



**Preferred Alternative
Design Parameters**

The image shows an aerial photograph of a residential area with various streets and landmarks. Overlaid on the map are several design parameters: a network of purple lines representing streets or boundaries, a blue shaded area, and a prominent red double-line road running horizontally across the center. Labels on the map include 'Jamesstown', 'Village', 'Sunset', 'Pet Cemetery', 'Riverview', 'Cloud', 'Daisy', 'Andover Rd', 'Dillons', and 'YMCA'. The title 'Preferred Alternative Design Parameters' is centered in large white text over a semi-transparent purple background.

US54/400 Corridor Study Geometric Design Criteria

Description	US 54 Mainline		US 54 Ramps		Frontage Roads		N/S Arterial Streets		Backage Roads		Criteria	
	Desirable	Minimum	Desirable	Minimum	Desirable	Minimum	Desirable	Minimum	Desirable	Minimum		
Route Classification	B											[1] Pg. 5-2
Functional Classification	Urban Principal Arterial - Freeway		Urban Principal Arterial - Freeway		Urban Principal Arterial - Other		Urban Principal/Minor Arterial		Urban Collector		[2] Pg. 8 - 12	
Access Control	Full											[1]
Traffic Volume	Traffic Analysis		Traffic Analysis		Traffic Analysis		Traffic Analysis		Traffic Analysis		Based on ultimate development	
Design Speed	70 mph		60 mph	40 mph	40 mph		40 mph		30 mph		[1] Table 7.2.1-2 [1] Table 7.2.1-3	
Design Vehicle	WB-67		WB-67		WB-67							
Horizontal Alignment												
Control Location	Centerline Roadway		Outside Edge of Pavement		Inside Edge of Lanes		Centerline Roadway		Centerline Roadway			
Minimum Radius (w/super)	3150'	1810'	2320'	444'	965'	444'	485'	444'	231'	214'	[2] Exhibit 3-16, Pg. 151 [2] Exhibit 3-27, Pg. 170	
Superelevation	6%	8%	6%	8%	6%	8%	6%	8%	6%	8%	[1] Table 7.2.1-2 [1] Table 7.2.1-3	
Vertical Alignment												
Control Location	Centerline Roadway		Outside Edge of Lane		Inside Edge of Lanes		Centerline Roadway		Centerline Roadway			
Maximum Gradient	3%		5%		5%		5%		5%		[1] Table 7.2.1-2 [1] Table 7.2.1-3	
Minimum Gradient	0.30%	0.10%	0.30%	0.10%	0.30%	0.10%	0.30%	0.10%	0.30%	0.10%		
Stopping Sight Distance	730'		570'	305'	305'		305'		200'		[1] Table 7.2.1-2 [2] Exhibit 3-72, Pg. 272	
Crest Curve K-Value	247		151	44	44		44		19		[2] Exhibit 3-72, Pg. 272	
Sag Curve K-Value	181		136	64	64		64		37		[2] Exhibit 3-75, Pg. 277	
Verical Clearance (Roads over highway)	16'-4"		16'-4"		16'-4"		16'-4"		16'-4"		[1] Table 7.2.1-2	
Verical Clearance (Highway over local roads)	16'-4"		16'-4"		16'-4"		16'-4"		16'-4"		[1] Table 7.2.1-2	
Cross Sectional Elements												
Roadway Width	Varies	122'-6"	Varies	28'-0"	29'-0"	29'-0"	Varies	49'-0"	Varies	41'-0"		
Lanes (per direction)	Traffic Analysis	3	Traffic Analysis	1	Traffic Analysis	2	Traffic Analysis	1	Traffic Analysis	1	Traffic Analysis	
Lane Widths												
Thru Lanes	12'		16'	12'	12'		11'		11'			
Auxiliary Turn Lanes	12'		N/A		12'		12'		14'			
Usable Shoulder Widths												
Inside	12'		4'	4'	2.5' Curb & Gutter		2.5' Curb & Gutter		2.5' Curb & Gutter			
Outside	12'		8'	8'	2.5' Curb & Gutter		2.5' Curb & Gutter		2.5' Curb & Gutter			
Median	N/A		N/A		N/A		1.75' Curb & Gutter		N/A			
Cross Slope												
Lanes	2%		2%		2%		3%		3%		[1] & [4]	
Shoulders	2.5%		2.5%		N/A		N/A		N/A			
Median Width	High Conc. Median Safety Barrier		N/A		N/A		Varies		N/A			
Side Slopes												
Within Clear Zone	6:1 (Max.)		6:1 (Max.)		4%		4%		4%		[1] Table 7.2.1-2 [1] Table 7.2.1-3	
Outside Clear Zone - fills <=30'	4:1 (Max.)		4:1 (Max.)		4:1 (Max.)		4:1 (Max.)		4:1 (Max.)		[1] Table 7.2.1-2 [1] Table 7.2.1-3	
Outside Clear Zone - fills >30'	3:1 (Max.)		3:1 (Max.)		3:1 (Max.)		3:1 (Max.)		3:1 (Max.)		[1] Table 7.2.1-2 [1] Table 7.2.1-3	
Clear Zone Width												
Clear Zone Width	34'	34'			6'		6'		6'		[5]	
Usual ROW Width	350' (mailine, ramps & front. rds.)		350' (mailine, ramps & front. rds.)		350' (mailine, ramps & front. rds.)		Varies		100'	110'	90'	

Notes: [1] KDOT Design Manual, 2008, Kansas Department of Transportation

[2] AASHTO = A Policy on Geometric Design of Highways and Streets, 2004, American Association of State Highway and Transportation Officials ("Green Book")

[3] AASHTO = Guidelines for Geometric Design of Very-Low Volume Local Roads (ADT ≤ 400), 2001, American Association of State Highway and Transportation Officials

[4] City of Andover

[5] Clear Zone measured from edge of driving lane or back of curb when present.

US 54/400 Corridor Study Project Survey Control

Project Coordinates x 0.9998848748 = NGS State Plane Coord.
NAD 1983

VERTICAL DATUM: NAVD 1988

Datum Benchmark: USGS Benchmark Designation-R 39
NAVD 1988 Elev. = 1361.74

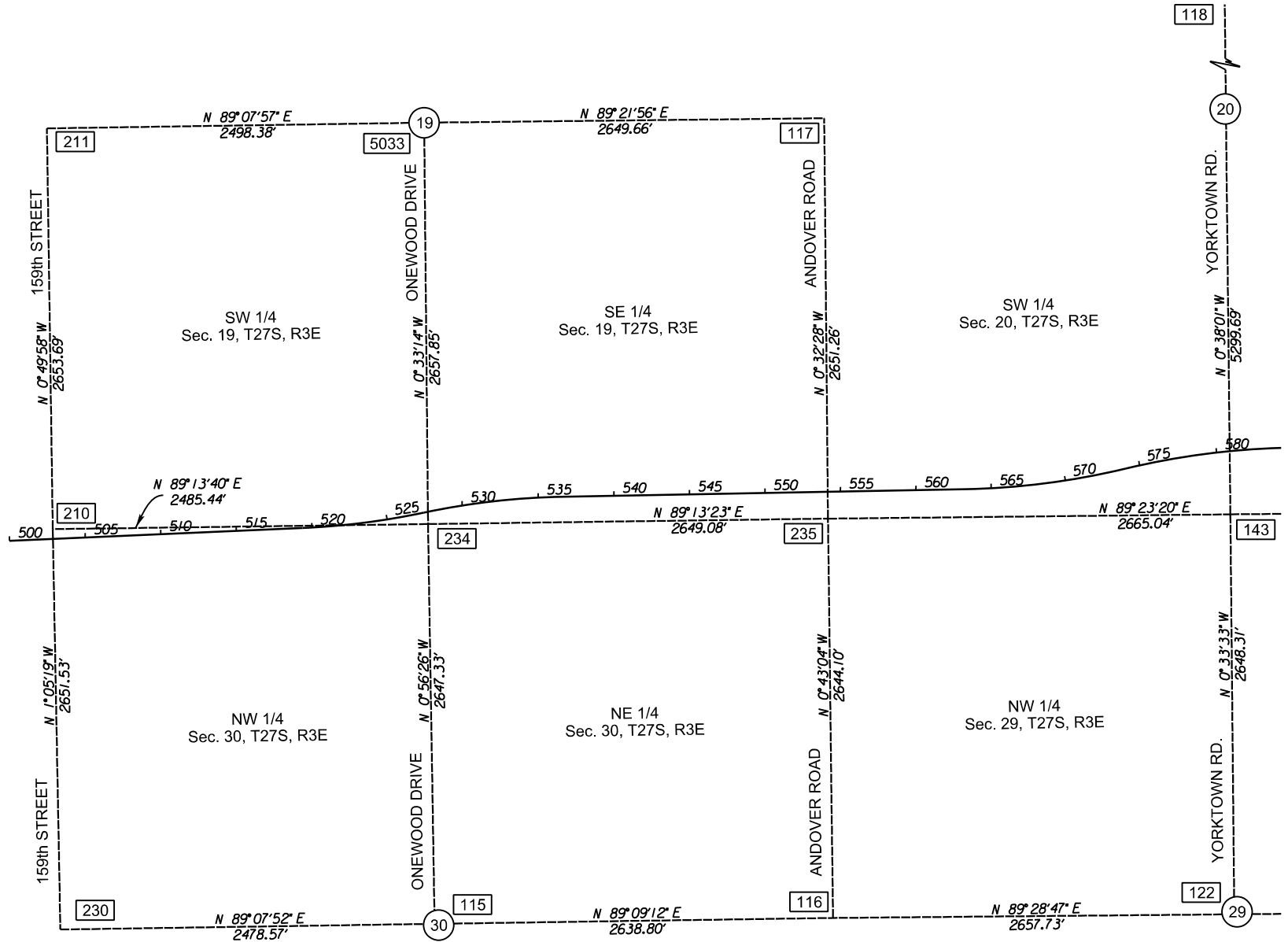
Proj. Corridor Benchmark: USGS benchmark monument
75' N. & 42' E. of Sec. Cor. at 159th & Kellogg
NAVD 1988 Elev. = 1302.21

US 54/400 Corridor Study Section Corners

Sec / Cor No.	Quarter Corner Location	Coordinates		Station	Offset (ft)	Angle
		Northing	Easting			
115	Center of Sec. 30, T27S, R3E	1681516.53	1704850.35			
116	E 1/4 Cor. Sec. 30, T27S, R3E	1681555.52	1707488.86			
117	E 1/4 Cor. Sec. 19, T27S, R3E	1686850.56	1707430.70	554+20.17	2,614.67 Lt.	90° 04' 12" NW
118	N 1/4 Cor. Sec. 20, T27S, R3E	1689527.21	1710062.02	580+86.53 (Ahd. Tan.)	5,196.36 Lt.	89° 58' 39" NW (Ahd. Tan.)
119	E 1/4 Cor. Sec. 20, T27S, R3E	1686904.83	1712752.09	607+49.55 (Bk. Tan.)	2,593.89 Lt.	86° 17' 20" NW (Bk. Tan.)
122	Center of Sec. 29, T27S, R3E	1681579.66	1710146.48			
123	E 1/4 Cor. Sec. 29, T27S, R3E	1681603.44	1712805.31			
125	N 1/4 Cor. Sec. 21, T27S, R3E	1689601.29	1715371.48			
126	E 1/4 Cor. Sec. 21, T27S, R3E	1686998.84	1718056.47			
127	Center of Sec. 28, T27S, R3E	1681651.79	1715459.69			
131	SE Cor. Sec. 20, T27S, R3E	1684255.76	1712782.33	607+49.55 (Bk. Tan.) 50+56.69 Prairie Creek Road	55.35 Rt. 0.00 Lt.	86° 17' 20" SE (Bk. Tan.)
137	SE Cor. Sec. 21, T27S, R3E	1684348.18	1718091.69			
139	S 1/4 Cor. Sec. 21, T27S, R3E	1684302.17	1715437.06	634+04.94	18.88 Rt.	90° 00' 23" SW
143	N 1/4 Cor. Sec. 29, T27S, R3E	1684227.84	1710120.63	580+86.53 (Ahd. Tan.) 50+98.52 Yorktown Road	103.33 Rt. 39.52 Lt.	89° 58' 39" SE (Ahd. Tan.) 90° 01' 21" NE
210	SW Cor. Sec. 19, T27S, R3E	1684130.00	1702321.69	502+84.77 49+89.78 159th Street	10.22 Lt. 0.00 Lt.	89° 55' 48" NW
211	W 1/4 Cor. Sec. 19, T27S, R3E	1686783.41	1702283.12			
230	W 1/4 Cor. Sec. 30, T27S, R3E	1681478.95	1702372.07	502+84.77	2,641.31 Rt.	89° 55' 48" SE
234	S 1/4 Cor. Sec. 19, T27S, R3E	1684163.50	1704806.90	527+70.66 (Bk. Tan.) 50+23.14 Onewood Drive	20.82 Rt. 48.50 Rt.	93° 10' 09" SE (Bk. Tan.) 90° 13' 23" NW
235	SE Cor. Sec. 19, T27S, R3E	1684199.42	1707455.74	554+20.17 50+36.59 Andover Road	36.59 Rt. 0.00 Lt.	90° 04' 12" SE
5033	Center of Sec. 19, T27S, R3E	1686821.23	1704781.21	527+70.66 (Bk. Tan.)	2,637.03 Lt.	93° 10' 09" NW (Bk. Tan.)



Scale: 1"=1000'

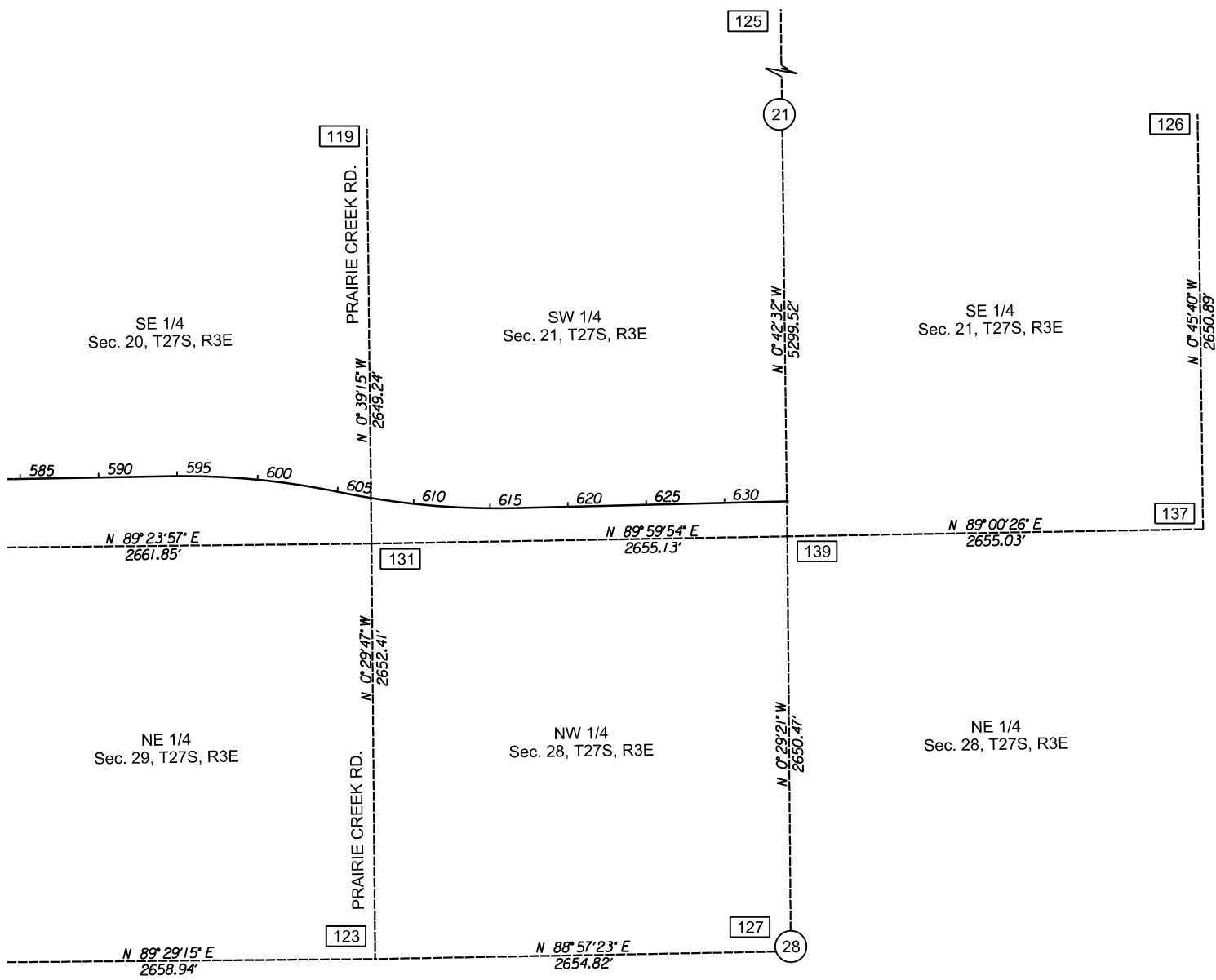


Note: Distances shown are from Section Corner to Section Corner

**US 54400 CORRIDOR STUDY
SECTION CORNERS**



Scale: 1"=1000'



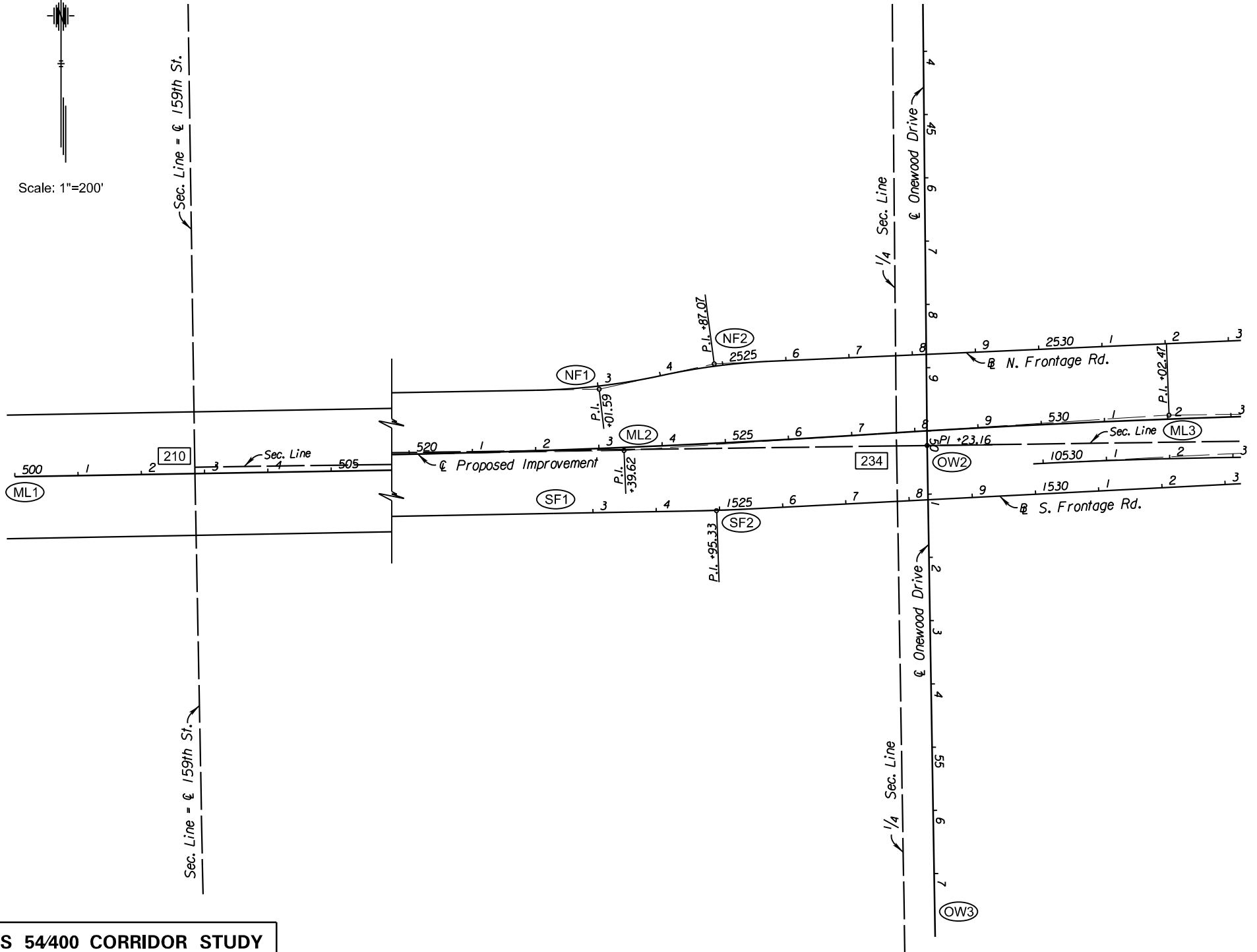
Note: Distances shown are from Section Corner to Section Corner

**US 54/400 CORRIDOR STUDY
SECTION CORNERS**

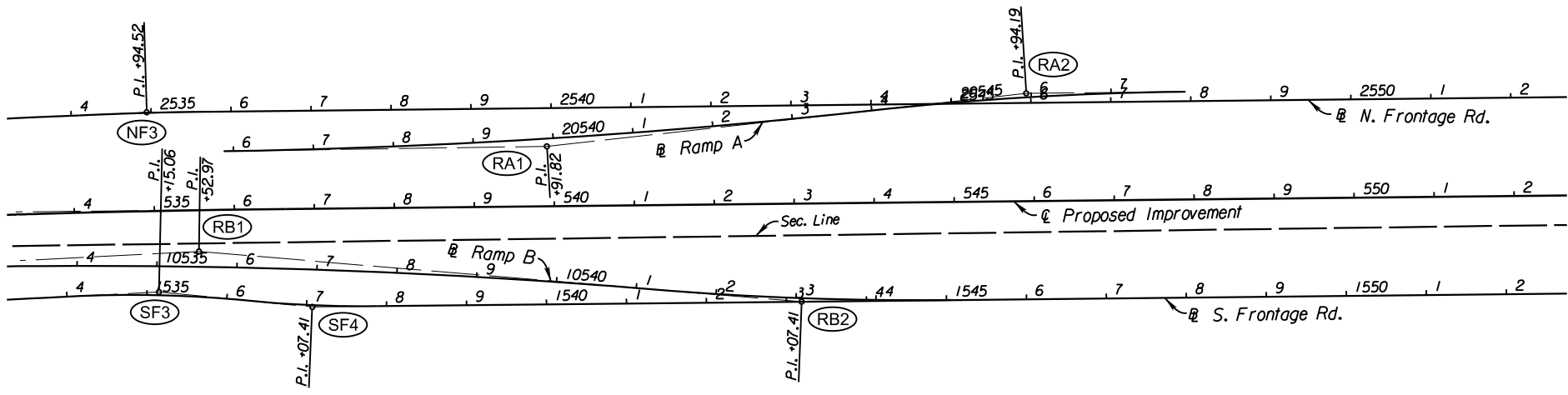
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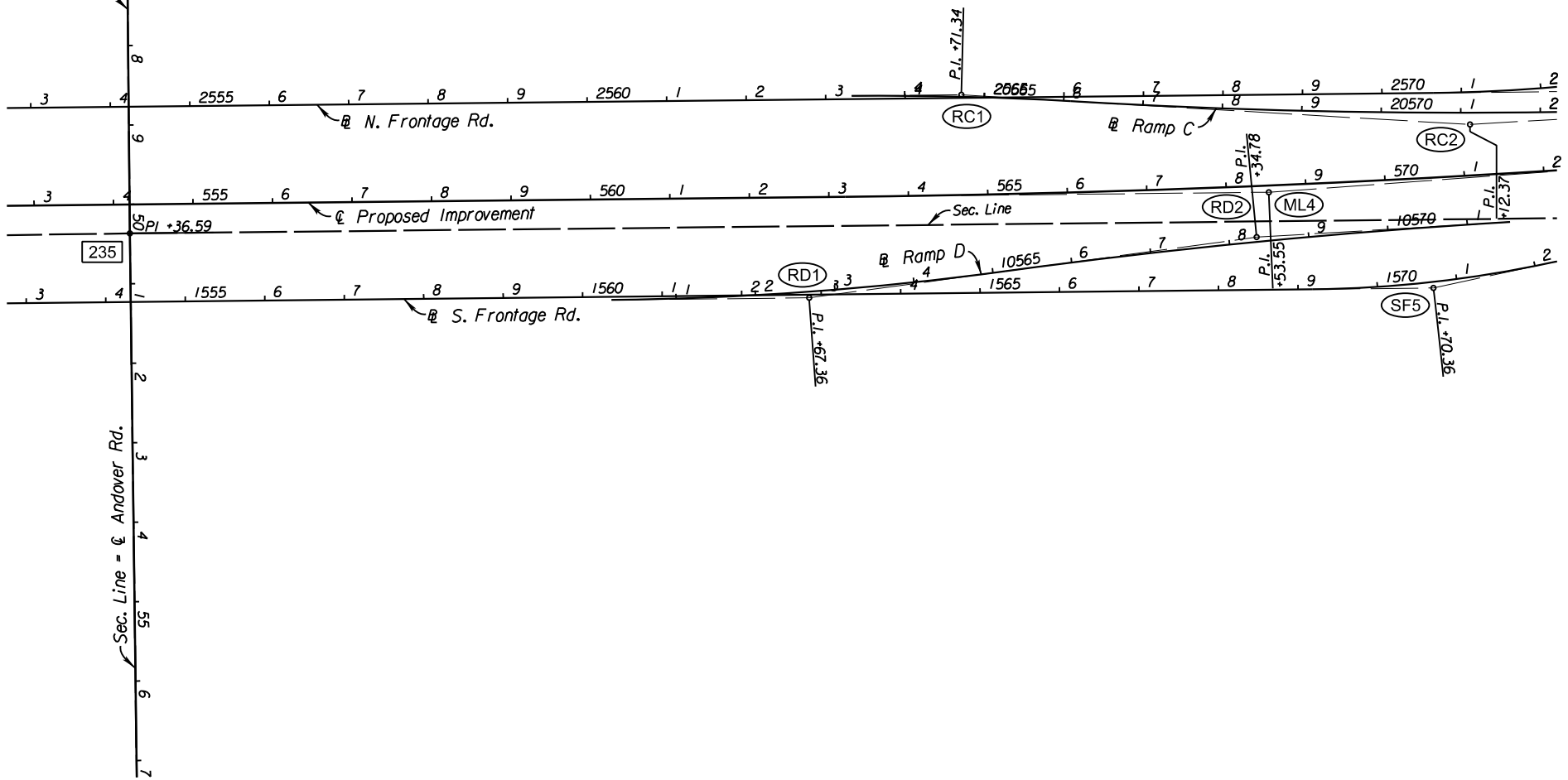
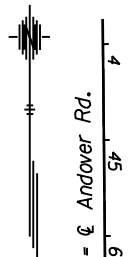
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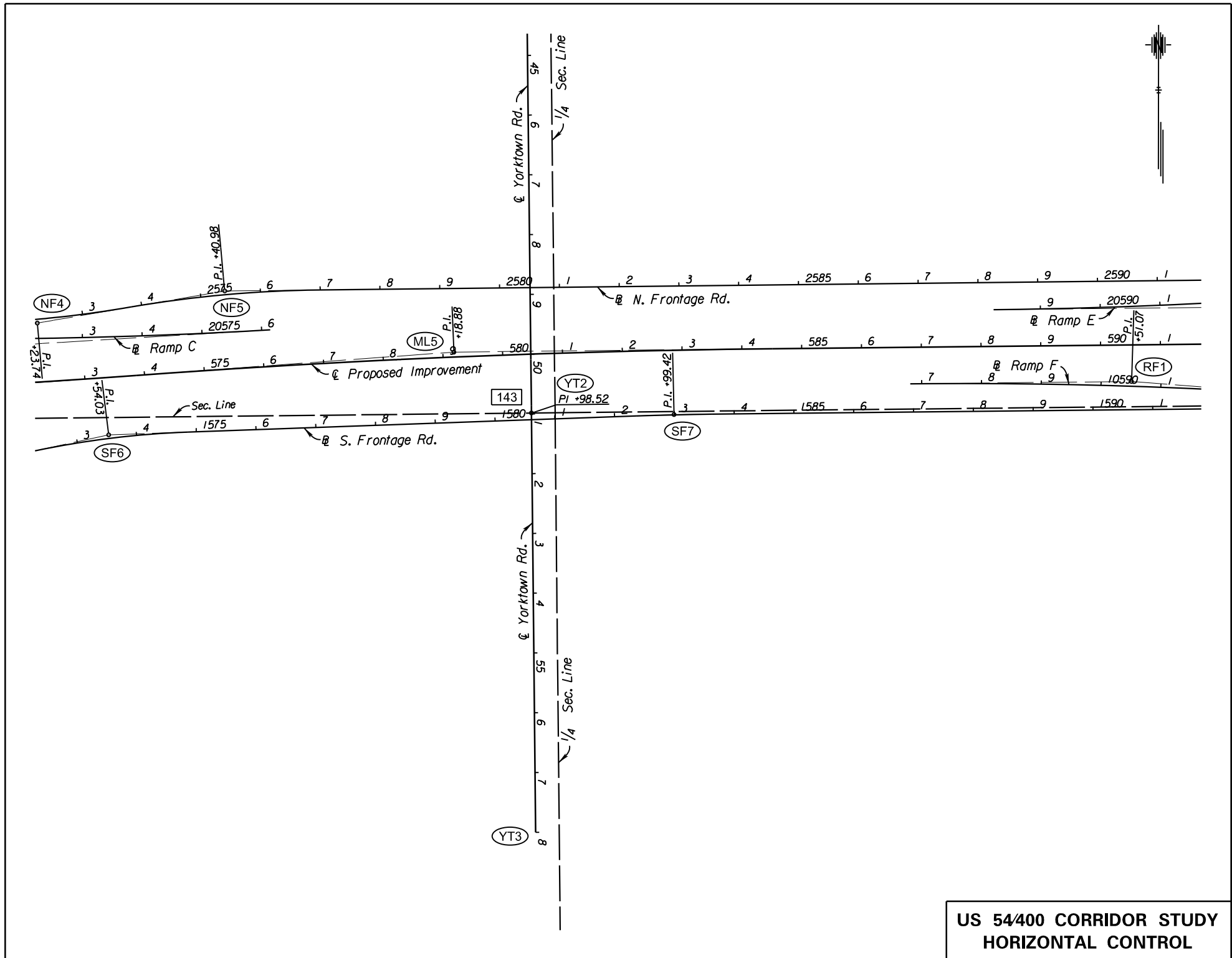
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HORIZONTAL CONTROL**



