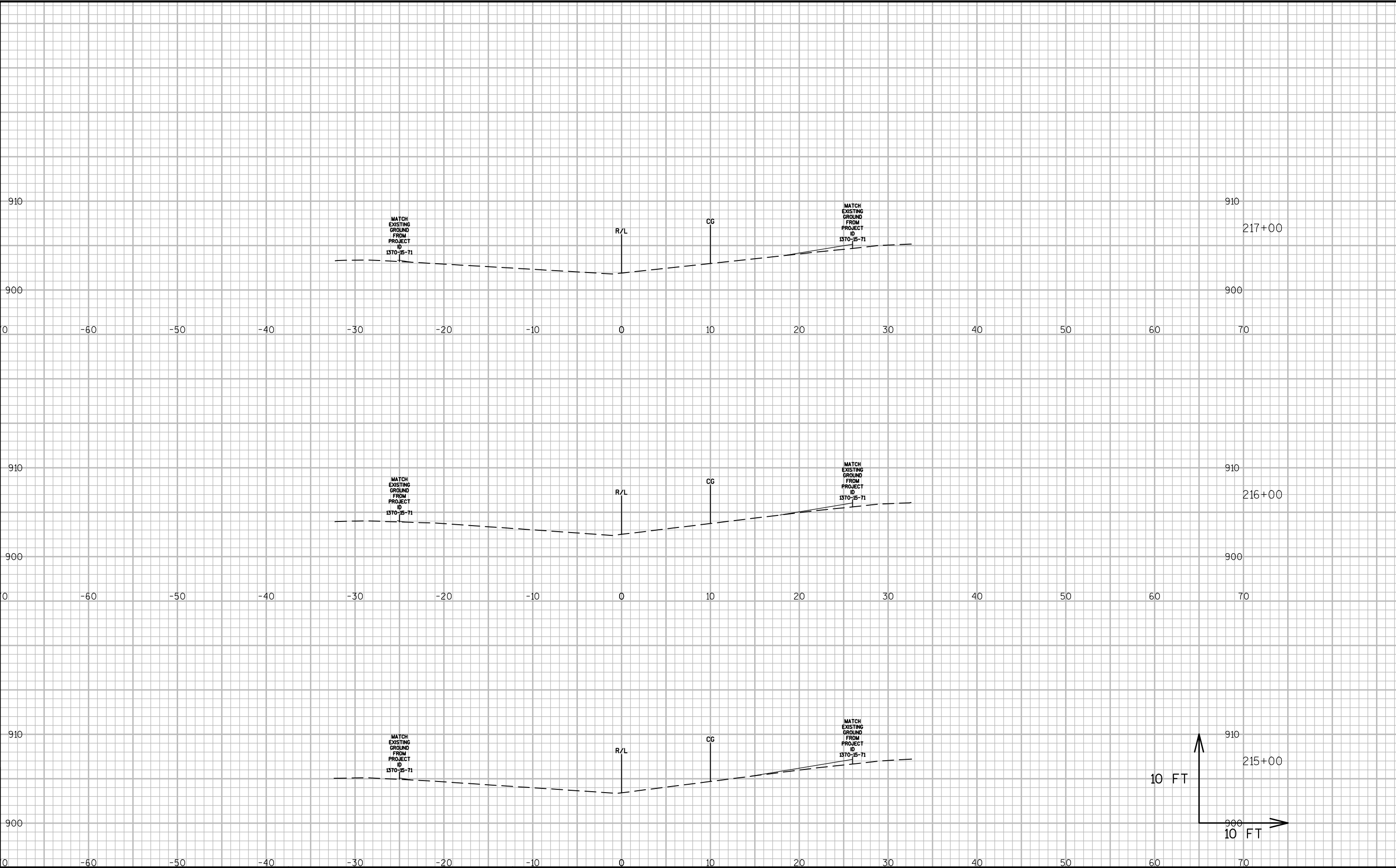
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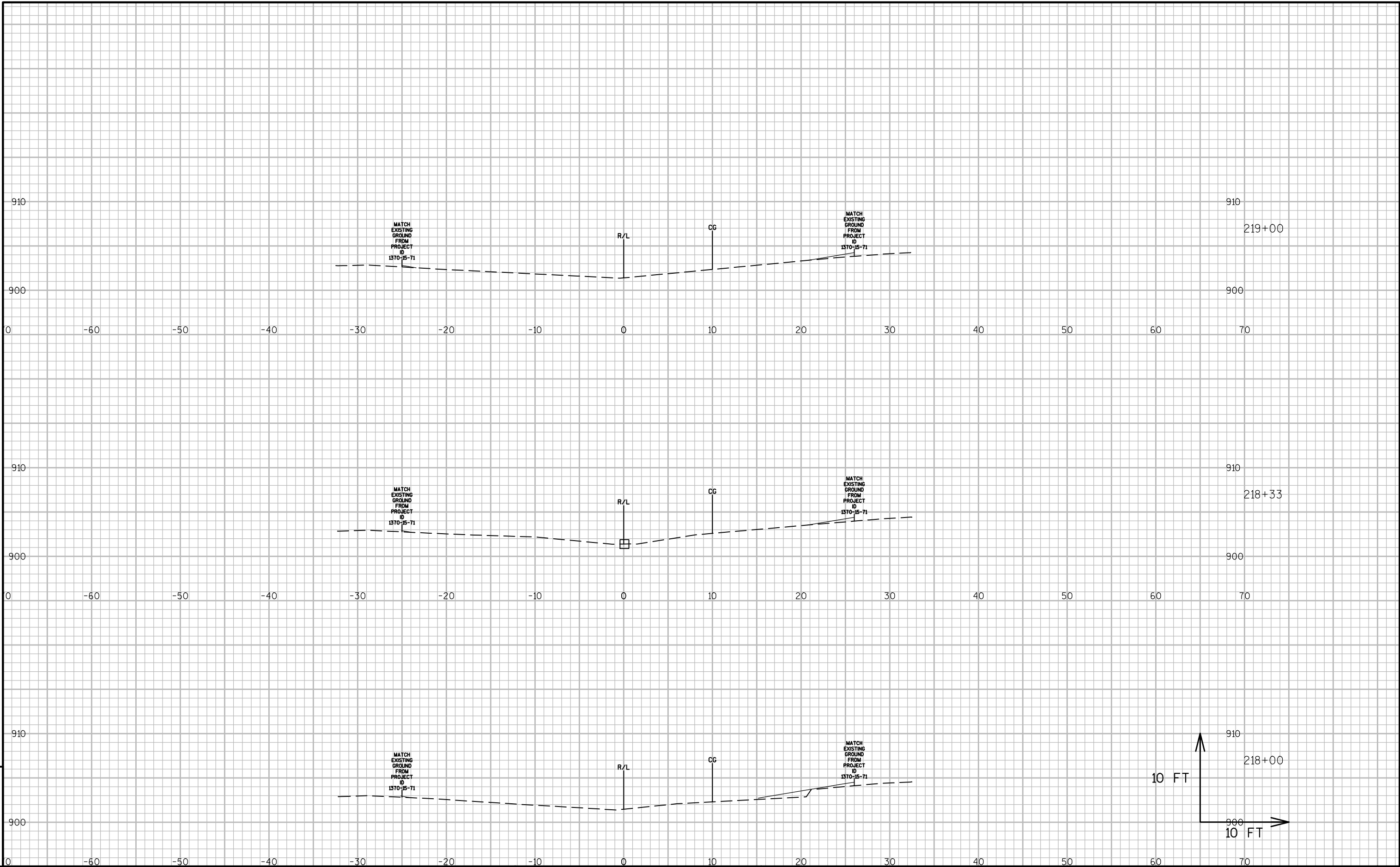


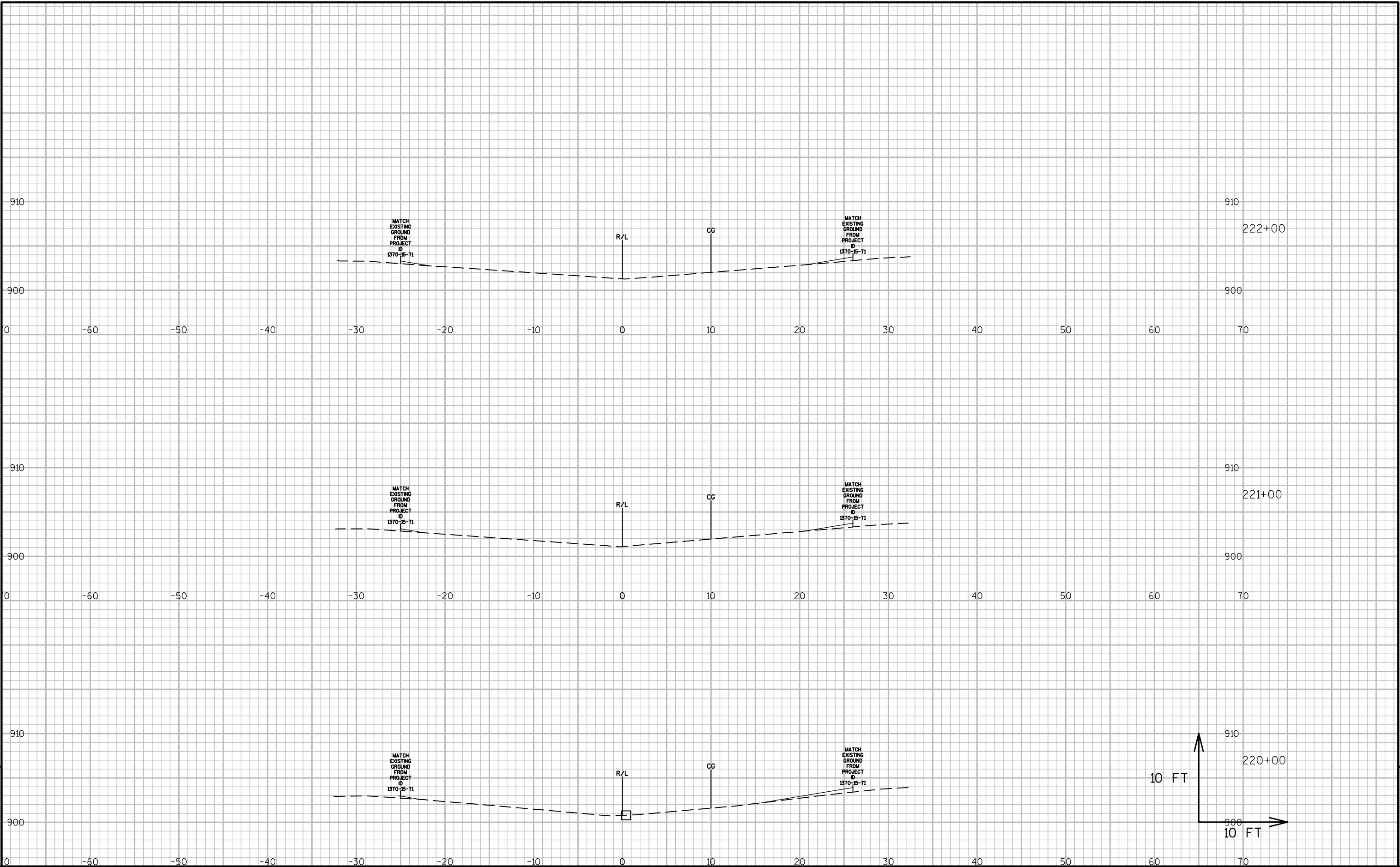


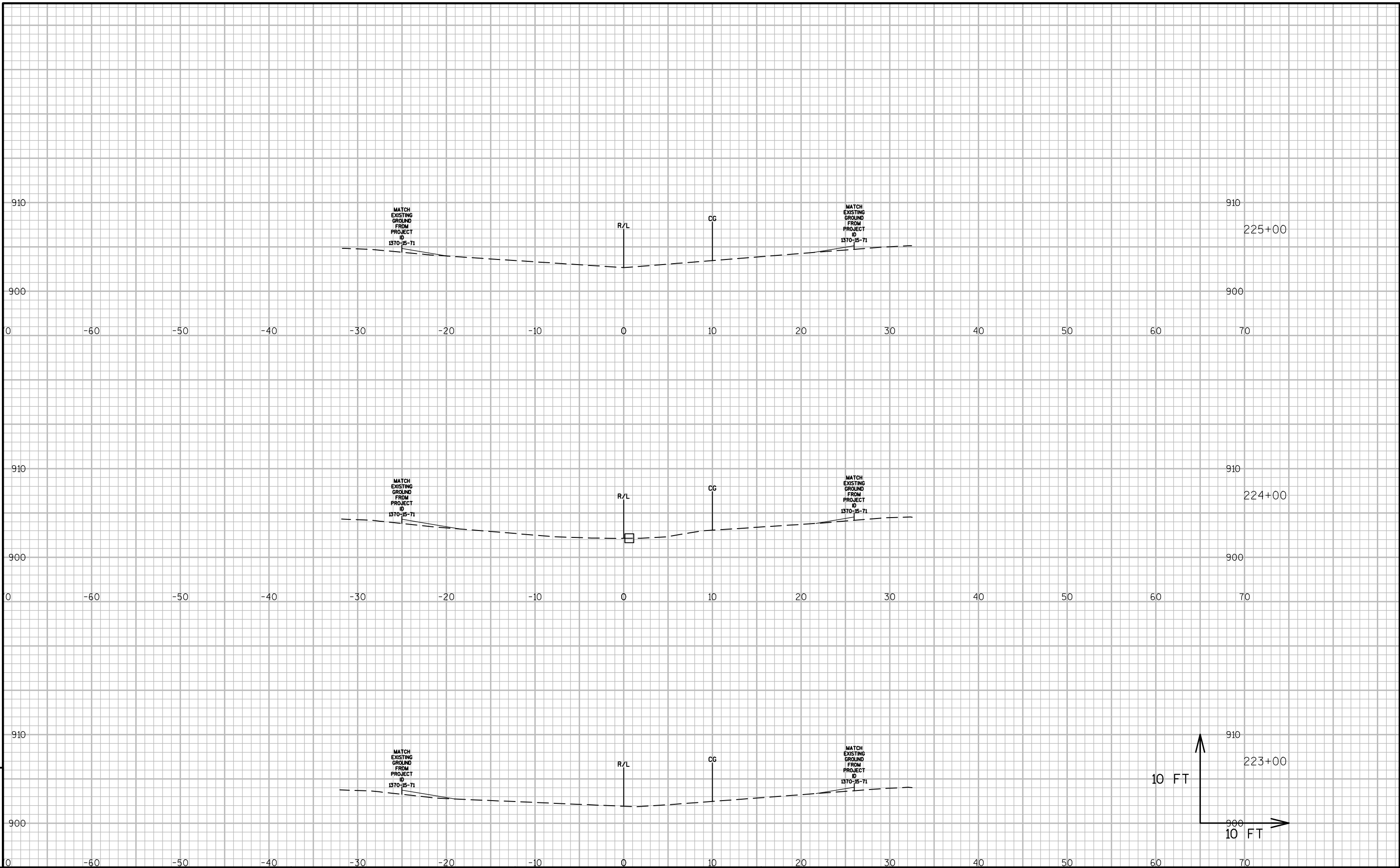


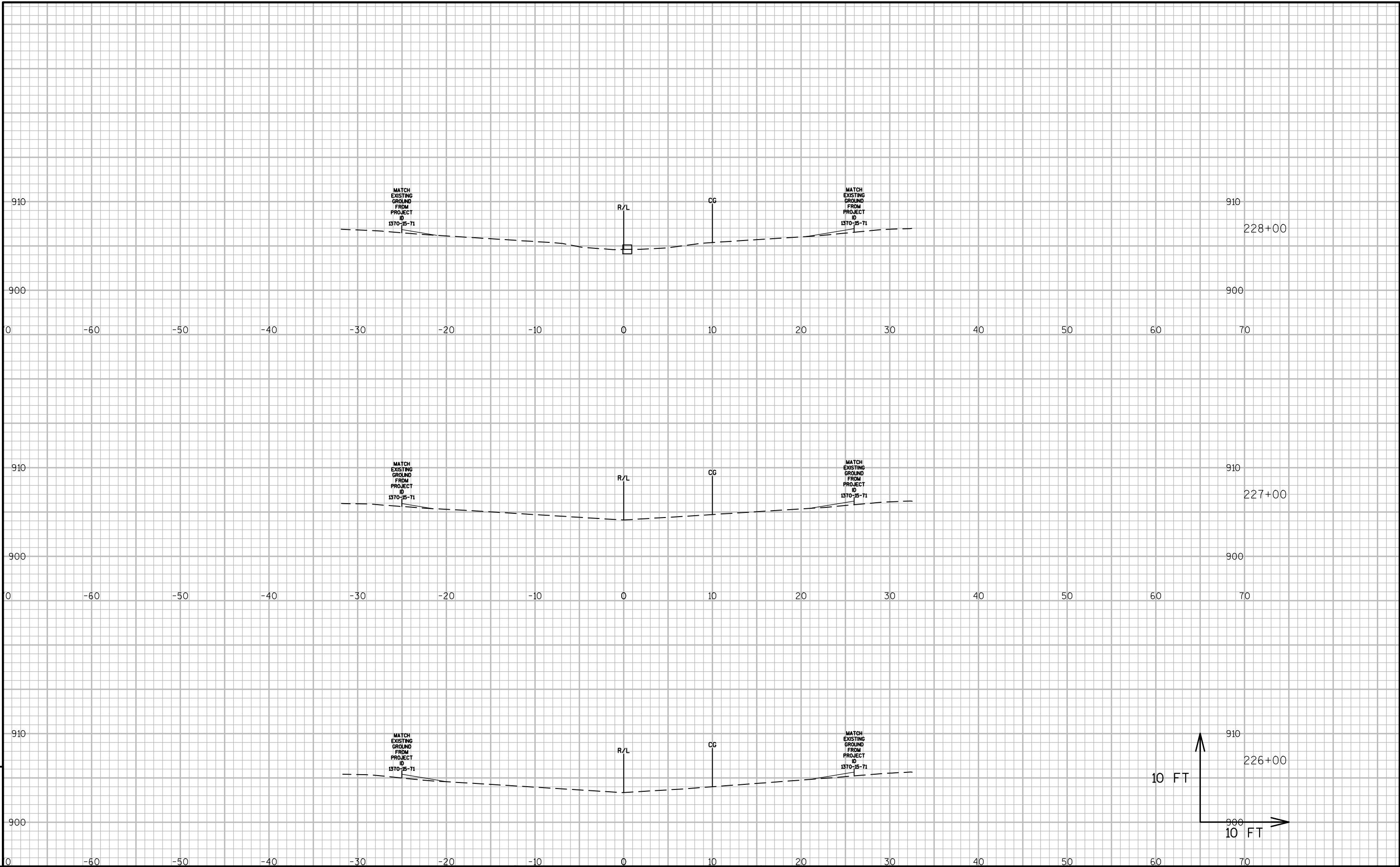
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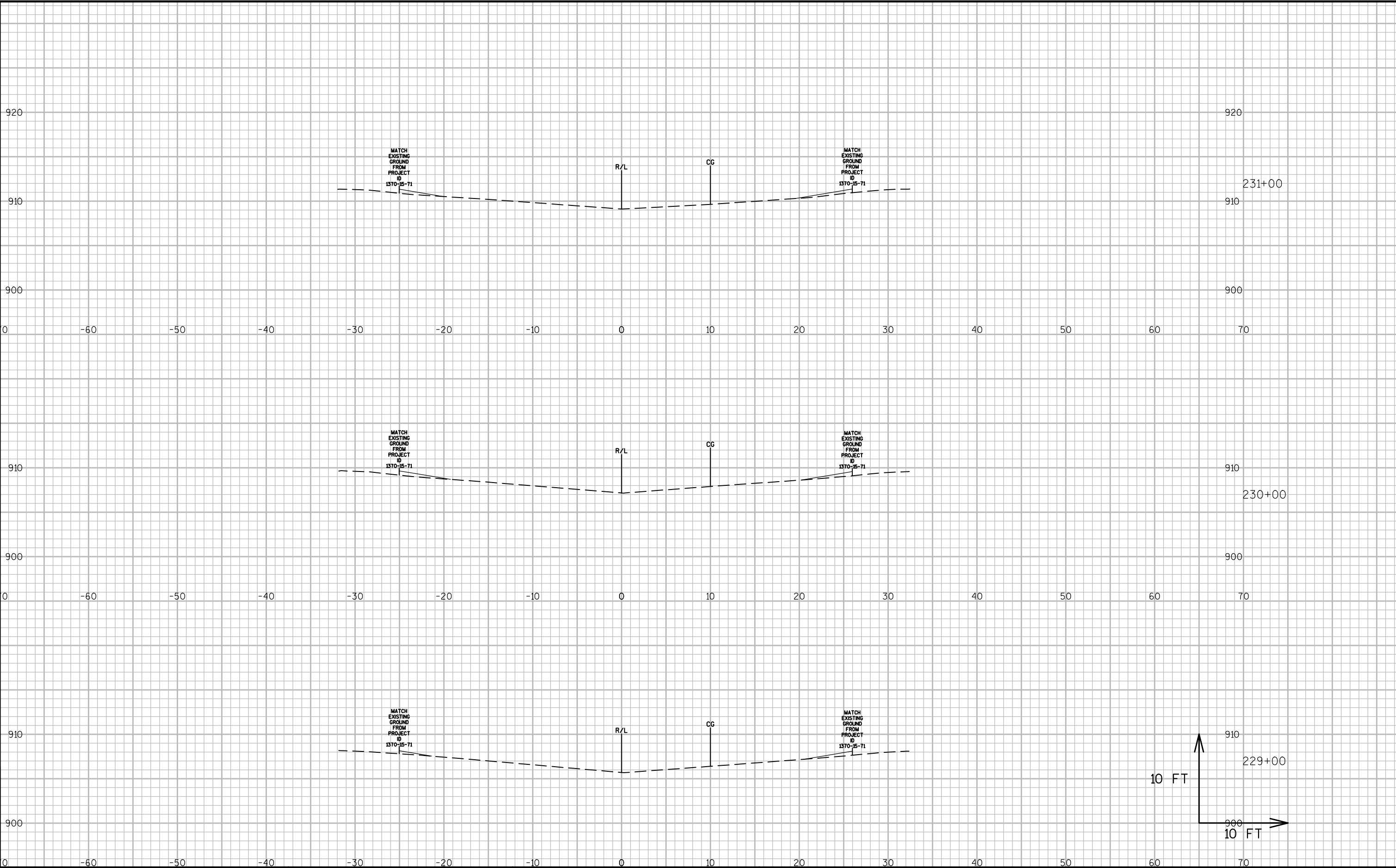
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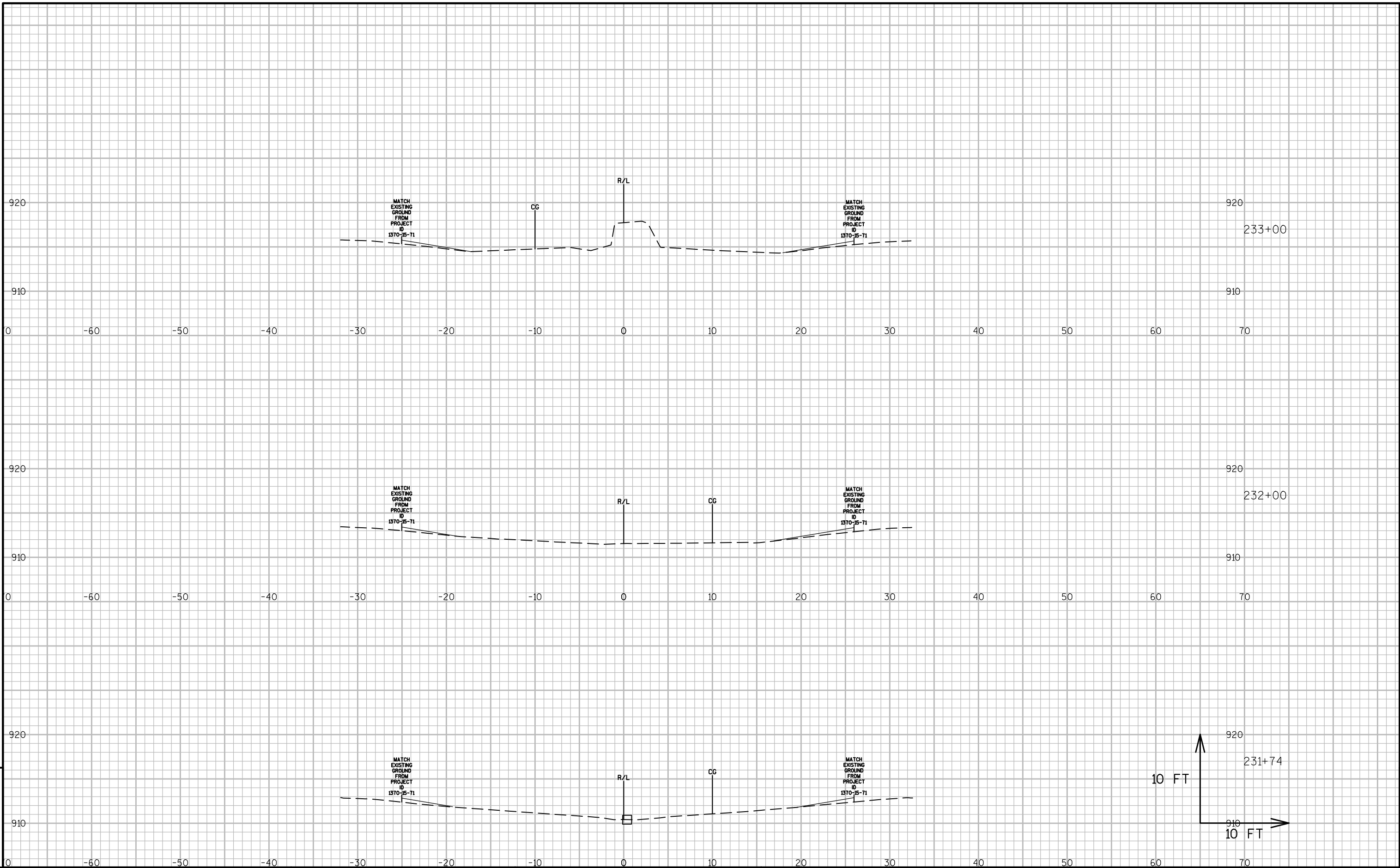


