



BrightSource

DOCKET

11-AFC-04

DATE MAY 03 2012

RECD. MAY 03 2012

May 3, 2012

Pierre Martinez
Project Manager
Systems Assessment & Facility Siting Division
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

Subject: Supplemental Response to Data Request #40 (11-AFC-04)

Dear Mr. Martinez:

On behalf of Rio Mesa Solar I, LLC, Rio Mesa Solar II, LLC, and Rio Mesa Solar III, LLC, please find enclosed a copy of our Supplemental Response to Data Request #40. Electronic copies will be sent to the Staff and the Proof of Service List.

Sincerely,

Todd Stewart
Director, Project Development

Enclosure

Cc: POS List
Project File

SUPPLEMENTAL RESPONSE TO DATA REQUEST #40

Technical Area: Transmission System Engineering

Data Request

40. Provide the pole configuration and the number of poles that would be required for the overhead generator-tie lines.

Response:

Applicant has recently identified some discrepancies between the BLM and SCE records in the location of existing and planned SCE transmission line Rights-of-Way (ROW) in the project area that may result in the offset of a portion of the proposed gen-tie route. Applicant is working with both SCE and BLM to resolve these issues. Once resolved, the initial proposed route and pole location described in the AFC may shift to the north in order to comply with BLM guidelines and Riverside County Board Policy B-29, which both encourage consolidation of transmission lines within defined corridors.

Please see Figure 3.3-2 in Section 3 of the AFC for the proposed pole configuration. Applicant will provide CEC with engineering drawings showing the revised route and pole locations as soon as the ROW issues are resolved and the new design is available.

Supplemental Data Request

Please elaborate on the discrepancies between the BLM and SCE records that you reference. We need to understand this better as an offset of a portion of the gen-tie route would require consideration in a number of technical areas and would also effect the project description. Also provide a timeline of when the ROW issues are intended to be resolved.

Supplemental Response:

During the due diligence process for the Rio Mesa generator tie line (Gen-Tie line), the Applicant discovered a BLM linear ROW granted to Southern California Edison (SCE) back in the 1980's (the "SCE ROW"). The SCE ROW seemed to be intended to accommodate the future extension of the Devers-Palo Verde – 2 (DPV-2) transmission line. The Applicant wanted to design the Project's proposed 230Kv Gen-Tie line to run in the vicinity of the SCE ROW, but Applicant was concerned that its preferred Gen-Tie route would interfere with a portion of the SCE ROW mapped by BLM.

To avoid ROW conflicts, the Applicant initiated a discussion with SCE to explore whether a segment of the SCE ROW could and/or would be realigned to accommodate Applicant's preferred Gen-Tie route. During Applicant's discussions with SCE, it was discovered that BLM's records and SCE's records were inconsistent. As mapped by the BLM, the SCE ROW is generally located *south* of the existing Devers-Palo Verde – 1 (DVP-1) line. However, SCE's records depict the SCE ROW for DPV-2 as being located *north* of the existing DPV1 line. SCE is proceeding with construction of the Colorado River Substation (CRS) and DPV-2 transmission line based on its own ROW records. If the SCE records are correct, there is no need to realign the SCE ROW for DPV-2 in order to accommodate the proposed RMS Gen-Tie line routing.

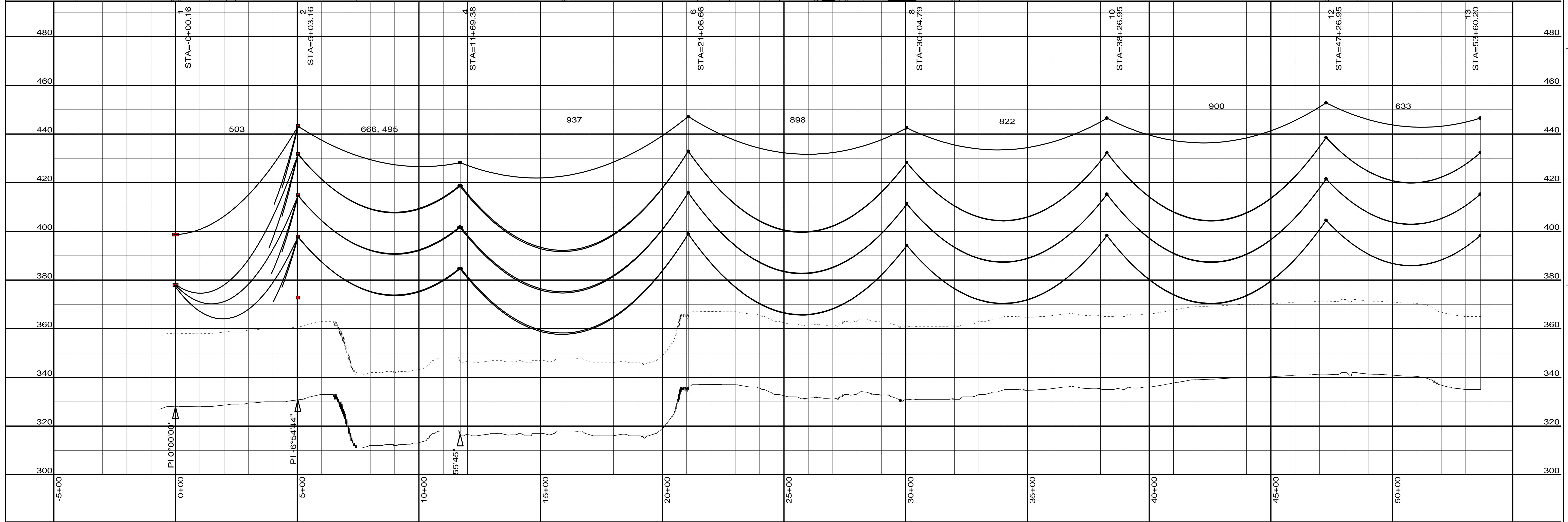
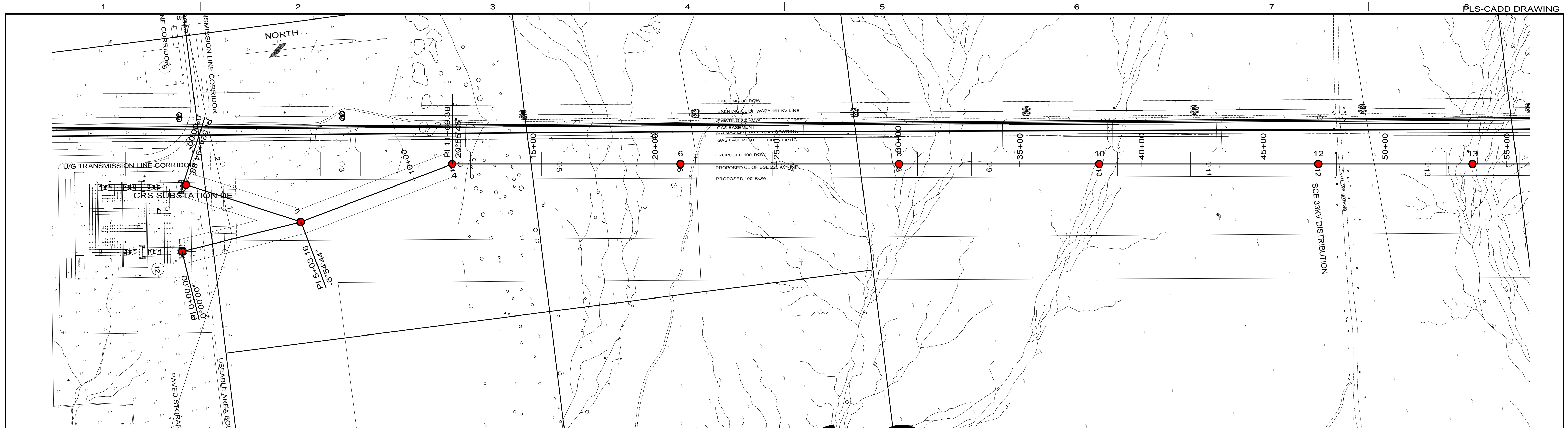
The Applicant requested that SCE and BLM reconcile the SCE ROW records for DPV-2 and both parties agreed to do so. Although Applicant has not yet been provided final confirmation that the BLM and SCE records have been reconciled, the Applicant has adjusted the proposed RMS Gen-tie line route to be south

SUPPLEMENTAL RESPONSE TO DATA REQUEST #40

Technical Area: Transmission System Engineering

of and adjacent to the existing DPV-1 line, in accordance with BLM guidelines. The resulting Gen-tie line segment from the where it crosses the WAPA 161kV transmission line northwest to the CRS has been shifted to the north 200' – 300' from the route depicted in the AFC. Applicant believes that this slight variation in routing is not considered a material change since the adjusted routing is still within the biological and cultural study area.

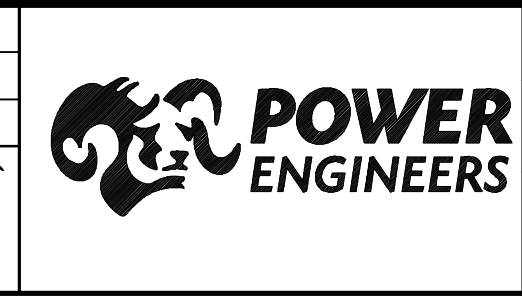
Attached are the new Plan and Profile (P&P) drawings showing the adjusted Gen-tie line routing and the location of all 67 poles as well as the Dead-end structure at the CRS. Also attached are 2 typical Pole configurations that are expected to be used for the Gen-tie Overhead transmission line.