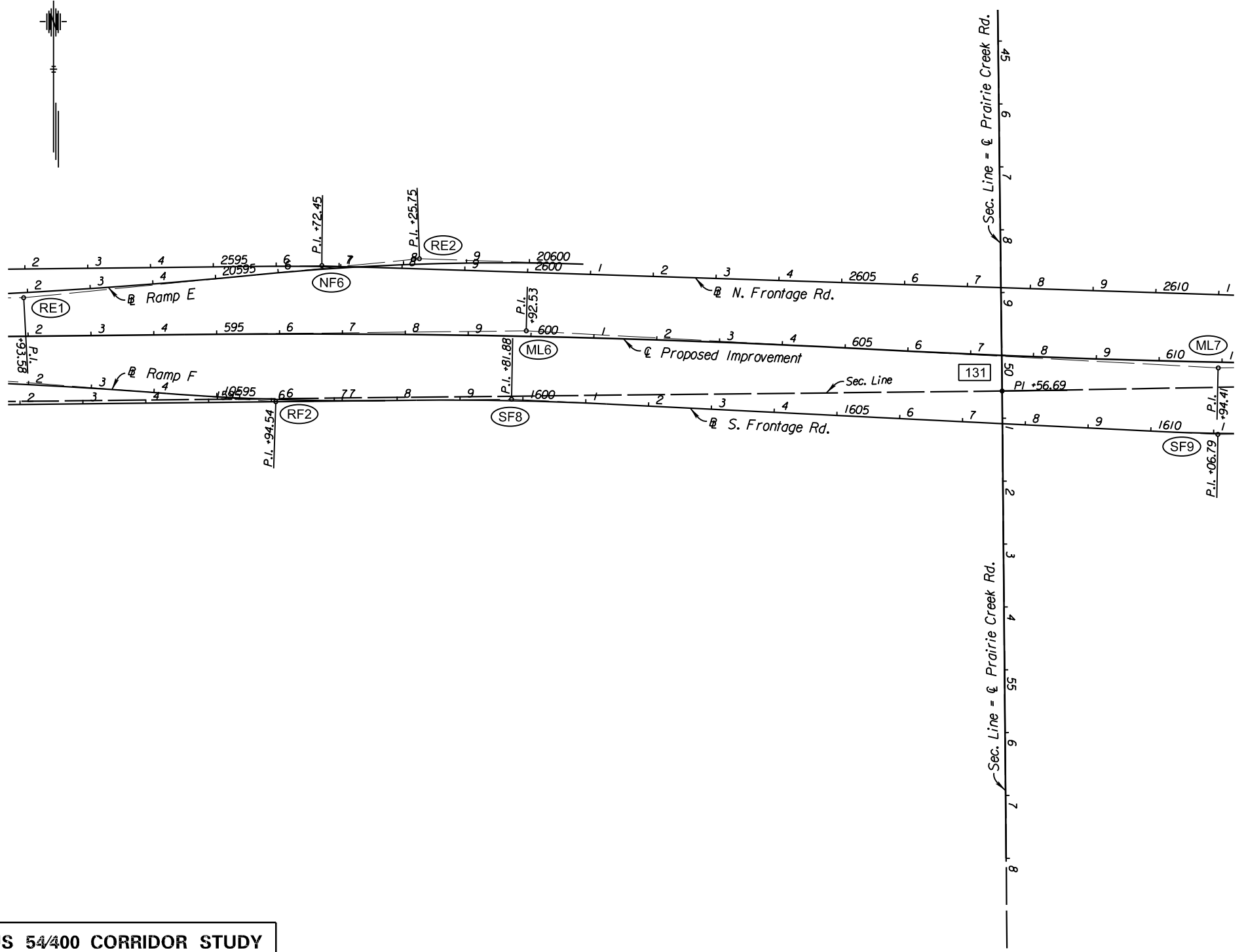
**US 54/400 CORRIDOR STUDY
HORIZONTAL CONTROL**



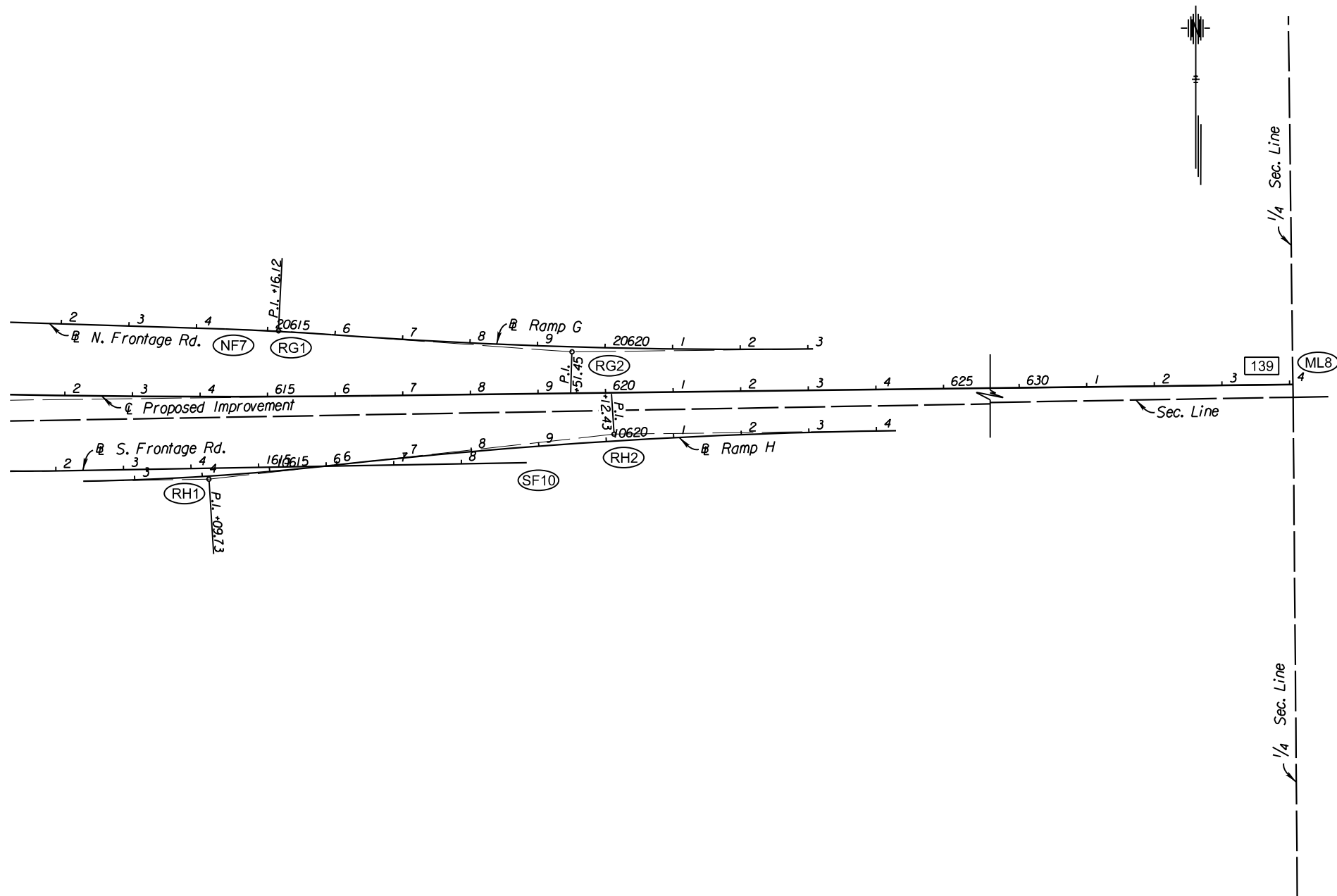
**US 54/400 CORRIDOR STUDY
HORIZONTAL CONTROL**



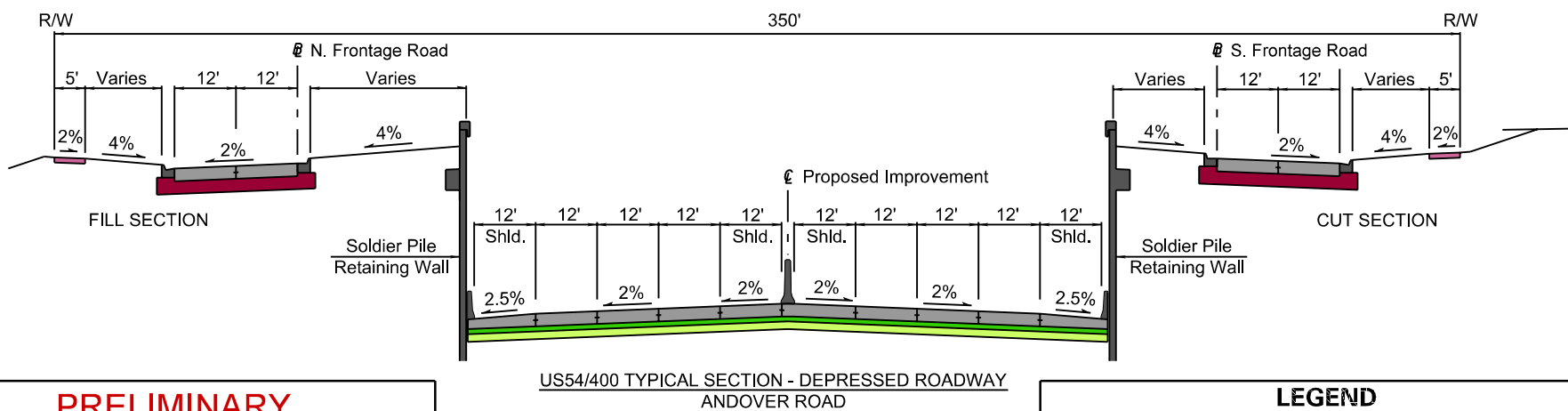
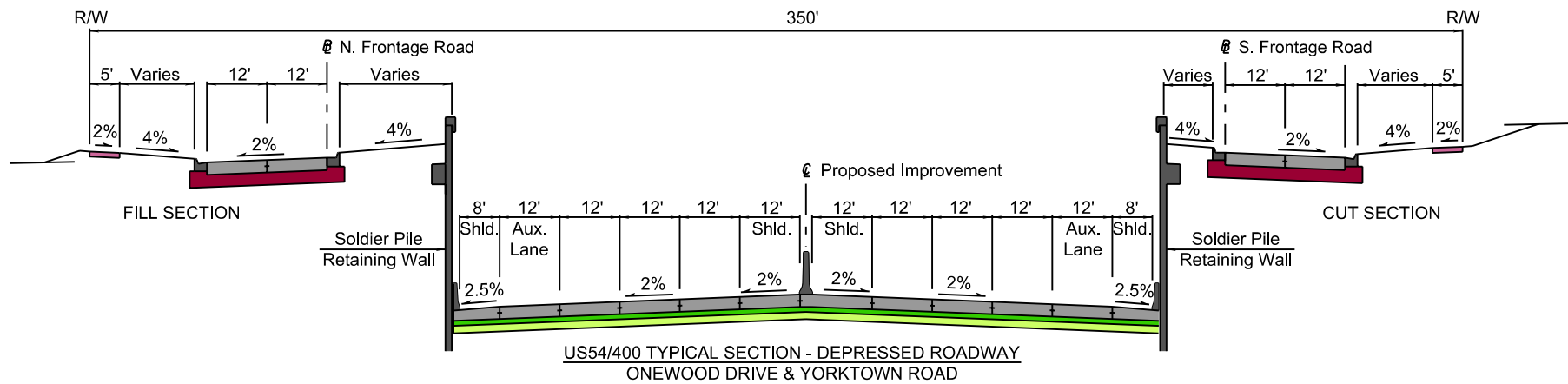
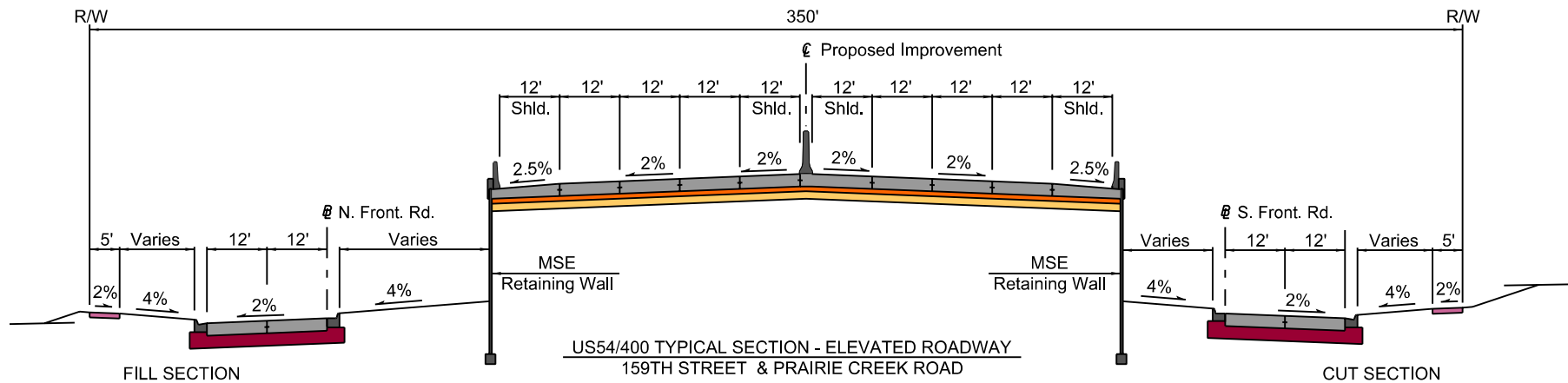
**US 54/400 CORRIDOR STUDY
HORIZONTAL CONTROL**



US 54/400 CORRIDOR STUDY
HORIZONTAL CONTROL



**US 54/400 CORRIDOR STUDY
HORIZONTAL CONTROL**

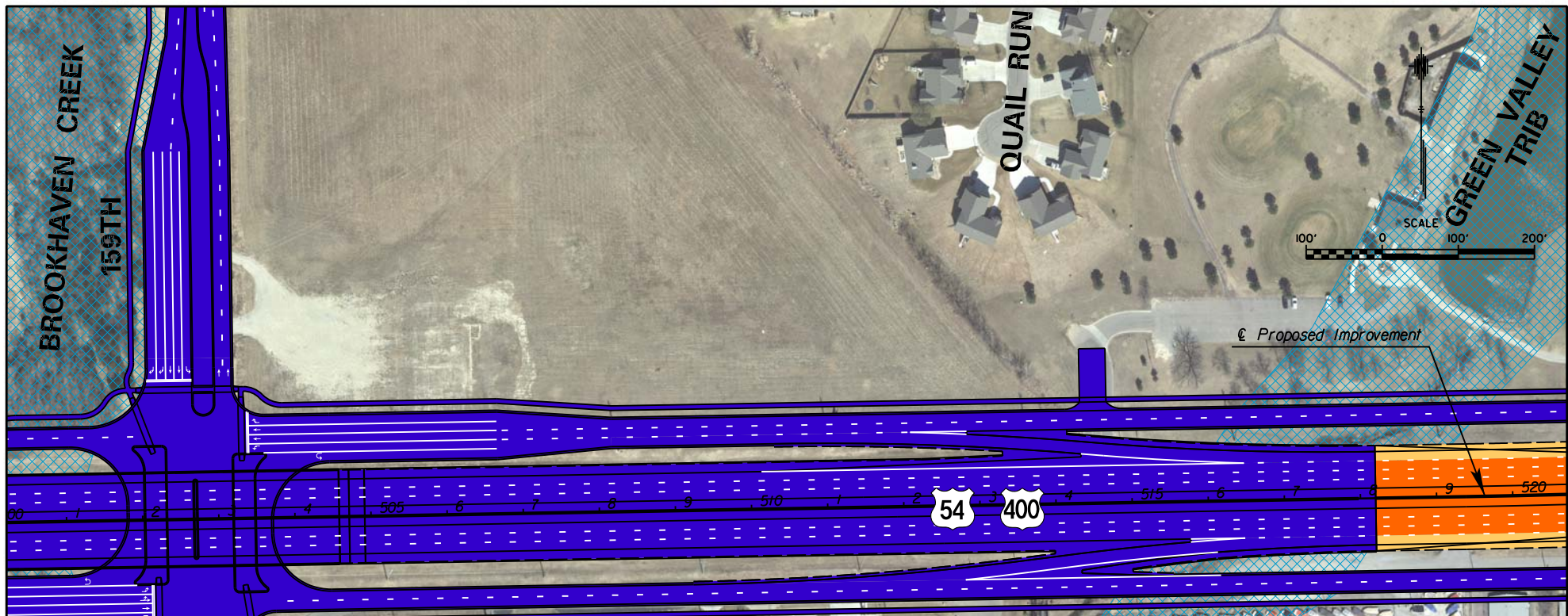


PRELIMINARY

This illustration depicts a preliminary concept for future US54/400 Improvements. The concept shown is based on the most current information available but may be changed in the future to accommodate the final design. Right-of-way needs will be determined at a later date. This illustration is current as of August 1, 2011 and is subject to change without notice.

LEGEND

- 10" Concrete Pavement
- 4" Cement Treated Base
- 6" Cement Treated Subgrade
- 10" Geogrid Reinforced Base
- Walls, Curbs & Safety Barriers
- 4" Bound Drainable Base
- 6" Lime Treated Subgrade
- 4" Concrete Sidewalk

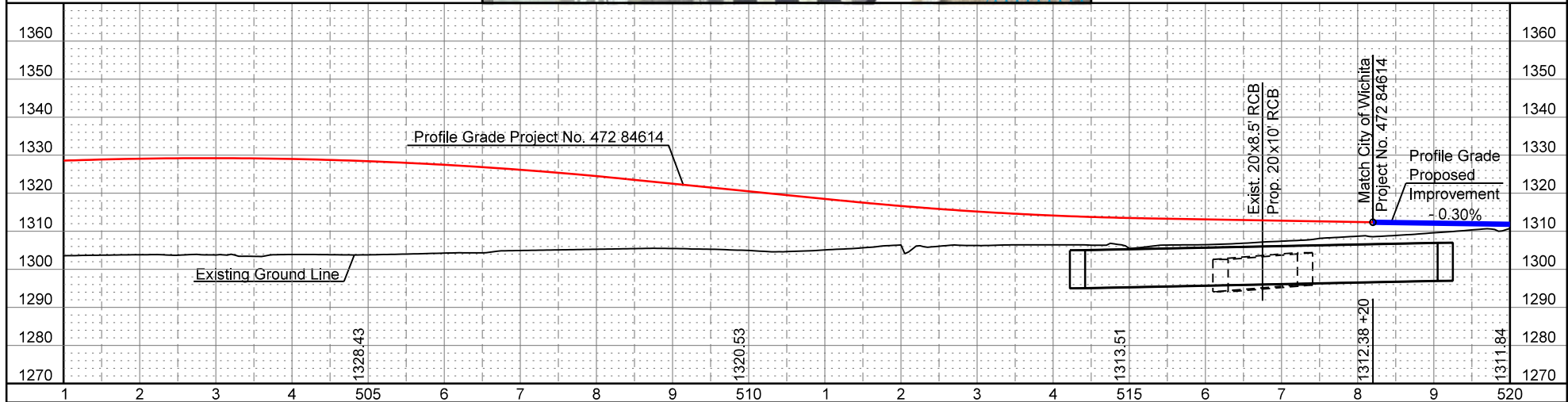


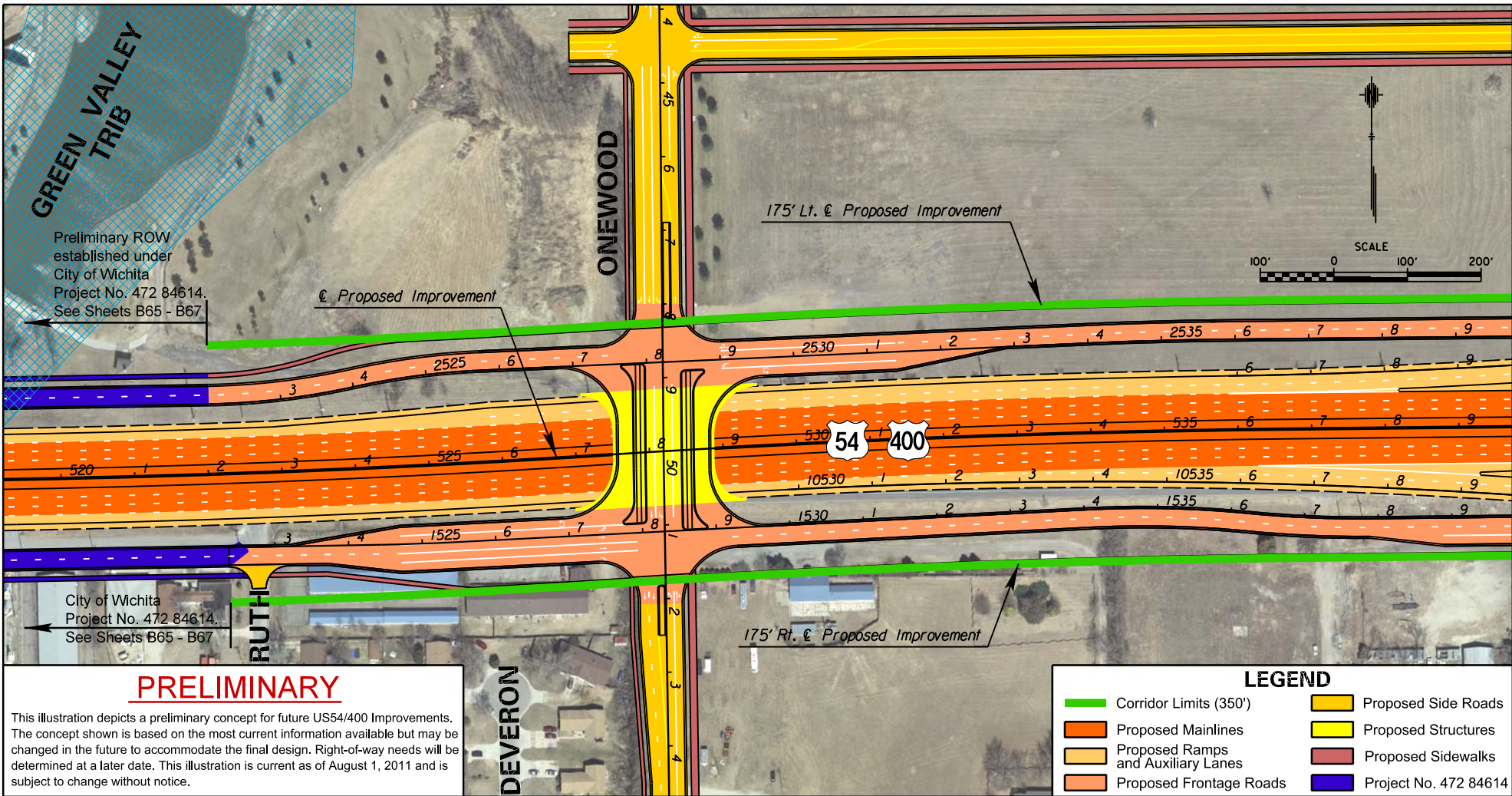
Preliminary ROW established under City of Wichita
Project No. 472 84614. See Sheets B65 - B67

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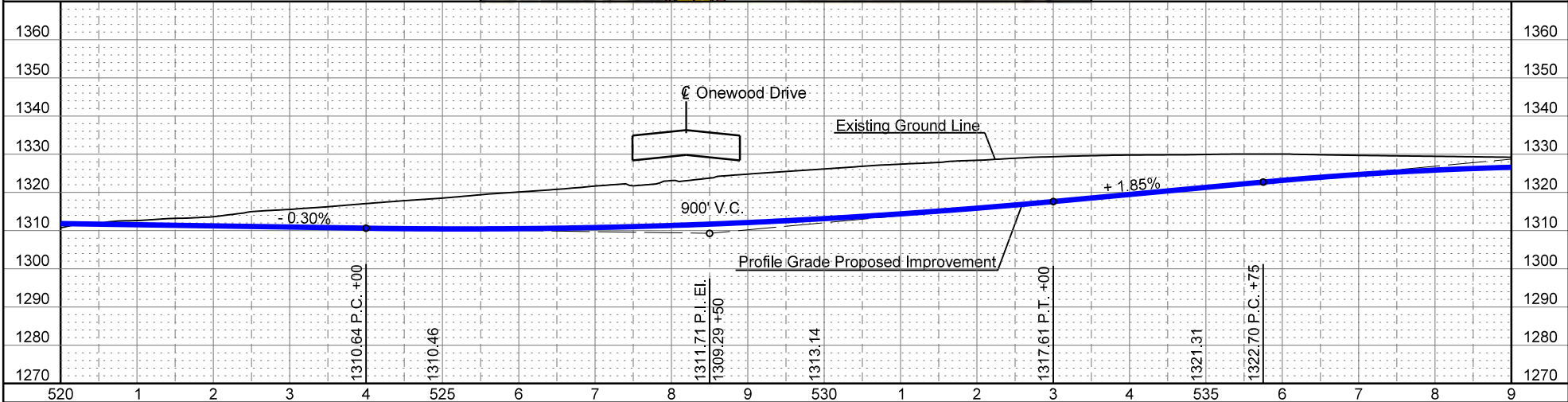
LEGEND	
	Corridor Limits (350')
	Proposed Mainlines
	Proposed Ramps and Auxiliary Lanes
	Proposed Frontage Roads
	Proposed Side Roads
	Proposed Structures
	Proposed Sidewalks
	Project No. 472 84614

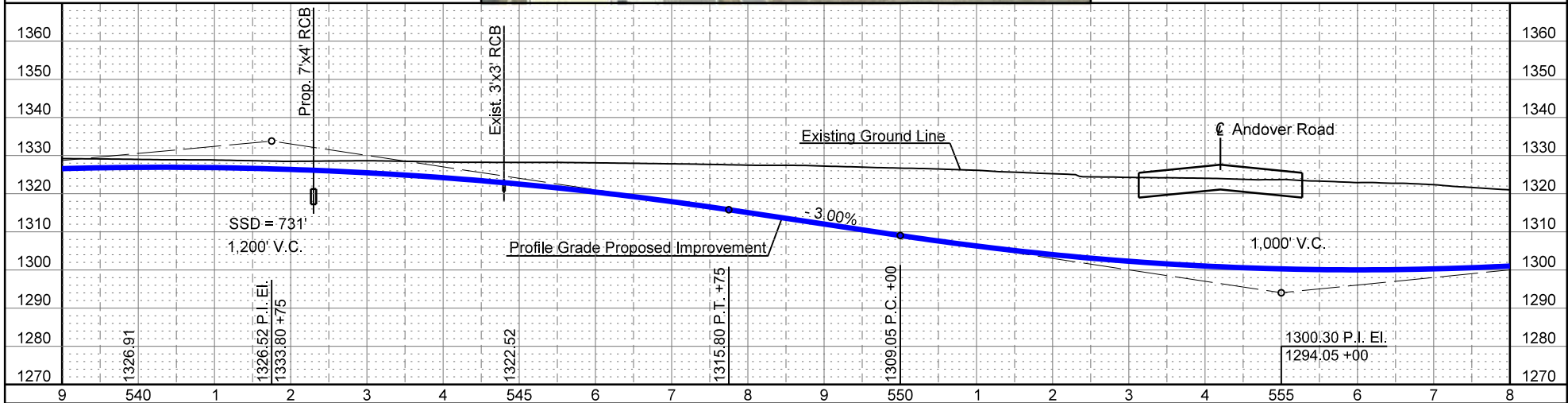
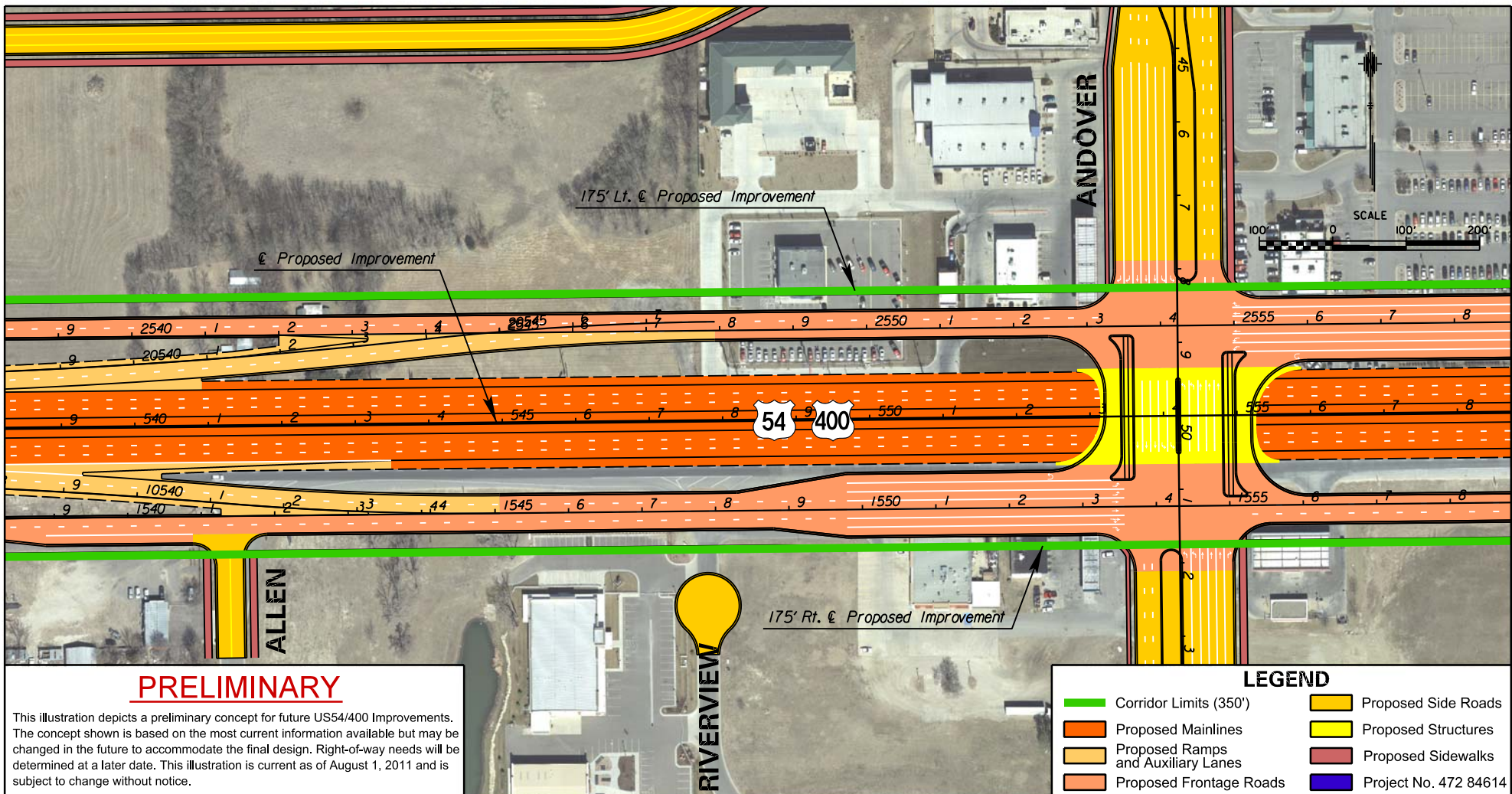