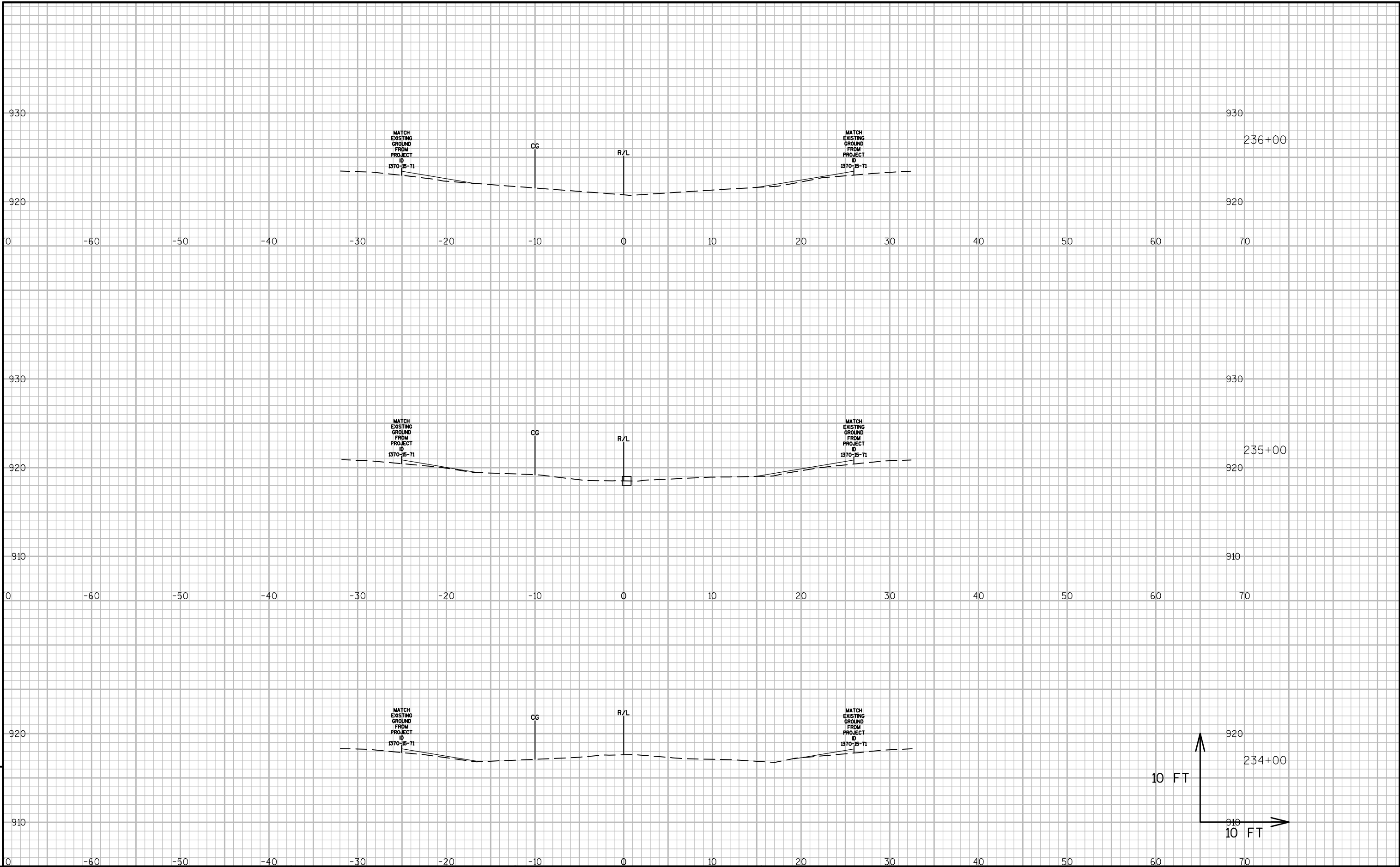


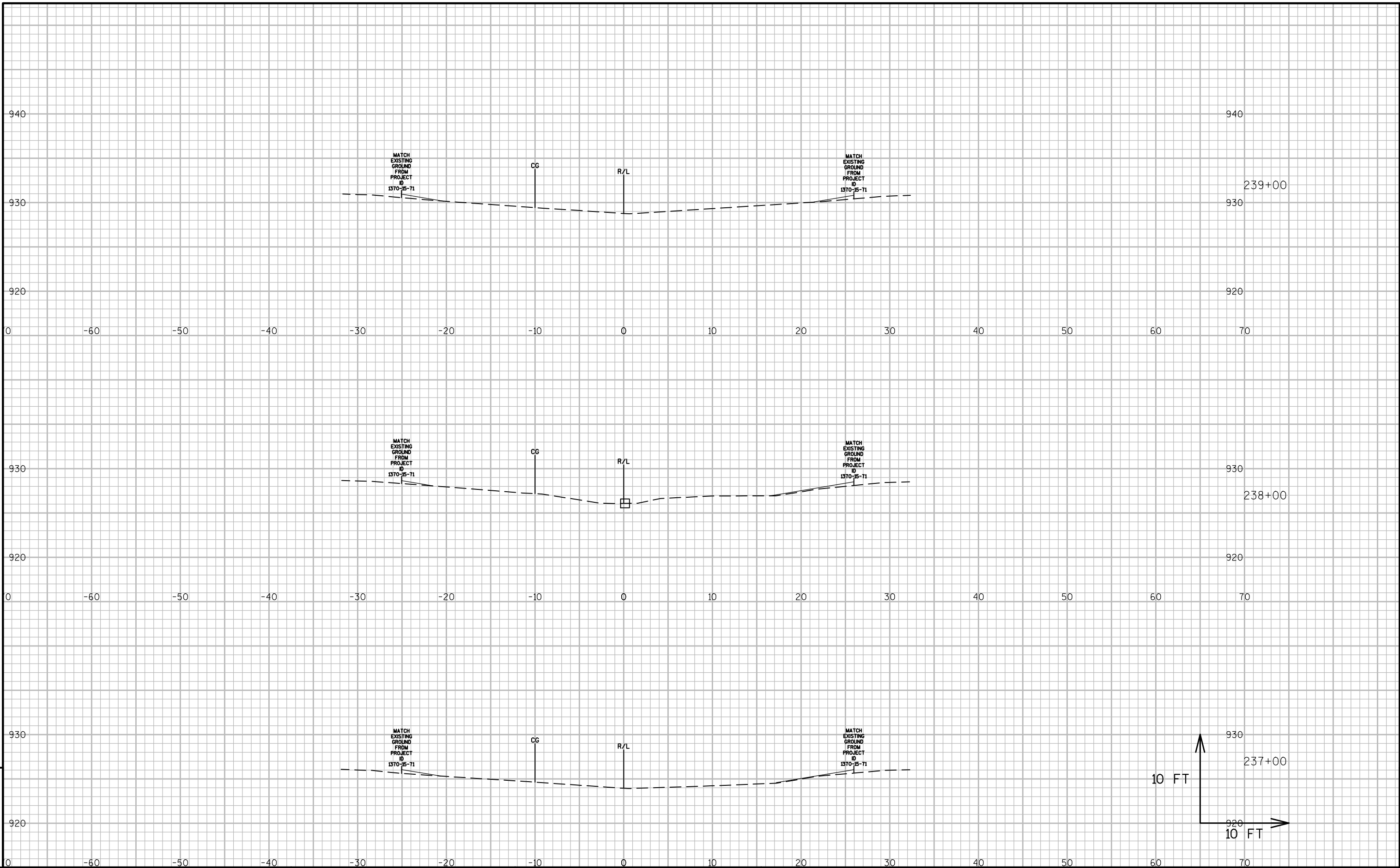


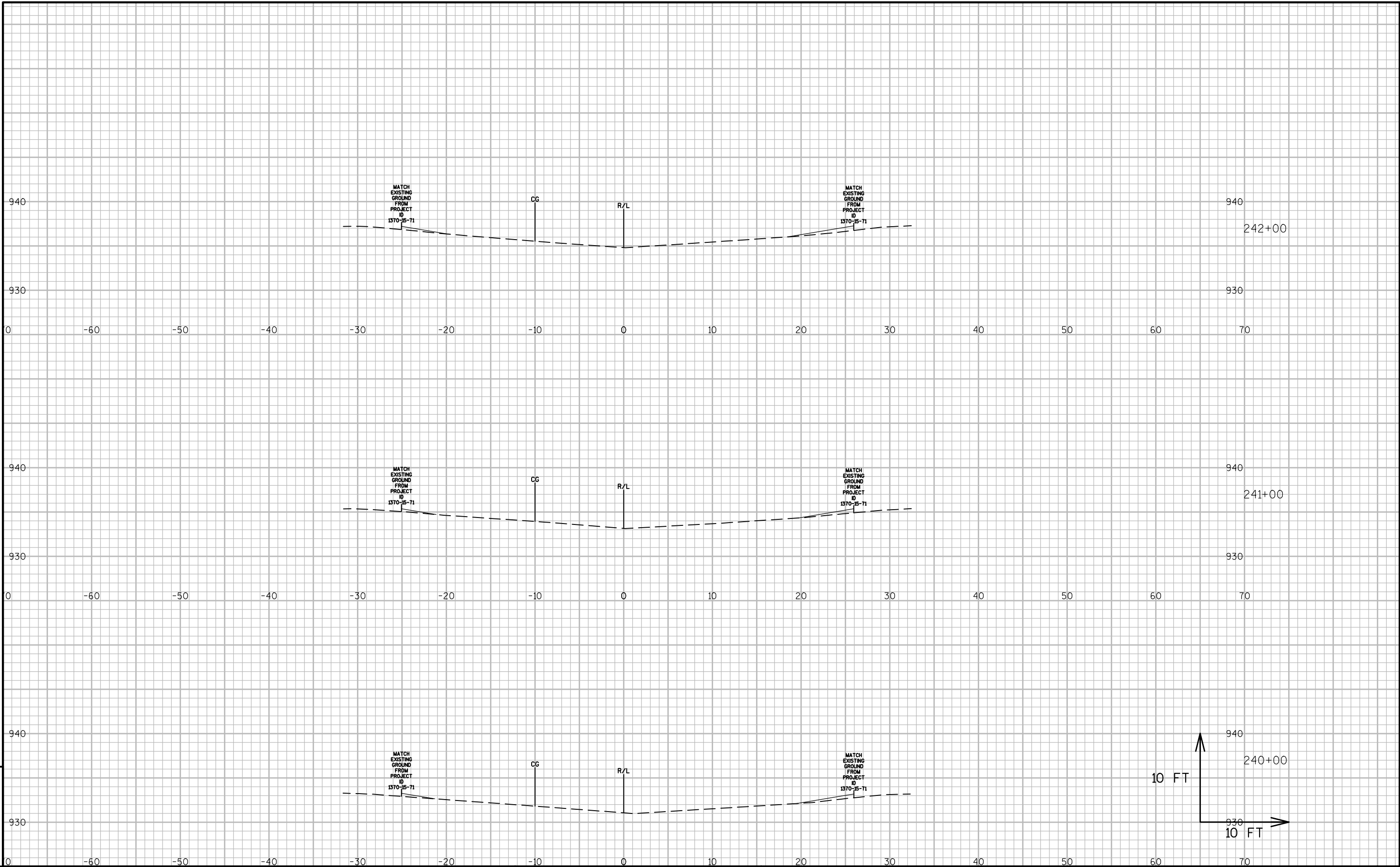
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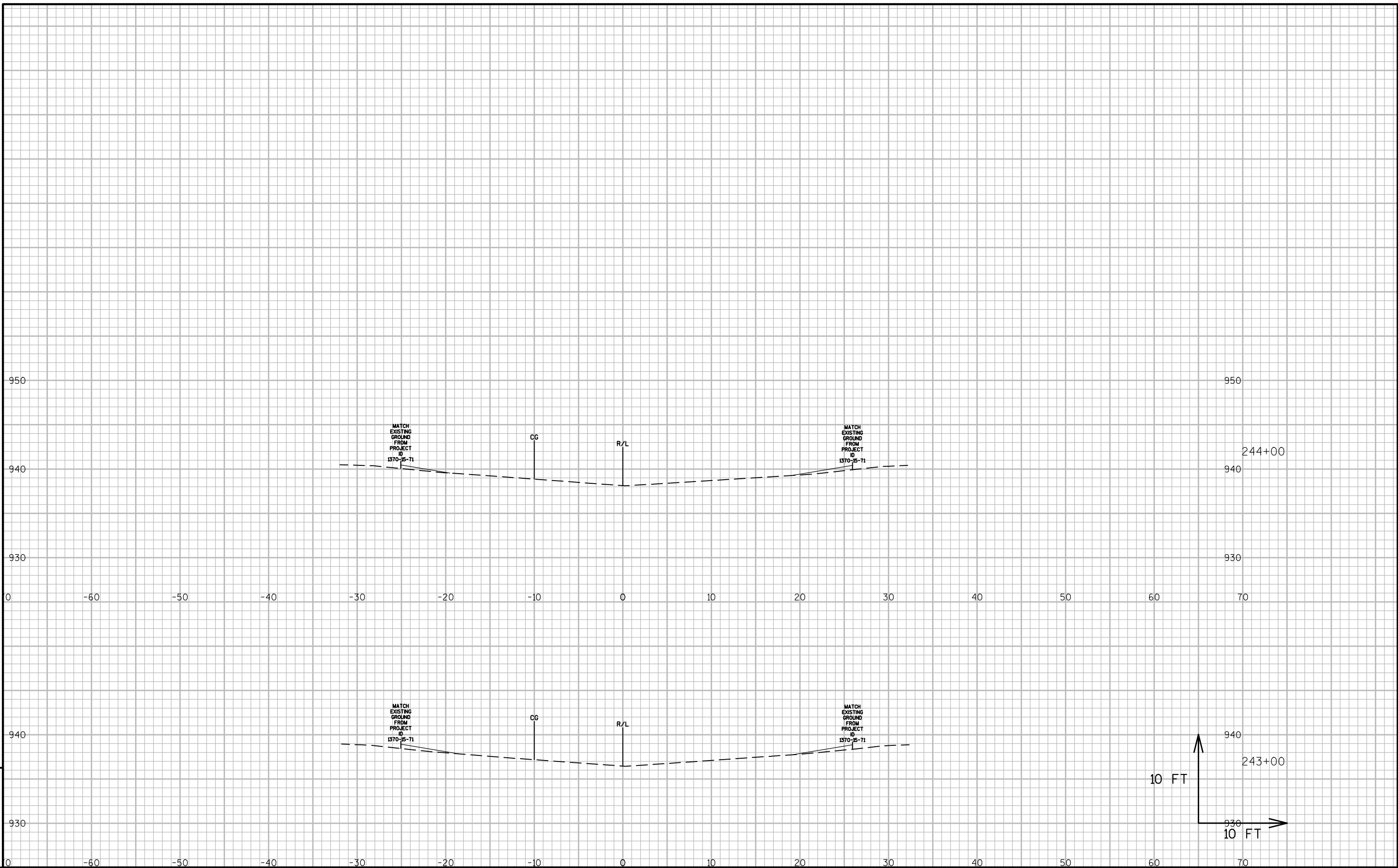
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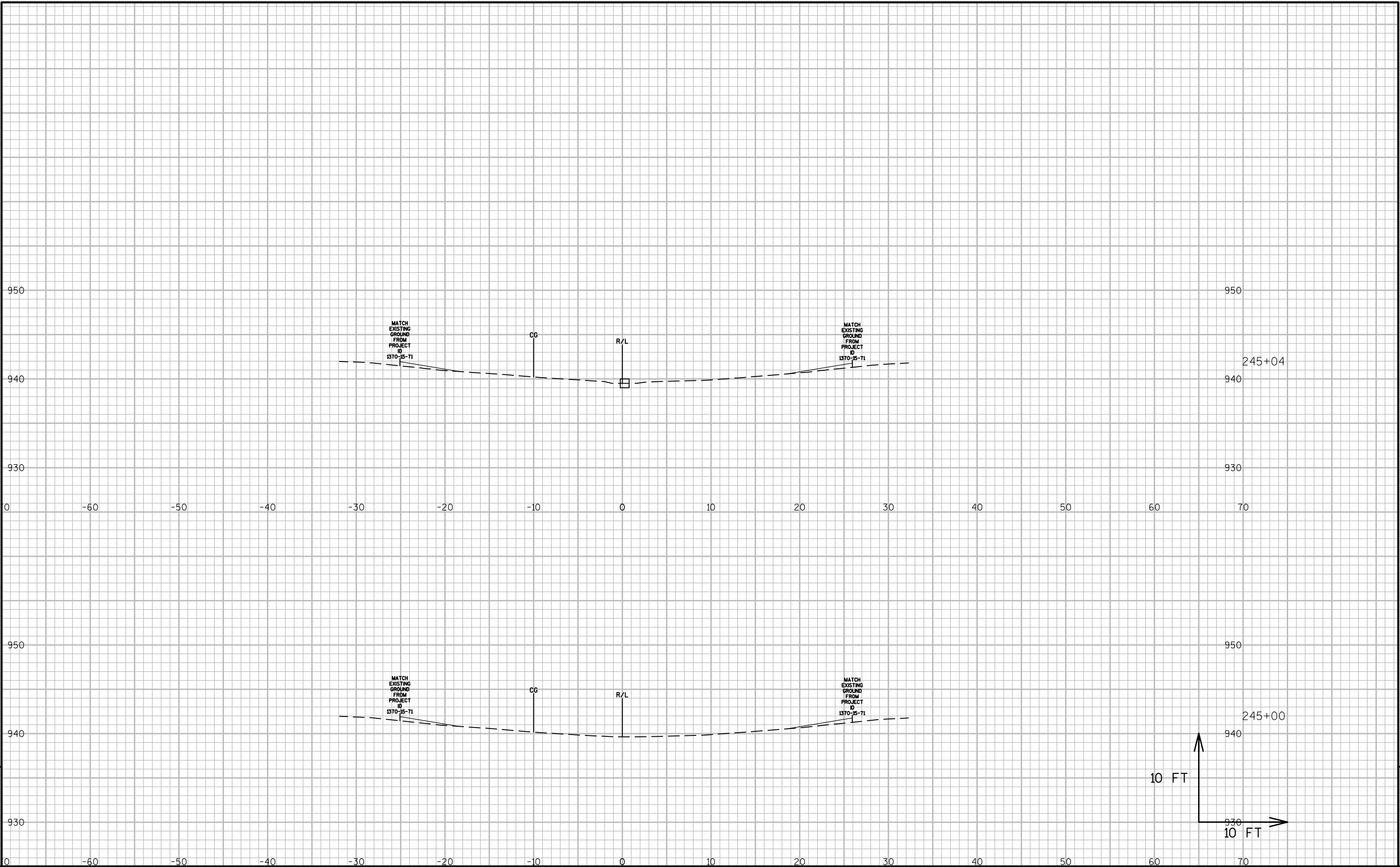






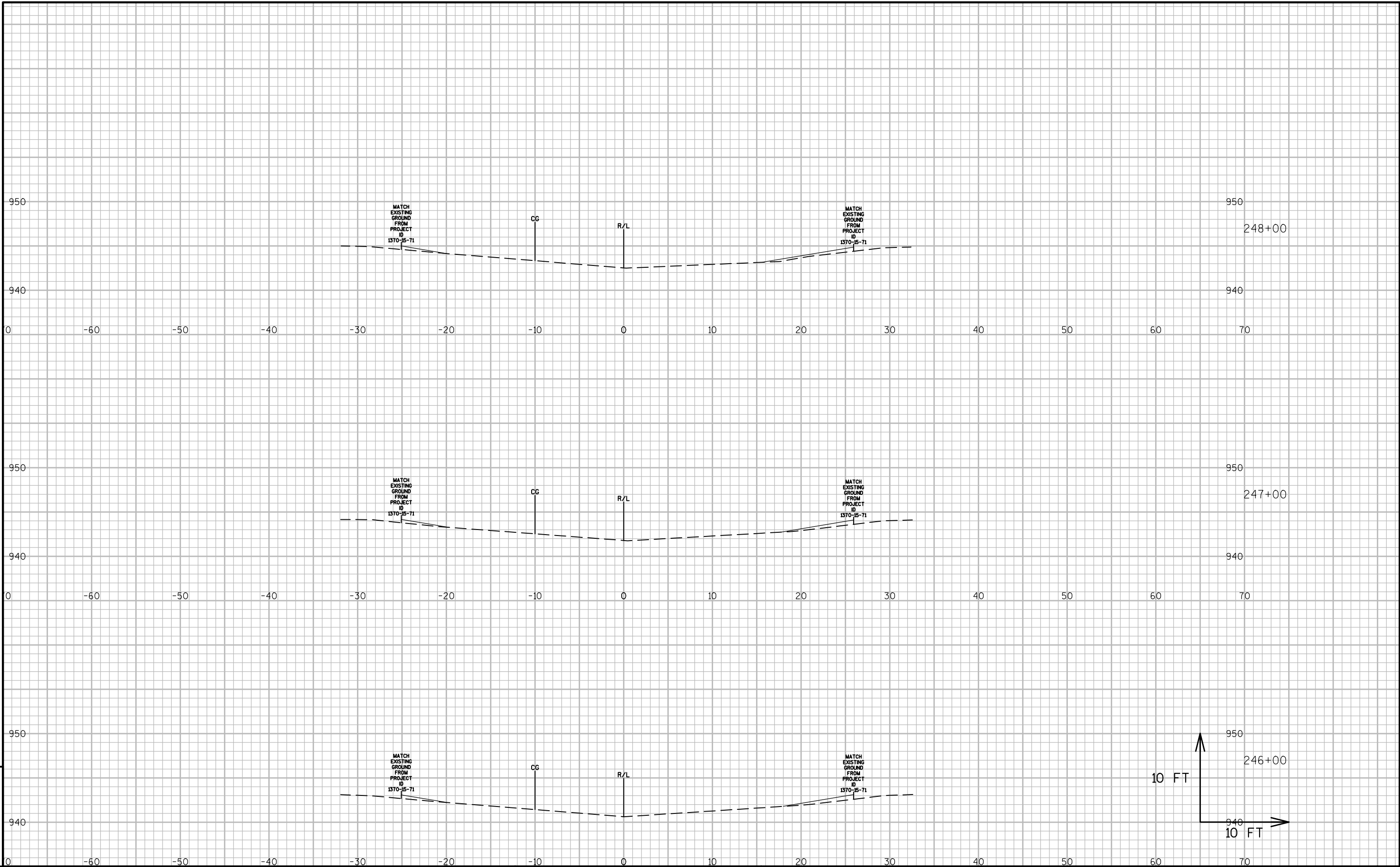


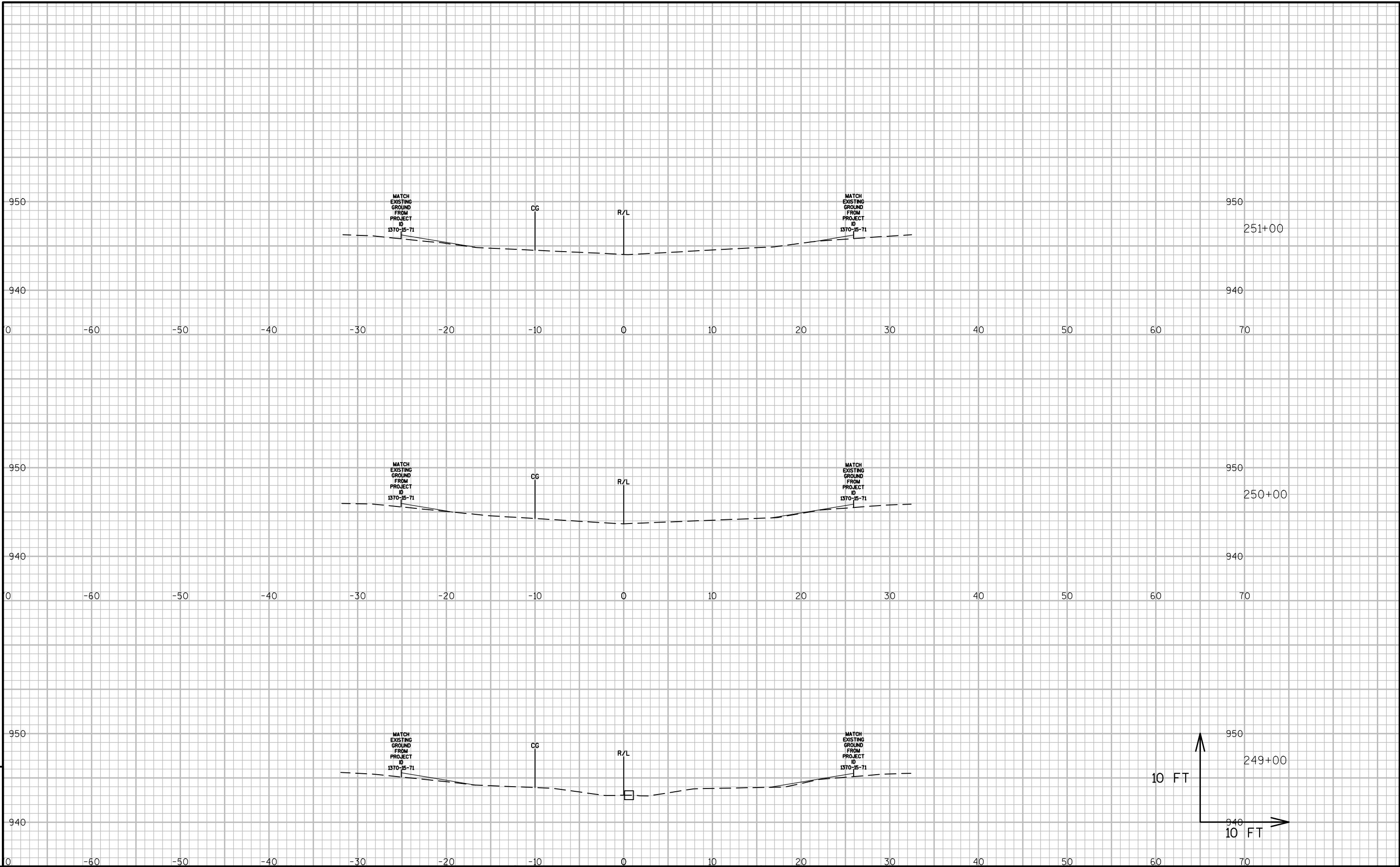


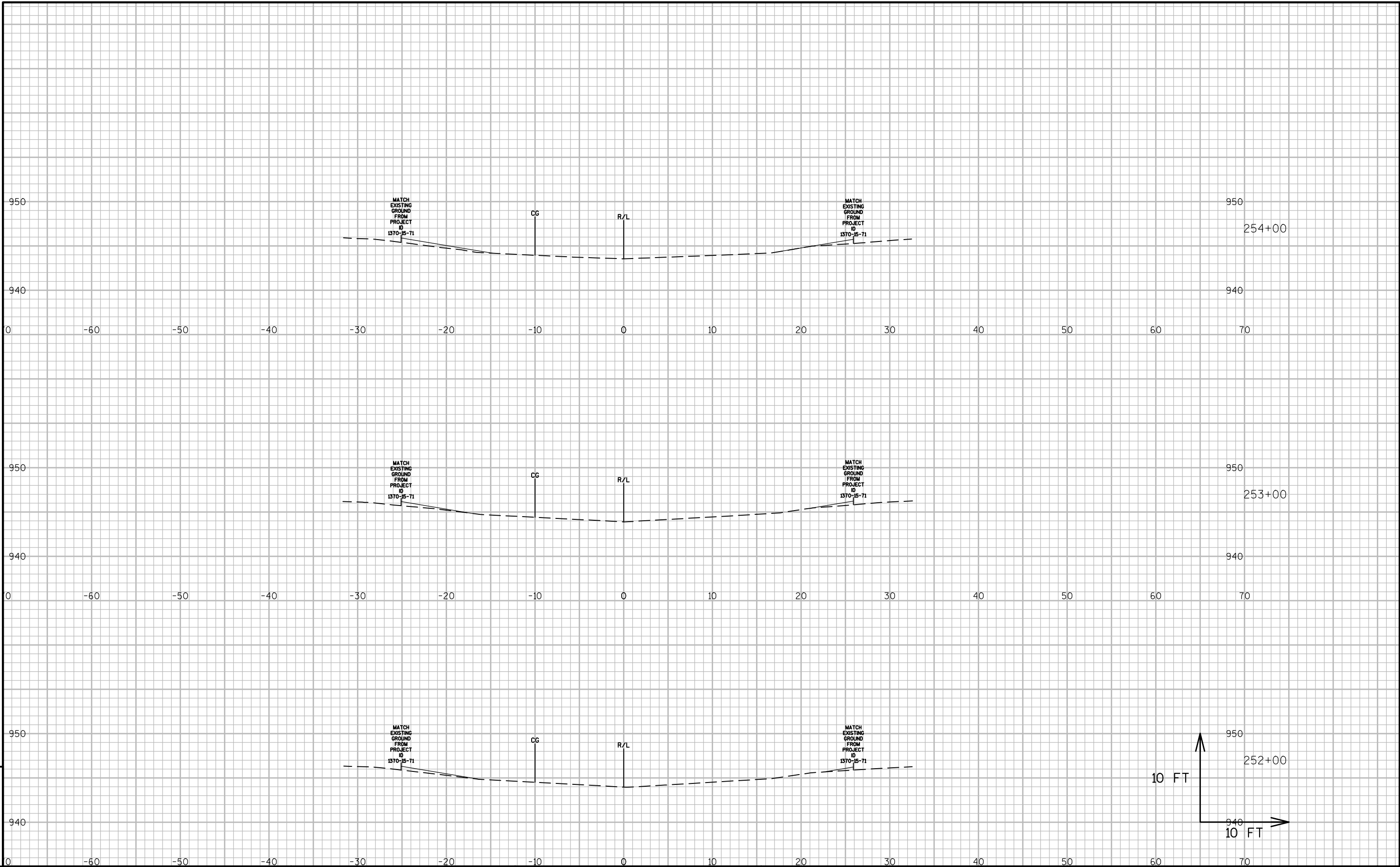


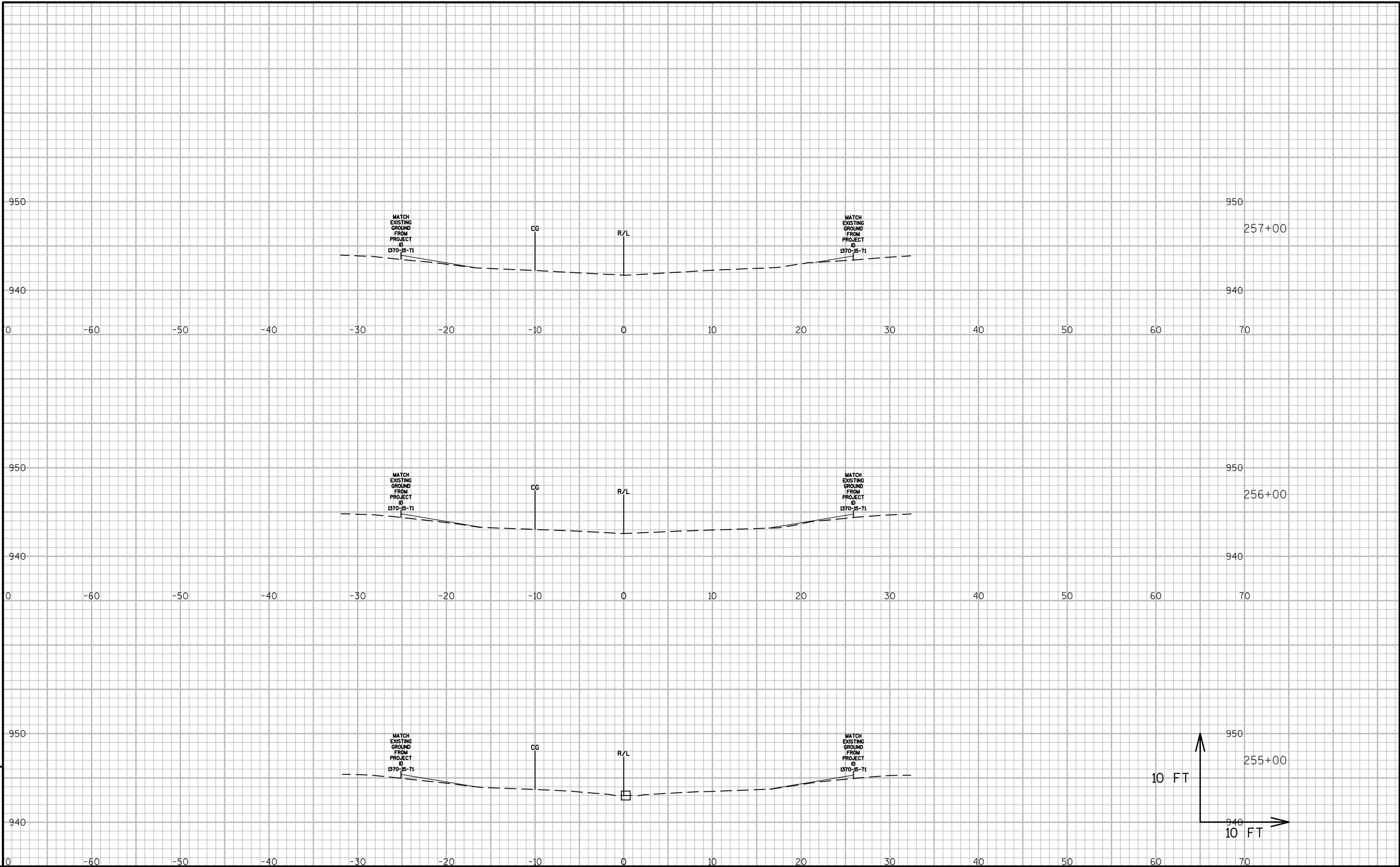
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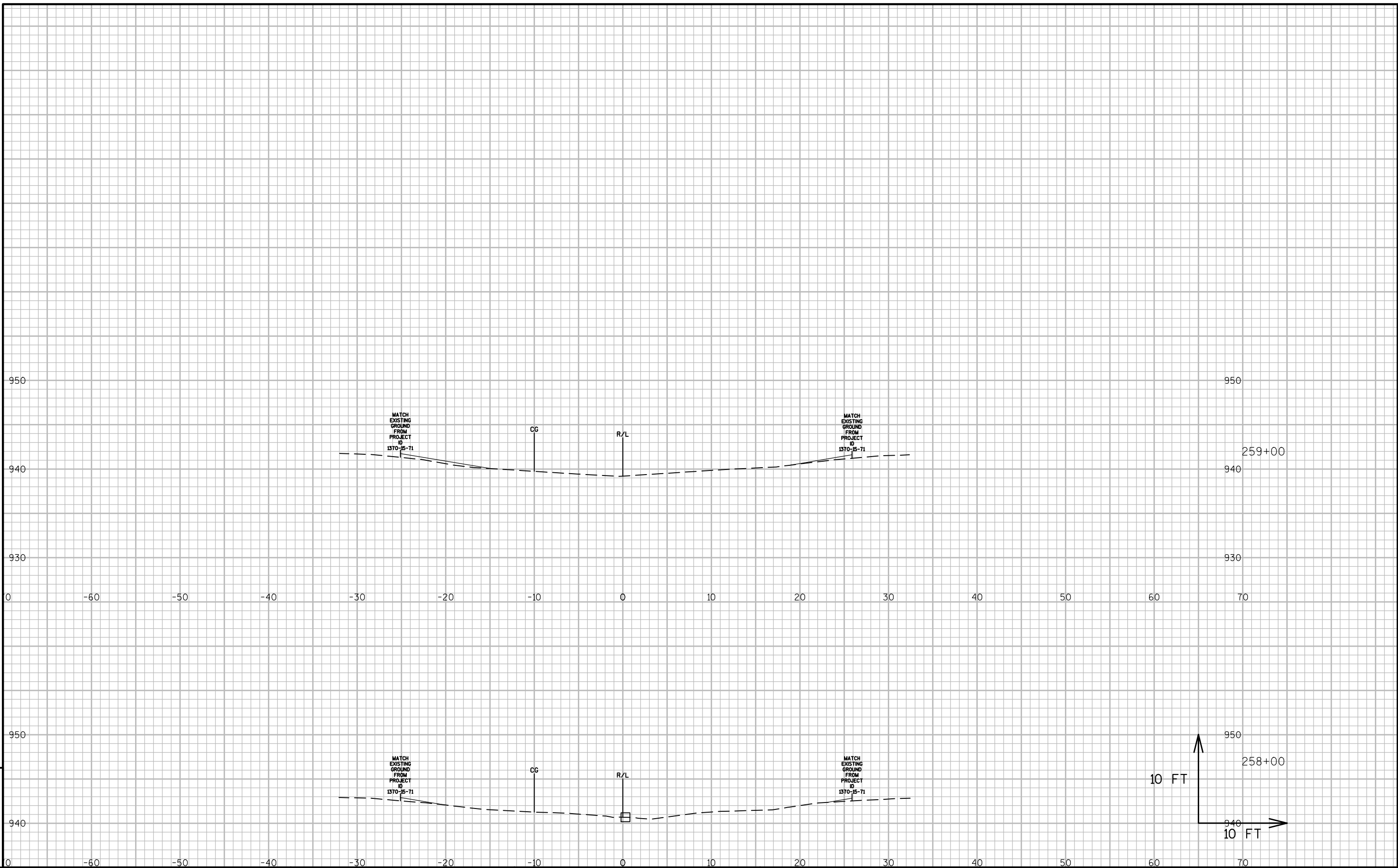
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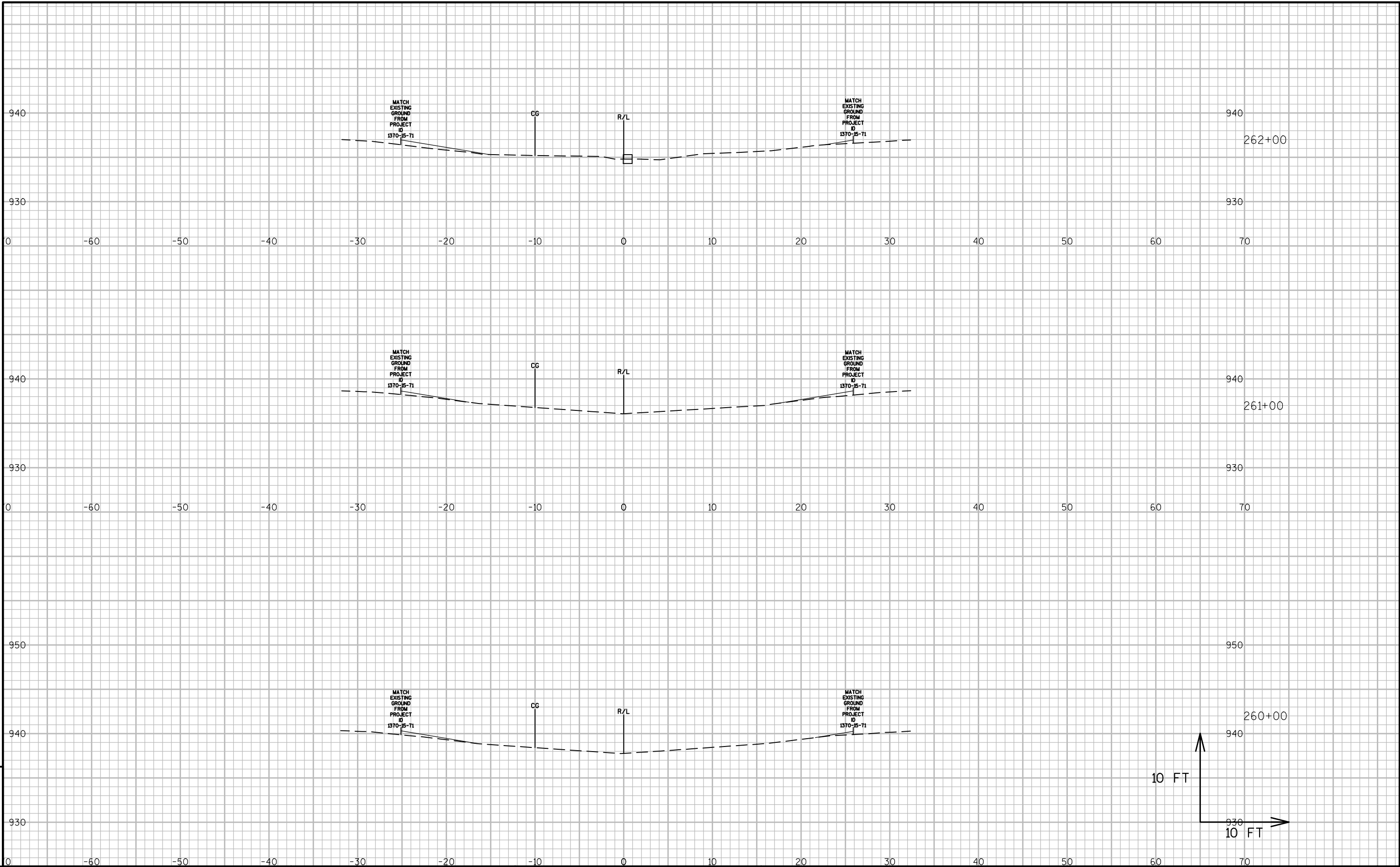


