

Woods County, Oklahoma
Major County, Oklahoma

OKLAHOMA MUNICIPAL POWER AUTHORITY
EDMOND, OKLAHOMA

PLAN AND PROFILE FOR STR 4/8
TO STR 10/11


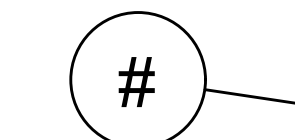
WAYNOKA RELOCATION 69kV (OMPA)

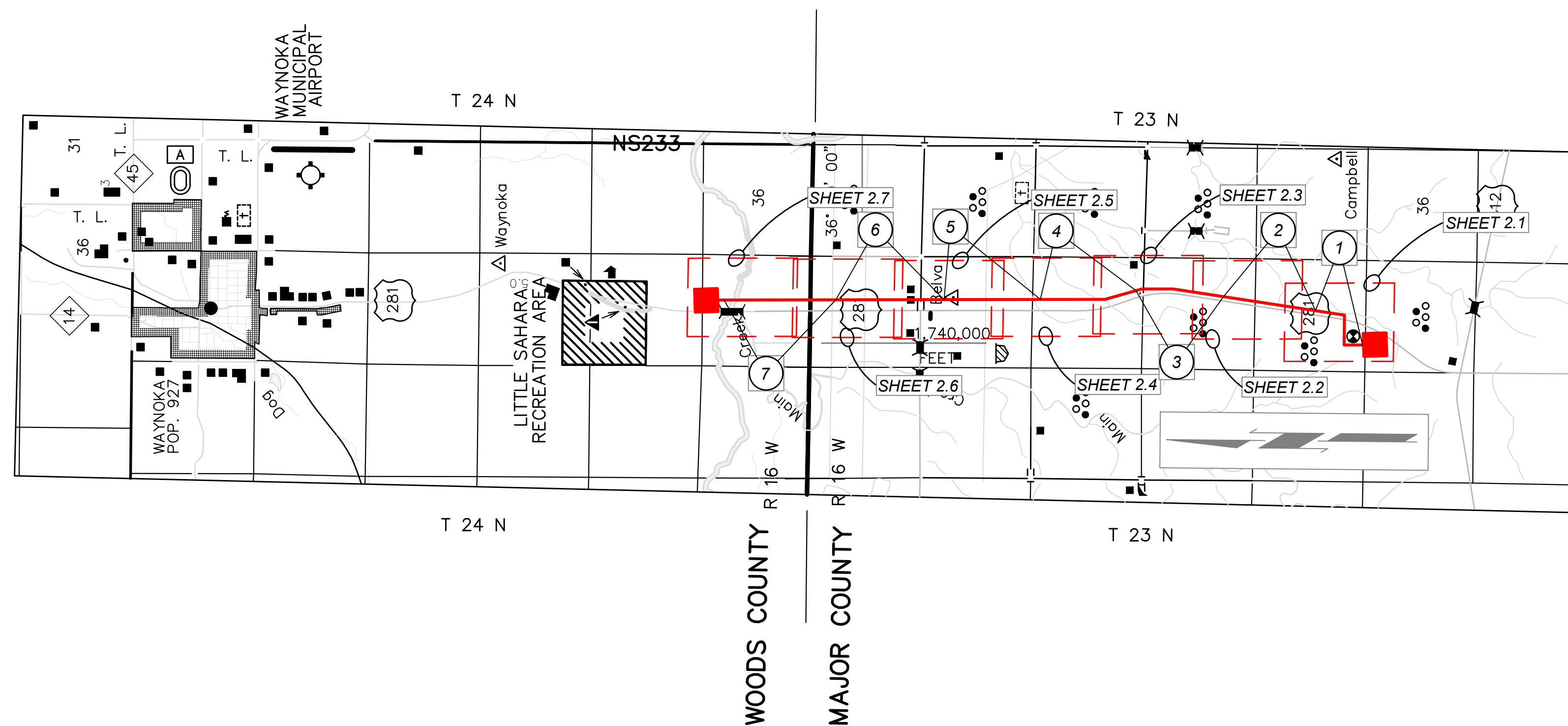
Project No.:
CEC No.: 230523

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LEGEND

-  Denotes Sheet Number
-  Denotes Mile Number



PROJECT LOCATION MAP

** ELIMINATE AGING INFRASTRUCTURE *
AND DRIVE COMMUNITY GROWTH*



4555 W. Memorial Rd
Oklahoma City, Ok 73142
P: 405 - 753 - 4200
www.connectcec.com



GENERAL NOTES:

1. THIS TRANSMISSION LINE WAS DESIGNED USING PLS-CADD SOFTWARE.
2. SURVEY WAS CONDUCTED IN THE STATE PLANE, NAD 83, OKLAHOMA NORTH, U.S. SURVEY FEET.
3. ALL STRUCTURES TO BE NOTED ON THE PLAN AND PROFILE SHEETS.
4. SHIELD WIRE TO BE (1) 5/16" EHS STEEL SAGGED PER DRAWING SC 4.1.
5. CONDUCTOR TO BE (3) 266.8 ACSR (26/7) SAGGED PER DRAWING SC 4.2.
6. PHASING SHOWN IS ACTUAL AND MUST BE MAINTAINED.
7. CONSTRUCTION TO BE PER RUS STANDARDS.
8. INSTALL DAMPERS PER DRAWING GD 3.3.
9. ALL ANCHORS LEAD LENGTHS ARE BASED ON ACTUAL SURVEY WHERE AVAILABLE. WHERE DATA IS UNAVAILABLE, FLAT GROUND IS ASSUMED.
10. GUYED ANGLE AND DEADEND STRUCTURES UTILIZE WOOD POLE EQUIVALENT (WPE) STEEL POLES.
11. CONTACT: TOBY CHILDRESS @ 918-663-9401 FOR CONSTRUCTION QUESTIONS.
12. CEC CORPORATION CA#32 EXPIRES 2024-06-30

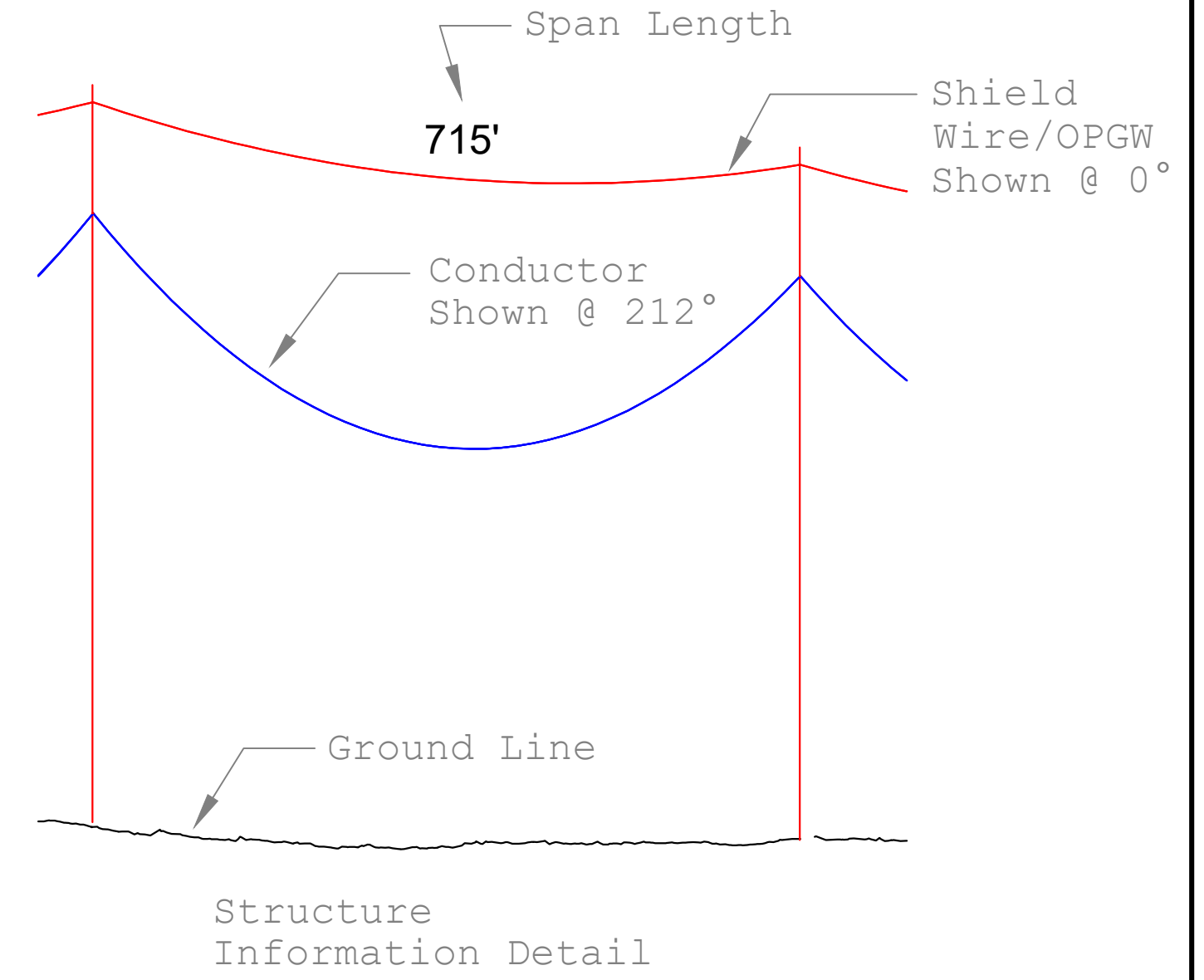
FOUNDATION NOTES:

Direct Embedded Foundations:

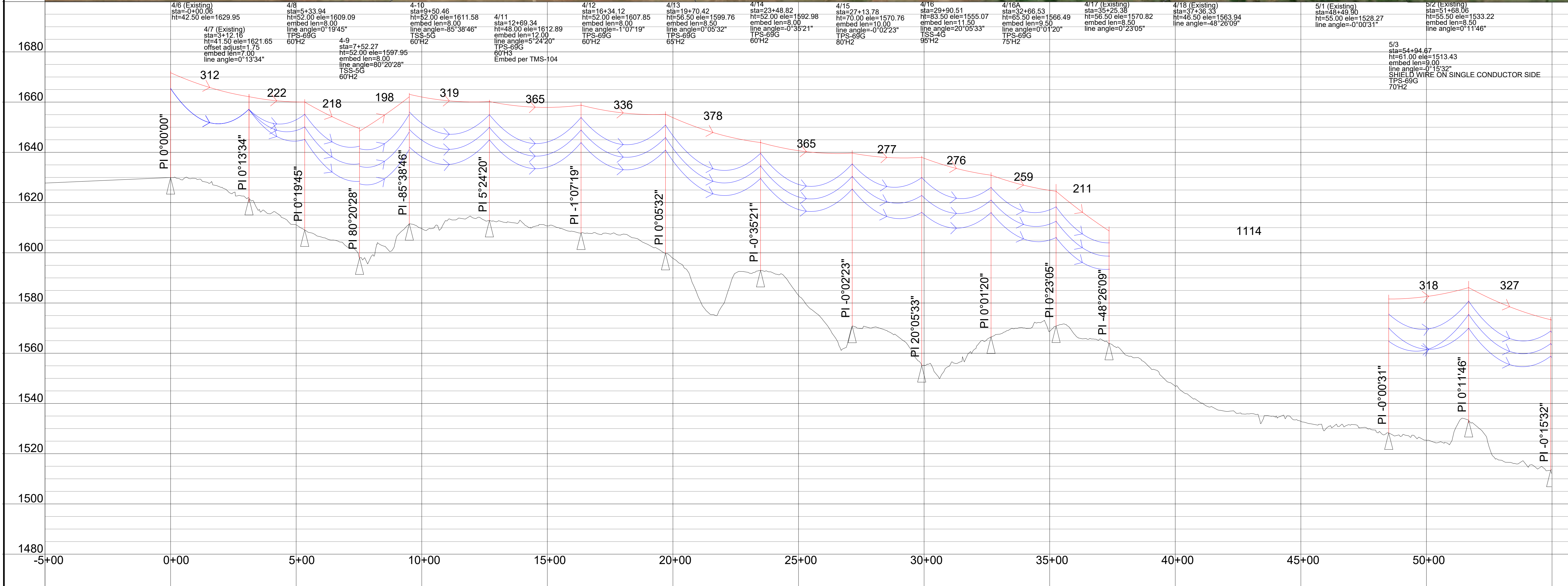
1. ALL STRUCTURES TO BE EMBEDDED 10% +2' OF POLE LENGTH UNLESS OTHERWISE NOTED.
2. ALL STRUCTURES TO BE BACKFILLED PER RUS-TM-101 UNLESS OTHERWISE NOTED.

LEGEND

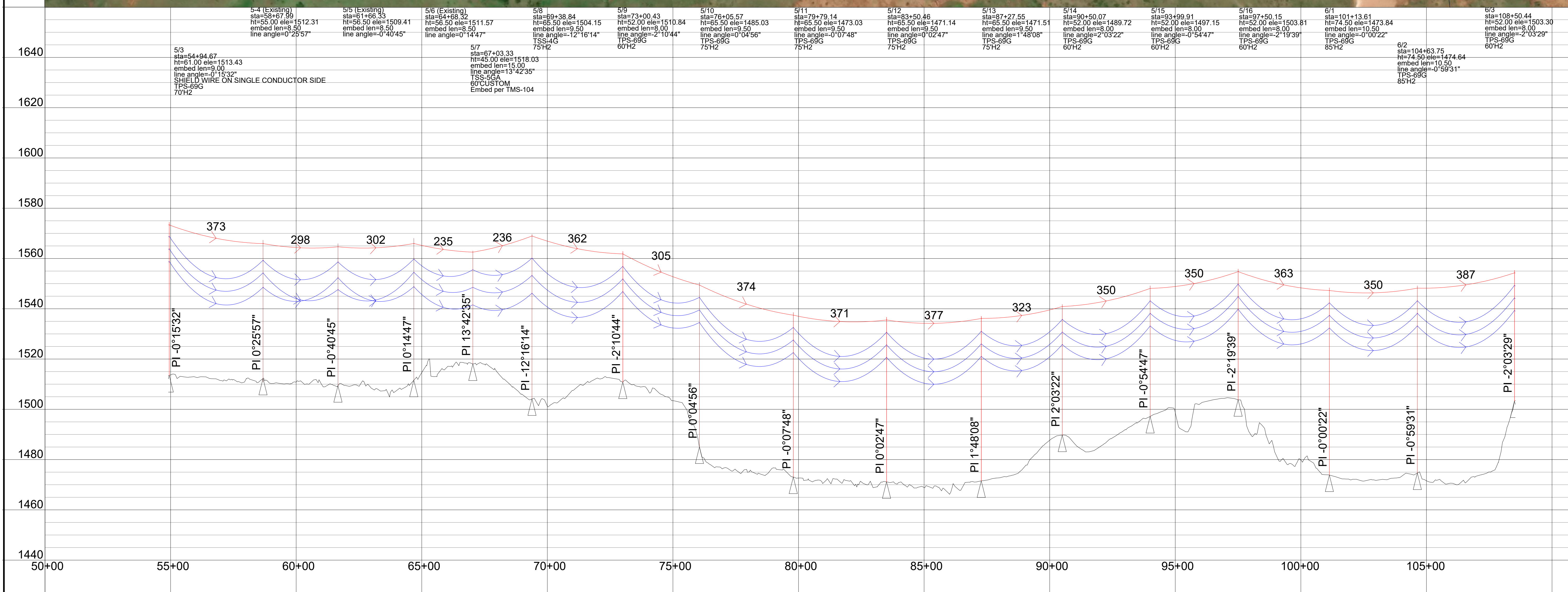
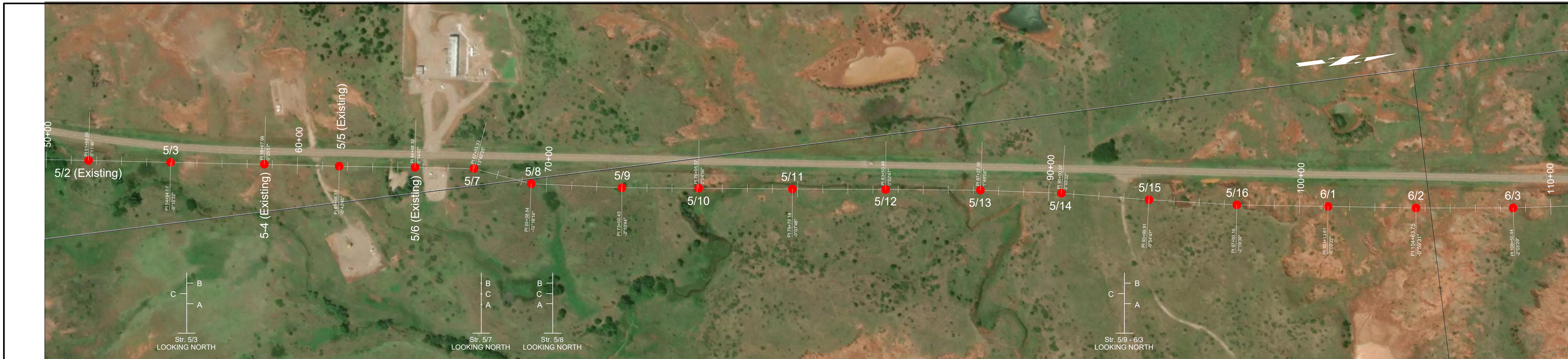
- STRUCTURE LOCATION
- CENTER LINE OF CONDUCTOR
- ANCHOR LOCATION