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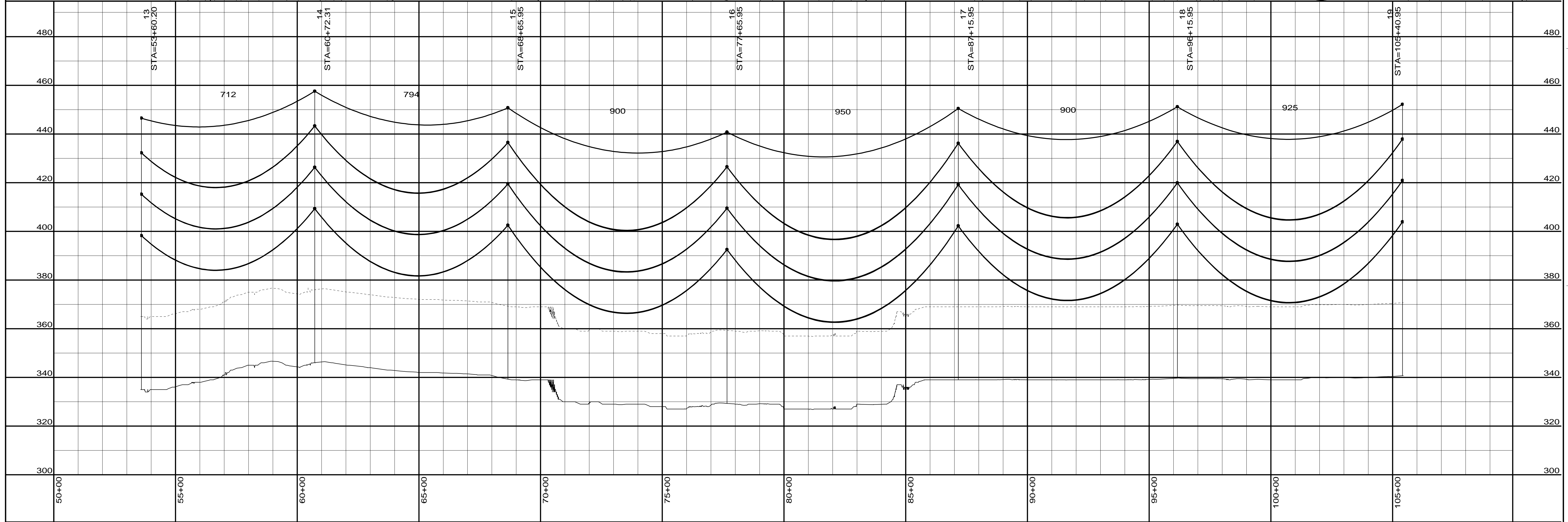
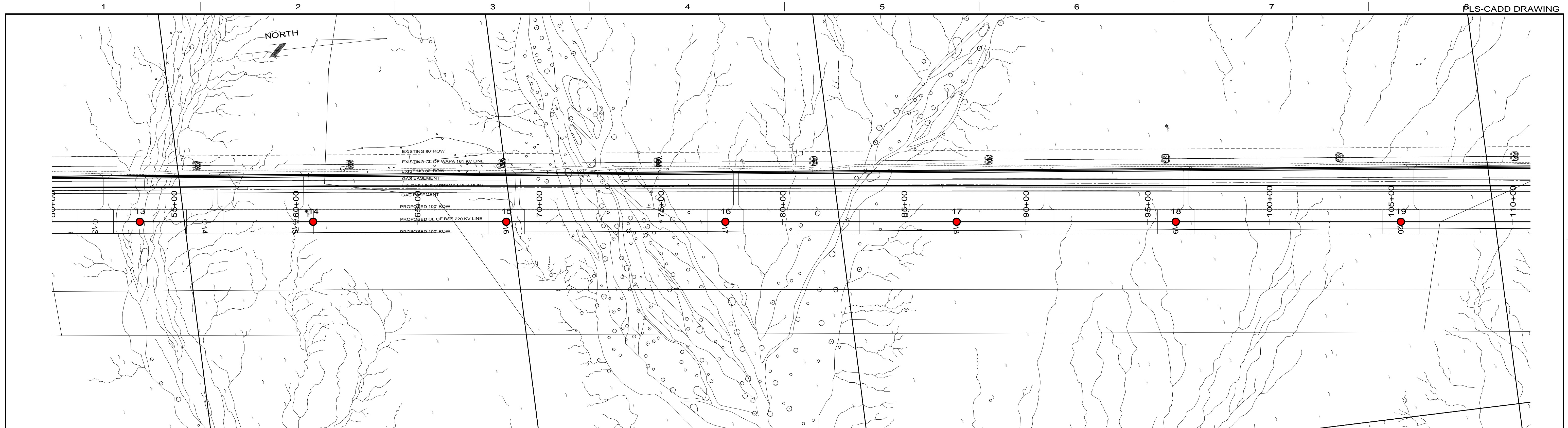
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A	ORIGINAL ISSUE	8/15/11	RH	EAR	EAR	*	

DSGN	IMD	8/18/11
DRN	IMD	8/18/11
CKD	EAR	8/18/11
SCALE: HORIZ: 1"=200'		
VERT: 1"=20'		
FOR 22X34 DWG ONLY		



BRIGHT SOURCE ENERGY
 RIO MESA 230KV DOUBLE CIRCUIT
 GEN-TIE LINE
 PLAN AND PROFILE DRAWING

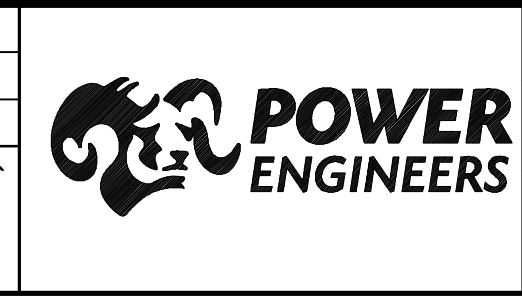
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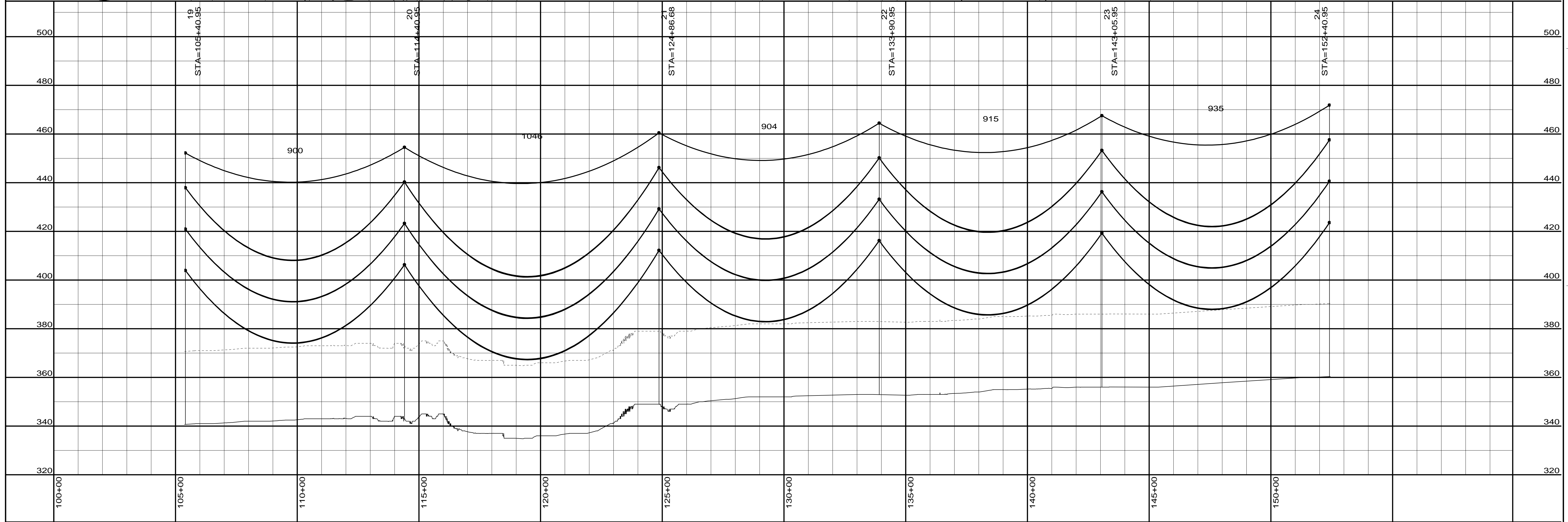
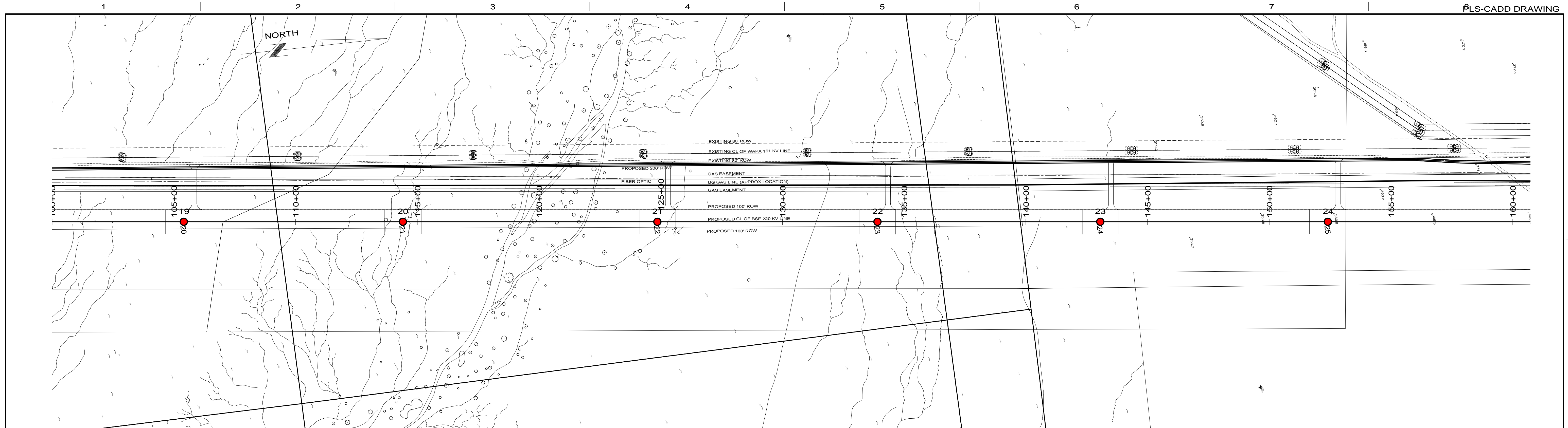
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P1-2	