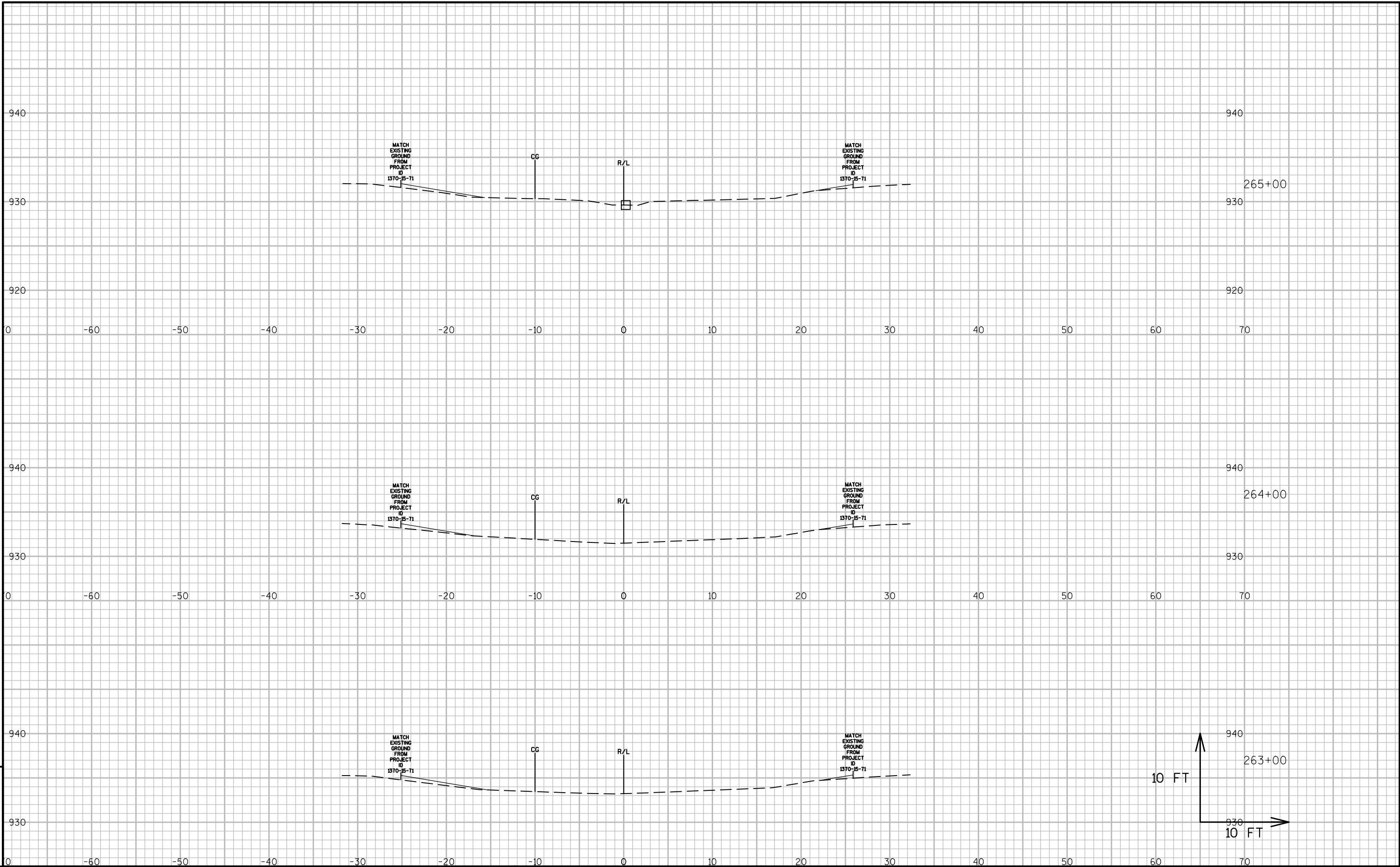


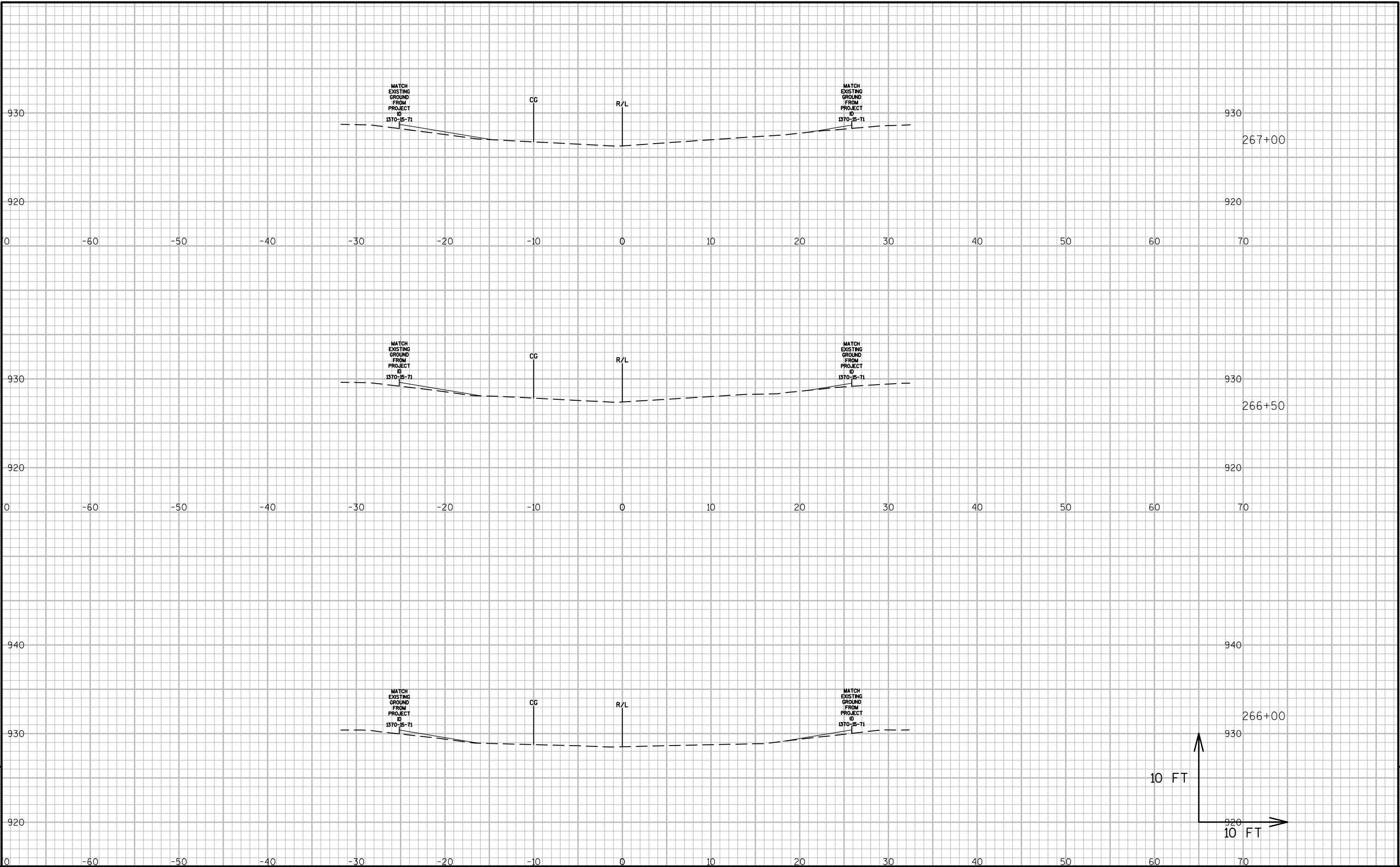






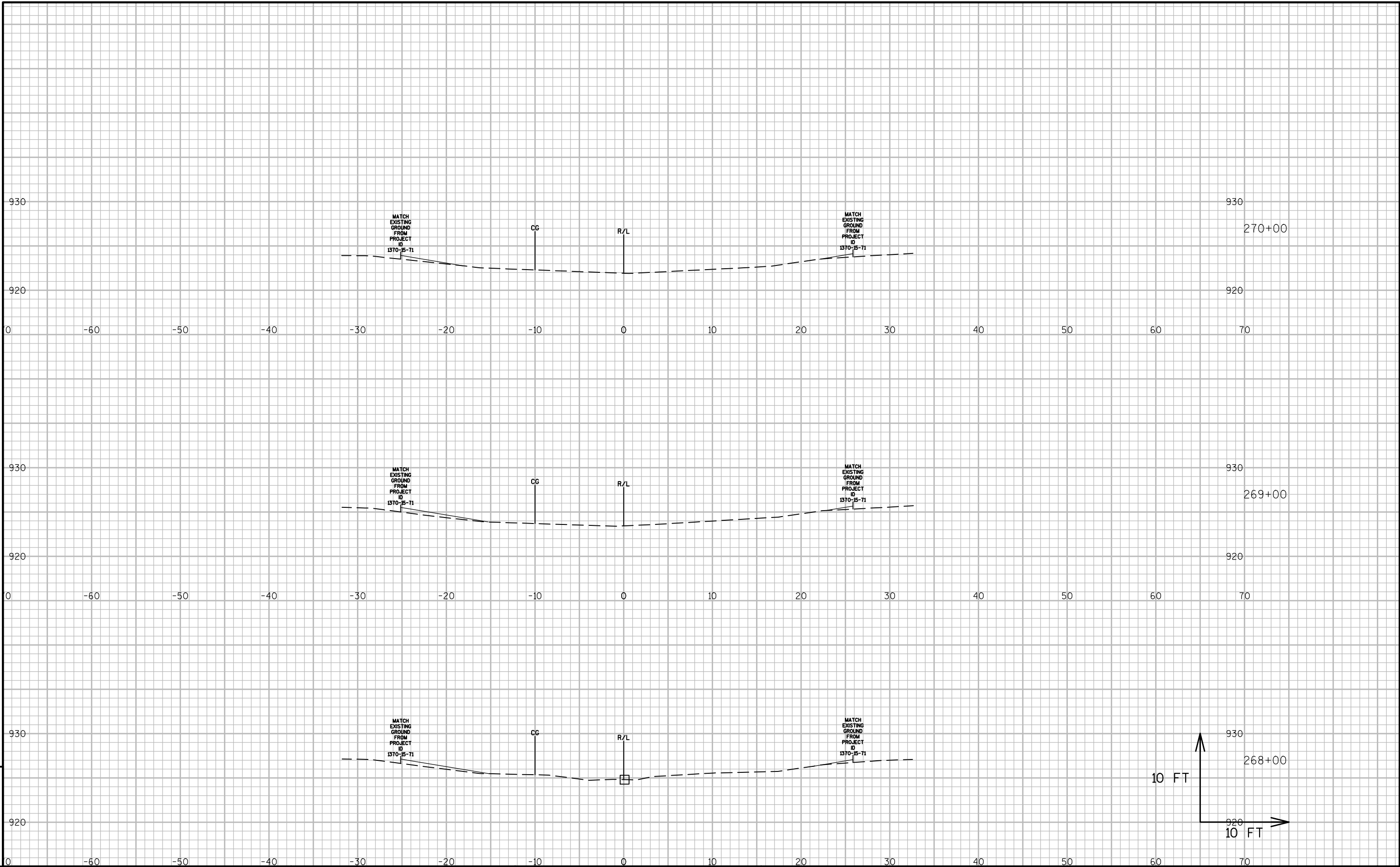






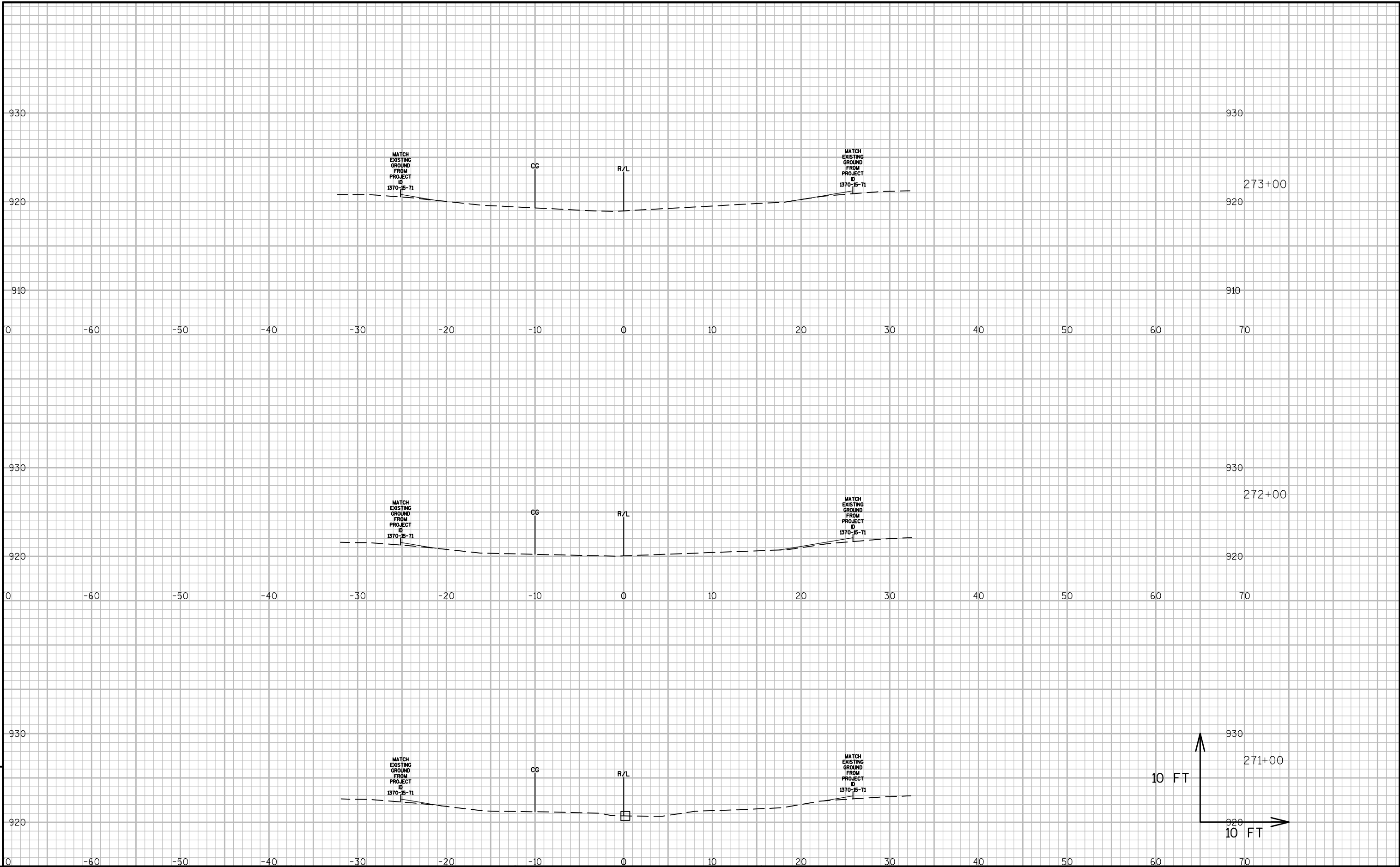
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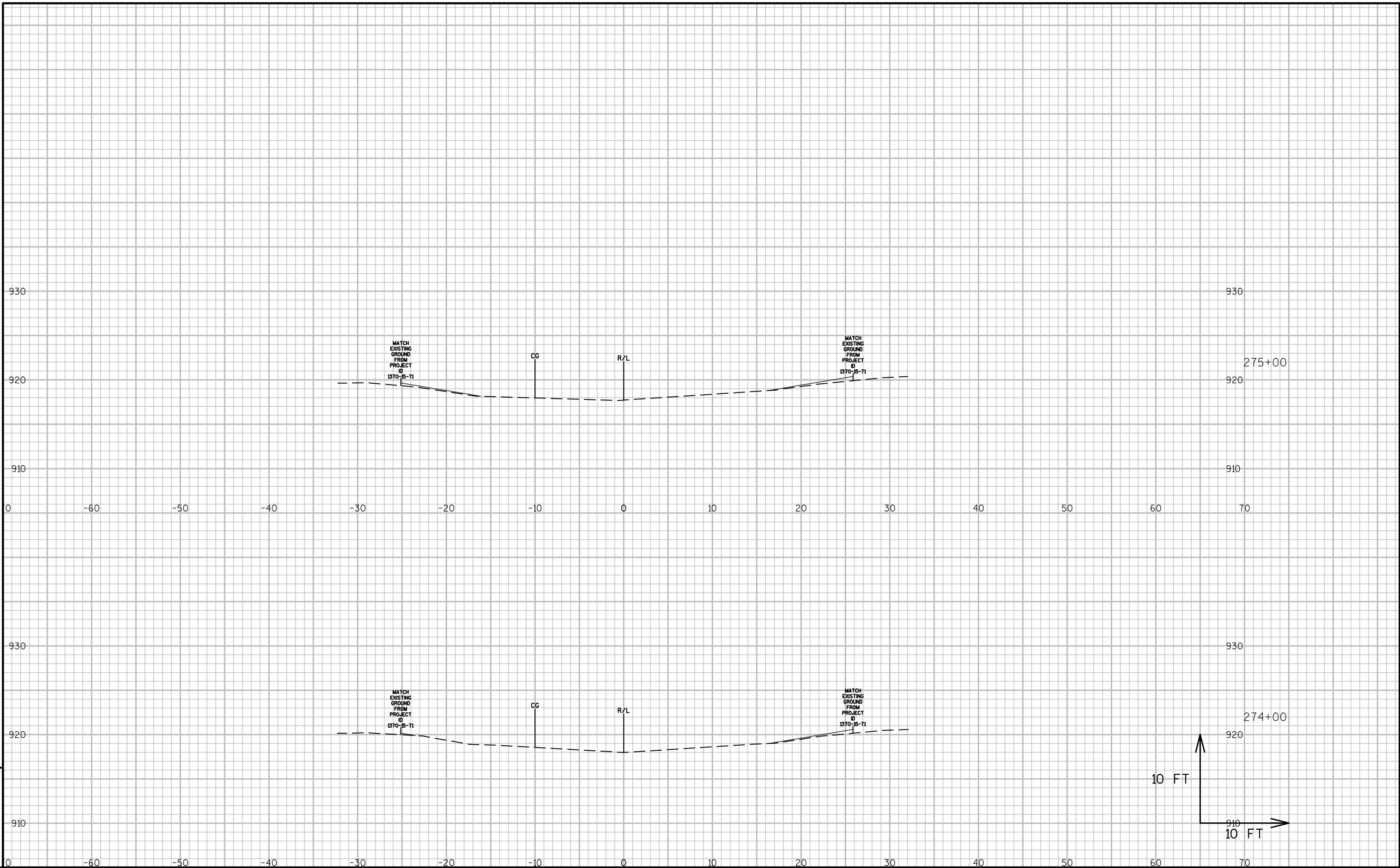
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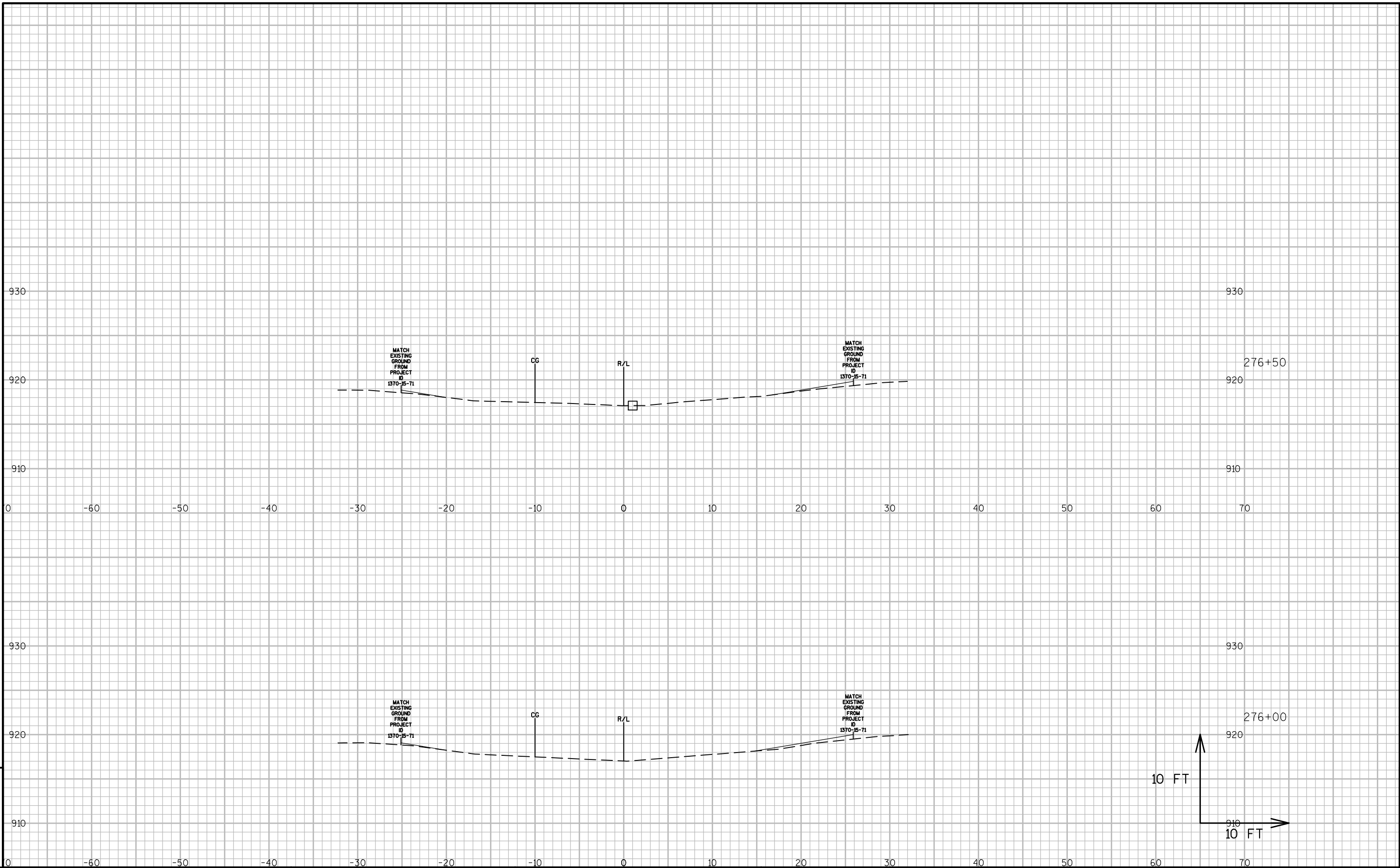
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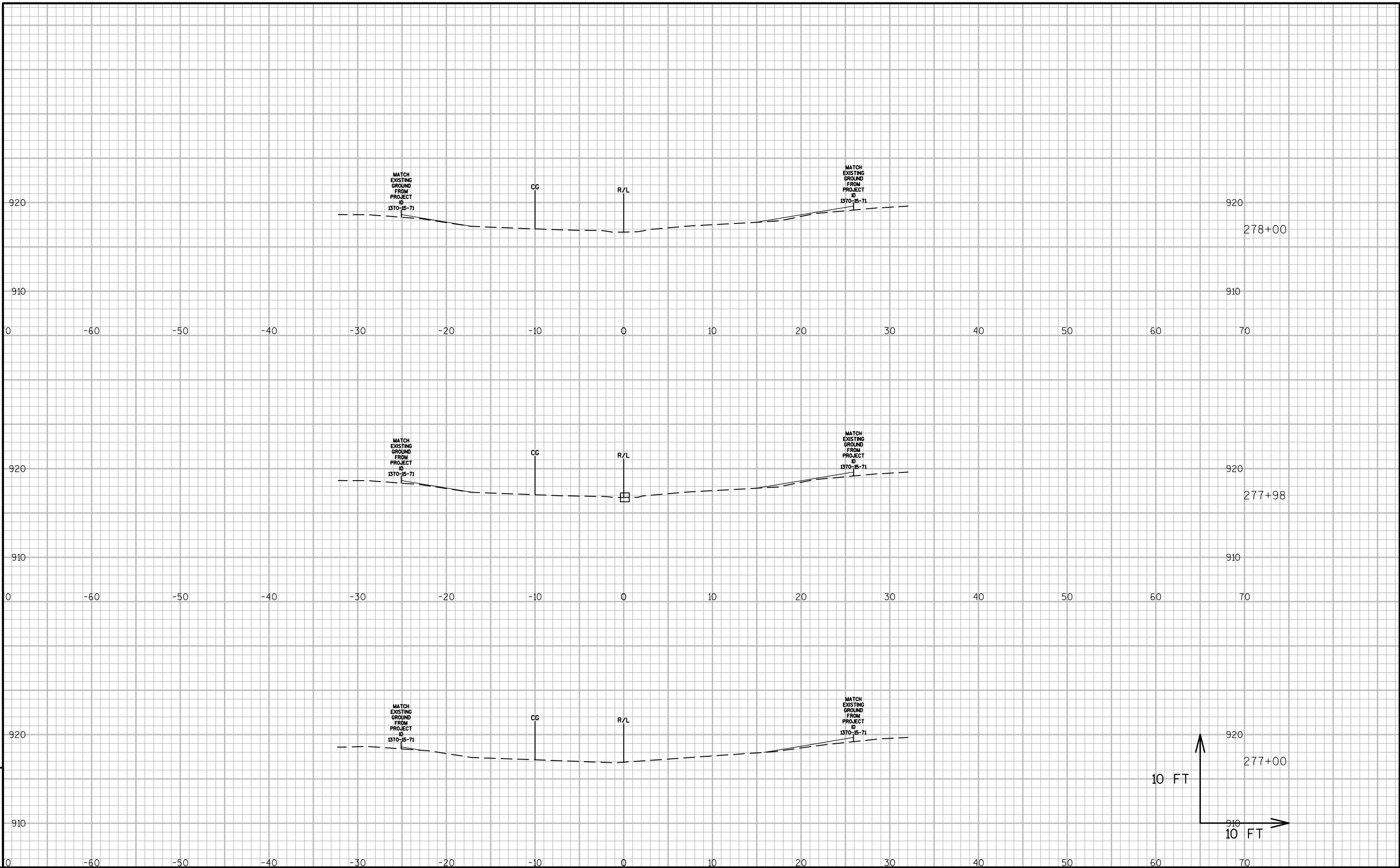