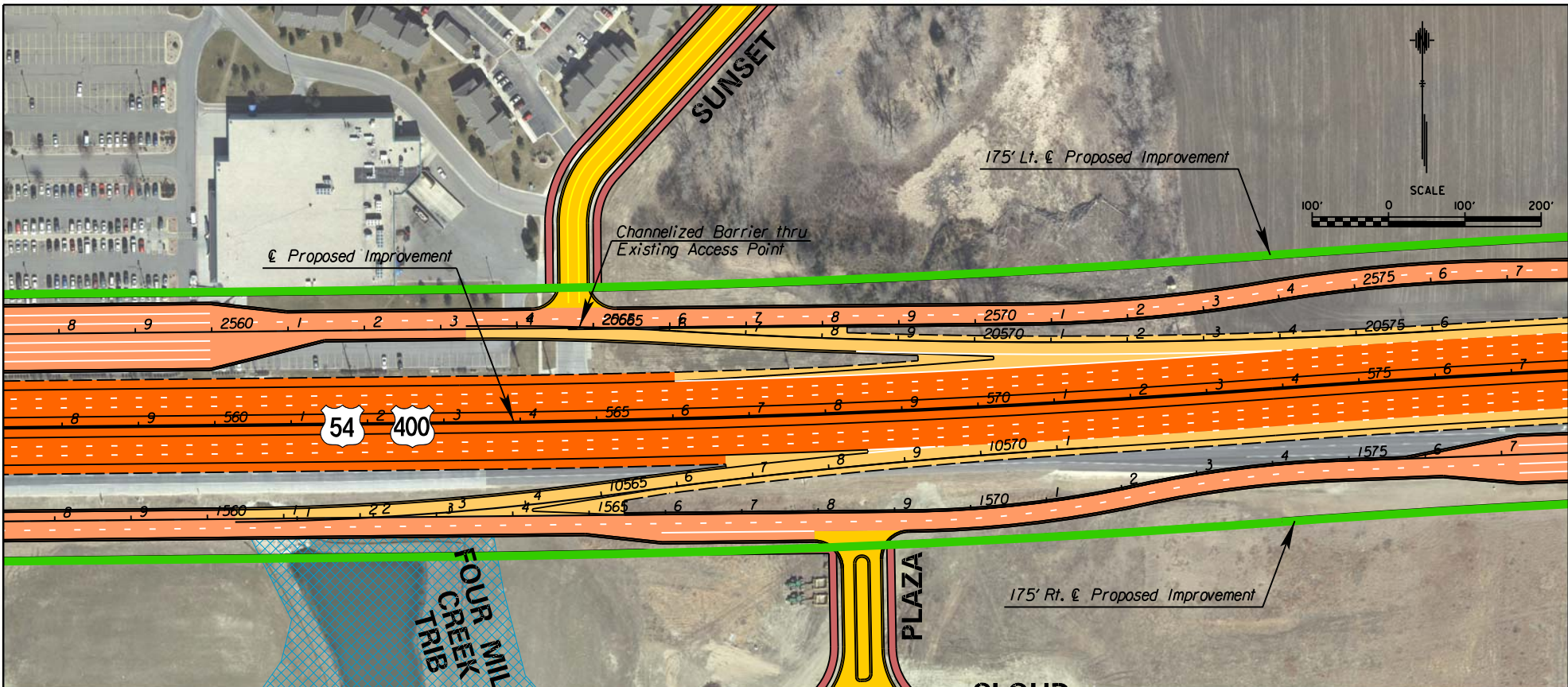


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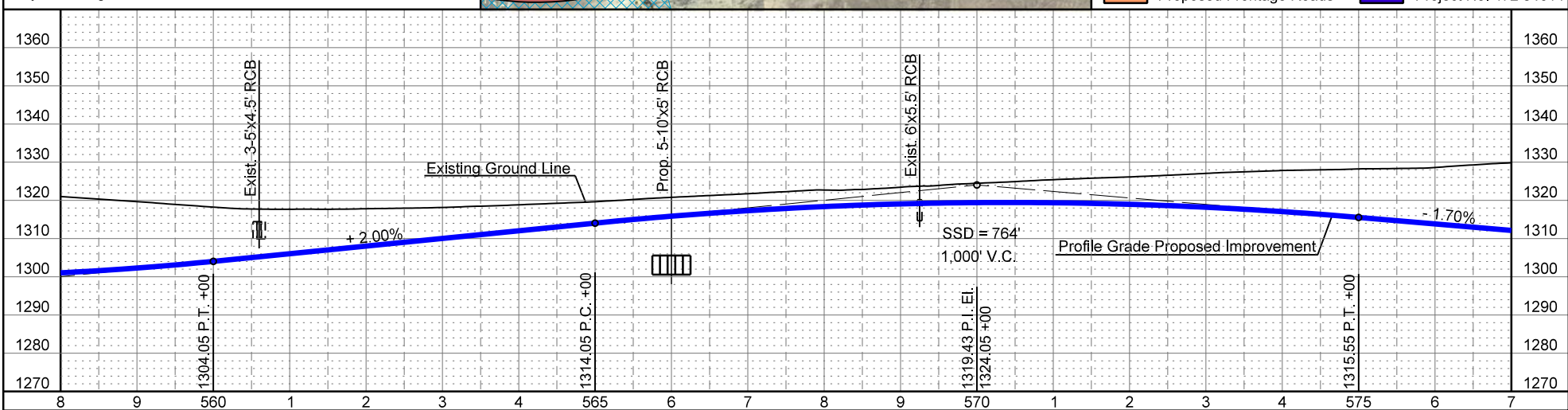


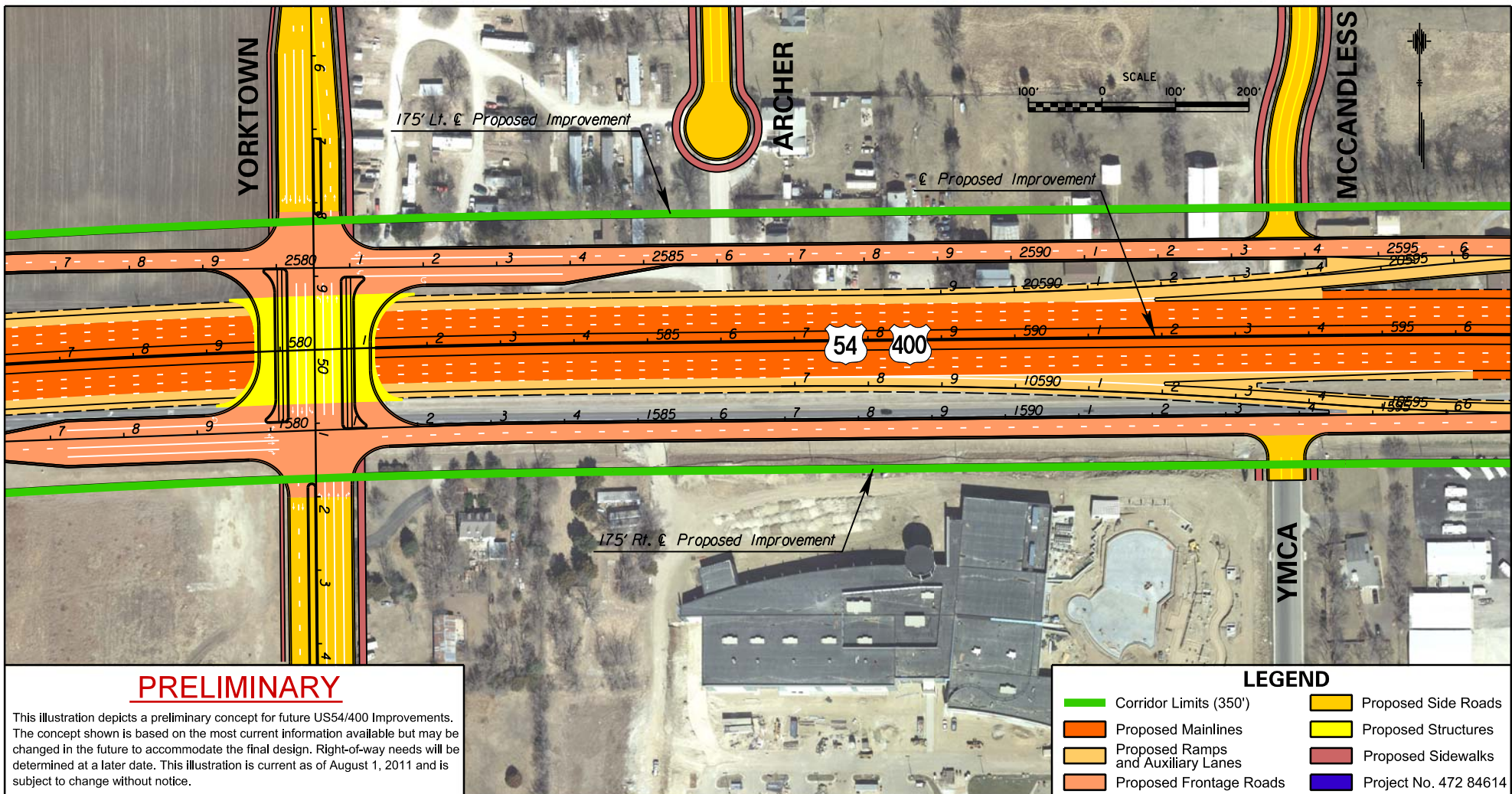


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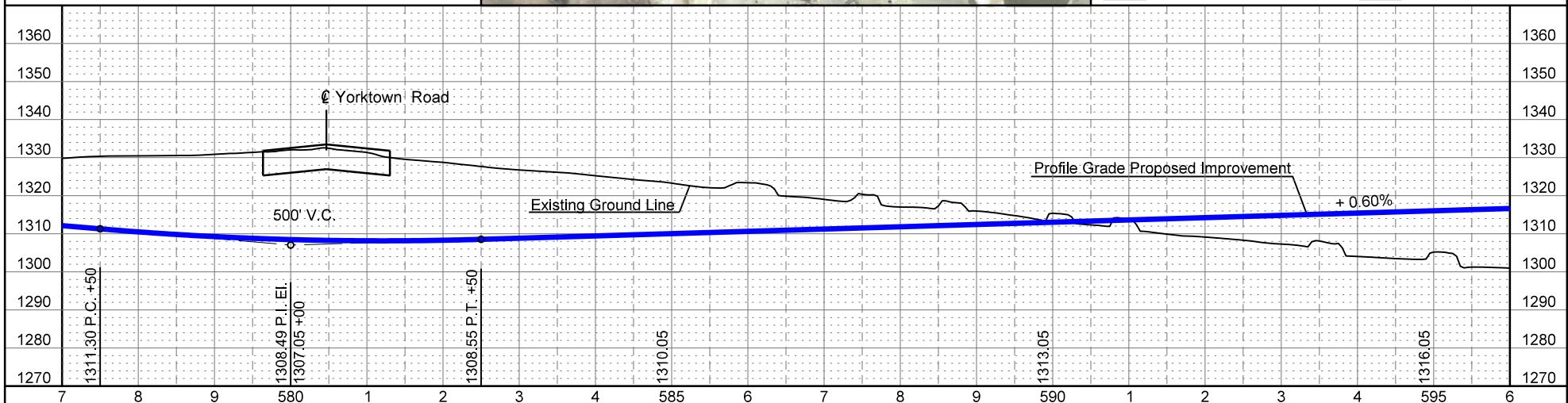
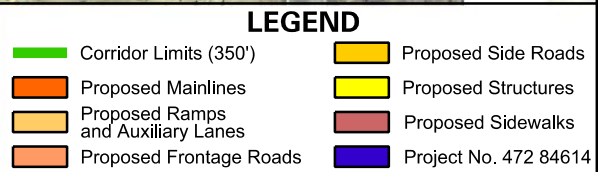
LEGEND	
	Corridor Limits (350')
	Proposed Side Roads
	Proposed Mainlines
	Proposed Ramps and Auxiliary Lanes
	Proposed Structures
	Proposed Sidewalks
	Project No. 472 84614

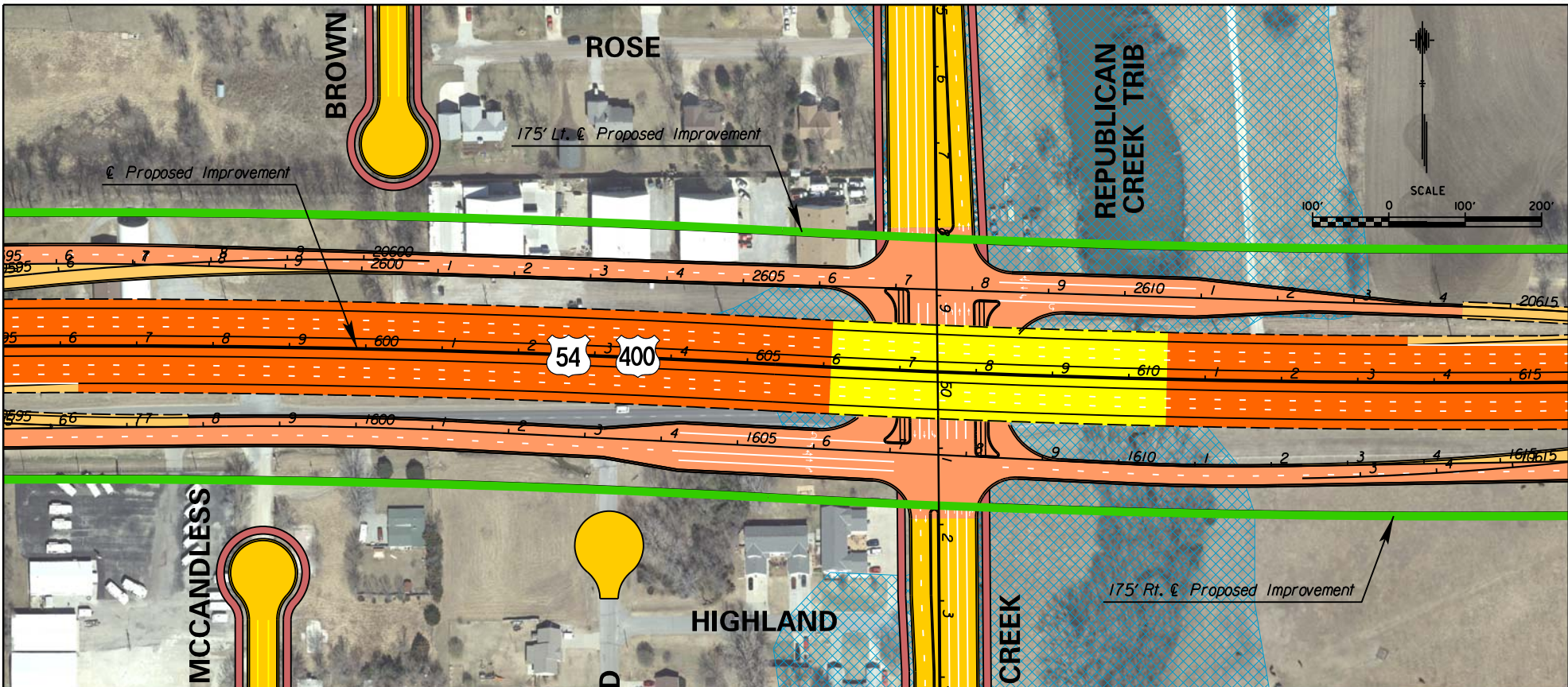




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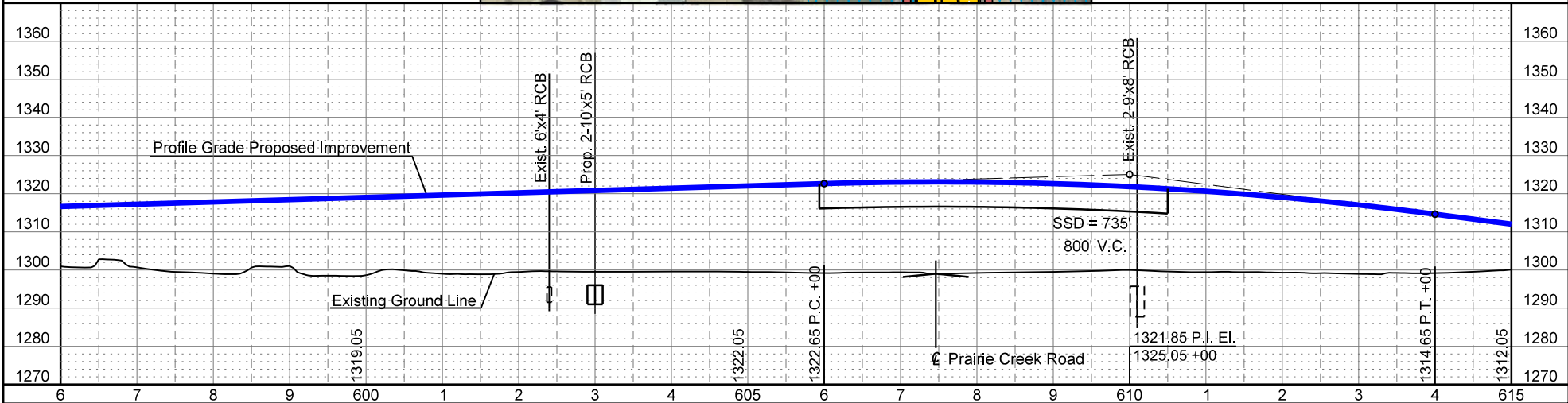


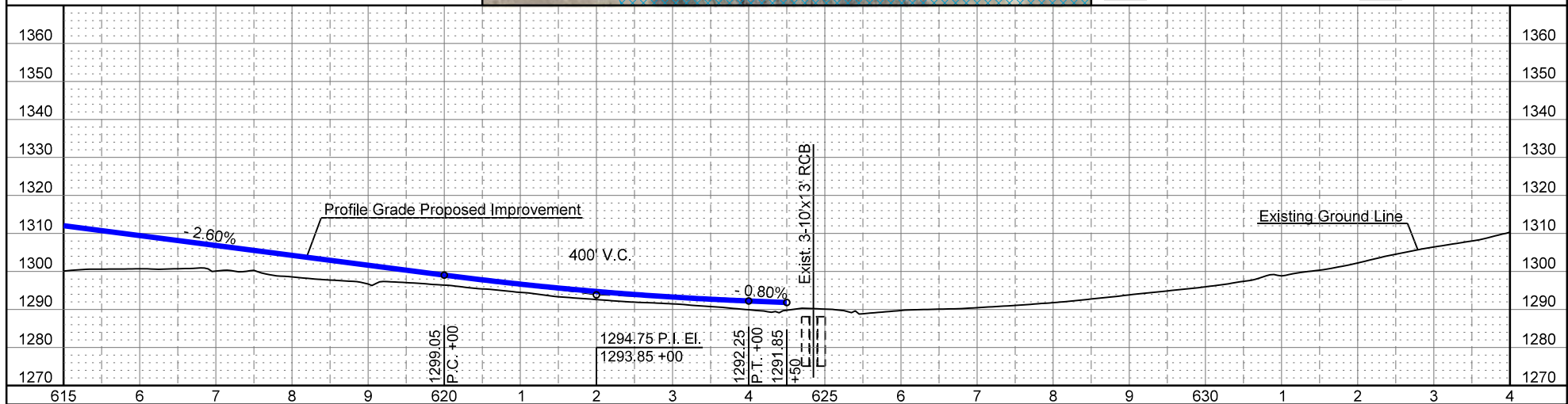
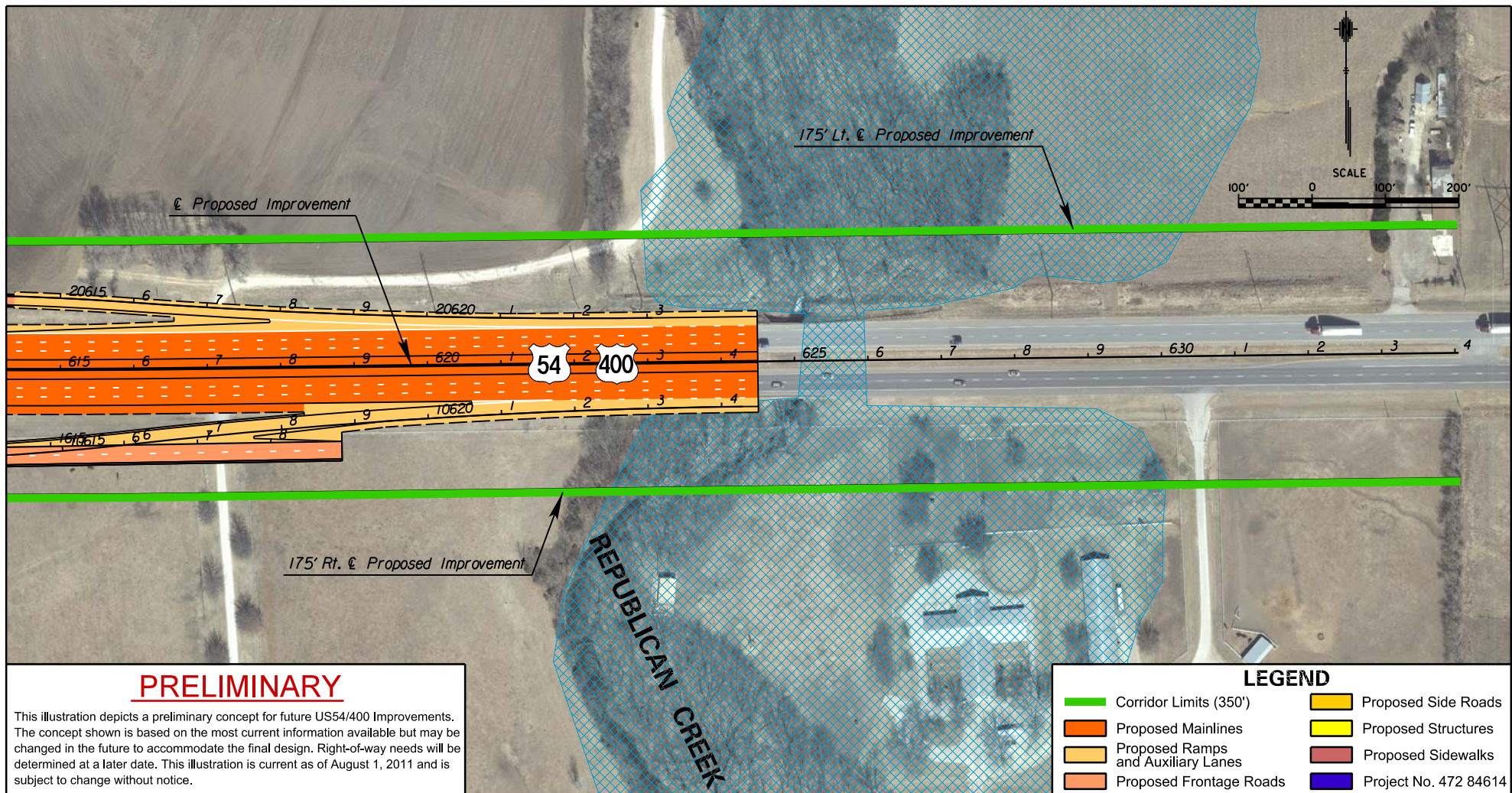
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LEGEND

Corridor Limits (350')	Proposed Side Roads
Proposed Mainlines	Proposed Structures
Proposed Ramps and Auxiliary Lanes	Proposed Sidewalks
Proposed Frontage Roads	Project No. 472 84614