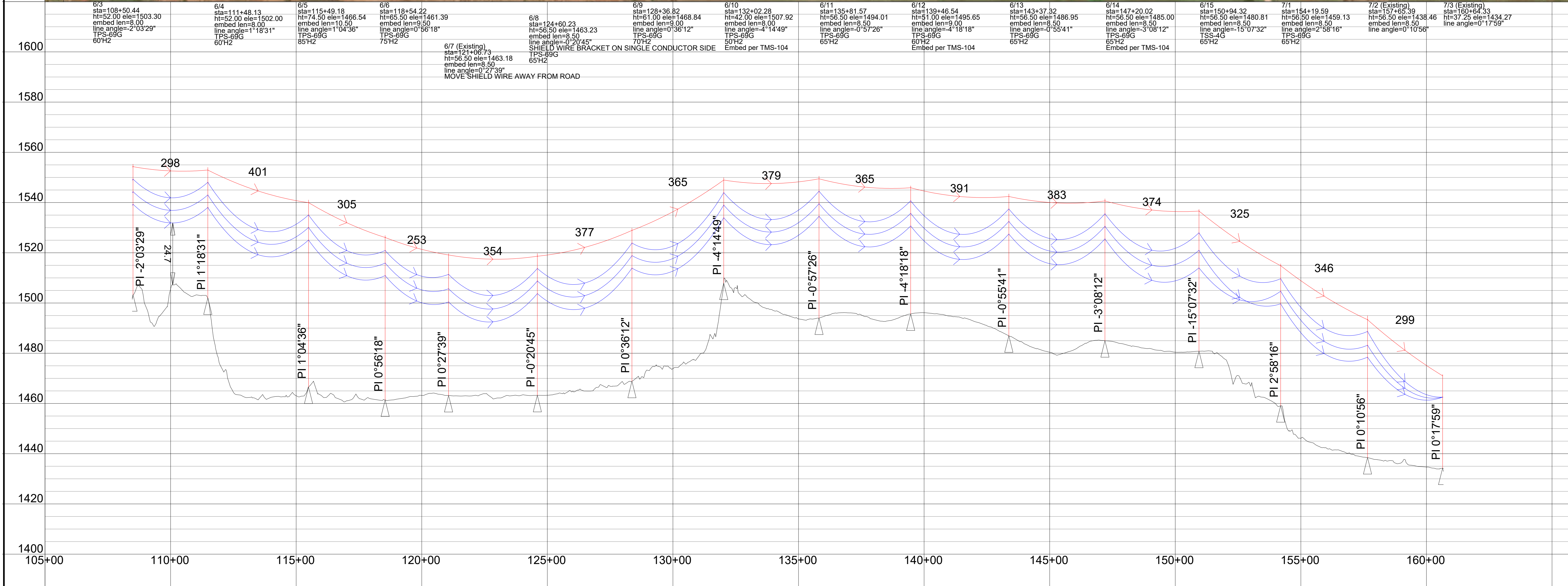
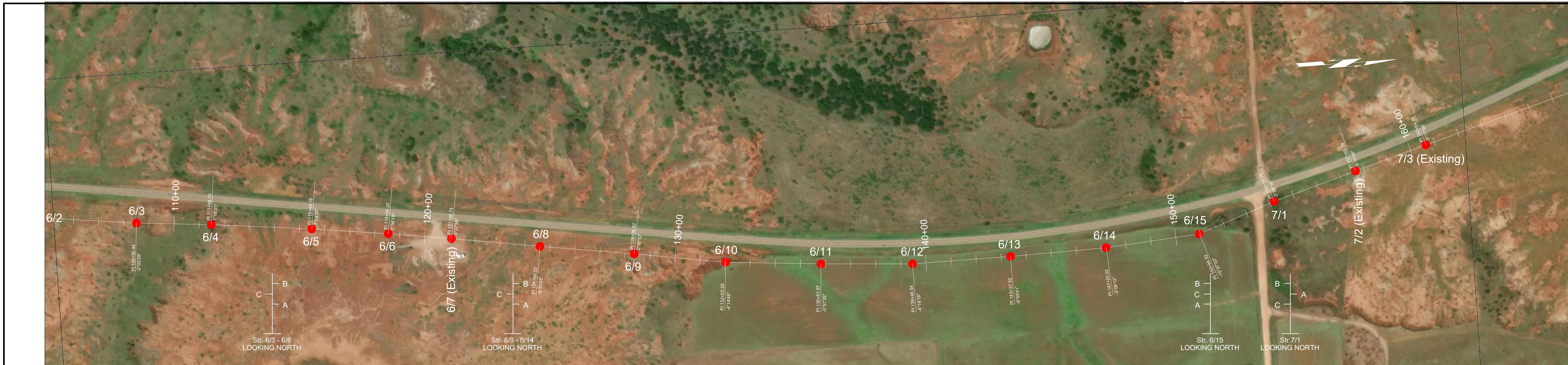
	DESIGN INFO	CLEARANCE				REVISIONS AND RECORD OF ISSUE				PROJECT: WAYNOKA RELOCATION
	Conductor: 266.8 kcmil ACSR (26/7) - Partridge	GROUND	ROAD	RAILROAD	WATER					TITLE: 69kV TRANSMISSION LINE
	Static OHGW: 5/16" EHS Steel 7-Strand	19'	20'	28'	18'					SHEET NO. GN 1.1
		LOADING								
	NESC Hvy 250B - 0.5" Ice, 4psf, 0F				A	1/8/24	IFC			
	NESC 250C - 0" Ice, 21psf, 60F					09/22/23	IFR 60%			
	NESC 250D - 1" Ice, 4psf, 15F				REV	DATE				



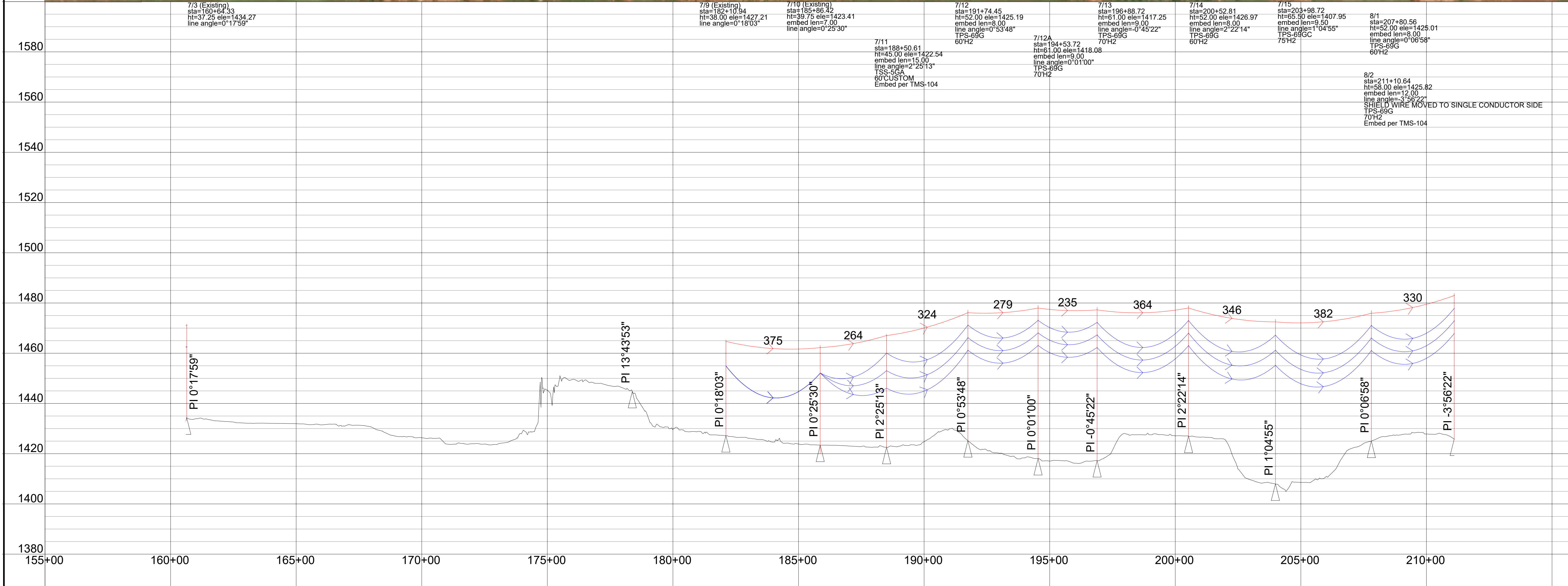
<p>4/6 (Existing) - 4-9, 0kV, 5-16 (7) ehs, Ruling Span 262 (ft), Displayed 0-Bare Initial 2235 (lbs)</p> <p>4/7 (Existing) - 4-9, 69.1kV, partridge, Ruling Span 197 (ft), Displayed 212-Bare Max Sag 471 (lbs)</p> <p>4/8 - 4-10, 0kV, 5-16 (7) ehs, Ruling Span 197 (ft), Displayed 0-Bare Initial 2231 (lbs)</p> <p>4-9 - 4-10, 69.1kV, partridge, Ruling Span 197 (ft), Displayed 212-Bare Max Sag 371 (lbs)</p> <p>4-10 - 4/18 (Existing), 0kV, 5-16 (7) ehs, Ruling Span 323 (ft), Displayed 0-Bare Initial 2231 (lbs)</p> <p>4-10 - 4/18 (Existing), 69.1kV, partridge, Ruling Span 323 (ft), Displayed 212-Bare Max Sag 559 (lbs)</p> <p>5/1 (Existing) - 5/7, 0kV, 5-16 (7) ehs, Ruling Span 317 (ft), Displayed 0-Bare Initial 2233 (lbs)</p> <p>5/1 (Existing) - 5/7, 69.1kV, partridge, Ruling Span 317 (ft), Displayed 212-Bare Max Sag 550 (lbs)</p>	<p>200.0 ft. Horiz. Scale</p> <p>20.0 ft. Vert. Scale</p>	<p>DESIGN INFO</p> <p>Conductor: 266.8 kcmil ACSR (26/7) - Partridge</p> <p>Static OHGW: 5/16" EHS Steel 7-Strand</p>	<p>CLEARANCE</p> <table border="1"> <tr> <th>GROUND</th> <th>ROAD</th> <th>RAILROAD</th> <th>WATER</th> </tr> <tr> <td>19'</td> <td>20'</td> <td>28'</td> <td>18'</td> </tr> </table> <p>LOADING</p> <p>NESC HVY 250B - 0.5" ice, 4psf, 0F</p> <p>NESC 250C - 0" ice, 21psf, 60F</p> <p>NESC 250D - 1" ice, 4psf, 15F</p>	GROUND	ROAD	RAILROAD	WATER	19'	20'	28'	18'	<p>REVISIONS AND RECORD OF ISSUE</p> <table border="1"> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP</th> </tr> <tr> <td>A</td> <td>1/8/24</td> <td>IFC</td> <td></td> </tr> <tr> <td></td> <td>9/22/23</td> <td>IFR</td> <td>60%</td> </tr> </table>	REV	DATE	BY	APP	A	1/8/24	IFC			9/22/23	IFR	60%		<p>PROJECT: WAYNOKA RELOCATION</p> <p>TITLE: 69KV TRANSMISSION LINE</p> <p>SHEET NO. PP 2.1</p>
	GROUND	ROAD	RAILROAD	WATER																						
	19'	20'	28'	18'																						
	REV	DATE	BY	APP																						
A	1/8/24	IFC																								
	9/22/23	IFR	60%																							



<p> — 5/1 (Existing) - 5/7, 0kV, 5-16 (7) ehs, Ruling Span 317 (ft), Displayed 0-Bare Initial 2233 (lbs) — 5/1 (Existing) - 5/7, 69.1kV, partridge, Ruling Span 317 (ft), Displayed 212-Bare Max Sag 550 (lbs) — 5/7 - 7/3 (Existing), 0kV, 5-16 (7) ehs, Ruling Span 353 (ft), Displayed 0-Bare Initial 2231 (lbs) — 5/7 - 7/3 (Existing), 69.1kV, partridge, Ruling Span 353 (ft), Displayed 212-Bare Max Sag 599 (lbs) </p> <p> 200.0 ft. Horiz. Scale 20.0 ft. Vert. Scale </p>	DESIGN INFO Conductor: 266.8 kcmil ACSR (26/7) - Partridge Static OHGW: 5/16" EHS Steel 7-Strand	CLEARANCE <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>GROUND</th> <th>ROAD</th> <th>RAILROAD</th> <th>WATER</th> </tr> <tr> <td>19'</td> <td>20'</td> <td>28'</td> <td>18'</td> </tr> </table>	GROUND	ROAD	RAILROAD	WATER	19'	20'	28'	18'	REVISIONS AND RECORD OF ISSUE <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td>A</td> <td>1/8/24</td> <td>IFC</td> </tr> <tr> <td></td> <td>9/22/23</td> <td>IFR 60%</td> </tr> </table>	REV	DATE	DESCRIPTION	A	1/8/24	IFC		9/22/23	IFR 60%	 	PROJECT: WAYNOKA RELOCATION TITLE: 69kV TRANSMISSION LINE SHEET NO.: PP 2.2
	GROUND	ROAD	RAILROAD	WATER																		
19'	20'	28'	18'																			
REV	DATE	DESCRIPTION																				
A	1/8/24	IFC																				
	9/22/23	IFR 60%																				



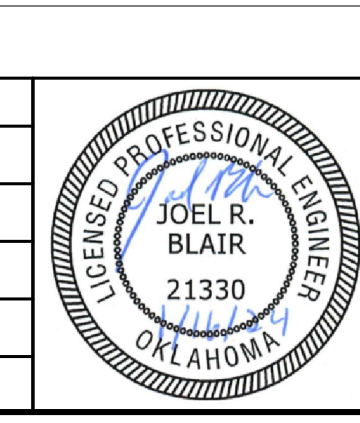
<p>— 5/7 - 7/3 (Existing), 0kV, 5-16 (7) ehs, Ruling Span 353 (ft), Displayed 0-Bare Initial 2231 (lbs)</p> <p>— 5/7 - 7/3 (Existing), 69.1kV, partridge, Ruling Span 353 (ft), Displayed 212-Bare Max Sag 599 (lbs)</p> <p>200.0 ft. Horiz. Scale</p> <p>20.0 ft. Vert. Scale</p>	<p>DESIGN INFO</p> <p>Conductor: 266.8 kcmil ACSR (26/7) - Partridge</p> <p>Static OHGW: 5/16" EHS Steel 7-Strand</p>	<p>CLEARANCE</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>GROUND</th> <th>ROAD</th> <th>RAILROAD</th> <th>WATER</th> </tr> <tr> <td>19'</td> <td>20'</td> <td>28'</td> <td>18'</td> </tr> </table> <p>LOADING</p> <p>NESC HVY 250B - 0.5" ice, 4psf, 0F</p> <p>NESC 250C - 0" ice, 21psf, 60F</p> <p>NESC 250D - 1" ice, 4psf, 15F</p>	GROUND	ROAD	RAILROAD	WATER	19'	20'	28'	18'	<p>REVISIONS AND RECORD OF ISSUE</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td>A</td> <td>1/8/24</td> <td>IFC</td> </tr> <tr> <td></td> <td>9/22/23</td> <td>IFR 60%</td> </tr> </table>	REV	DATE	DESCRIPTION	A	1/8/24	IFC		9/22/23	IFR 60%			<p>PROJECT: WAYNOKA RELOCATION</p> <p>TITLE: 69KV TRANSMISSION LINE</p> <p>SHEET NO. PP 2.3</p>
	GROUND	ROAD	RAILROAD	WATER																			
19'	20'	28'	18'																				
REV	DATE	DESCRIPTION																					
A	1/8/24	IFC																					
	9/22/23	IFR 60%																					



