

South Ripley Solar

Electric and Magnetic Field Study
SRS-E-EMF-SUP_A-RB

January 4th 2022



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Issue and revision record

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Contents

Executive summary	1
1 Design Criteria	2
2 Overhead Cable Results	3
2.1 Case 1 – Electric Field Levels	3
2.2 Case 1 – Magnetic Field Levels	4
2.3 Case 2 – Electric Field Levels	5
2.4 Case 2 – Magnetic Field Levels	6
3 Conclusion	7
4 References	8
Appendices	9
A. EMF Residential Clearance	10
B. Substation & Transmission Drawings	11
C. Software Output Files	12

Tables

Table 2-1: 230 kV Transmission Line Electric Field Levels	3
Table 2-2: 230 kV Transmission Line Magnetic Field Levels	4
Table 2-3: Two (2) 230 kV Transmission Line Electric Field Levels	5
Table 2-4: Two (2) 230 kV Transmission Line Magnetic Field Levels	6
Table 3-1: EMF Calculation Results	7
Table 4-1: References	8

Figures

Figure 2.1: Case 1 – Electric Field Calculation	3
Figure 2.2: Case 1 – Magnetic Field Calculation	4

Figure 2.3: Case 2 – Electric Field Calculation	5
Figure 2.4: Case 2 – Magnetic Field Calculation	6

Executive summary

The South Ripley Solar Project is a proposed 270 MW utility-scale solar energy facility located in Chautauqua County, New York. The project, which is being developed by ConnectGen Chautauqua County LLC, is proposed to interconnect into a 230 kV transmission line to deliver power to the New York State transmission system. Mott MacDonald (MM) is responsible for supporting the Section 94-c application.

The EMF Study concludes that all electric and magnetic field levels for the overhead cables are within the Interim Standard values of 1.6 kV/m for Electric Fields and 200 mG for Magnetic Fields set forth by the state of New York Public Service Commission, at edge of ROW.

This report presents the Electric and Magnetic Field (EMF) calculations for the overhead transmission line conducted using PLS-CADD. Two Case Studies were conducted to evaluate EMF impacts:

Case 1: 230kV Gen-Tie transmission line from the interconnection station north dead-end to the collection station dead-end.

Case 2: 2 x 230kV horizontal transmission line spans in parallel from the two (2) interconnection station southern dead-ends to the turning structures on the existing transmission ROW.

Refer to Appendix for case designation annotation. The following cases were studied:

- Case 1 - Electric Field Levels
- Case 1 - Magnetic Field Levels
- Case 2 - Electric Field Levels
- Case 2 - Magnetic Field Levels

These cases are required as per Section 94-c guidelines. There are no expected variations in amperage for the following conditions: Summer Normal, Summer Emergency, Winter Normal, Winter Emergency, Max average annual load initially, and Max average annual load at 10 years out. The electric and magnetic fields calculated are based on the lowest sag point and the point where vertical ground clearance is minimum. This in turn gives the highest EMF calculation at the one meter above grade test point.

The following sections detail the method used in the studies and present the results of the analysis.

1 Design Criteria

The following data points were used as inputs to PLS CADD for calculating the electric and magnetic fields for the South Ripley Solar Project:

- The electric field standards in the state of New York is set forth by the Public Service Commission (PCS). In Opinion No. 78-13 an interim standard of 1.6 kilovolts per meter (kV/m) for transmission lines, measured at the edge of the right-of-way, one meter above ground level, with the line at rated voltage [1].
- The magnetic field standard in the state of New York is set forth by the Public Service Commission (PCS). In cases 26529 and 26559, the interim standard was set to 200 milligauss (mG), measured at the edge of the right-of-way, one meter above ground level [1].
- The right-of-way for the overhead cables is assumed to be 75 feet from centerline (150 ft total) for Case 1 and 250 ft total for Case 2 (100 ft between centerlines of parallel lines plus 75 ft each side).
- Based on Exhibit 22 of Chapter XVIII, Title 19 of NYCRR Part 900, for the Office of Renewable Energy Siting, the electric field calculation must use 5-foot measurement intervals showing the entire right-of-way and out to 500 feet on both sides.
- Each calculation was set to calculate a value at 3.28 feet above the ground as this is equivalent to the 1-meter requirement set forth by the New York standard outlined above.
- The electric and magnetic fields calculated are based on the lowest sag point and the point where vertical ground clearance is minimum, results for the latter point are presented in this report as it produced the worst-case scenarios.
- The configuration considered is based on the substation general arrangement drawings (drawing no. SRS-E-210-01_SUP_A and SRS-E-211-01_SUP_A) and Transmission Plan & Profile drawings (SRS-E-220-01_SUP_A and SRS-E-220-02_SUP_A).
- The wind force is assumed to be acting perpendicular to the conductor at a speed of 3 ft/s as per New York Power Pool (NYPP) Final Report on Tie-Line Ratings [2].
- The electric and magnetic field calculations were run at the full ampacity of a 795 ACSR 26/7 Strand "DRAKE" (1,200 amps), which has a current over that required to evacuate the max capacity of the 285 MVA plant. There are no expected variations in amperage for the following conditions: Summer Normal, Summer Emergency, Winter Normal, Winter Emergency, Max average annual load initially, and Max average annual load at 10 years out.

2 Overhead Cable Results

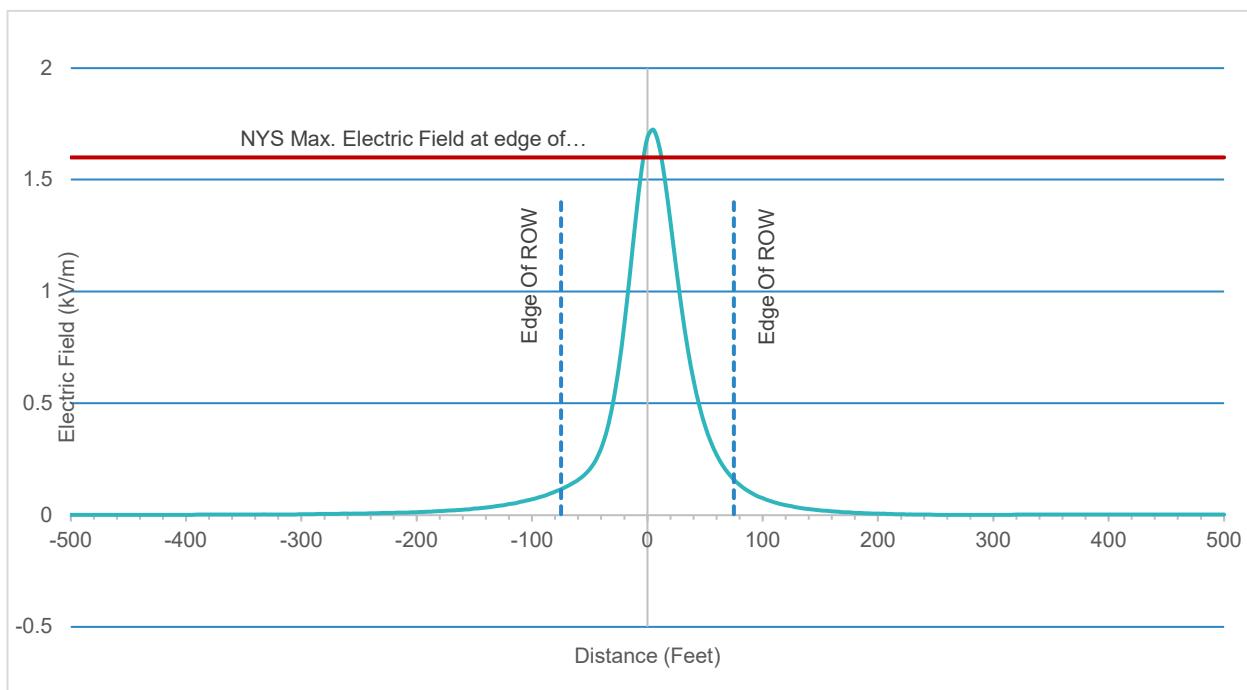
The Electric and Magnetic Field levels for the 230 kV overhead cables were calculated at a height of 1-meter above grade as described in the Design Criteria.
Refer to Appendix C for detailed results from the EMF calculation.

2.1 Case 1 – Electric Field Levels

Table 2-1: 230 kV Transmission Line Electric Field Levels

Case	Field Strength Calculated at Centerline	Field Strength Calculated at Edge of Right-of-Way	New York Magnetic Field Standard at Edge of Right-of-Way
Case 1	1.689 kV/m	0.159 kV/m @ ± 75ft	< 1.6 kV/m

Figure 2.1: Case 1 – Electric Field Calculation



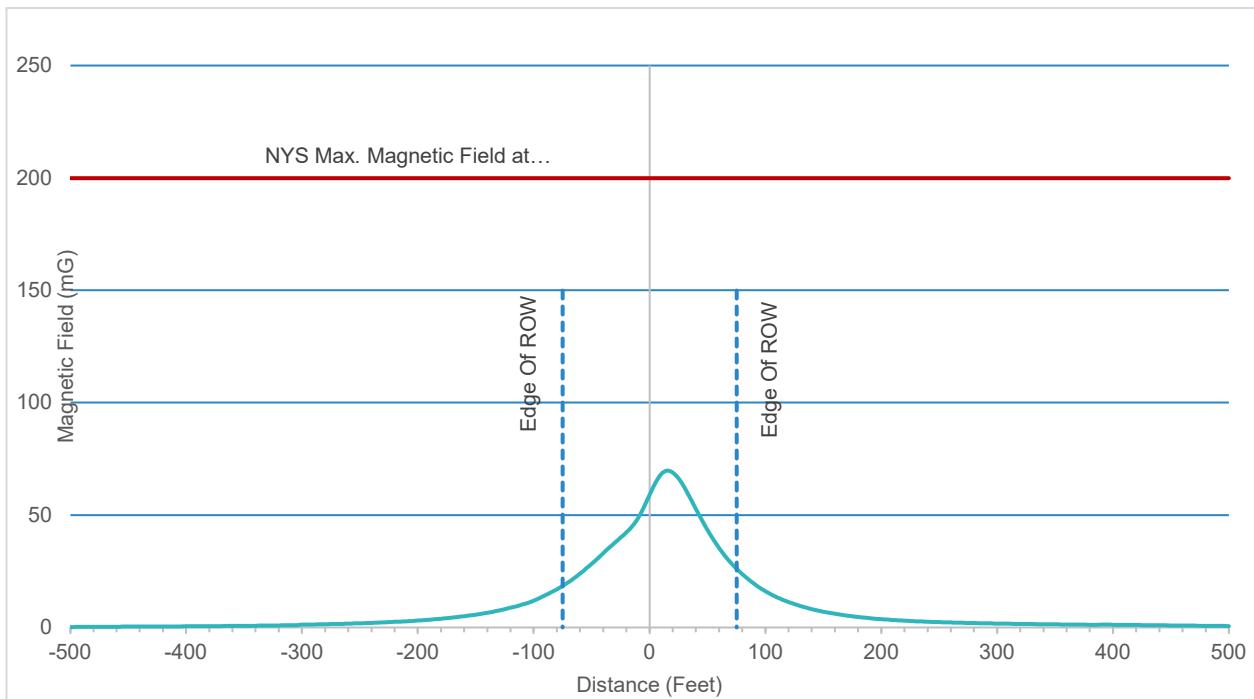
Source: PLS CADD Model 3D EMF Calculations - South Ripley Solar_230kV.xyz

2.2 Case 1 – Magnetic Field Levels

Table 2-2: 230 kV Transmission Line Magnetic Field Levels

Case	Field Strength Calculated at Centerline	Field Strength Calculated at Edge of Right-of-Way	New York Magnetic Field Standard at Edge of Right-of-Way
Case 1	59.157 mG	26.151 mG @ ± 75ft	< 200 mG

Figure 2.2: Case 1 – Magnetic Field Calculation



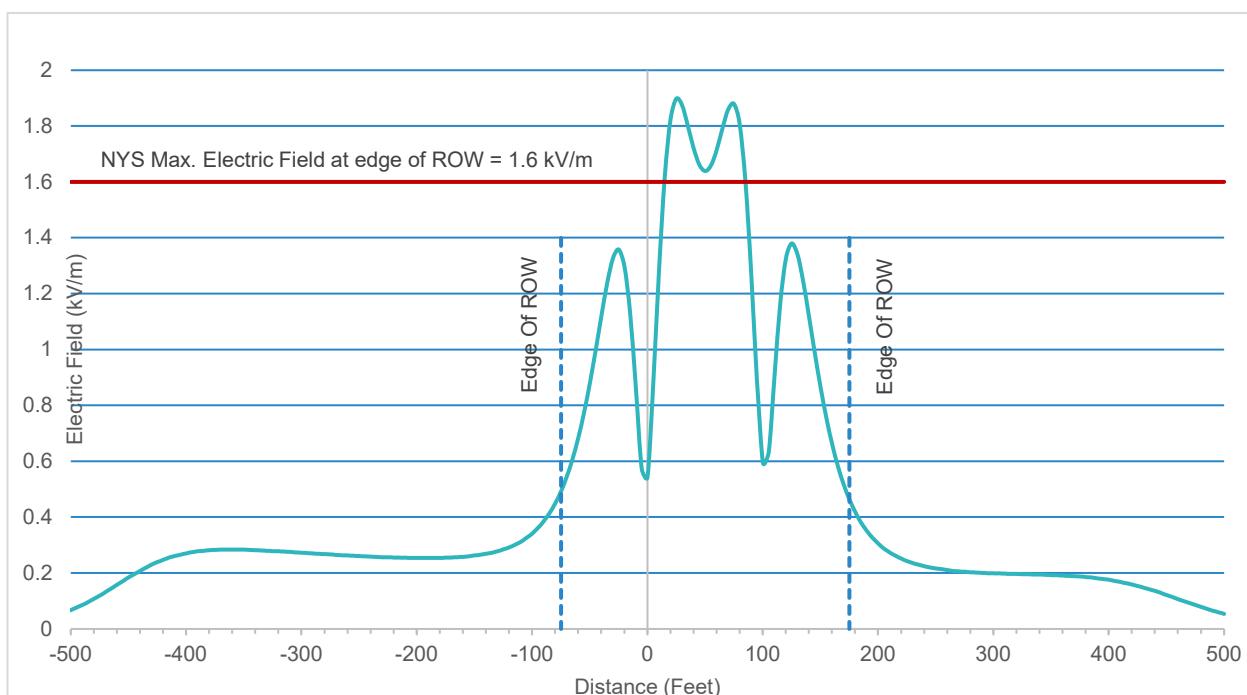
Source: PLS CADD Model 3D EMF Calculations - South Ripley Solar_230kV.xyz