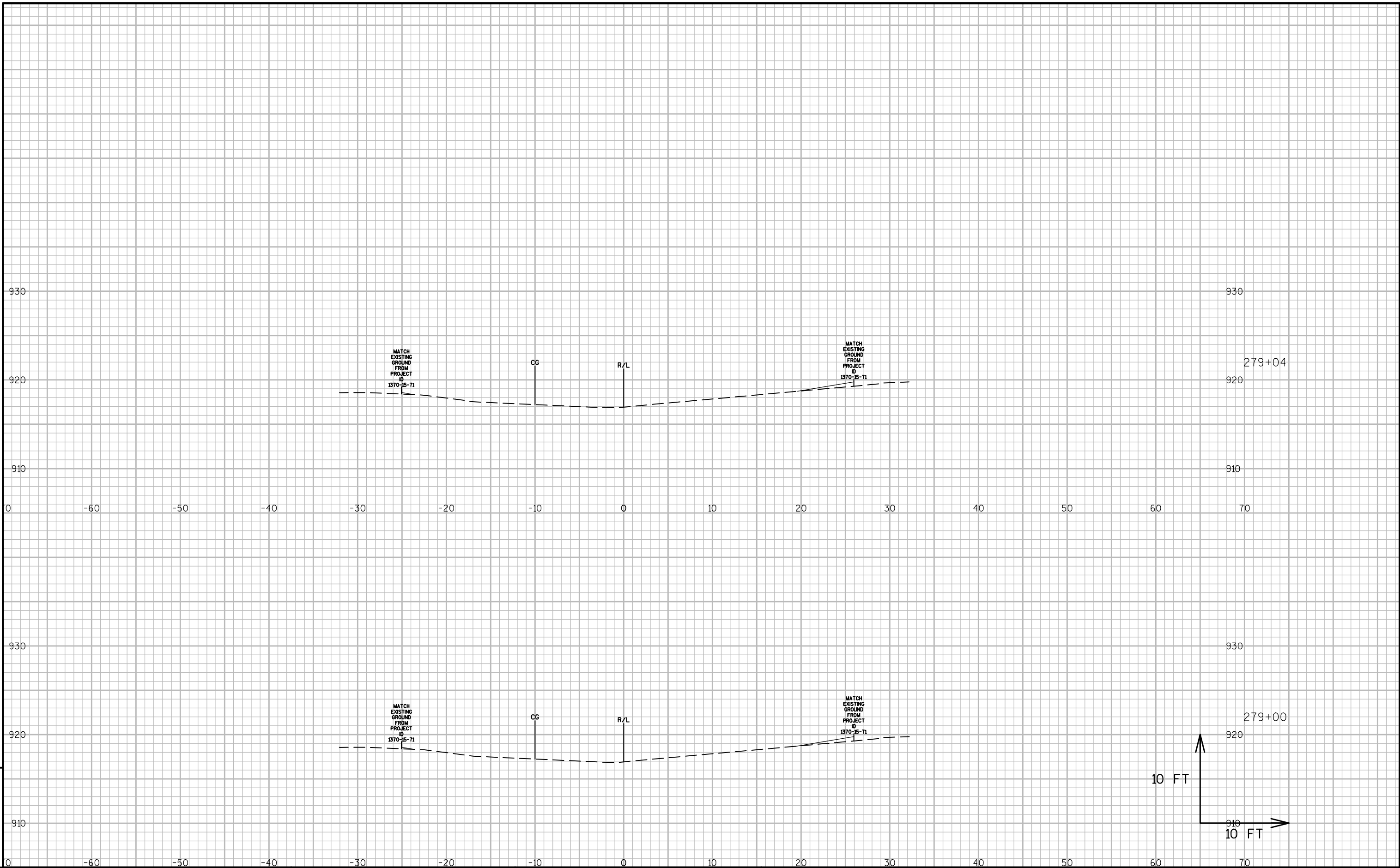


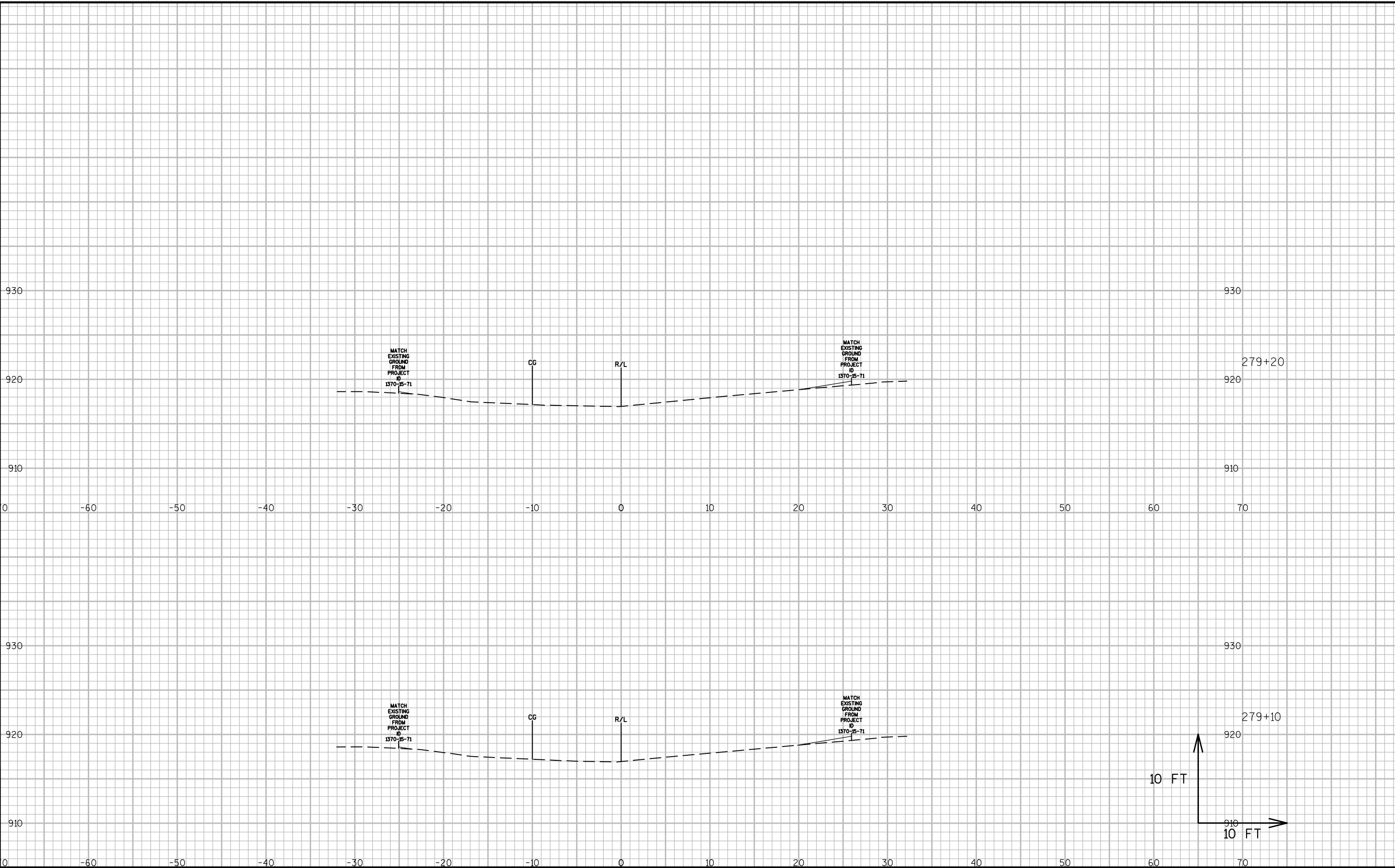
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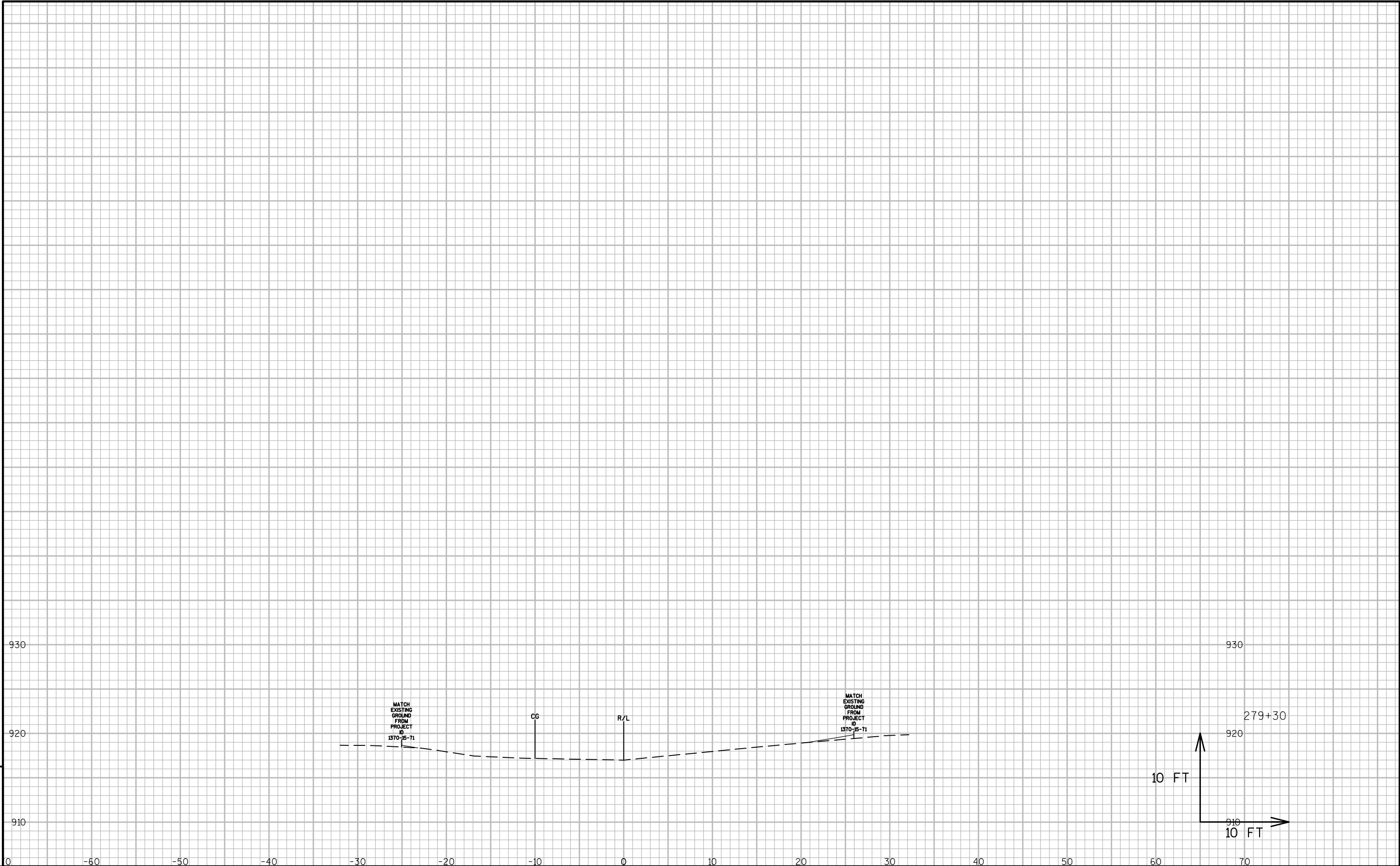




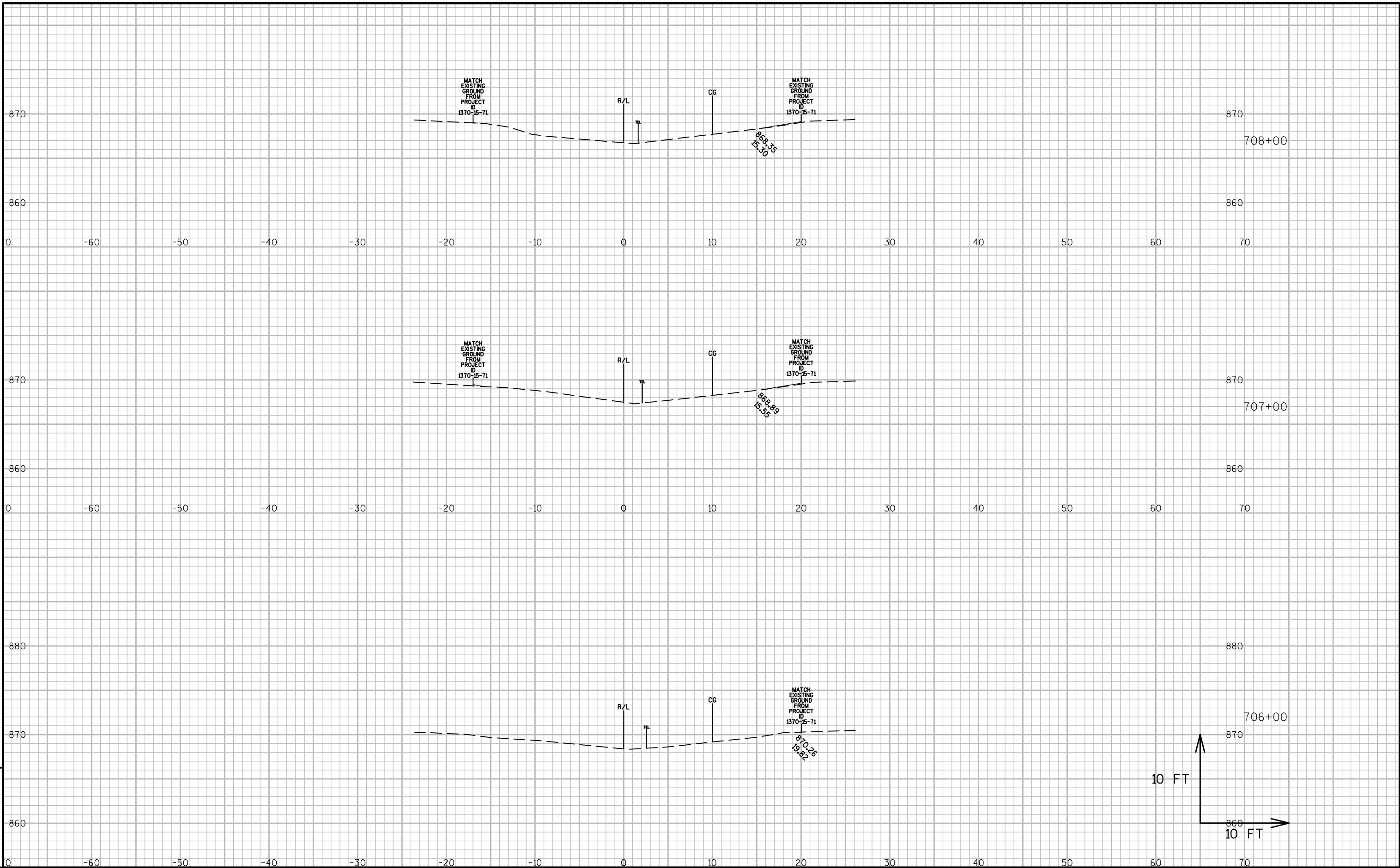




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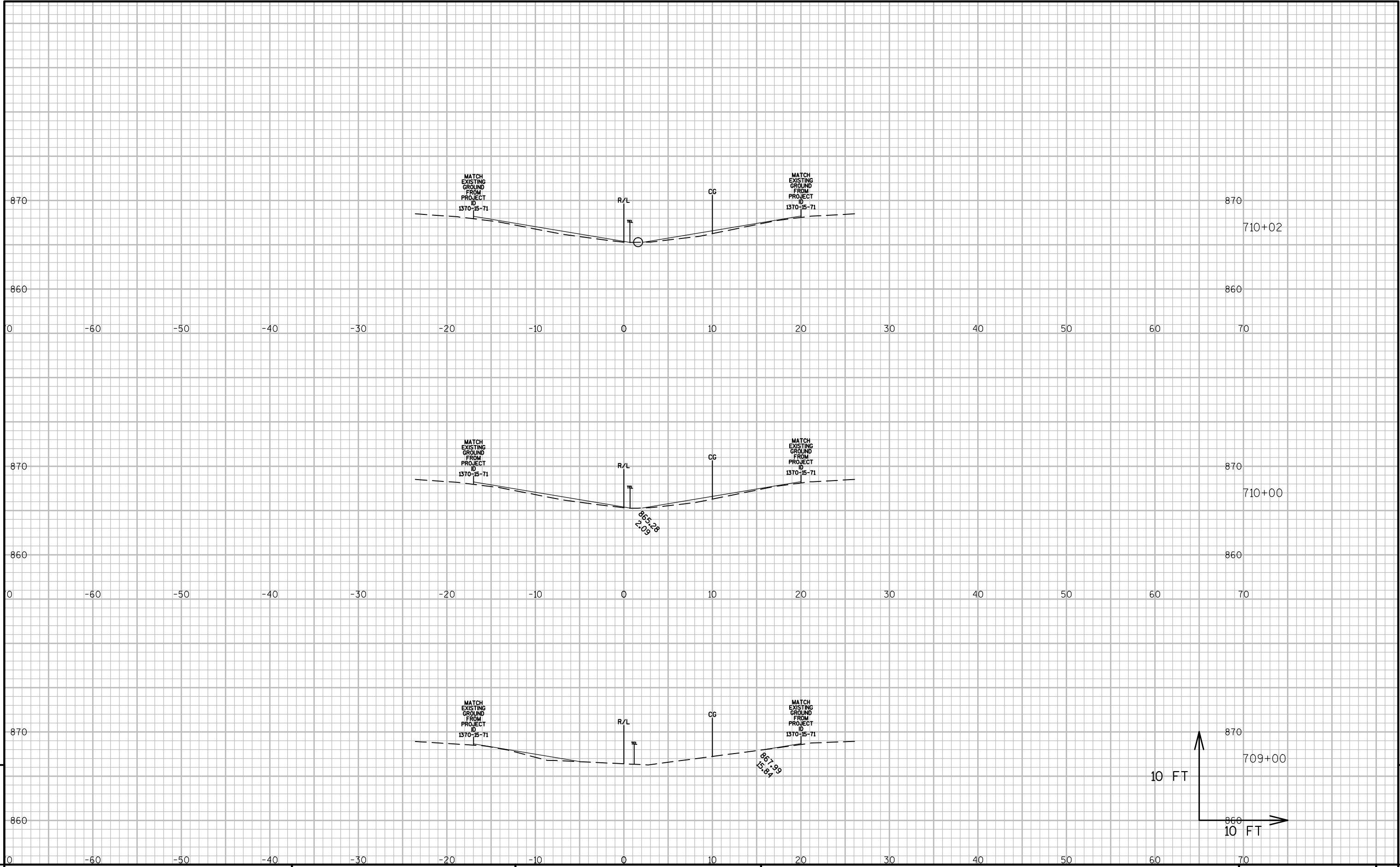


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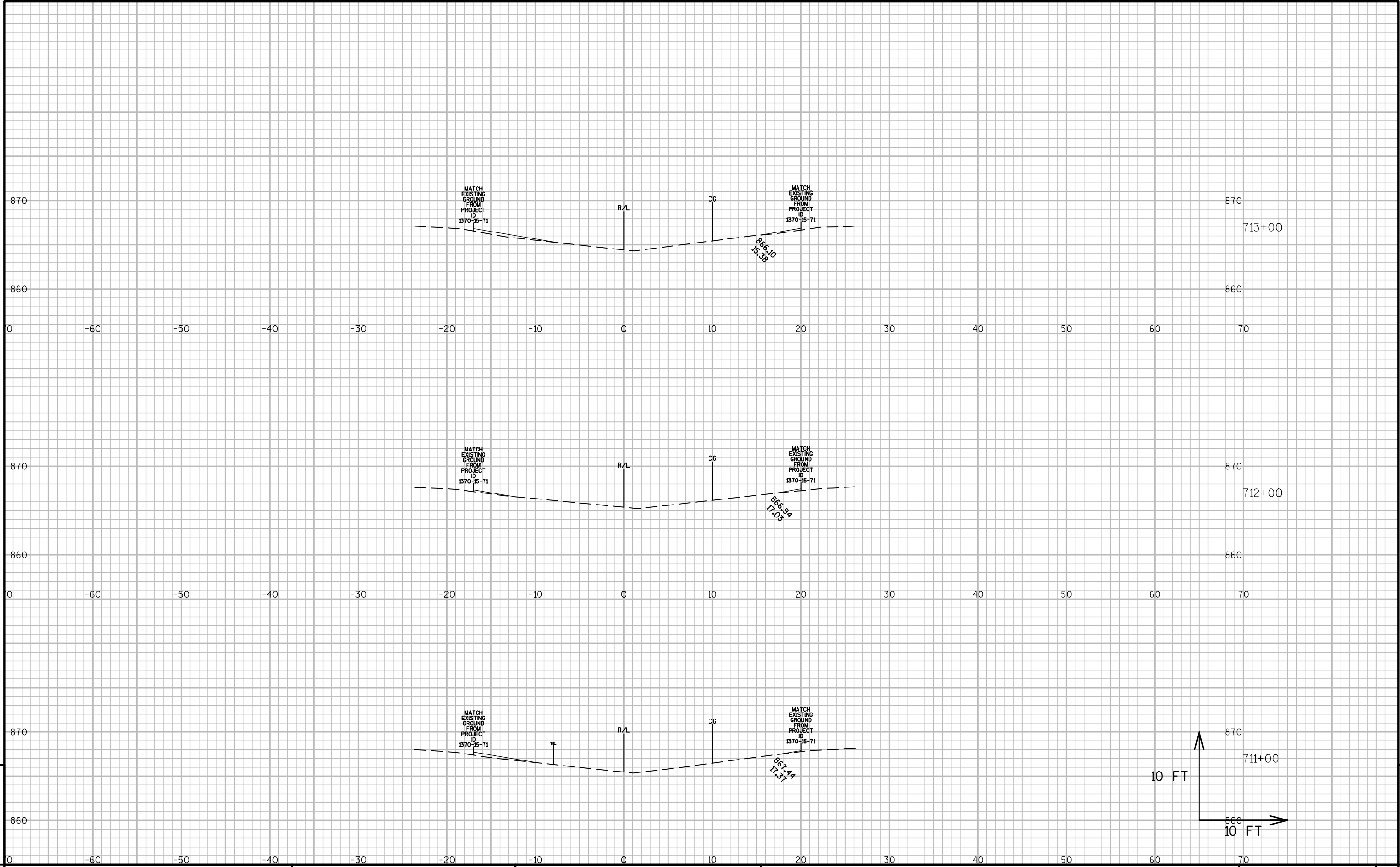
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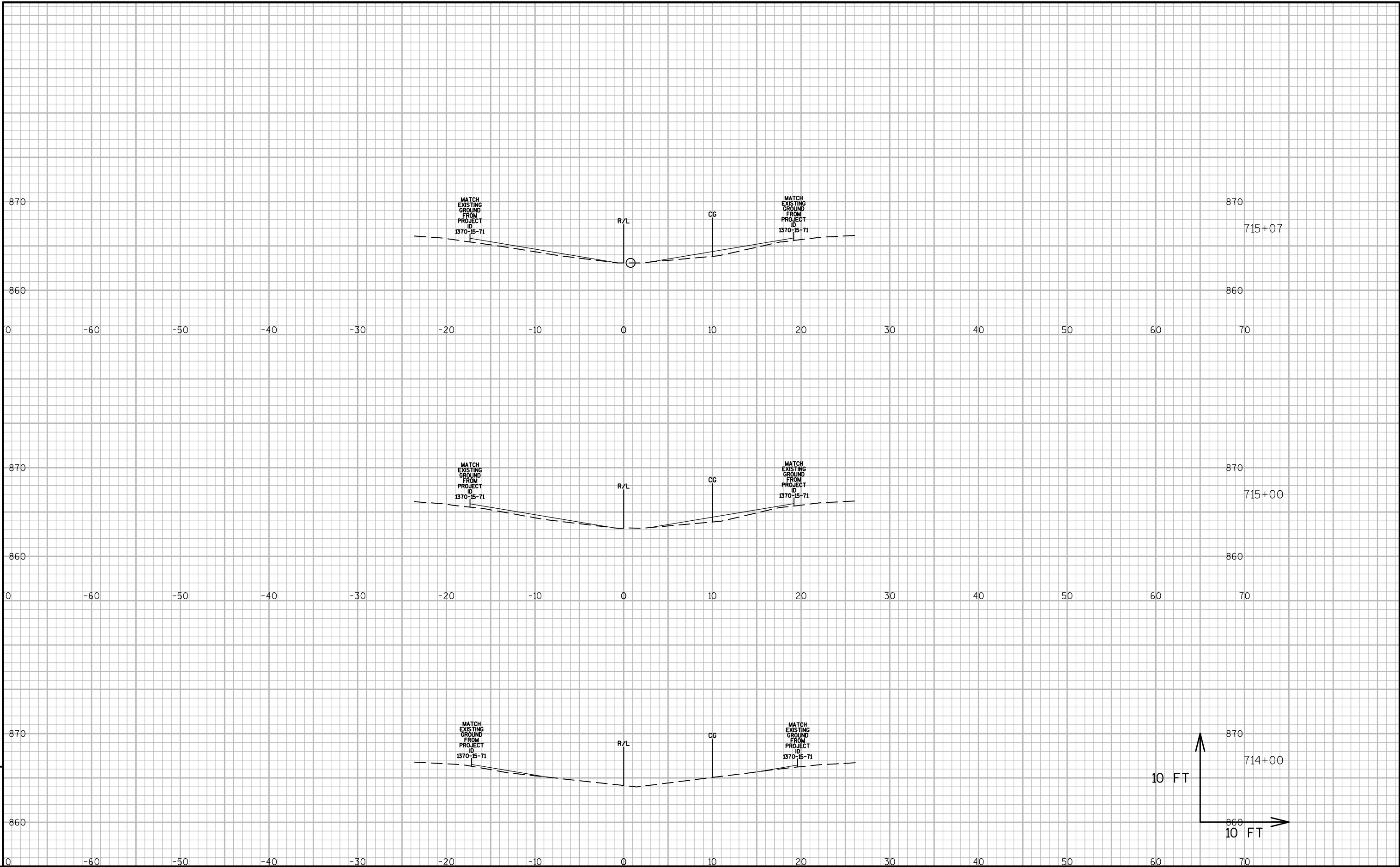
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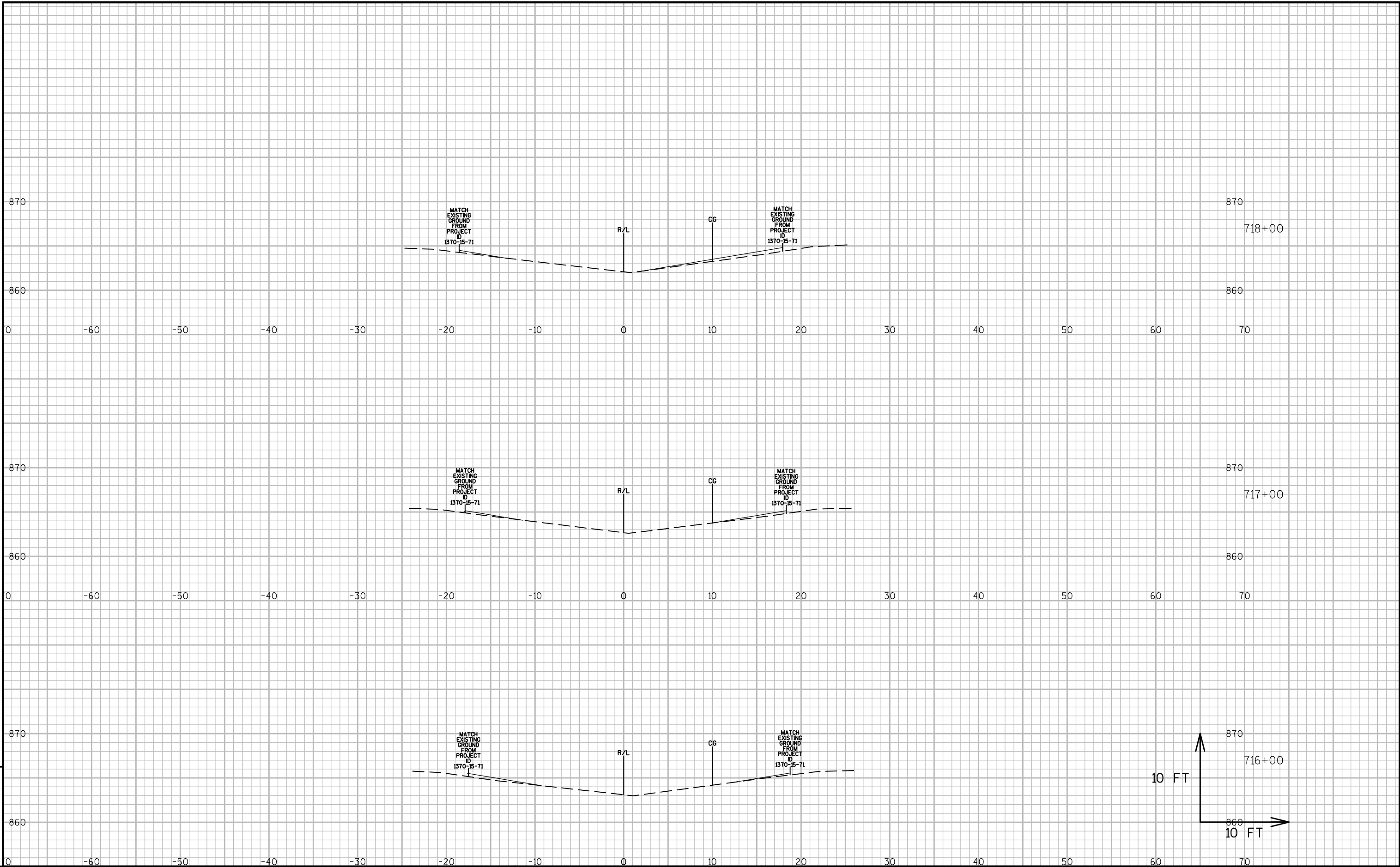
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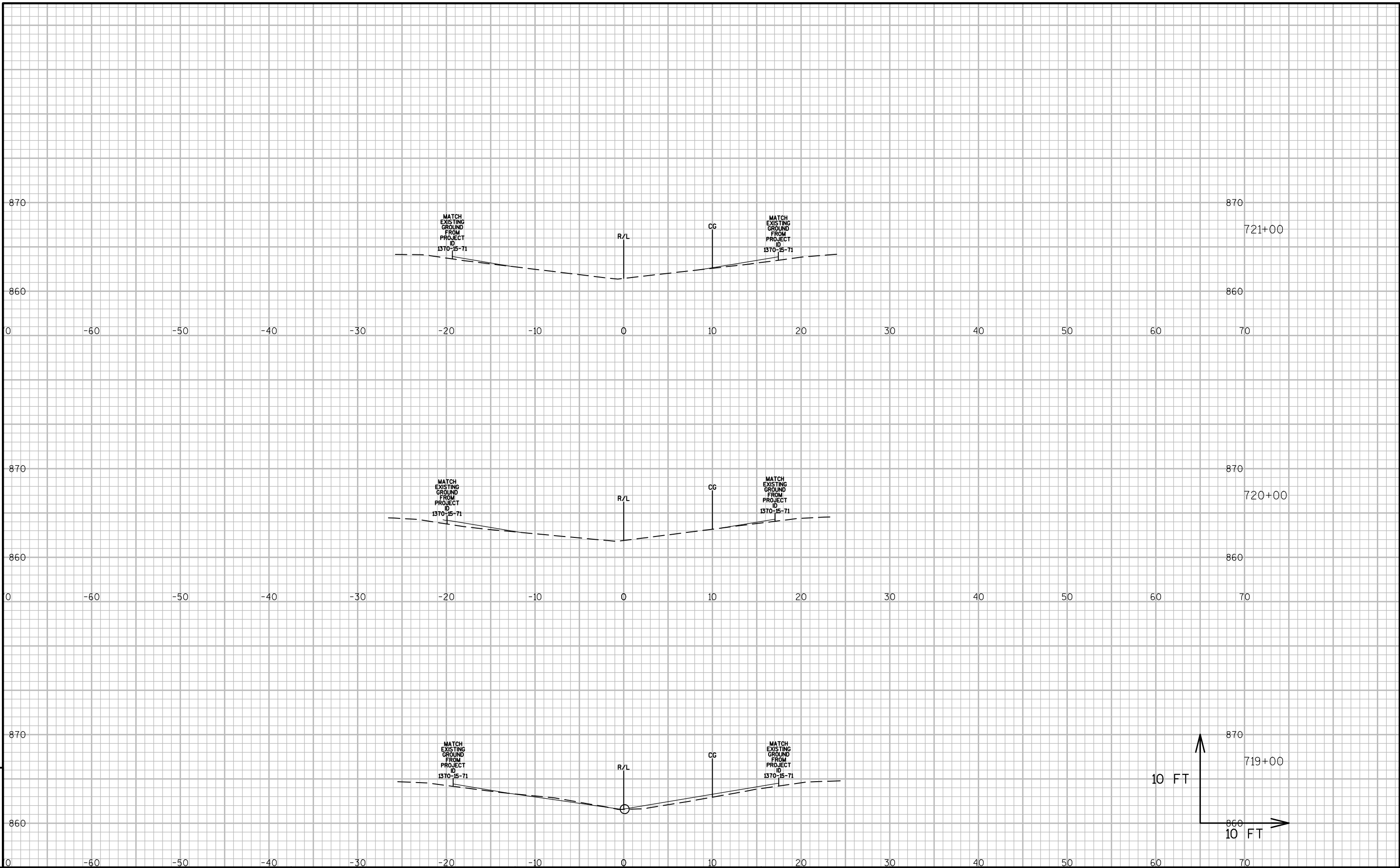
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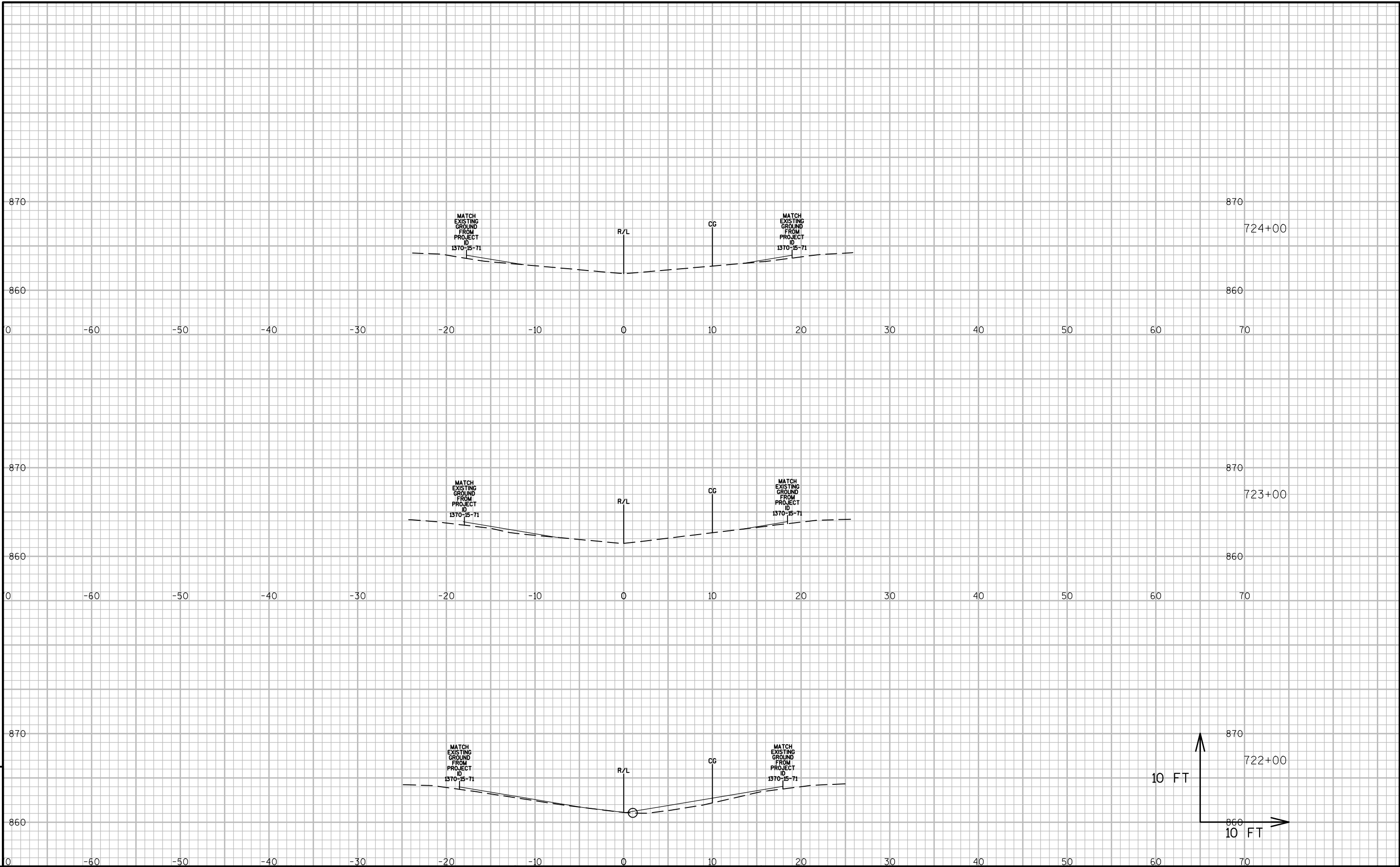
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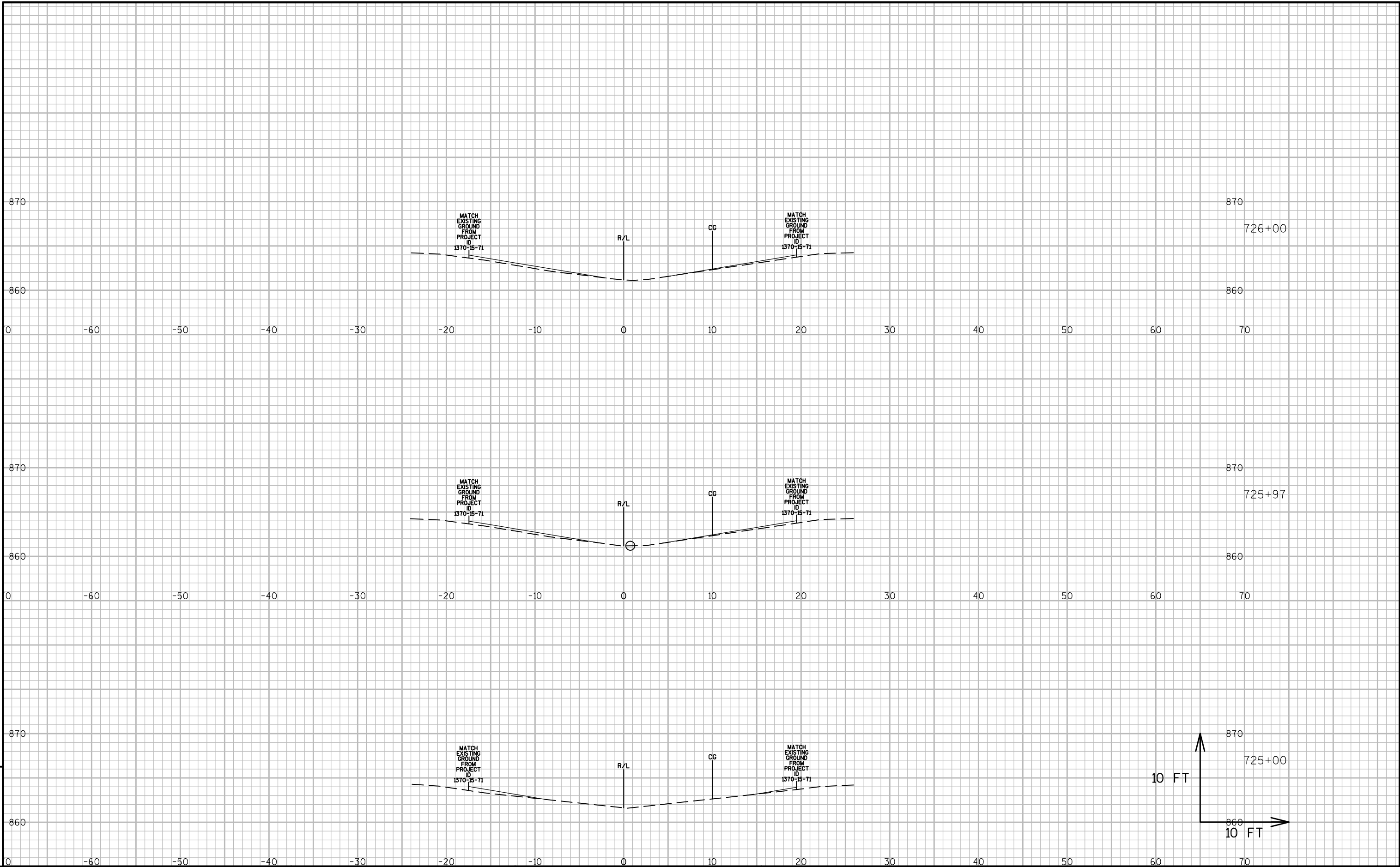