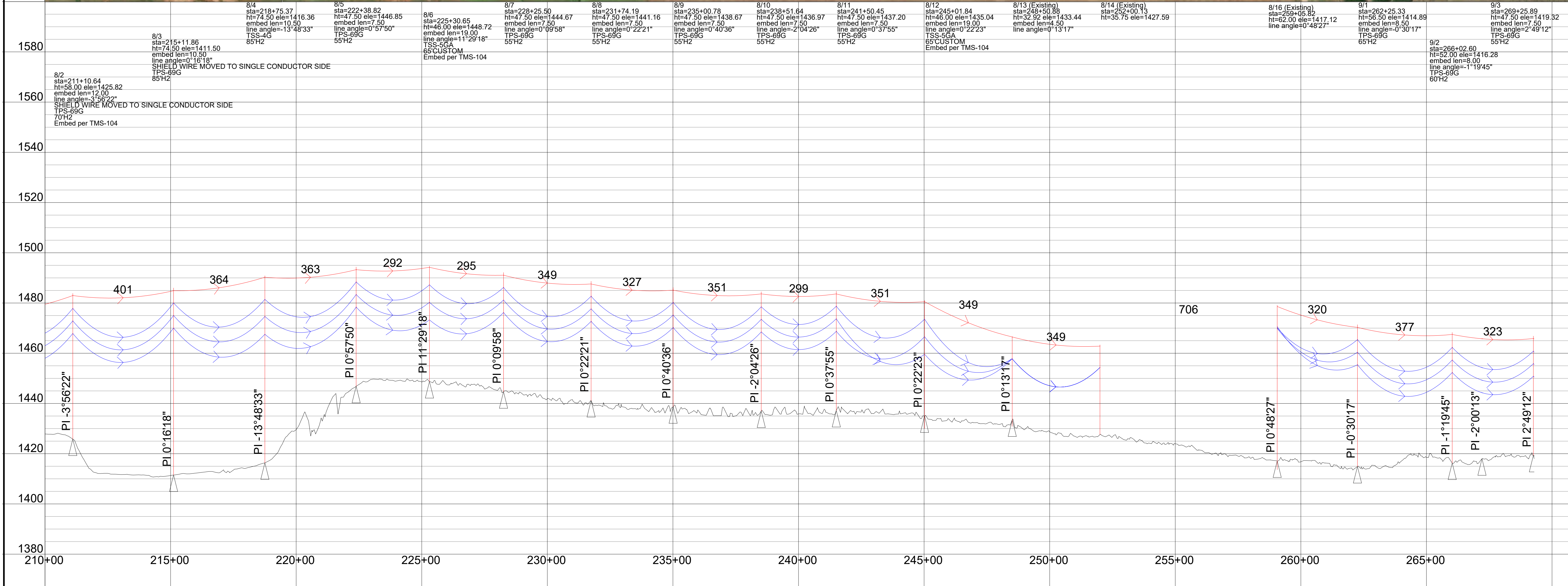
— 5/7 - 7/3 (Existing), 0kV, 5-16 (7) ehs, Ruling Span 353 (ft), Displayed 0-Bare Initial 2231 (lbs)
— 7/3 (Existing), 69.1kV, partridge, Ruling Span 353 (ft), Displayed 212-Bare Max Sag 595 (lbs)
— 7/9 (Existing) - 7/11, 0kV, 5-16 (7) ehs, Ruling Span 334 (ft), Displayed 0-Bare Initial 2237 (lbs)
— 7/9 (Existing) - 7/11, 69.1kV, partridge, Ruling Span 334 (ft), Displayed 212-Bare Max Sag 574 (lbs)
— 7/11 - 8/6, 0kV, 5-16 (7) ehs, Ruling Span 344 (ft), Displayed 0-Bare Initial 2237 (lbs)
— 7/11 - 8/6, 69.1kV, partridge, Ruling Span 344 (ft), Displayed 212-Bare Max Sag 587 (lbs)

200.0 ft. Horiz. Scale
 20.0 ft. Vert. Scale

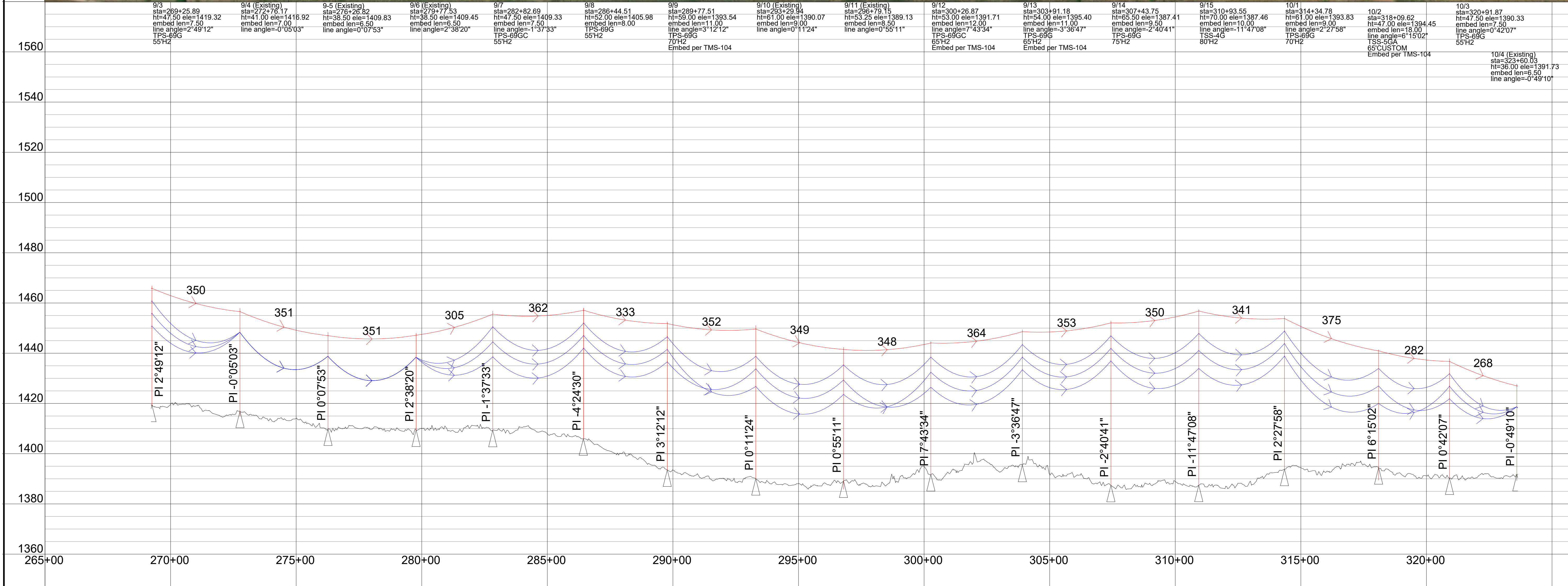
DESIGN INFO		CLEARANCE				REVISIONS AND RECORD OF ISSUE	
Conductor:	266.8 kcmil ACSR (26/7) - Partridge	GROUND	ROAD	RAILROAD	WATER		
		19'	20'	28'	18'		
Static OHGW:	5/16" EHS Steel 7-Strand	LOADING				A	1/8/24 IFC
		NESC HVY 250B - 0.5" ice, 4psf, 0F				9/22/23	IFR 60%
		NESC 250C - 0" ice, 21psf, 60F				REV	DATE
		NESC 250D - 1" ice, 4psf, 15F					



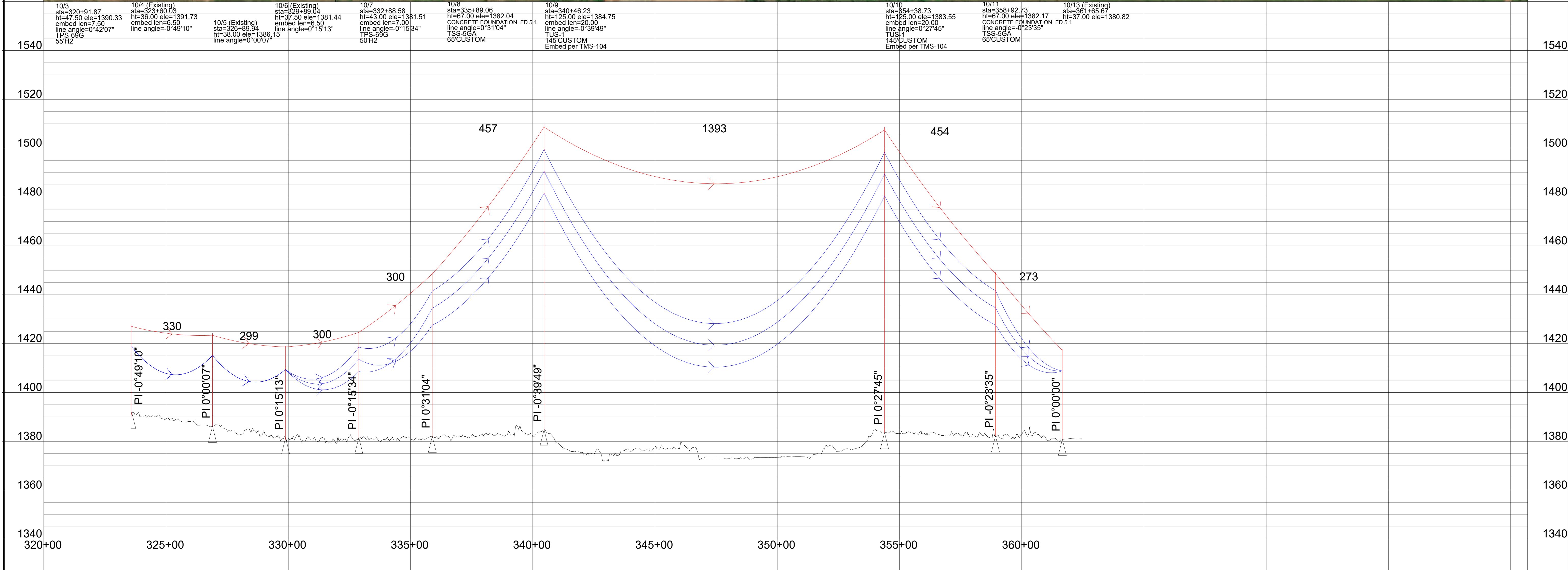
PROJECT: **WAYNOKA RELOCATION**
 TITLE: **69KV TRANSMISSION LINE**
 SHEET NO.: **PP 2.4**