2.3 Case 2 – Electric Field Levels

Table 2-3: Two (2) 230 kV Transmission Line Electric Field Levels

Case	Field Strength Calculated at Centerline	Field Strength Calculated at Edge of Right-of-Way	New York Magnetic Field Standard at Edge of Right-of-Way
Case 2	0.543 kV/m	0.493 kV/m @ -75ft & +175ft	< 1.6 kV/m

Figure 2.3: Case 2 – Electric Field Calculation



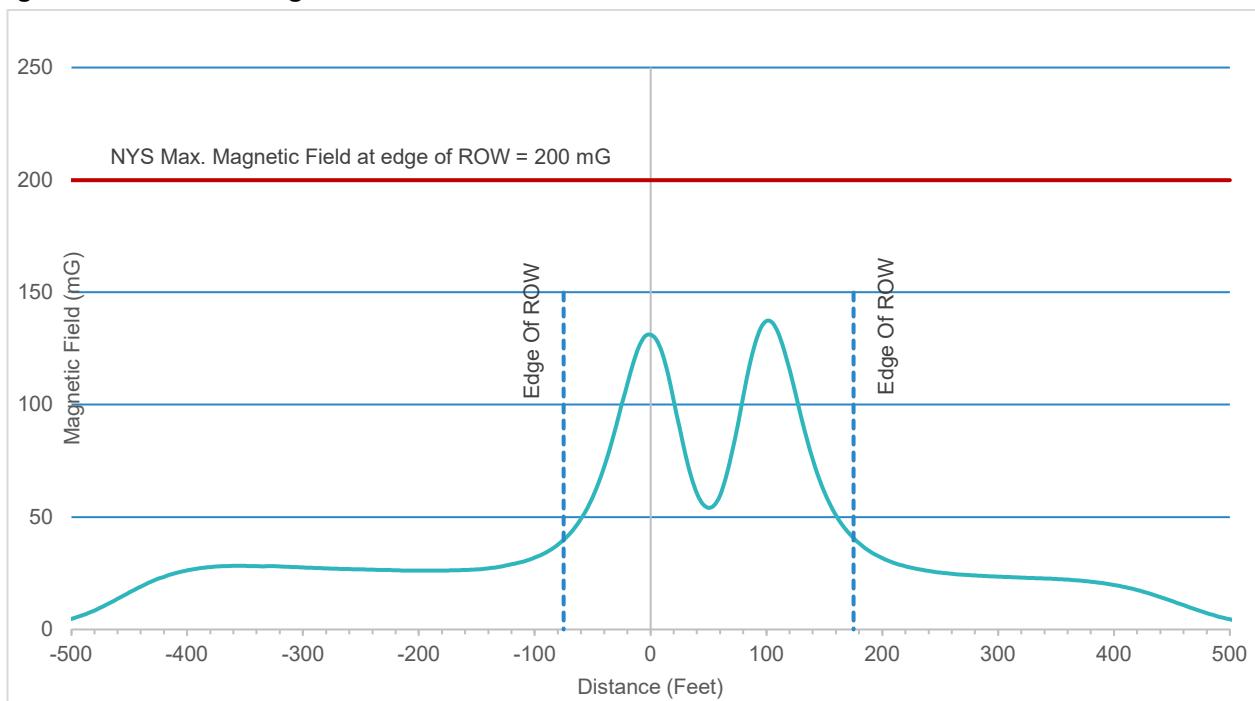
Source: PLS CADD Model 3D EMF Calculations - South Ripley Solar_230kV.xyz

2.4 Case 2 – Magnetic Field Levels

Table 2-4: Two (2) 230 kV Transmission Line Magnetic Field Levels

Case	Field Strength Calculated at Centerline	Field Strength Calculated at Edge of Right-of-Way	New York Magnetic Field Standard at Edge of Right-of-Way
Case 2	131.2 mG	40.7 mG @ -75ft & +175ft	< 200 mG

Figure 2.4: Case 2 – Magnetic Field Calculation



Source: PLS CADD Model 3D EMF Calculations - South Ripley Solar_230kV.xyz

3 Conclusion

The EMF Study concludes that all electric and magnetic field levels for the overhead cables are within the Interim Standard values of 1.6 kV/m for Electric Fields and 200 mG for Magnetic Fields set forth by the state of New York Public Service Commission, at edge of ROW.

Table 3-1: EMF Calculation Results

Case	Magnetic Field Strength Calculated at Centerline	Magnetic Field Strength Calculated at Edge of Right-of-Way	Electric Field Strength Calculated at Centerline	Electric Field Strength Calculated at Edge of Right-of-Way	New York Magnetic Field Standard at Edge of Right-of-Way	New York Electric Field Standard at Edge of Right-of-Way
Case 1	59.157 mG	26.151 mG @ ± 75ft	1.689 kV/m	0.159 kV/m @ ± 75ft	< 200 mG	< 1.6 kV/m
Case 2	131.2 mG	40.7 mG @ -75ft & +175ft	0.543 kV/m	0.493 kV/m @ -75ft & +175ft	< 200 mG	< 1.6 kV/m

4 References

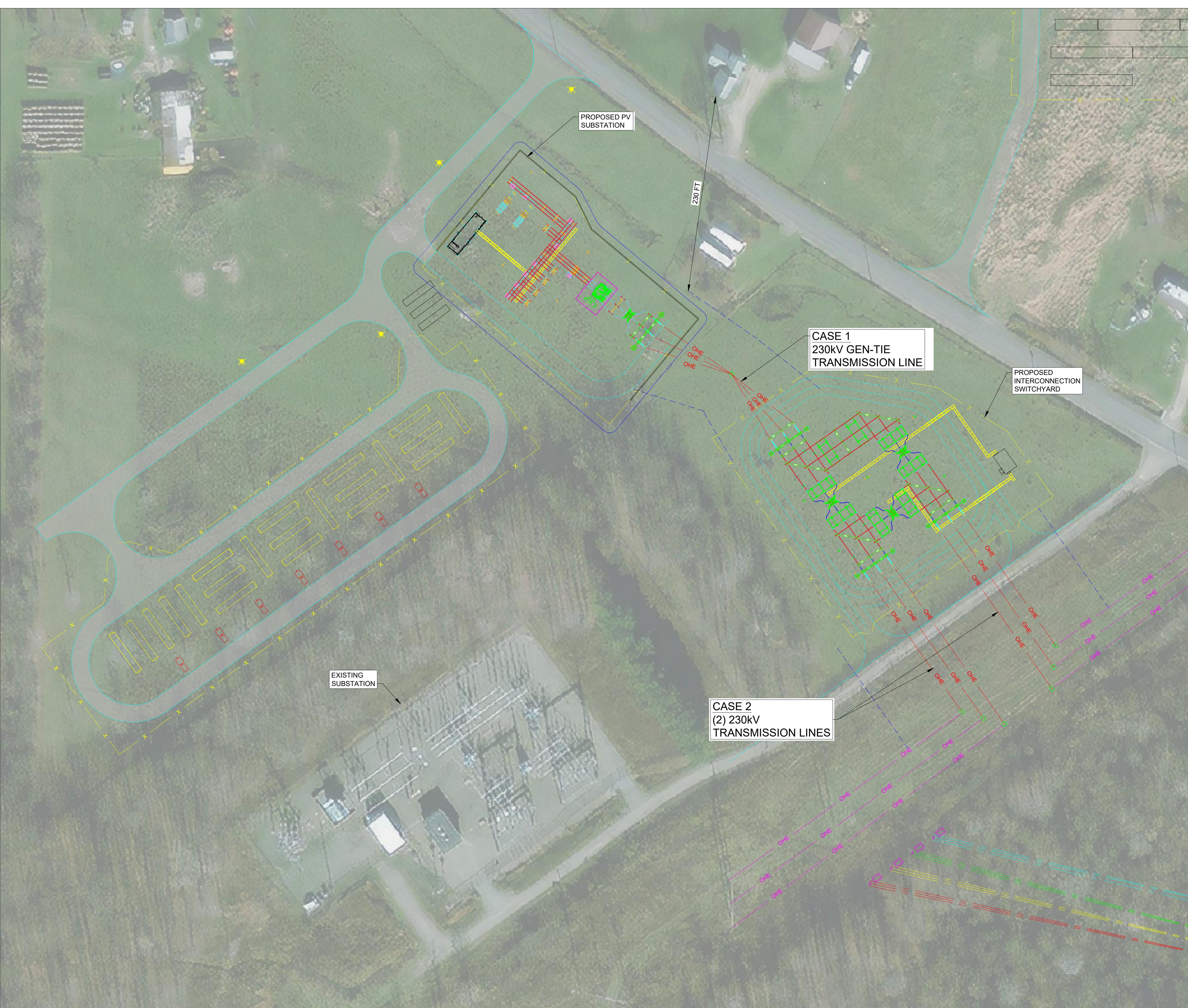
Table 4-1: References

No.	Type	Description
1.	Proceeding Notes	Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities, Dated September 11, 1990
2.	Report	New York Power Pool Final Report on Tie Line Ratings, Dated November 1995

Appendices

A. EMF Residential Clearance	10
B. Substation & Transmission Drawings	11
C. Software Output Files	12

A. EMF Residential Clearance

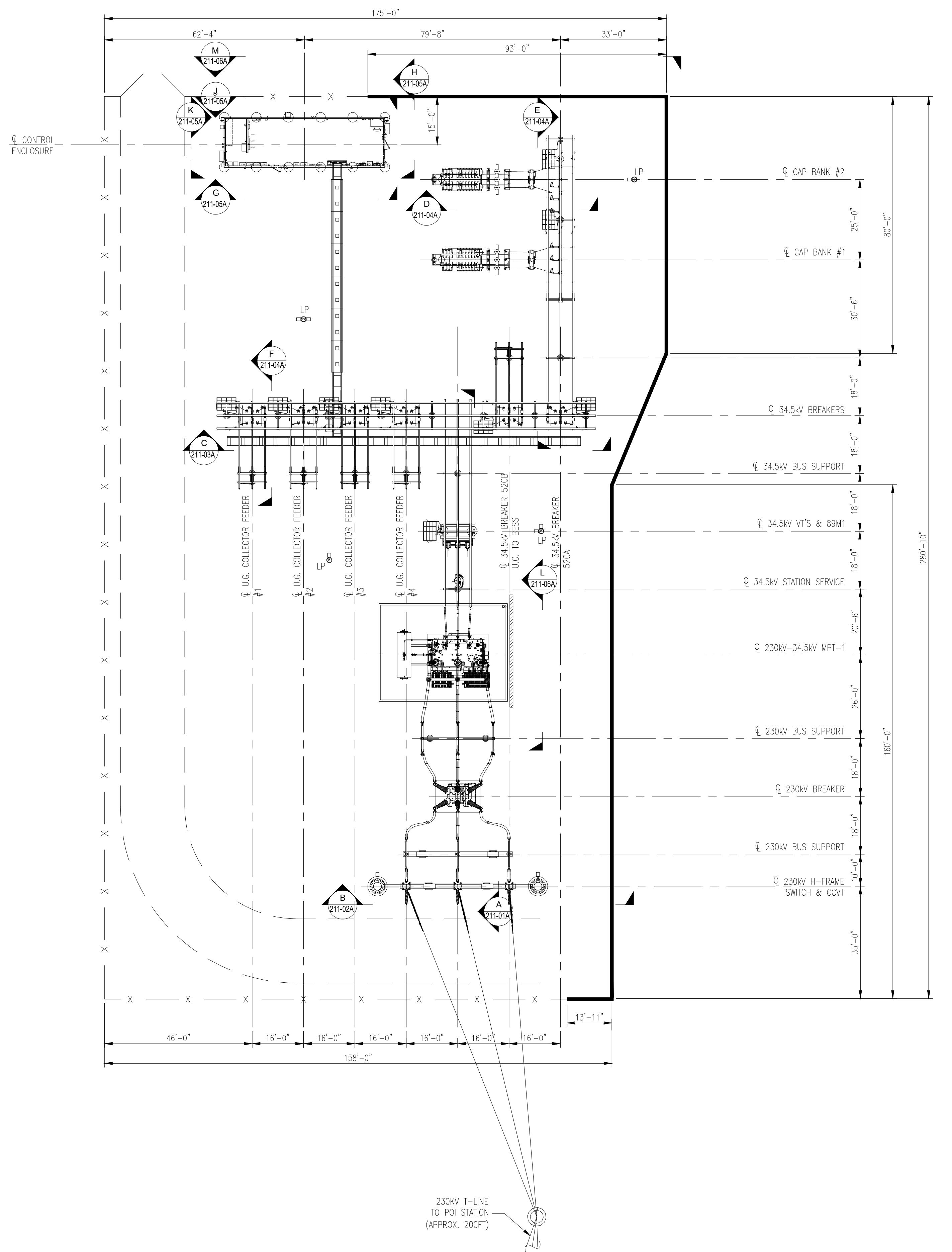


Notes
1. DIMENSIONS ARE TO APPROXIMATE EDGE OF RIGHT OF WAY.
Legend <ul style="list-style-type: none"> OVERHEAD LINE (EXISTING) OVERHEAD LINE (PROPOSED) EDGE OF R.O.W.