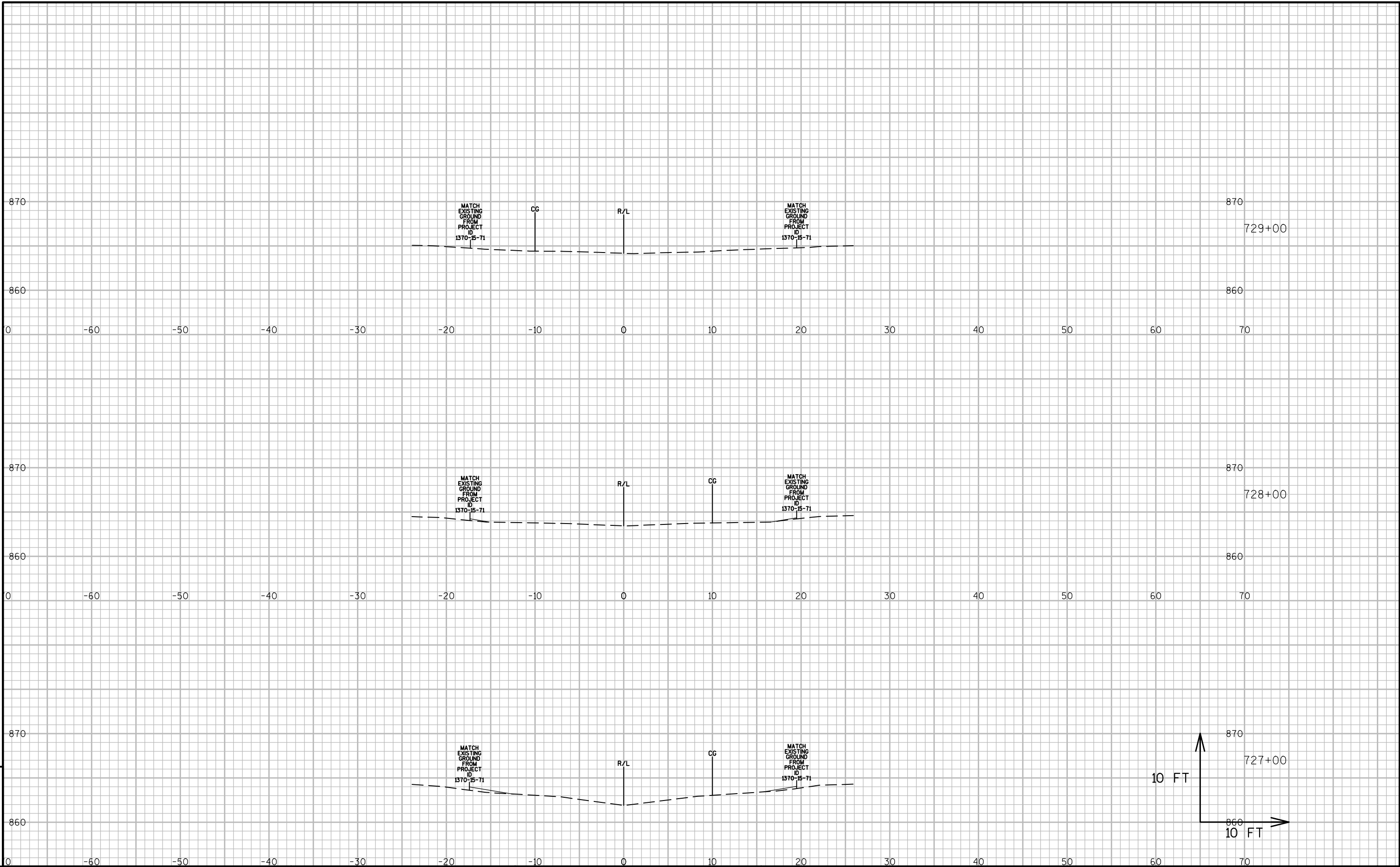
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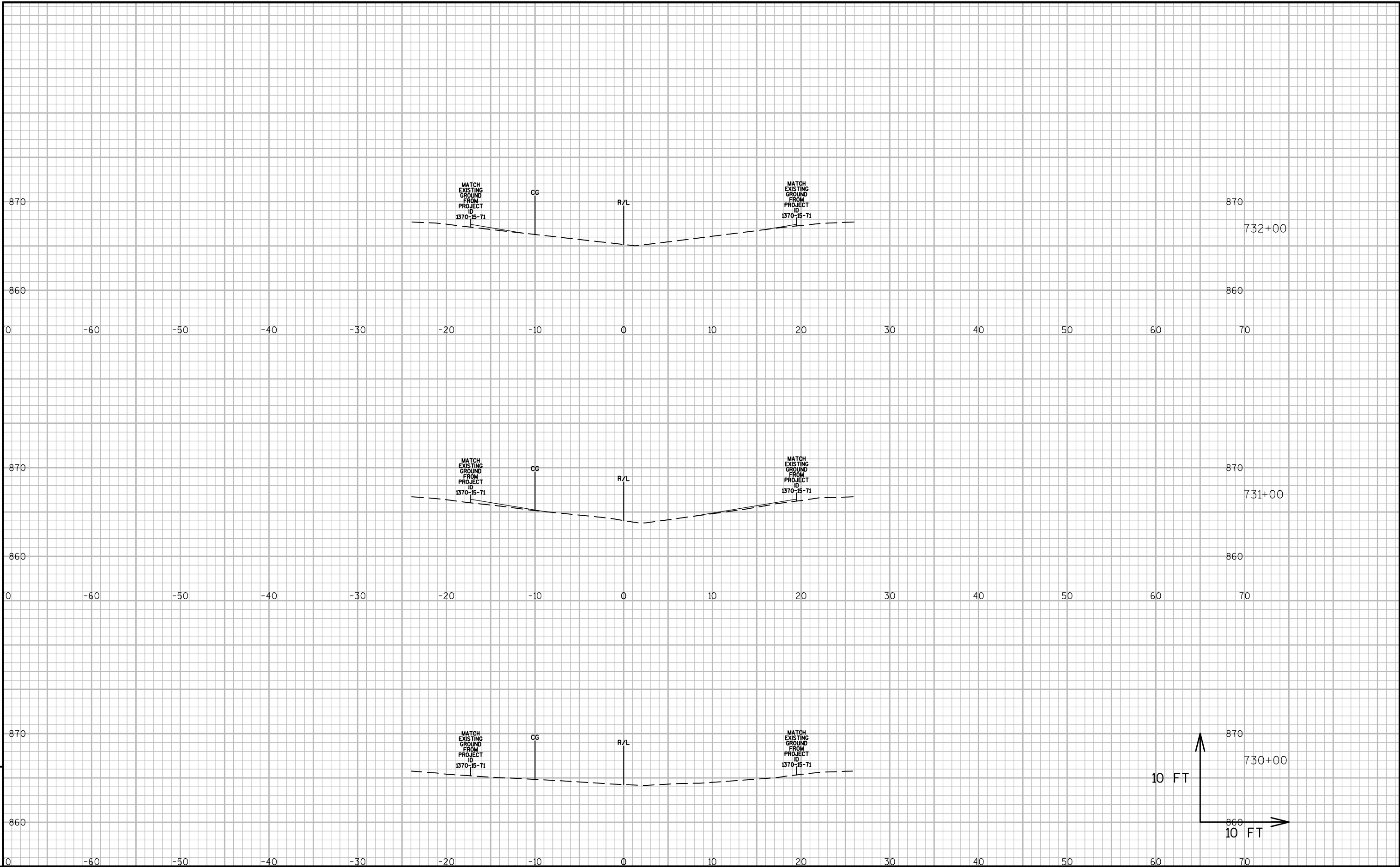
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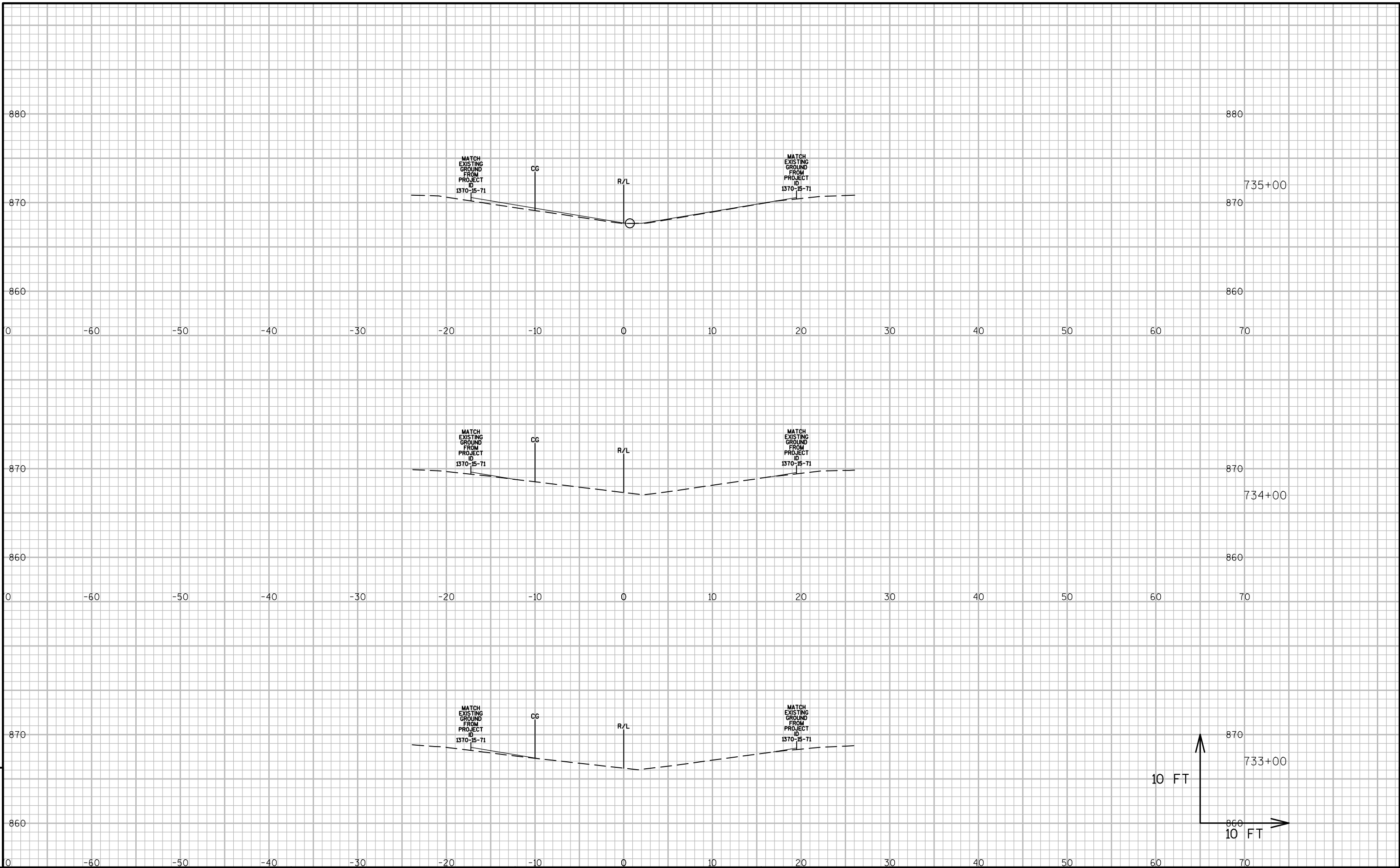






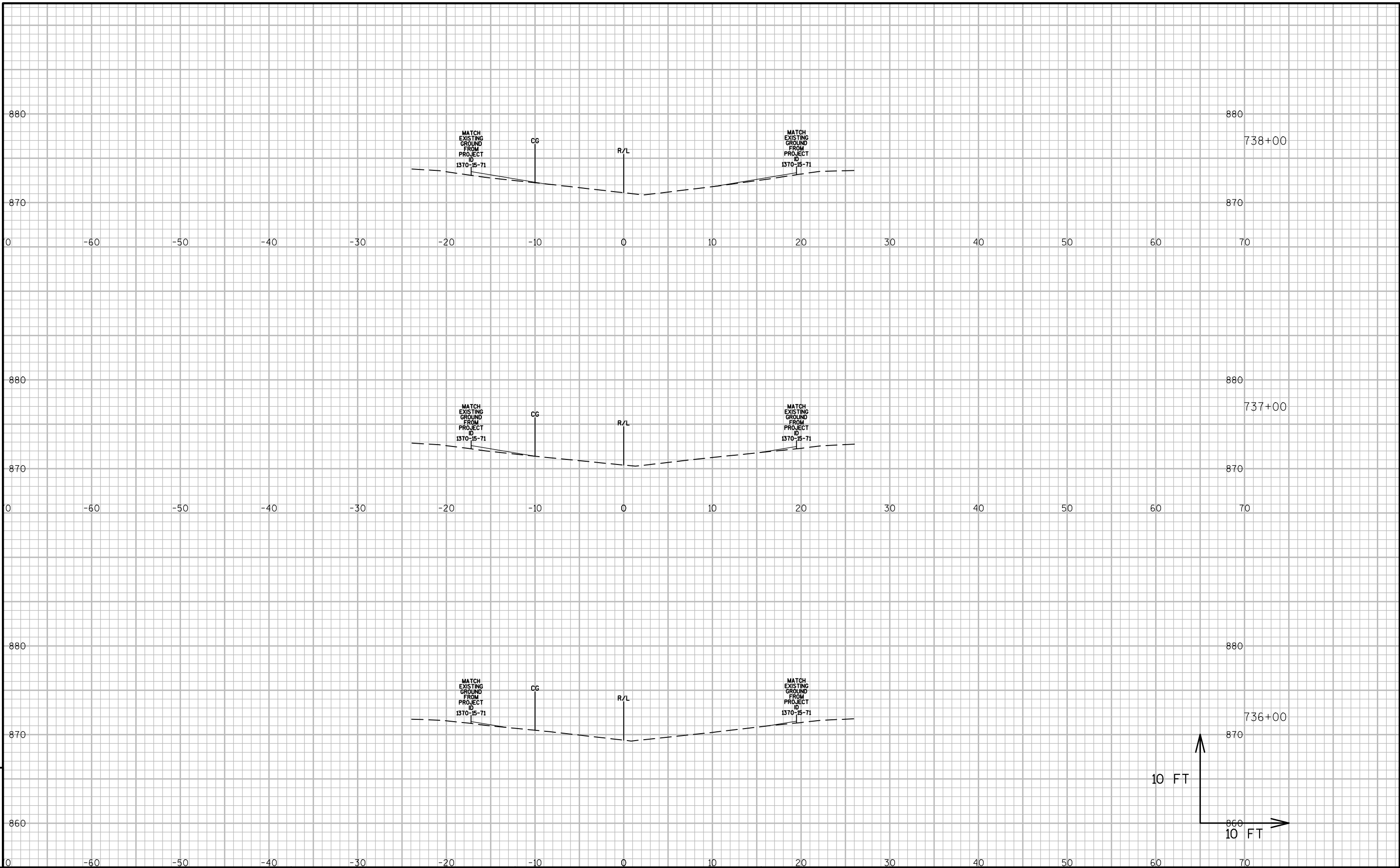
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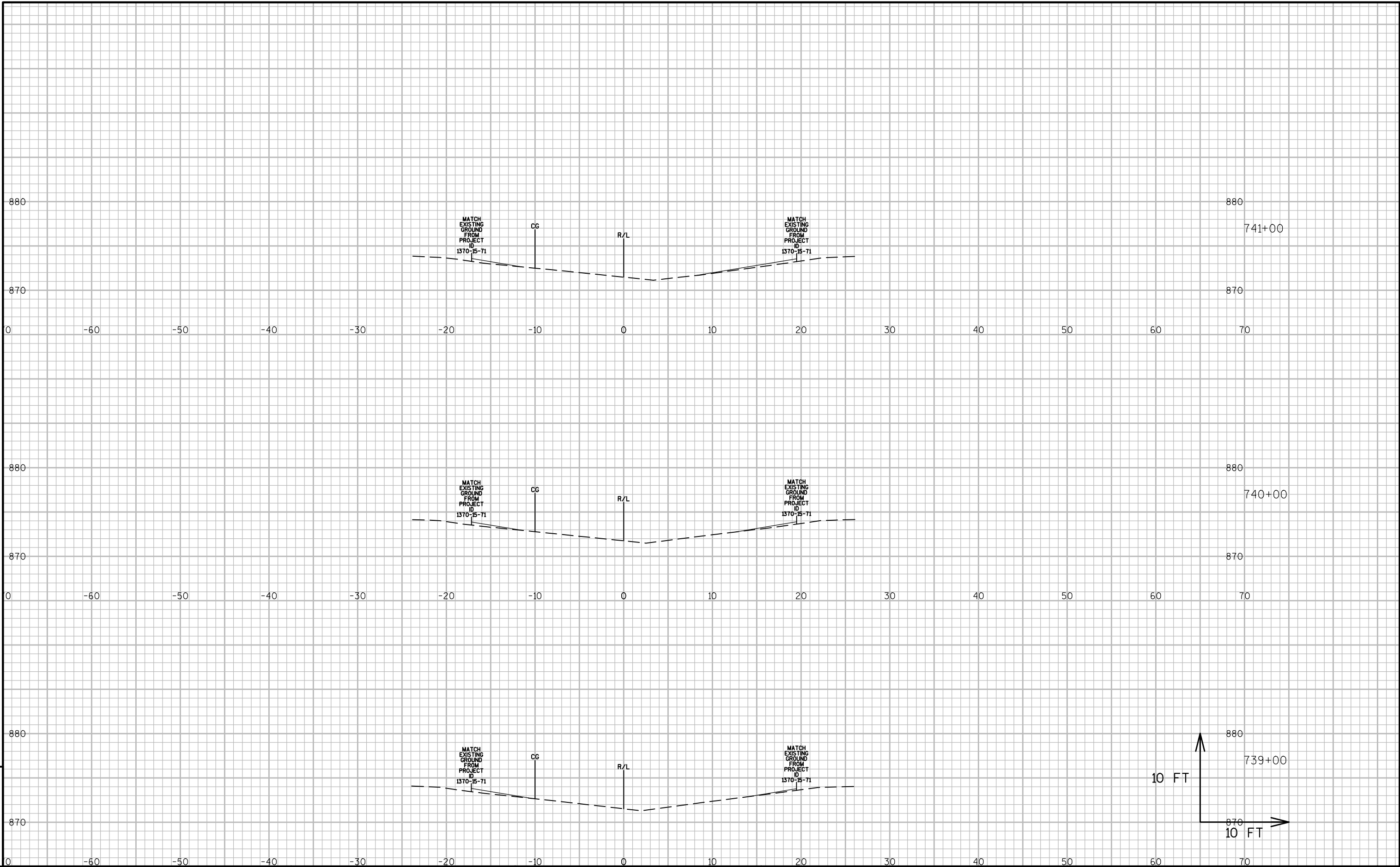
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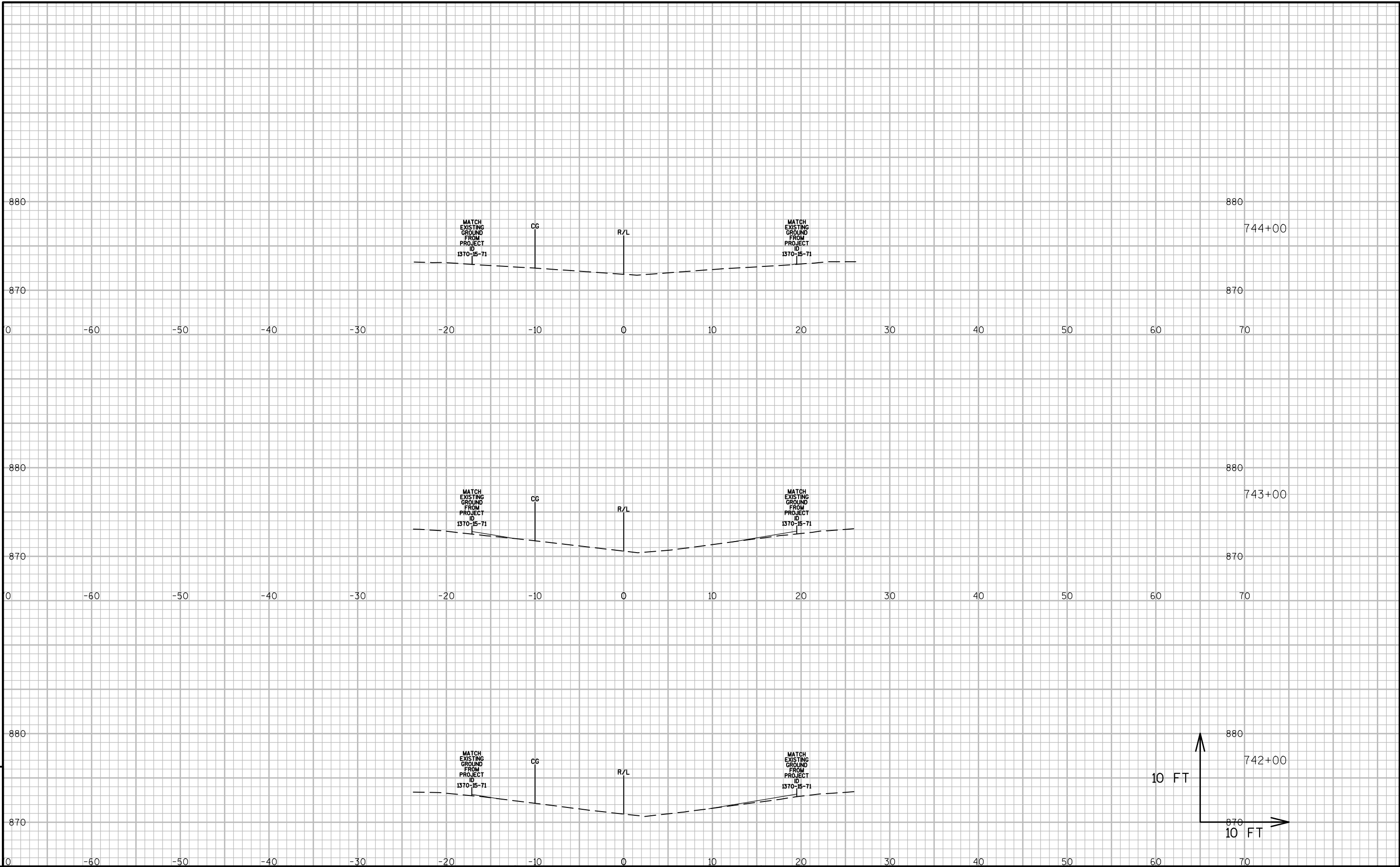
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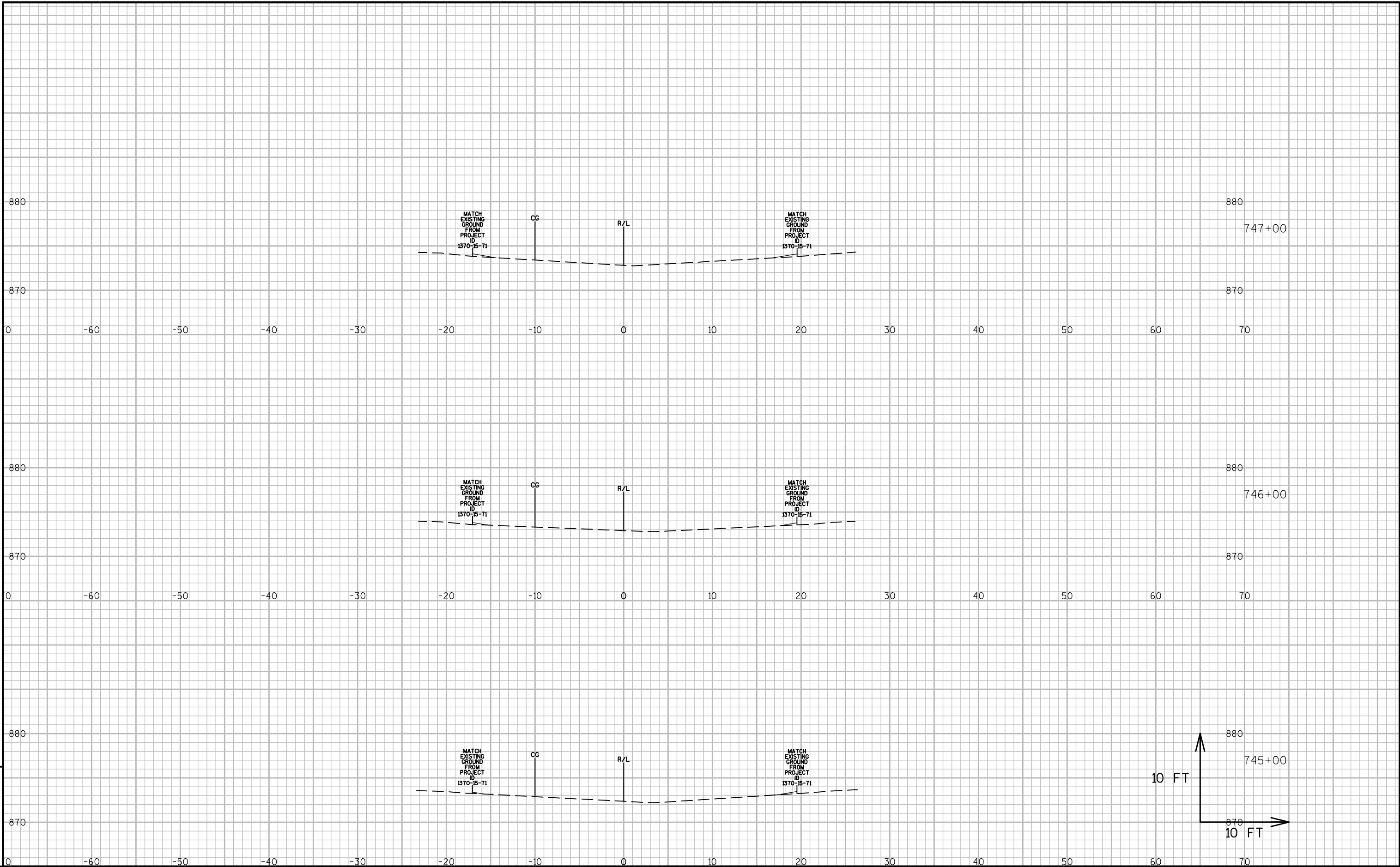