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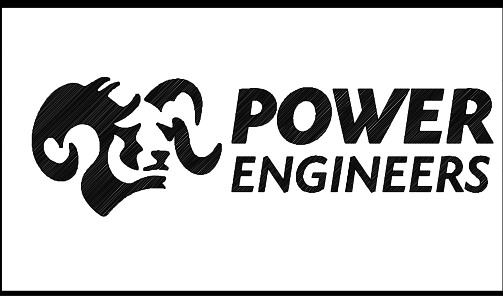
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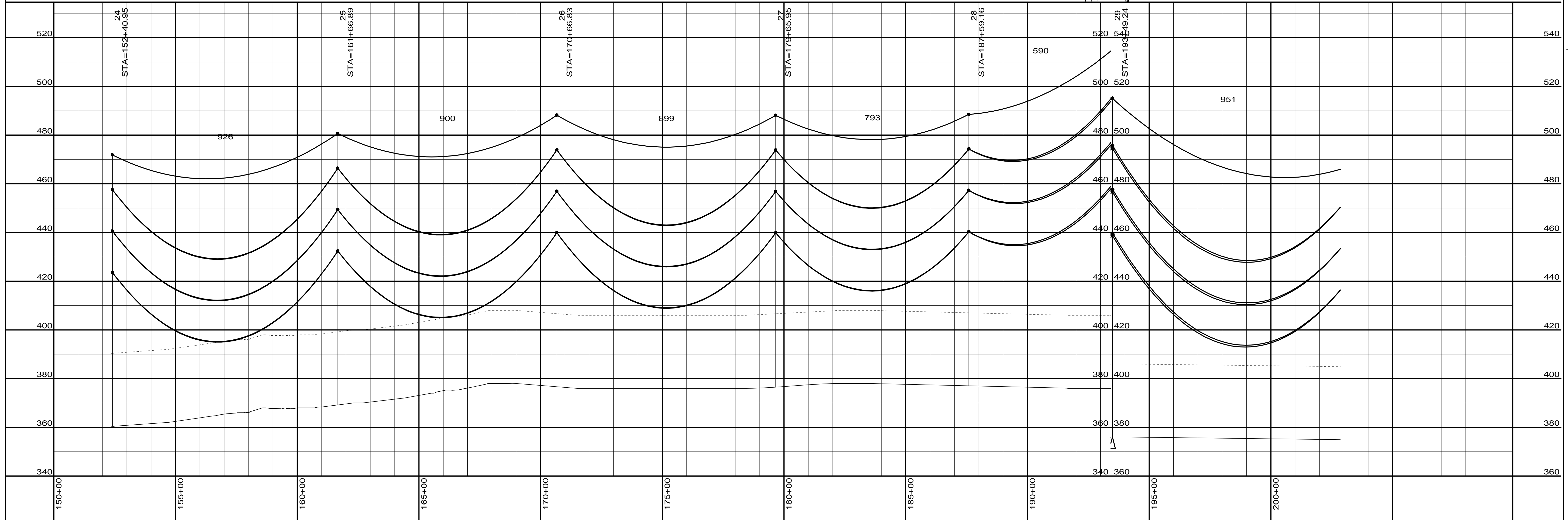
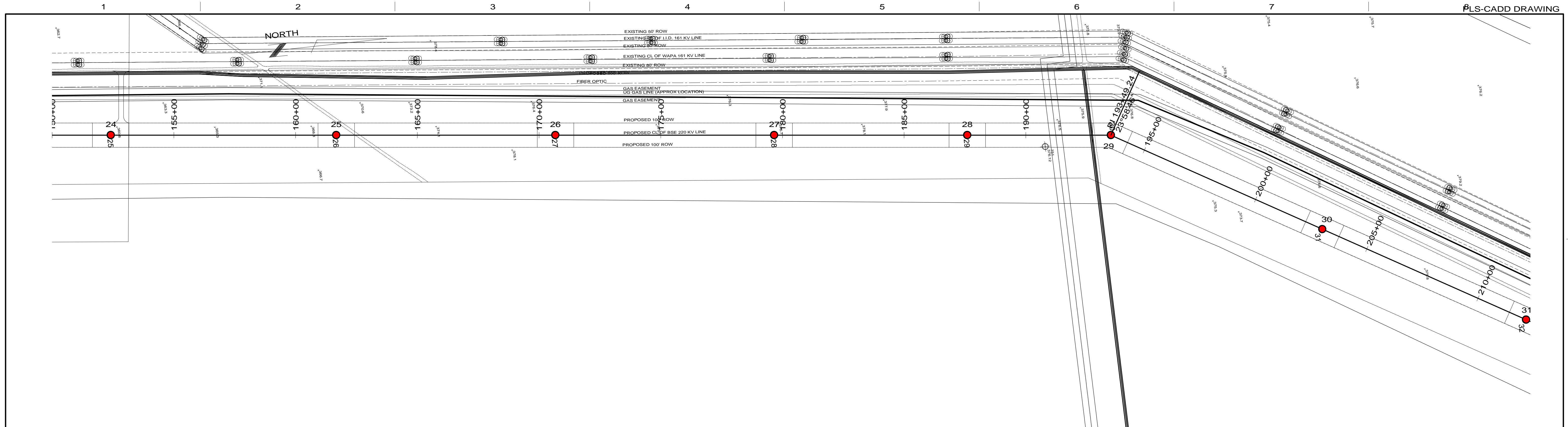
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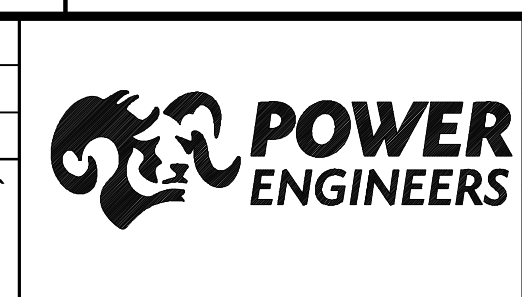
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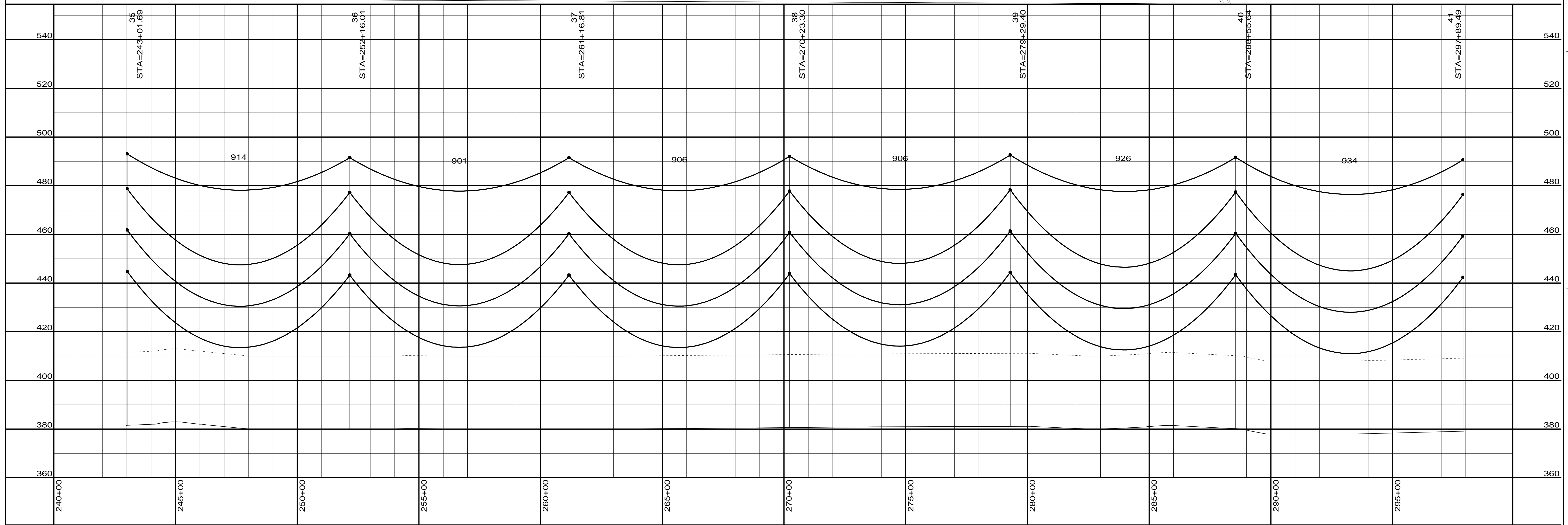
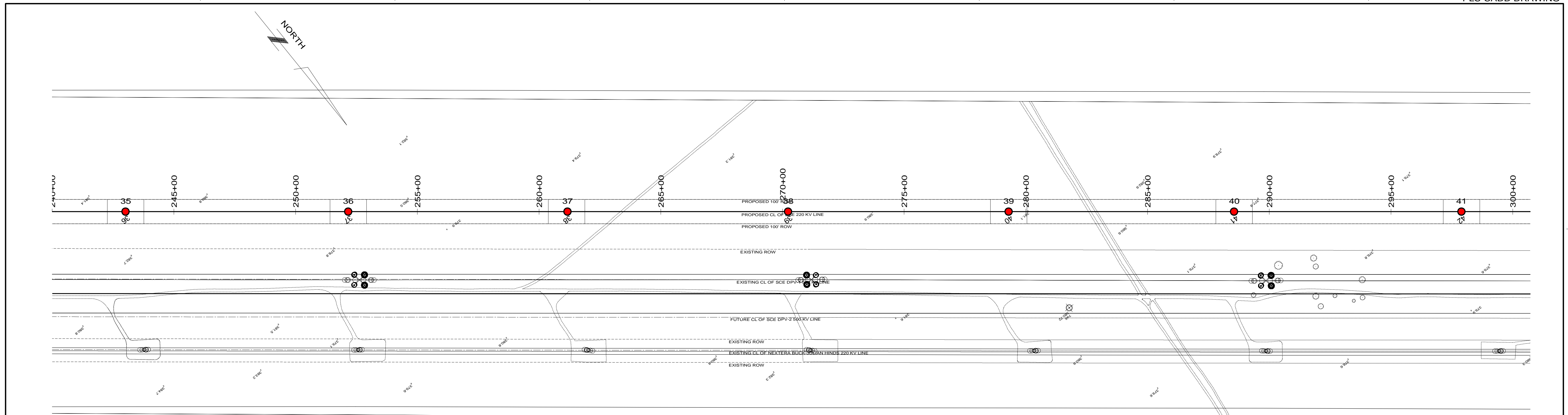
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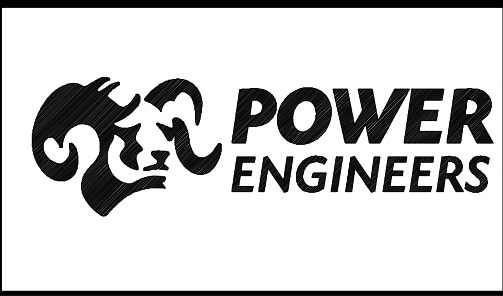