OVERHEAD RESIDENTIAL CLEARANCE - SUPPLEMENT A

N

B. Substation & Transmission Drawings



VOLTAGE		MINIMUM METAL-TO-METAL CLEARANCE PHASE-TO-PHASE	DESIGN CENTERLINE TO CENTERLINE PHASE SPACING FOR RIGID BUS RECOMMENDED	CLEARANCE TO GROUNDED PARTS FOR RIGID BUS	MINIMUM CLEARANCE BETWEEN OVERHEAD BUS AND GROUND FOR PERSONAL SAFETY	MINIMUM CLEARANCE BETWEEN OVERHEAD BUS AND ROADWAY
KV	BIL					
230	900	7'-5"	11'-0"	6'-4"	15'-0"	27'-0"
34.5	200	1'-6"	4'-0"	1'-3"	10'-0"	22'-0"

- Notes
1. THE EQUIPMENT AND LAYOUT SHOWN IS FOR CONCEPTUAL USE ONLY.
 2. ELECTRICAL EQUIPMENT WILL UTILIZE GALVANIZED STEEL MATERIAL AND EQUIPMENT COLOR WILL BE NATURAL GALVANIZED STEEL, WHITE OR ANSI GREY. FINAL MATERIAL TYPE AND FINISH COLOR DETAILS WILL BE UPDATED DURING DETAILED DESIGN.

Legend	
—	ACCESS PATH
—	SHIELD WIRE
—x—x—	FENCE
[]	PEDESTRIAN RATED TRENCH
[]	HS 20 VEHICLE RATED TRENCH
□	LIGHT FIXTURE
●	BOLLARD
SP	SHIELD POLE
LP	LIGHT POLE
▨	12' SOUND WALL
■	20' SOUND WALL

Reference Drawings					
C	01/07/2022	DT	ISSUED FOR 94-C	DH	KS
B	12/08/2021	DT	ISSUED FOR REVIEW	DH	KS
A	11/24/2021	DT	ISSUED FOR REVIEW	DH	KS
Rev	Date	Drawn	Description	Ch'kd	App'd



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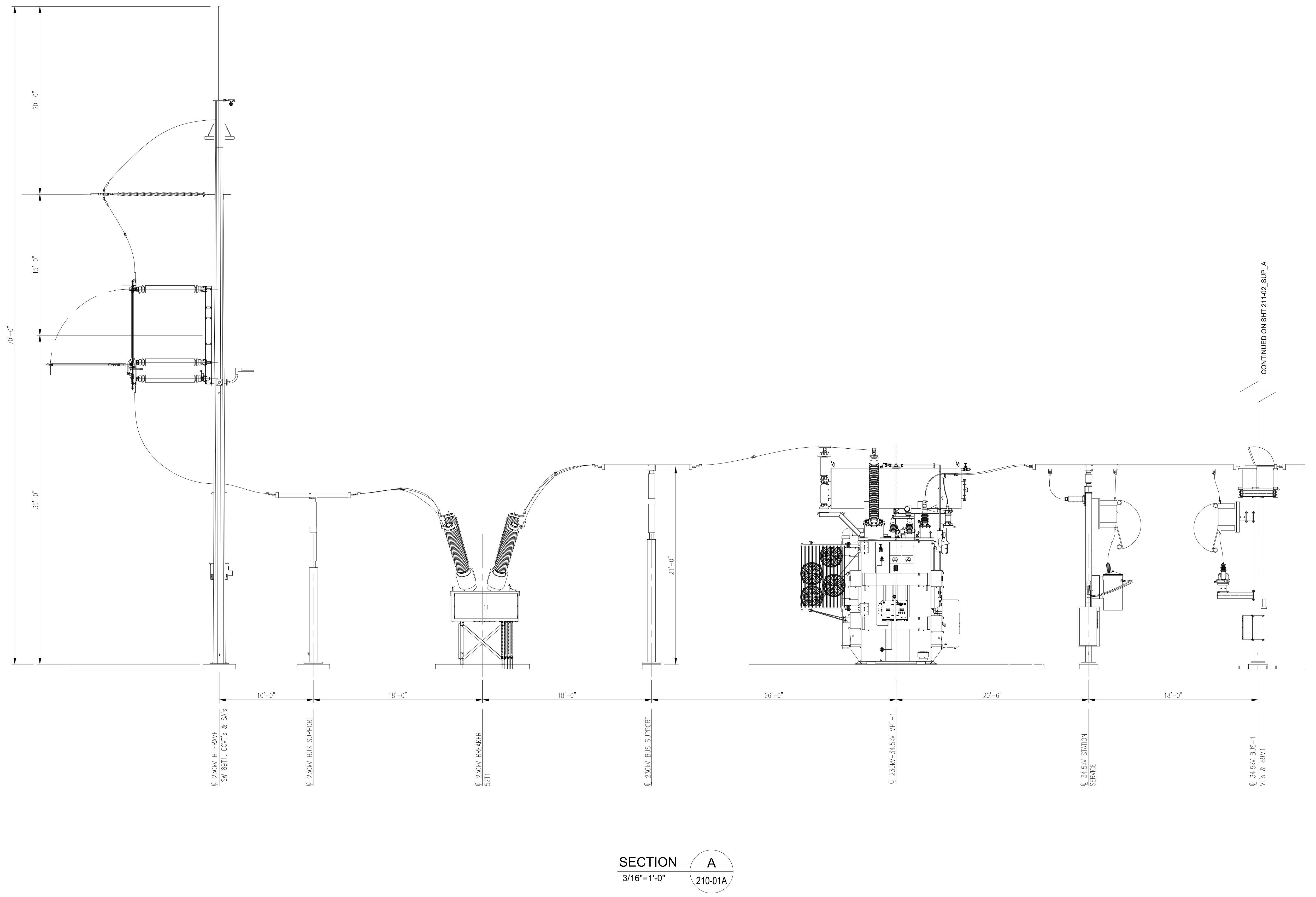
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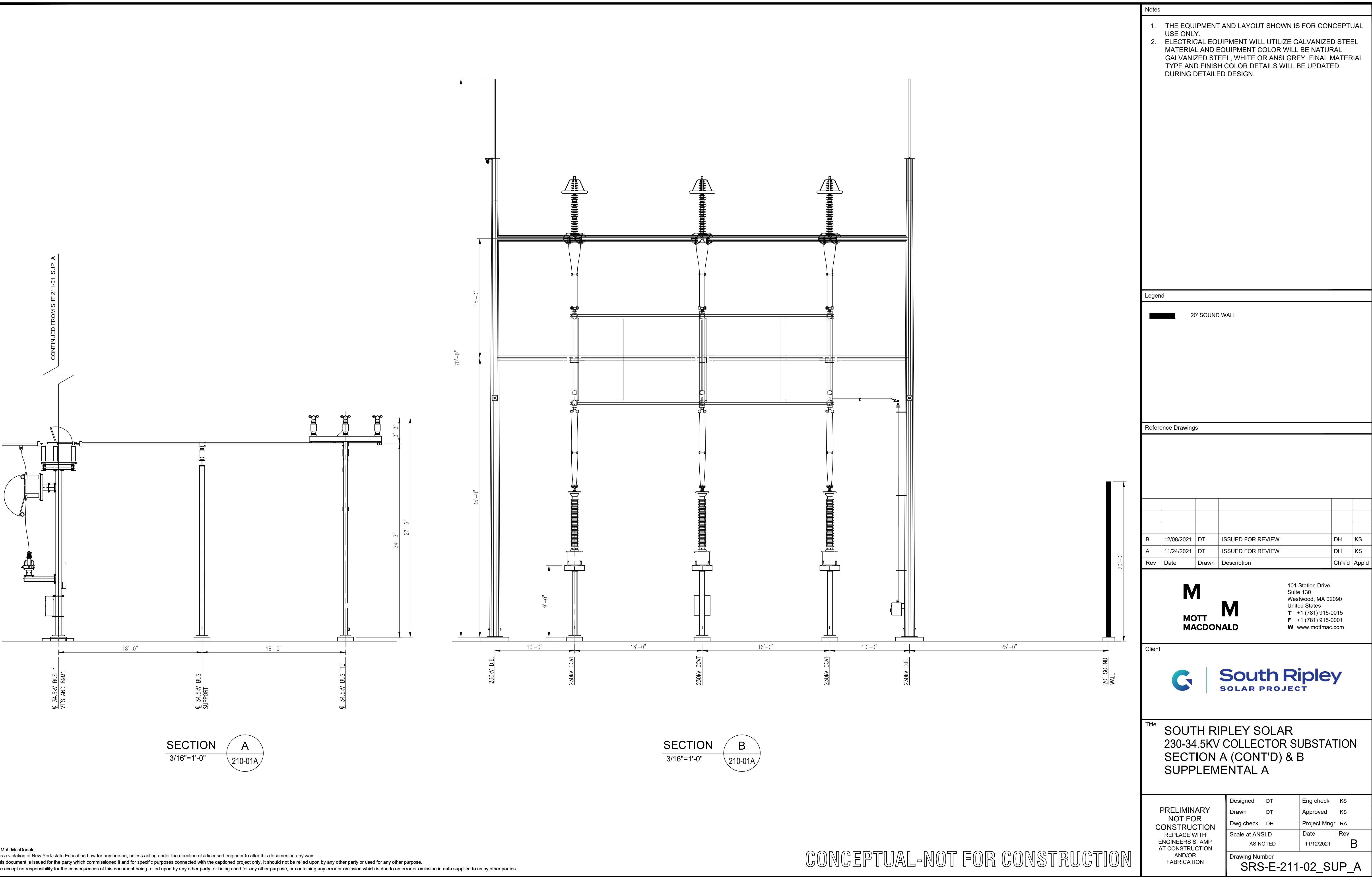
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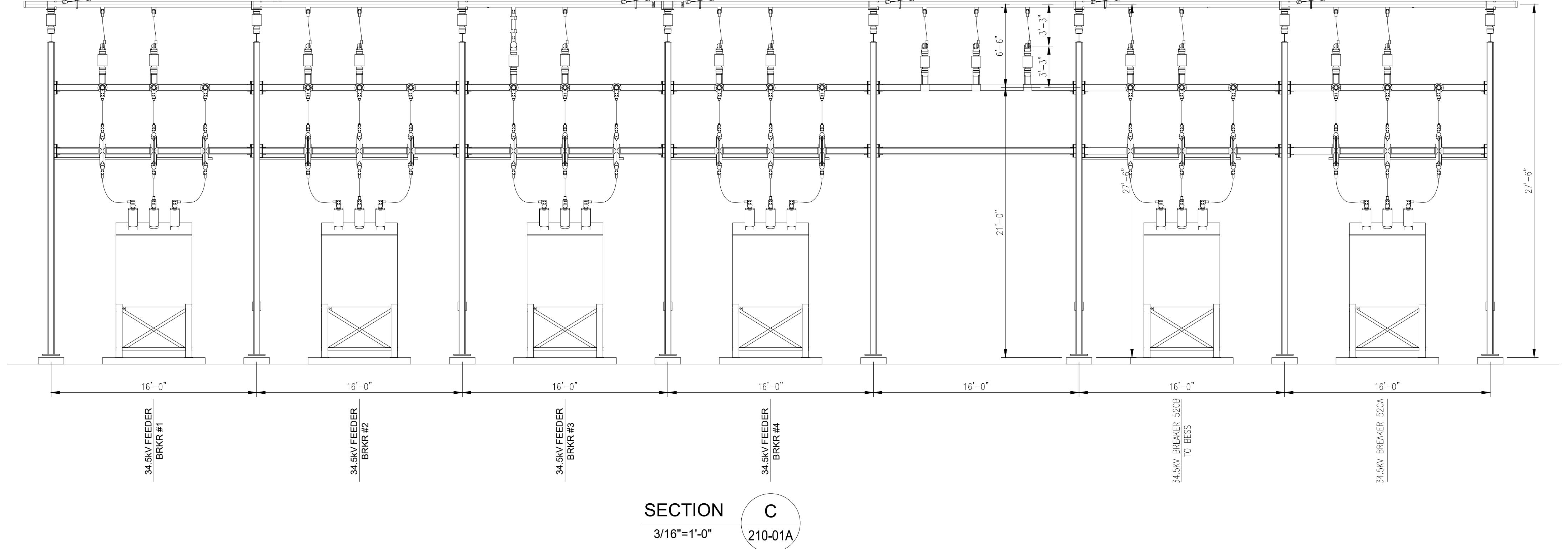
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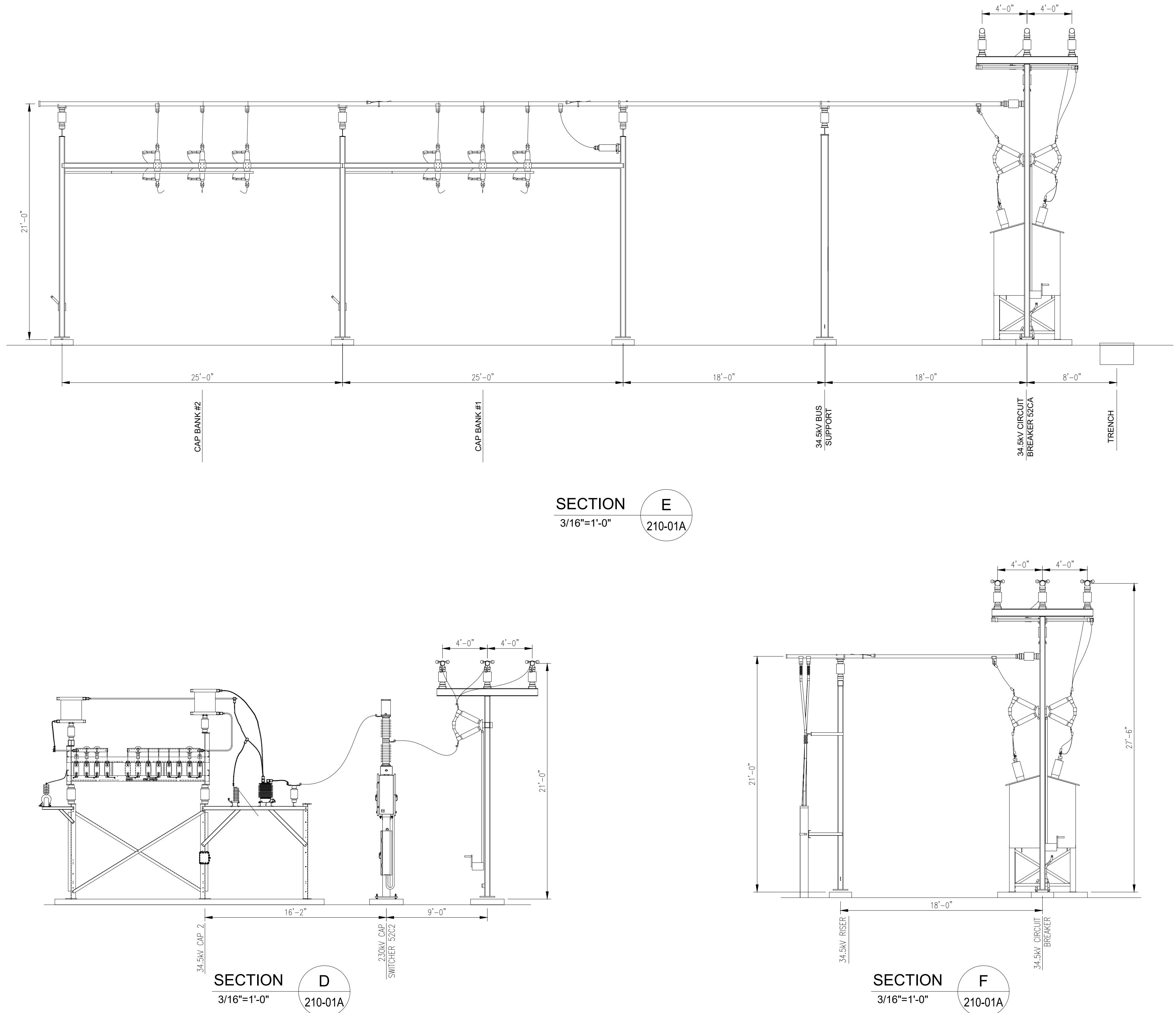