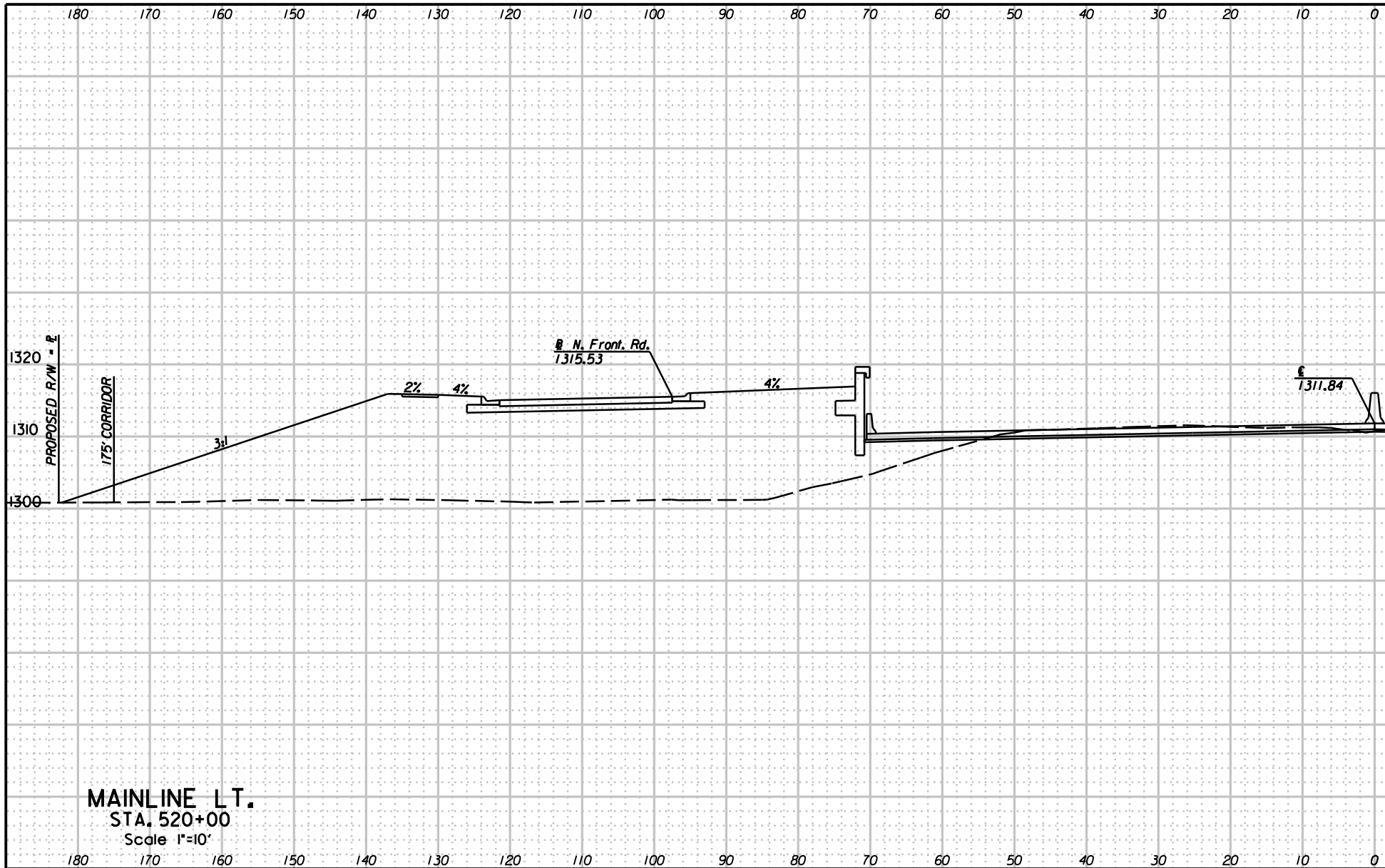


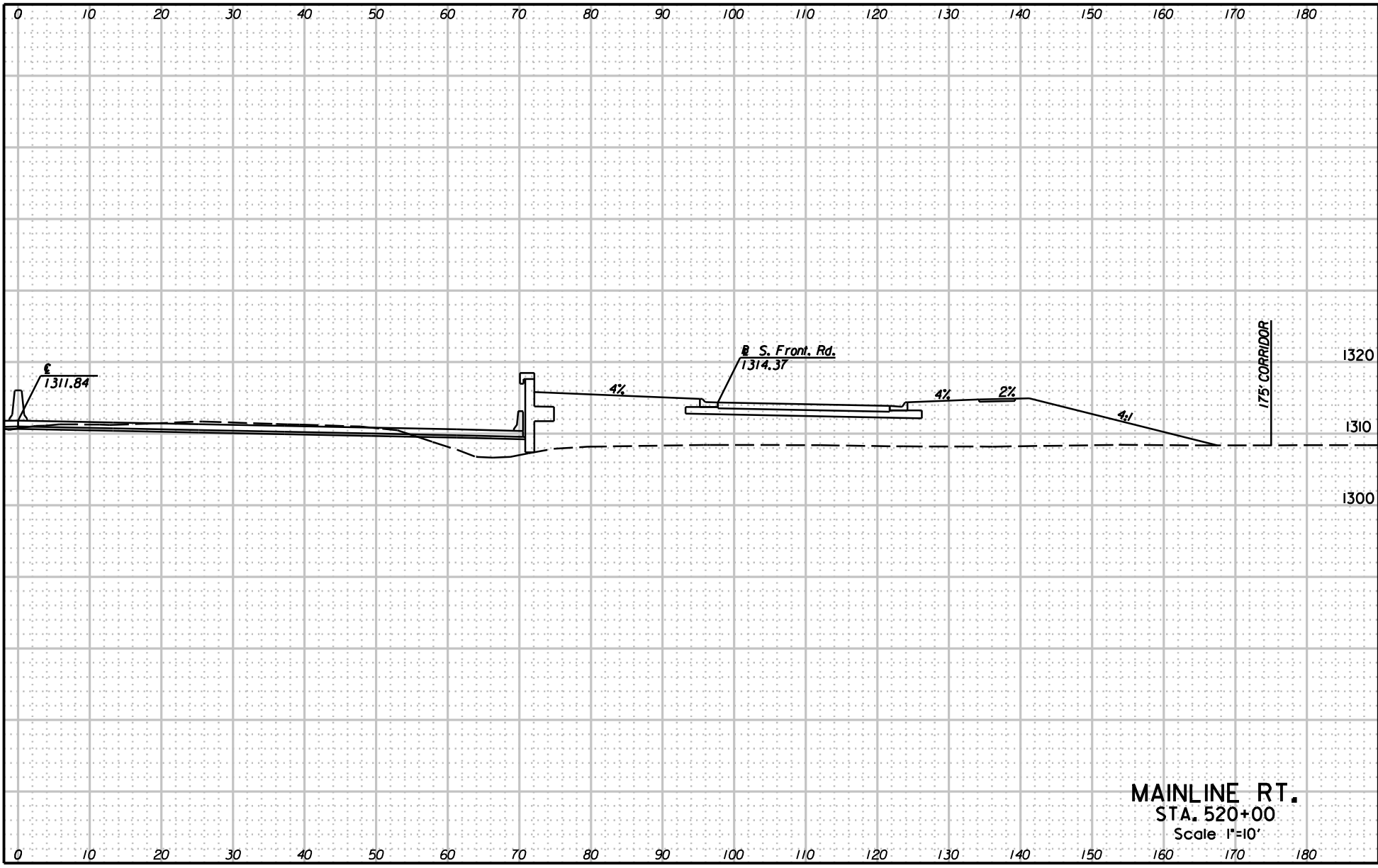


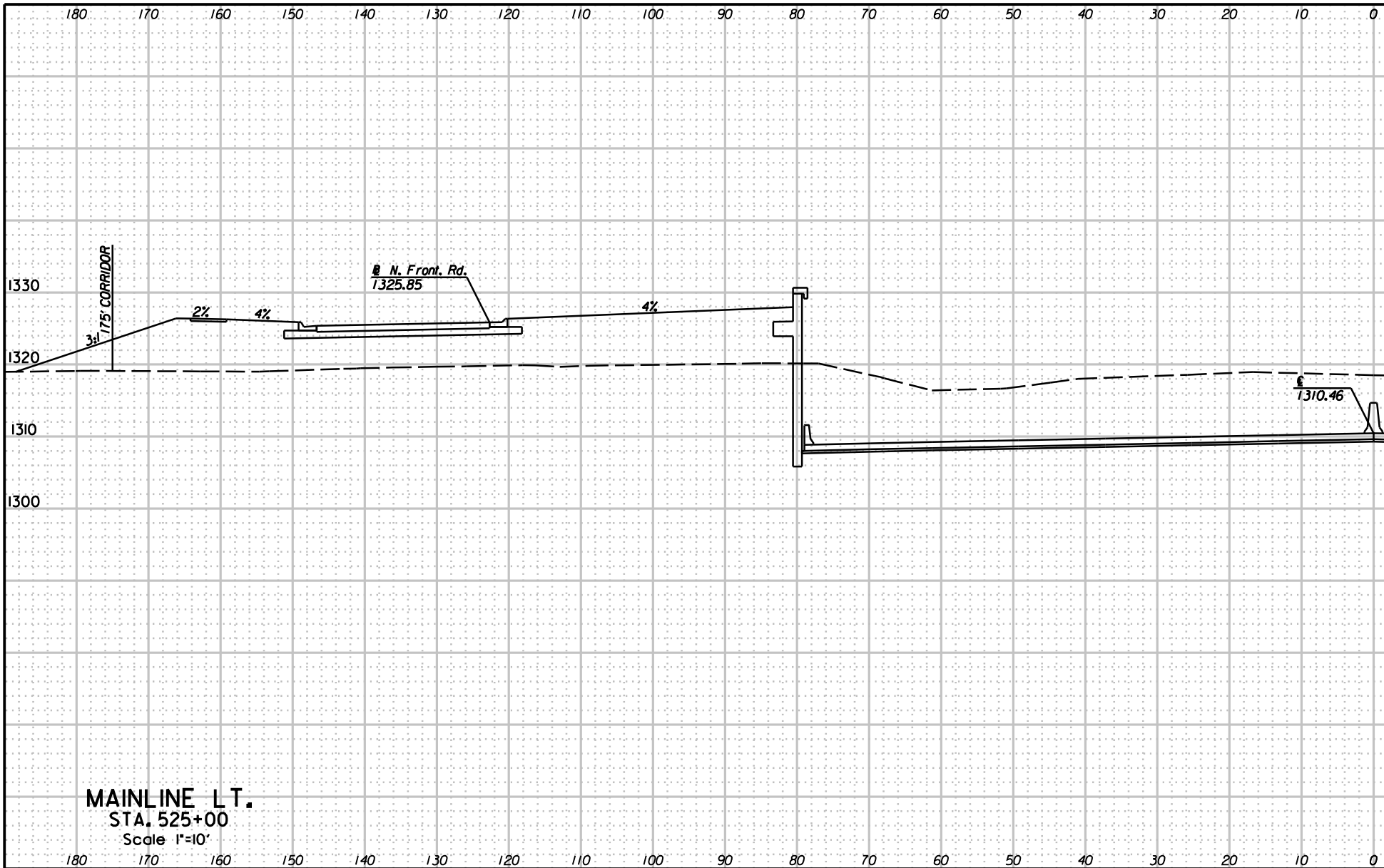
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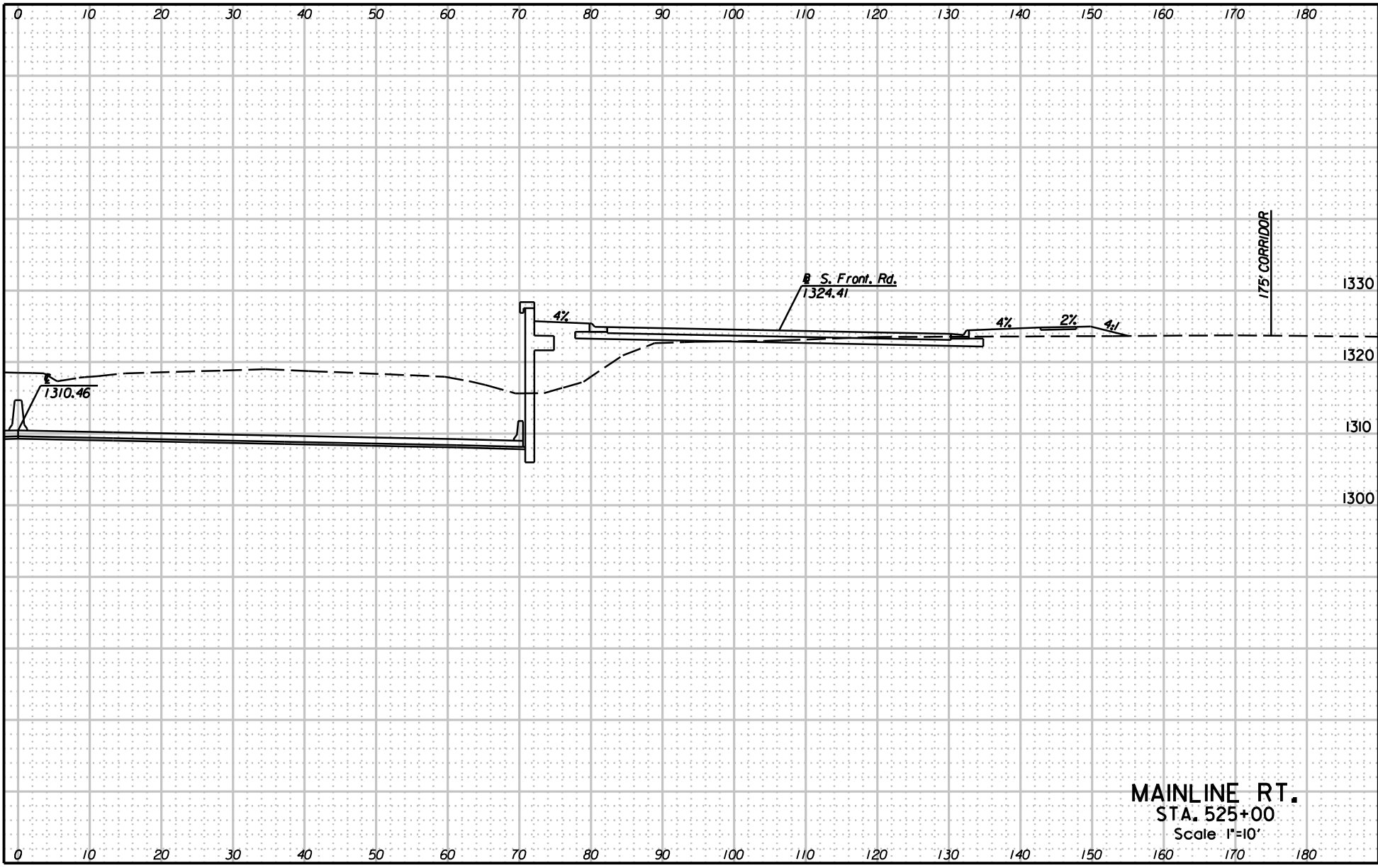
Cross-Sections

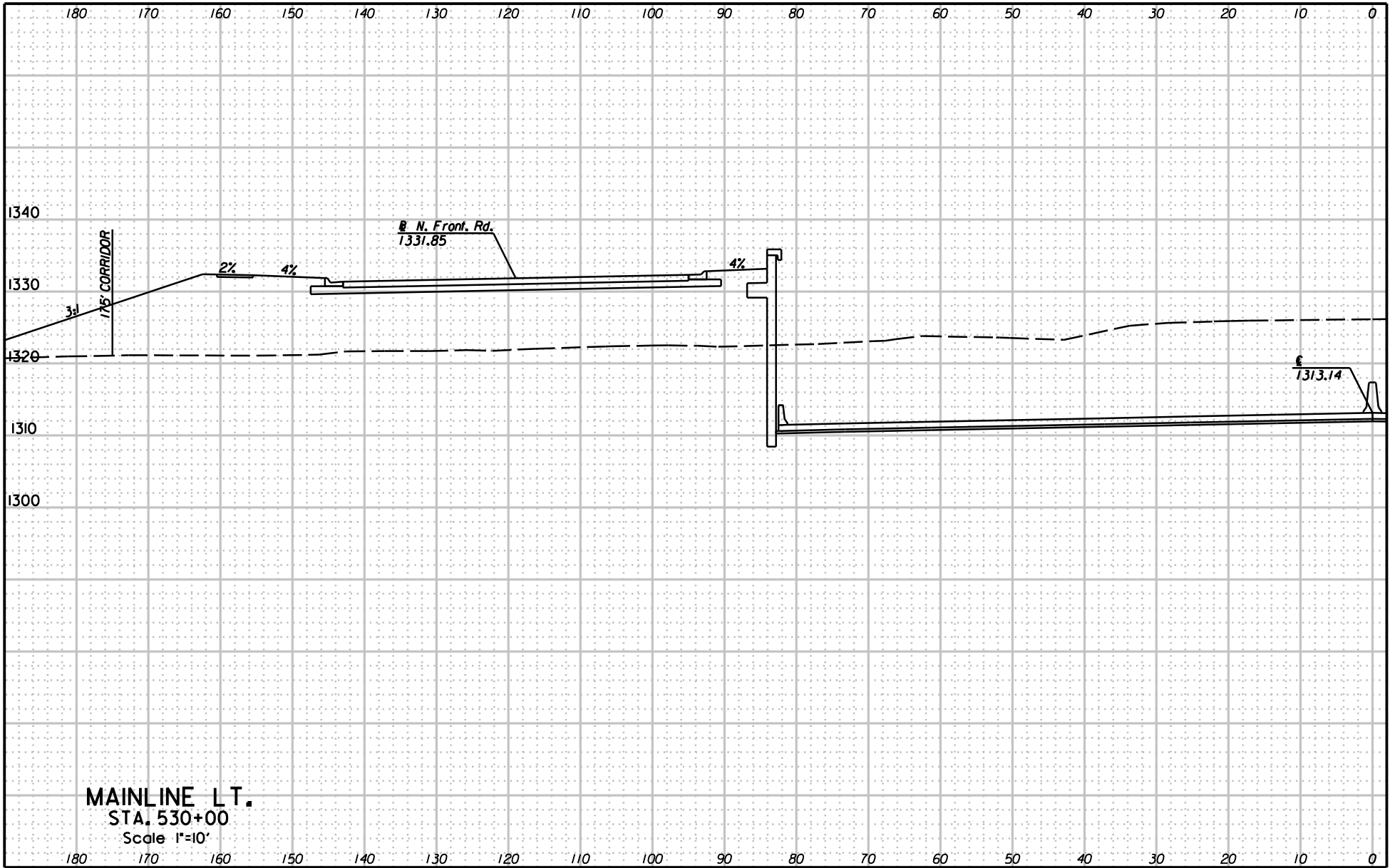
Note: Where construction limits extend outside the proposed 175' Corridor north and south as depicted on the enclosed sections, it is anticipated that temporary and/or permanent easements will be acquired to facilitate construction.