<p>7/11 - 8/6, 69 kV, partridge, Ruling Span 344 (ft), Displayed 0-Bare Initial 2237 (lbs)</p> <p>7/11 - 8/6, 69 kV, partridge, Ruling Span 344 (ft), Displayed 212-Bare Max Sag 587 (lbs)</p> <p>8/6 - 8/12, 69 kV, 5-16 (7) ehs, Ruling Span 331 (ft), Displayed 0-Bare Initial 2235 (lbs)</p> <p>8/6 - 8/12, 69 kV, partridge, Ruling Span 331 (ft), Displayed 212-Bare Max Sag 570 (lbs)</p> <p>8/12 - 8/14 (Existing), 69 kV, 5-16 (7) ehs, Ruling Span 349 (ft), Displayed 0-Bare Initial 2231 (lbs)</p> <p>8/12 - 8/14 (Existing), 69 kV, partridge, Ruling Span 349 (ft), Displayed 212-Bare Max Sag 594 (lbs)</p> <p>8/16 (Existing) - 10/2, 69 kV, 5-16 (7) ehs, Ruling Span 349 (ft), Displayed 0-Bare Initial 2237 (lbs)</p> <p>8/16 (Existing) - 10/2, 69 kV, partridge, Ruling Span 349 (ft), Displayed 212-Bare Max Sag 593 (lbs)</p>	<p>200.0 ft. Horiz. Scale</p> <p>20.0 ft. Vert. Scale</p>	<p>DESIGN INFO</p> <p>Conductor: 266.8 kcmil ACSR (26/7) - Partridge</p> <p>Static OHGW: 5/16" EHS Steel 7-Strand</p>	<table border="1"> <tr> <th colspan="2">CLEARANCE</th> </tr> <tr> <td>GROUND</td> <td>ROAD RAILROAD WATER</td> </tr> <tr> <td>19'</td> <td>20' 28' 18'</td> </tr> <tr> <th colspan="2">LOADING</th> </tr> <tr> <td>A</td> <td>1/8/24 IFC</td> </tr> <tr> <td>9/22/23</td> <td>IFR 60%</td> </tr> <tr> <th>REV</th> <th>DATE</th> </tr> <tr> <td></td> <td></td> </tr> </table>	CLEARANCE		GROUND	ROAD RAILROAD WATER	19'	20' 28' 18'	LOADING		A	1/8/24 IFC	9/22/23	IFR 60%	REV	DATE			<p>REVISIONS AND RECORD OF ISSUE</p>		<p>PROJECT: WAYNOKA RELOCATION</p> <p>TITLE: 69KV TRANSMISSION LINE</p> <p>SHEET NO. PP 2.5</p>
	CLEARANCE																					
	GROUND	ROAD RAILROAD WATER																				
	19'	20' 28' 18'																				
LOADING																						
A	1/8/24 IFC																					
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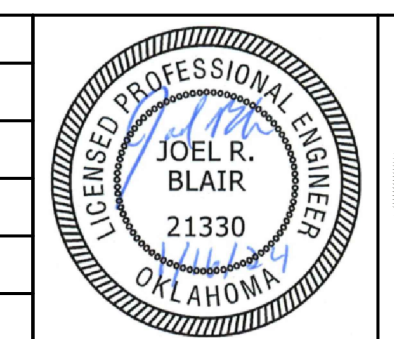
<p> — 8/16 (Existing) - 10/2 0kV, 5-16 (7) ehs, Ruling Span 349 (ft), Displayed 0-Bare Initial 2237 (lbs) — 9/16 (Existing) - 10/2 69.1kV, partridge, Ruling Span 349 (ft), Displayed 212-Bare Max Sag 593 (lbs) — 10/2 - 10/5 (Existing), 0kV, 5-16 (7) ehs, Ruling Span 297 (ft), Displayed 0-Bare Initial 2235 (lbs) — 10/2 - 10/5 (Existing), 69.1kV, partridge, Ruling Span 297 (ft), Displayed 212-Bare Max Sag 522 (lbs) </p>	<p> 200.0 ft. Horiz. Scale 20.0 ft. Vert. Scale </p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">DESIGN INFO</th> </tr> <tr> <td>Conductor:</td> <td>266.8 kcmil ACSR (26/7) - Partridge</td> </tr> <tr> <td>Static OHGW:</td> <td>5/16" EHS Steel 7-Strand</td> </tr> </table>	DESIGN INFO		Conductor:	266.8 kcmil ACSR (26/7) - Partridge	Static OHGW:	5/16" EHS Steel 7-Strand	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4">CLEARANCE</th> </tr> <tr> <td>GROUND</td> <td>ROAD</td> <td>RAILROAD</td> <td>WATER</td> </tr> <tr> <td>19'</td> <td>20'</td> <td>28'</td> <td>18'</td> </tr> <tr> <th colspan="4">LOADING</th> </tr> <tr> <td colspan="2">NESC HVY 250B - 0.5" ice, 4psf, 0F</td> <td colspan="2">A</td> </tr> <tr> <td colspan="2">NESC 250C - 0" ice, 21psf, 60F</td> <td colspan="2">9/22/23</td> </tr> <tr> <td colspan="2">NESC 250D - 1" ice, 4psf, 15F</td> <td colspan="2">REV DATE</td> </tr> </table>	CLEARANCE				GROUND	ROAD	RAILROAD	WATER	19'	20'	28'	18'	LOADING				NESC HVY 250B - 0.5" ice, 4psf, 0F		A		NESC 250C - 0" ice, 21psf, 60F		9/22/23		NESC 250D - 1" ice, 4psf, 15F		REV DATE		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">REVISIONS AND RECORD OF ISSUE</th> </tr> <tr> <td>1/8/24</td> <td>IFC</td> </tr> <tr> <td>9/22/23</td> <td>IFR 60%</td> </tr> </table>	REVISIONS AND RECORD OF ISSUE		1/8/24	IFC	9/22/23	IFR 60%		<p> PROJECT: WAYNOKA RELOCATION TITLE: 69kV TRANSMISSION LINE SHEET NO.: PP 2.6 </p>
DESIGN INFO																																														
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Static OHGW:	5/16" EHS Steel 7-Strand																																													
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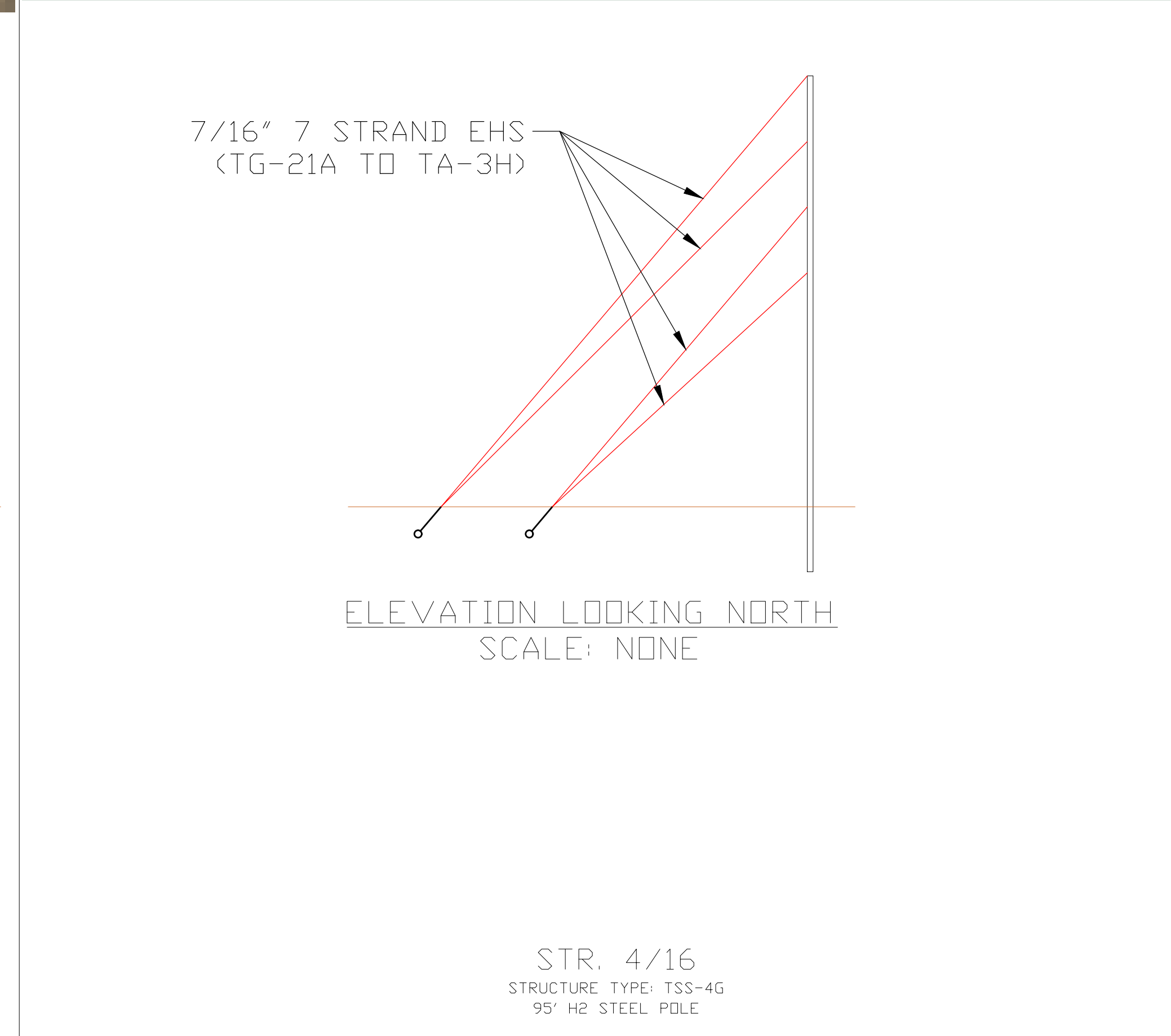
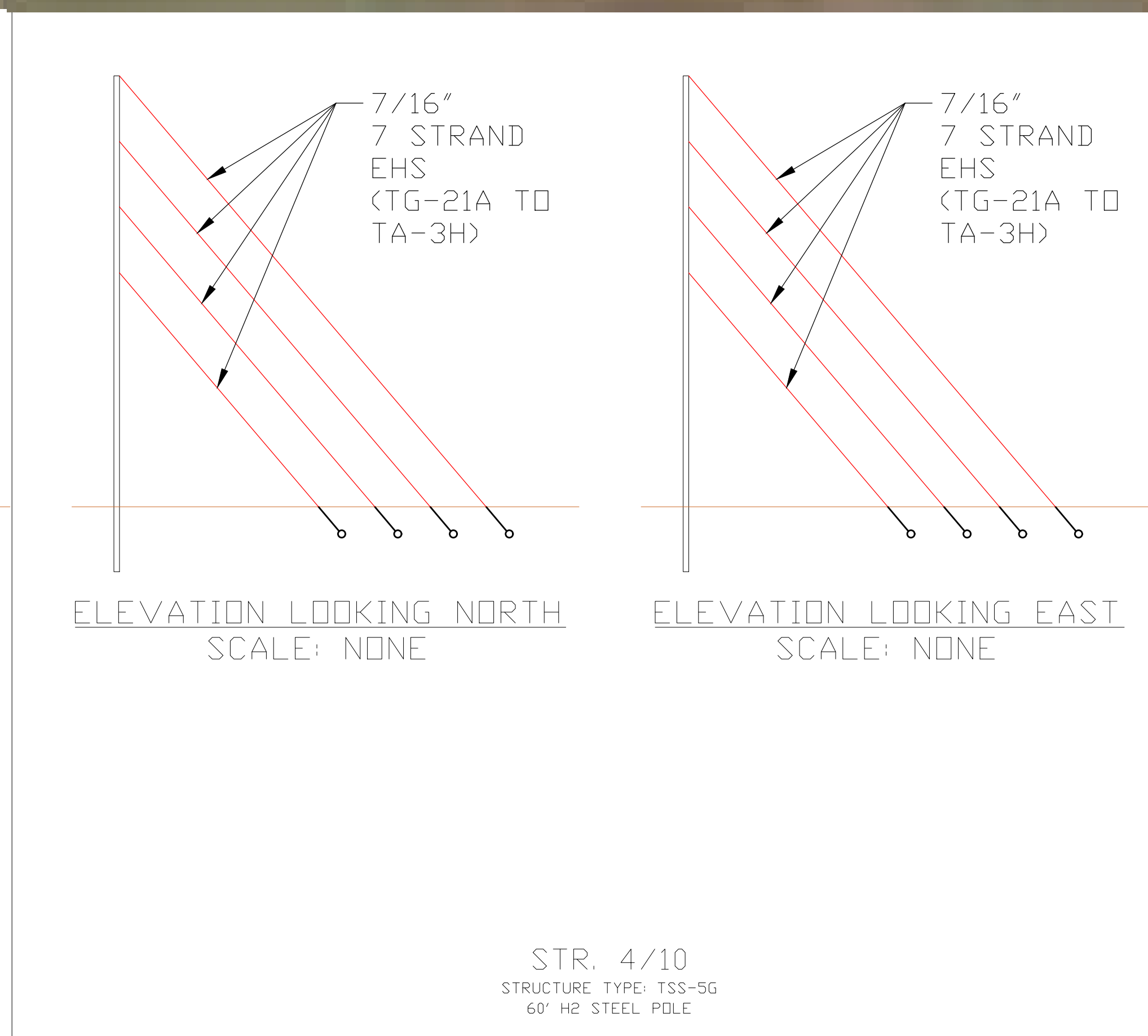
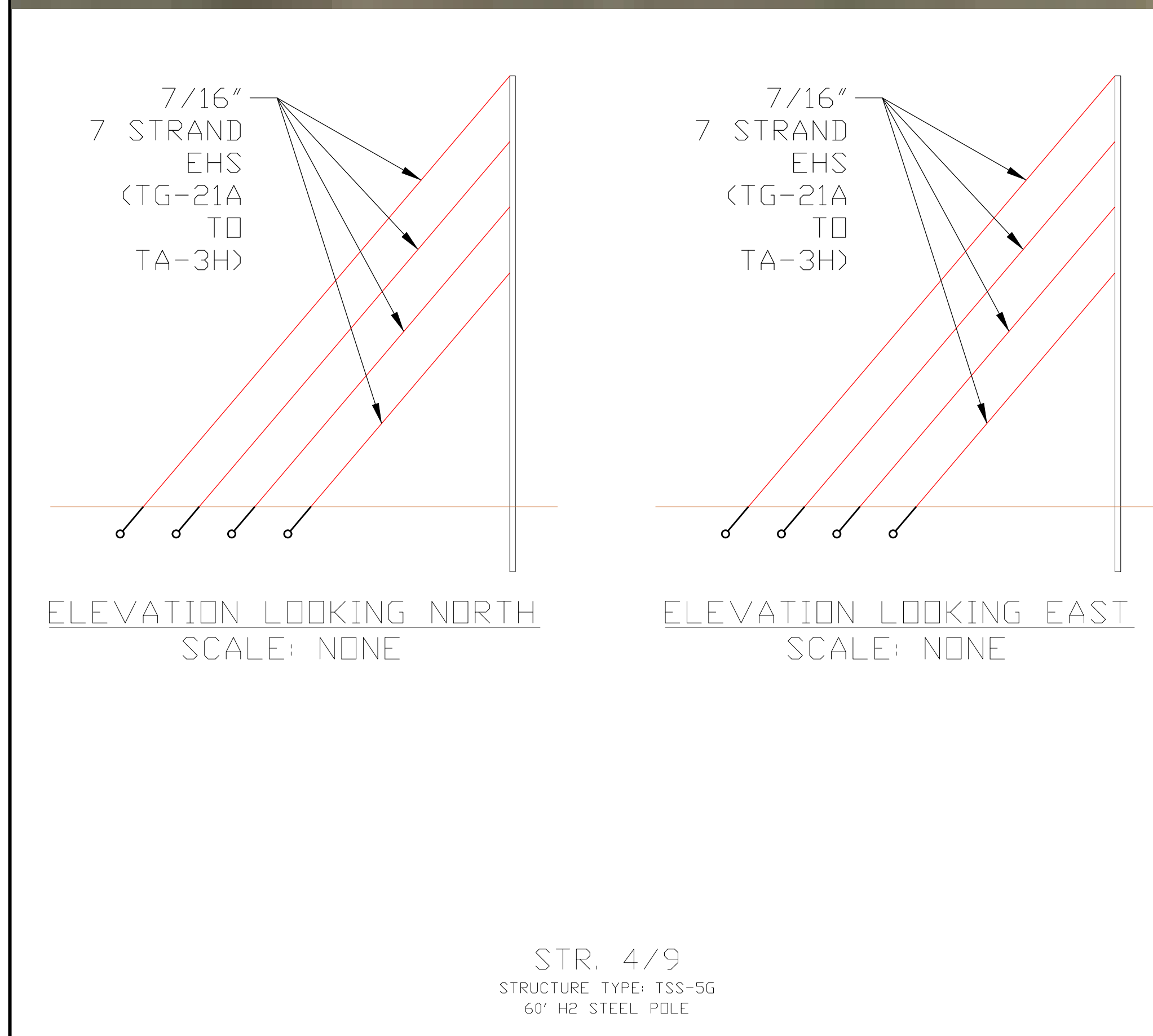
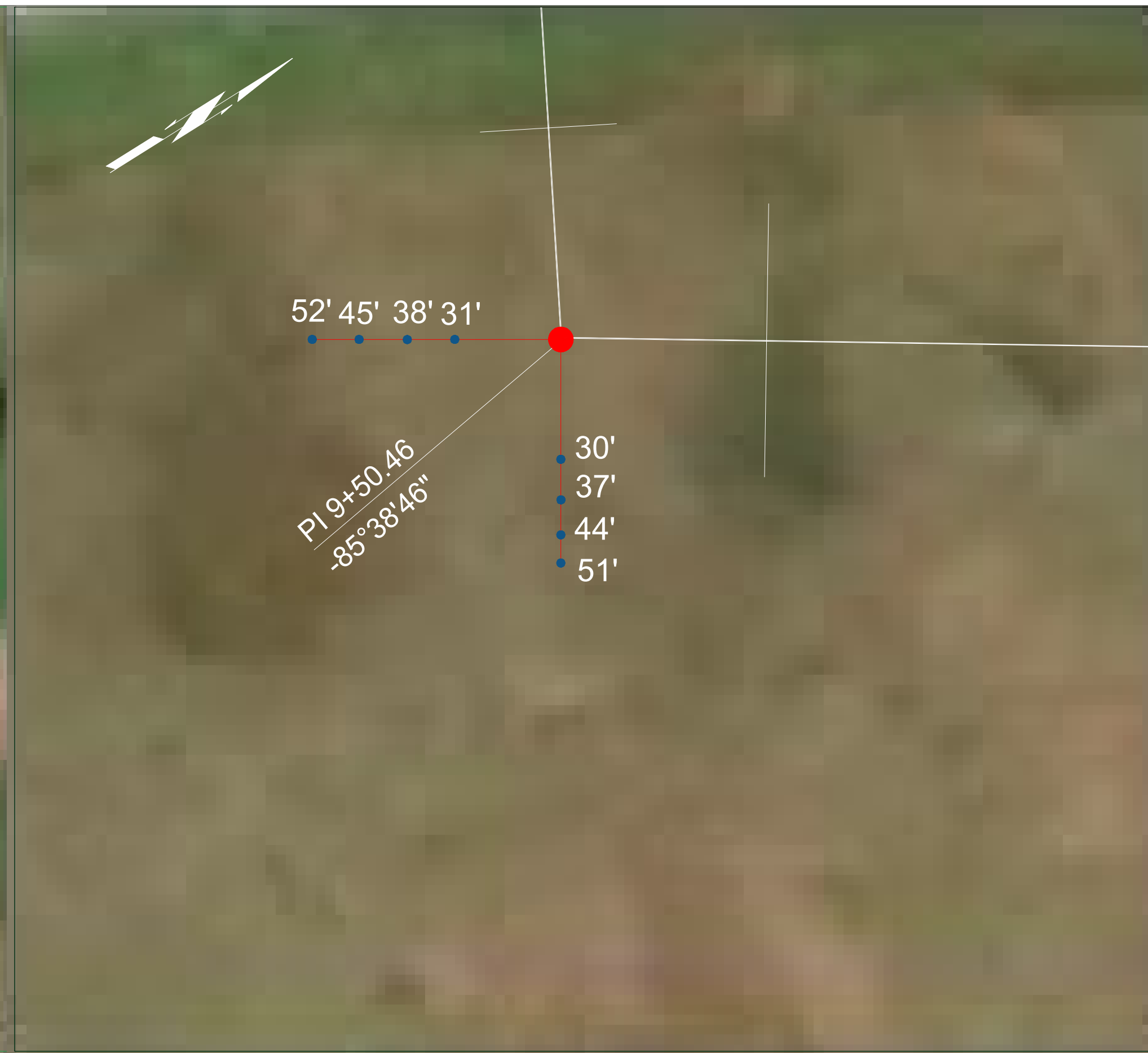
——— 10/2 - 10/5 (Existing), 0kV, 5-16 (7) ehs, Ruling Span 297 (ft), Displayed 0-Bare Initial 2235 (lbs)
——— 10/2 - 10/5 (Existing), 69.1kV, partridge, Ruling Span 297 (ft), Displayed 212-Bare Max Sag 522 (lbs)
——— 10/5 (Existing) - 10/8, 0kV, 5-16 (7) ehs, Ruling Span 299 (ft), Displayed 0-Bare Initial 2235 (lbs)
——— 10/5 (Existing) - 10/8, 69.1kV, partridge, Ruling Span 299 (ft), Displayed 212-Bare Max Sag 526 (lbs)
——— 10/8 - 10/11, 0kV, 5-16 (7) ehs, Ruling Span 1118 (ft), Displayed 0-Bare Initial 2197 (lbs)
——— 10/8 - 10/11, 69.1kV, partridge, Ruling Span 1118 (ft), Displayed 212-Bare Max Sag 1263 (lbs)
——— 10/11 - 10/13 (Existing), 0kV, 5-16 (7) ehs, Ruling Span 271 (ft), Displayed 0-Bare Initial 2238 (lbs)
——— 10/11 - 10/13 (Existing), 69.1kV, partridge, Ruling Span 271 (ft), Displayed 212-Bare Max Sag 486 (lbs)

200.0 ft. Horiz. Scale
 20.0 ft. Vert. Scale

DESIGN INFO	CLEARANCE				REVISIONS AND RECORD OF ISSUE	
	GROUND	ROAD	RAILROAD	WATER	REV	DATE
Conductor: 266.8 kcmil ACSR (26/7) - Partridge	19'	20'	28'	18'	A	1/8/24 IFC
Static OHGW: 5/16" EHS Steel 7-Strand	LOADING				9/22/23	IFR 60%
	NESG HVY 250B - 0.5" ice, 4psf, 0F					
	NESG 250C - 0" ice, 21psf, 60F					
	NESG 250D - 1" ice, 4psf, 15F					