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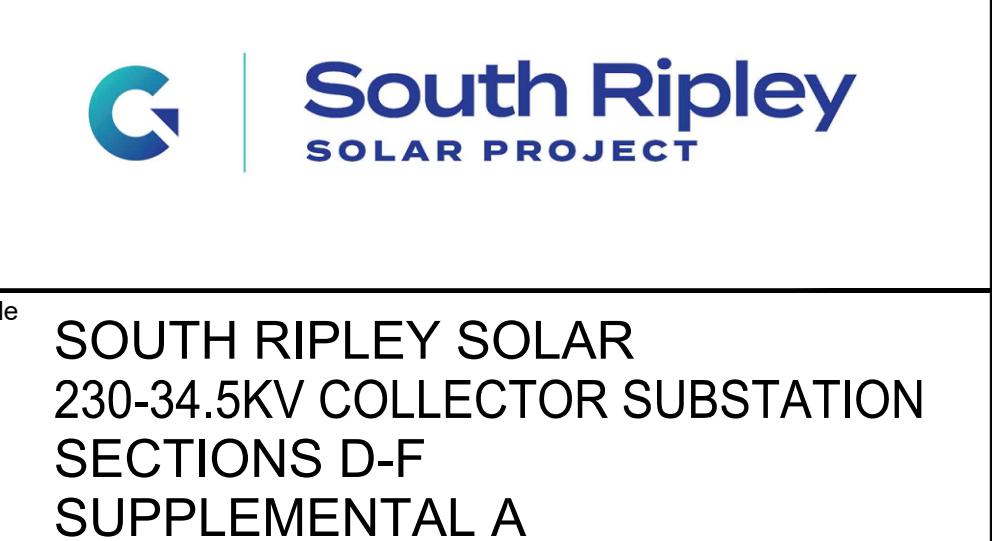
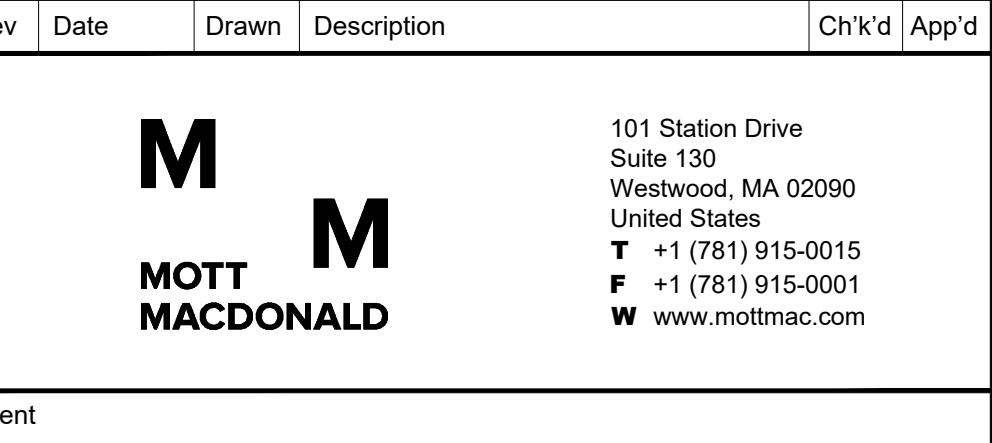
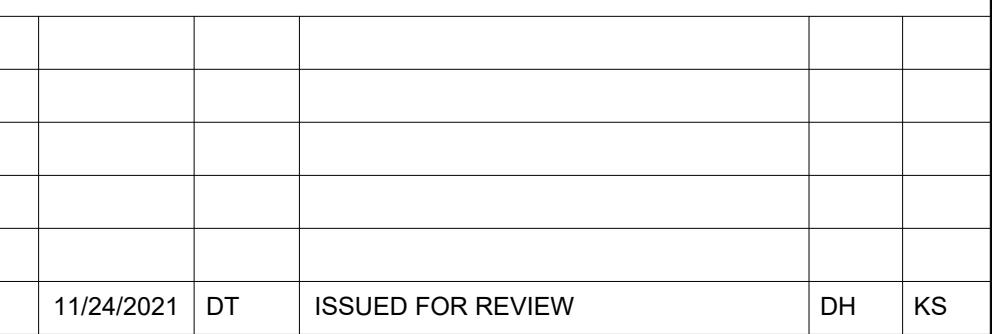
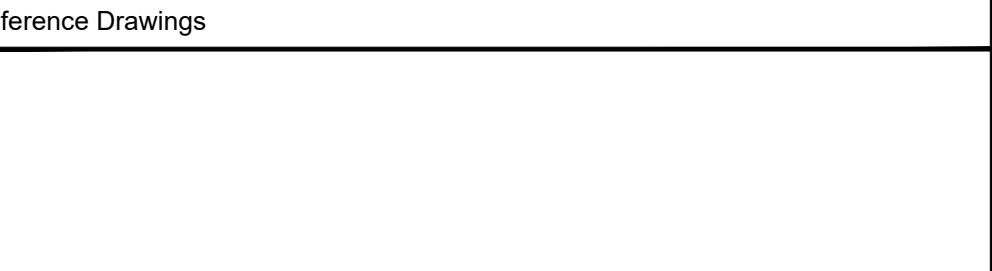
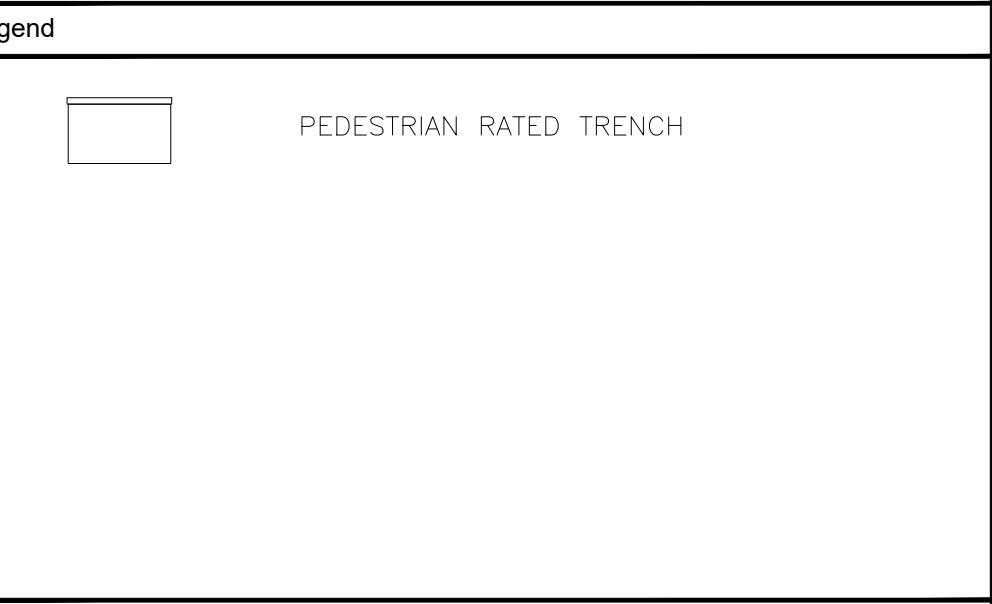
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PEDESTRIAN RATED TRENCH LIGHT													
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South Ripley SOLAR PROJECT													
Title													
SOUTH RIPLEY SOLAR 230-34.5KV COLLECTOR SUBSTATION SECTION C SUPPLEMENTAL A													
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION													
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Notes