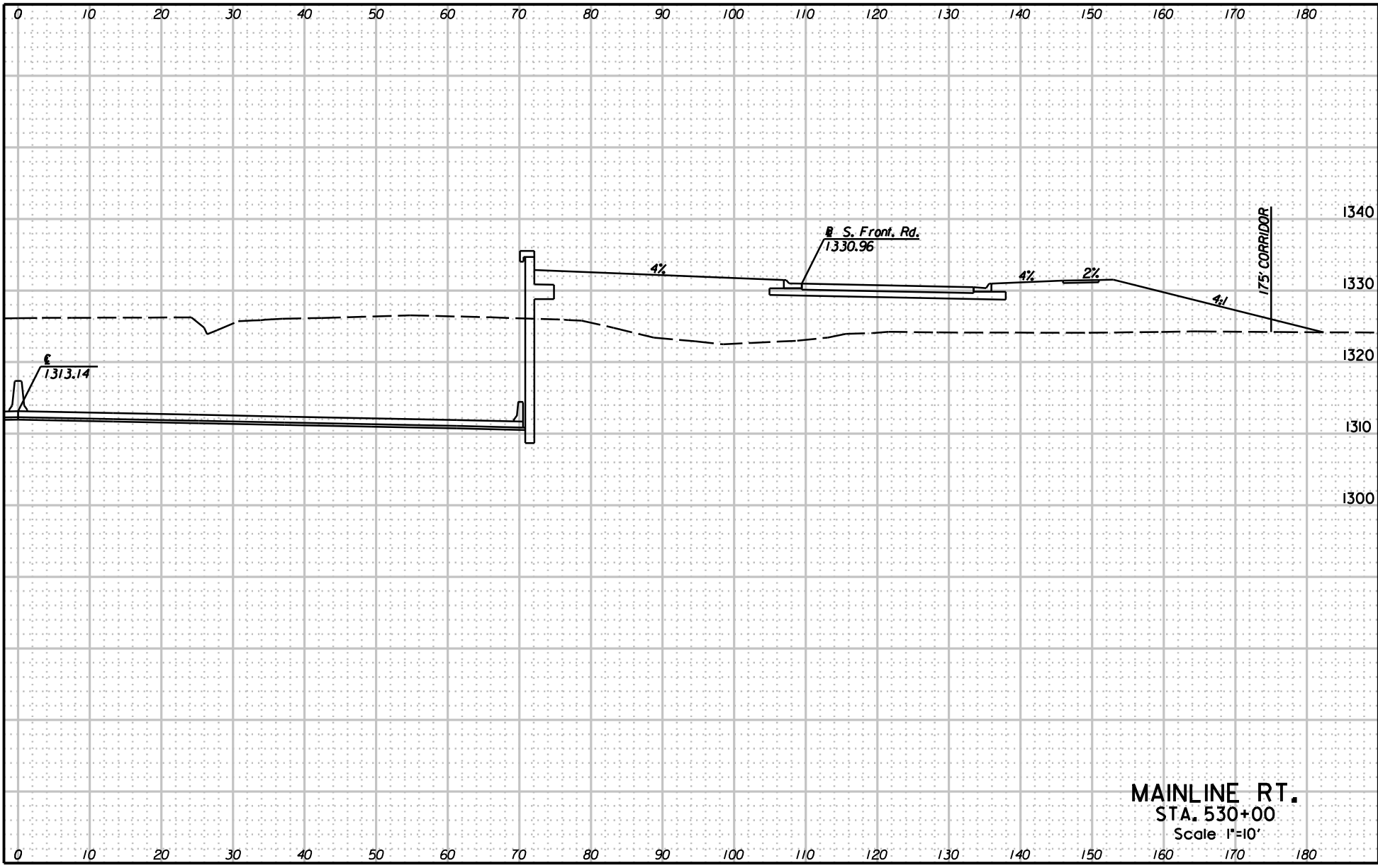


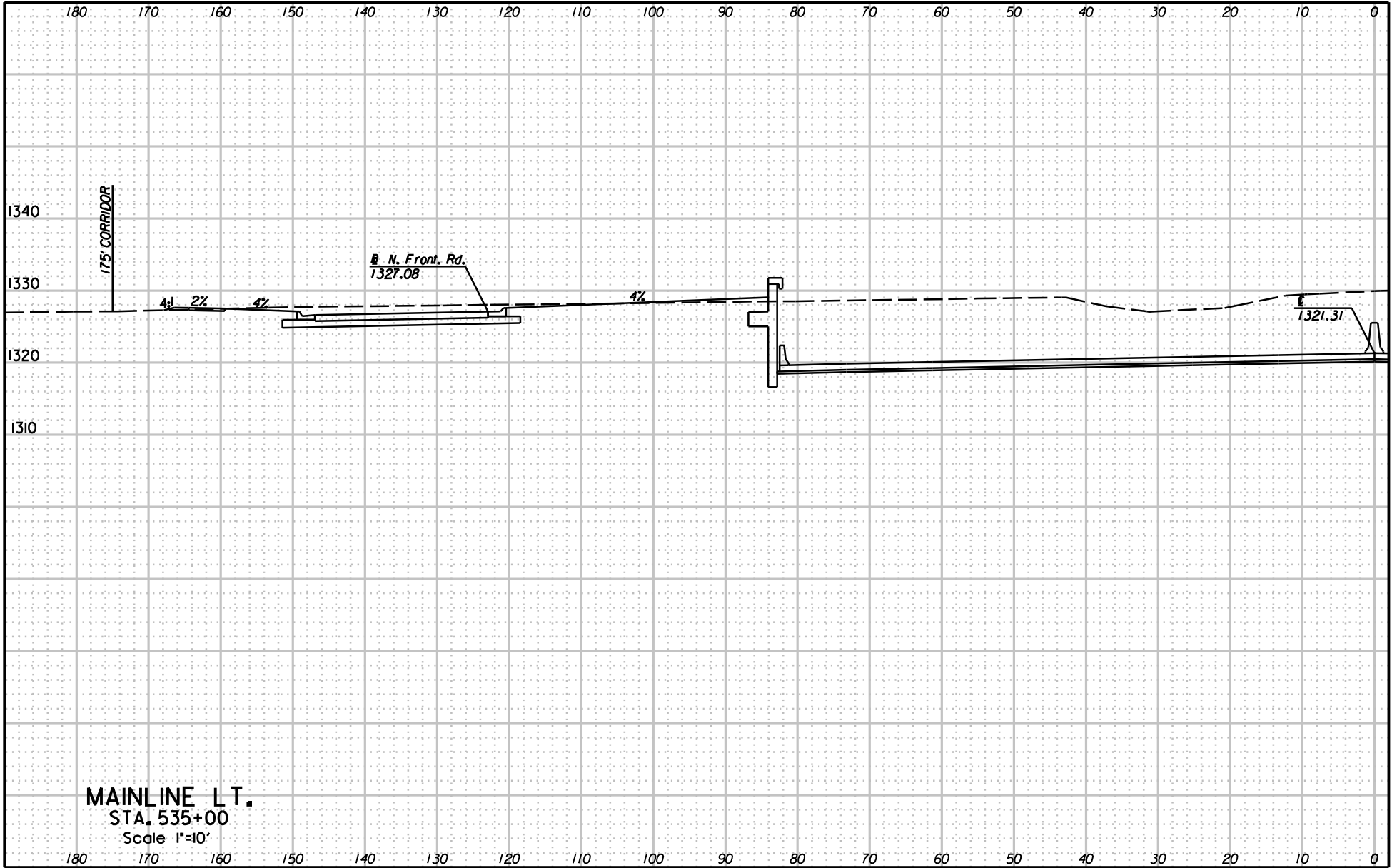


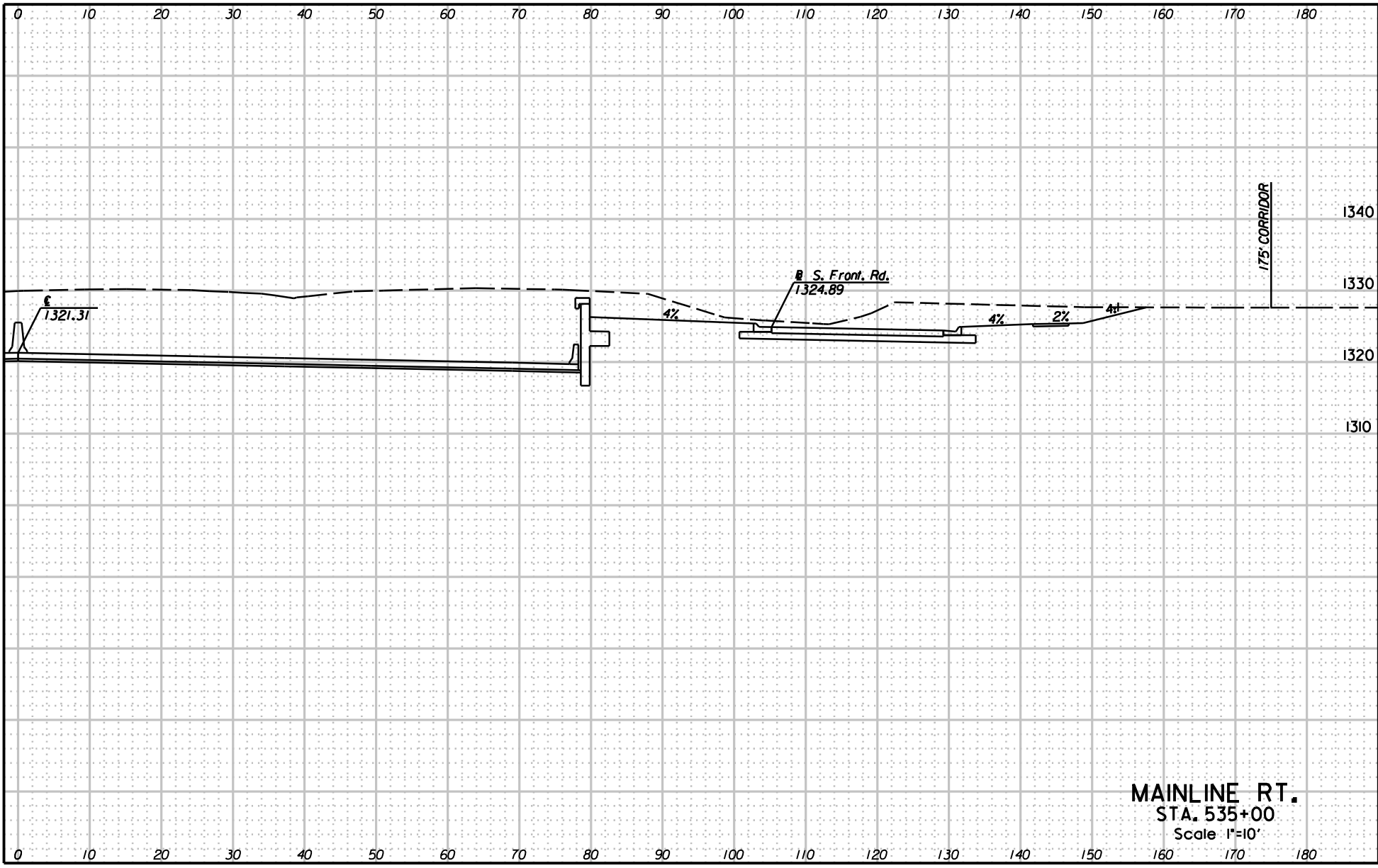


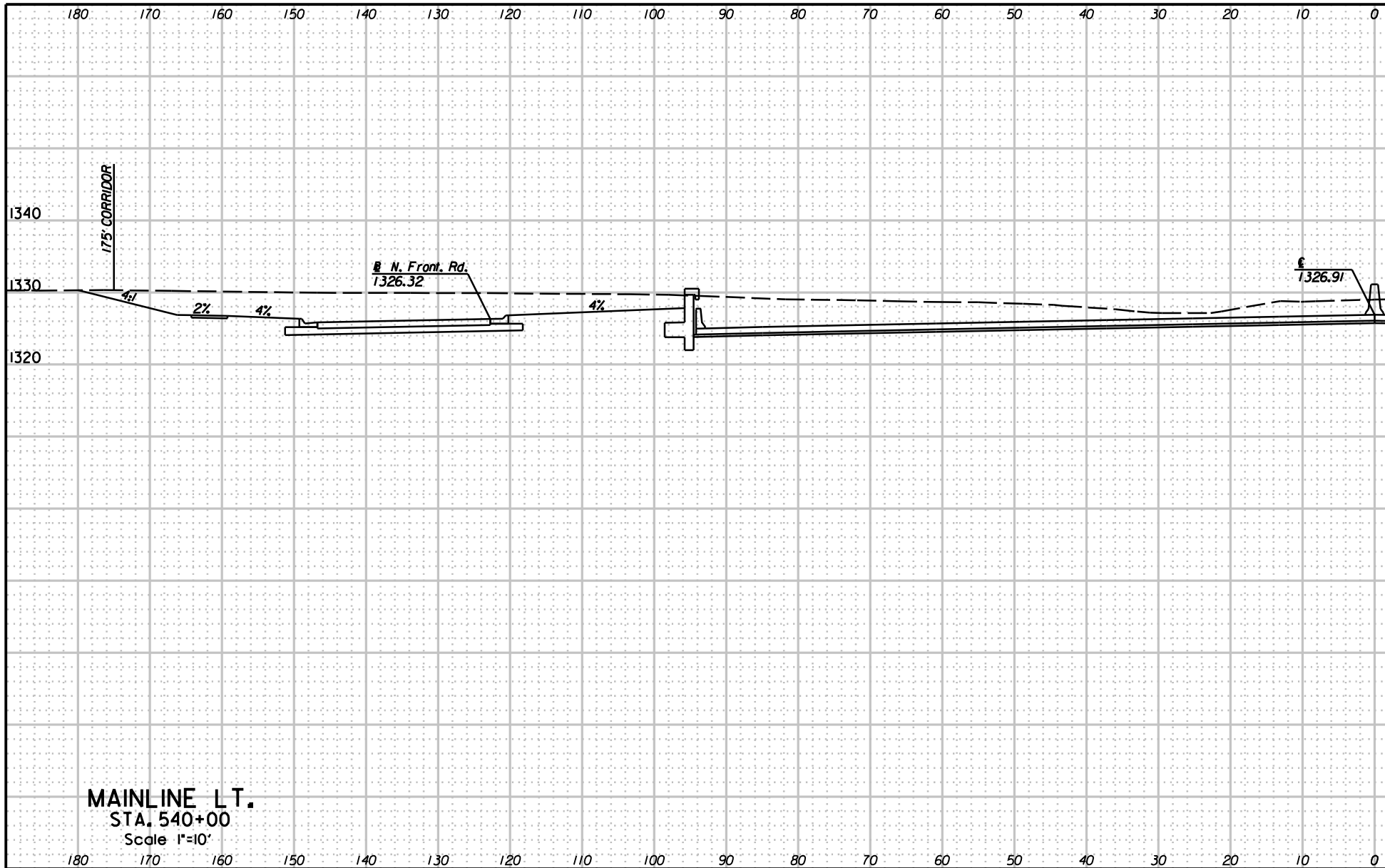


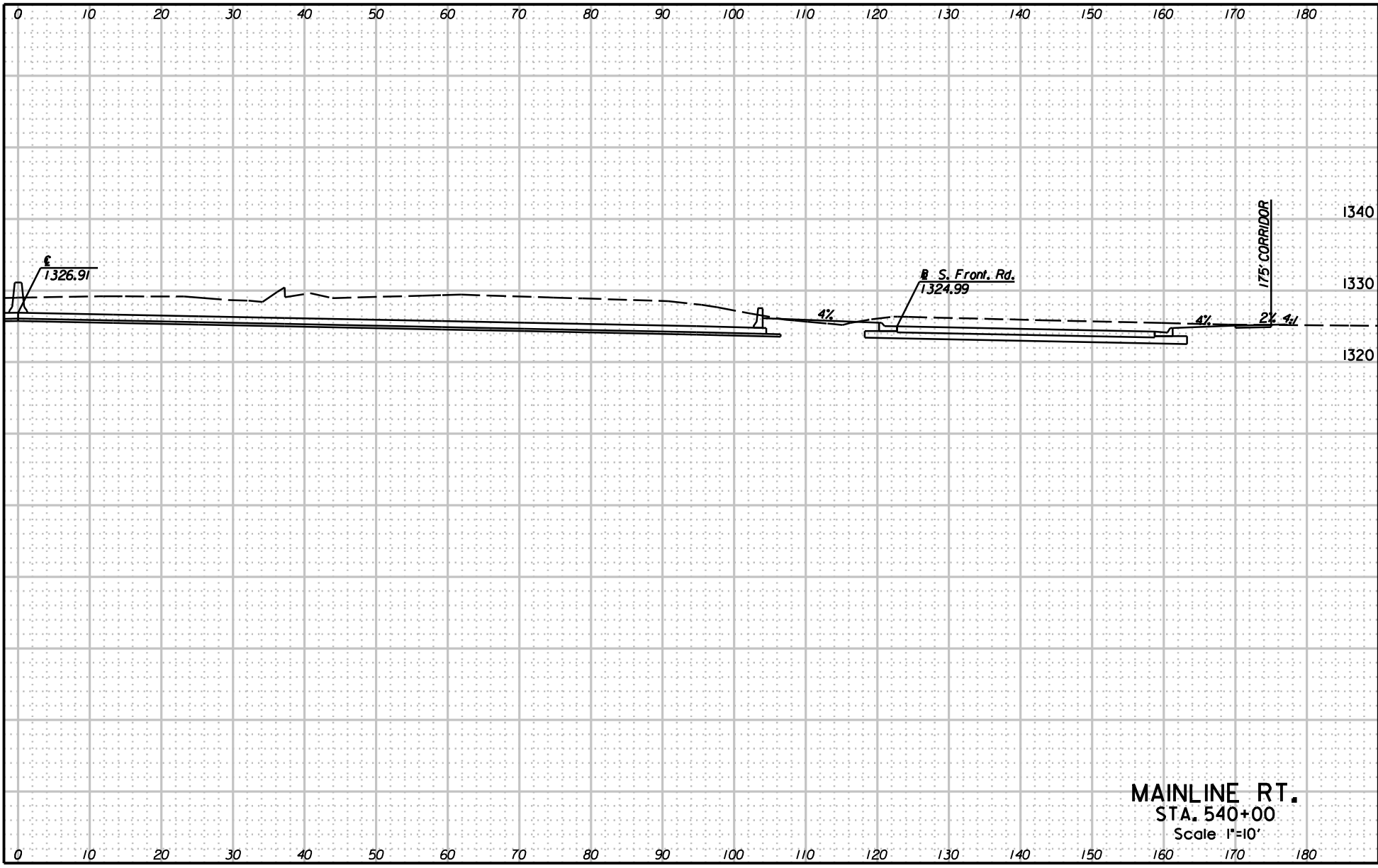


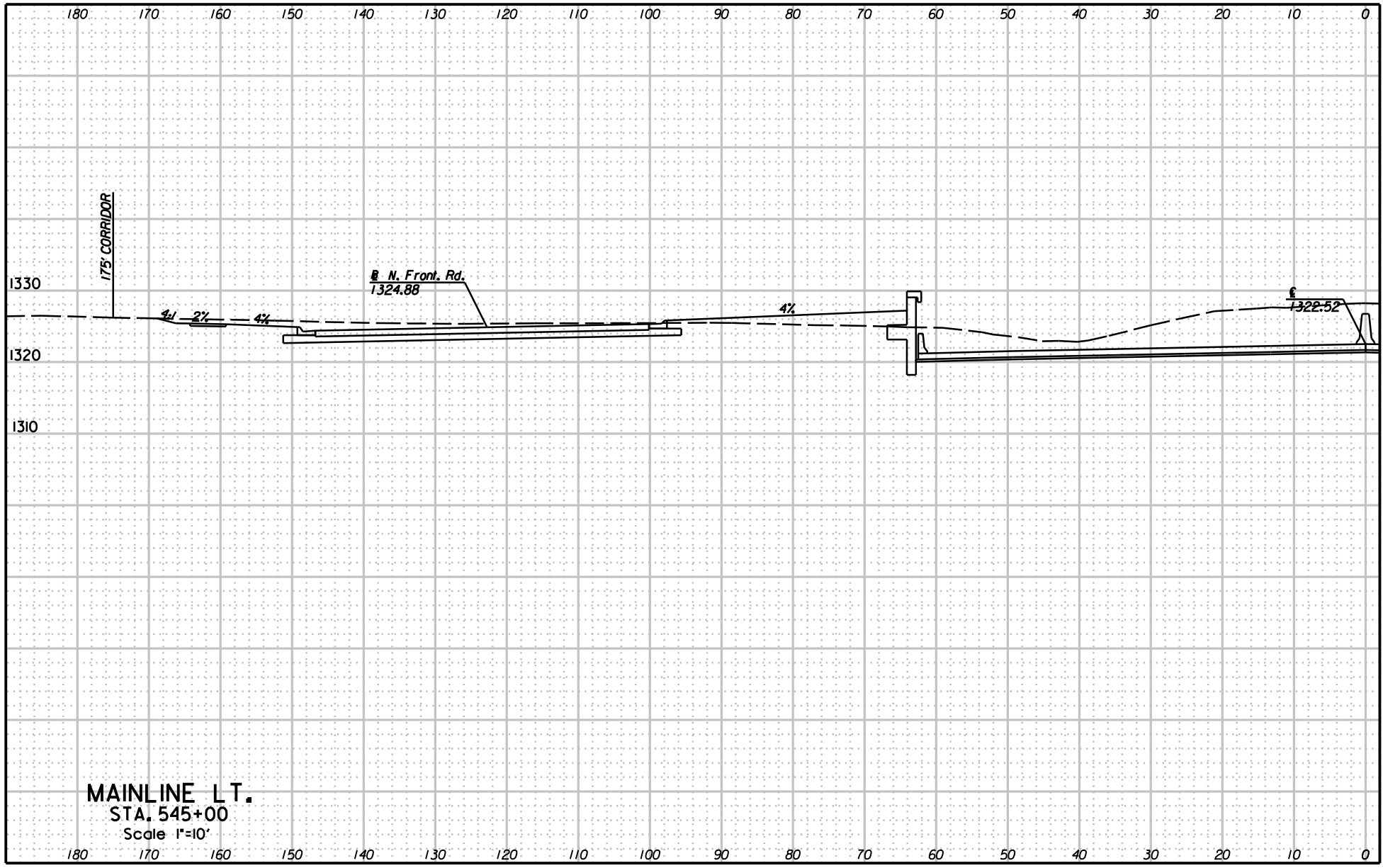


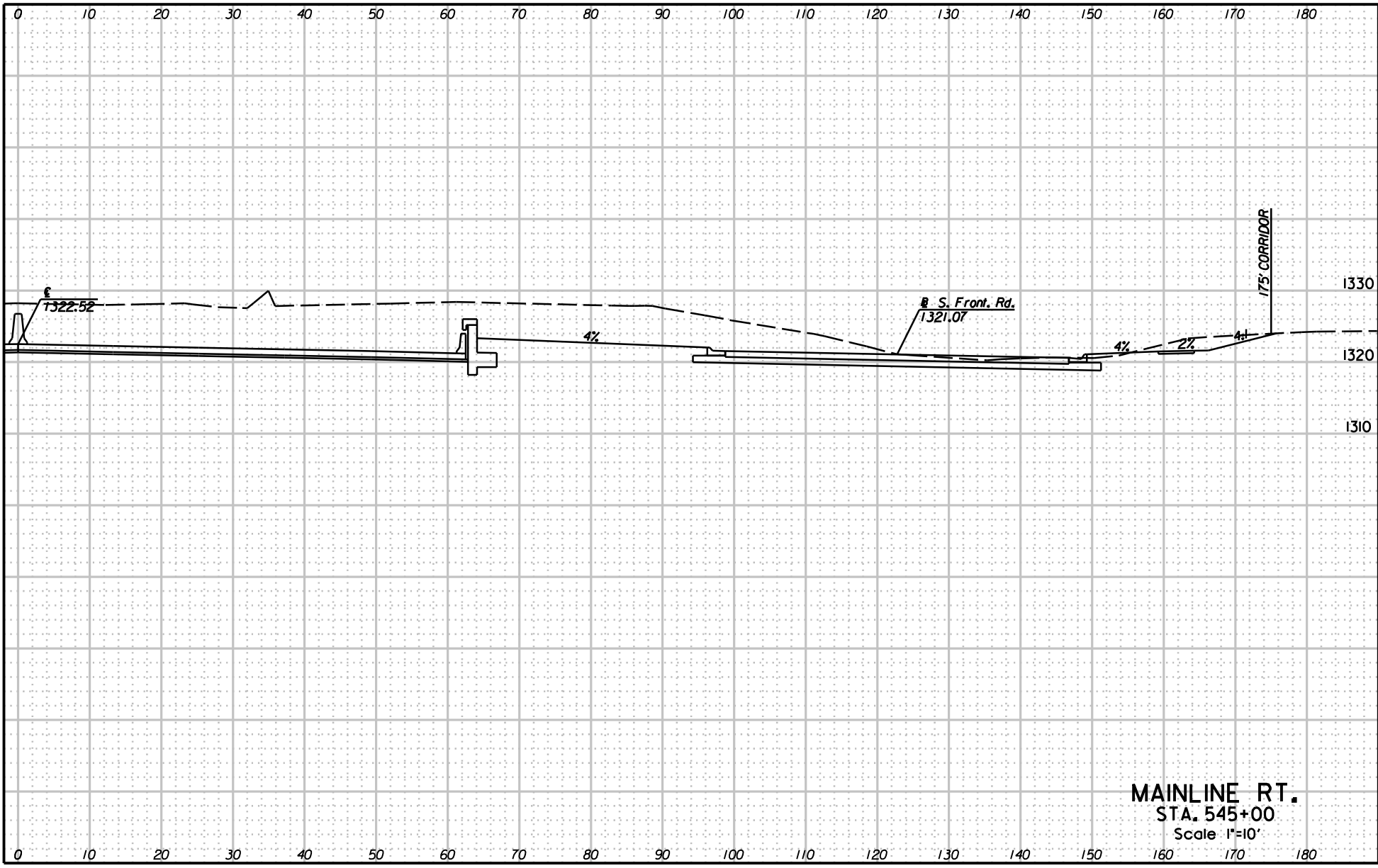


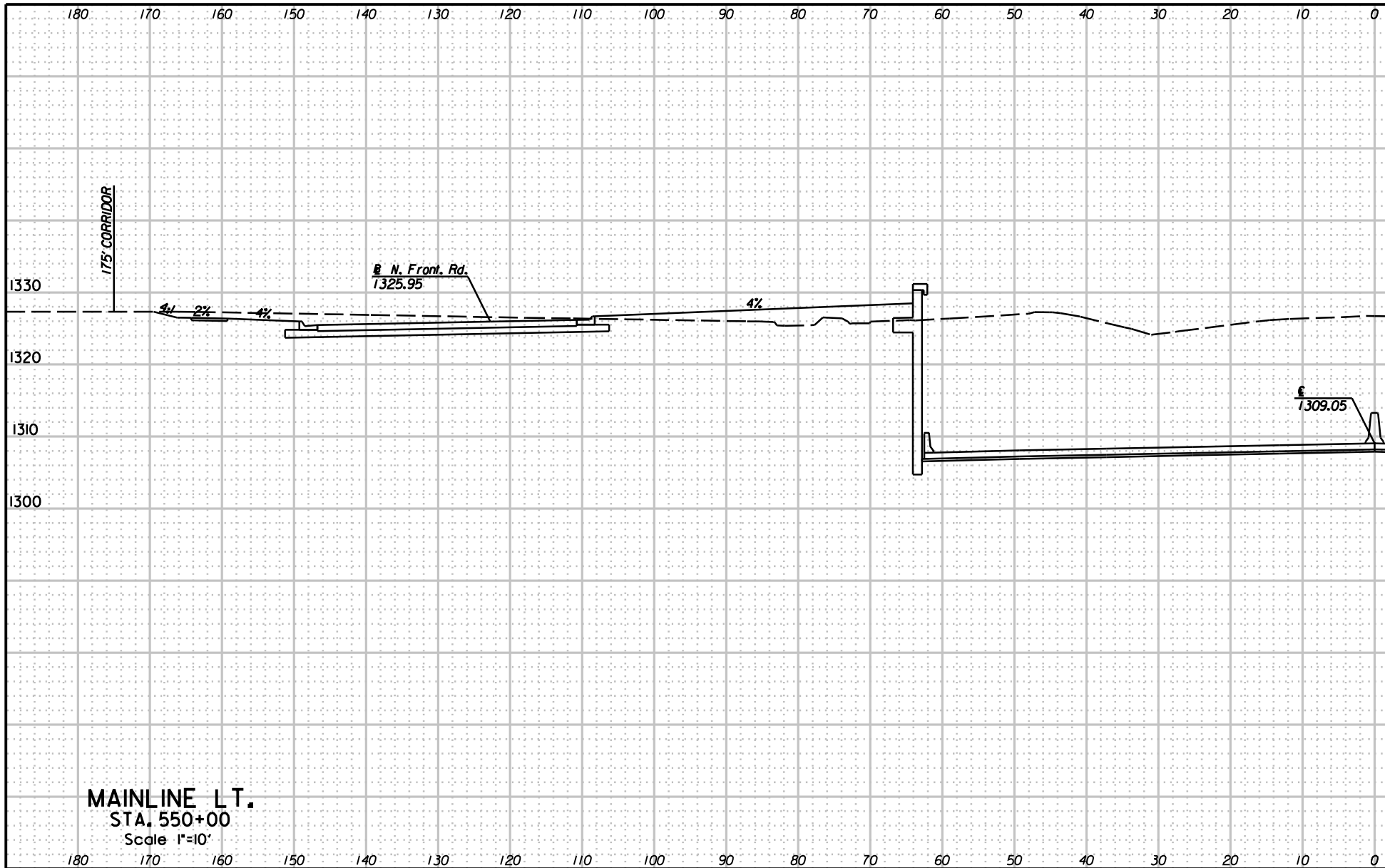


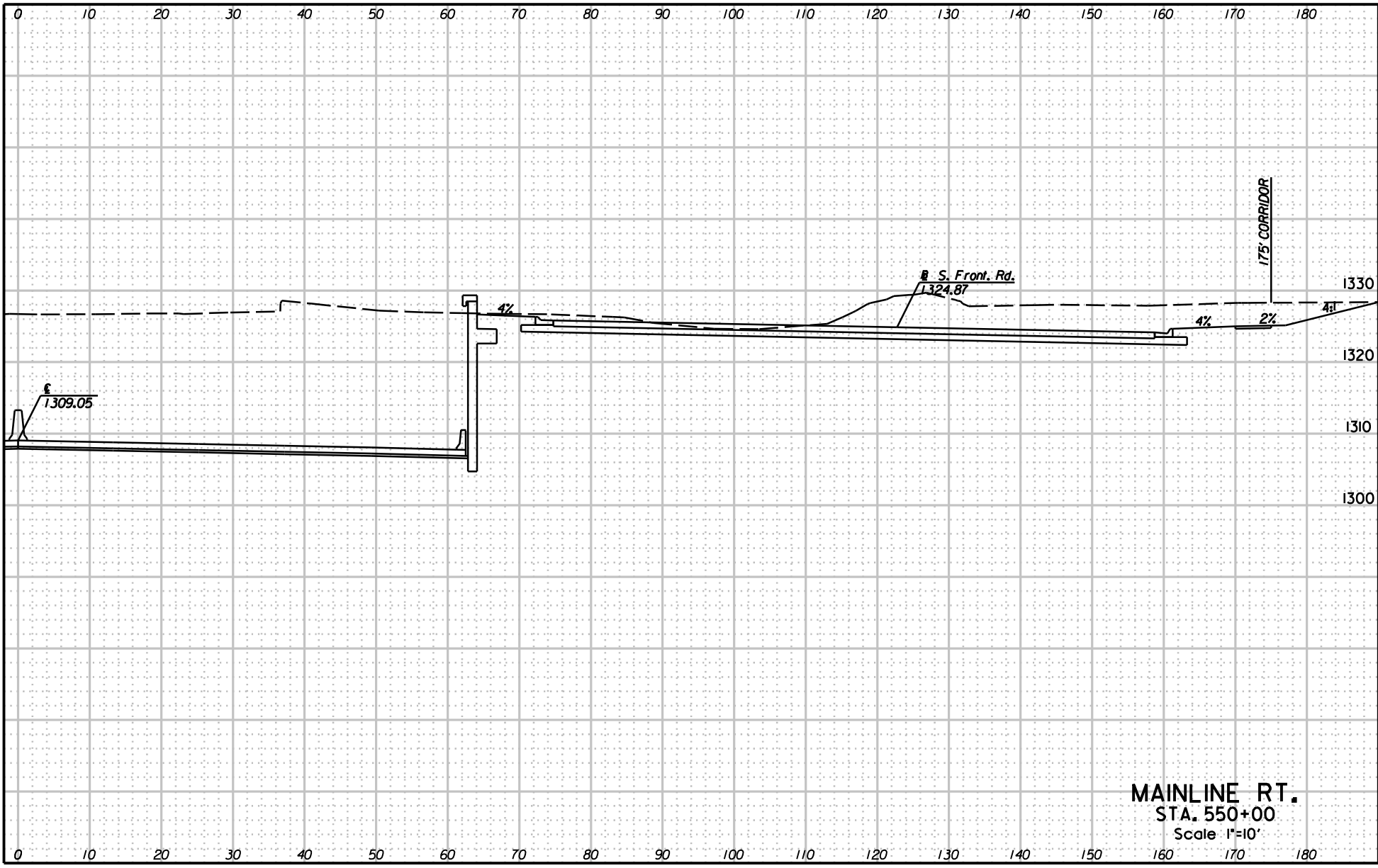


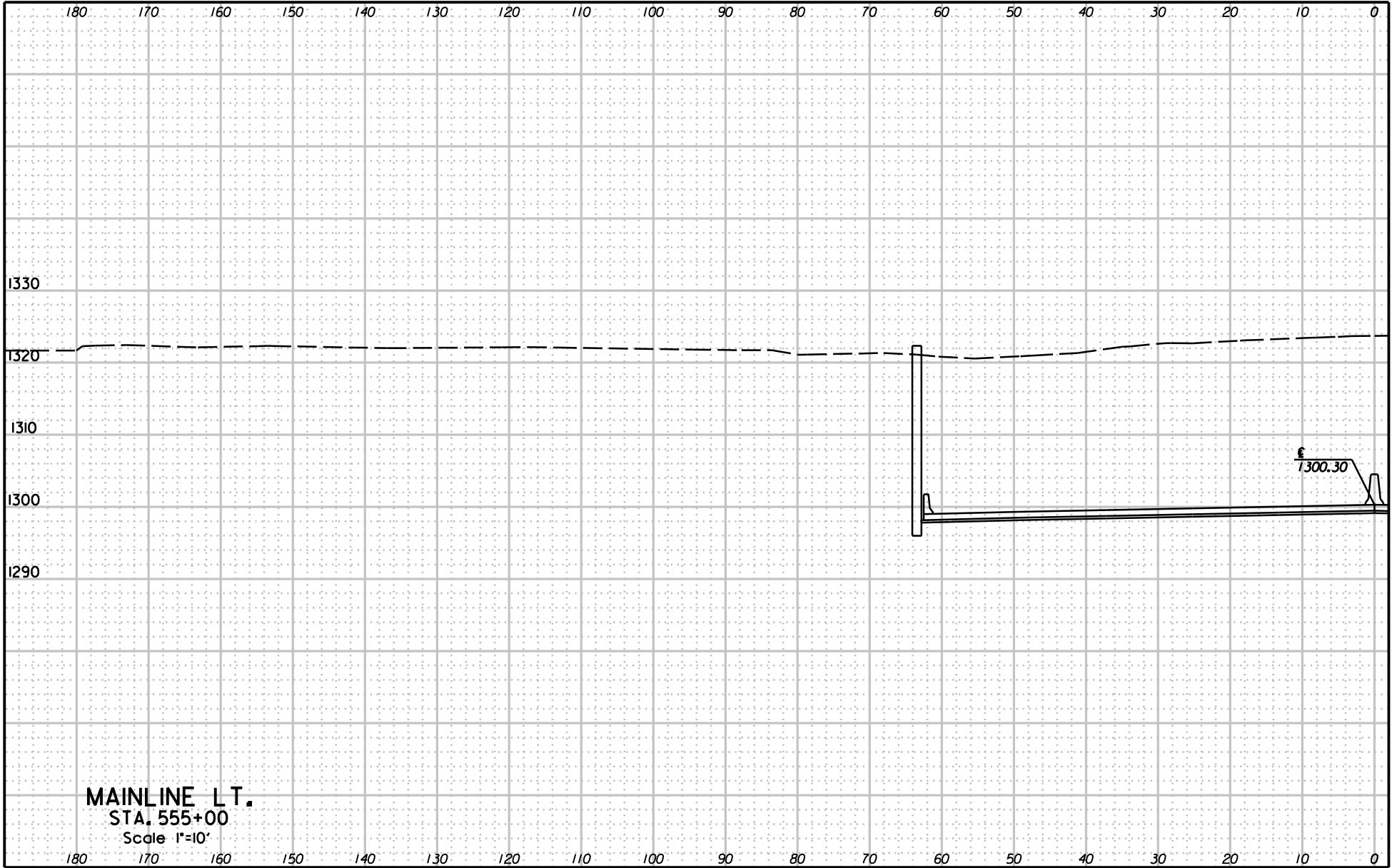


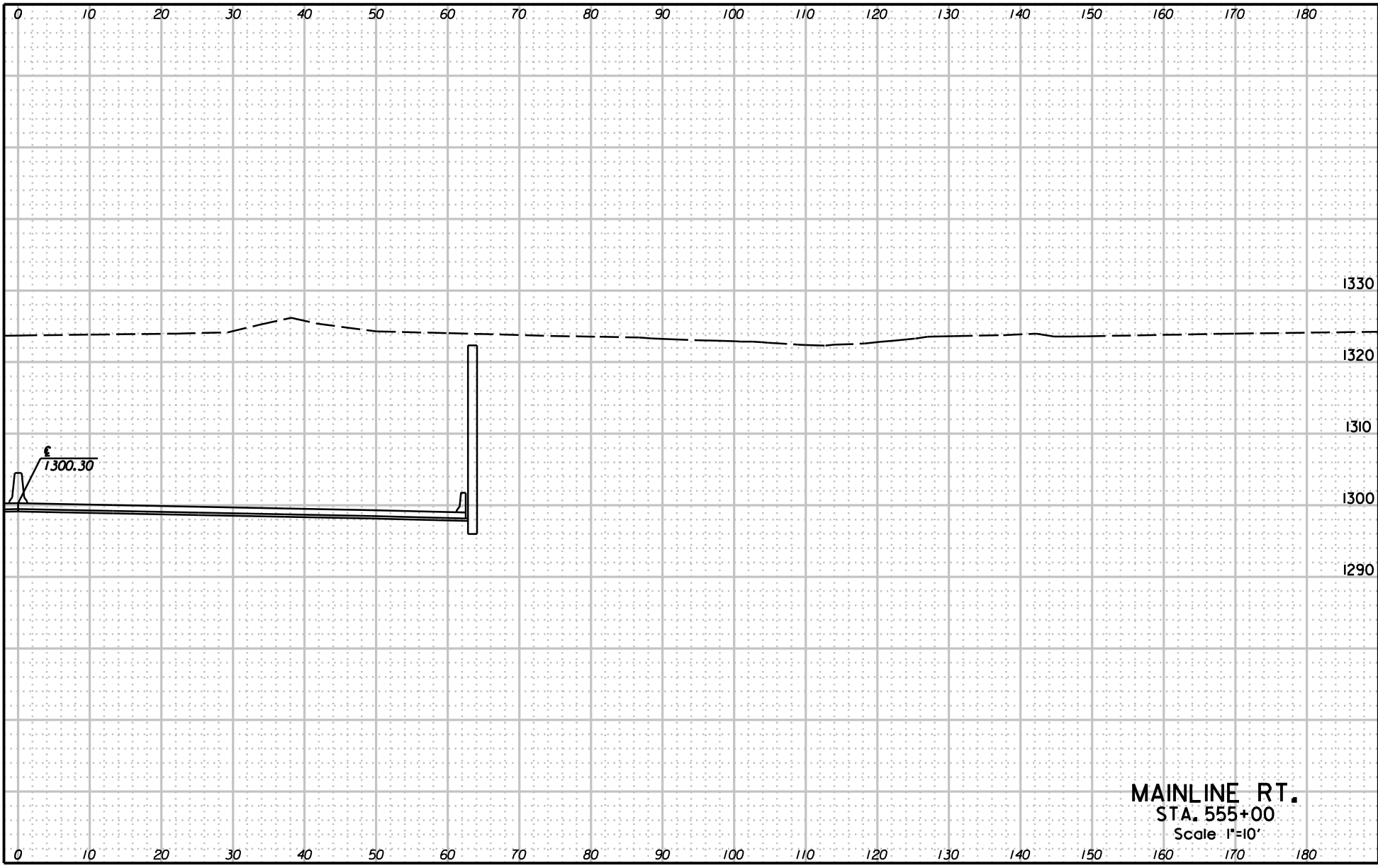


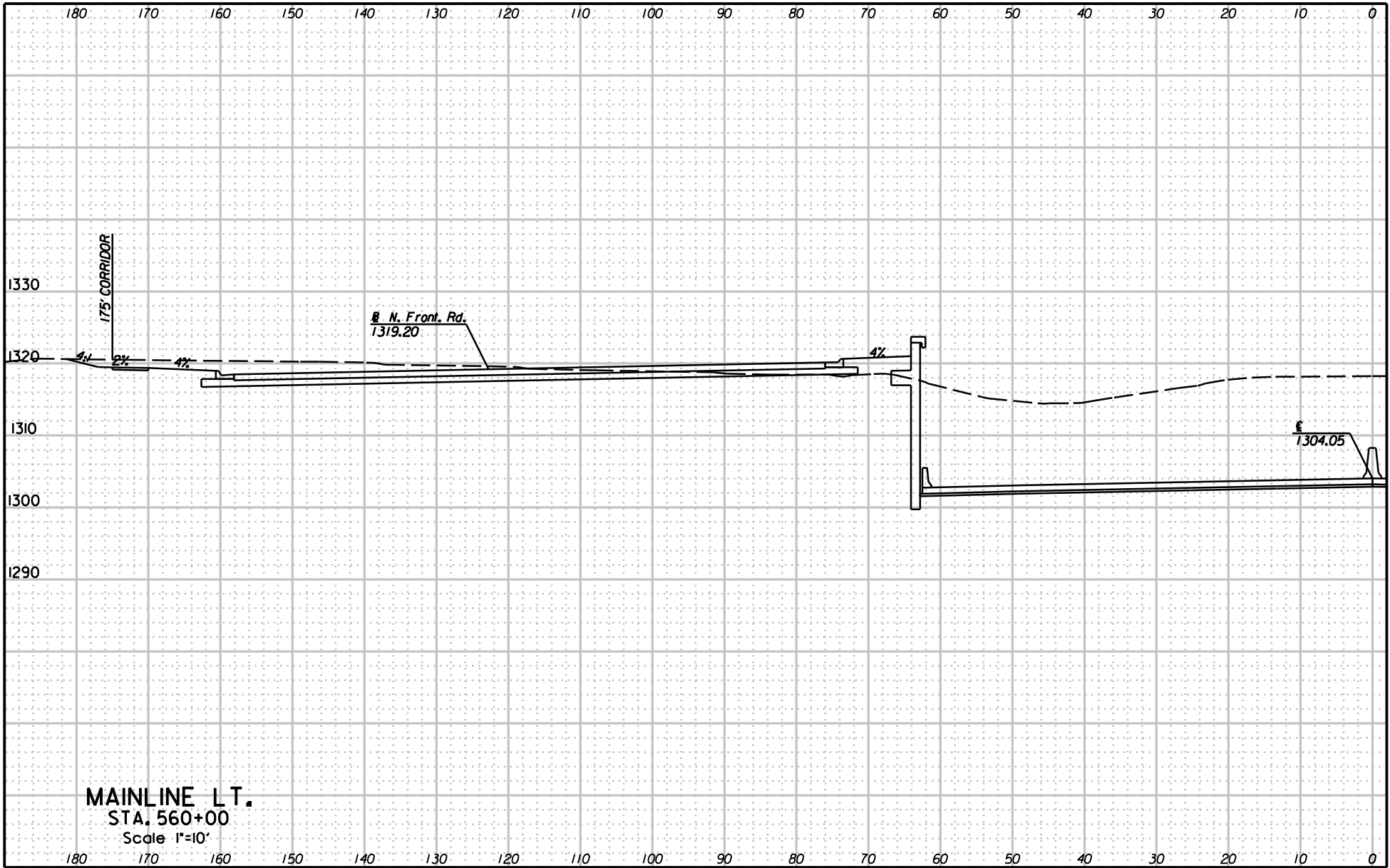


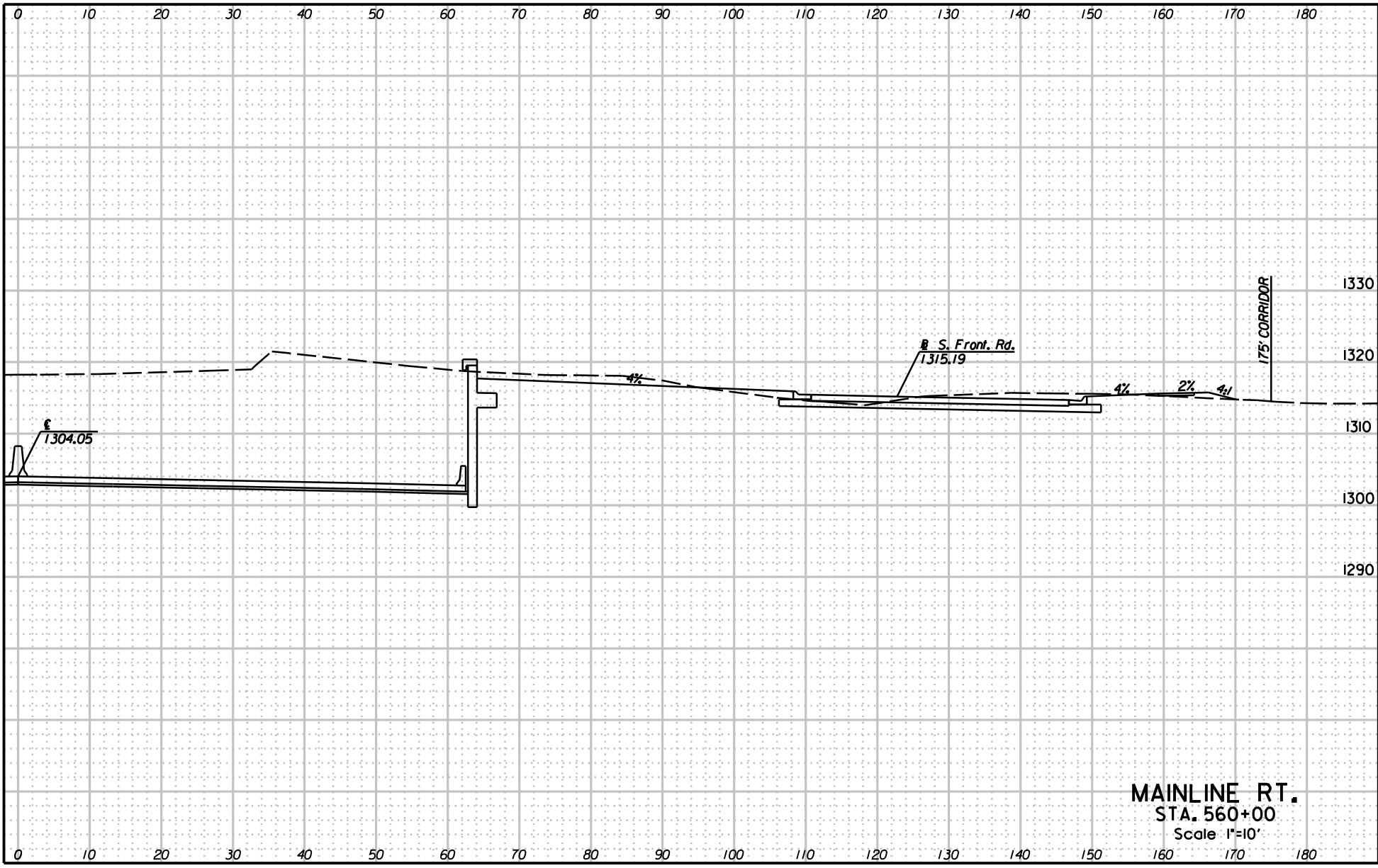