PROJECT:	WAYNOKA RELOCATION
TITLE:	69KV TRANSMISSION LINE
SHEET NO.	PP 2.7

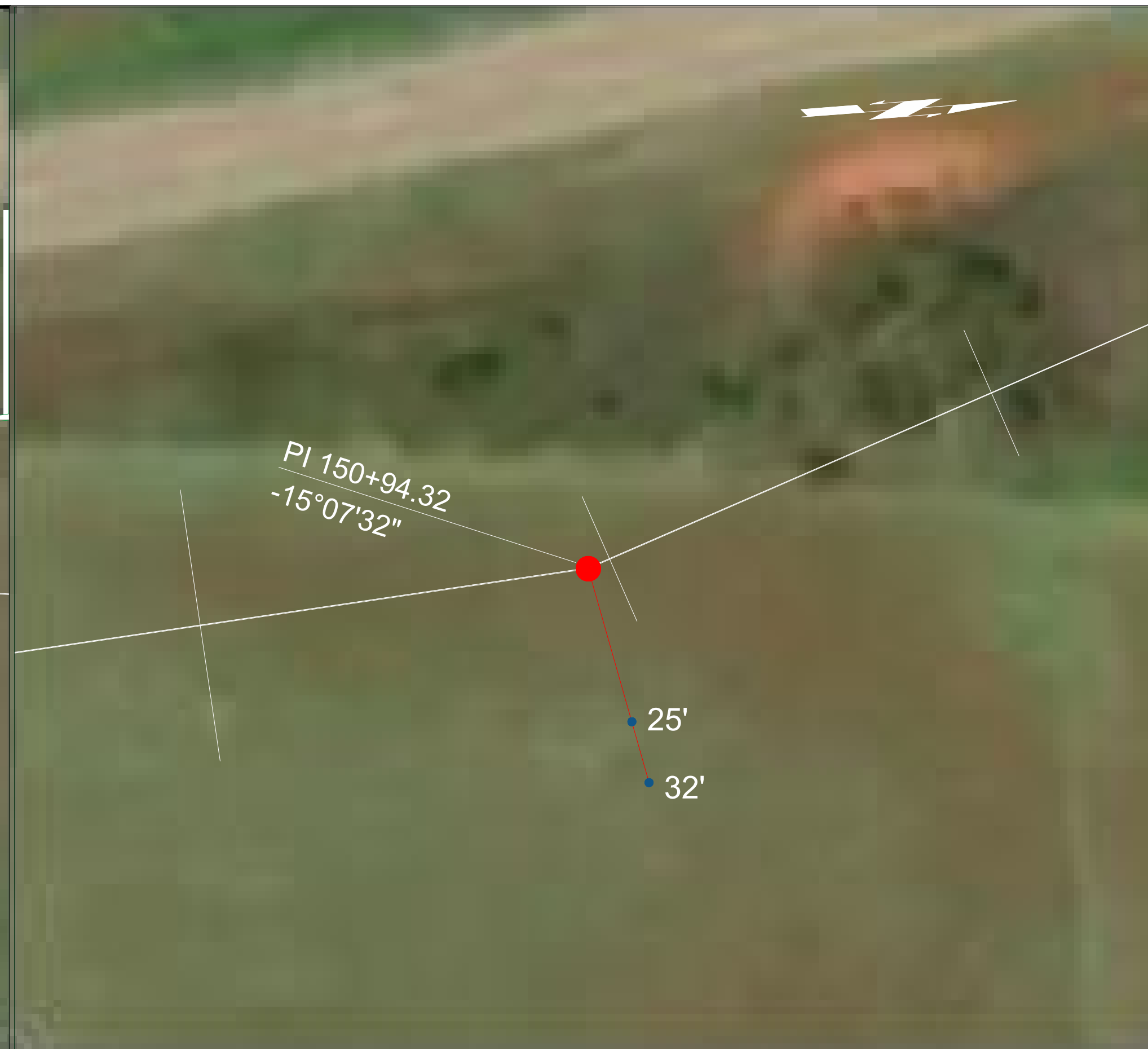


<p>DESIGN INFO</p> <p>Conductor: 266.8 kcmil ACSR (26/7) - Partridge</p> <p>Static OHGW: 5/16" EHS Steel 7-Strand</p>	<p>CLEARANCE</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>GROUND</th> <th>ROAD</th> <th>RAILROAD</th> <th>WATER</th> </tr> <tr> <td>19'</td> <td>20'</td> <td>28'</td> <td>18'</td> </tr> </table> <p>LOADING</p> <p>NESC HVY 250B - 0.5" ice, 4psf, 0F</p> <p>NESC 250C - 0" ice, 21psf, 60F</p> <p>NESC 250D - 1" ice, 4psf, 15F</p>	GROUND	ROAD	RAILROAD	WATER	19'	20'	28'	18'	<p>REVISIONS AND RECORD OF ISSUE</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td>A</td> <td>1/8/24</td> <td>IFC</td> </tr> <tr> <td></td> <td>9/22/23</td> <td>IFR 60%</td> </tr> </table>	REV	DATE	DESCRIPTION	A	1/8/24	IFC		9/22/23	IFR 60%			<p>PROJECT: WAYNOKA RELOCATION</p> <p>TITLE: 69kV TRANSMISSION LINE</p> <p>SHEET NO.: GD 3.1</p>
GROUND	ROAD	RAILROAD	WATER																			
19'	20'	28'	18'																			
REV	DATE	DESCRIPTION																				
A	1/8/24	IFC																				
	9/22/23	IFR 60%																				



PI 69+38.84
-12°16'14"

30'
37'



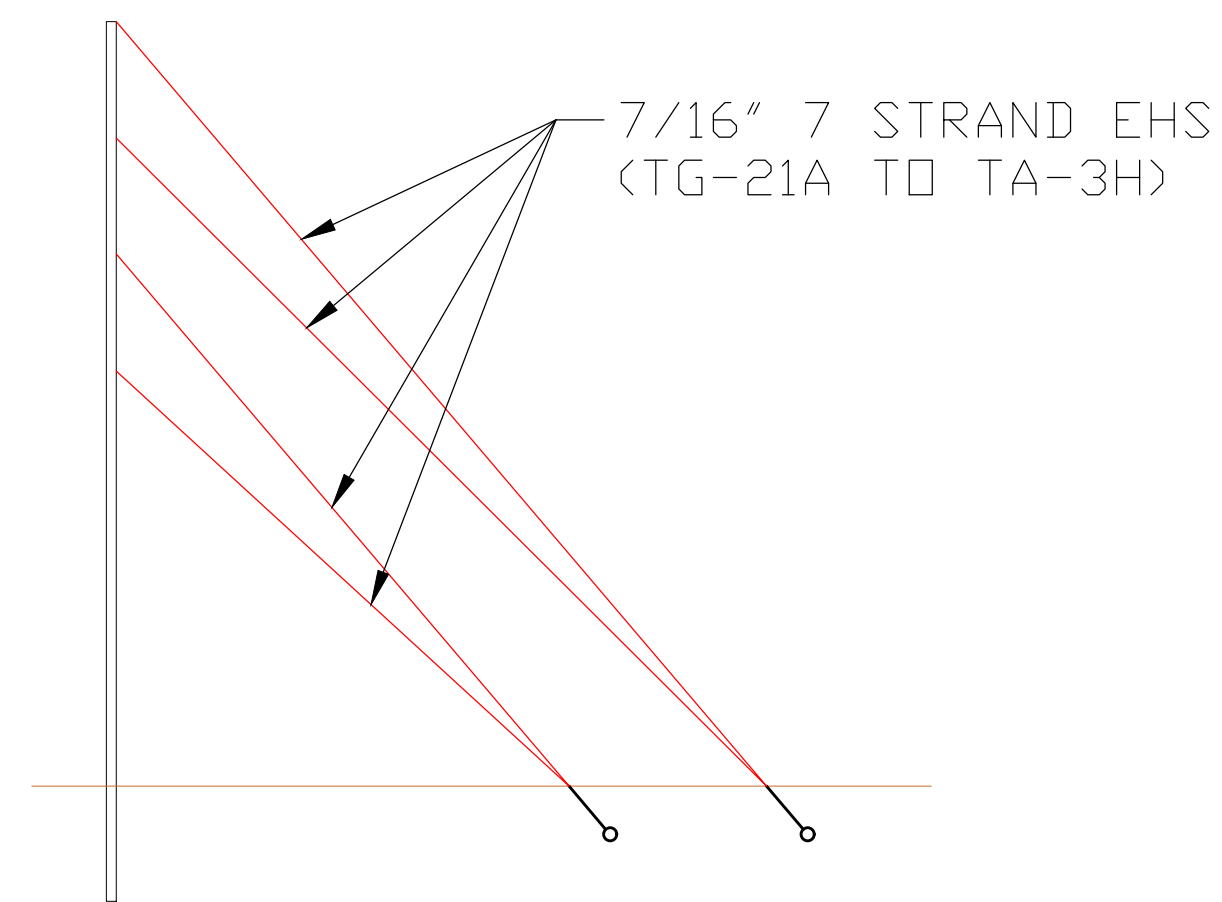
PI 150+94.32
-15°07'32"

25'
32'



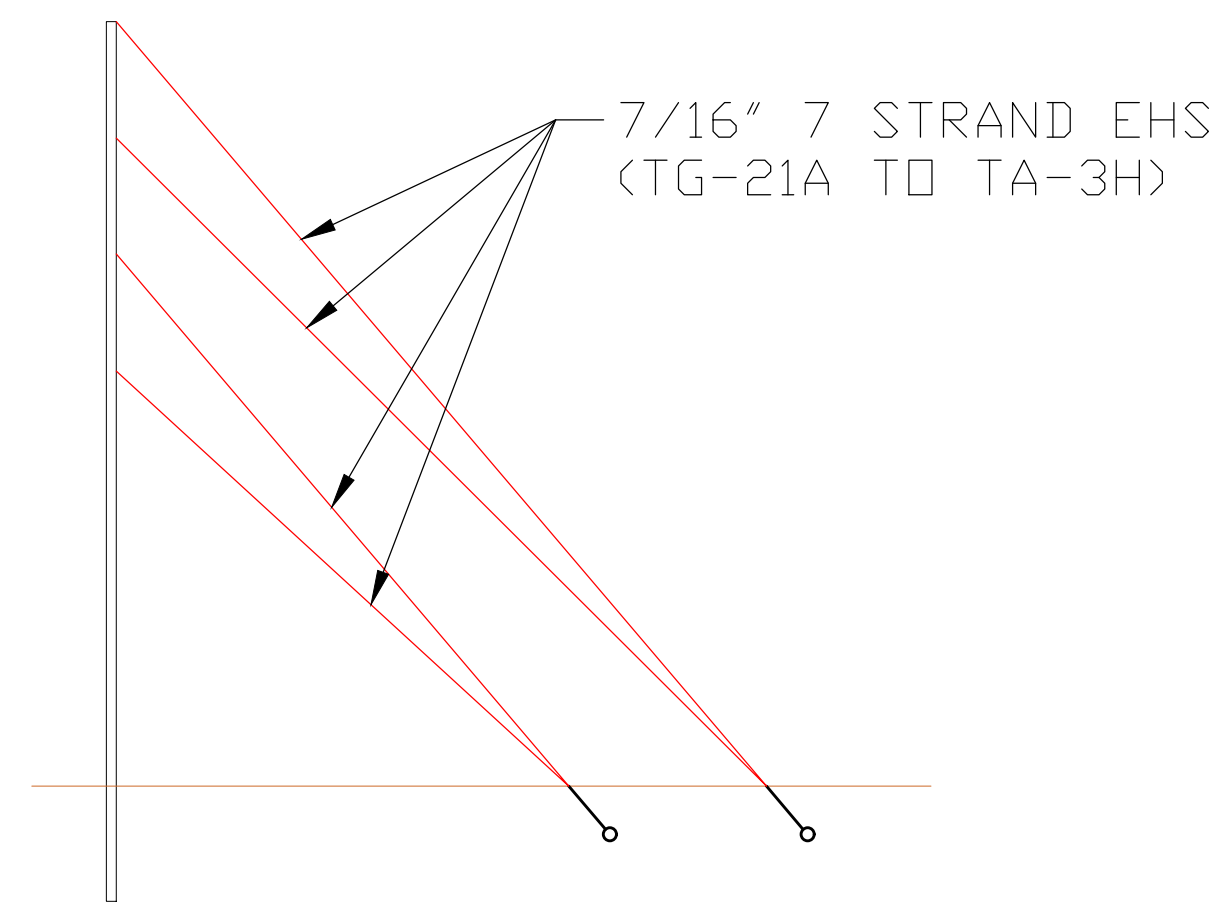
PI 218+75.37
-13°48'33"

36'
43'



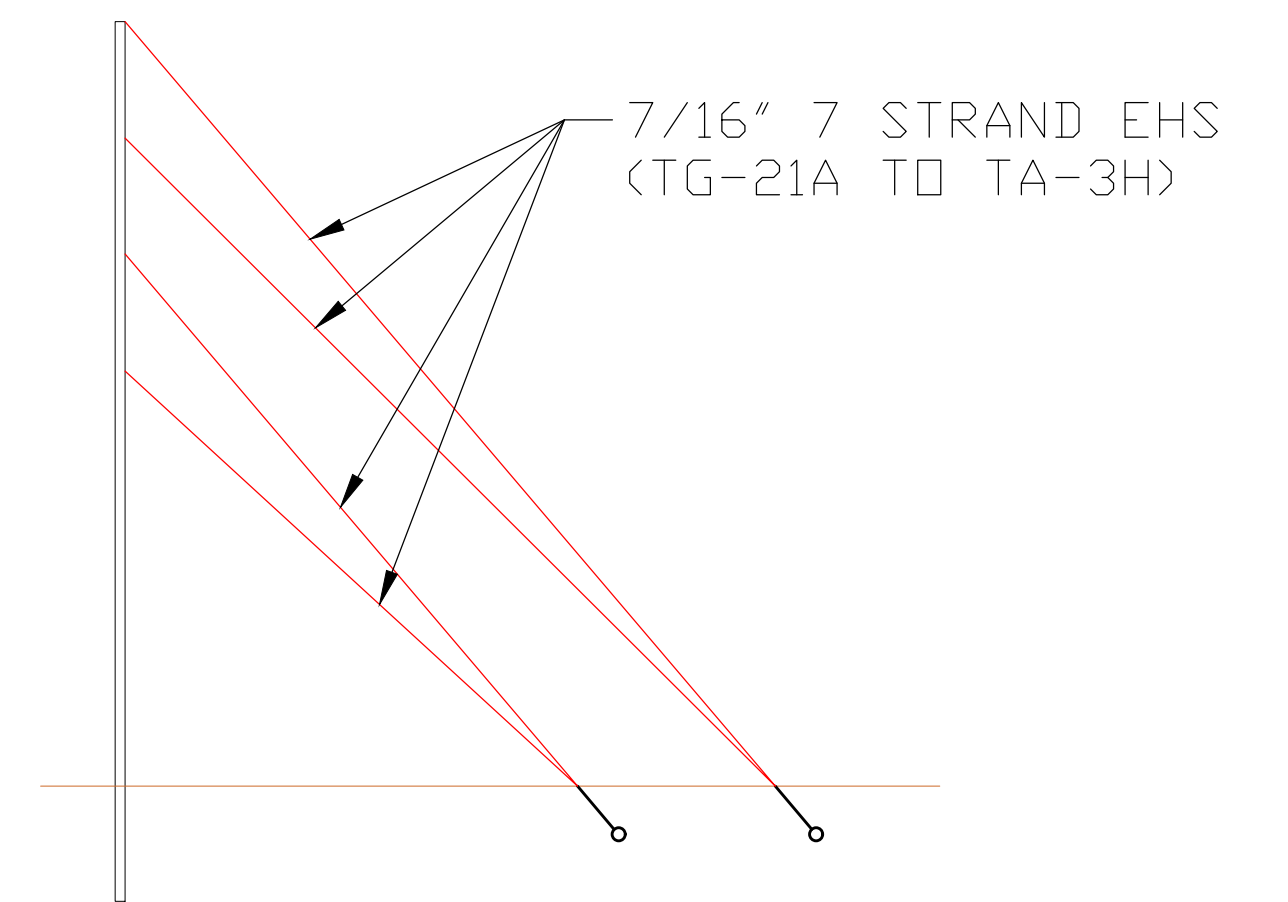
ELEVATION LOOKING NORTH
SCALE: NONE

STR. 5/8
STRUCTURE TYPE: TSS-4G
75' H2 STEEL POLE



ELEVATION LOOKING NORTH
SCALE: NONE

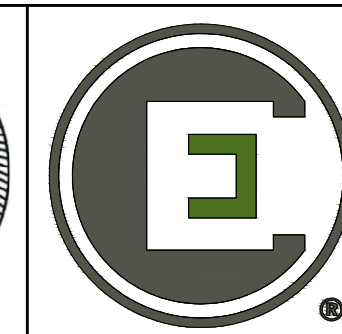
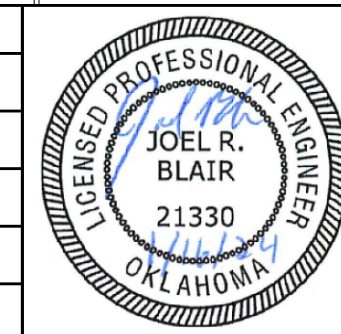
STR. 6/15
STRUCTURE TYPE: TSS-4G
65' H2 STEEL POLE