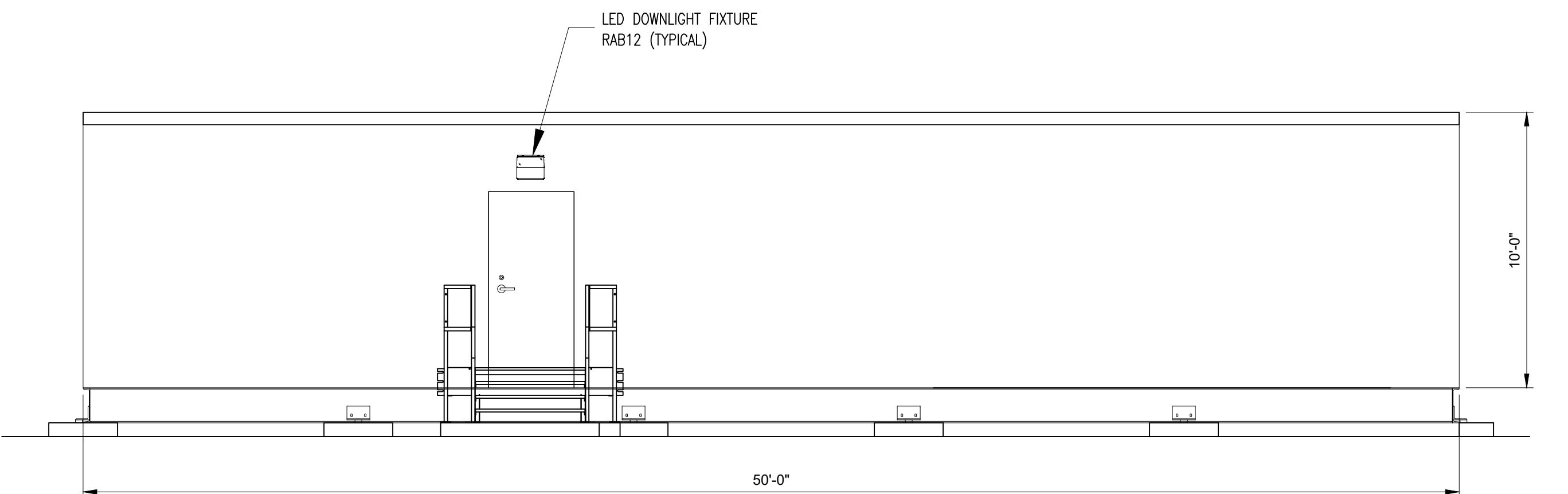
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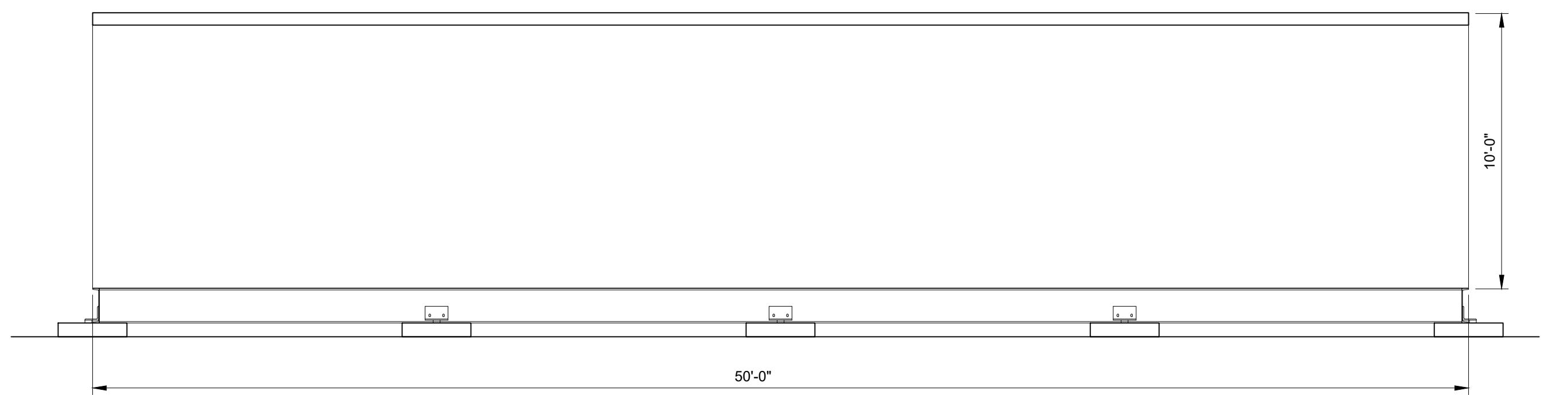
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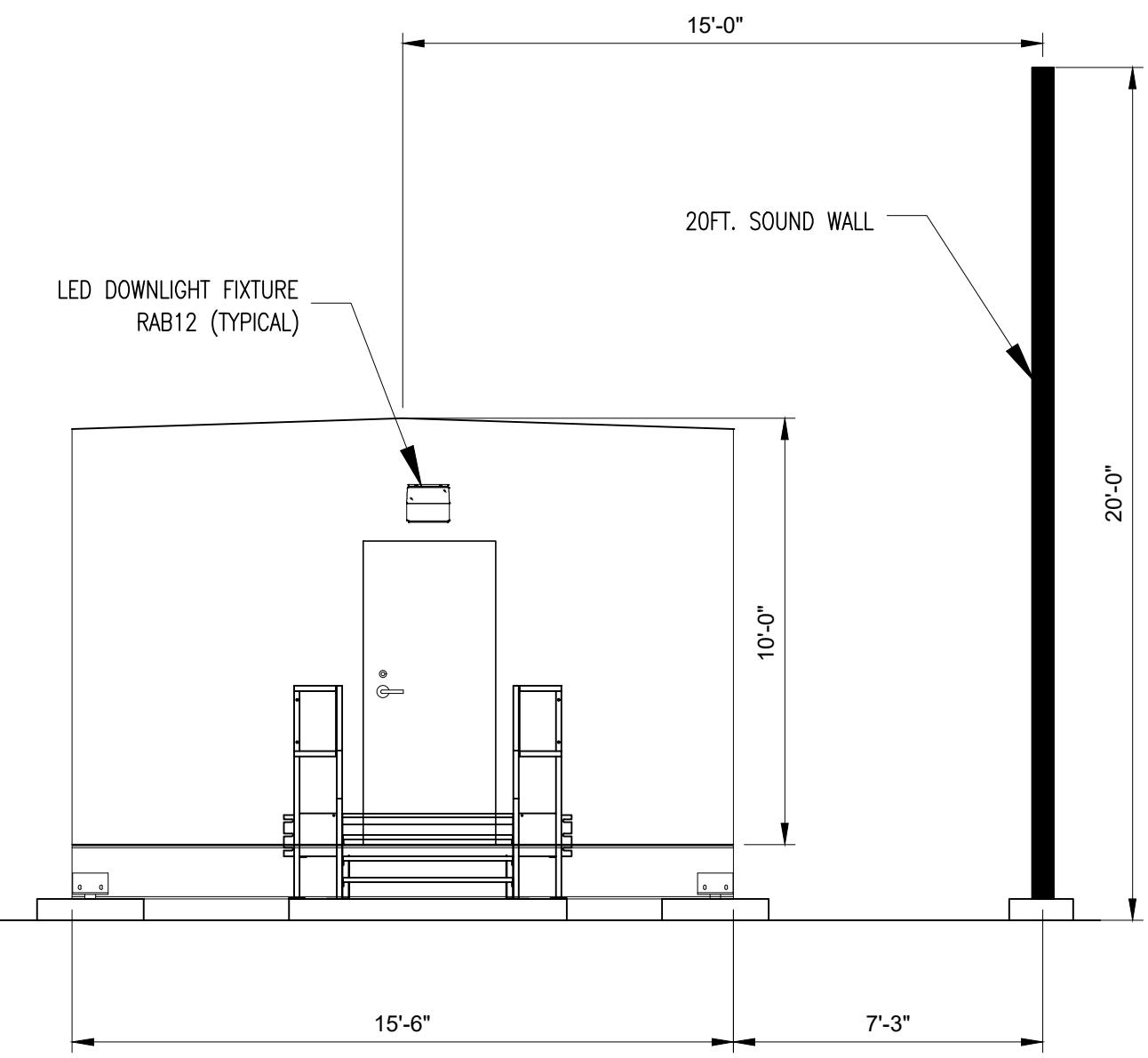
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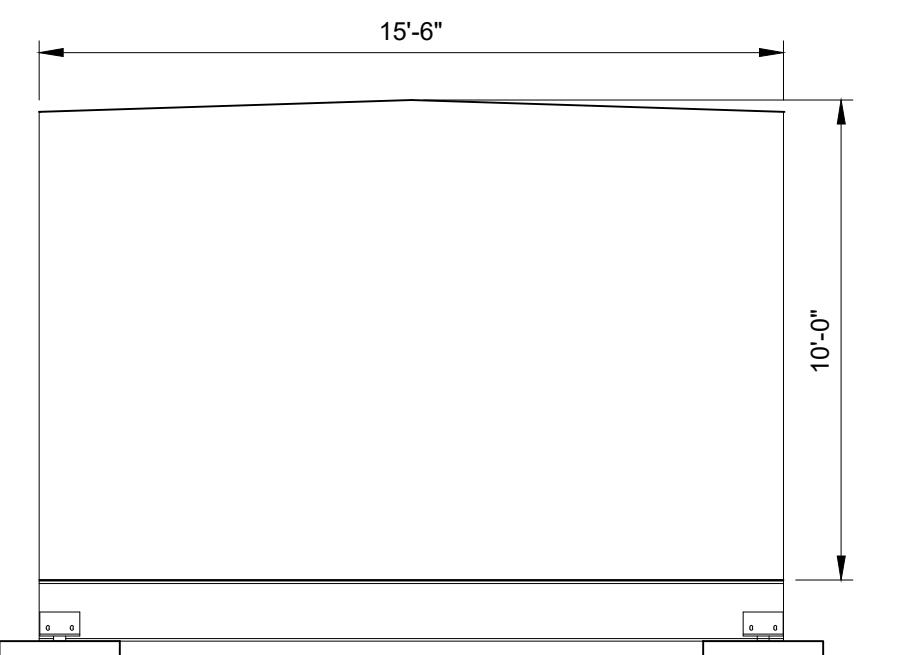
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G
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SECTION
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J
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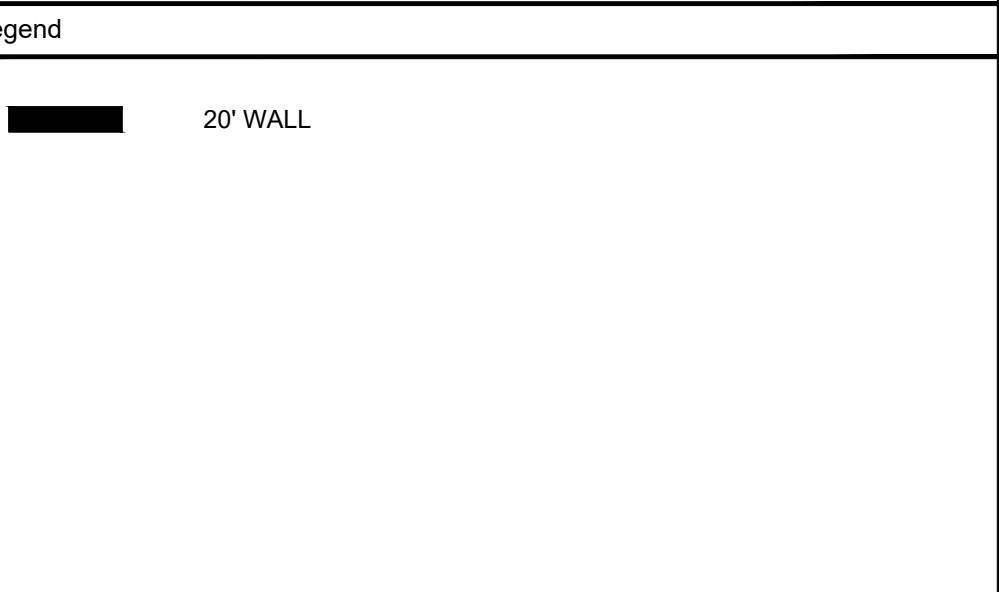
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210-01A



SECTION
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K
210-01A

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B	12/08/2021	DT	ISSUED FOR REVIEW	DH	KS
A	11/24/2021	DT	ISSUED FOR REVIEW	DH	KS
Rev	Date	Drawn	Description	Ch'kd	App'd

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	South Ripley SOLAR PROJECT				

Title SOUTHERN RIPLEY SOLAR
230-34.5KV COLLECTOR SUBSTATION
CONTROL ENCL. SECTIONS G-K
SUPPLEMENTAL A

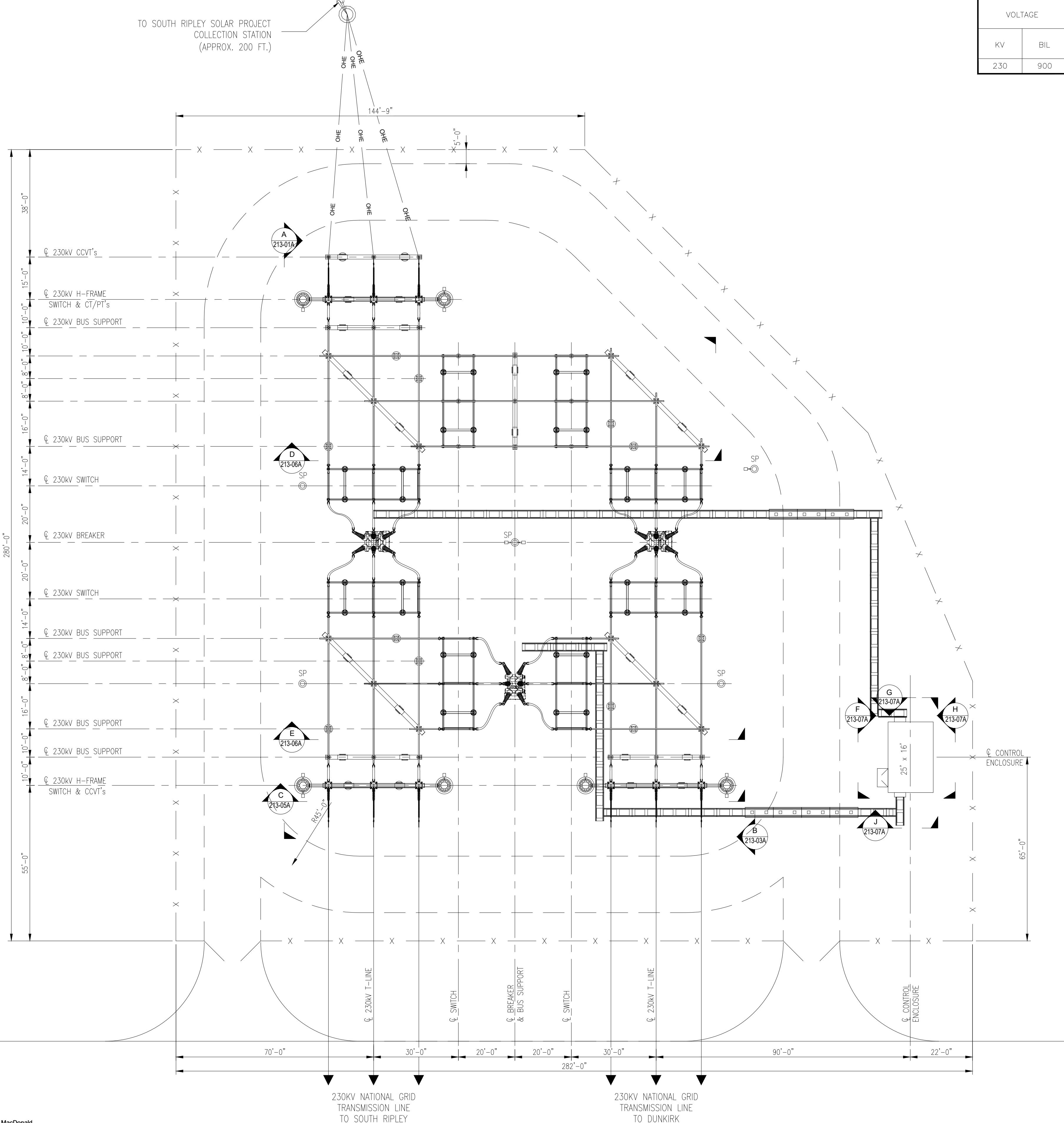
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	Dwg check	DH	Project Mngr	RA
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	AS NOTED	11/12/2021		C
Drawing Number		SRS-E-211-05_SUP_A		

TO SOUTH RIPLEY SOLAR PROJECT
COLLECTION STATION
(APPROX. 200 FT.)

VOLTAGE		MINIMUM METAL-TO-METAL CLEARANCE PHASE-TO-PHASE	DESIGN CENTERLINE TO CENTERLINE PHASE SPACING FOR RIGID BUS RECOMMENDED	CLEARANCE TO GROUNDED PARTS FOR PERSONAL SAFETY	MINIMUM CLEARANCE BETWEEN OVERHEAD BUS AND GROUND FOR PERSONAL SAFETY	MINIMUM CLEARANCE BETWEEN OVERHEAD BUS AND ROADWAY
KV	BIL	7'-5"	16'-0"	6'-4"	15'-0"	23'-6"
230	900					