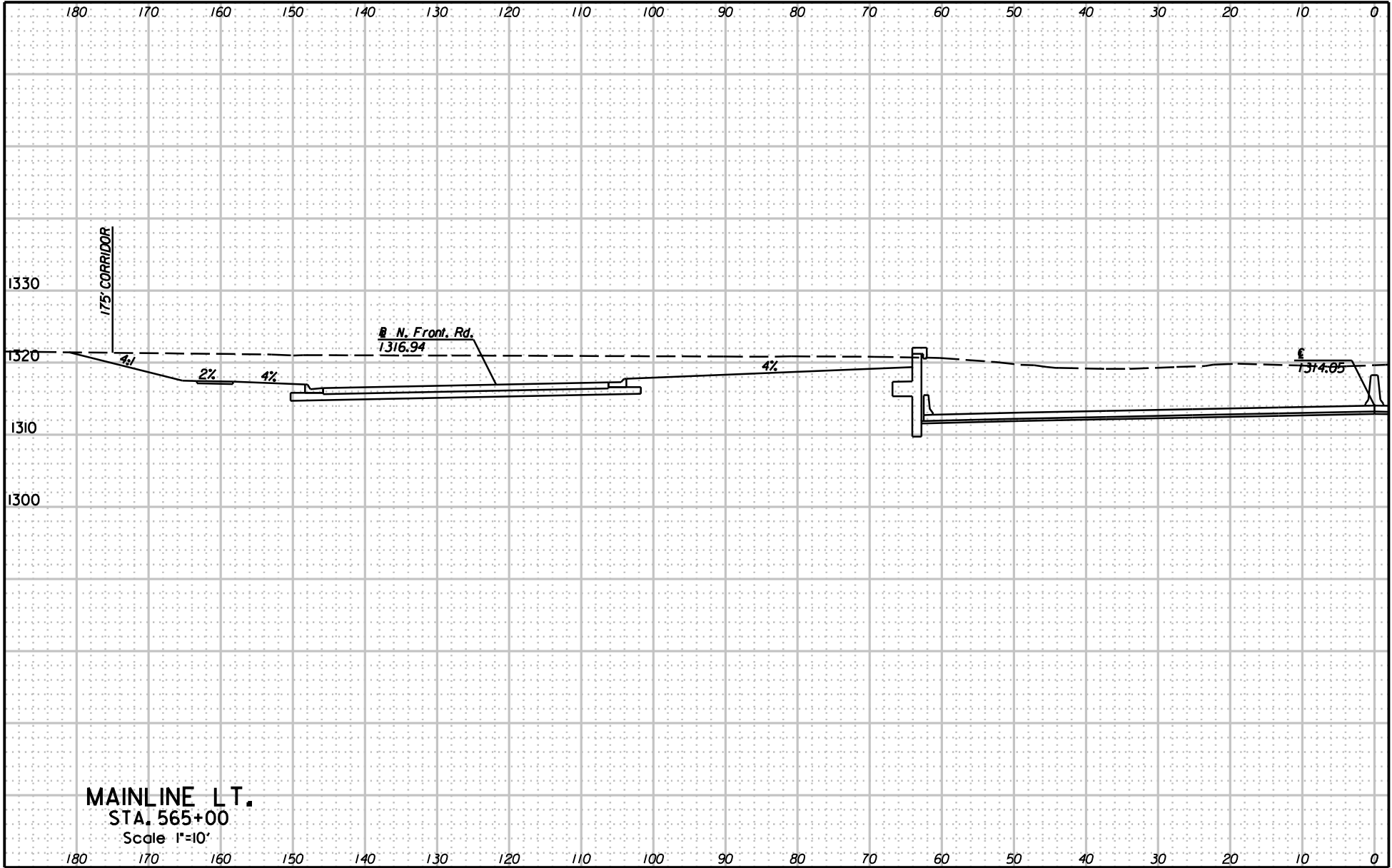


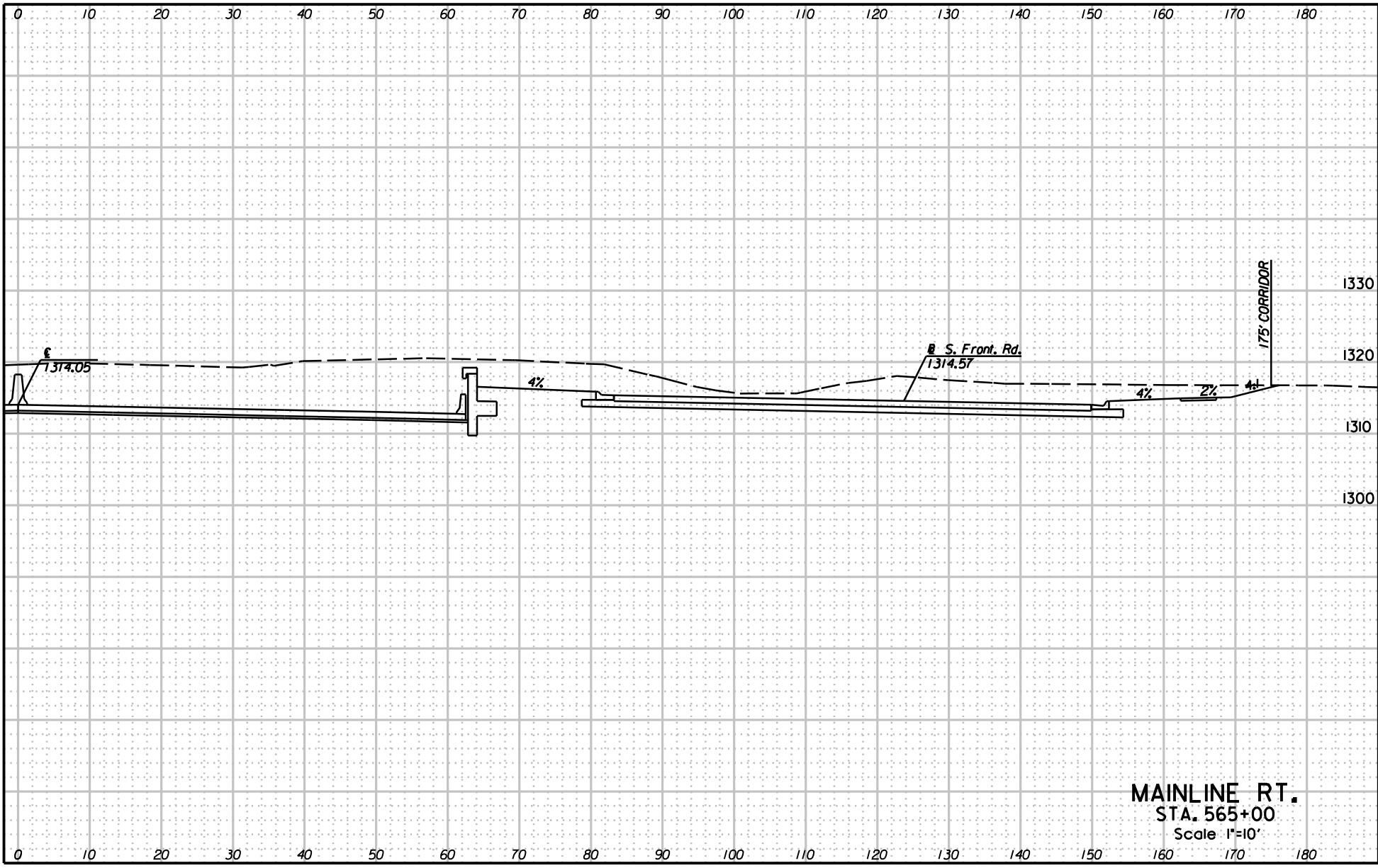




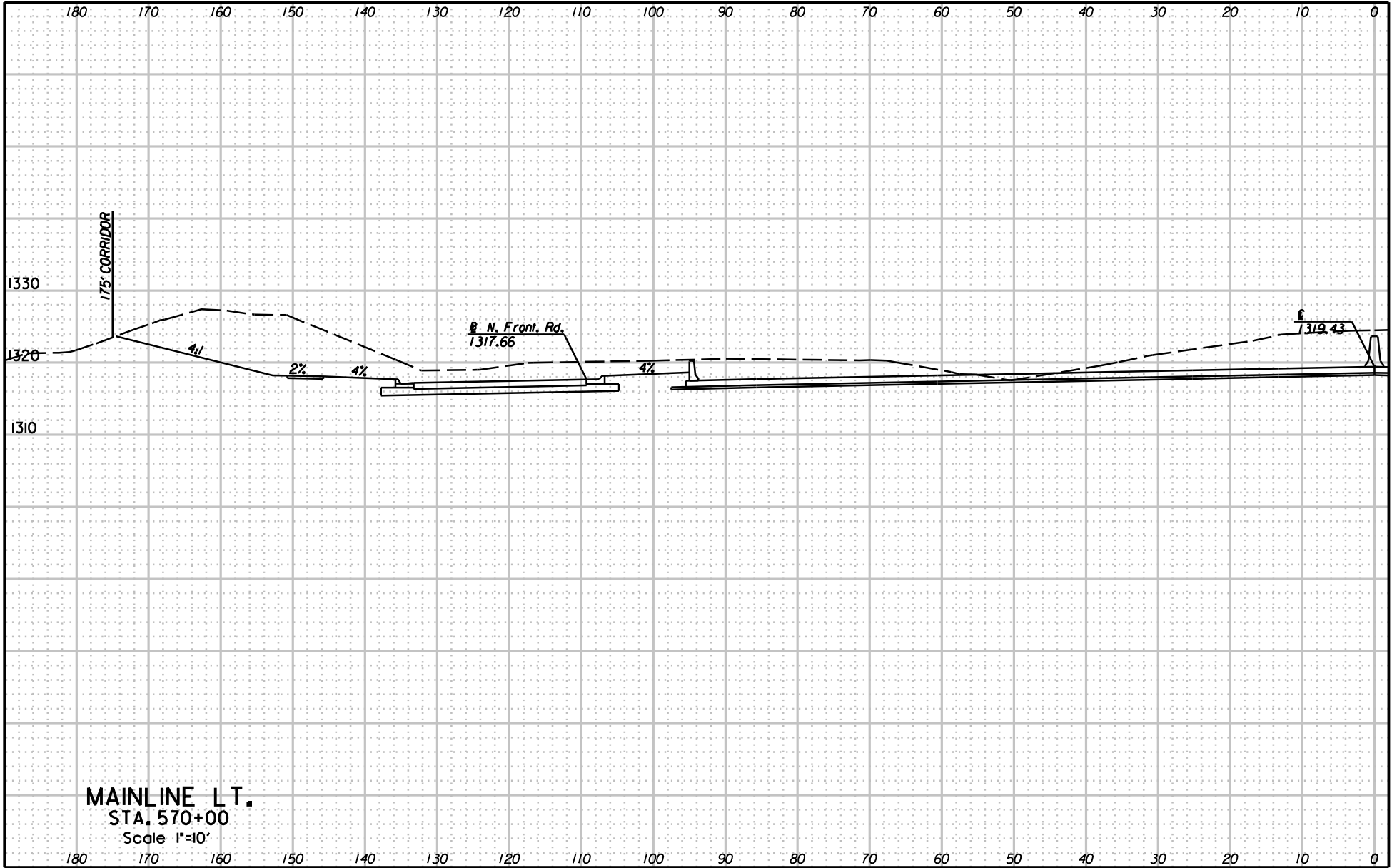


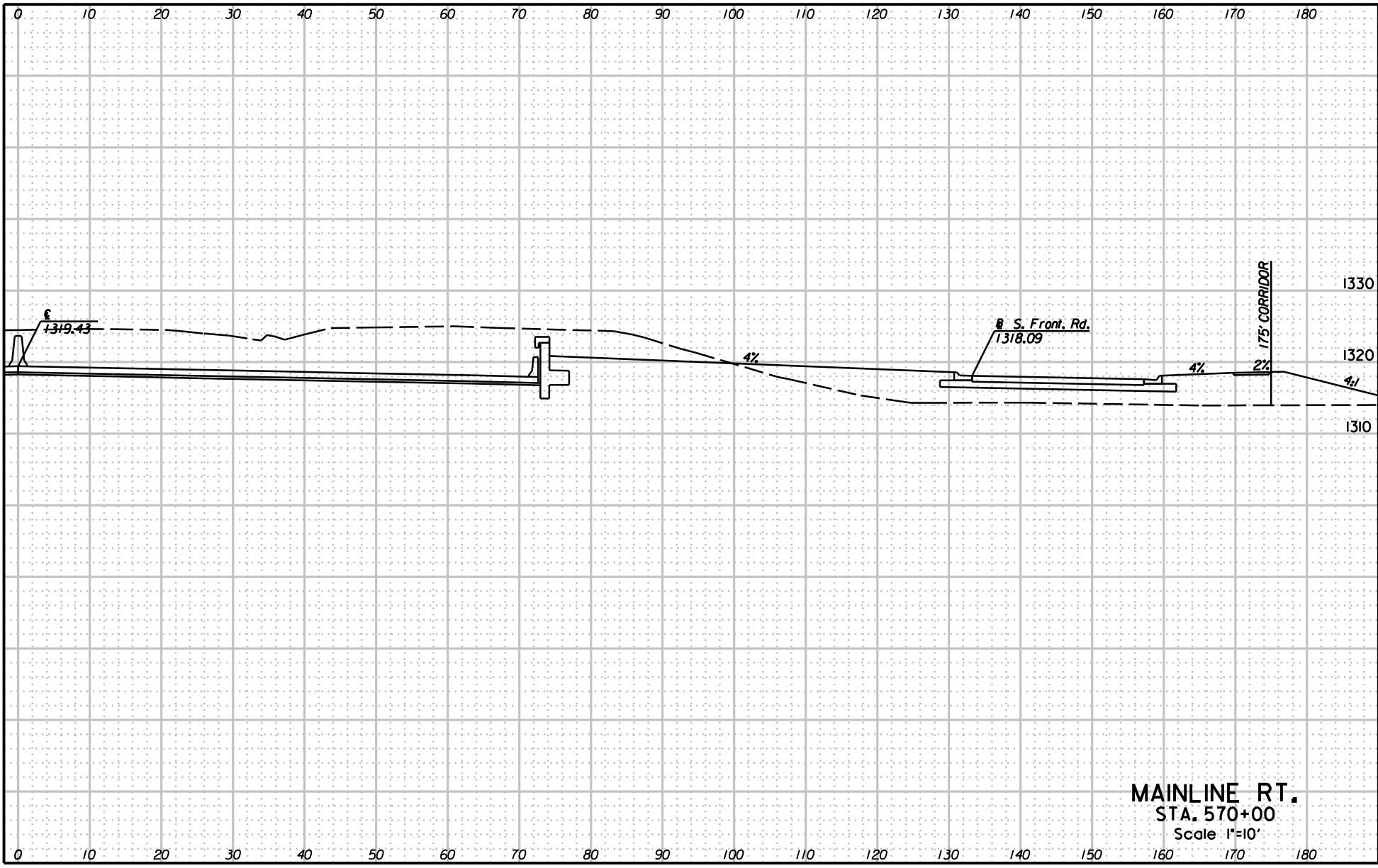




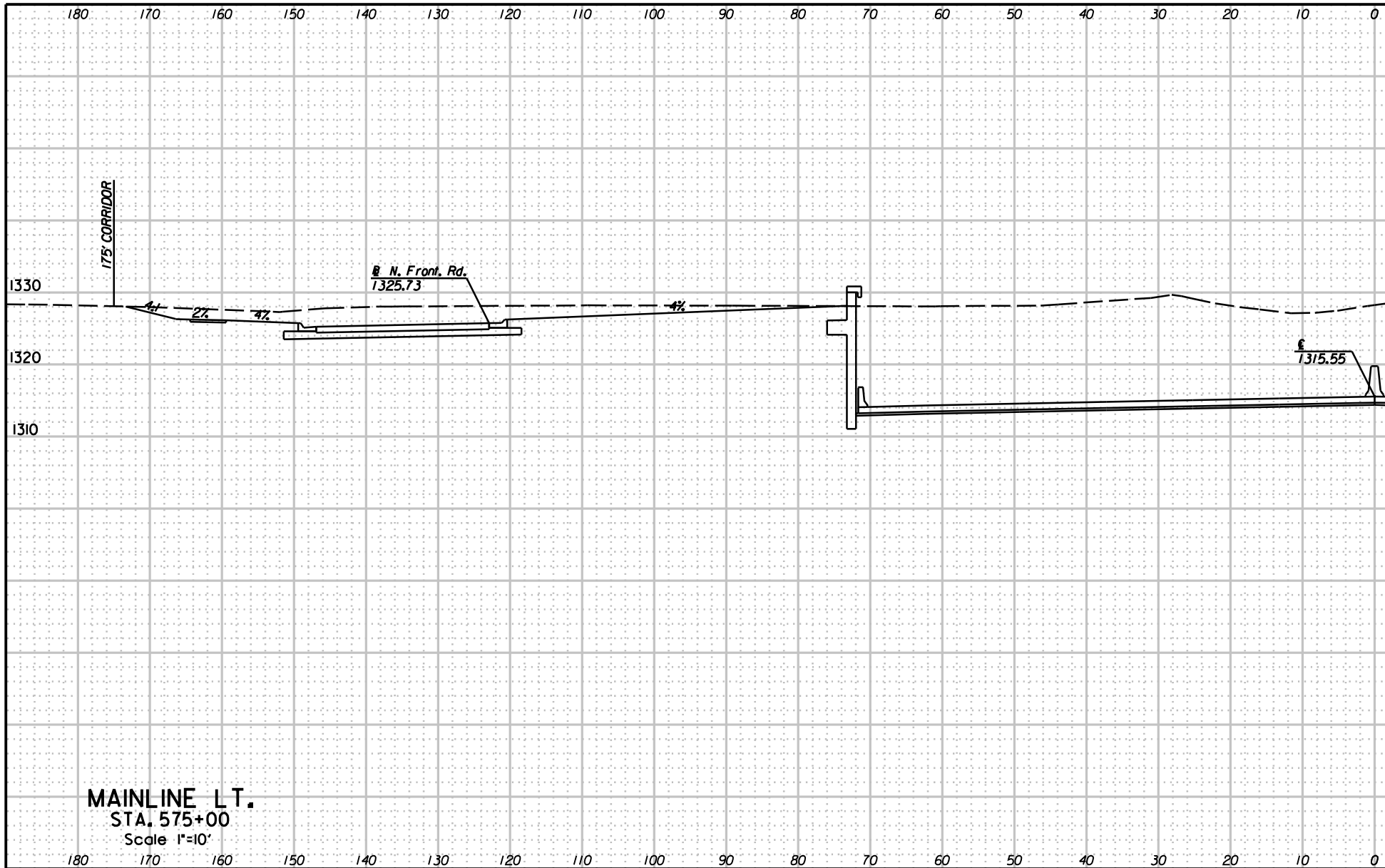


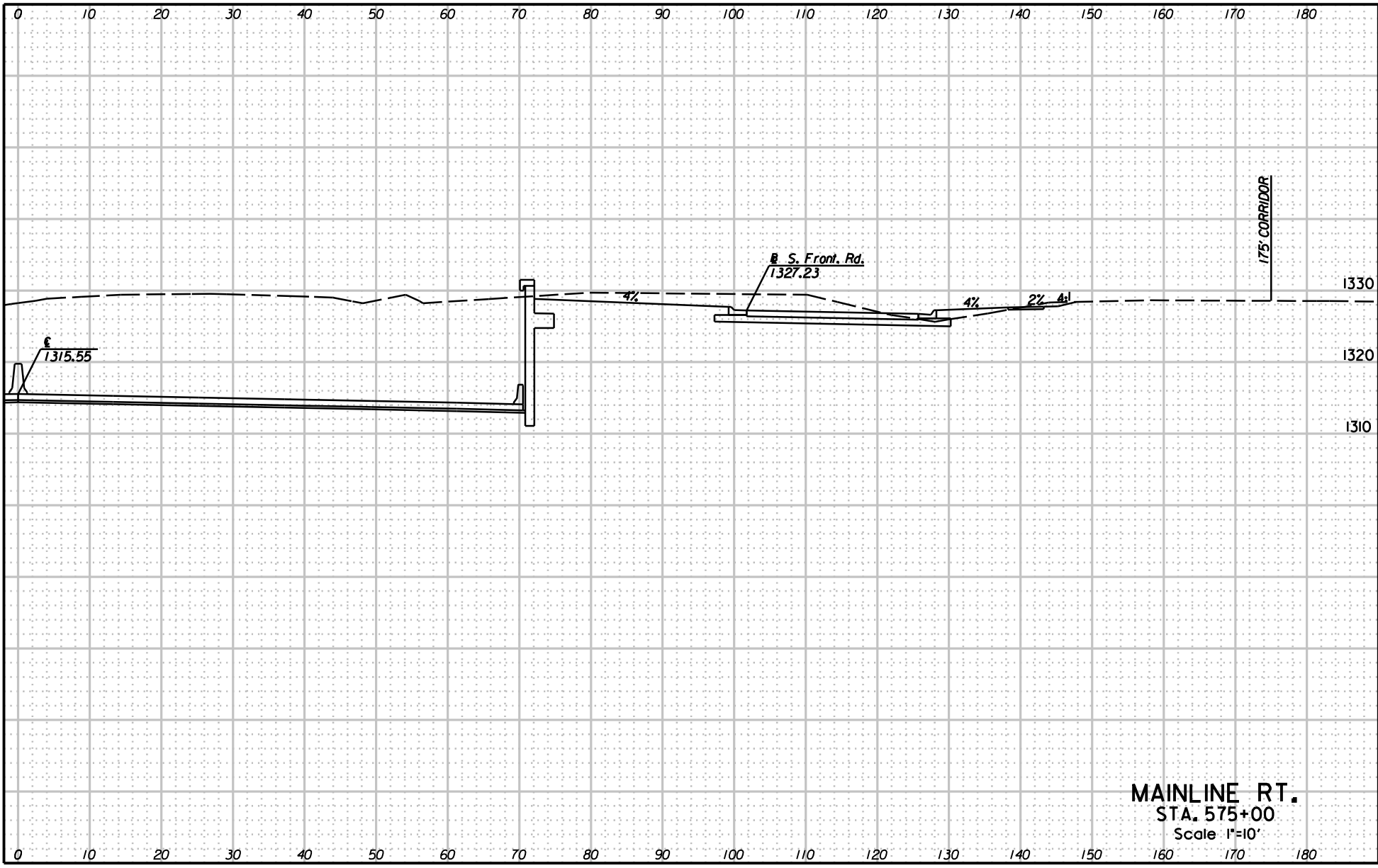
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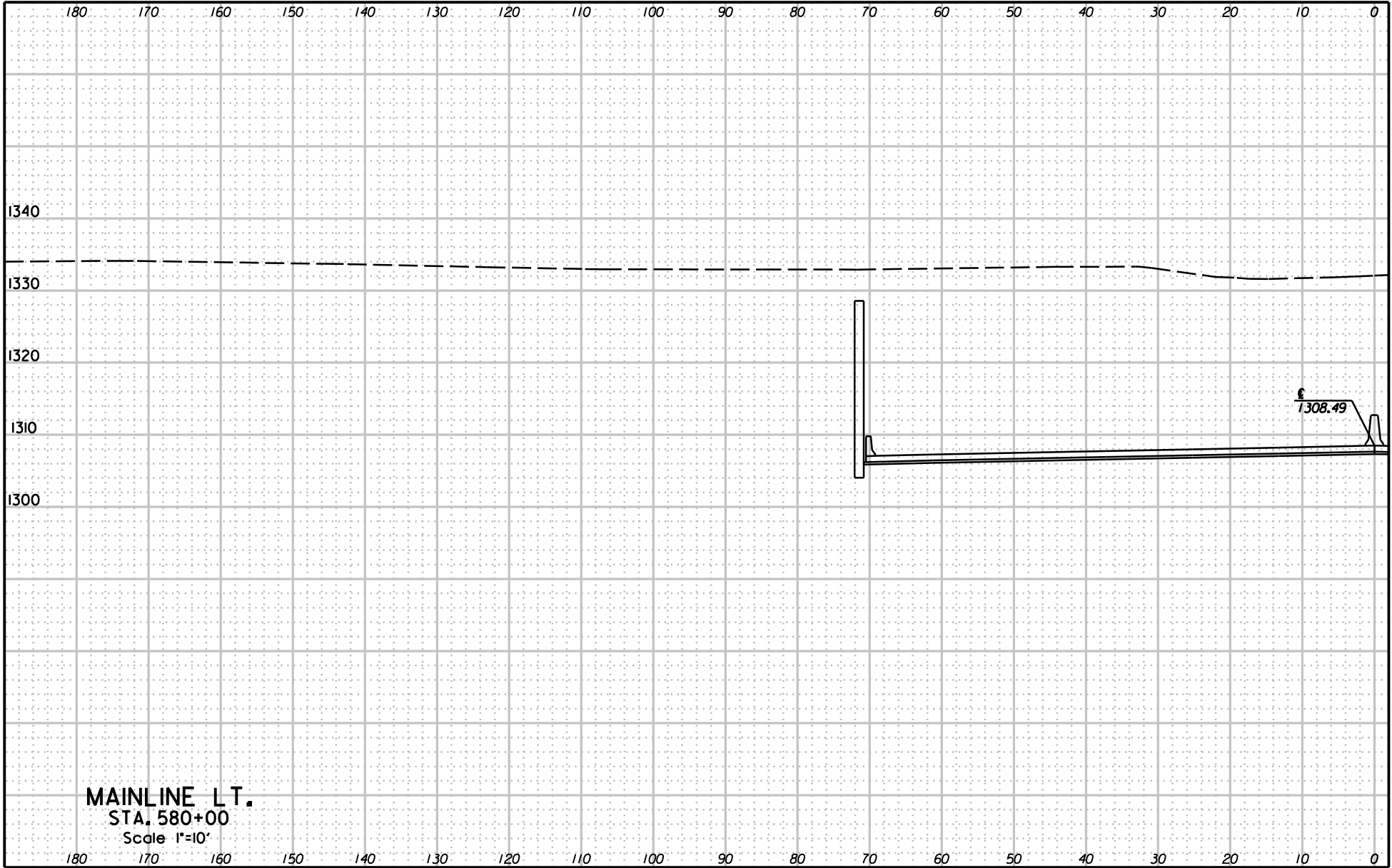


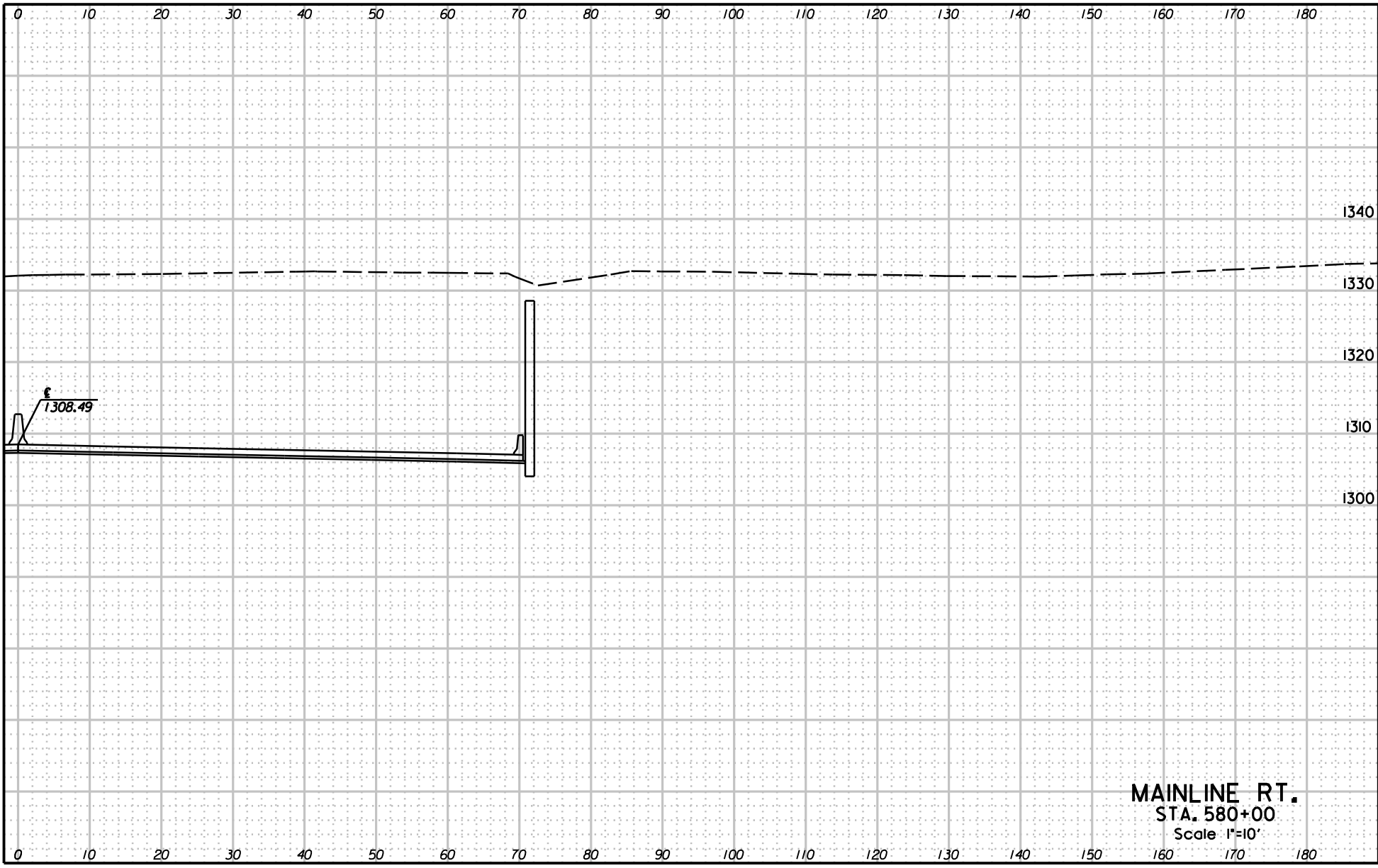


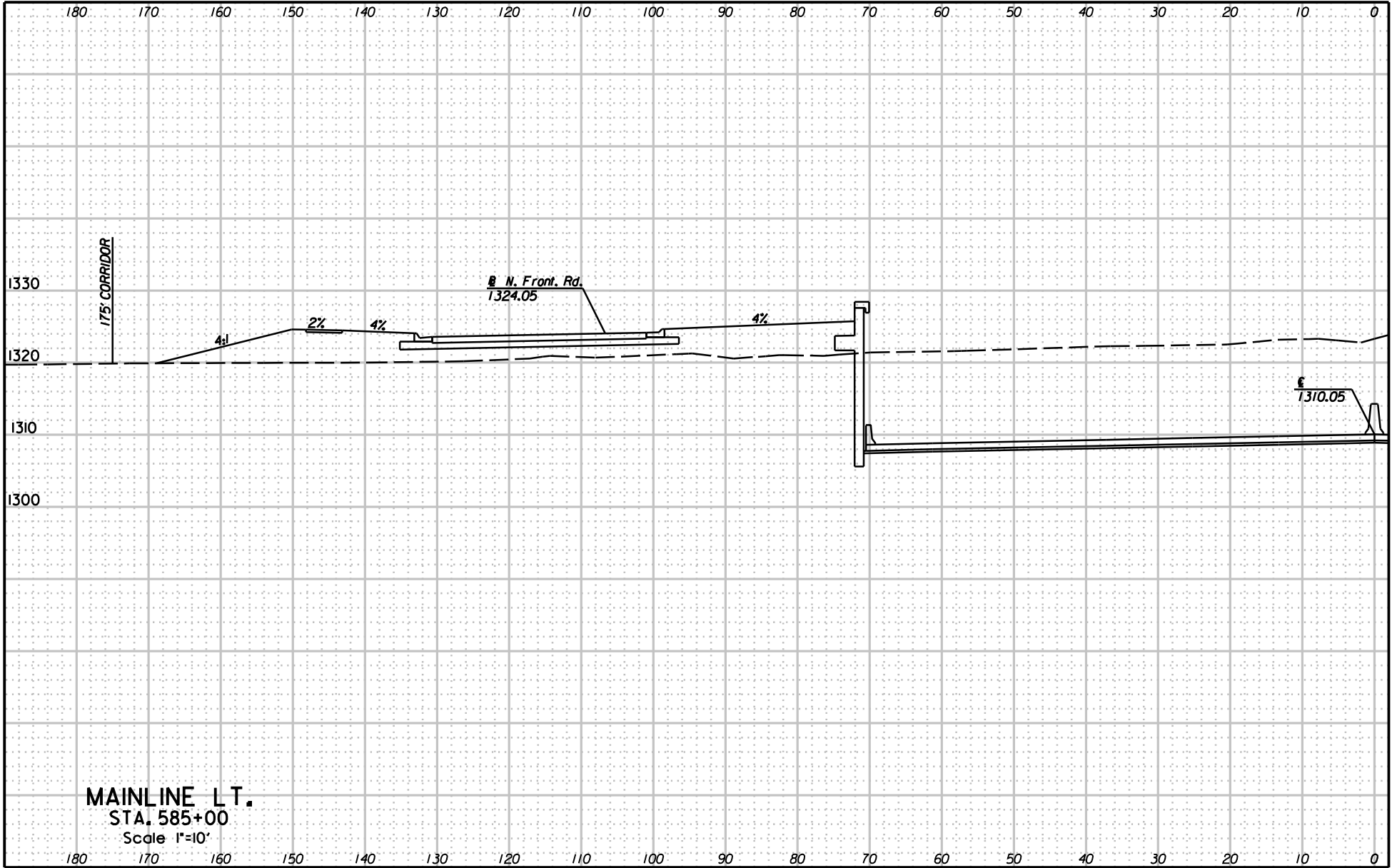
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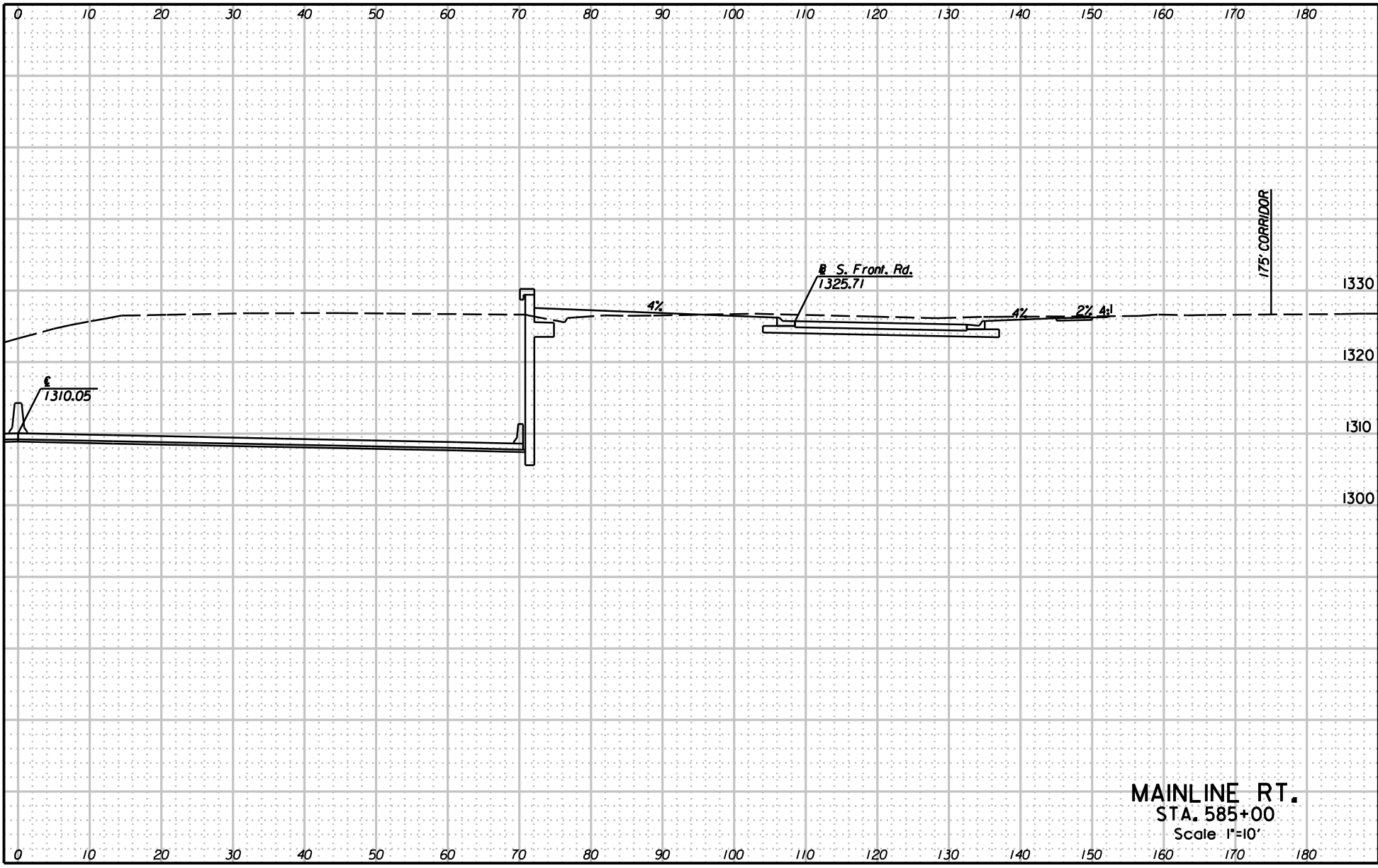