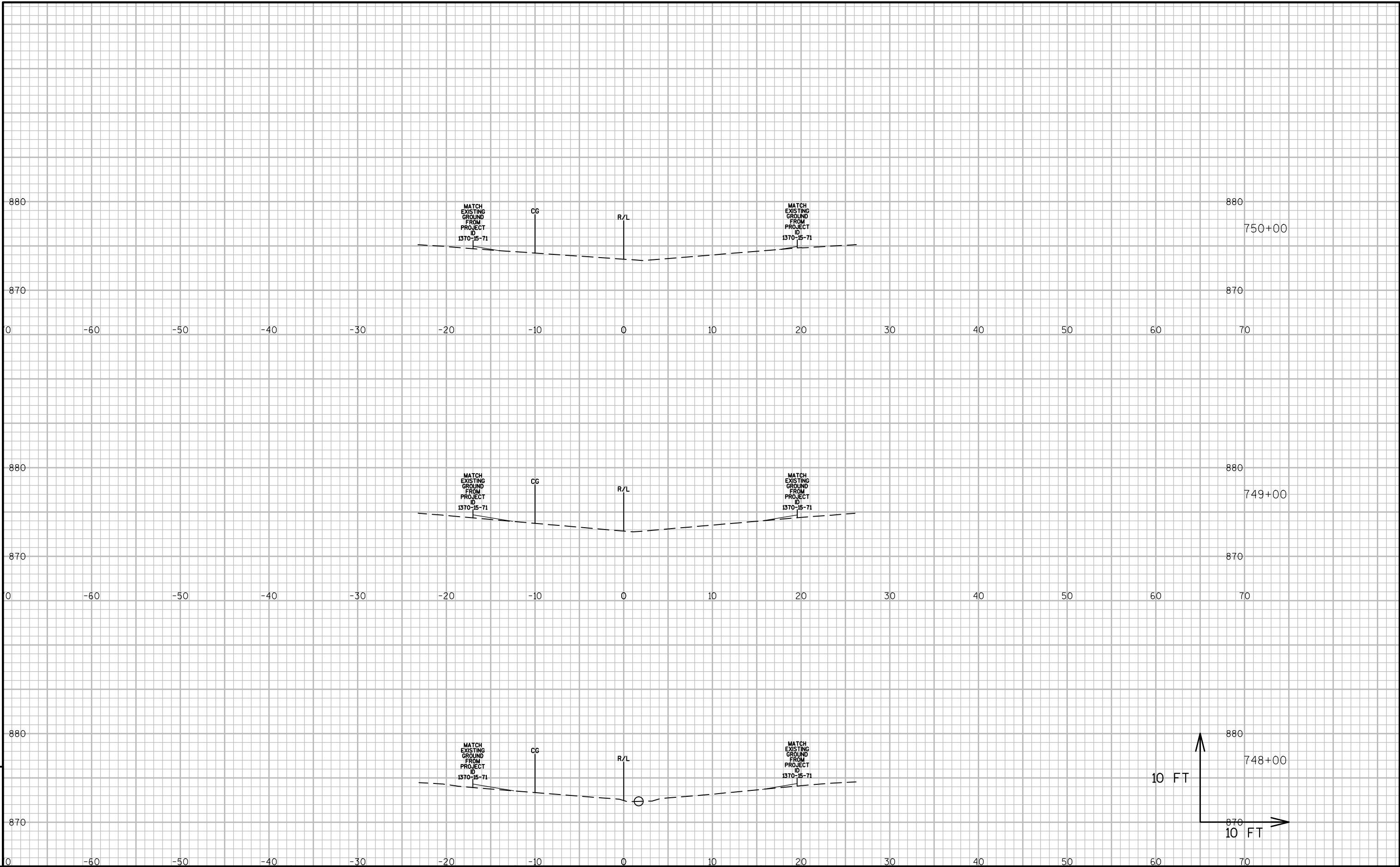


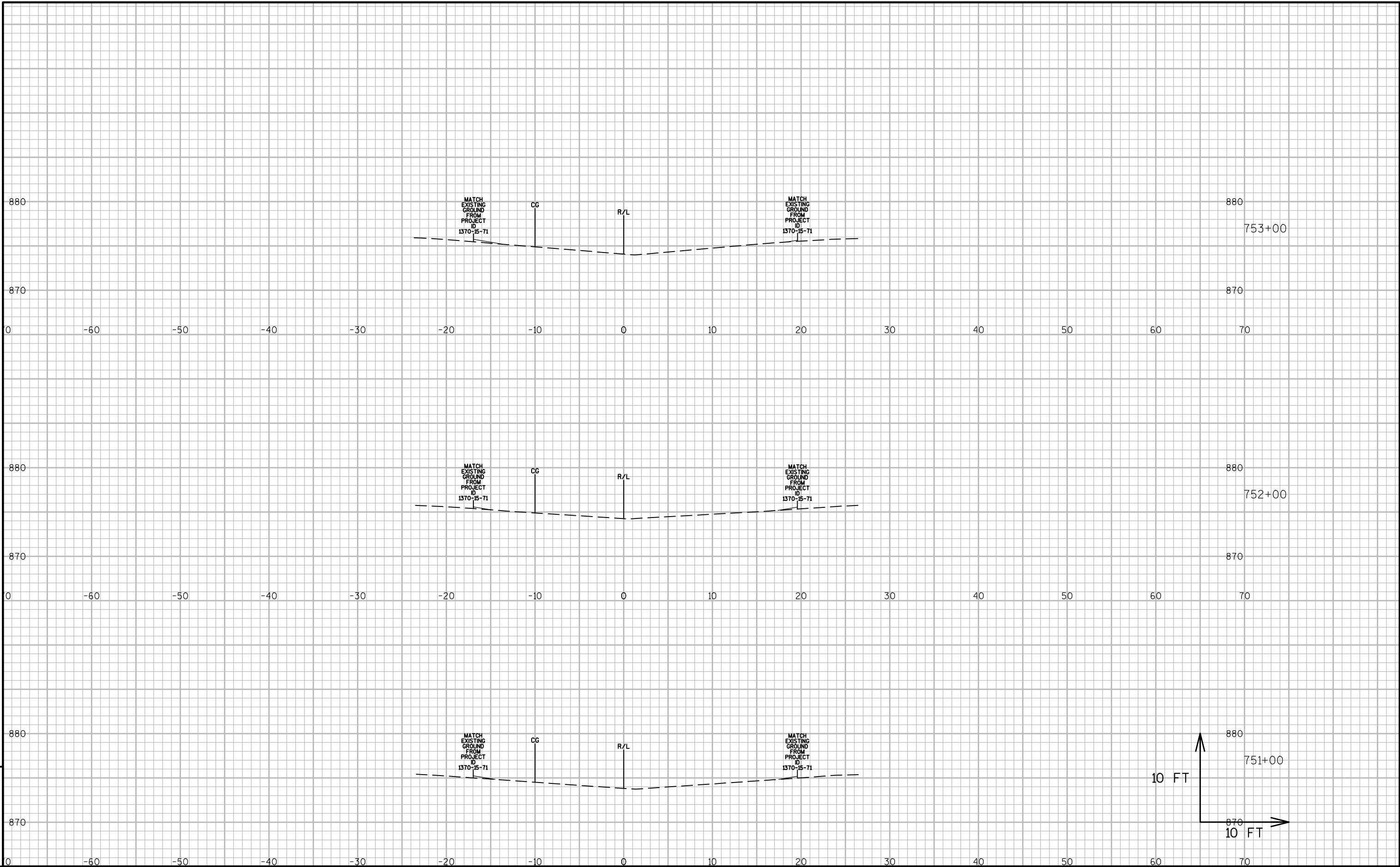
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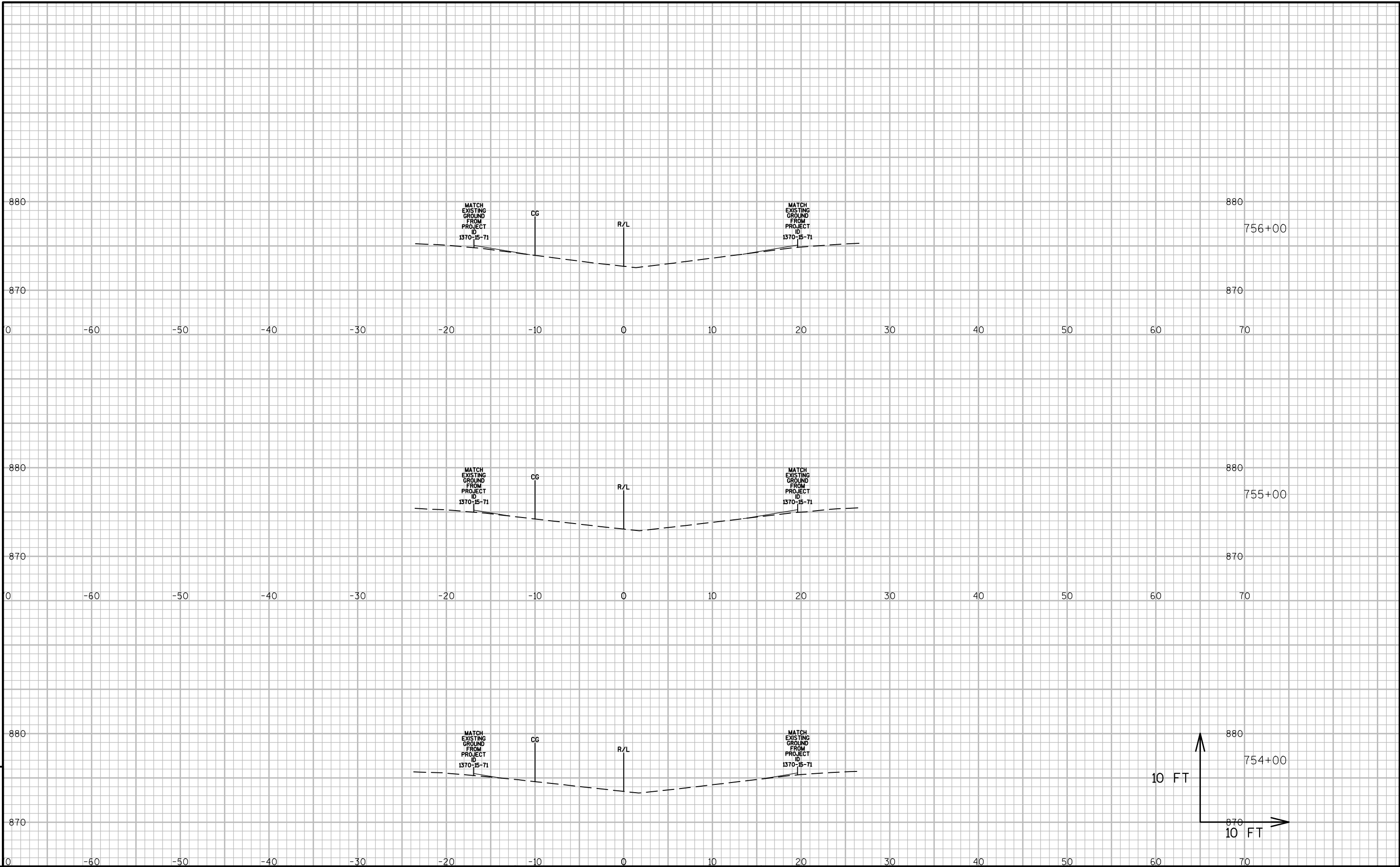
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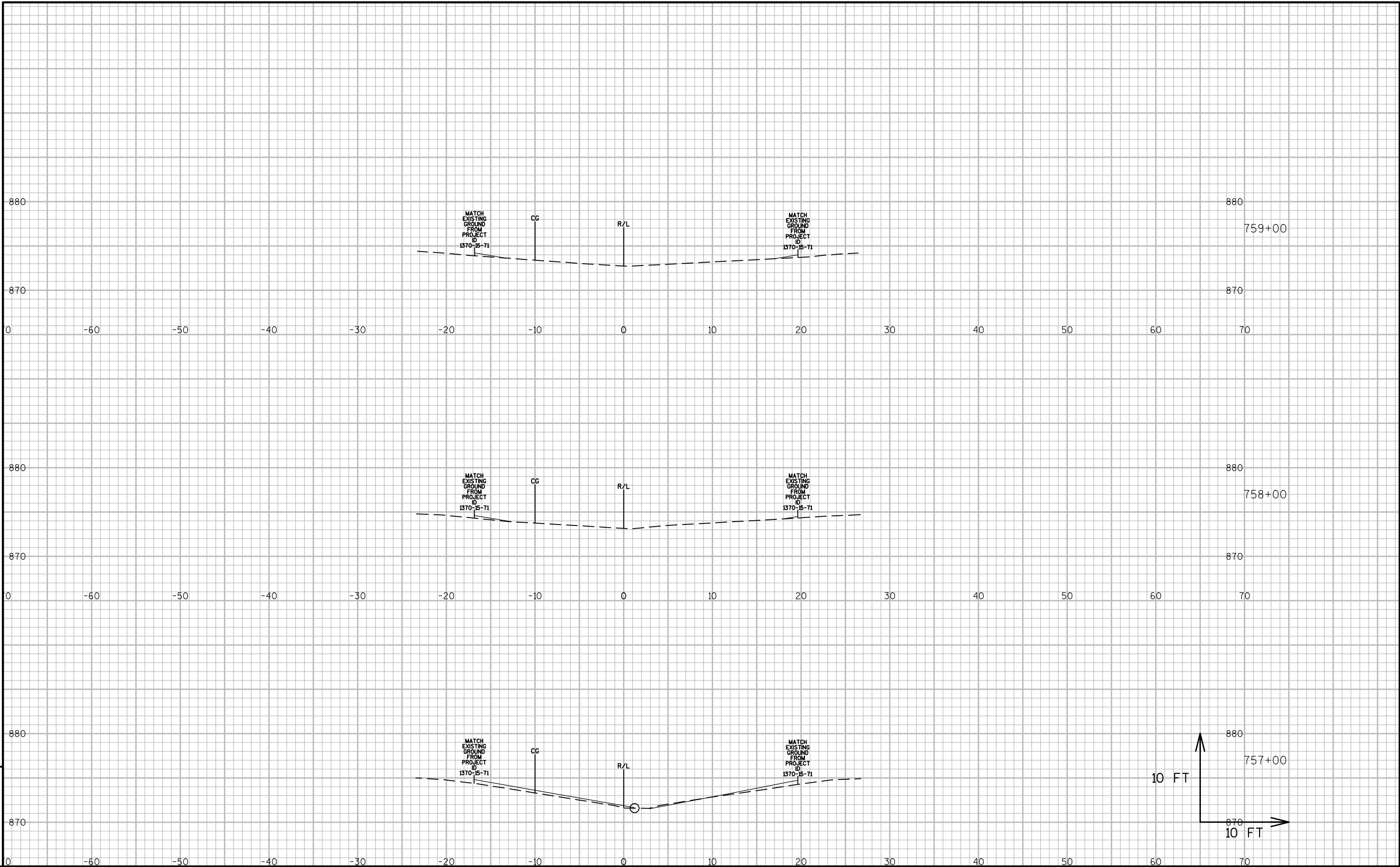