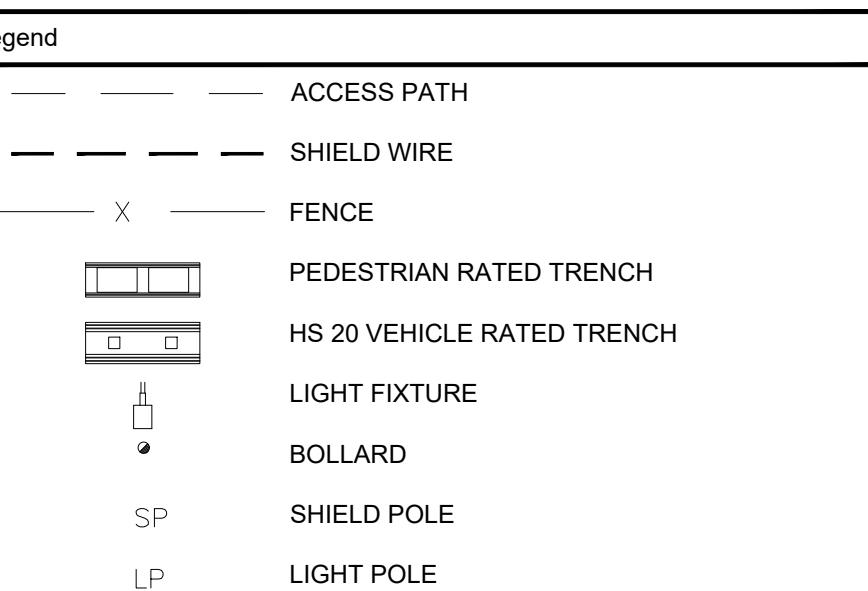
Notes

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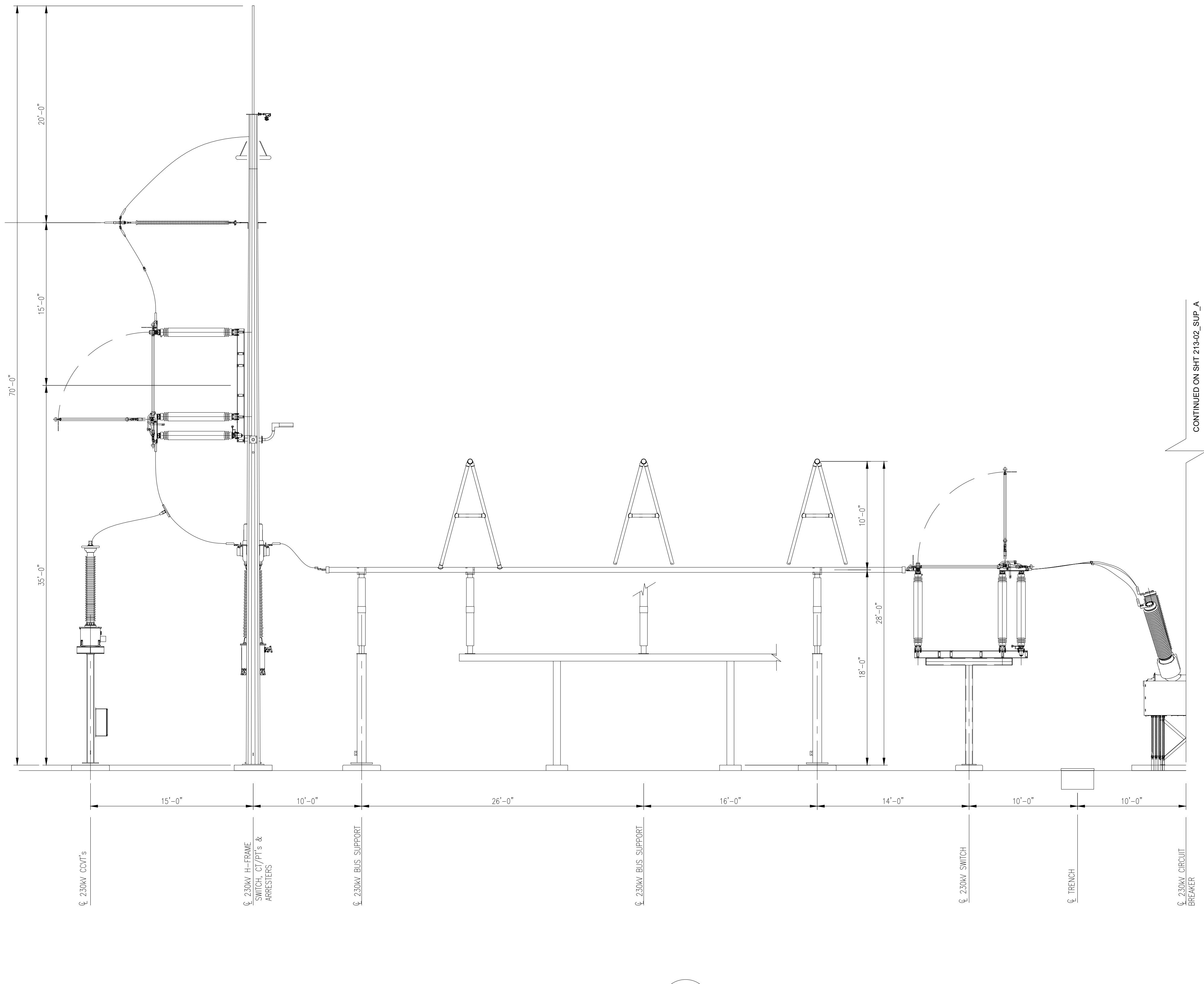
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A	11/24/2021	DT	ISSUED FOR REVIEW	DH	KS
Rev	Date	Drawn	Description	Ch'd	App'd

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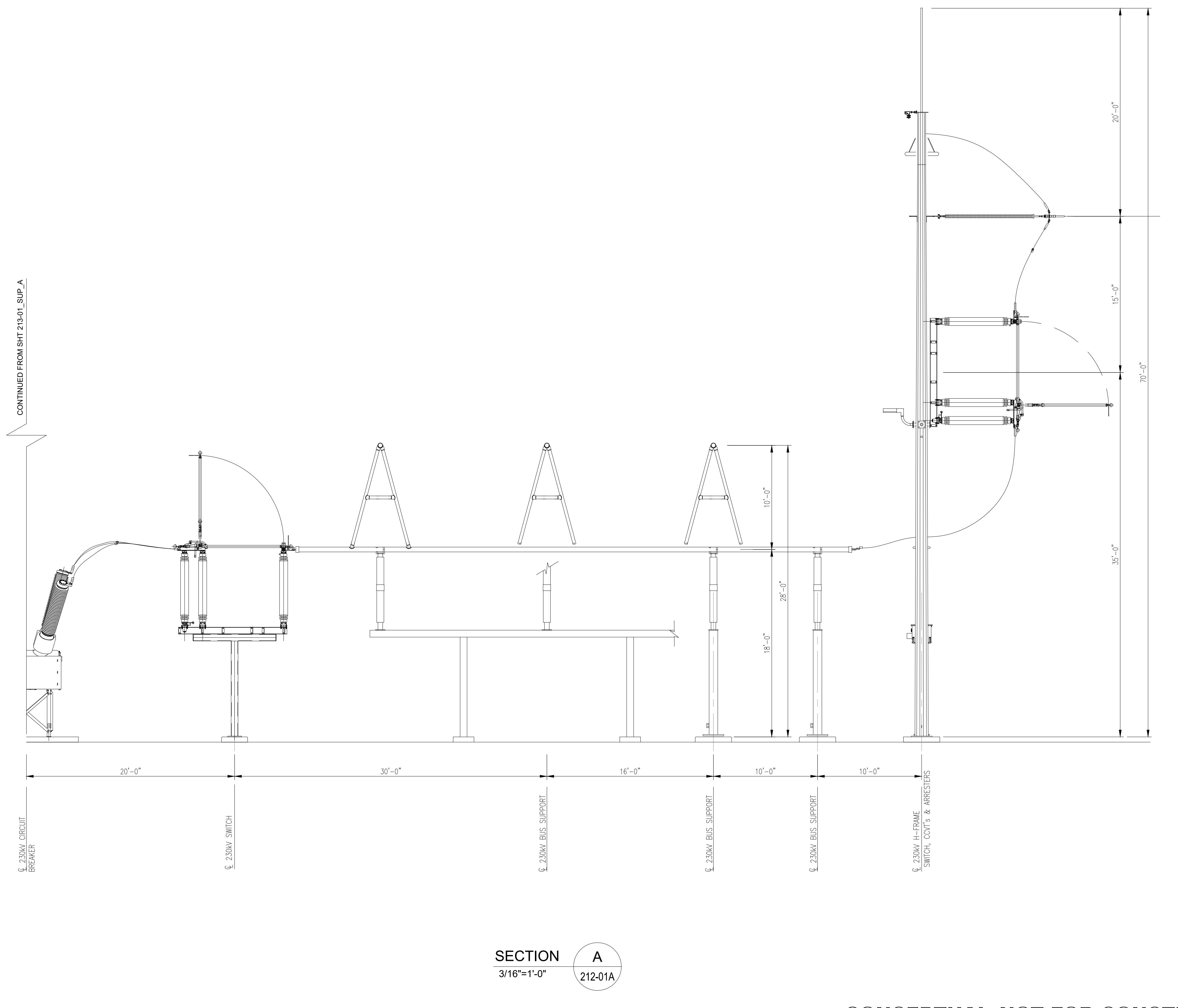
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**SOUTH RIPLEY SOLAR
POI SUBSTATION
GENERAL ARRANGEMENT
SUPPLEMENTAL A**

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	Drawn	DT	Approved	KS
Dwg check	DH	Project Mngr	RA	
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REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	10/21/2021	B		
Drawing Number	SRS-E-212-01_SUP_A			



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Notes																									
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Reference Drawings																									
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Title																									
SOUTH RIPLEY SOLAR POI SUBSTATION SECTION A SUPPLEMENTAL A																									
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	<table border="1"> <tr> <td>Designed</td><td>DT</td><td>Eng check</td><td>KS</td></tr> <tr> <td>Drawn</td><td>DT</td><td>Approved</td><td>KS</td></tr> <tr> <td>Dwg check</td><td>DH</td><td>Project Mngr</td><td>RA</td></tr> <tr> <td>Scale at ANSI D AS NOTED</td><td>Date</td><td>Rev</td><td></td></tr> <tr> <td></td><td>11/15/2021</td><td></td><td>A</td></tr> <tr> <td>Drawing Number</td><td colspan="3">SRS-E-213-01_SUP_A</td></tr> </table>	Designed	DT	Eng check	KS	Drawn	DT	Approved	KS	Dwg check	DH	Project Mngr	RA	Scale at ANSI D AS NOTED	Date	Rev			11/15/2021		A	Drawing Number	SRS-E-213-01_SUP_A		
Designed	DT	Eng check	KS																						
Drawn	DT	Approved	KS																						
Dwg check	DH	Project Mngr	RA																						
Scale at ANSI D AS NOTED	Date	Rev																							
	11/15/2021		A																						
Drawing Number	SRS-E-213-01_SUP_A																								



CONCEPTUAL-NOT FOR CONSTRUCTION

SECTION A

3/16"=1'-0"

212-01A

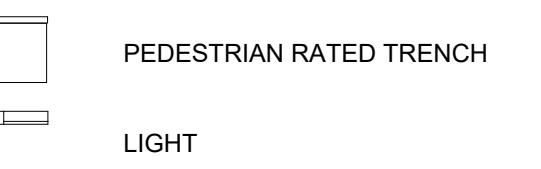
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notes

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2. ELECTRICAL EQUIPMENT WILL UTILIZE GALVANIZED STEEL MATERIAL AND EQUIPMENT COLOR WILL BE NATURAL GALVANIZED STEEL, WHITE OR ANSI GREY. FINAL MATERIAL TYPE AND FINISH COLOR DETAILS WILL BE UPDATED DURING DETAILED DESIGN.

Legend



Reference Drawings

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W www.mottmac.com

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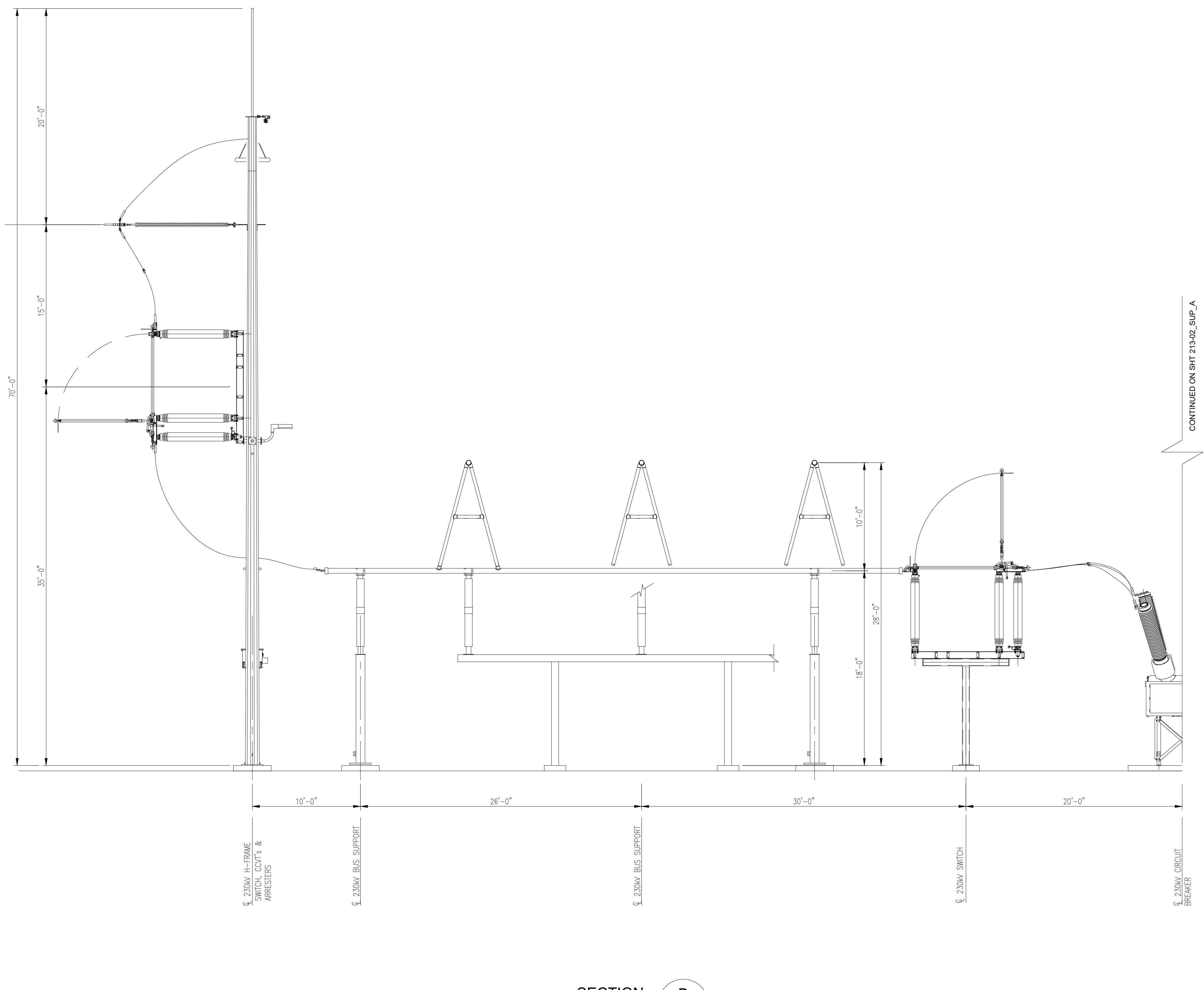