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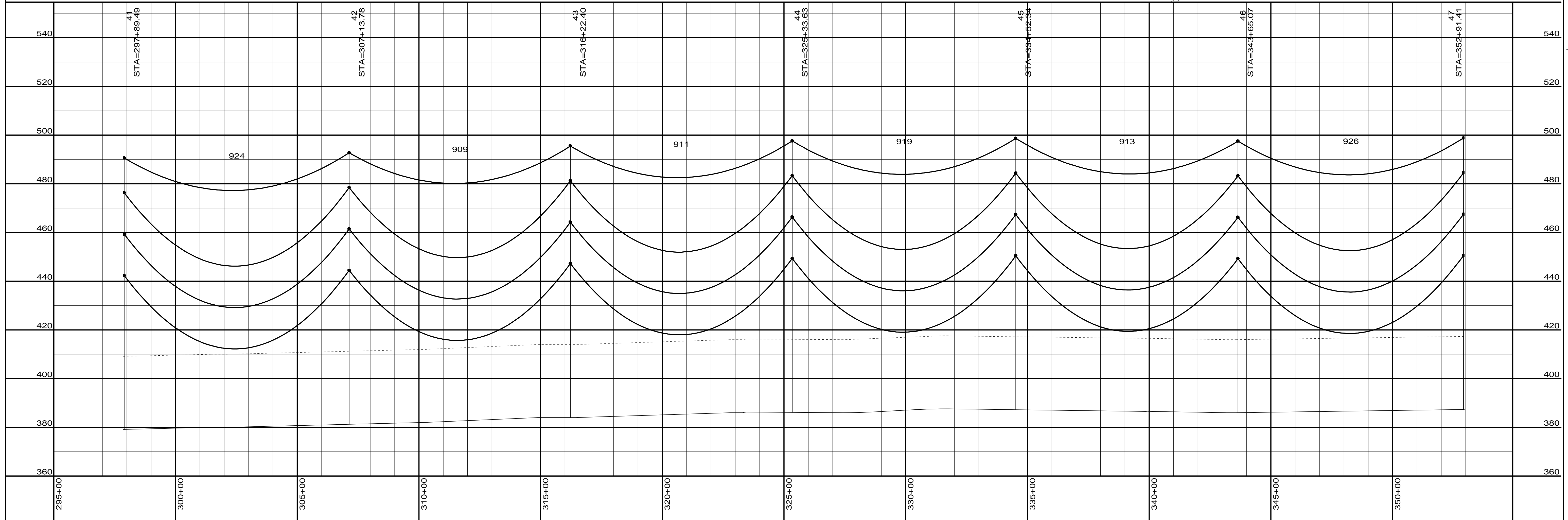
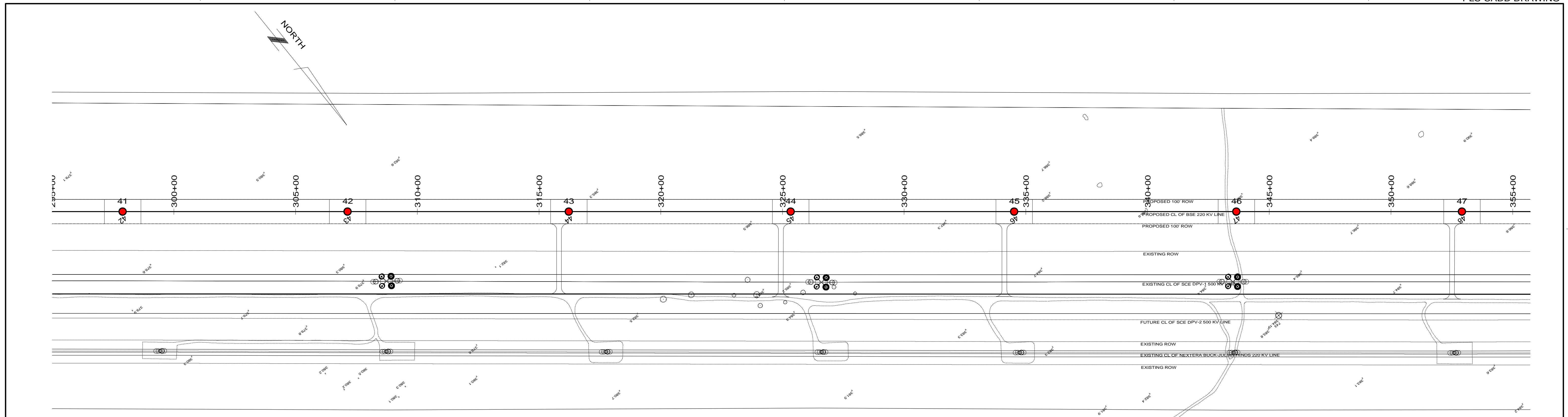
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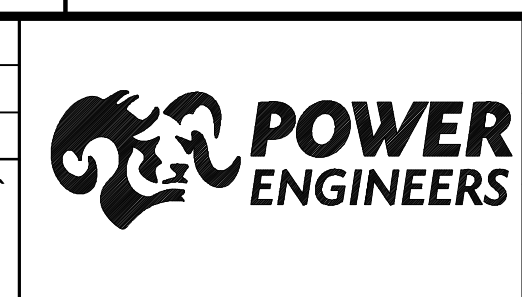
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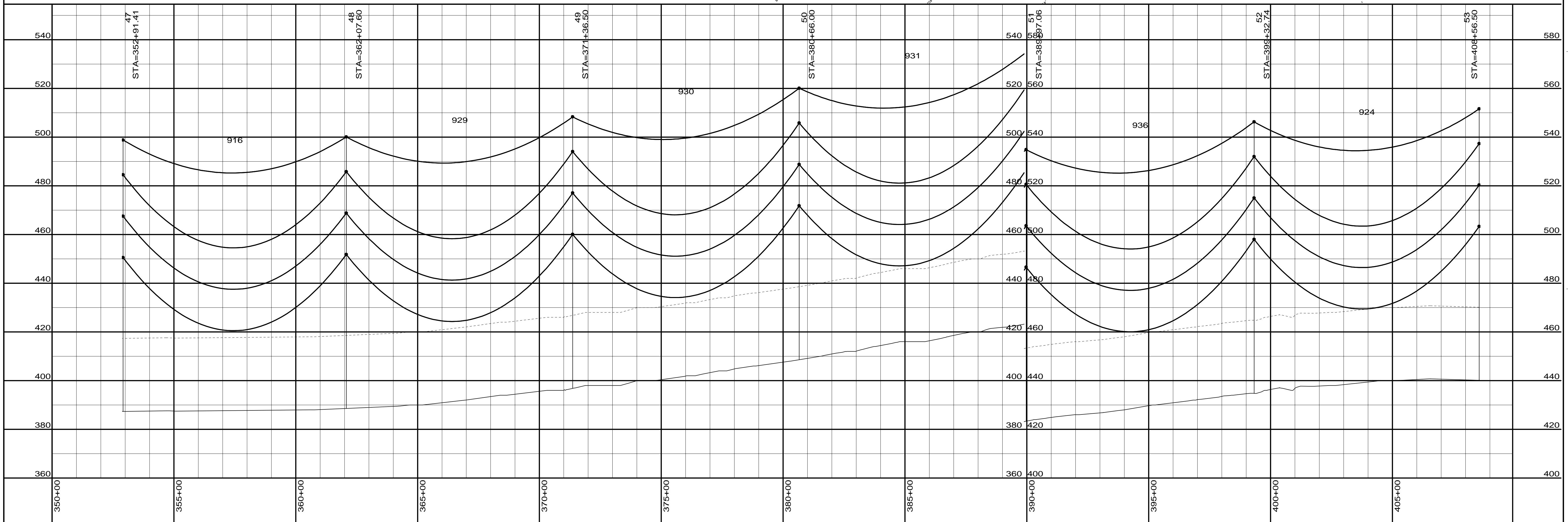
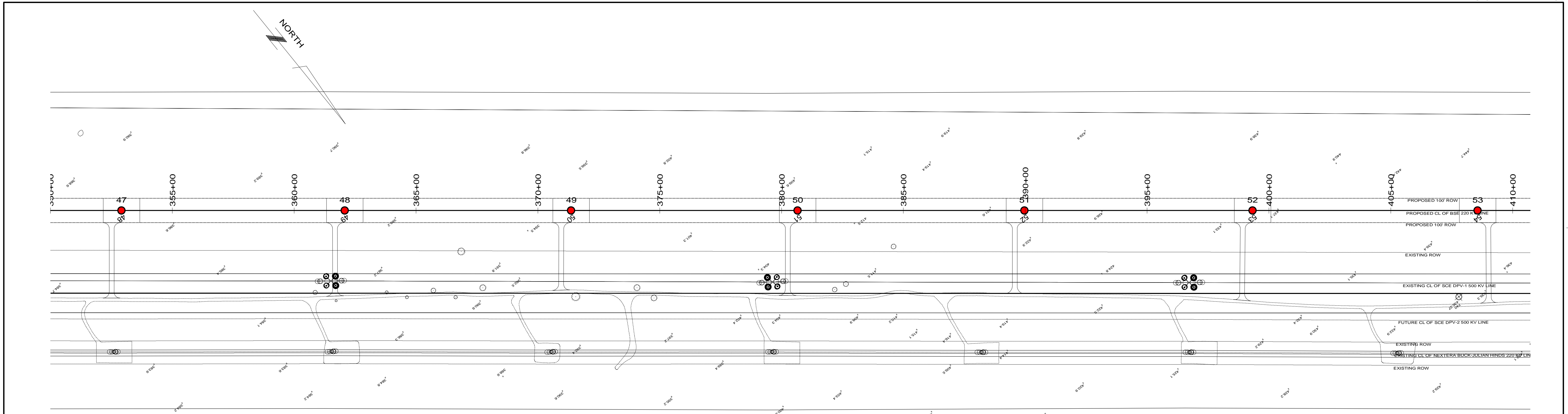
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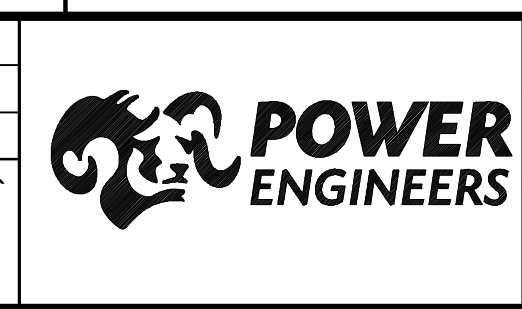
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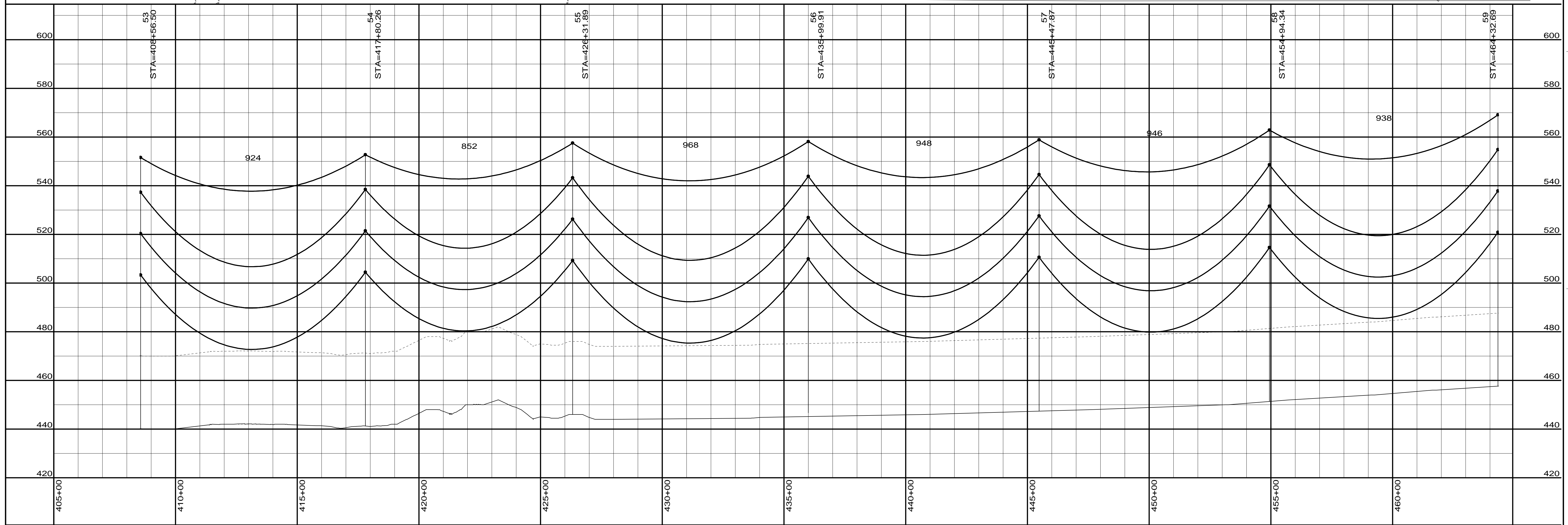
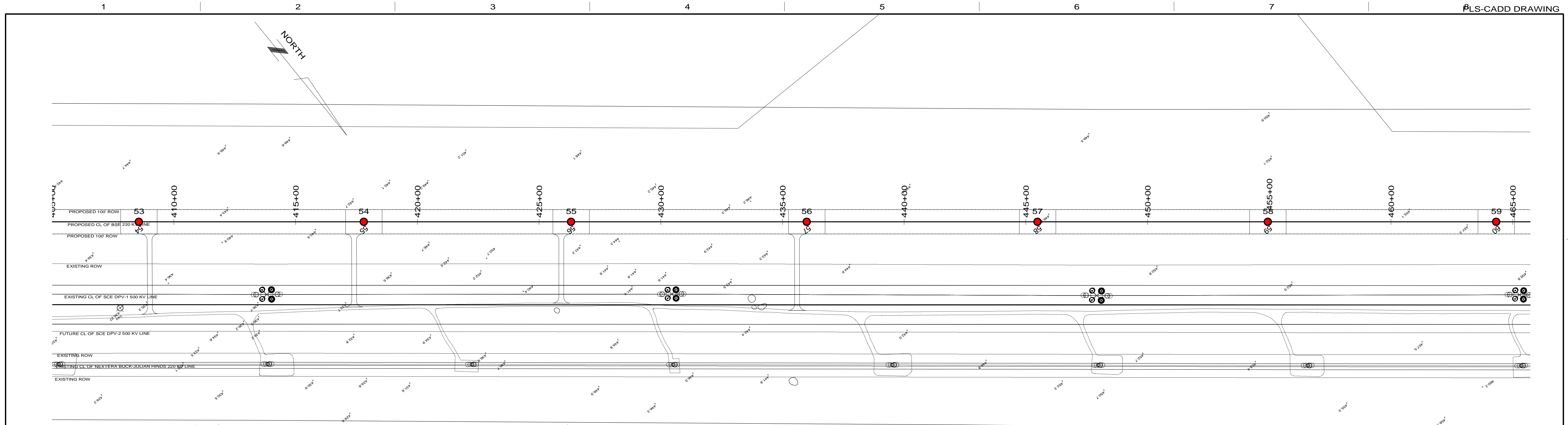
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DSGN	IMD	8/18/11
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P1-8	