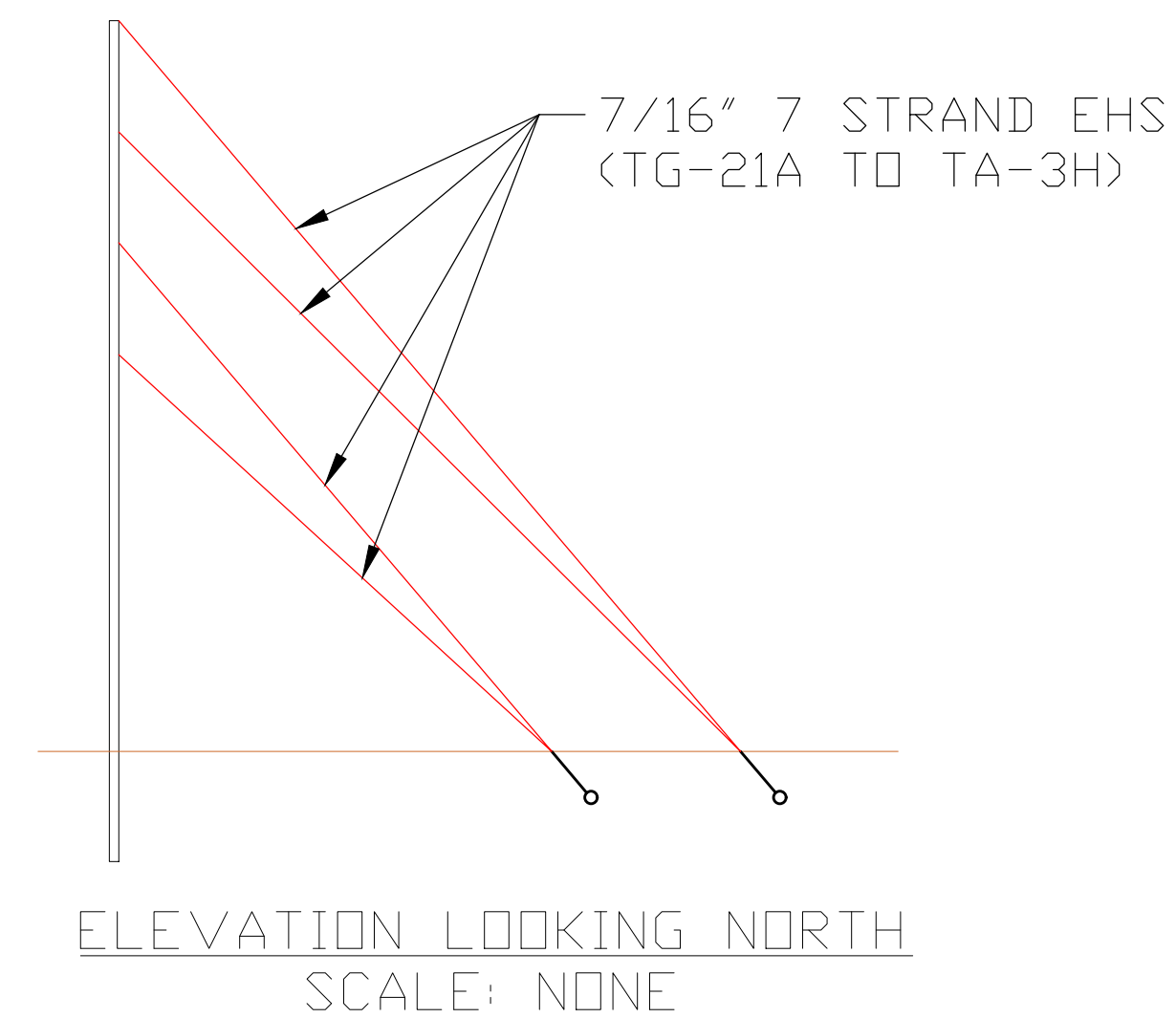
ELEVATION LOOKING NORTH
SCALE: NONE

STR. 8/4
STRUCTURE TYPE: TSS-4G
85' H2 STEEL POLE

DESIGN INFO	CLEARANCE				REVISIONS AND RECORD OF ISSUE	
	GROUND	ROAD	RAILROAD	WATER	REV	DATE
Conductor: 266.8 kcmil ACSR (26/7) - Partridge	19'	20'	28'	18'		
Static OHGW: 5/16" EHS Steel 7-Strand	LOADING				A	1/8/24 IFC
	NESC HVY 250B - 0.5" ice, 4psf, 0F					9/22/23 IFR 60%
	NESC 250C - 0" ice, 21psf, 60F					
	NESC 250D - 1" ice, 4psf, 15F					

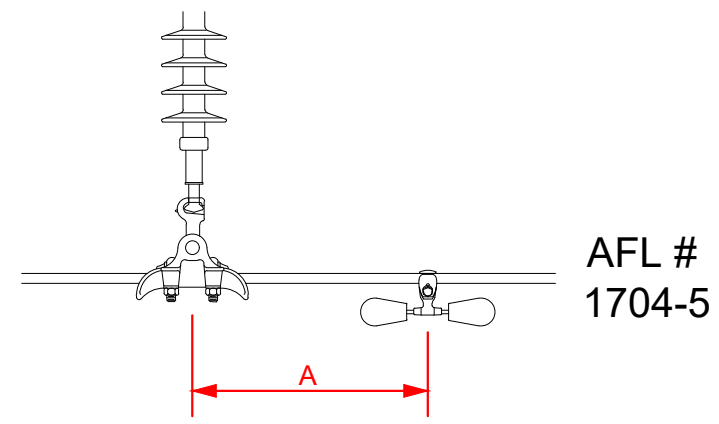


PROJECT:	WAYNOKA RELOCATION
TITLE:	69kV TRANSMISSION LINE
SHEET NO.	GD 3.2



STR. 9/15
STRUCTURE TYPE: TSS-4G
80' H2 STEEL PDLE

**266.8 (26/7) Partridge ACSR DAMPER
TM-25**



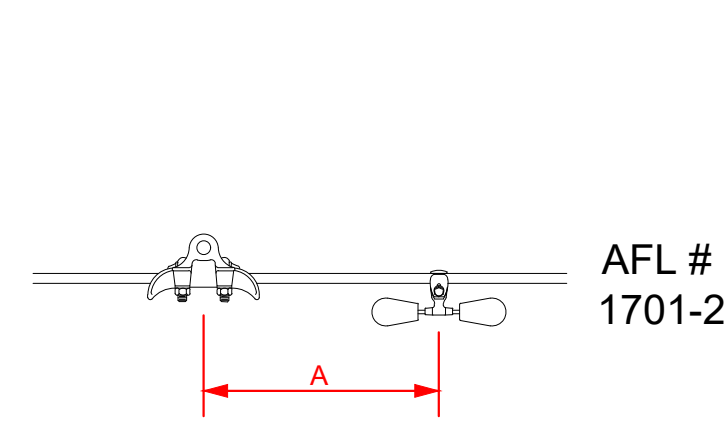
STR 7/11 to 8/6	
SPANS	A
0 - 400	N/A
400 - 1180	16"

STR 10/8 to 10/11	
SPANS	A
0 - 415	N/A
415 - 1210	19"
*1210 - 2420	19"

Dampers are required on one end of each span

* Dampers are required on both sides of each span

**5/16" Steel EHS DAMPER
TM-25 OHGW**

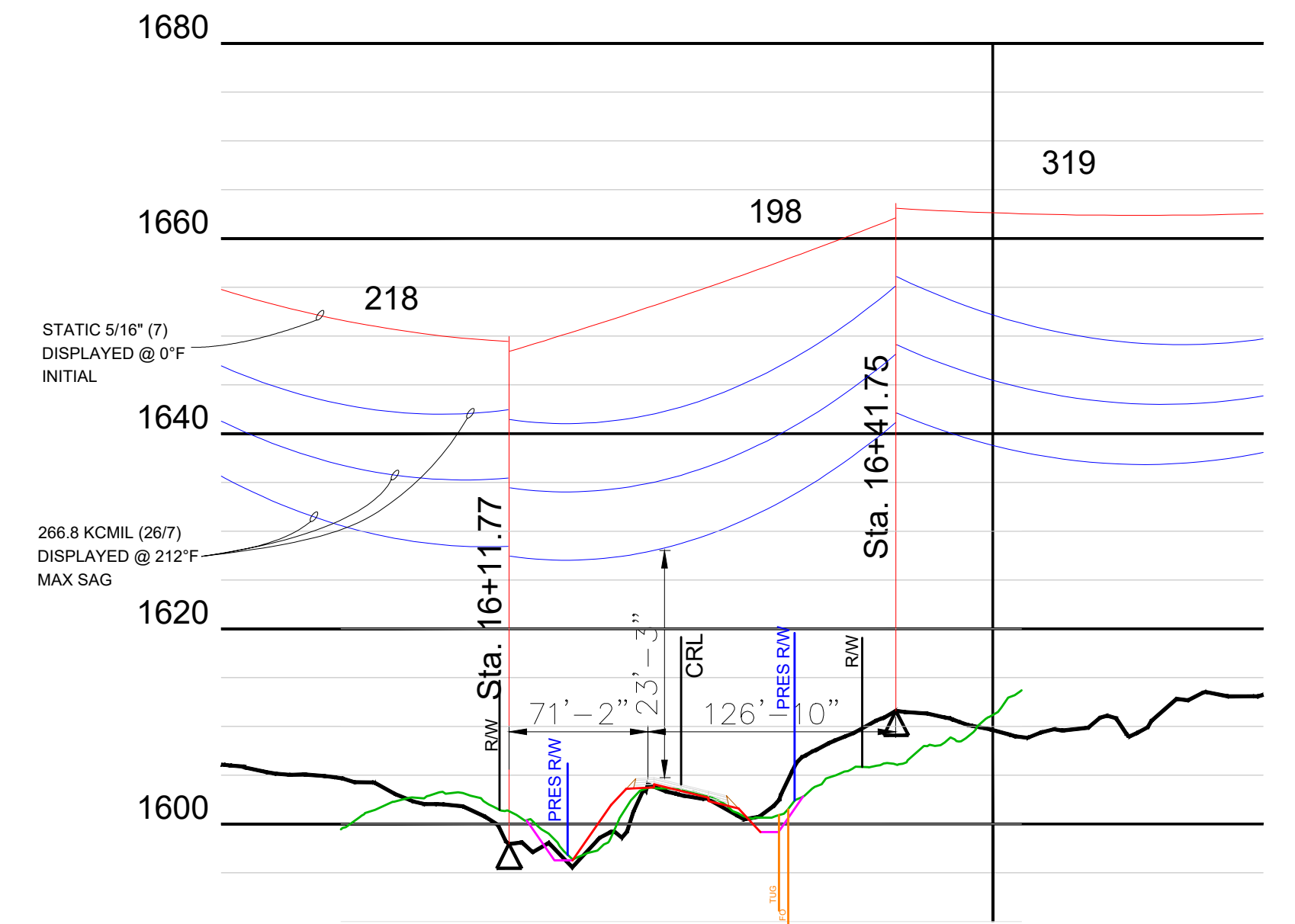
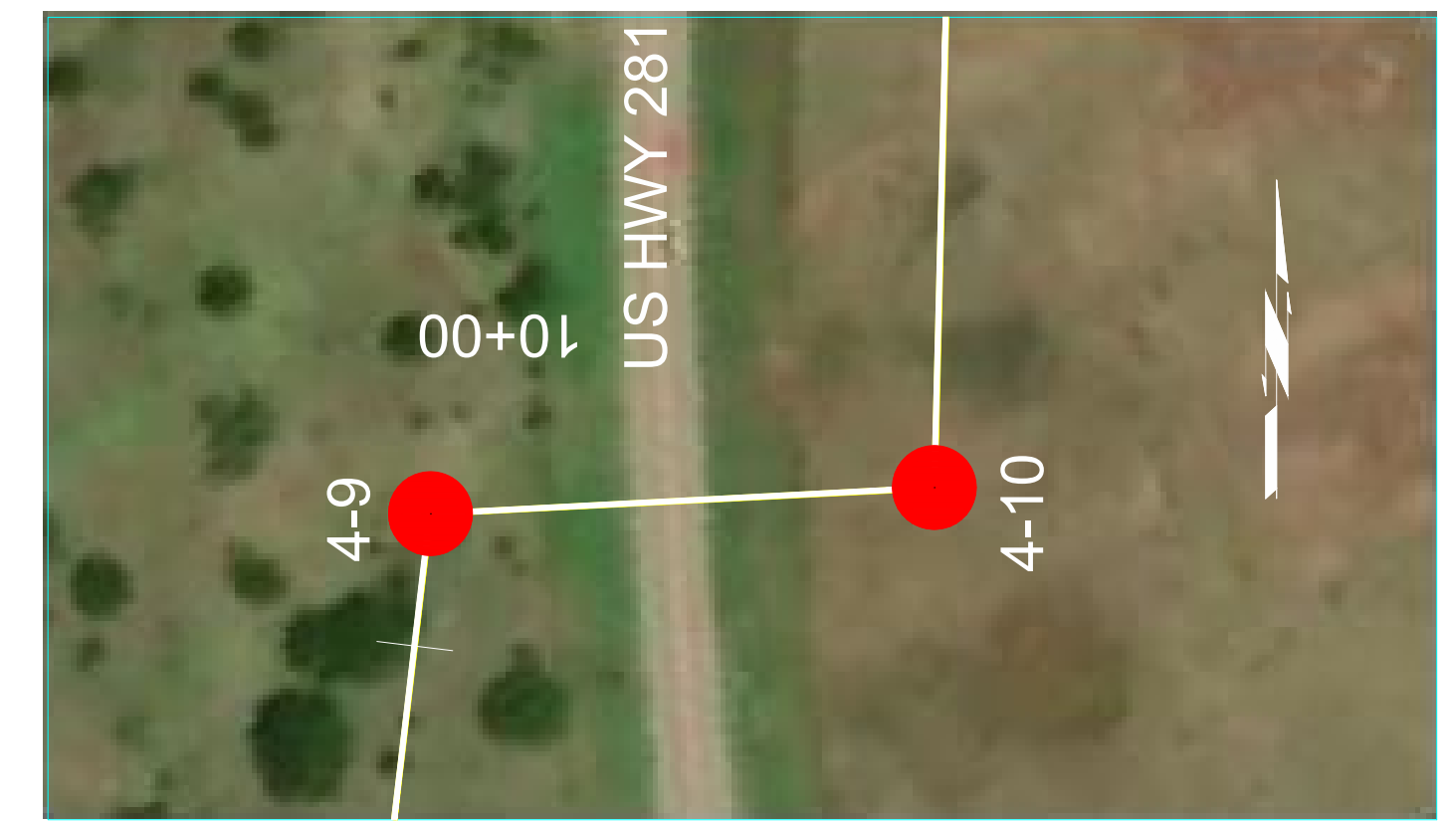


STR 7/11 to 8/6	
SPANS	A
0 - 330	N/A
330 - 795	13"

STR 8/6 to 8/12	
SPANS	A
0 - 330	N/A
330 - 800	13"

Dampers are required on one end of each span

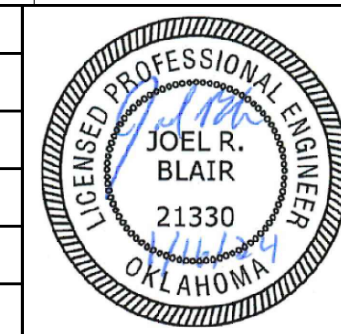
* Dampers are required on both sides of each span



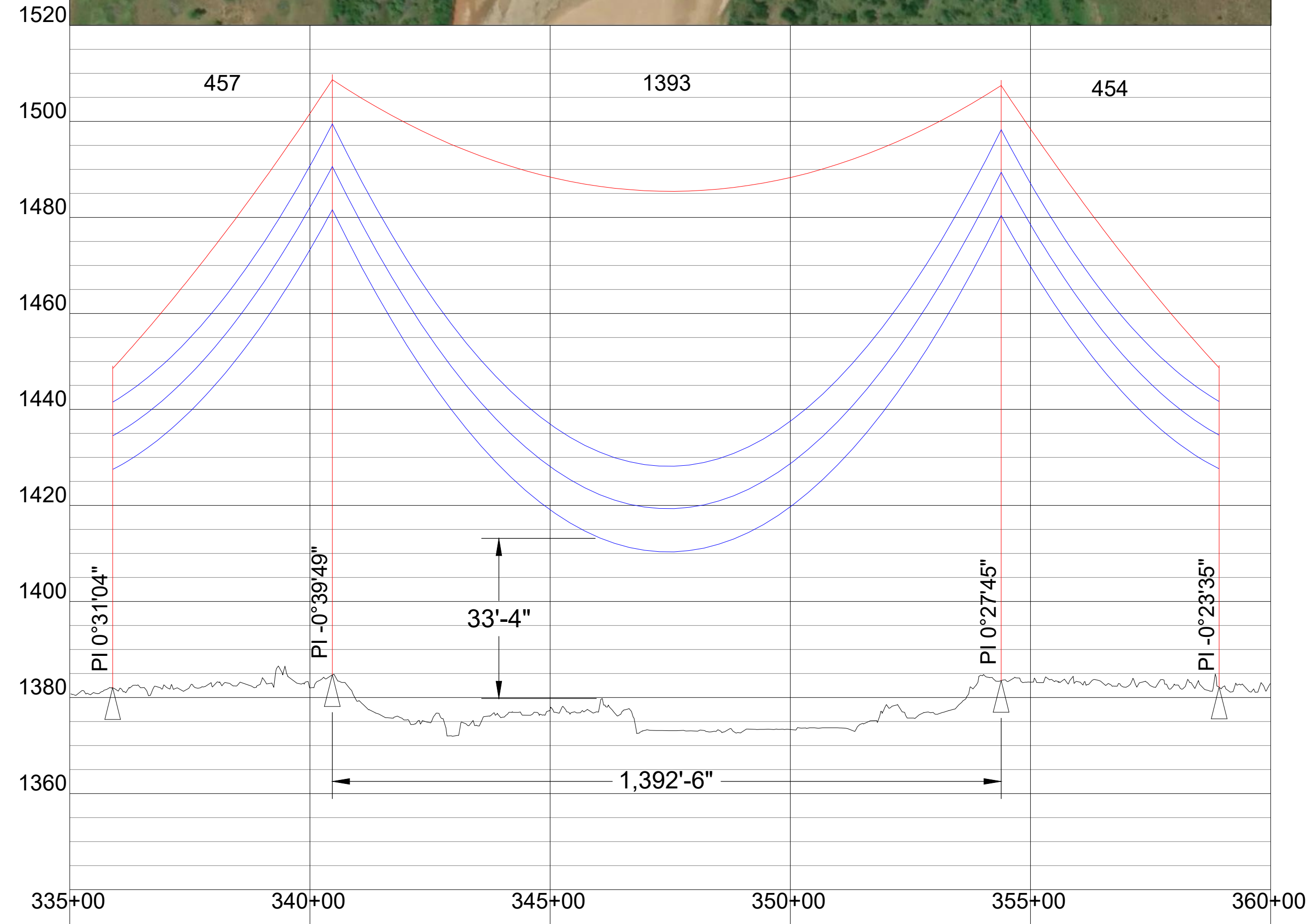
75.0 ft. Horiz. Scale

15.0 ft. Vert. Scale

DESIGN INFO	CLEARANCE				REVISIONS AND RECORD OF ISSUE	
Conductor: 266.8 Kcmil ACSR (26/7) - Partridge	GROUND 19'	ROAD 20'	RAILROAD 28'	WATER 18'		
Static OHGW: 5/16" EHS Steel 7-Strand	LOADING				A	1/8/24 IFC
	NESC HVY 250B - 0.5" ice, 4psf, 0F					9/22/23 IFR 60%
	NESC 250C - 0" ice, 21psf, 60F				REV	DATE
	NESC 250D - 1" ice, 4psf, 15F					