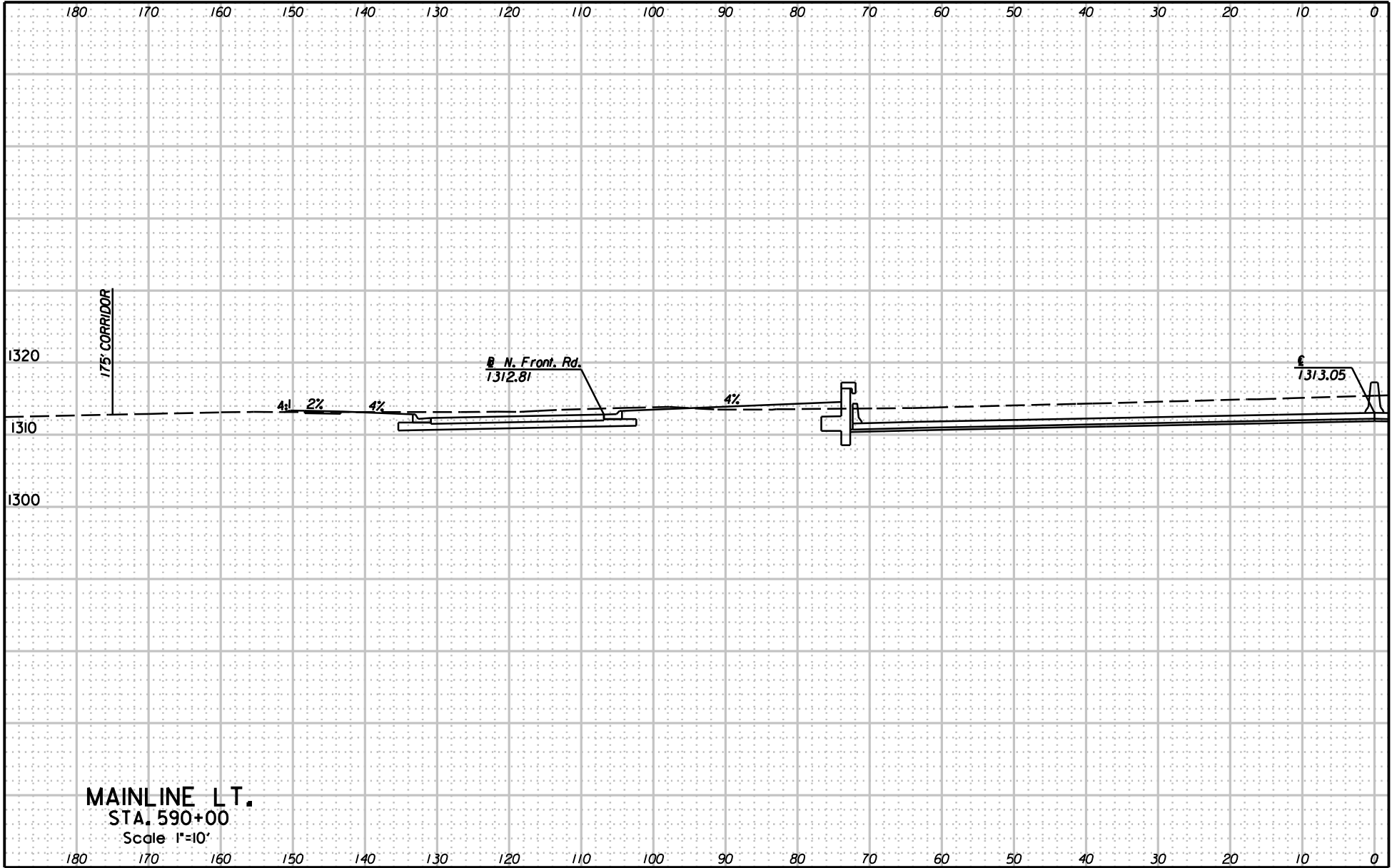


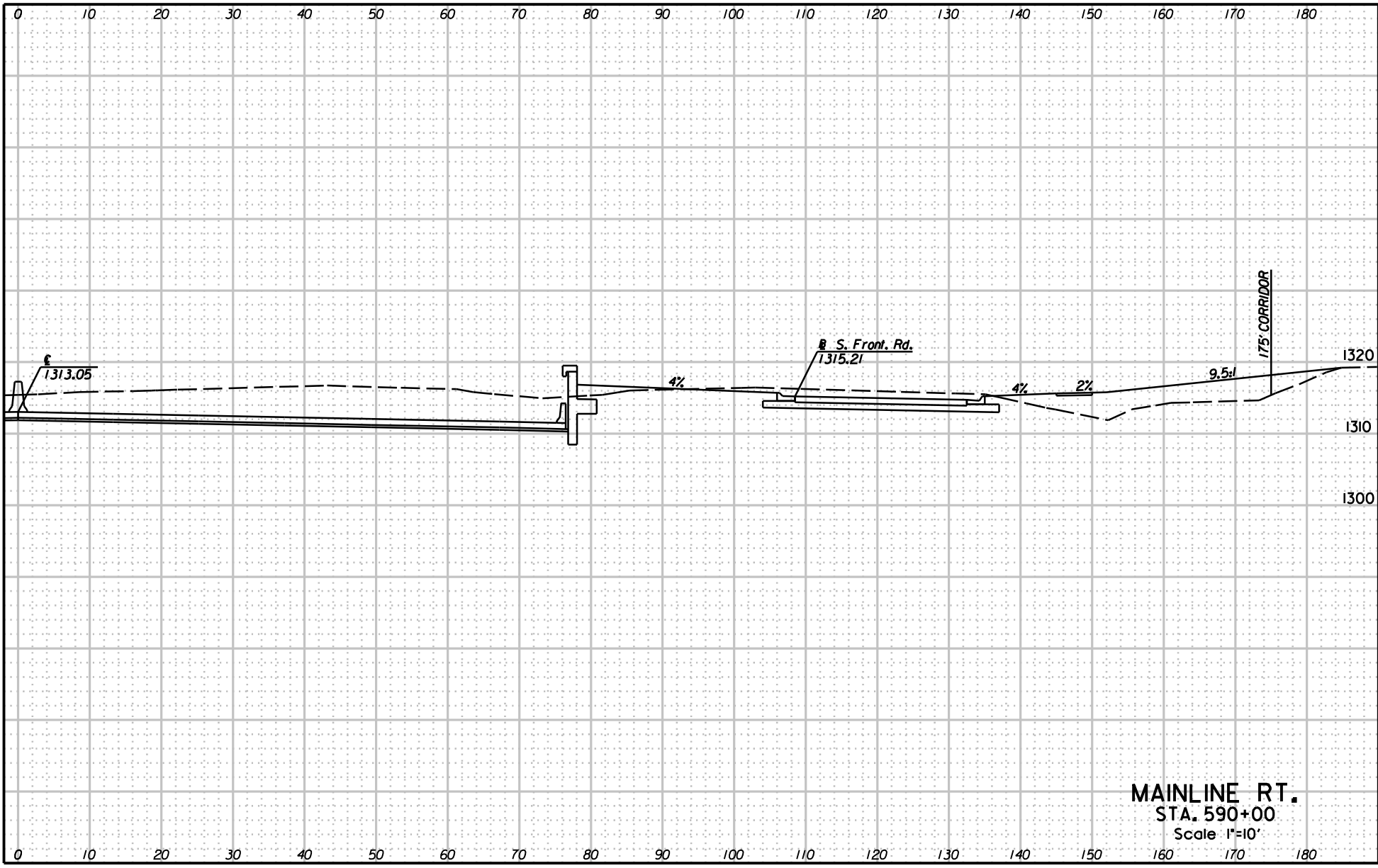




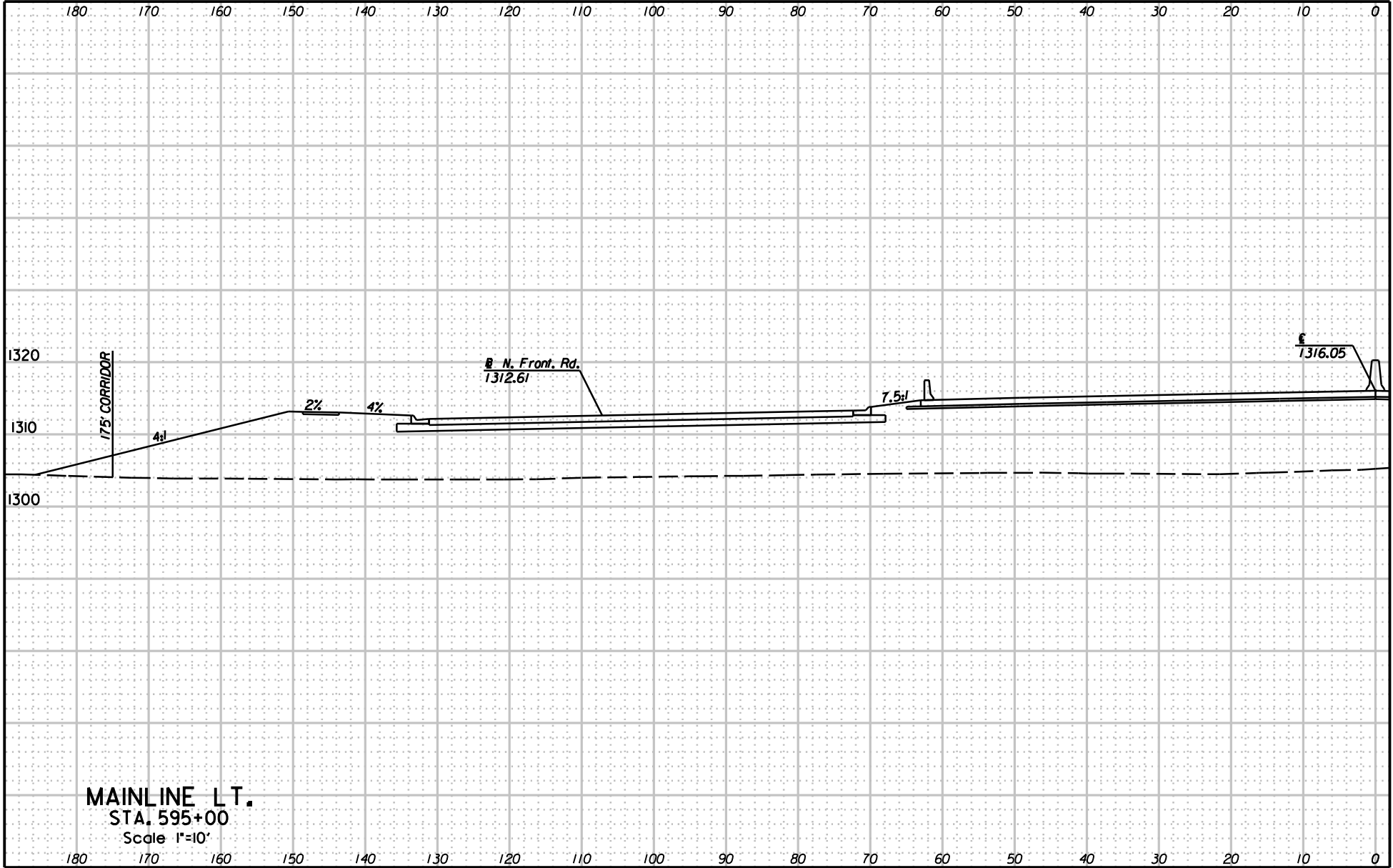


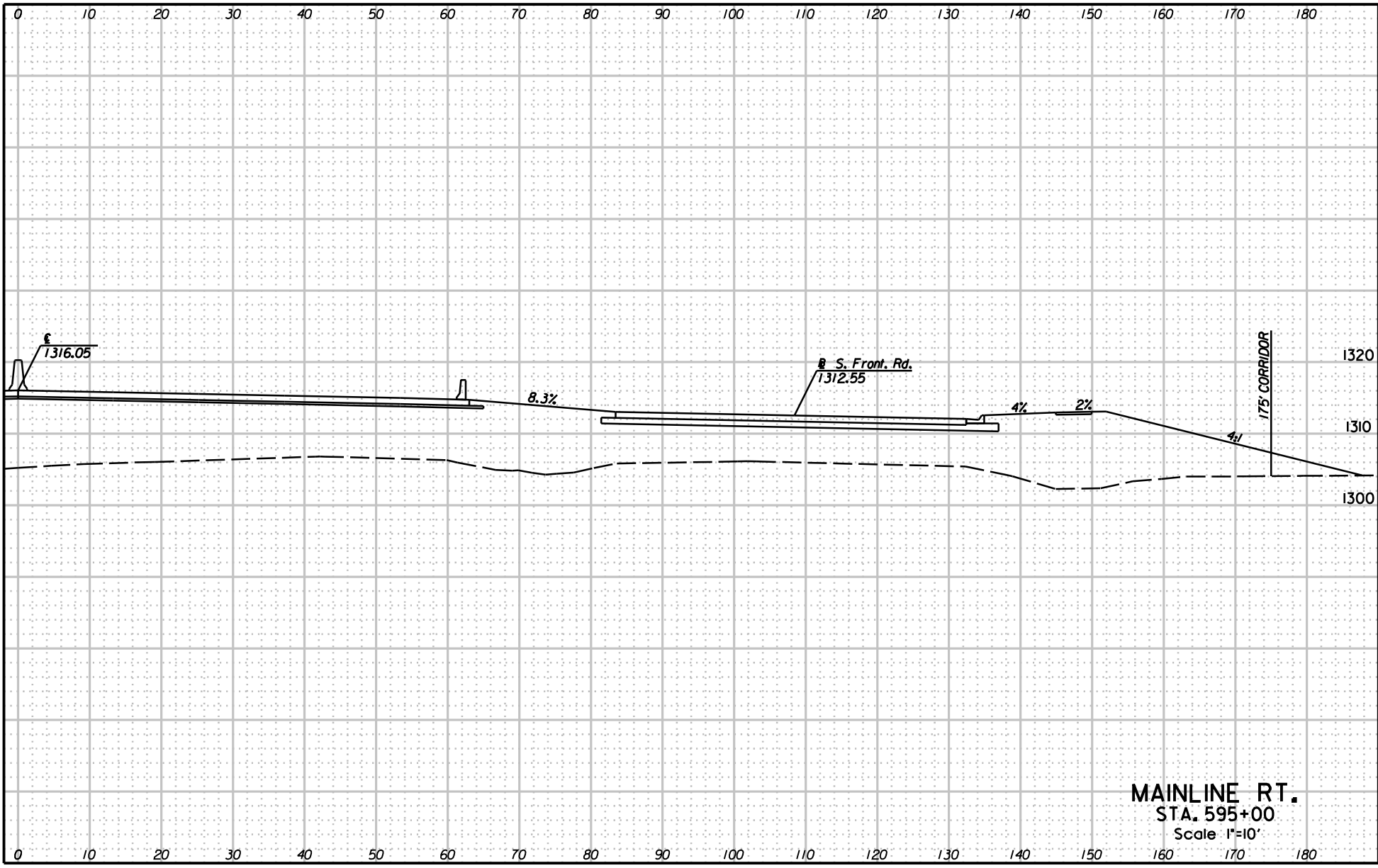


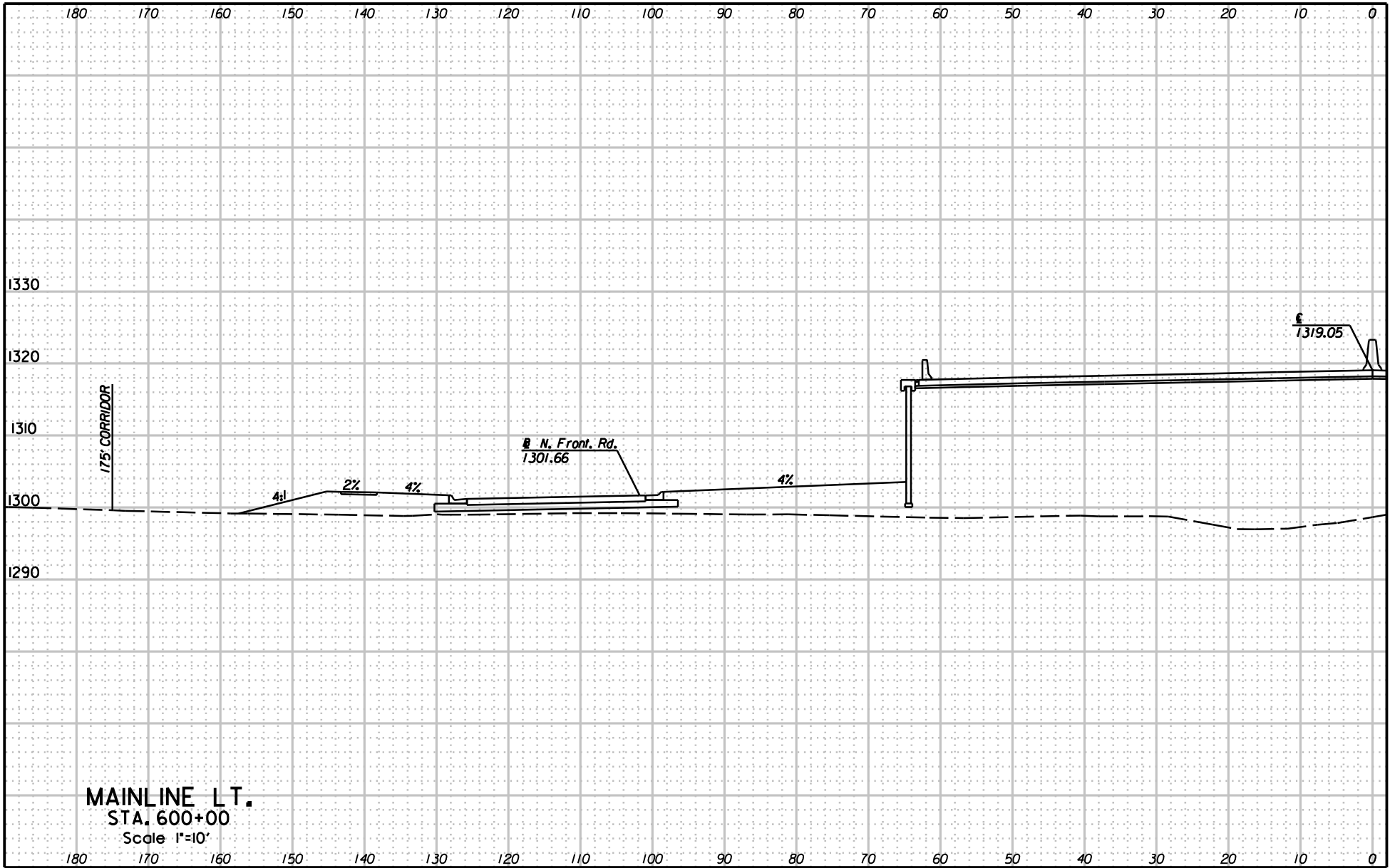


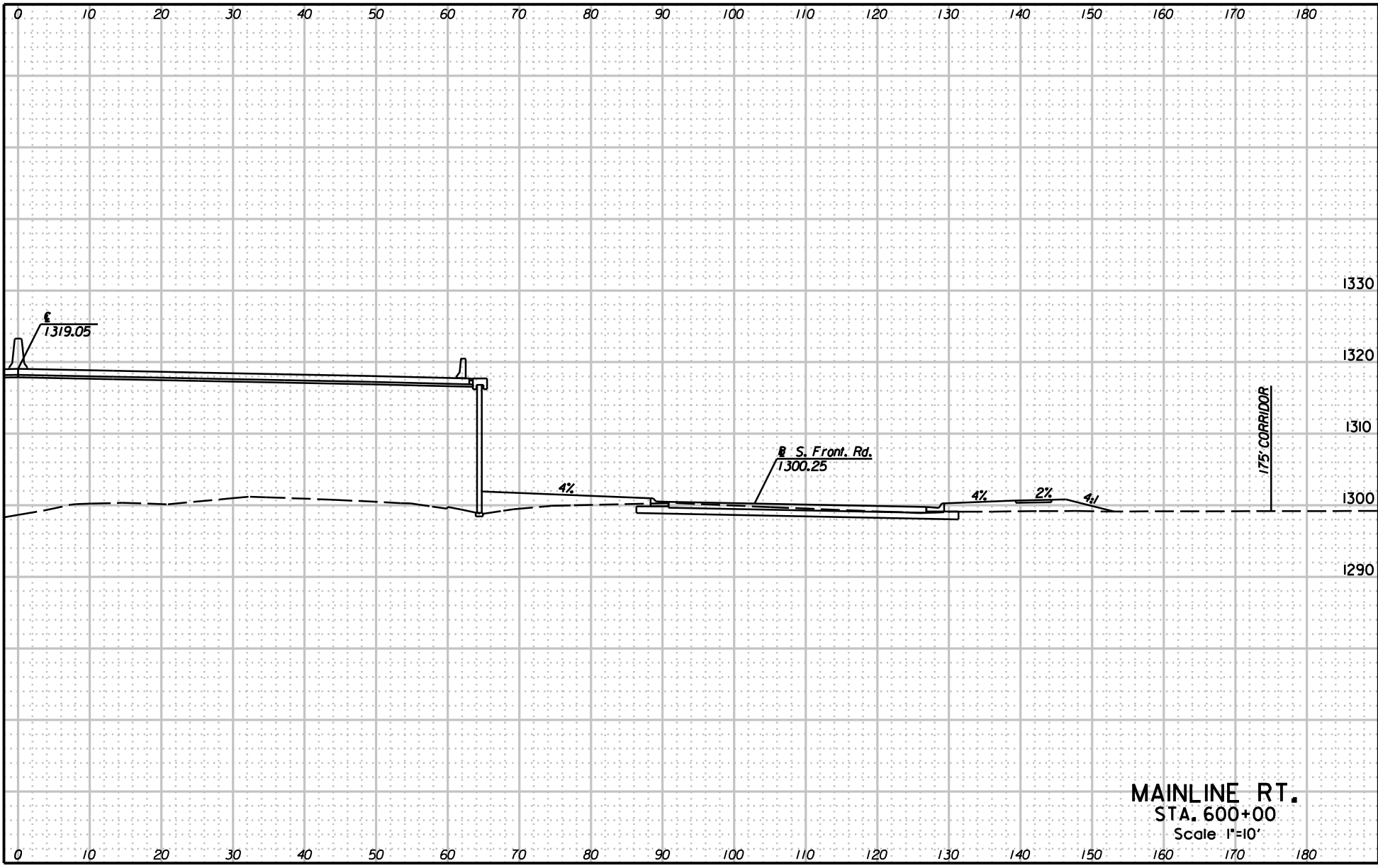


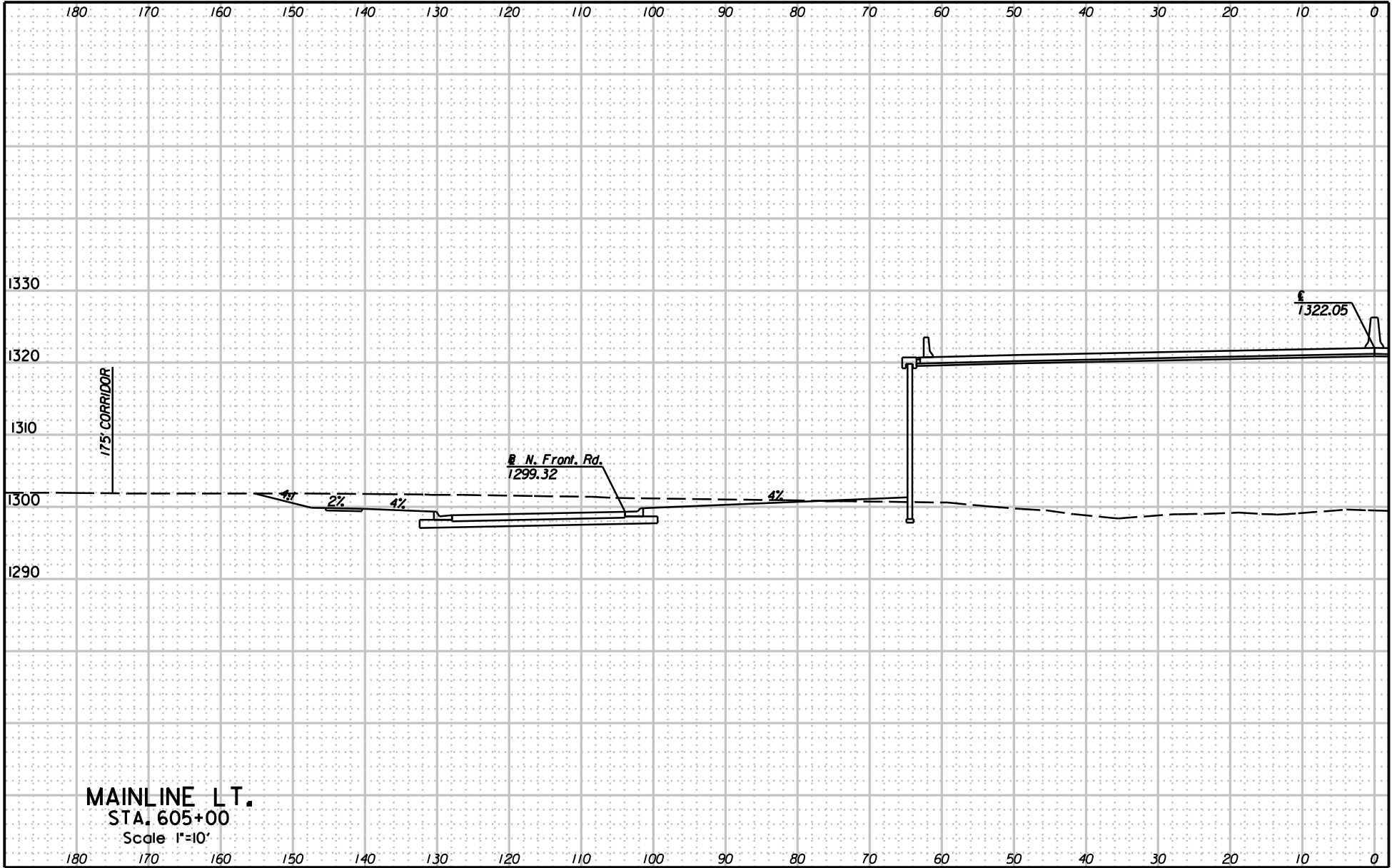
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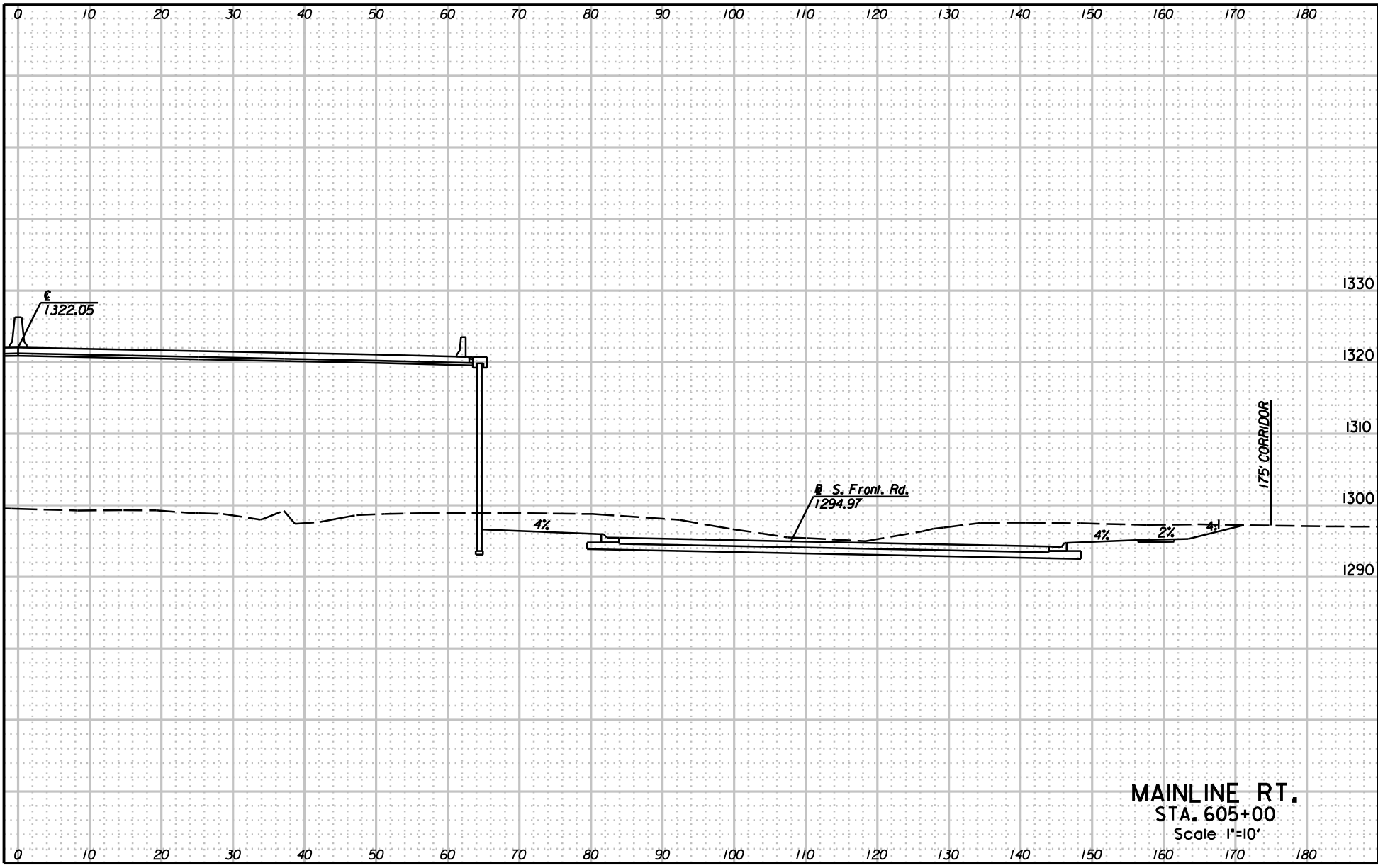