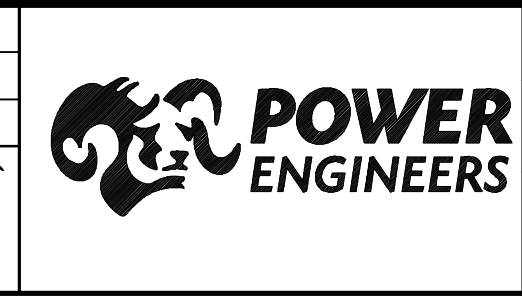
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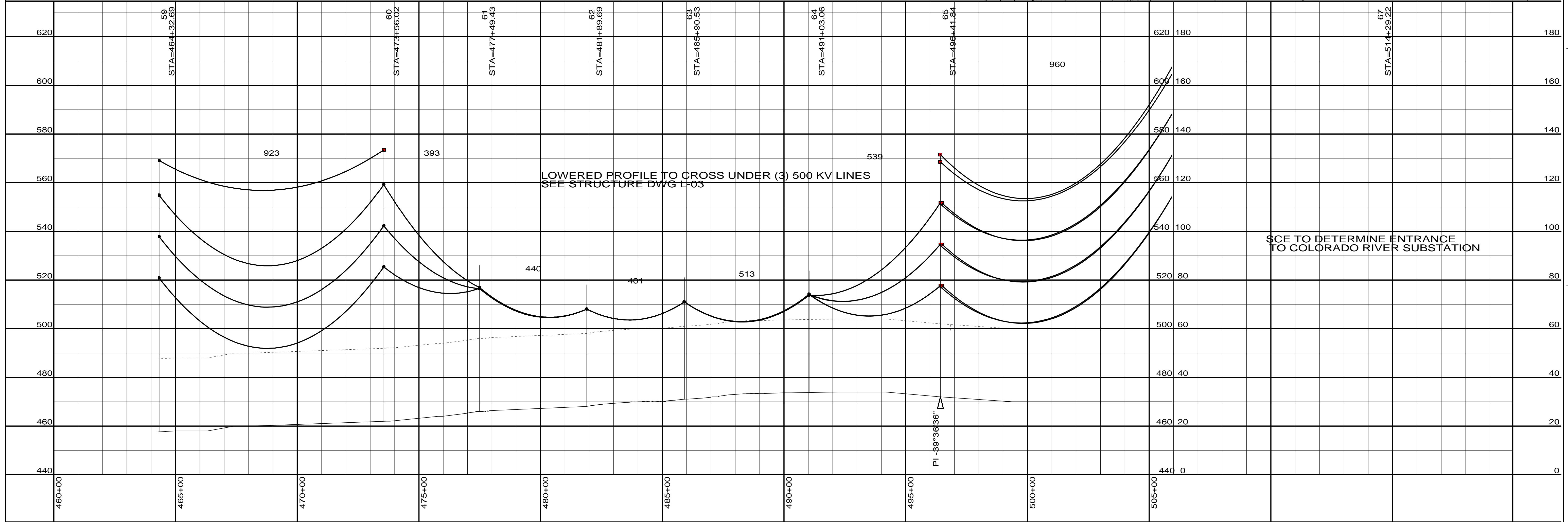
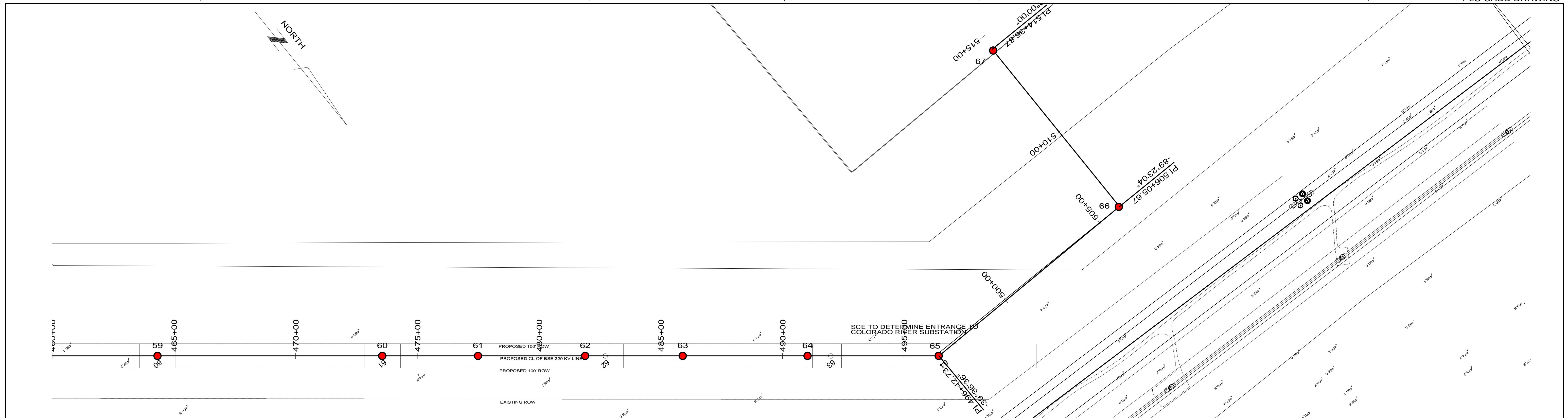
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RIO MESA 230KV DOUBLE CIRCUIT
GEN-TIE LINE
PLAN AND PROFILE DRAWING

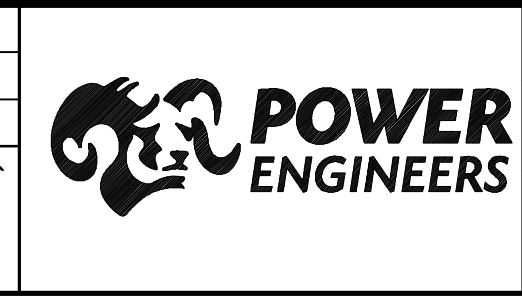
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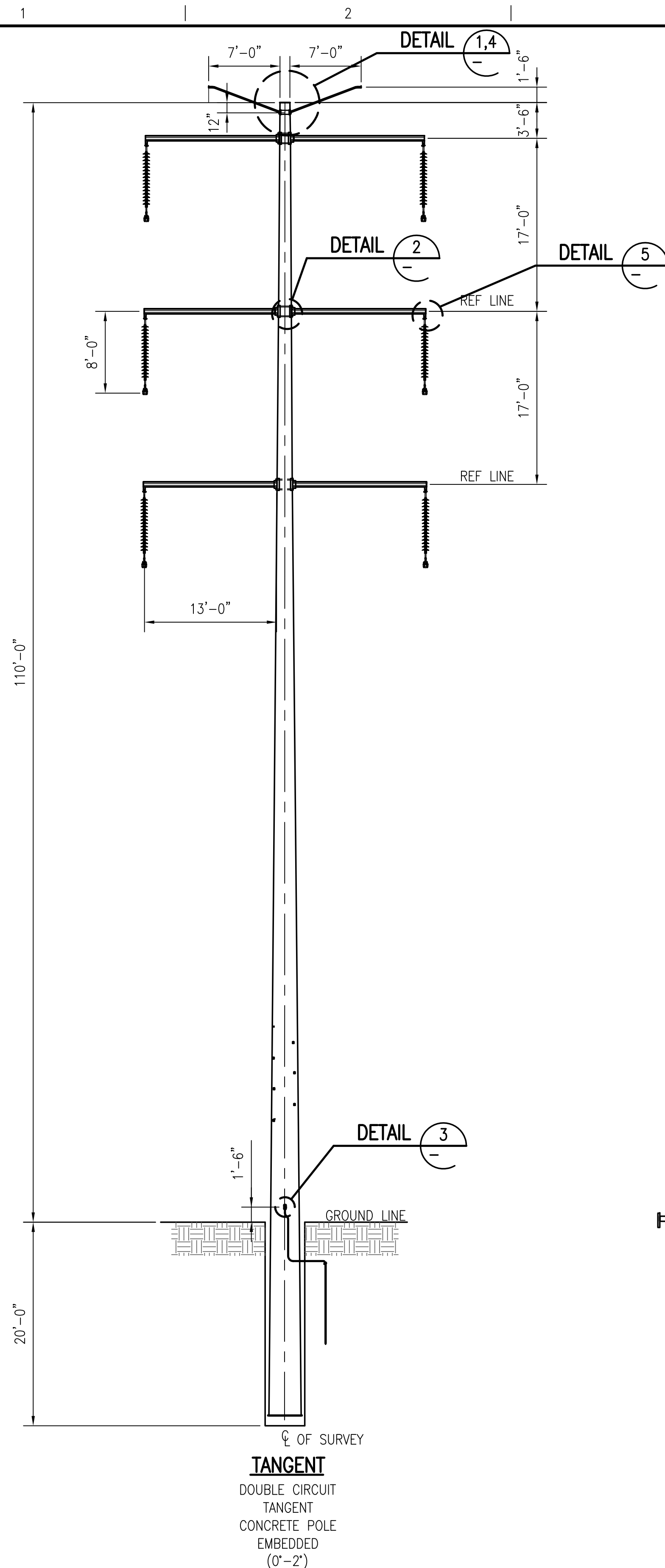
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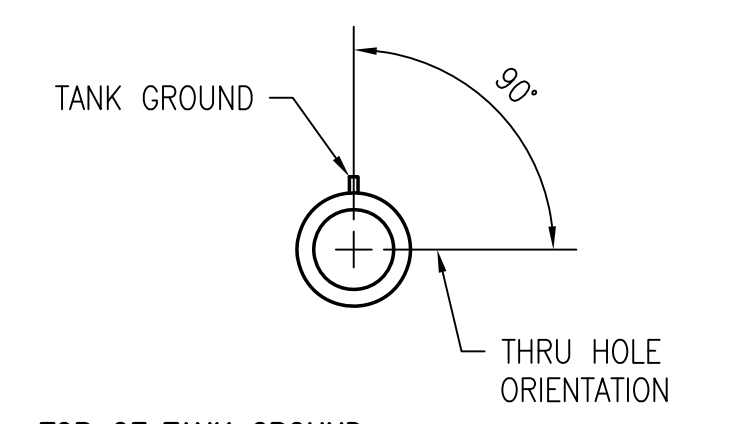
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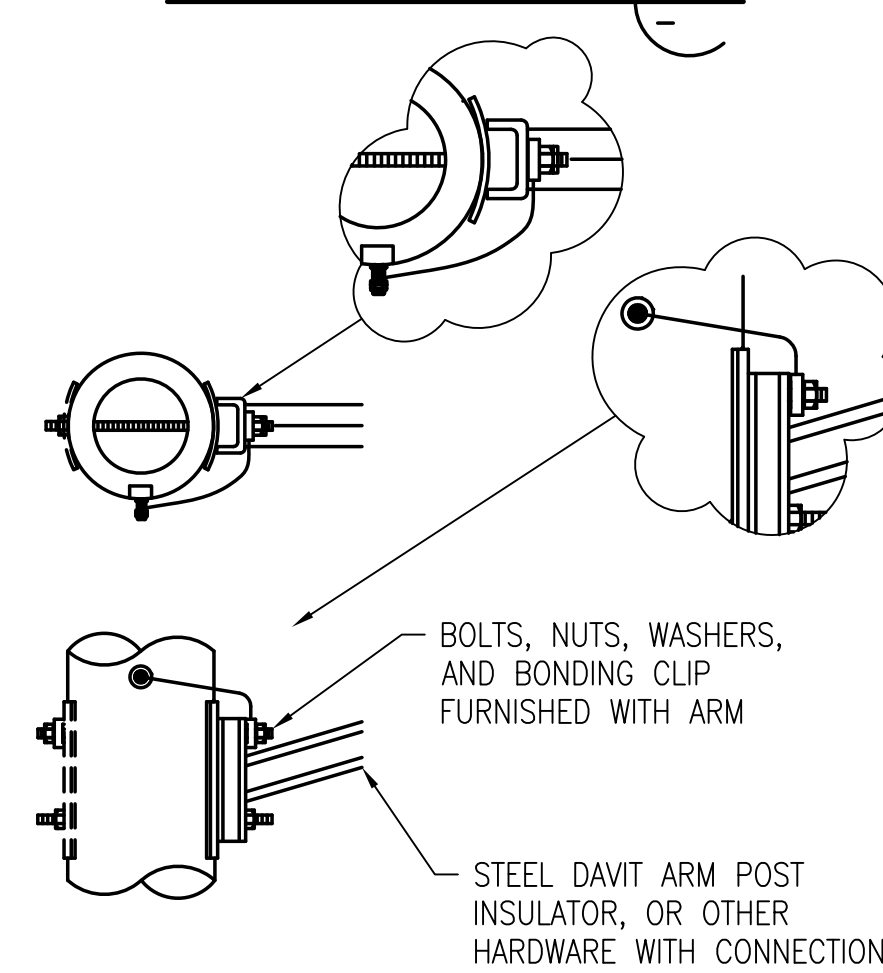
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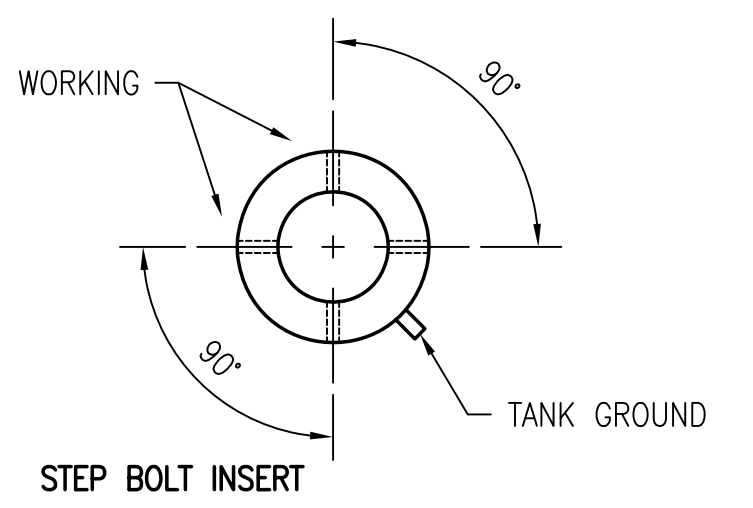
TANGENT
DOUBLE CIRCUIT
TANGENT
CONCRETE POLE
EMBEDDED
(0'-2')