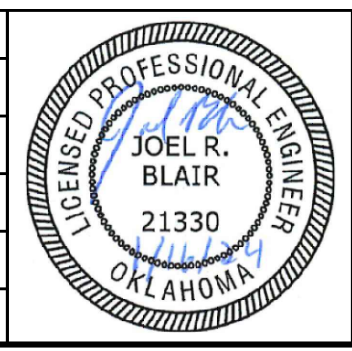


PROJECT:	WAYNOKA RELOCATION
TITLE:	69kV TRANSMISSION LINE
SHEET NO.	GD 3.3



200.0 ft. Horiz. Scale
 20.0 ft. Vert. Scale

DESIGN INFO	CLEARANCE	REVISIONS AND RECORD OF ISSUE
Conductor: 266.3 kcmil ACSR (26/7) - Partridge	GROUND 19' ROAD 20' RAILROAD 28' WATER 18'	
Static OHGW: 5/16" EHS Steel 7-Strand	LOADING	A 1/8/24 IFC
	NESC HVY 250B - 0.5" ice, 4psf, 0F	9/22/23 IFR 60%
	NESC 250C - 0" ice, 21psf, 60F	REV DATE
	NESC 250D - 1" ice, 4psf, 15F	



PROJECT:	WAYNOKA RELOCATION
TITLE:	69kV TRANSMISSION LINE
SHEET NO.	GD 3.4

Partridge
Ruling span - 196.779'
from structure #4-9 to structure #4-10

Span Length	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Left Span	Span Vertical Projection
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)				(ft)
197.2	1.05	1.17	1.31	1.47	1.65	1.86	2.07	2.29	4-9		13.63

Span Length	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Left Span	Span Vertical Projection
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F				
(ft)	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.				(ft)
197.2	3.06	3.23	3.42	3.63	3.85	4.08	4.30	4.52	4-9		13.63

Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F			
(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)			(lbs)
1708	1533	1369	1217	1081	963	865	782			

Partridge
Ruling span - 1118.18'
from structure #10/8 to structure #10/11

Span Length	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Left Span	Span Vertical Projection
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)					(ft)
456.5	4.66	4.77	4.88	4.98	5.09	5.19	5.30	5.40	10/8			56.00
1392.5	43.13	44.11	45.09	46.07	47.05	48.03	48.99	49.95	10/9			-1.20
453.3	4.60	4.70	4.81	4.91	5.02	5.12	5.22	5.32	10/10			-54.67

Span Length	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Left Span	Span Vertical Projection
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F					
(ft)	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.					(ft)
456.5	6.46	6.53	6.60	6.68	6.75	6.82	6.88	6.95	10/8			56.00
1392.5	19.64	19.86	20.08	20.30	20.51	20.73	20.93	21.14	10/9			-1.20
453.3	6.41	6.49	6.56	6.63	6.70	6.77	6.83	6.90	10/10			-54.67

Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F			
(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)			(lbs)
2065	2019	1975	1934	1893	1855	1819	1784			

Partridge
Ruling span - 343.855'
from structure #7/11 to structure #8/6

Span Length	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Left Span	Span Vertical Projection
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)				(ft)
323.3	2.67	2.88	3.12	3.37	3.63	3.90	4.18	4.46	7/11		-1.81
279.3	1.99	2.15	2.33	2.52	2.71	2.91	3.12	3.32	7/12		1.89
235.0	1.41	1.52	1.65	1.78	1.92	2.06	2.21	2.35	7/12A		-0.83
364.1	3.38	3.66	3.96	4.28	4.61	4.95	5.30	5.65	7/13		0.72
345.9	3.05	3.30	3.57	3.86	4.16	4.47	4.78	5.10	7/14		-6.82
381.8	3.72	4.02	4.35	4.71	5.07	5.45	5.83	6.22	7/15		4.86
330.1	2.78	3.01	3.26	3.52	3.79	4.07	4.36	4.65	8/1		9.81
401.2	4.11	4.44	4.81	5.20	5.60	6.02	6.44	6.87	8/2		-0.83
363.4	3.37	3.65	3.94	4.26	4.59	4.93	5.28	5.63	8/3		-1.26
363.4	3.37	3.65	3.94	4.26	4.59	4.93	5.28	5.63	8/4		14.11
291.2	2.17	2.34	2.53	2.74	2.95	3.17	3.39	3.62	8/5		-3.66

Span Length	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Left Span	Span Vertical Projection
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F					
(ft)	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.					(ft)
323.3	4.89	5.08	5.28	5.49	5.70	5.91	6.11	6.31	7/11			-1.81
279.3	4.22	4.39	4.56	4.75	4.93	5.10	5.28	5.45	7/12			1.89
235.0	3.55	3.69	3.84	3.99	4.14	4.30	4.44	4.59	7/12A			-0.83
364.1	5.50	5.72	5.95	6.19	6.42	6.66	6.88	7.11	7/13			0.72
345.9	5.23	5.43	5.65	5.88	6.10	6.32	6.54	6.75	7/14			-6.82
381.8	5.77	6.00	6.24	6.49	6.73	6.98	7.22	7.46	7/15			4.86
330.1	4.99	5.19	5.40	5.61	5.82	6.04	6.24	6.45	8/1			9.81
401.2	6.06	6.31	6.56	6.82	7.08	7.33	7.59	7.84	8/2			-0.83
363.4	5.49	5.71	5.94	6.18	6.41	6.64	6.87	7.10	8/3			-1.26
363.4	5.49	5.71	5.94	6.18	6.41	6.64	6.87	7.10	8/4			14.11
291.2	4.40	4.58	4.76	4.95	5.14	5.32	5.51	5.69	8/5			-3.66

Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F		
(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)		(lbs)
1797	1662	1537	1421	1319	1228	1148	1076		

Partridge
Ruling span - 330.93'
from structure #8/6 to structure #8/12

Span Length	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Mid Span	Left Span	Span Vertical Projection
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)				(ft)
294.3	2.21	2.40	2.60	2.82	3.04	3.28	3.51	3.76	8/6		-3.01
348.7	3.10	3.37	3.65	3.95	4.27	4.60	4.94	5.27	8/7		-3.51
326.6	2.72	2.95	3.20	3.47	3.75	4.04	4.33	4.63	8/8		-2.49
350.9	3.14	3.41	3.70	4.00	4.33	4.66	5.00	5.34	8/9		-1.70
298.8	2.28	2.47	2.68	2.90	3.14	3.38	3.62	3.87	8/10		0.23
350.8	3.14	3.41	3.69	4.00	4.33	4.66	5.00	5.34	8/11		1.80

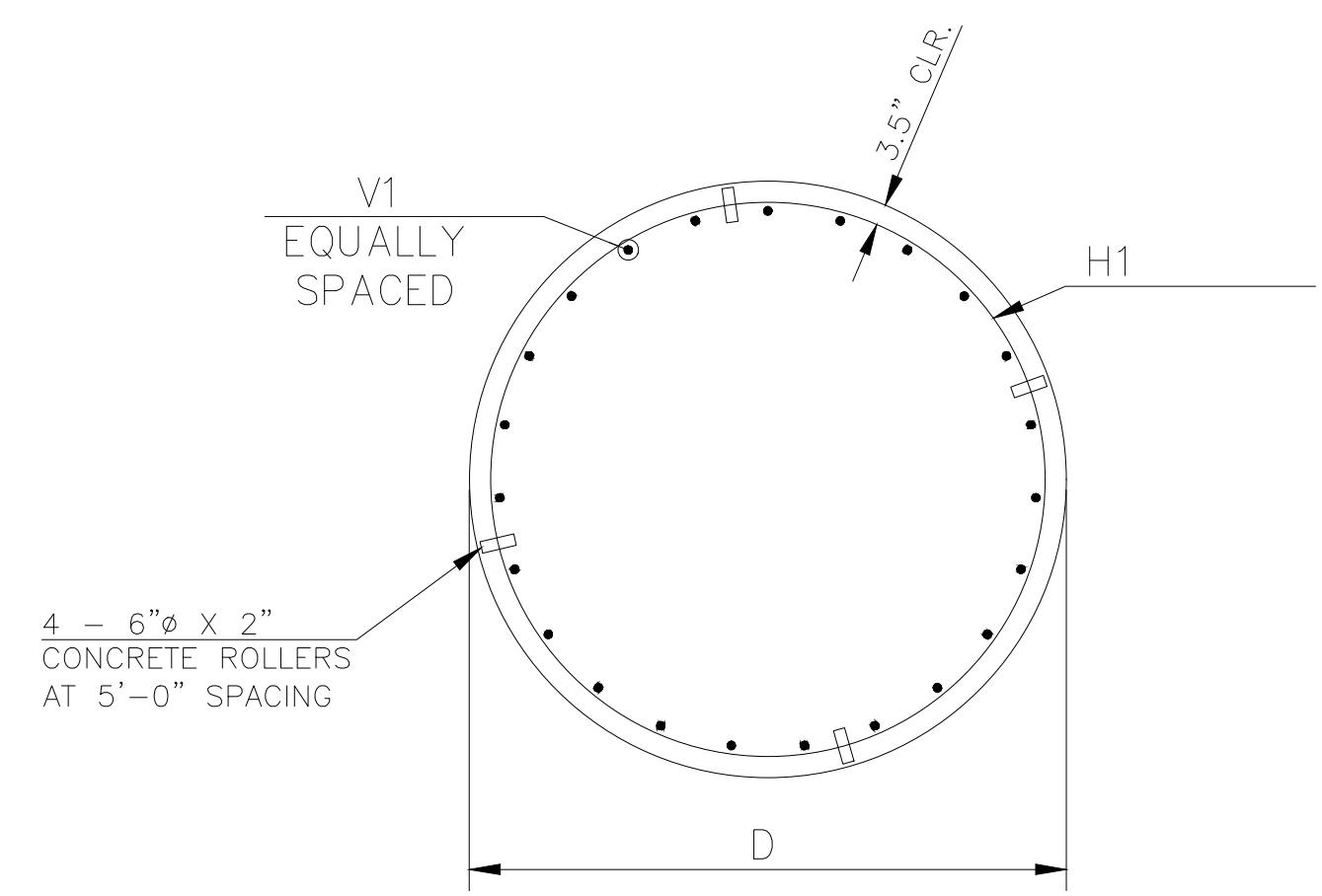
Span Length	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Wave Time	Left Span	Span Vertical Projection
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F					
(ft)	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.					(ft)
294.3	4.45	4.63	4.82	5.02	5.22	5.41	5.61	5.80	8/6			-3.01
348.7	5.27	5.49	5.71	5.95	6.18	6.41	6.64	6.87	8/7			-3.51
326.6	4.94	5.14	5.35	5.57	5.79	6.01	6.22	6.43	8/8			-2.49
350.9	5.30	5.52	5.75	5.98	6.22	6.46	6.69	6.91	8/9			-1.70
298.8	4.52	4.70	4.90	5.10	5.30	5.50	5.69	5.89	8/10			0.23
350.8	5.30	5.52	5.75	5.98	6.22	6.45	6.68	6.91	8/11			1.80

Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension	Horiz Tension
30 F	40 F	50 F	60 F	70 F	80 F	90 F	100 F
(ft)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)
1797	1657	1528	1411	1306	1213	1130	1058

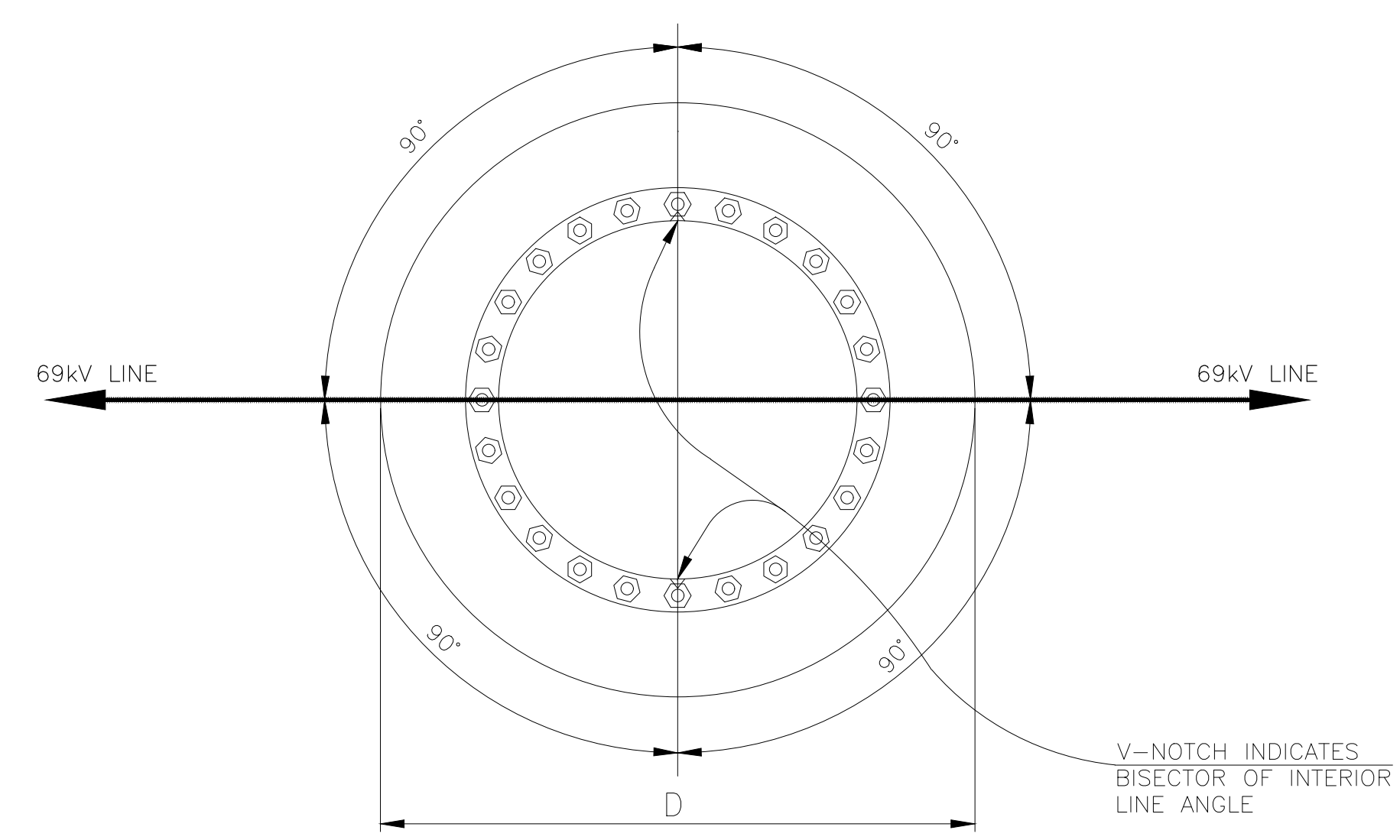
DESIGN INFO		CLEARANCE				REVISIONS AND RECORD OF ISSUE		
Conductor:	266.3 kcmil ACSR (26/7) - Partridge	GROUND	ROAD	RAILROAD	WATER			
		19'	20'	28'	18'			
Static OHGW:	5/16" EHS Steel 7-Strand	LOADING				A	1/12/24	IFC
		NESC HVY 250B - 0.5" ice, 4psf, 0F					9/22/23	IFR 60%
		NESC 250C - 0" ice, 21psf, 60F				REV	DATE	
		NESC 250D - 1" ice, 4psf, 15F						