**SOUTH RIPLEY SOLAR
POI SUBSTATION
SECTION A (CONT'D)
SUPPLEMENTAL A**

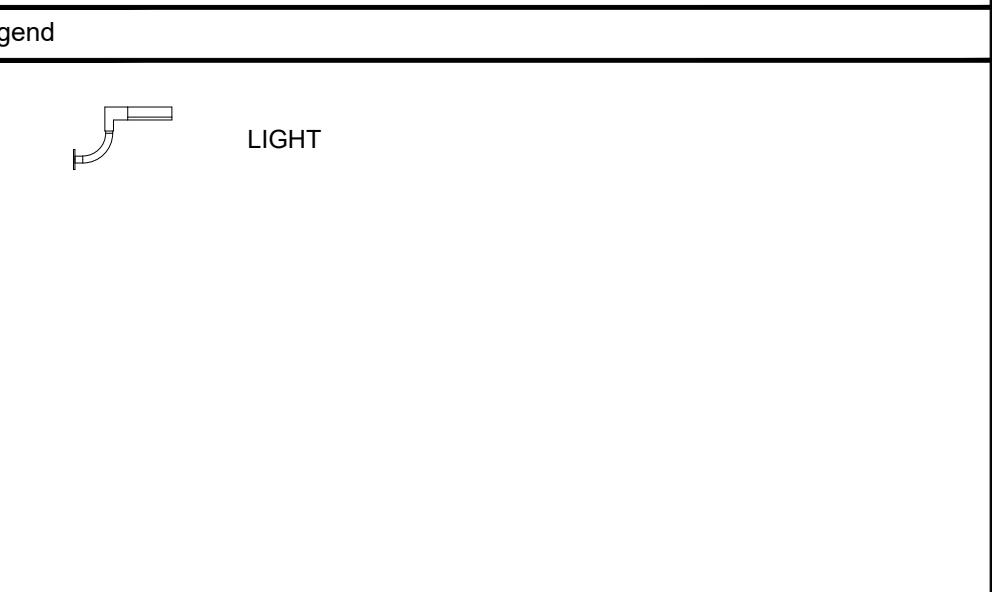
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	DT	Eng check	KS
	Drawn	DT	Approved	KS
	Dwg check	DH	Project Mngr	RA
	Scale at ANSI D 1" = 20'		Date	Rev
			11/12/2021	A
Drawing Number SRS-E-213-02_SUP_A				

Notes

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Reference Drawings

A	11/24/2021	DT	ISSUED FOR REVIEW	DH	KS
Rev	Date	Drawn	Description	Ch'kd	App'd

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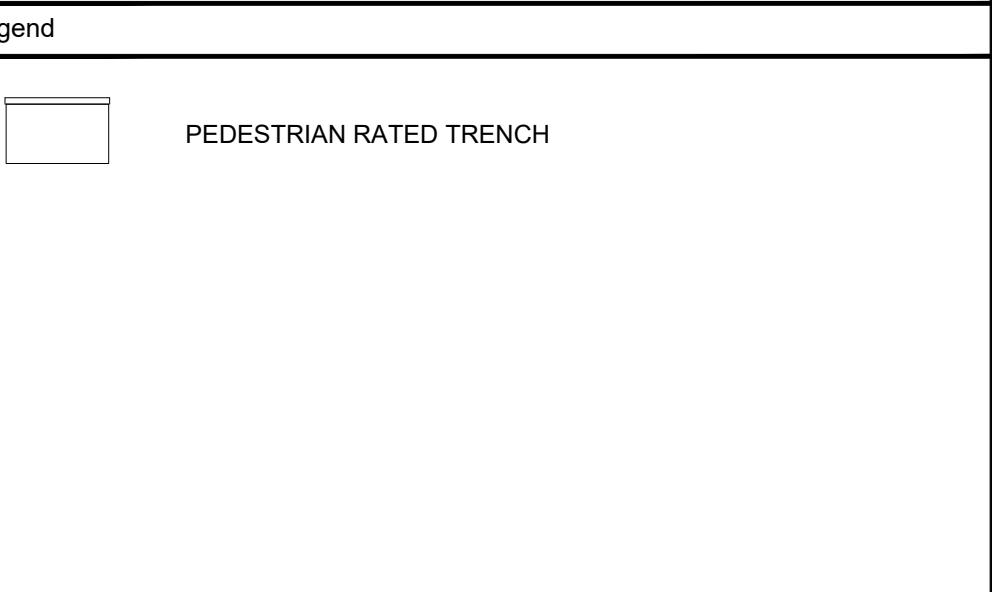


Title SOUTH RIPLEY SOLAR POI SUBSTATION SECTION B SUPPLEMENTAL A

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	Dwg check	DH	Project Mngr	RA
	Scale at ANSI D 1" = 20'	Date 11/15/2021	Rev	
	Drawing Number SRS-E-213-03_SUP_A			A

Notes

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Reference Drawings

A	11/24/2021	DT	ISSUED FOR REVIEW	DH	KS
Rev	Date	Drawn	Description	Ch'kd	App'd

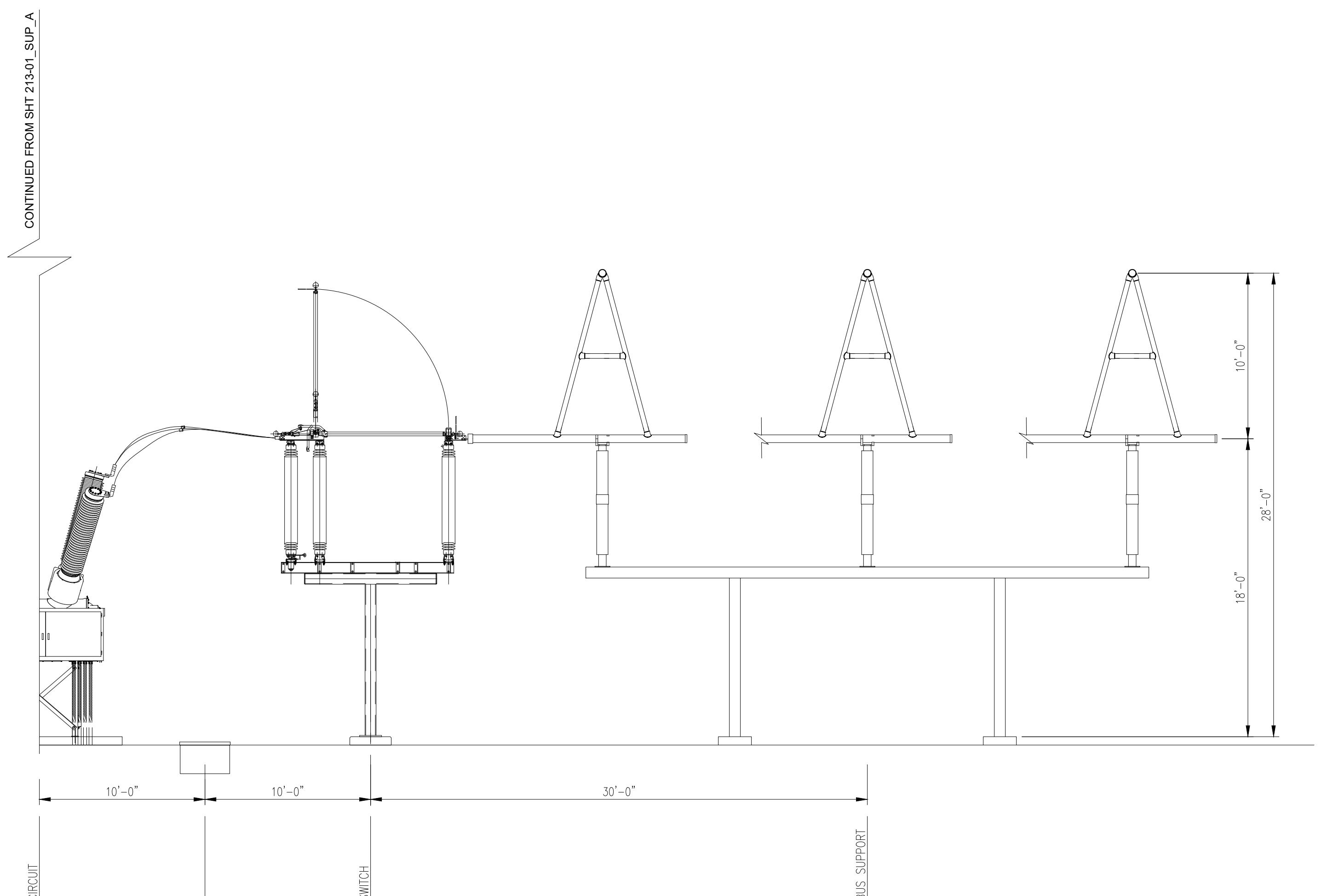
M **M**
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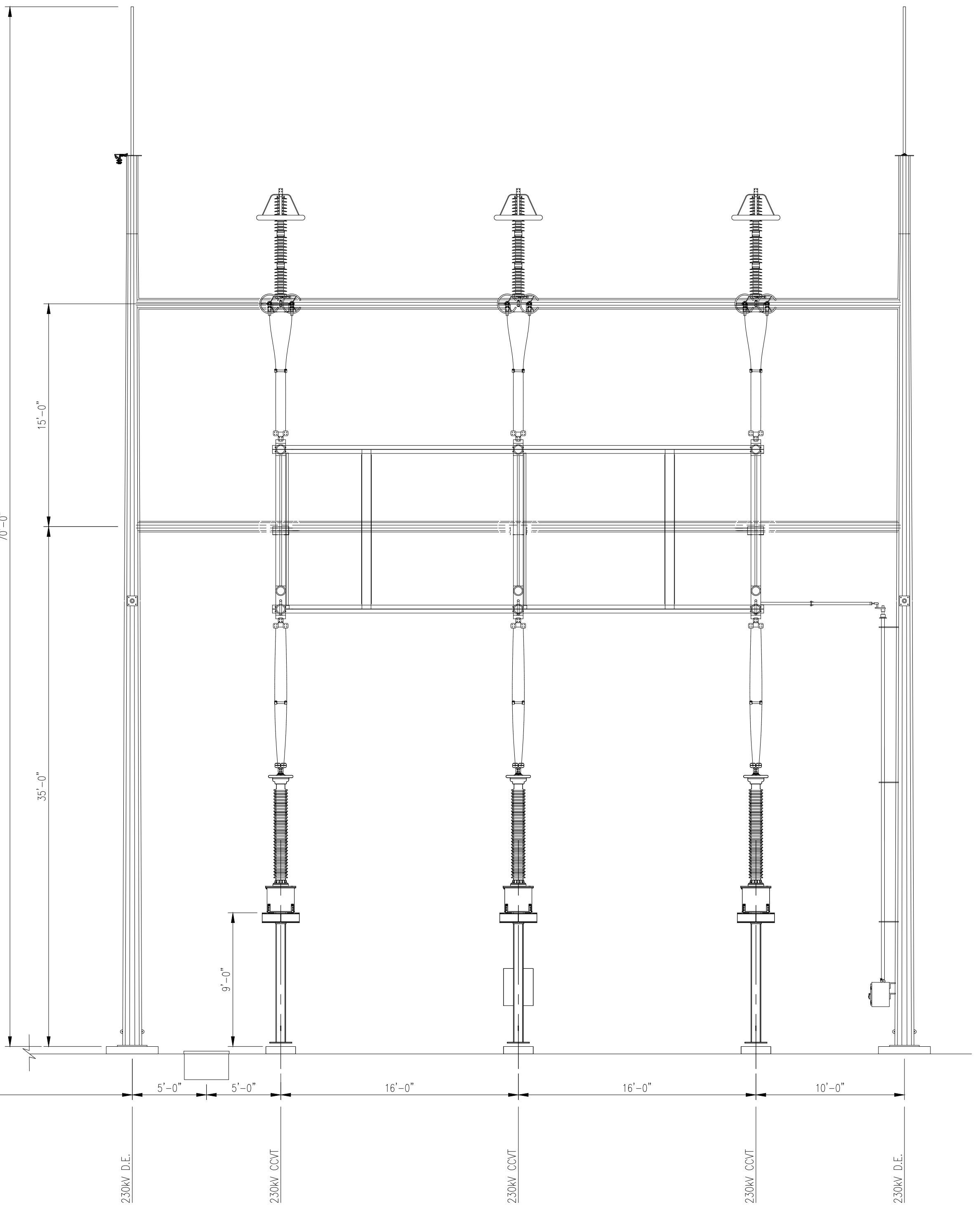
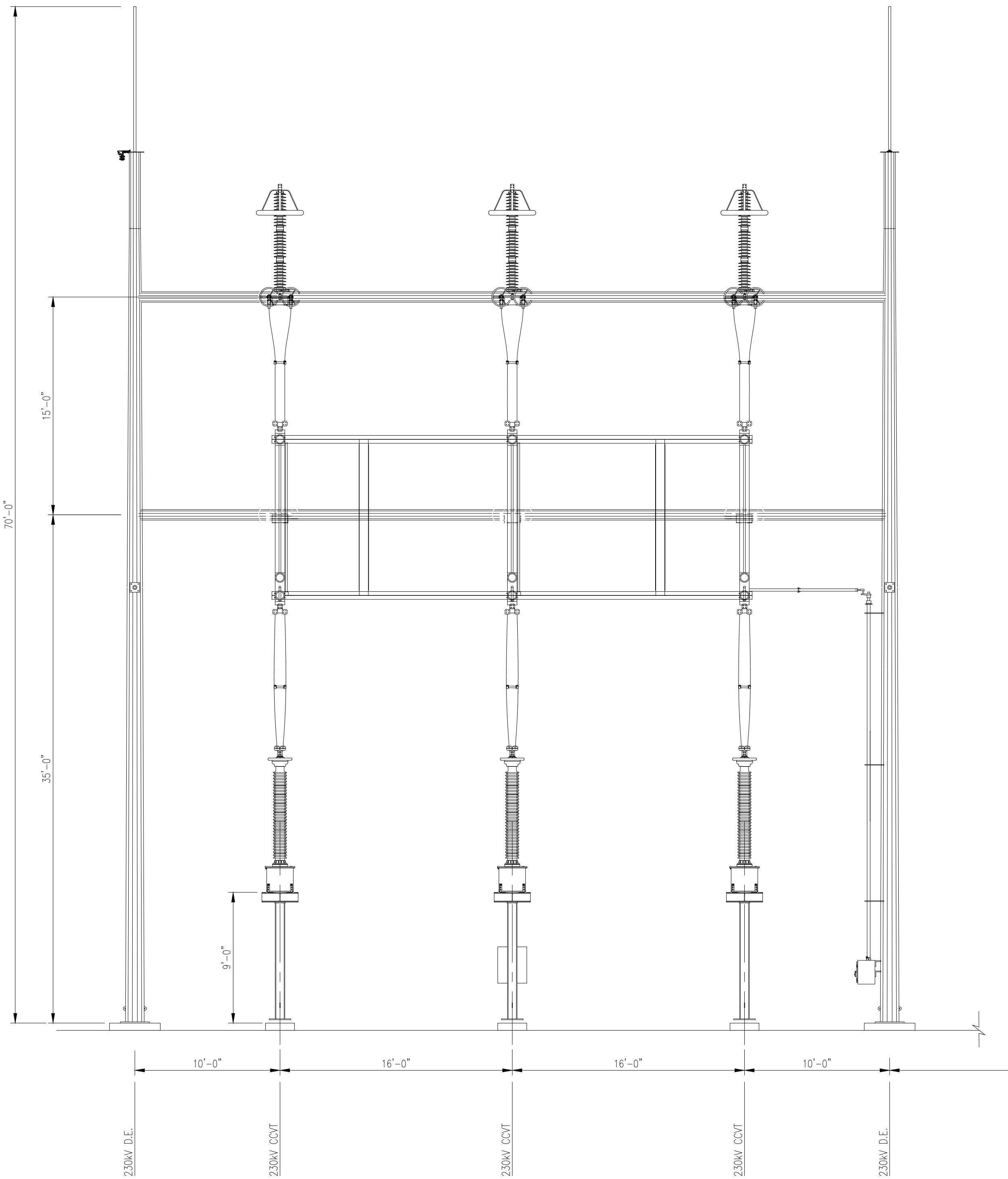
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Title SOUTH RIPLEY SOLAR
POI SUBSTATION
SECTION B (CONT'D)
SUPPLEMENTAL A