TOP OF TANK GROUND
DETAIL 1

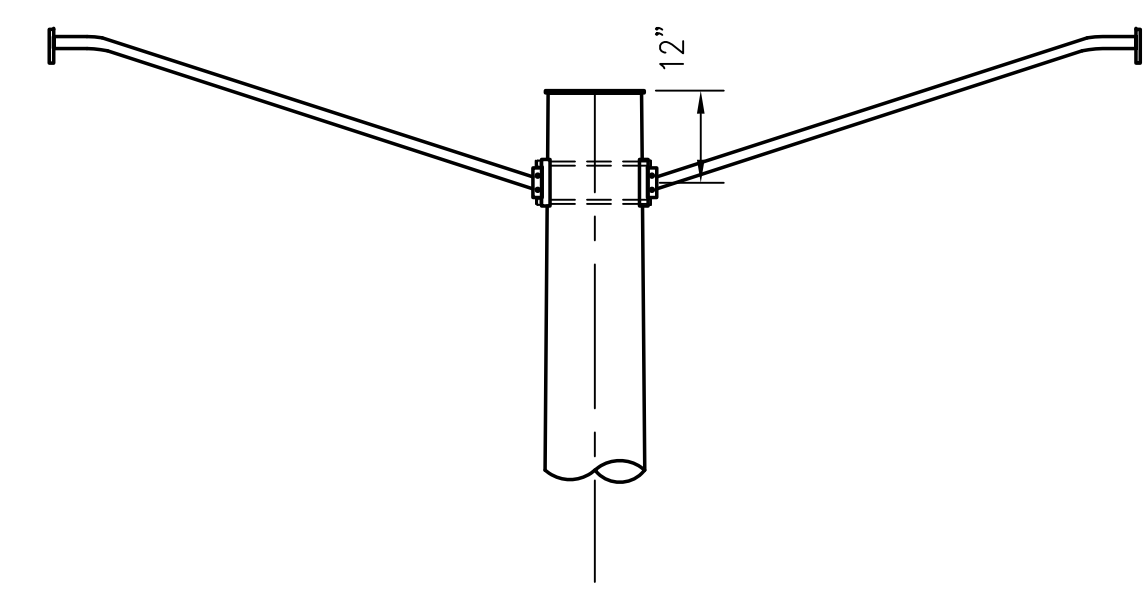


ARM GROUND AND THRU BOLT
DETAIL 2

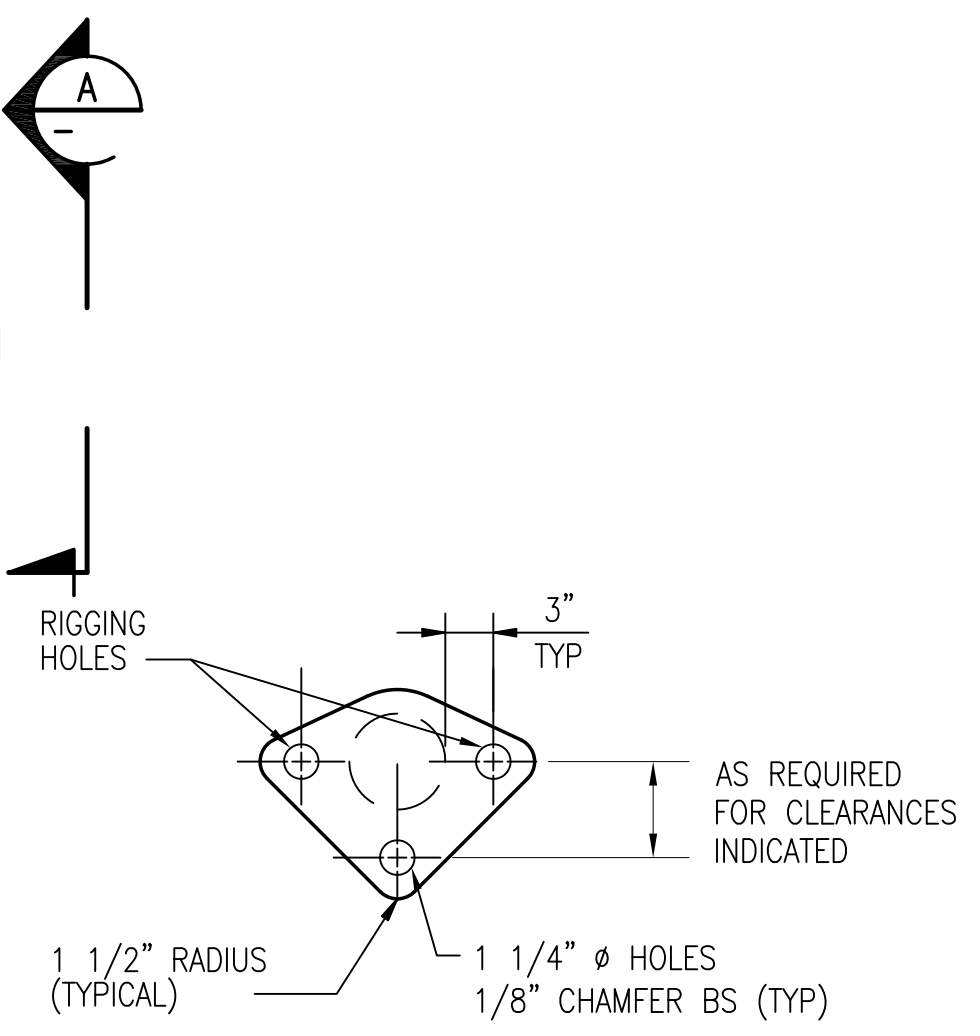


DETAIL 3

INSERTS WILL ACCEPT 3/4" x 7 1/2" STEP BOLT WITH 2" BUTTONHEADS
PROVIDE WORKING STEPS AT THE FOLLOWING LOCATIONS:
- 5' FROM THE POLE TOP
- 5' BELOW THE MIDPOINT OF ALL ATTACHMENTS
NO INSERTS BELOW 10' ABOVE GROUND LINE