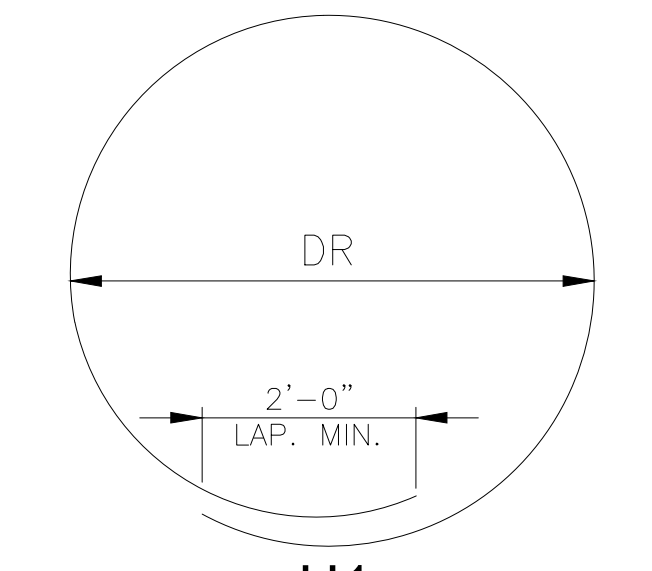
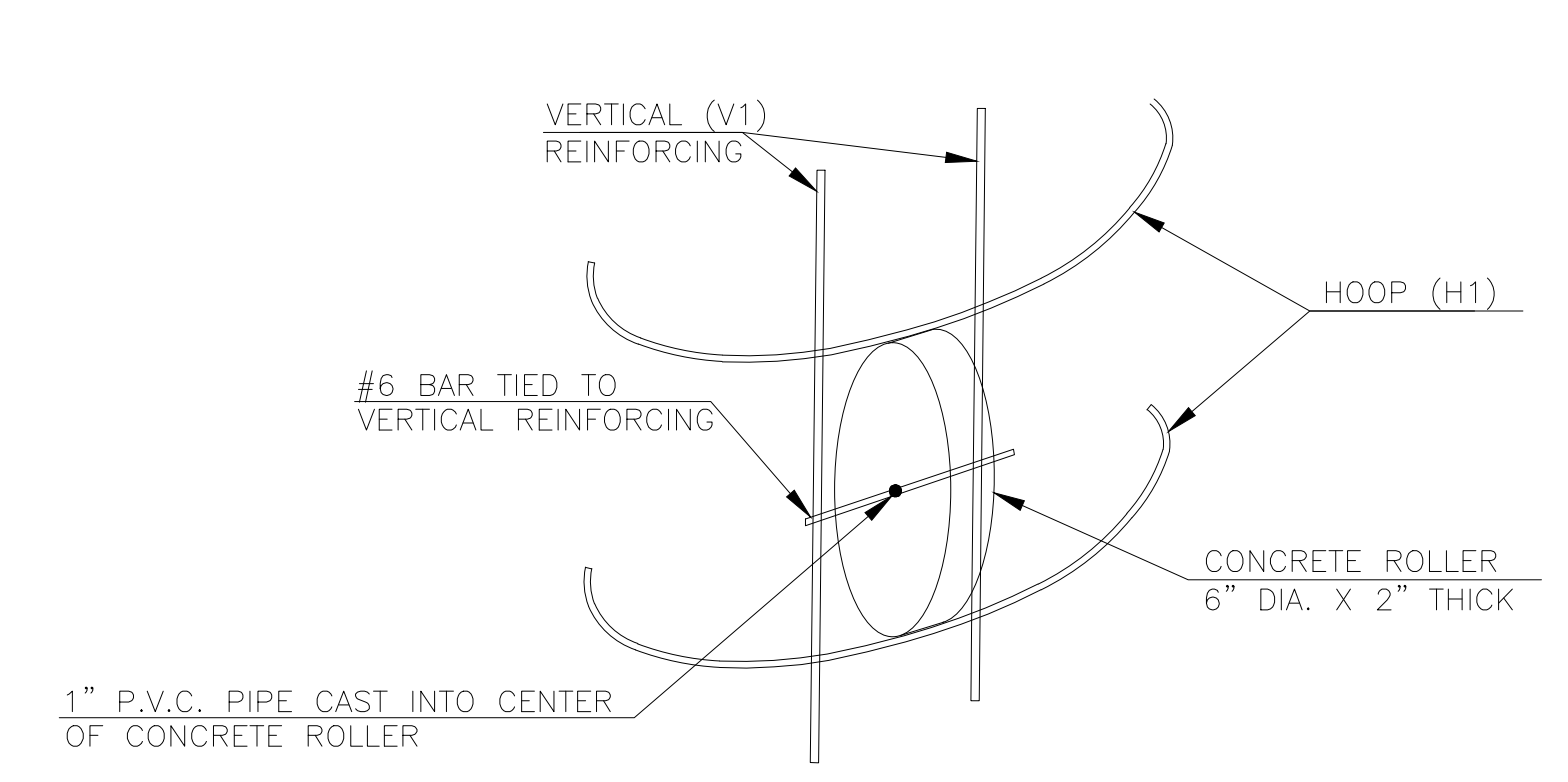
PROJECT:	WAYNOKA RELOCATION
TITLE:	69kV TRANSMISSION LINE
SHEET NO.	SC 4.2



SECTION A-A



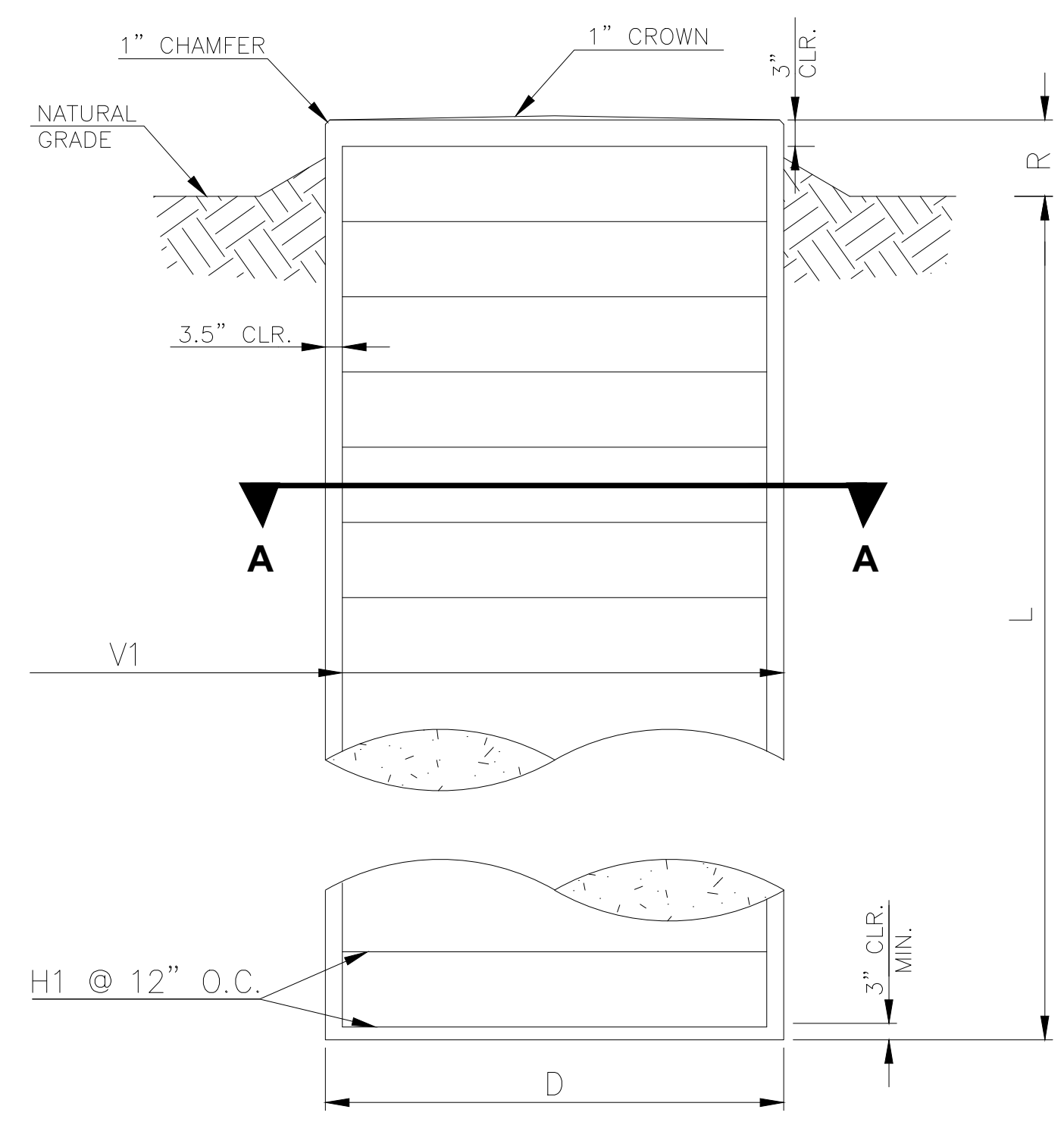
PLAN VIEW



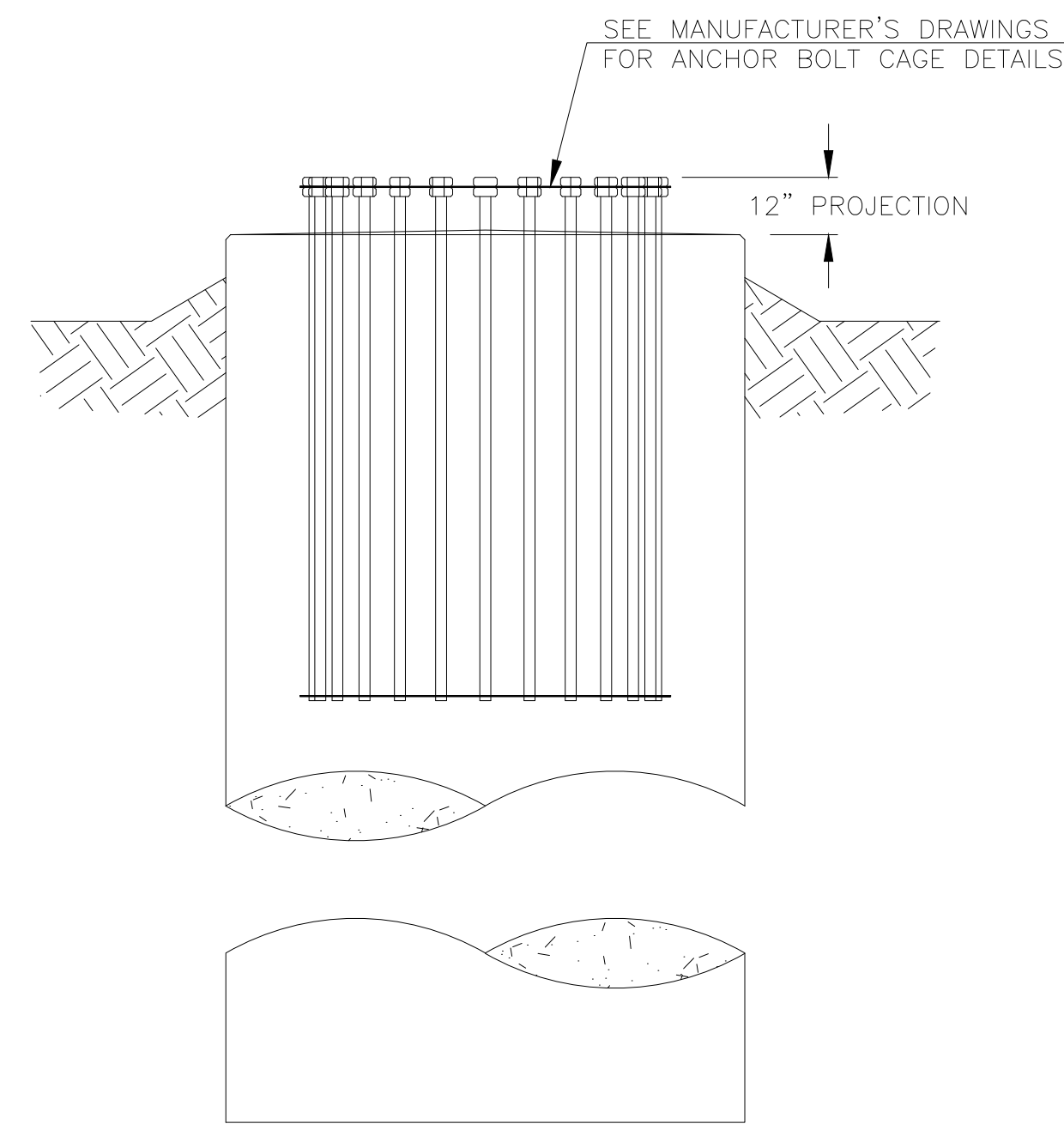
H1 BAR BEND DETAIL

NOTE:
ALL REINFORCING STEEL DIMENSIONS ARE OUT TO OUT

STR #	PIER QTY	DIAMETER "D" (FT)	LENGTH "L" (FT)	CONCRETE (YD ³)	H1			V1			REVEAL "R"	
					SIZE	LENGTH	QTY	DR	SIZE	LENGTH		QTY
10/8	1	6'-0"	24'	27.20	#6	19'-1"	27	5'-5"	#11	25'-6"	32	2'-0"
10/11	1	6'-0"	30'	33.50	#6	19'-1"	33	5'-5"	#11	31'-6"	32	2'-0"



ELEVATION



ELEVATION

ANCHOR BOLT CAGE ORIENTATION

GENERAL NOTES

- CONCRETE SHALL BE HIGH EARLY STRENGTH WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. CONCRETE SLUMP SHALL BE 6"±1". CONCRETE SHALL BE AIR ENTRAINED AT 4½% (±1%) AND EACH TRUCK LOAD TESTED AND RESULTS REPORTED TO PROJECT ENGINEER*. CONCRETE SHALL NOT EXCEED 90°F AT THE TIME OF PLACEMENT IN THE FORMS.
 - TREMIE SHALL BE USED WHEN VERTICAL DROP FROM END OF CHUTE EXCEEDS 5'.
 - REINFORCING STEEL SHALL BE FREE FROM RUST, MUD & GREASE.
 - REINFORCING STEEL SHALL BE A615 GRADE 60.
 - WHENEVER HOLE IS OVEREXCAVATED FOR ANY REASON, THE VOLUME OF OVEREXCAVATION SHALL BE FILLED WITH CONCRETE.
 - POLE SHALL NOT BE LOADED UNTIL CONCRETE HAS REACHED 4000 PSI COMPRESSIVE STRENGTH OR AS DIRECTED BY THE ENGINEER.
 - MINIMUM OF FOUR (4) TEST CYLINDERS SHALL BE TAKEN FROM THE FIRST TRUCK LOAD OF CONCRETE AND EVERY THIRD TRUCK THEREAFTER. TWO (2) CYLINDER SHALL BE BROKEN AT SEVEN DAYS AND THE REMAINING TWO (2) BROKEN AT 28 DAYS FOR ACCEPTANCE. TWO COPIES OF THE TEST REPORT SHALL BE SENT TO THE PROJECT ENGINEER*.
 - FINISH SOIL GRADE AROUND COMPLETED PIER TO BE SLOPED TO DRAIN WATER AWAY FROM PIER. EXCESS SOIL TO BE REMOVED FROM RIGHT-OF-WAY.
 - CONCRETE USED IN THE CONCRETE ROLLER SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 4,000 PSI. SLAB BOLSTERS OR HIGH CHAIRS SHALL NOT BE SUBSTITUTED FOR THE CONCRETE ROLLERS.
 - CONCRETE MUST BE PLACED THE SAME DAY THE HOLE IS DRILLED. DO NOT ALLOW THE SHAFT TO REMAIN OPEN OVERNIGHT.
- * TRANSMISSION ENGINEERING OR CONSTRUCTION INSPECTOR MAY REQUEST ADDITIONAL TESTS TO BE MADE. CONTRACTOR WILL BE RESPONSIBLE FOR ALL TESTS AND ASSOCIATED COSTS.

DESIGN INFO	CLEARANCE	REVISIONS AND RECORD OF ISSUE	PROJECT:
Conductor: 266.3 kcmil ACSR (26/7) - Partridge	GROUND ROAD RAILROAD WATER 19' 20' 28' 18'		WAYNOKA RELOCATION
Static OHGW: 5/16" EHS Steel 7-Strand	LOADING	A 1/12/24 IFC	TITLE: 69KV TRANSMISSION LINE
	NESC HVY 250B - 0.5" ice, 4psf, 0F	9/22/23 IFR 60%	SHEET NO. FD 5.1
	NESC 250C - 0" ice, 21psf, 60F	REV DATE	
	NESC 250D - 1" ice, 4psf, 15F		