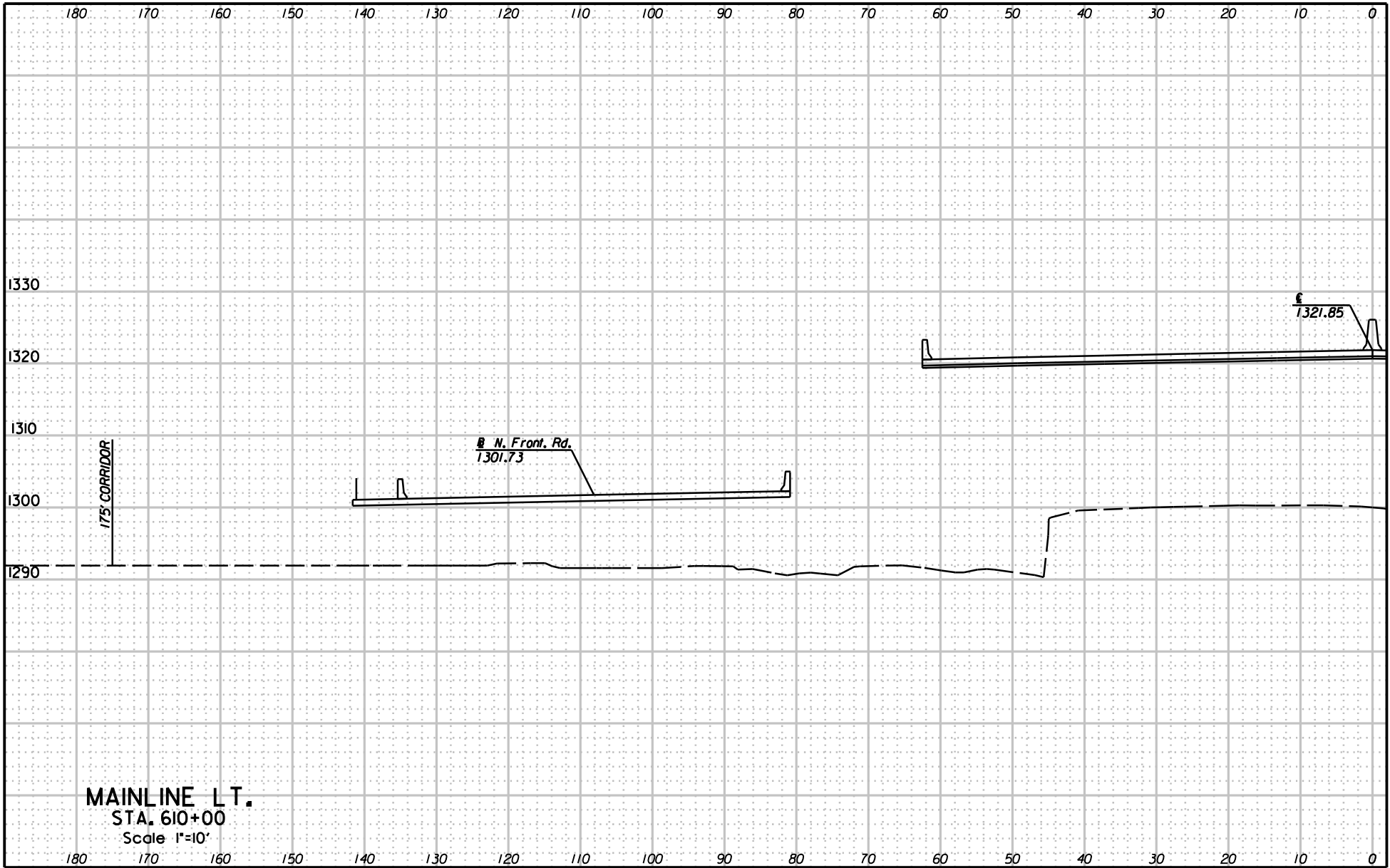


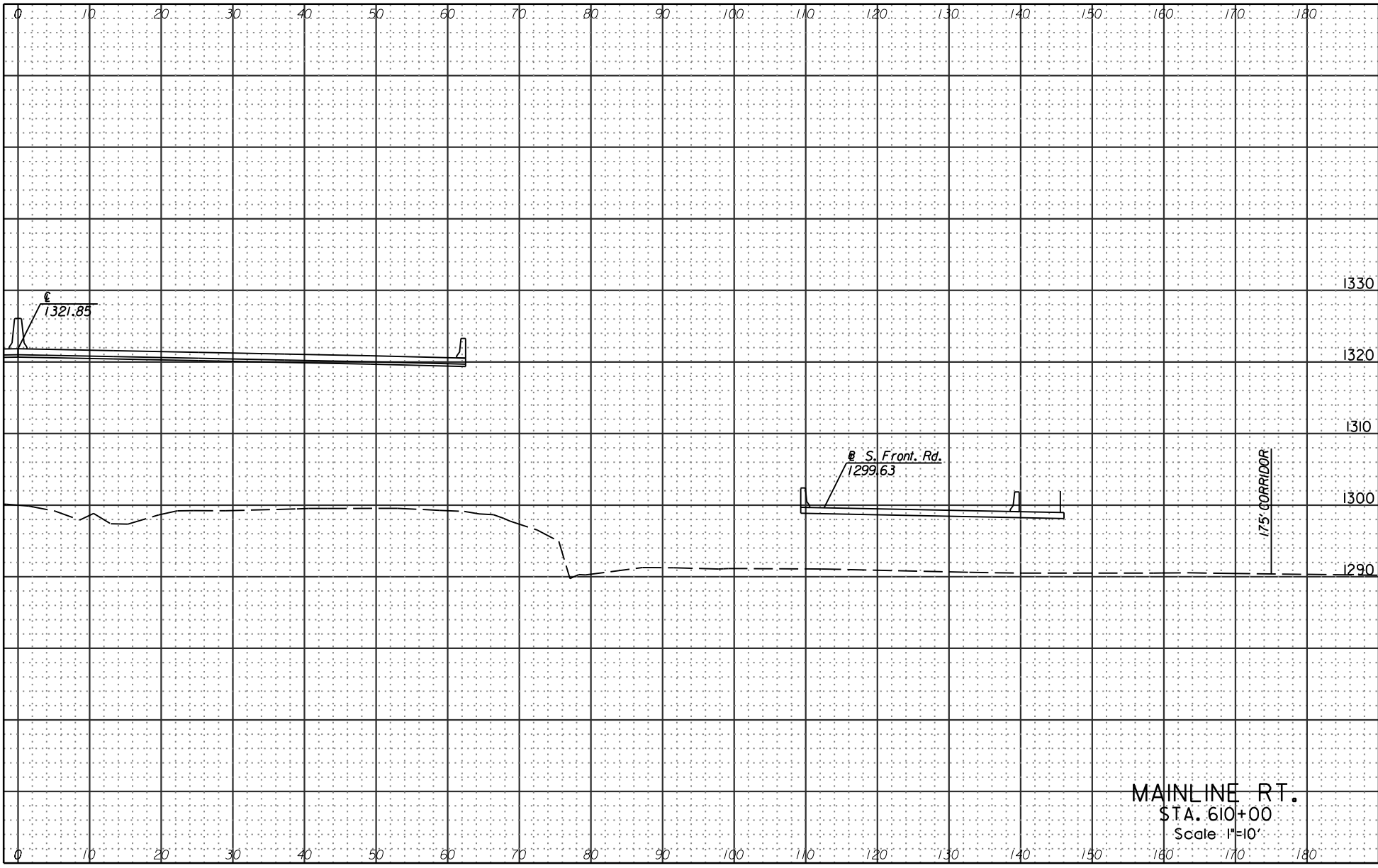


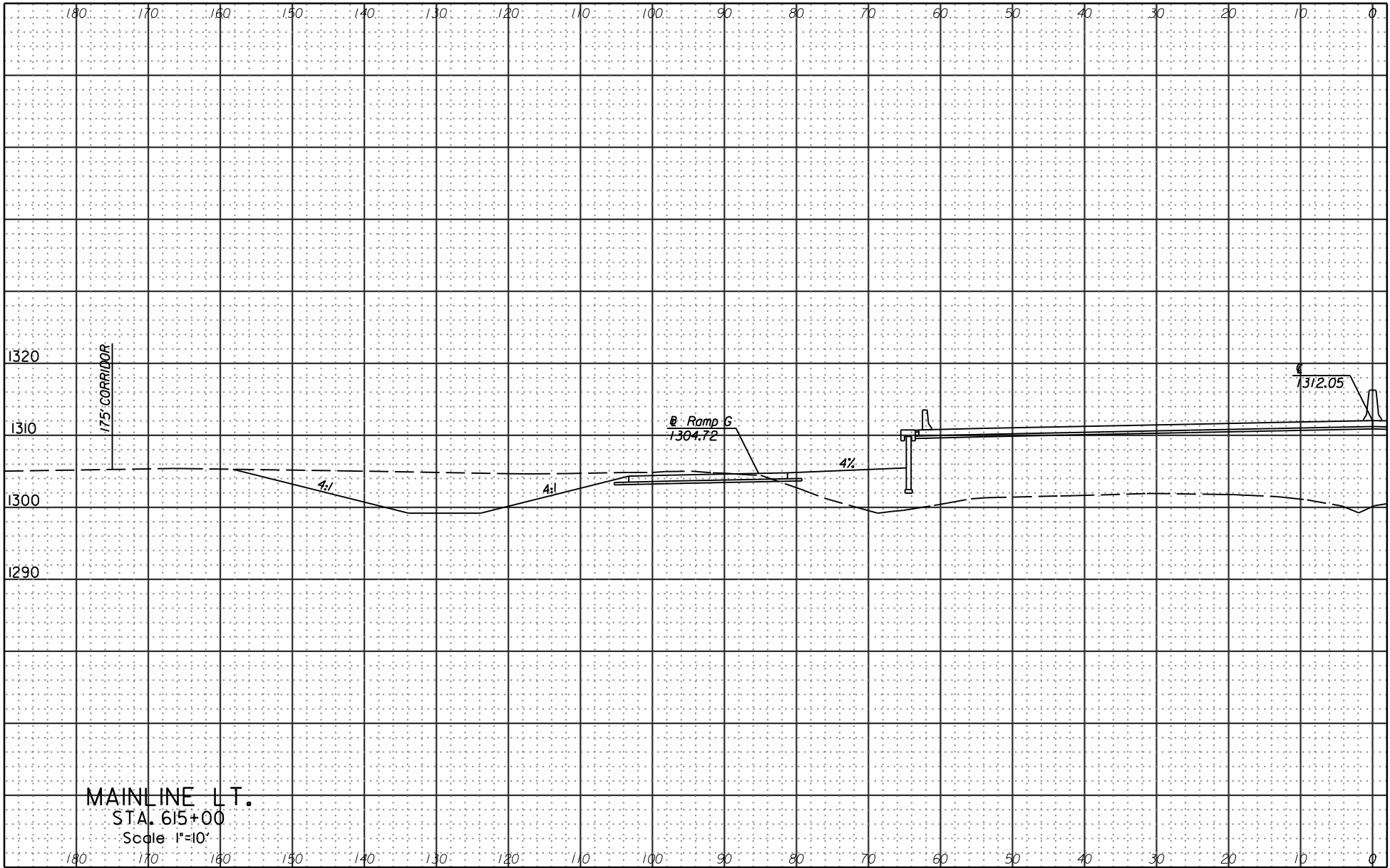


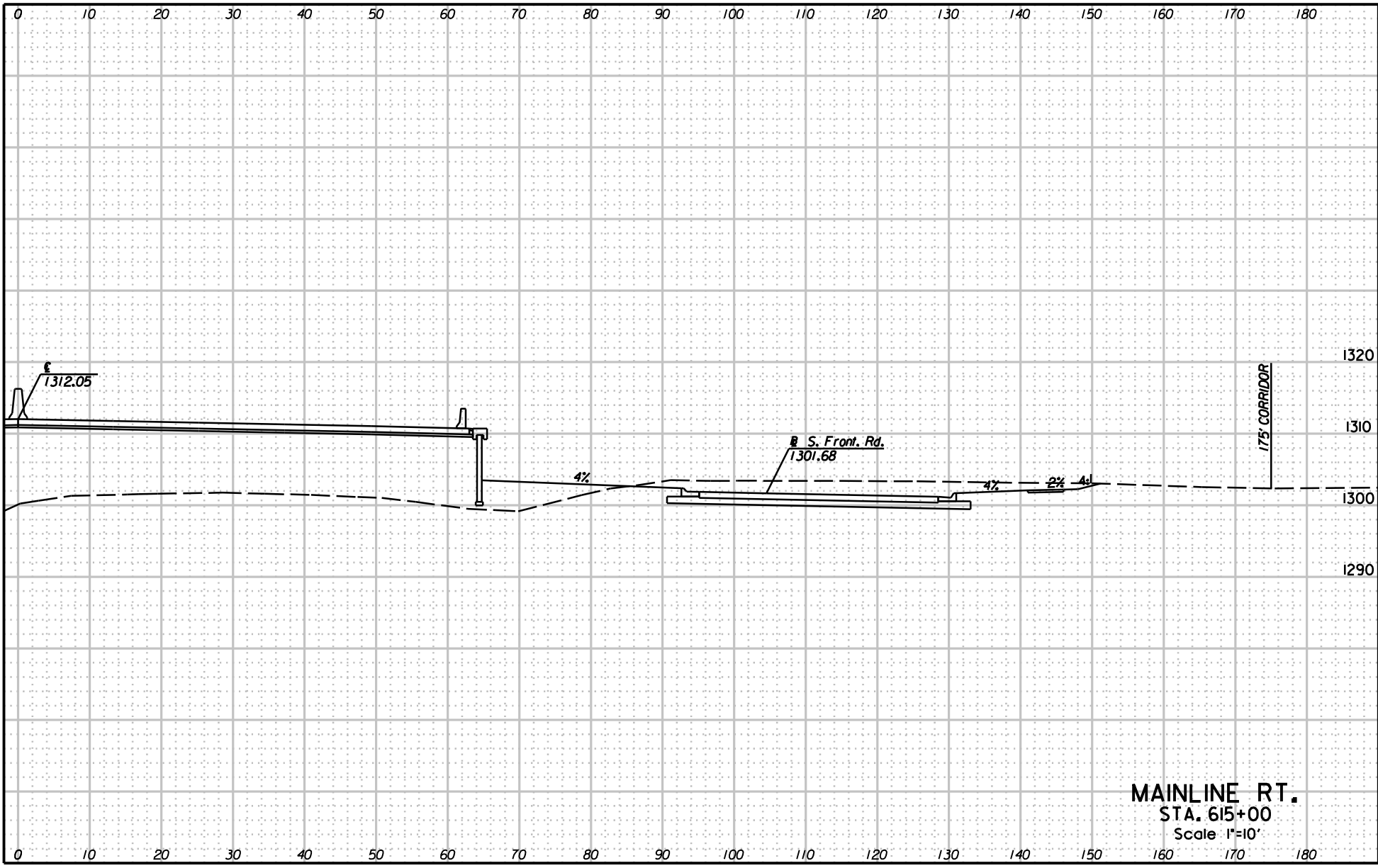


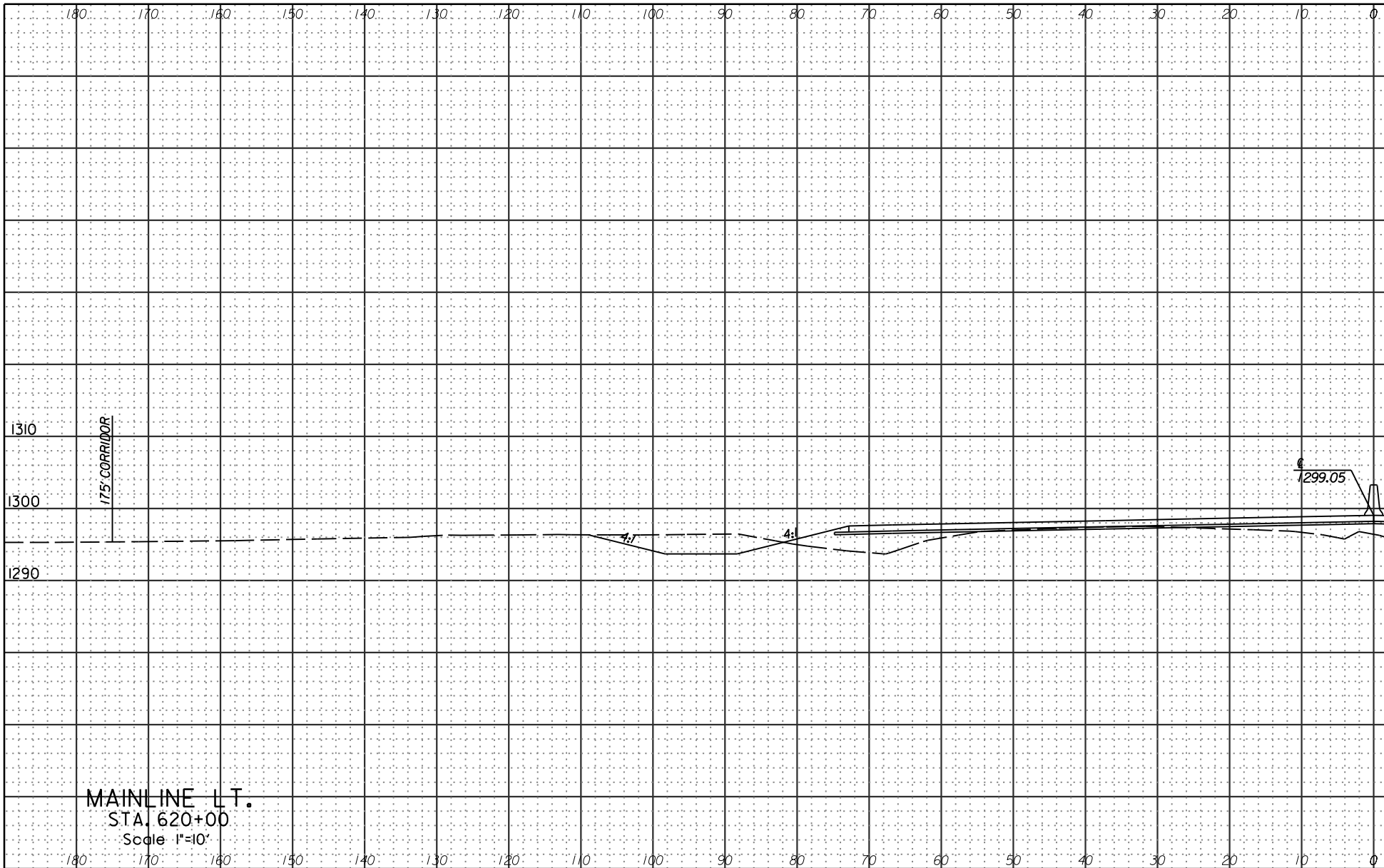


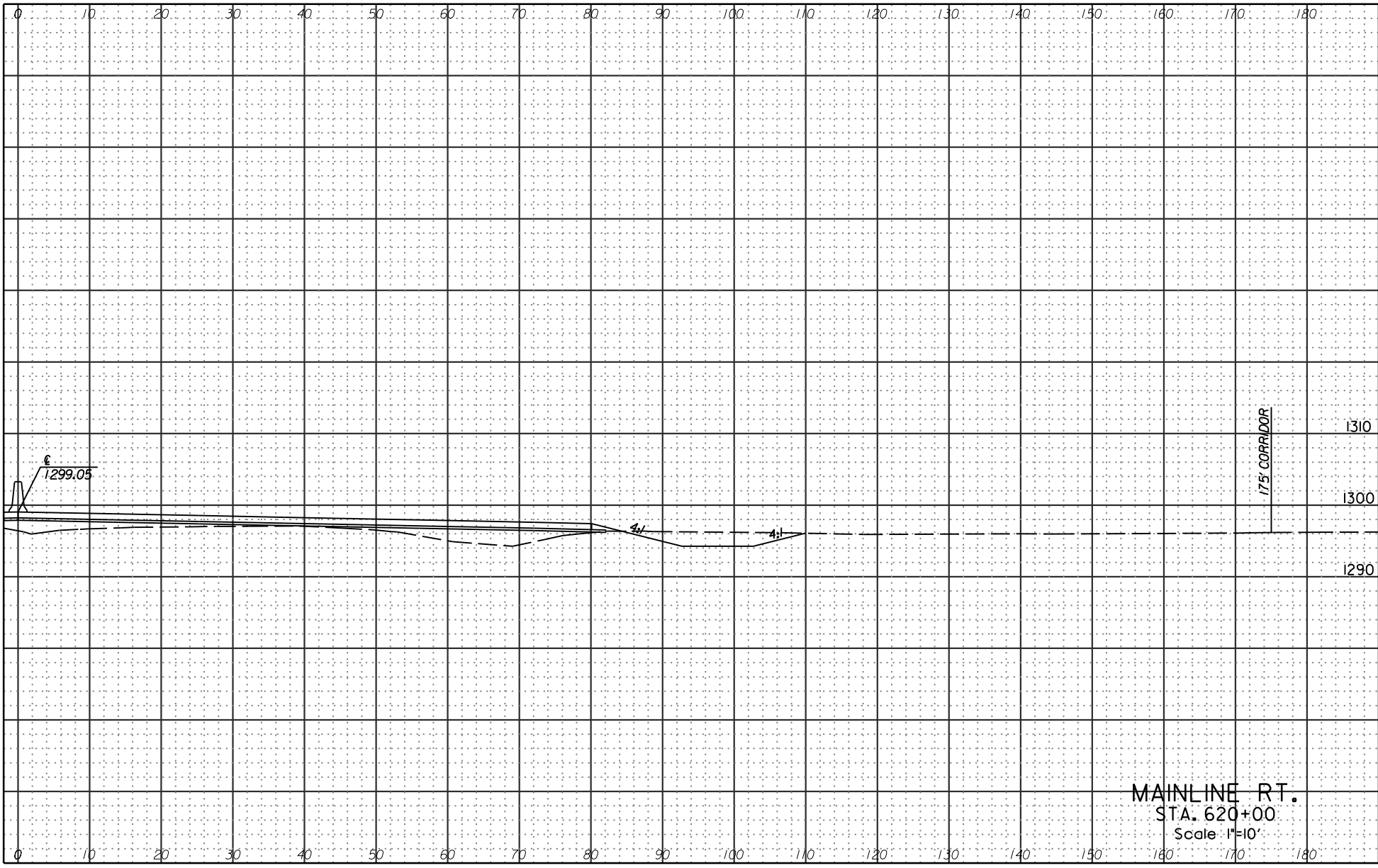




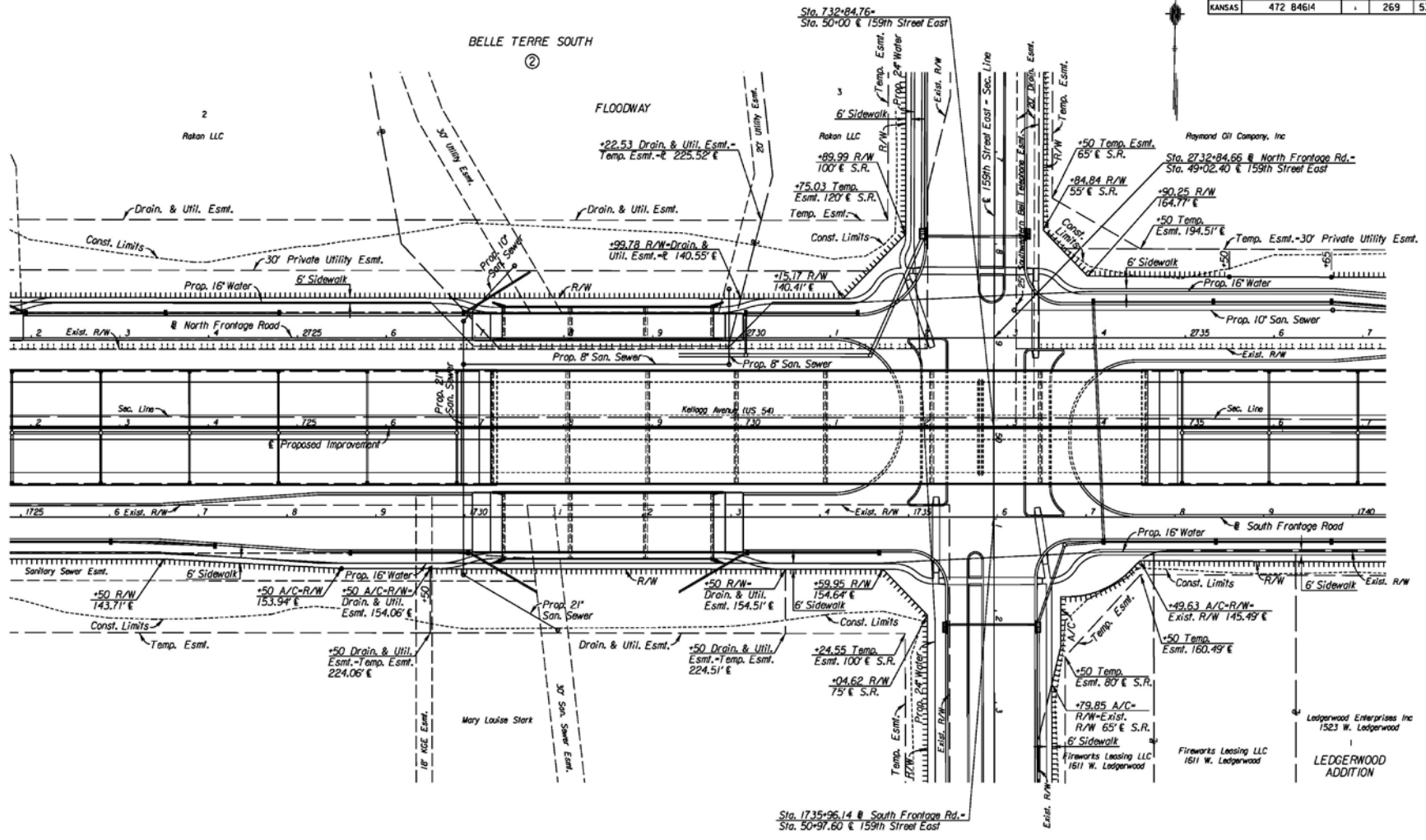








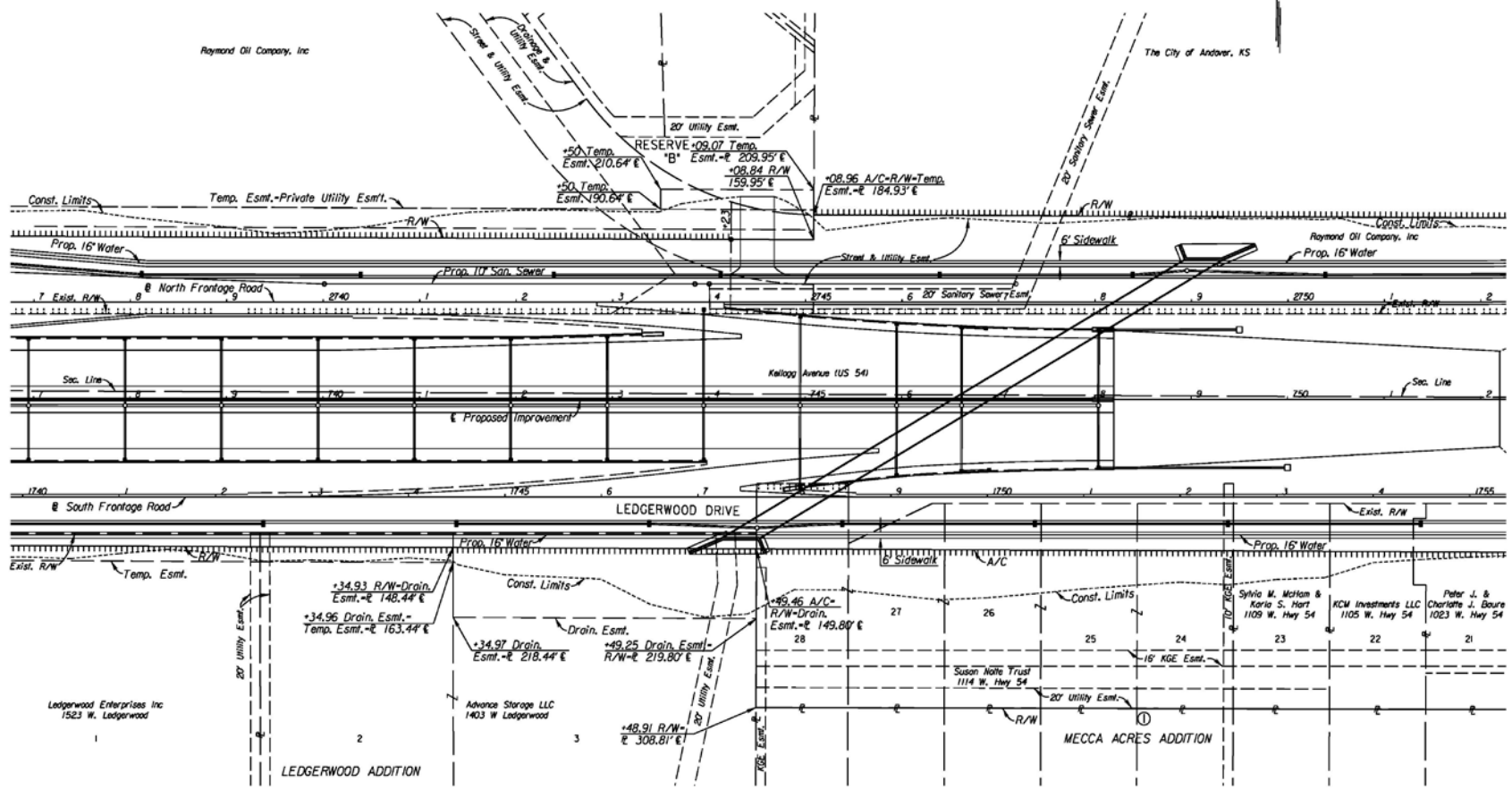
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472 B4614		269	534



CITY OF WICHITA
 EAST KELLOGG
 RIGHT-OF-WAY PLAN
 STA. 722+00 TO STA. 737+00

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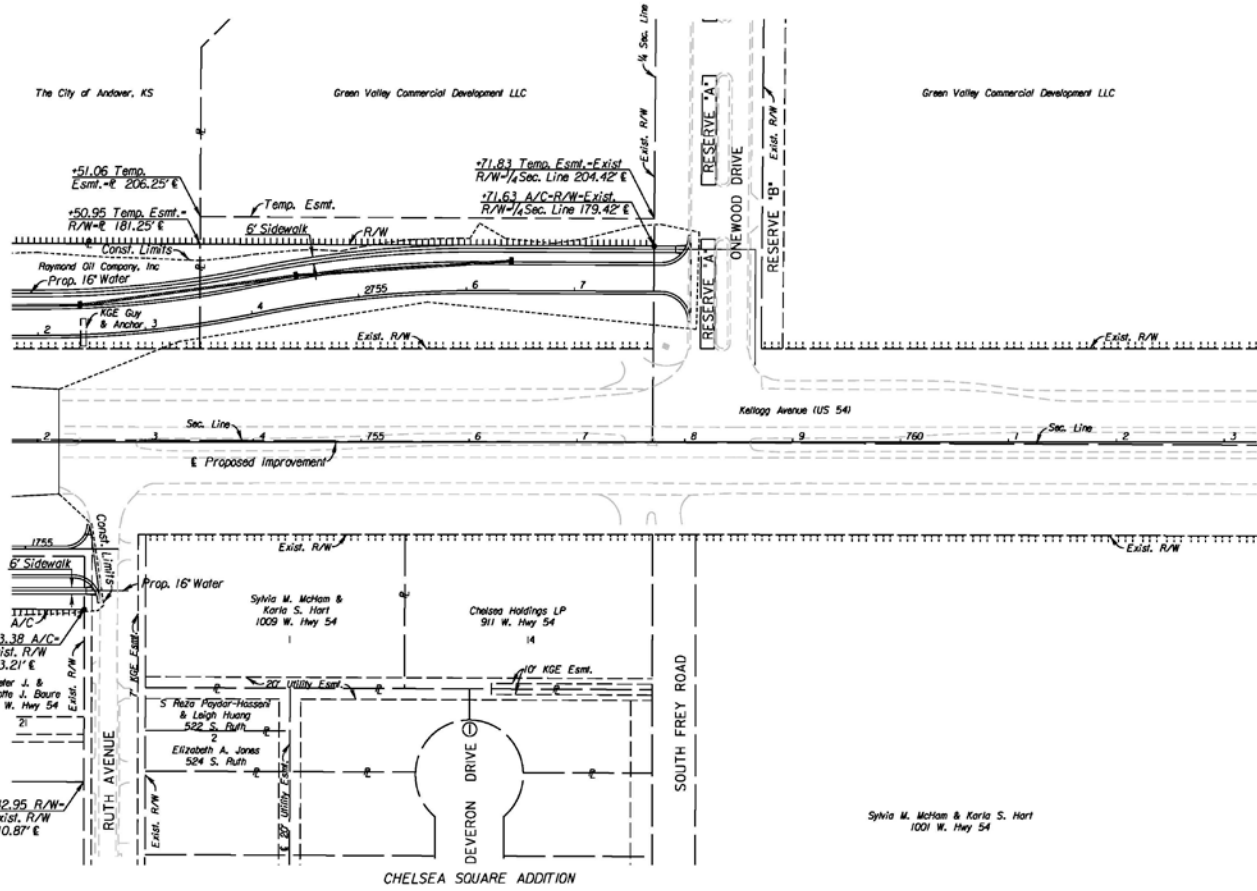
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CITY OF WICHITA
 EAST KELLOGG
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STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472 84614		271	534



CITY OF WICHITA
 EAST KELLOGG
 RIGHT-OF-WAY PLAN
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