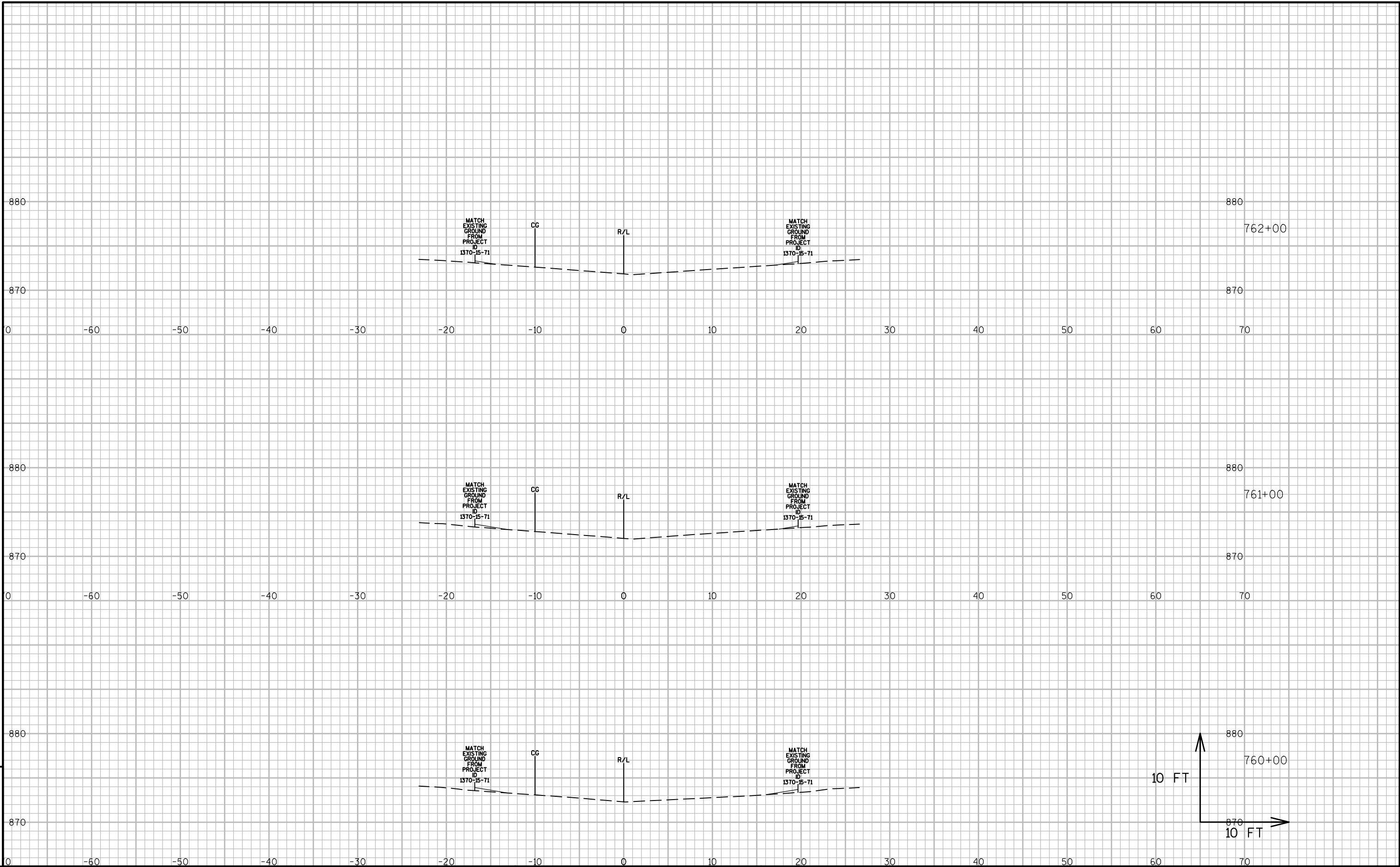






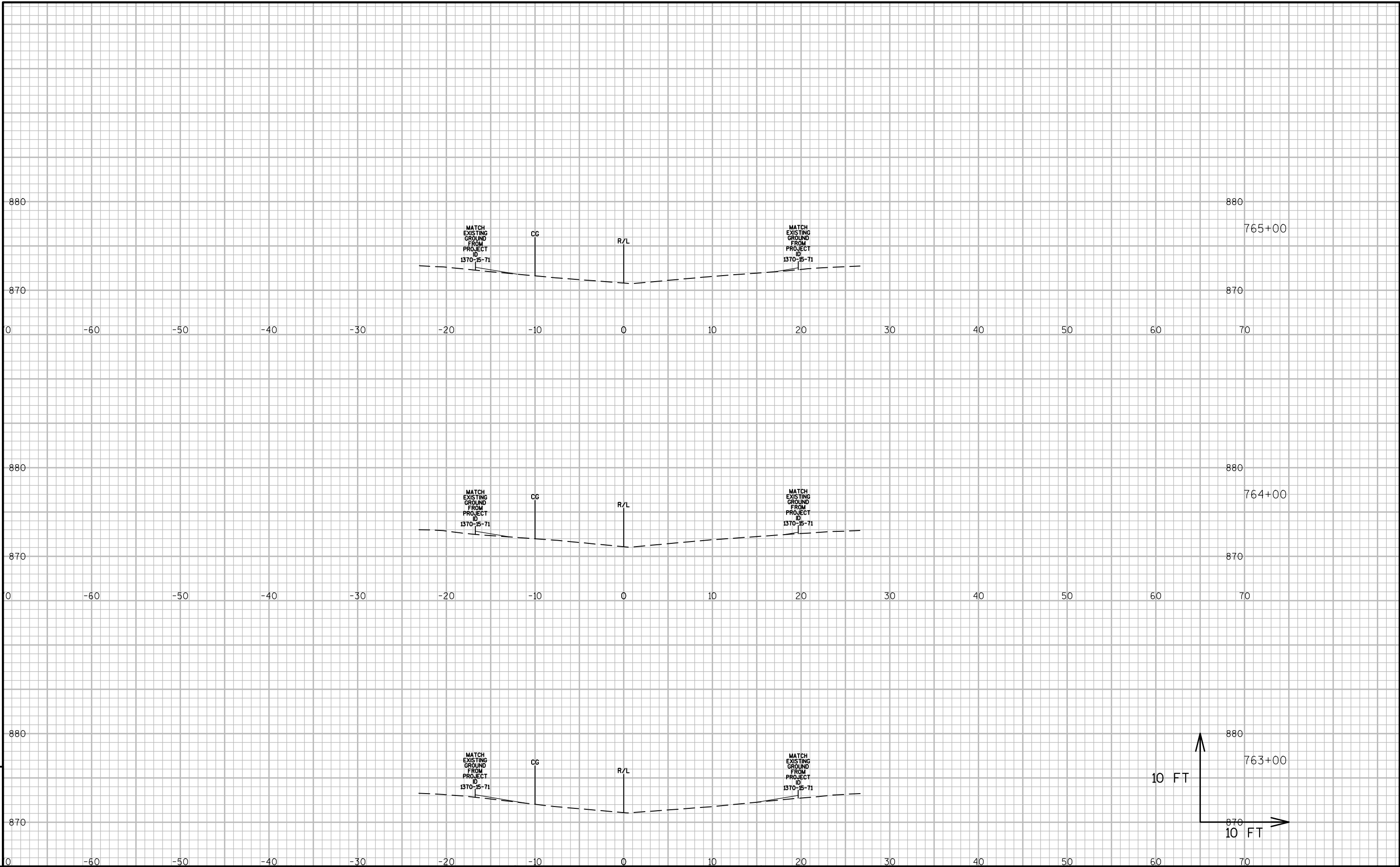






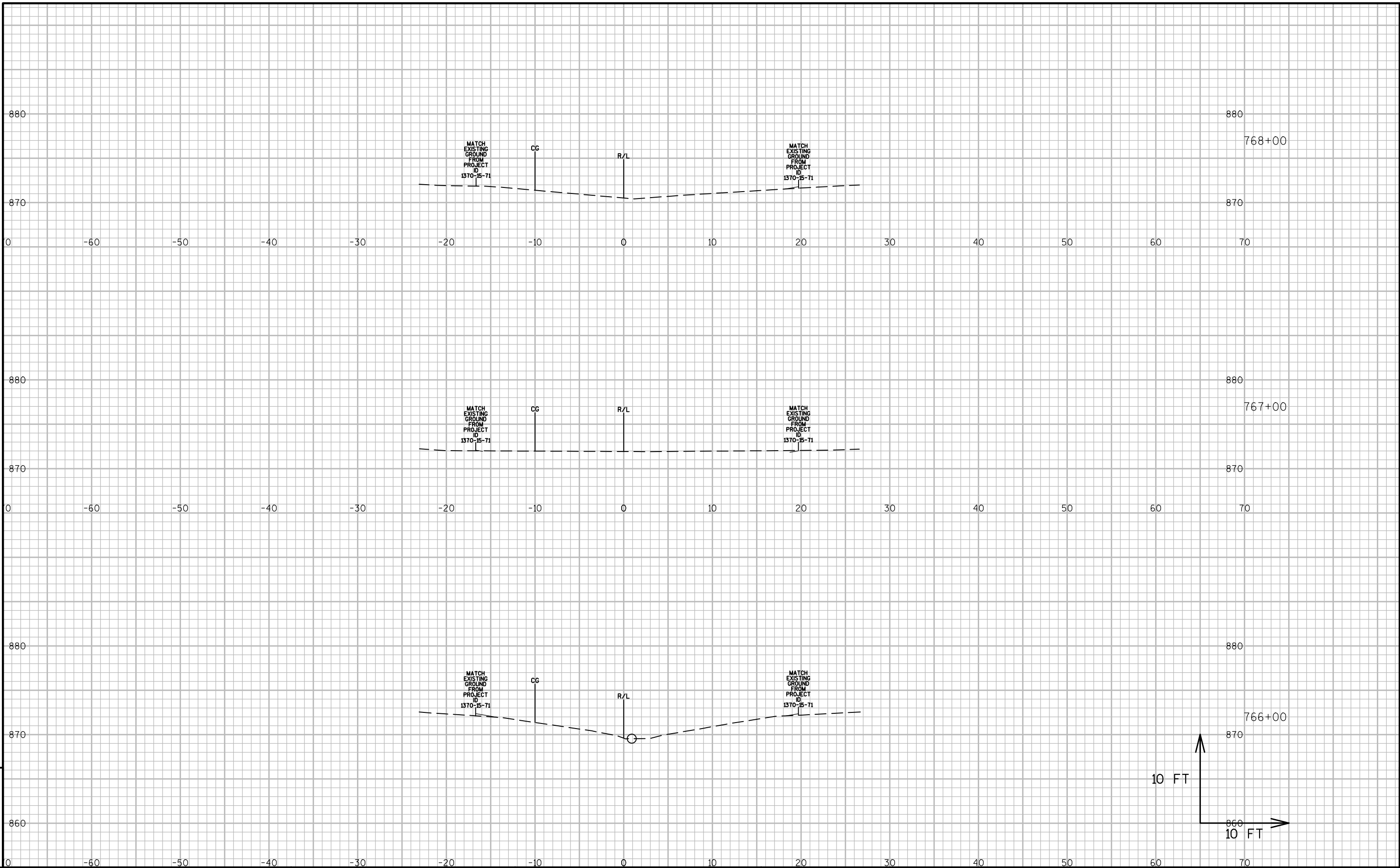
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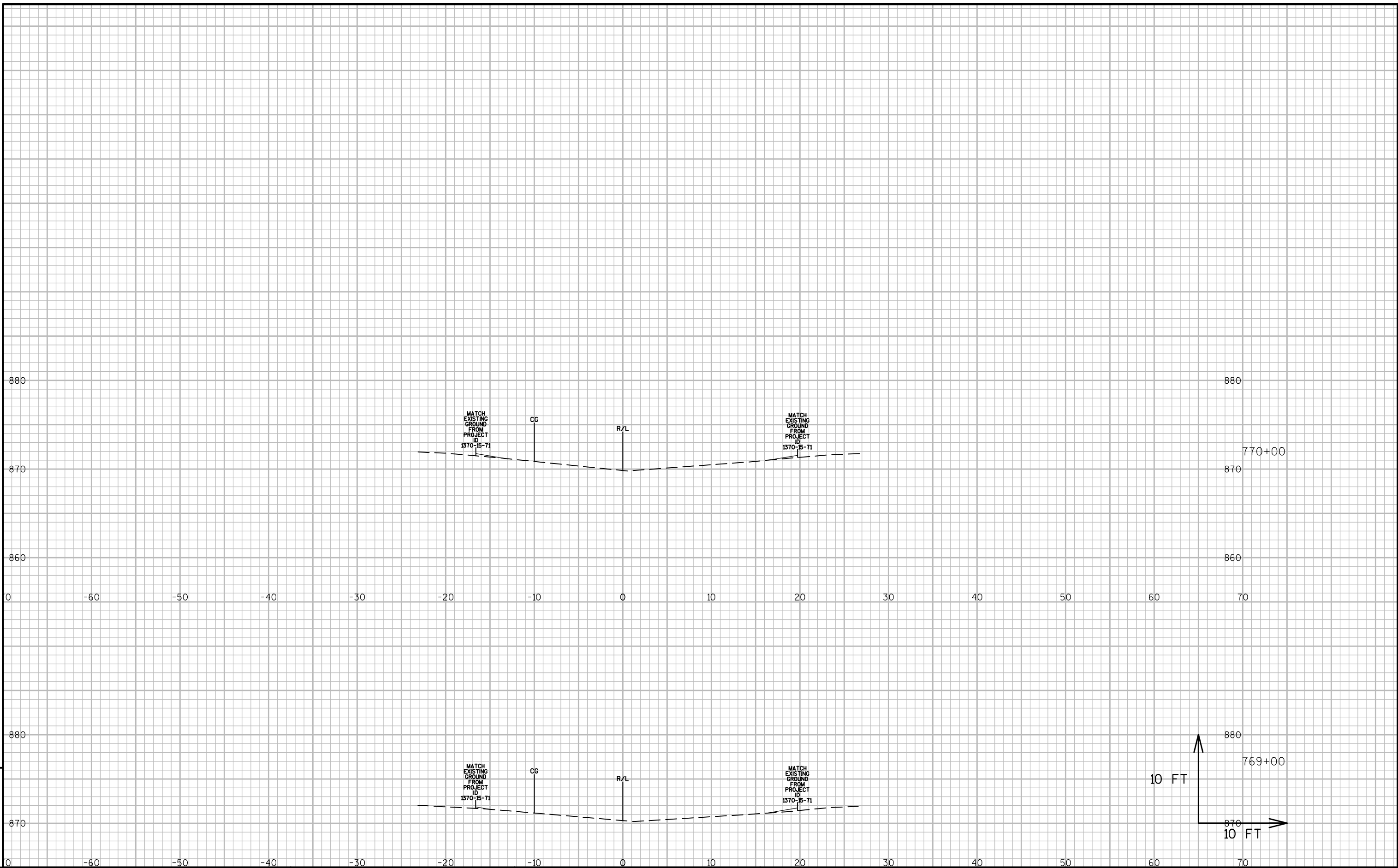
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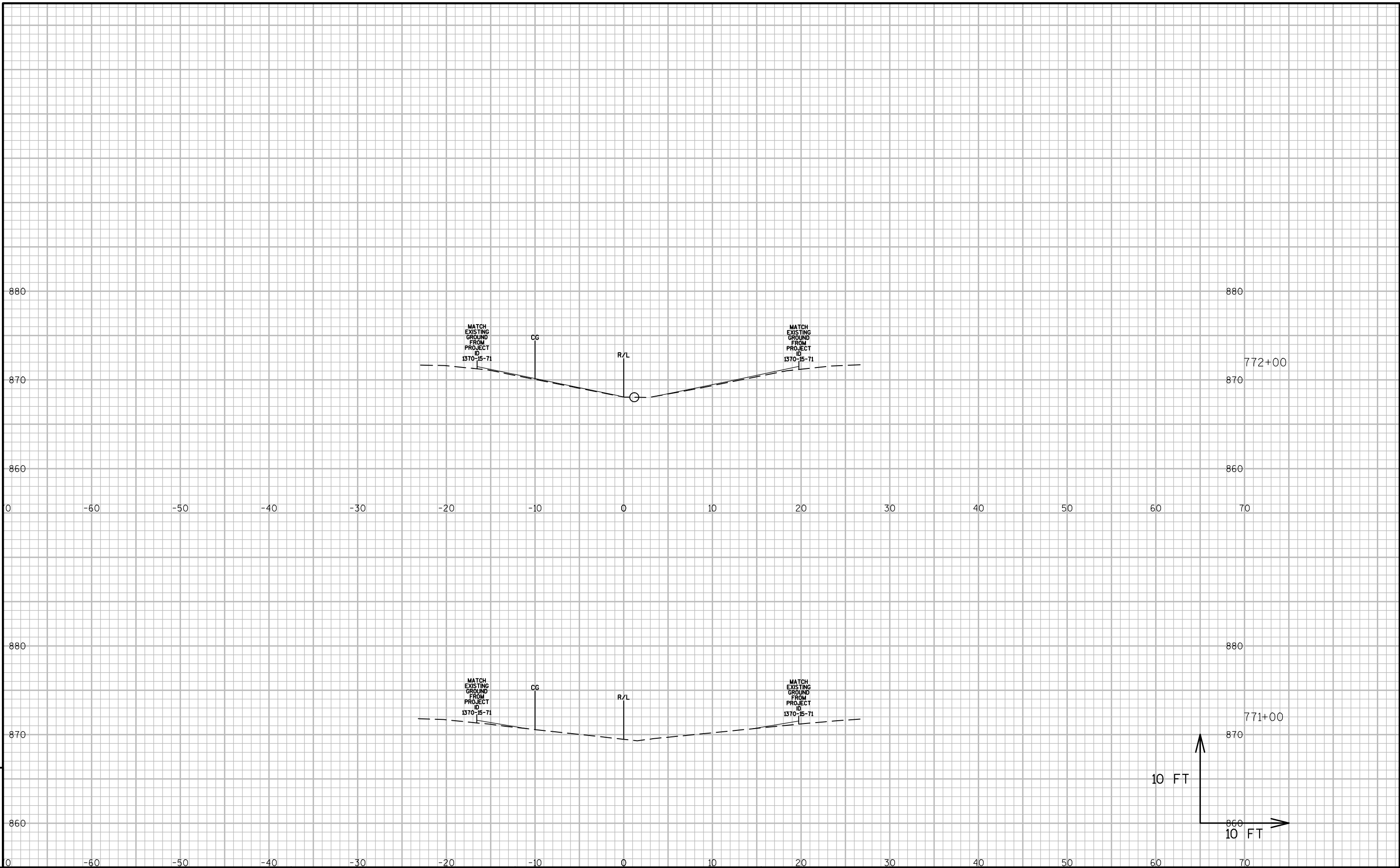


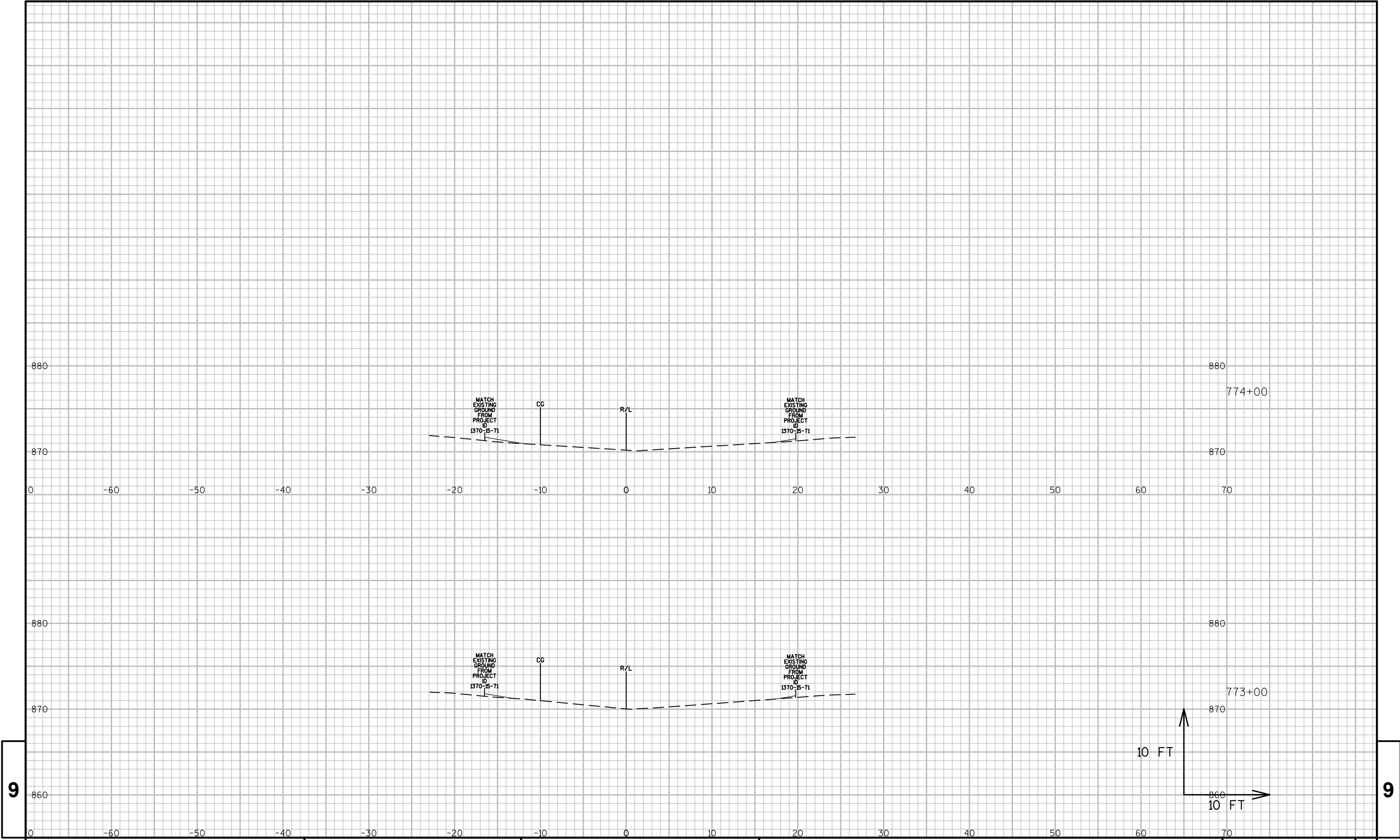
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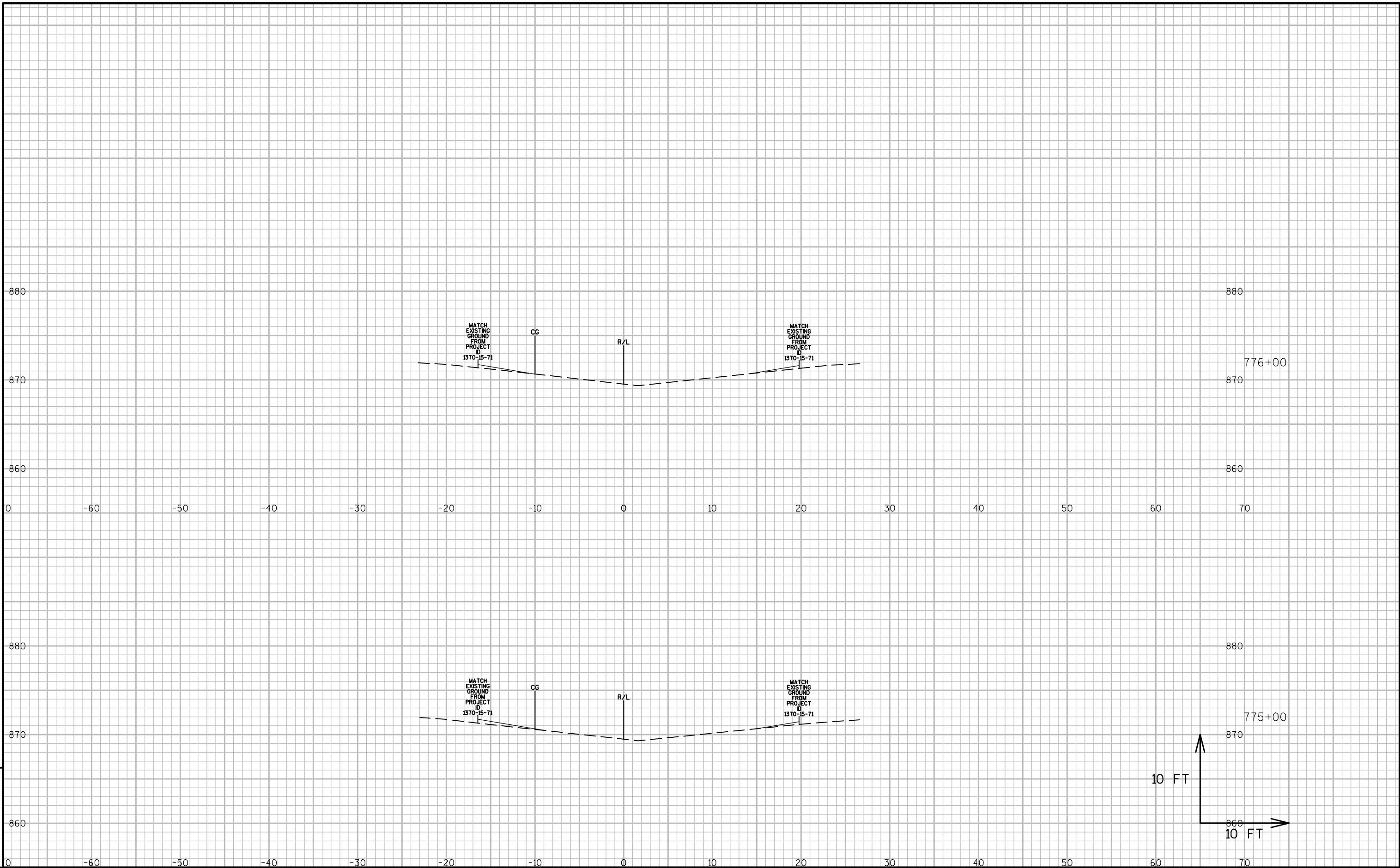
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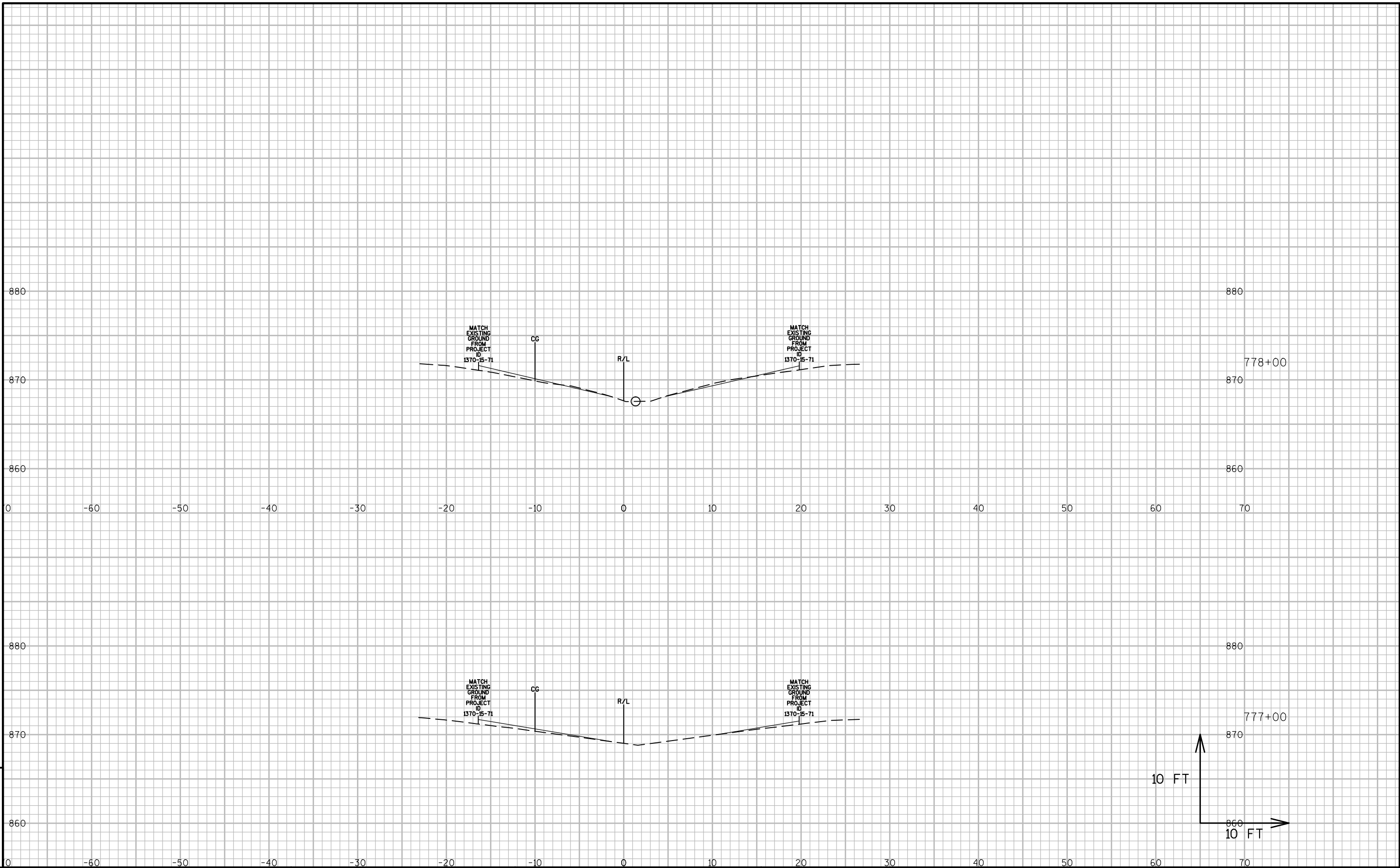