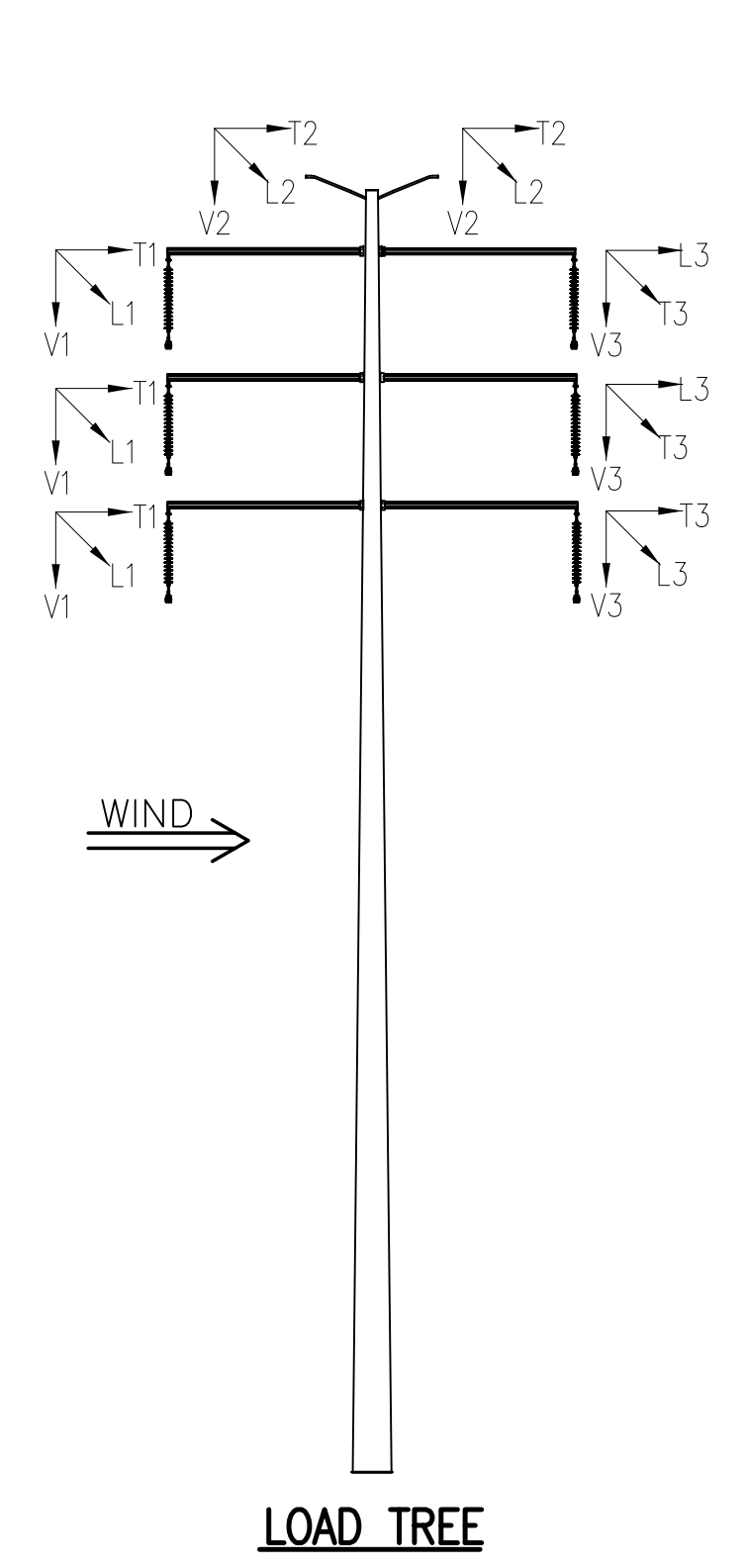
DETAIL 4



SECTION A

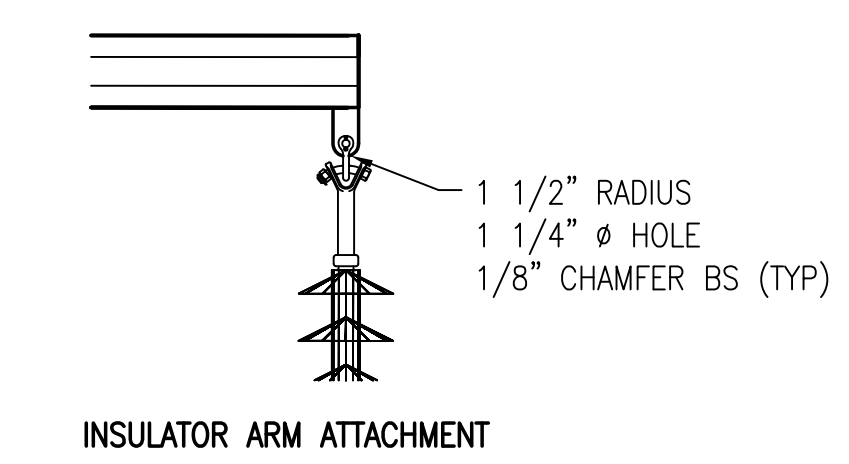
LOAD CASES	WIND PRESSURE (PSF)	RADIAL ICE (IN)	INSULATOR ASSEMBLY	OVERLOAD FACTORS				WIRE TENSIONS	
				WIND	TENSION	VERTICAL	POLE WT	LAPWING	OPGW
I GO 95 LIGHT *	8.0	0.0	200	*	*	*	*	11405	3239
II EXTREME WIND	20.7	0.0	200	1.1	1.1	1.1	1.1	13215	4380

* CONCRETE STRUCTURES TO HAVE 1.5 OLF'S STEEL STRUCTURES TO HAVE 1.25 OLF'S.



LOADING SCHEDULE (LBS)			
WIRES	LOADS	G.O. 95 LIGHT	EXTREME WIND
TRANSMISSION: 1590 ACSR "LAPWING"	V1	1800	1980
	T1	1520	3100
	L1	0	0
OPGW	V2	720	800
	T2	950	2050
	L2	0	0

DESIGN PARAMETERS			
WIRE	MAX LINE ANGLE (DEG)	MAX WIND SPAN (FT)	MAX WT SPAN (FT)
TRANSMISSION: 1590 ACSR "LAPWING"	2'	925	1275
OPGW	2'	925	1275



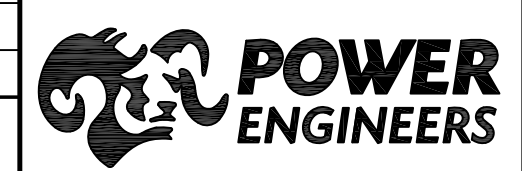
DETAIL 5

- NOTES**
- PROVIDE STEP INSERTS FOR CLIMBING STARTING 10'-0" ABOVE GROUND AND CONTINUING TO THE TOP OF THE STRUCTURE. PROVIDE ADDITIONAL STEP INSERTS ON FLATS WHERE NECESSARY SO THAT ALL PARTS OF THE STRUCTURE, INSULATORS, AND HARDWARE ASSEMBLIES MAY BE REACHED FOR MAINTENANCE.
 - STRUCTURE DESIGNER SHALL PROVIDE THE FOUNDATION LOADS AT THE MAXIMUM DESIGN CONDITION WITH AN OVERLOAD FACTOR OF 1.0. THIS INFORMATION SHALL BE PROVIDED ON THE STRUCTURE DESIGN SUBMITTAL DRAWINGS.
 - INSTALL #2 STRANDED COPPER GROUND WIRE, WITH TANK GROUNDS, 1'-6" FROM POLE TOP TO 1'-6" BELOW GROUND LINE.
 - ARM ATTACHMENT HARDWARE TO BE CONFIGURED SO THAT THE ARM ON ANY CIRCUIT OR LEVEL CAN BE REMOVED WITHOUT DISTURBING THE ARM AT THE SAME LEVEL FOR THE OTHER CIRCUIT.

19RML0_2.DWG
THIS DRAWING WAS PREPARED BY POWER ENGINEERS, INC. FOR A SPECIFIC PROJECT. TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH POWER AND POWER'S CLIENT IS GRANTED.

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
B	ISSUED FOR REVIEW	04/25/12	RH	EAR	*	*	
A	ISSUED FOR BID	07/29/11	JLQ	JM	*	*	

DSGN	JM	07/26/11
DRN	JLQ	07/26/11
CKD	*	*
SCALE:	NTS	
FOR 22x34 DWG ONLY		



BRIGHT SOURCE ENERGY		JOB NUMBER	REV
RIO MESA SOLAR 230 kV TRANSMISSION LINE		123272	B
TANGENT DOUBLE CIRCUIT		DRAWING NUMBER LO-2	

R:\Hydroprojects\123272\DD\DWG\02_Struct\19rml0_3.dwg template 22x34 Apr 25, 2012 - 10:50am

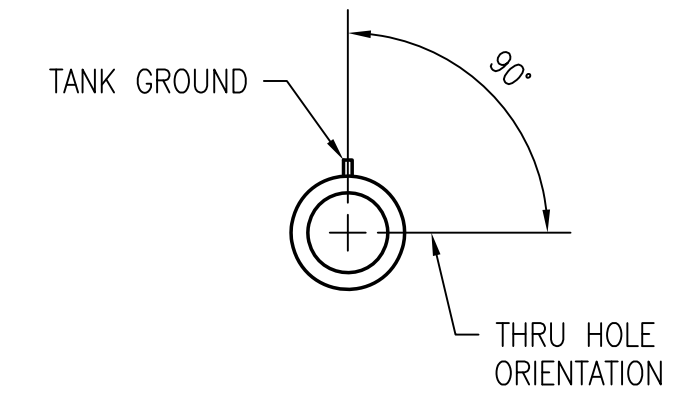
19RML0_3.DWG

STRUCTURE LOAD DATA									
LOAD CASES	WIND PRESSURE (PSF)	RADIAL ICE (IN)	INSULATOR ASSEMBLY	OVERLOAD FACTORS				WIRE TENSIONS	
				WIND	TENSION	VERTICAL	POLE WT	LAPWING	OPGW
I G.O. 95 LIGHT *	8.0	0.0	200	*	*	*	*	11405	3239
II EXTREME WIND	20.7	0.0	200	1.1	1.1	1.1	1.1	13215	4380

* CONCRETE STRUCTURES TO HAVE 1.5 OLF'S STEEL STRUCTURES TO HAVE 1.25 OLF'S.

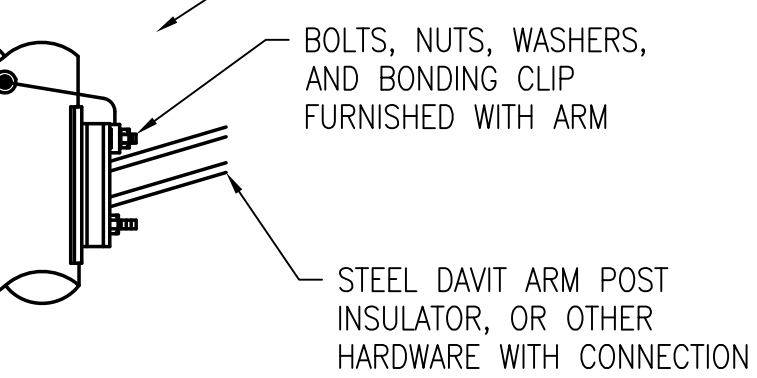
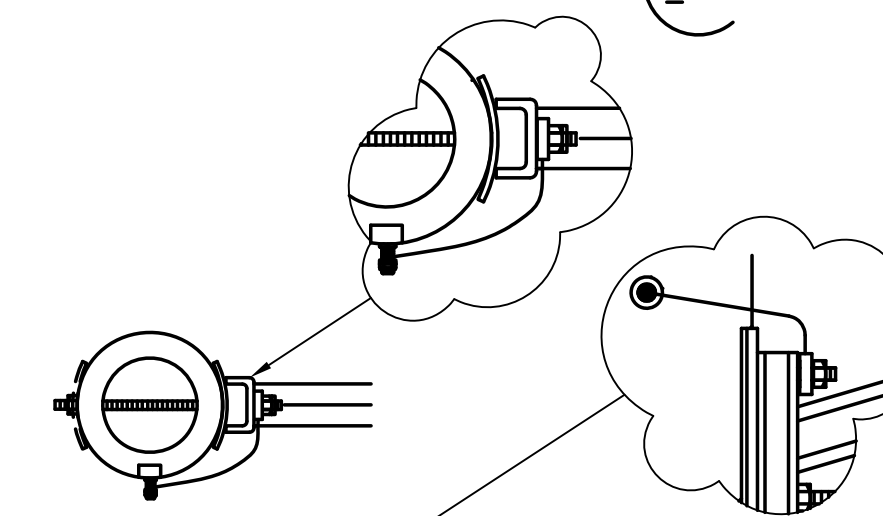
LOADING SCHEDULE (LBS)			
WIRES	LOADS	G.O. 95 LIGHT	EXTREME WIND
TRANSMISSION: 1590 ACSR "LAPWING"	V1	1800	1980
	T1	1520	3100
	L1	0	0

DESIGN PARAMETERS			
WIRE	MAX LINE ANGLE (DEG)	MAX WIND SPAN (FT)	MAX WT SPAN (FT)
TRANSMISSION: 1590 ACSR "LAPWING"	2°	925	1275
OPGW	2°	925	1275

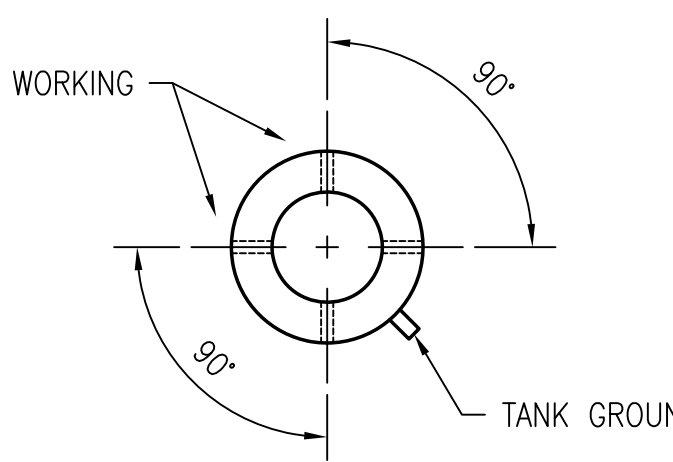


TOP OF TANK GROUND

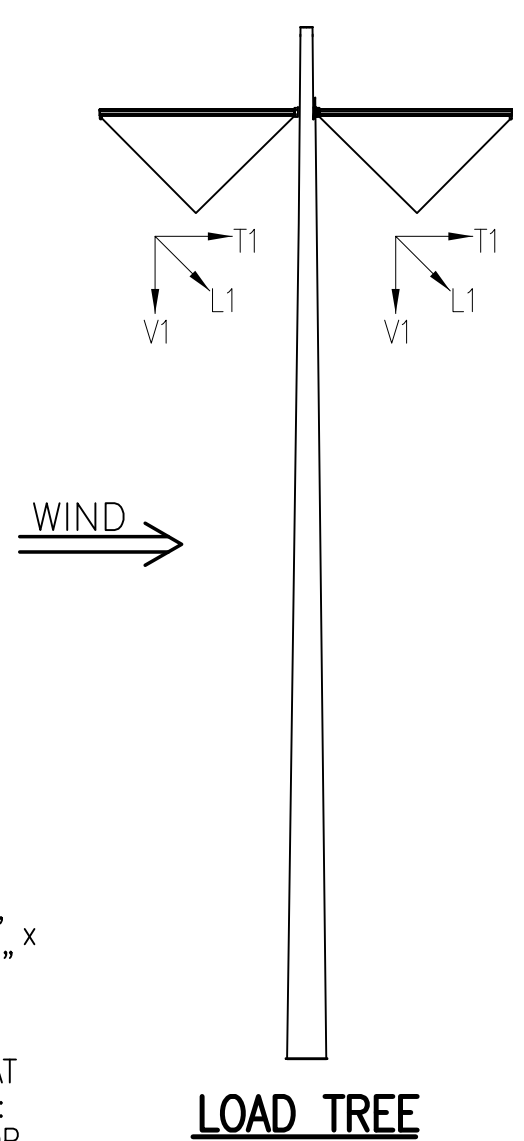
DETAIL 1



DETAIL 2



DETAIL 3



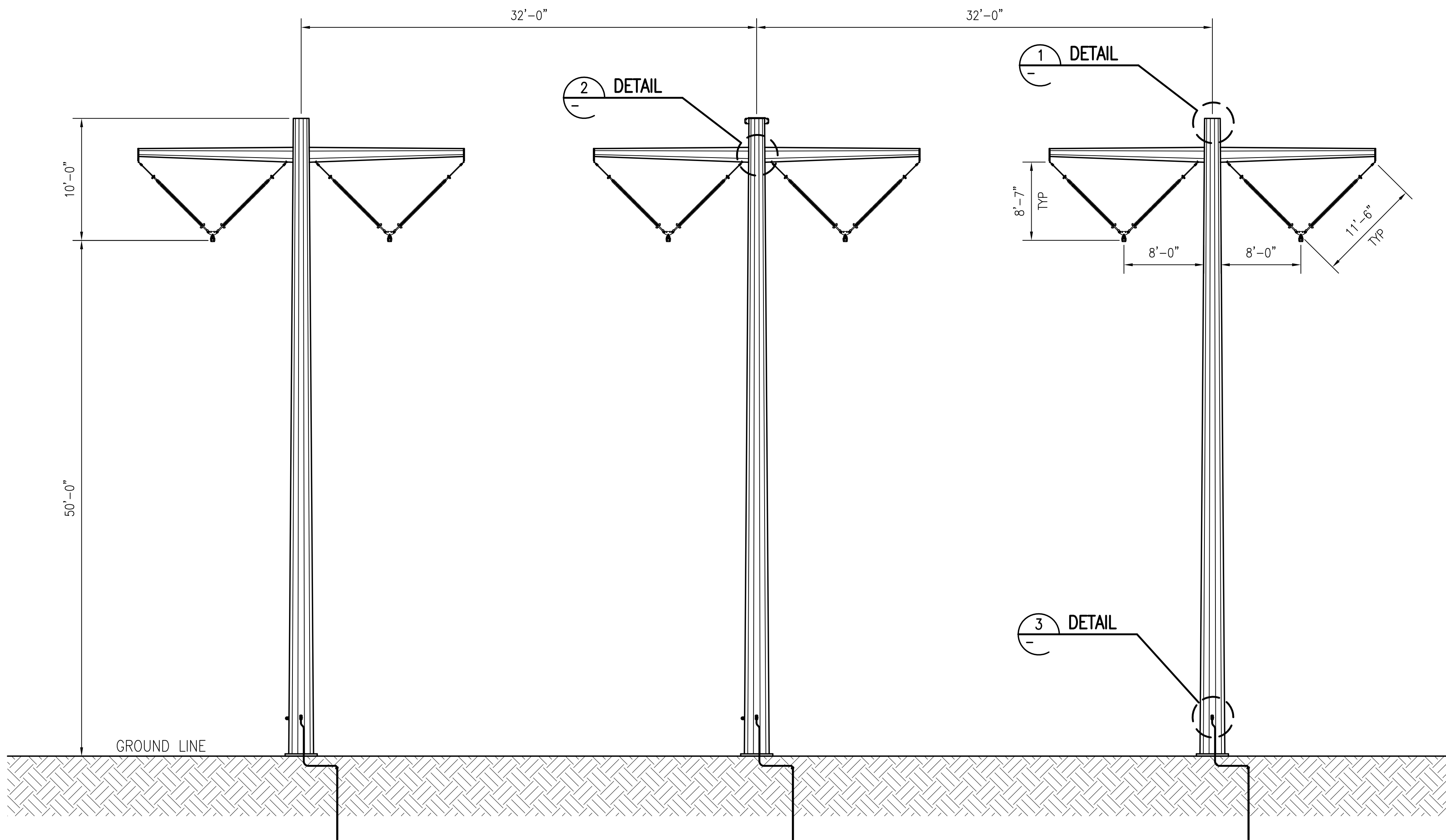
INSERTS WILL ACCEPT 3/4" x 7 1/2" STEP BOLT WITH 2" BUTTONHEADS

PROVIDE WORKING STEPS AT THE FOLLOWING LOCATIONS:
- 5" FROM THE POLE TOP
- 5" BELOW THE MIDPOINT OF ALL ATTACHMENTS

NO INSERTS BELOW 10' ABOVE GROUND LINE

NOTES

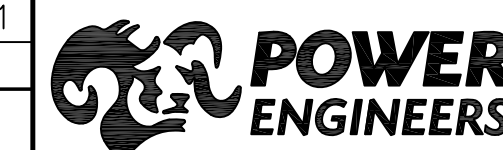
1. PROVIDE STEP INSERTS FOR CLIMBING STARTING 10'-0" ABOVE GROUND AND CONTINUING TO THE TOP OF THE STRUCTURE. PROVIDE ADDITIONAL STEP INSERTS ON FLATS WHERE NECESSARY SO THAT ALL PARTS OF THE STRUCTURE, INSULATORS, AND HARDWARE ASSEMBLIES MAY BE REACHED FOR MAINTENANCE.
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A	ISSUED FOR REVIEW	04/25/12	RH	EAR	*	*	
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DSGN	JM	07/26/11
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SCALE:	NTS	
FOR 22x34 DWG ONLY		



BRIGHT SOURCE ENERGY		JOB NUMBER	REV
RIO MESA SOLAR 230 kV TRANSMISSION LINE		123272	A
3 POLE TANGENT		DRAWING NUMBER	
		LO-3	



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV**

**APPLICATION FOR CERTIFICATION
FOR THE *RIO MESA SOLAR*
*ELECTRIC GENERATING FACILITY***

**DOCKET NO. 11-AFC-04
PROOF OF SERVICE
(Revised 2/27/12)**

APPLICANTS' AGENTS

BrightSource Energy, Inc.
Todd Stewart, Senior Director
Project Development
1999 Harrison Street, Suite 2150
Oakland, CA 94612
tstewart@brightsourceenergy.com

BrightSource Energy, Inc.
Michelle Farley
1999 Harrison Street, Suite 2150
Oakland, CA 94612
mfarley@brightsourceenergy.com

BrightSource Energy, Inc.
Brad DeJean
1999 Harrison Street, Suite 2150
Oakland, CA 94612
e-mail service preferred
bdejean@brightsourceenergy.com

APPLICANTS' CONSULTANTS

Grenier and Associates, Inc.
Andrea Grenier
1420 E. Roseville Parkway,
Suite 140-377
Roseville, CA 95661
e-mail service preferred
andrea@agrenier.com

URS Corporation
Angela Leiba
4225 Executive Square, Suite 1600
La Jolla, CA 92037
angela_leiba@urscorp.com

COUNSEL FOR APPLICANTS

Ellison, Schneider, & Harris
Christopher T. Ellison
Brian S. Biering
2600 Capitol Avenue, Suite 400
Sacramento, CA 95816-5905
cte@eslawfirm.com
bsb@eslawfirm.com

INTERESTED AGENCIES

Mojave Desert AQMD
Chris Anderson, Air Quality Engineer
14306 Park Avenue,
*Victorville, CA 92392-2310
canderson@mdaqmd.ca.gov

California ISO
e-mail service preferred
e-recipient@caiso.com

Bureau of Land Management
Cedric Perry
Lynnette Elser
22835 Calle San Juan De Los Lagos
Moreno Valley, CA 92553
cperry@blm.gov
elser@blm.gov

INTERVENORS

Center for Biological Diversity
Lisa T. Belenky, Senior Attorney
351 California Street, Suite 600
San Francisco, CA 94104
e-mail service preferred
lbelenky@biologicaldiversity.org

Center for Biological Diversity
Ileene Anderson
Public Lands Desert Director
PMB 447, 8033 Sunset Boulevard
Los Angeles, CA 90046 *e-mail
service preferred*
ianderson@biologicaldiversity.org

**ENERGY COMMISSION –
DECISIONMAKERS**

CARLA PETERMAN
Commissioner and Presiding Member
CPeterma@energy.state.ca.us

KAREN DOUGLAS
Commissioner and Associate Member
e-mail service preferred
kldougl@energy.state.ca.us

**ENERGY COMMISSION –
DECISIONMAKERS (cont.)**

Kourtney Vaccaro
Hearing Adviser
e-mail service preferred
kvaccaro@energy.state.ca.us

Galen Lemei
Advisor to Commissioner Douglas
e-mail service preferred
glemei@energy.state.ca.us

Jennifer Nelson
Advisor to Commissioner Douglas
e-mail service preferred
jnelson@energy.state.ca.us

Jim Bartridge
Advisor to Commissioner Peterman
jbartrid@energy.state.ca.us

ENERGY COMMISSION STAFF

Pierre Martinez Project
Manager
pmartine@energy.state.ca.us

Lisa DeCarlo
Staff Counsel
e-mail service preferred
ldecarlo@energy.state.ca.us

Eileen Allen
Commissioners' Technical
Advisor for Facility Siting
e-mail service preferred
eallen@energy.state.ca.us

**ENERGY COMMISSION –
PUBLIC ADVISER**

Jennifer Jennings
Public Adviser's Office
e-mail service preferred
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Michelle L. Farley, declare that on May 3, 2012, I served and filed copies of the attached Supplemental Response to Data Request #40, dated May 3, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: [<http://www.energy.ca.gov/sitingcases/riomesa/index.html>].

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

(Check all that Apply)

For service to all other parties:

X Served electronically to all e-mail addresses on the Proof of Service list;

_____ Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "e-mail preferred."

AND

For filing with the Docket Unit at the Energy Commission:

X by sending electronic copies to the e-mail address below (preferred method); **OR**

_____ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 11-AFC-4
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

_____ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
mlevy@energy.state.ca.us

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.



Michelle L. Farley