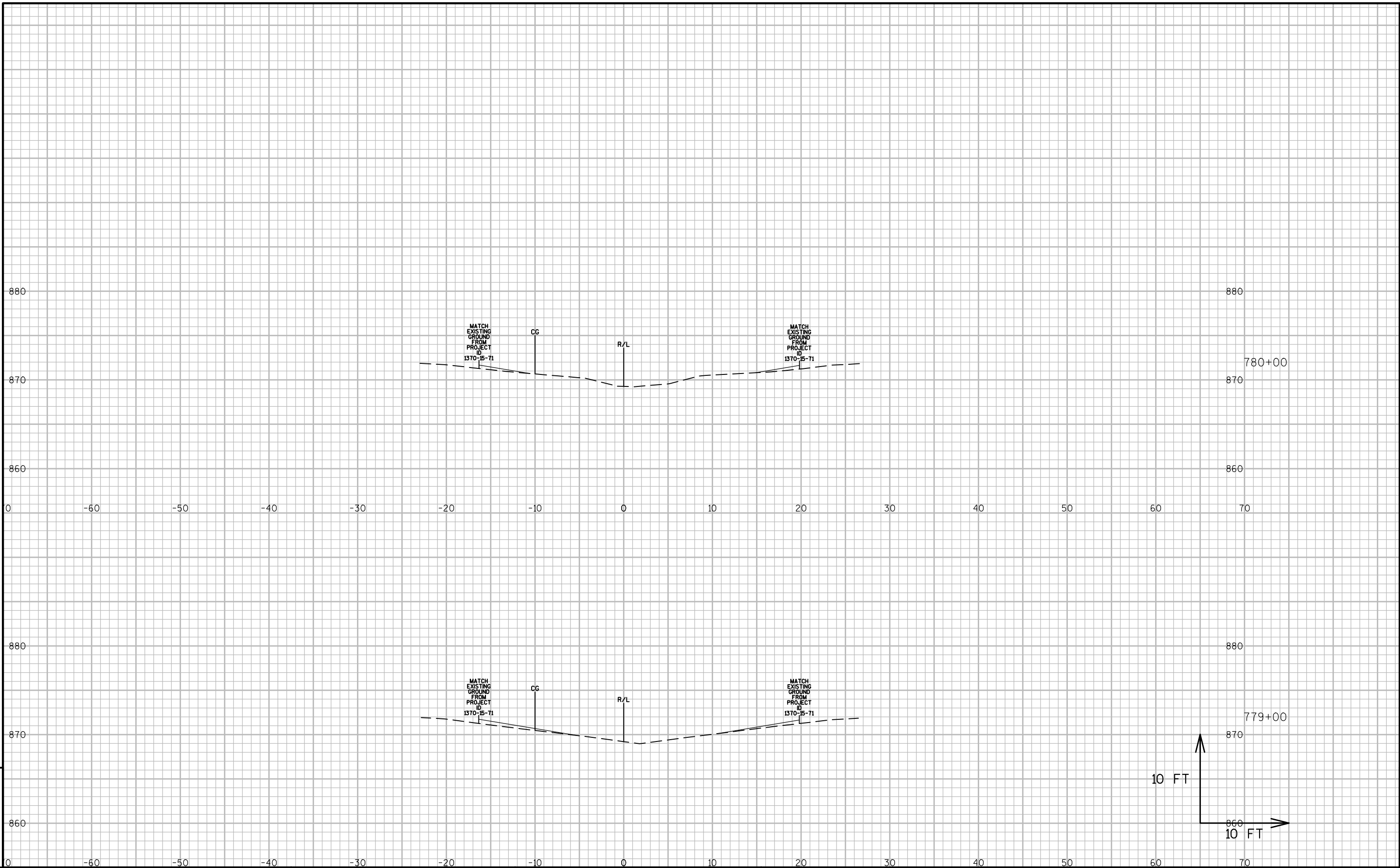
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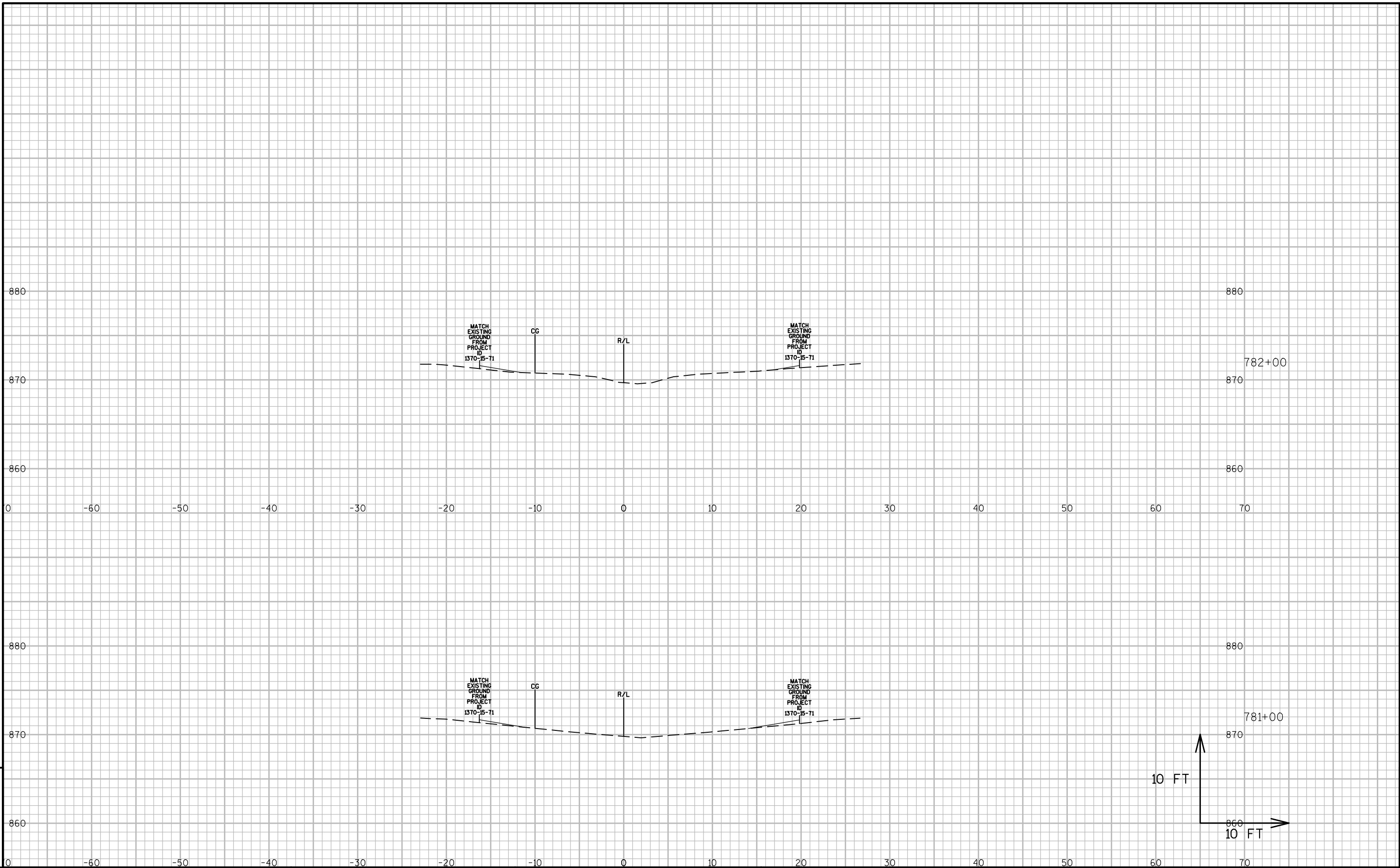
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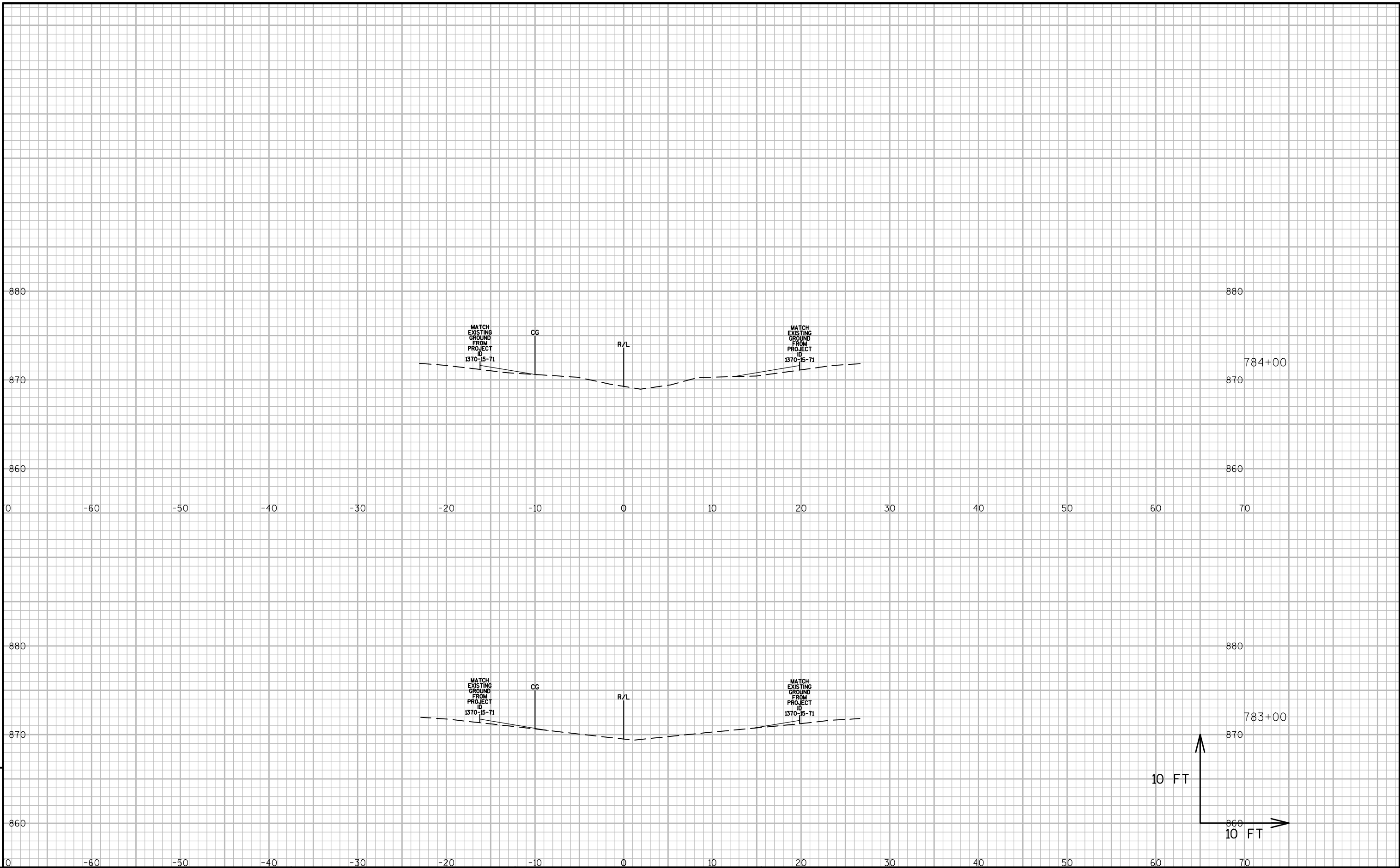
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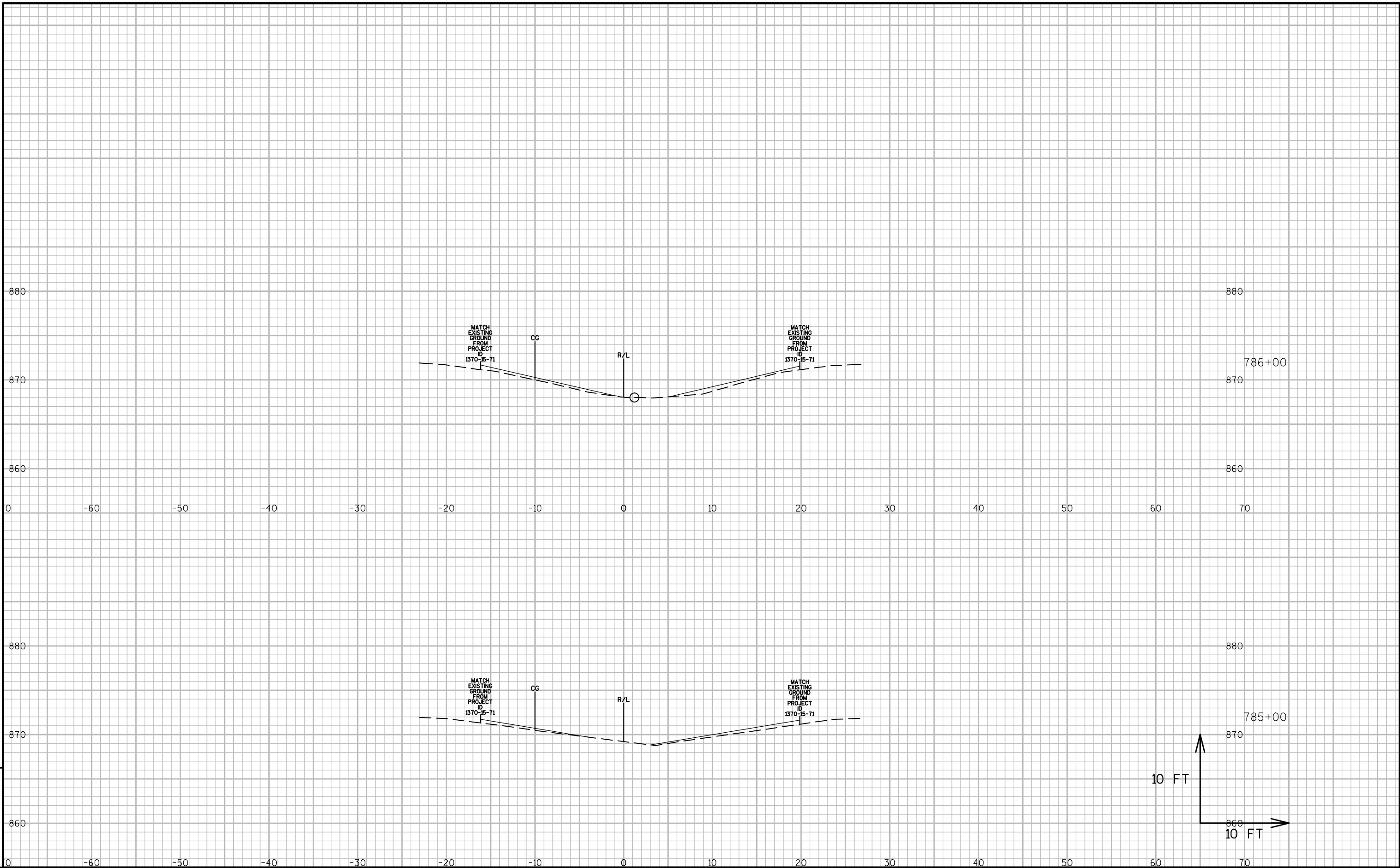
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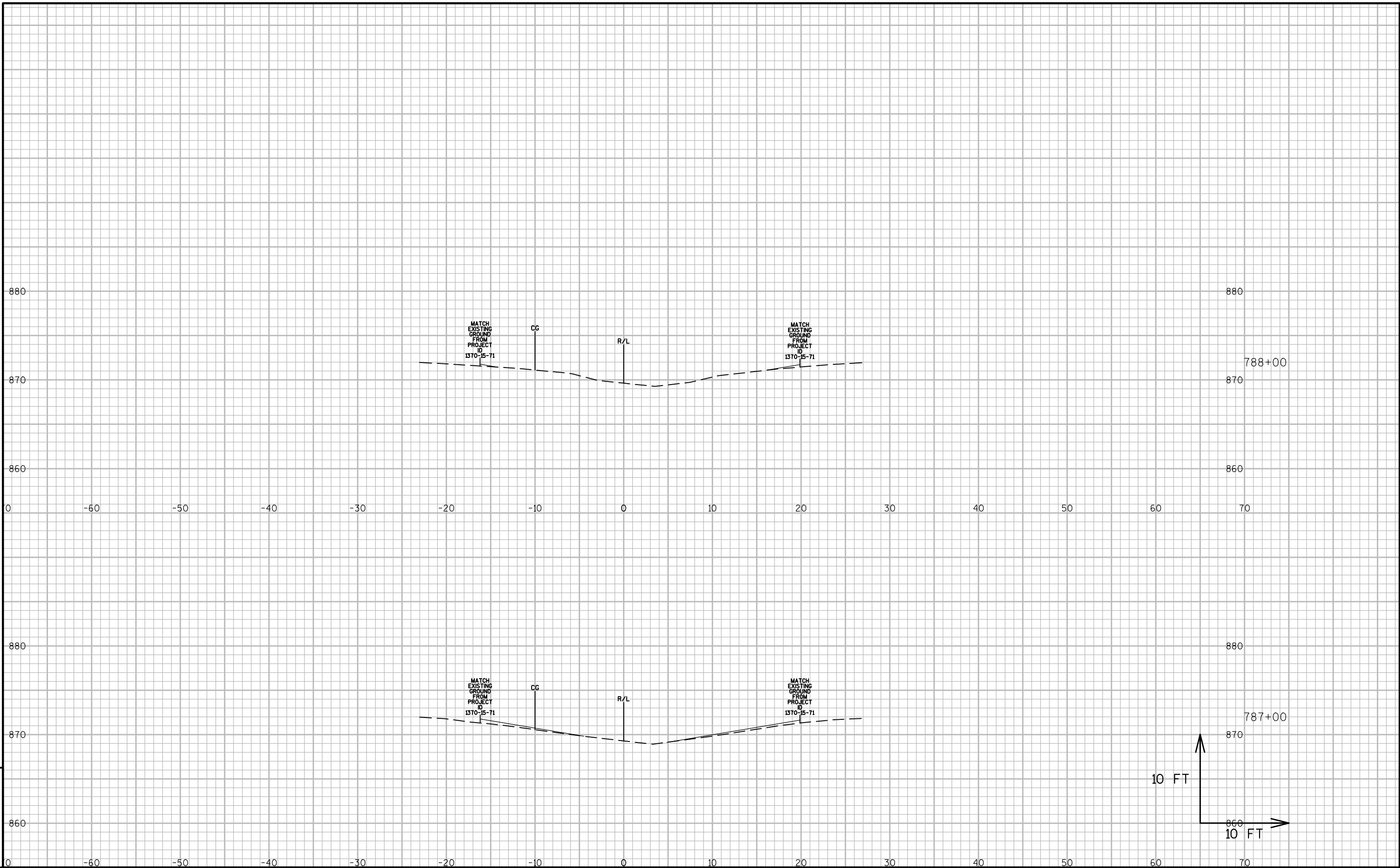
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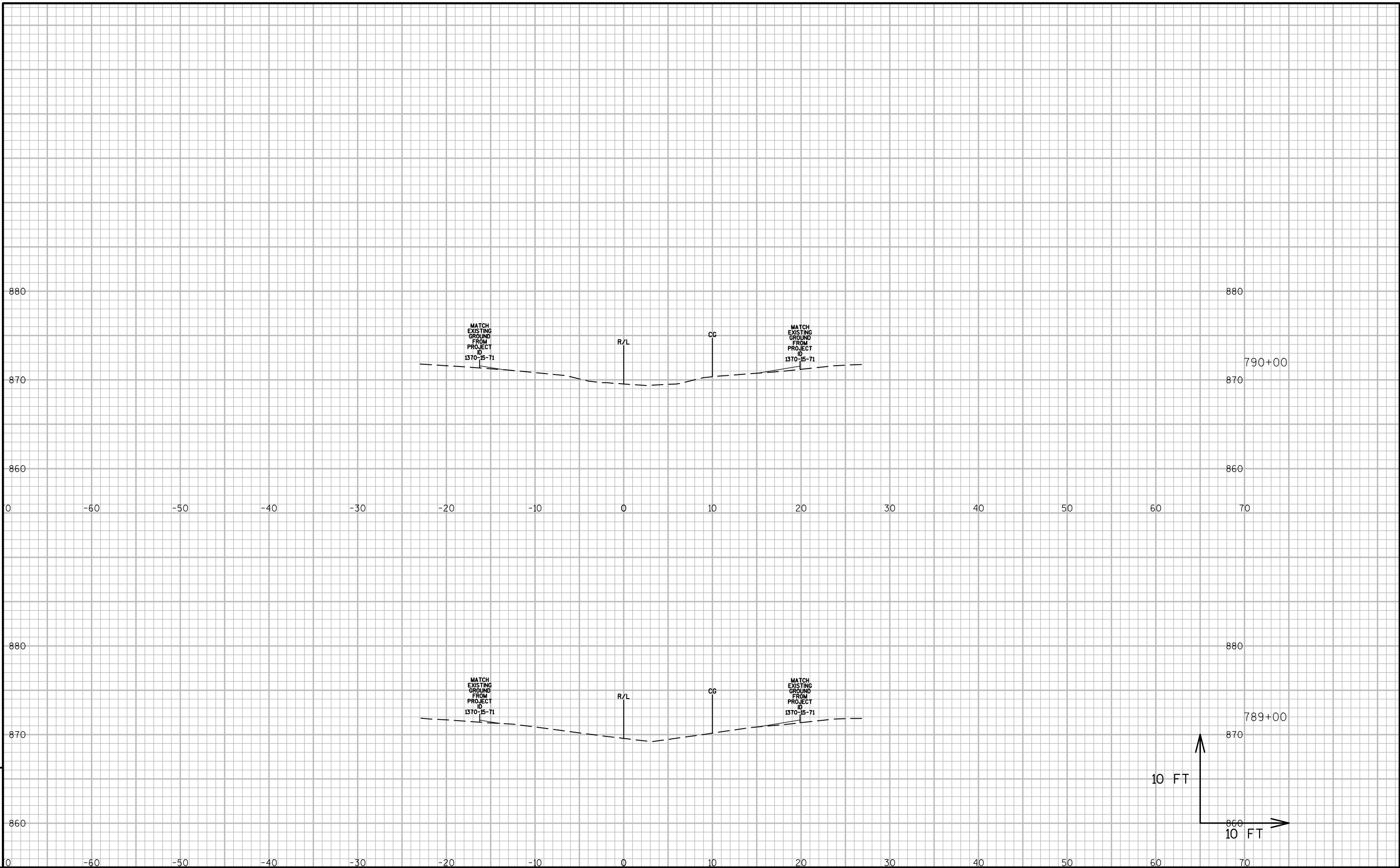
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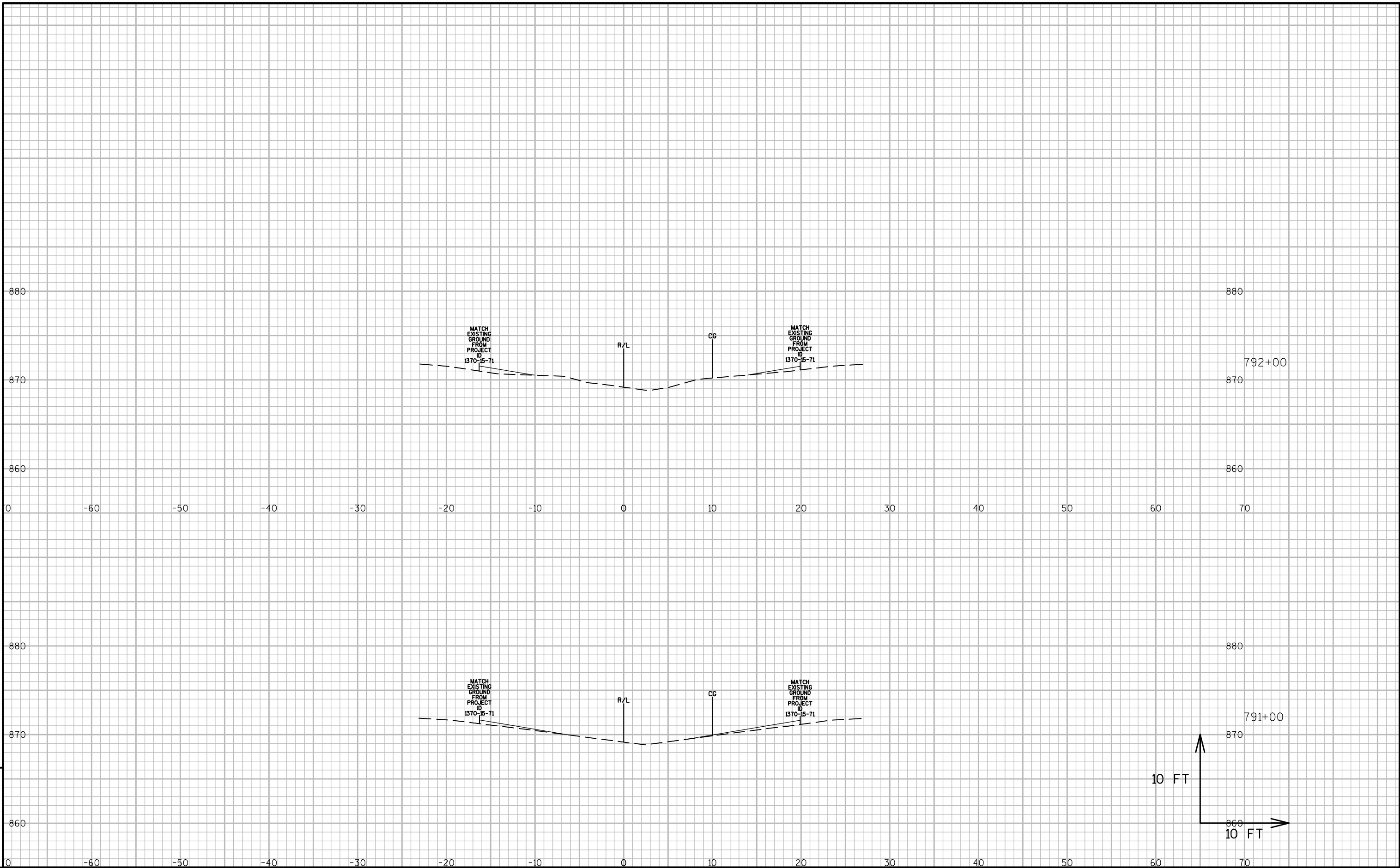
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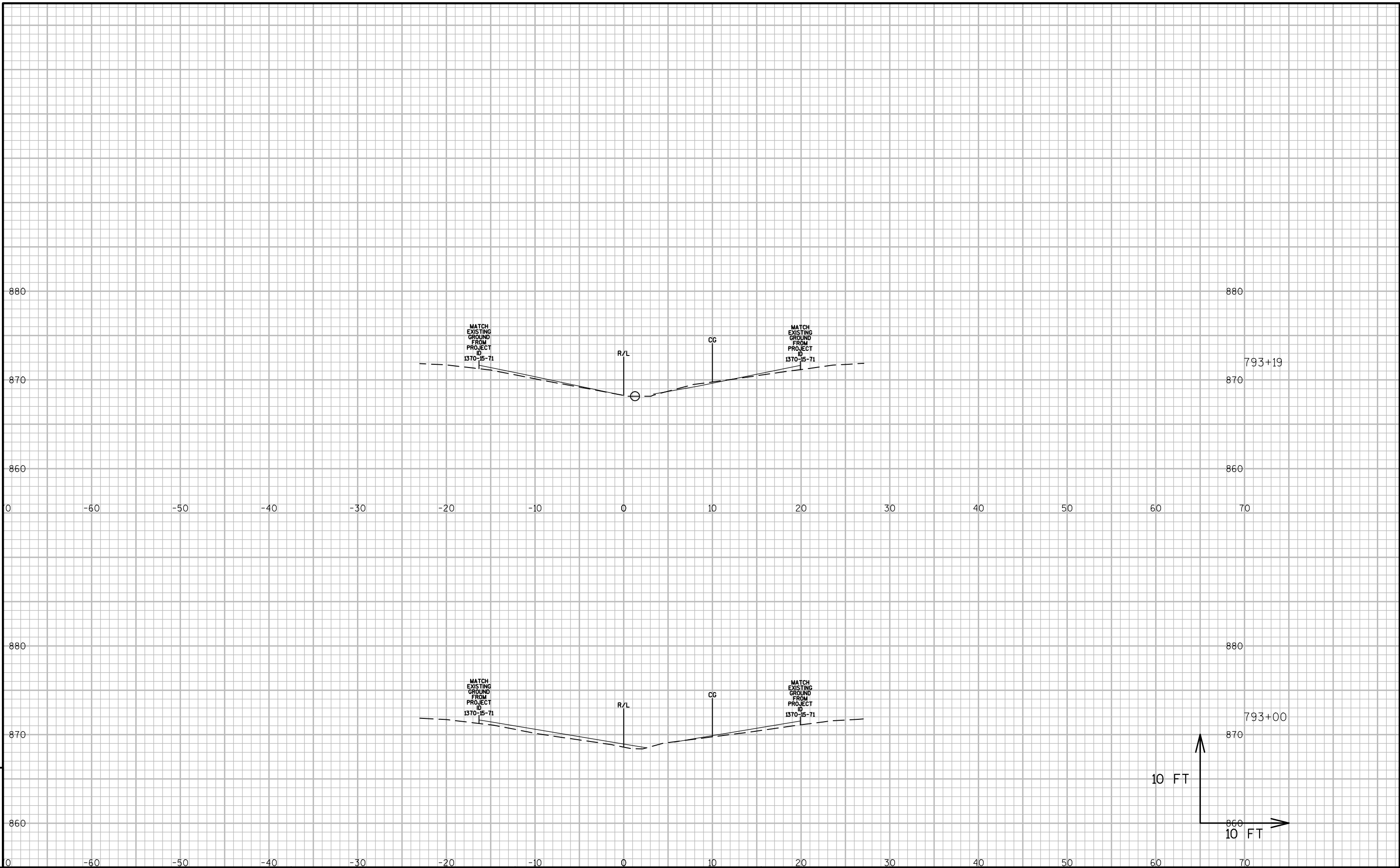


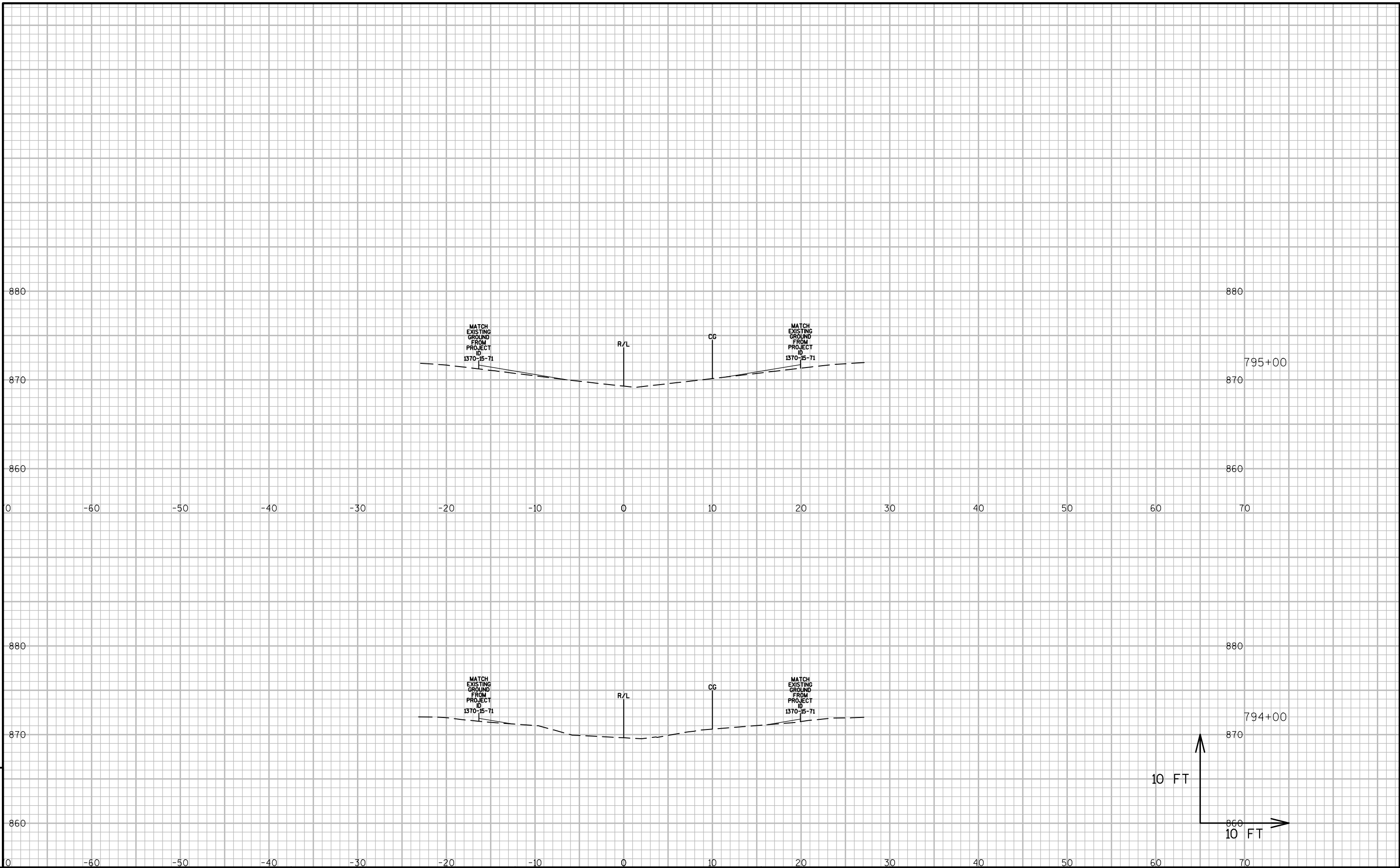


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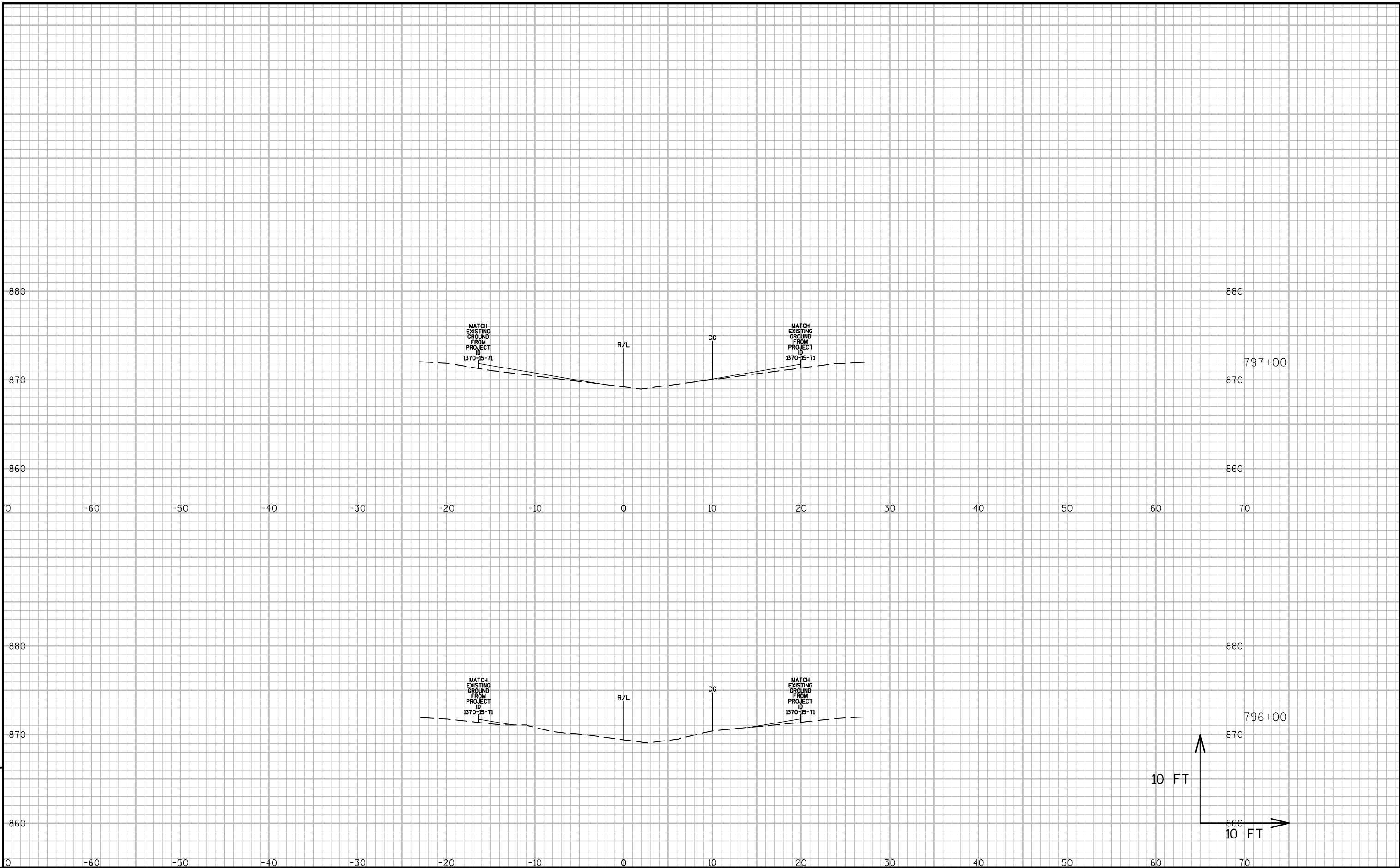


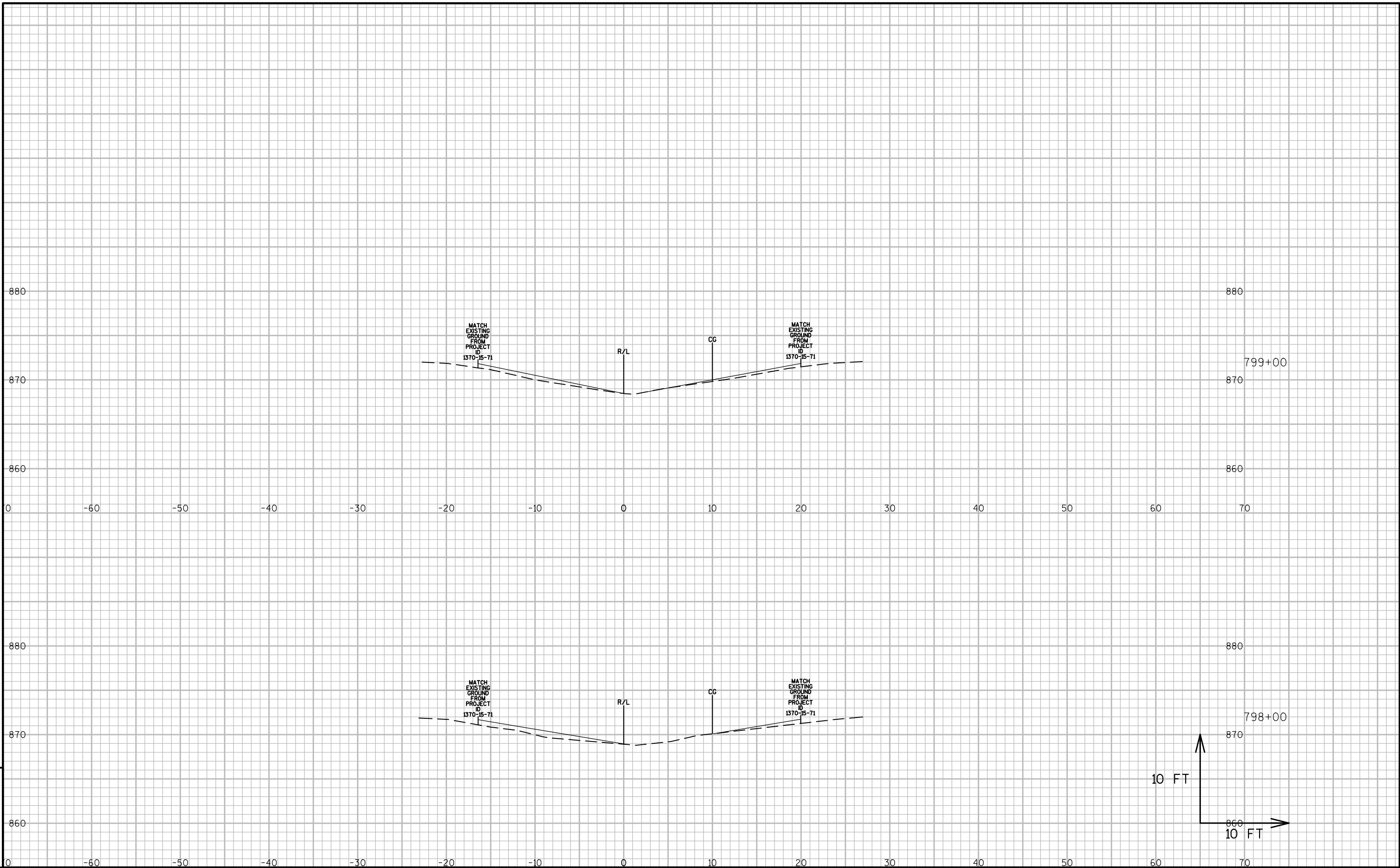




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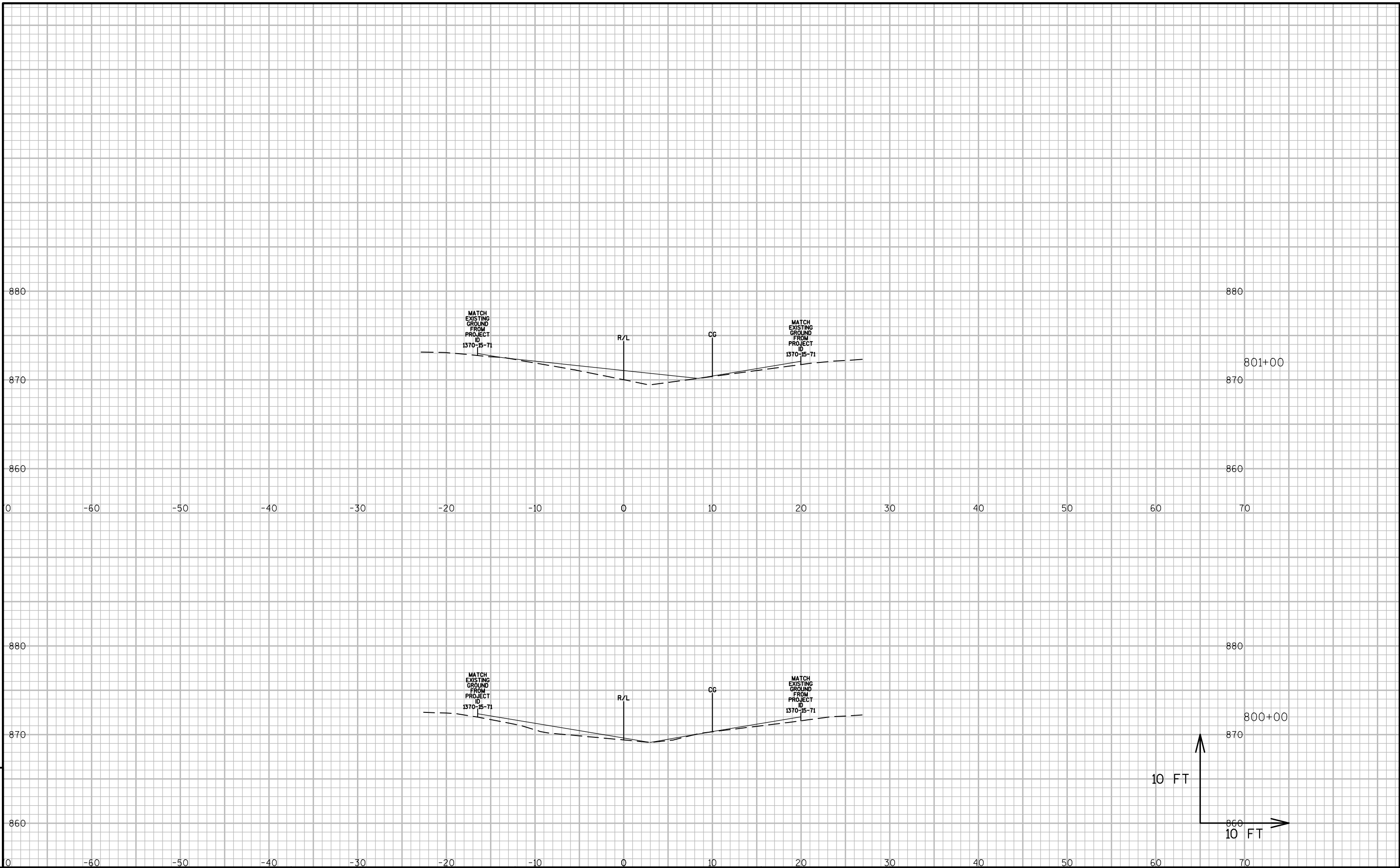
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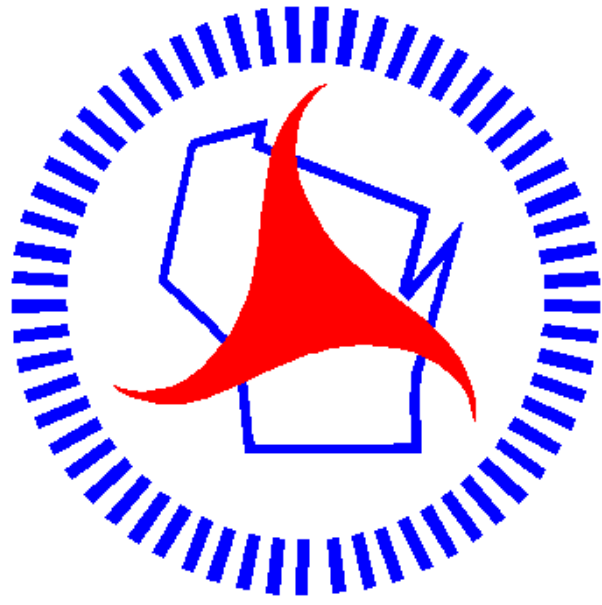




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