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed Drawn	DT DT	Eng check Approved	KS KS
	Dwg check	DH	Project Mngr	RA
Scale at ANSI D AS NOTED	Date	Rev		
	11/15/2021			
	Drawing Number			
	SRS-E-213-04_SUP_A			





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- Notes
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Legend	
	PEDESTRIAN RATED TRENCH

Reference Drawings					
A	11/24/2021	DT	ISSUED FOR REVIEW	DH	KS

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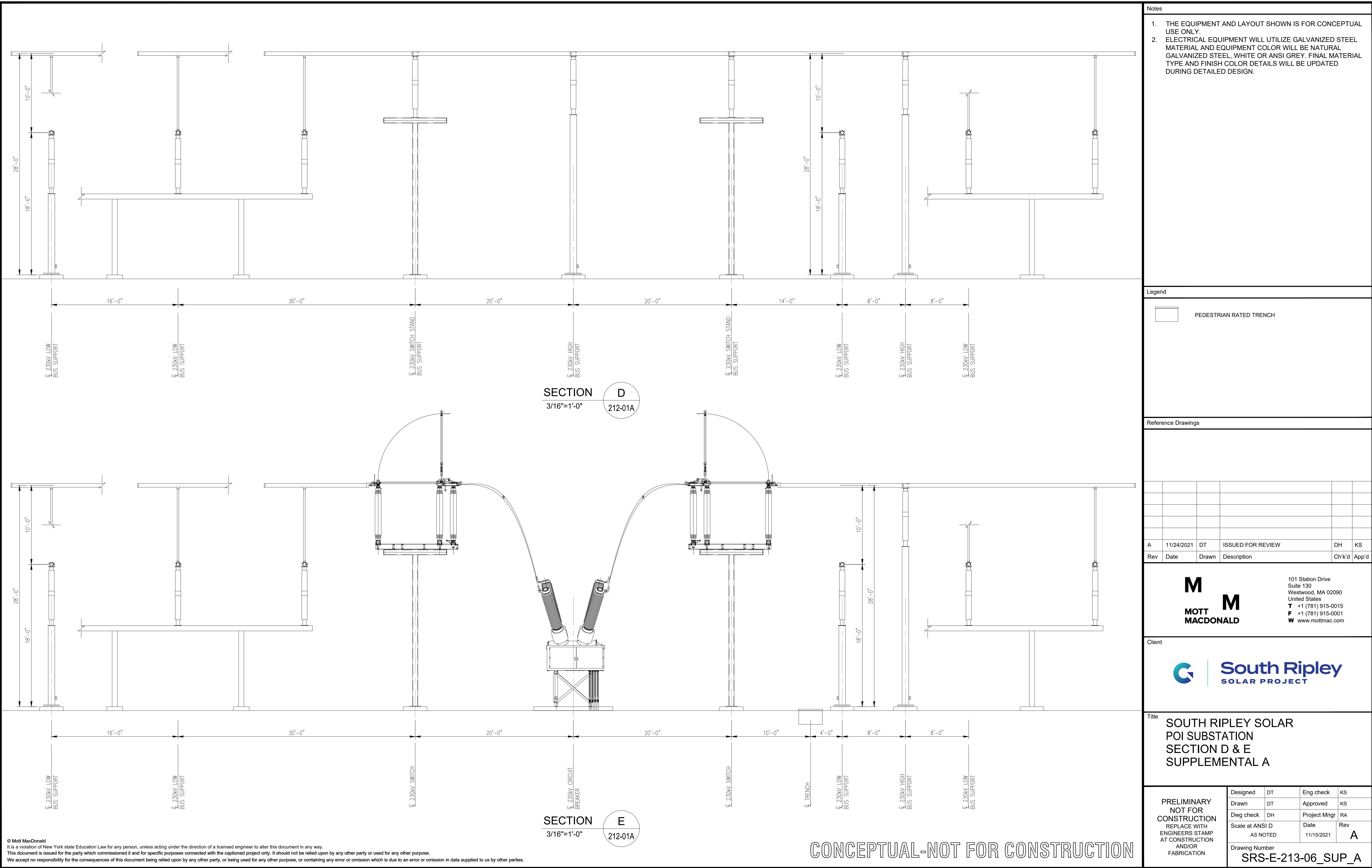
Client

South Ripley SOLAR PROJECT

Title

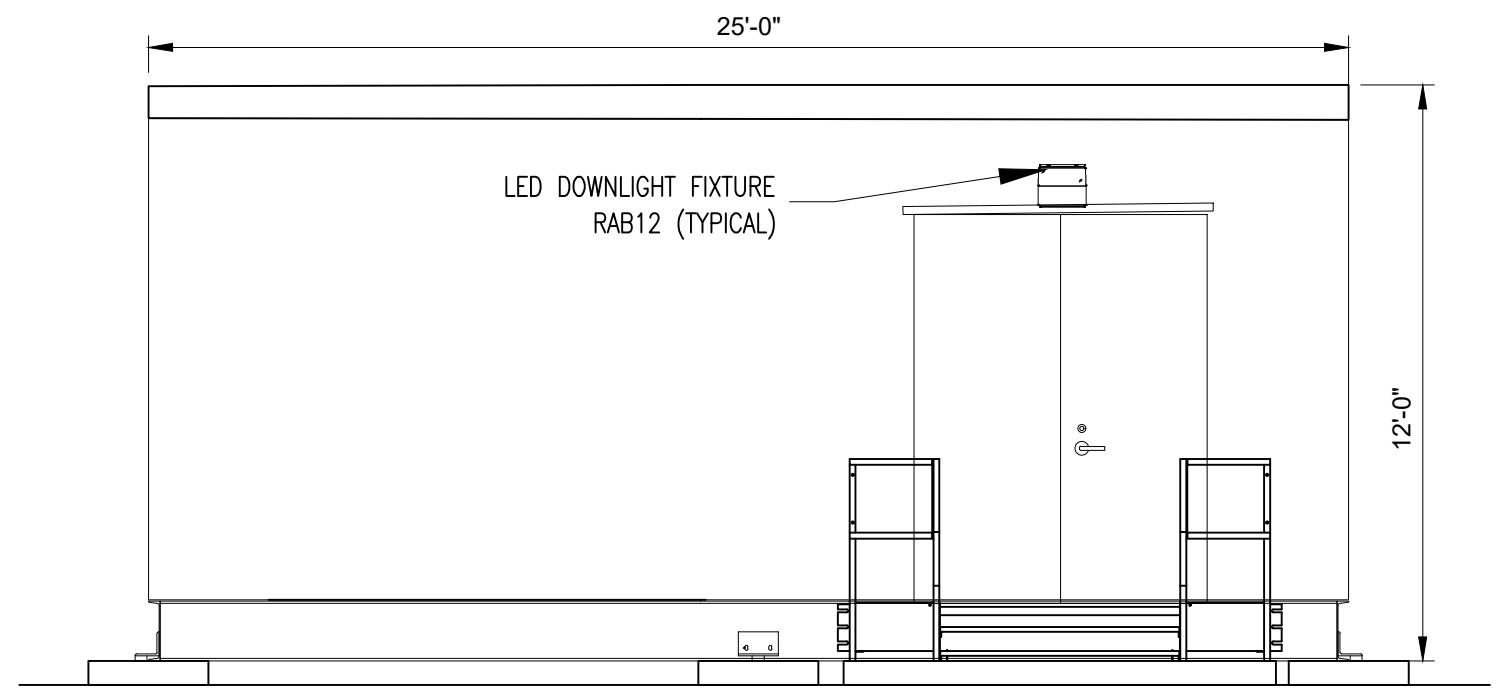
**SOUTH RIPLEY SOLAR
POI SUBSTATION
SECTION C
SUPPLEMENTAL A**

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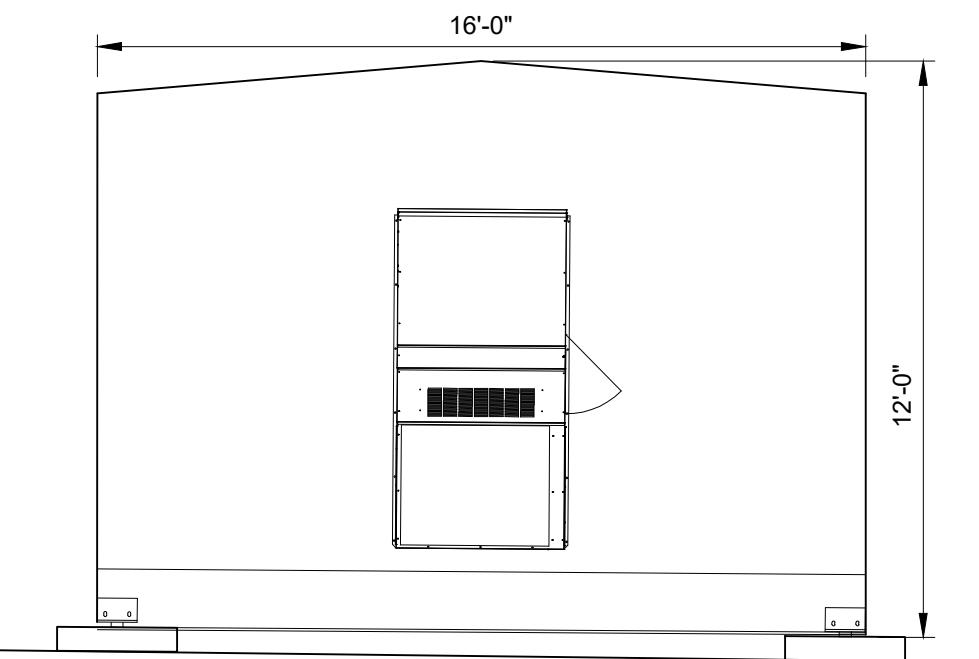


Notes

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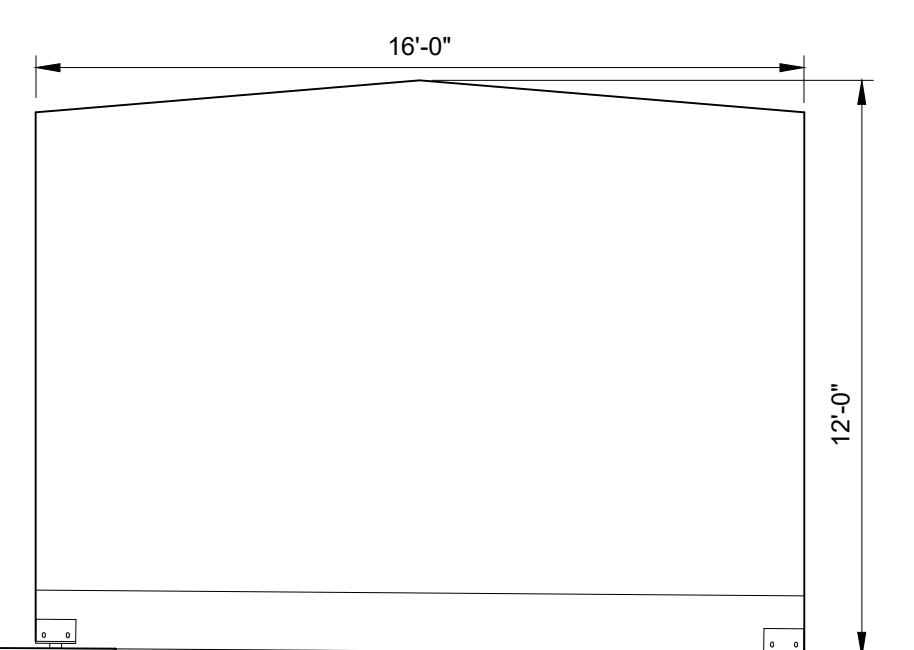
SECTION
F
212-01A
1/4"=1'-0"



SECTION
G
212-01A
1/4"=1'-0"



SECTION
H
212-01A
1/4"=1'-0"



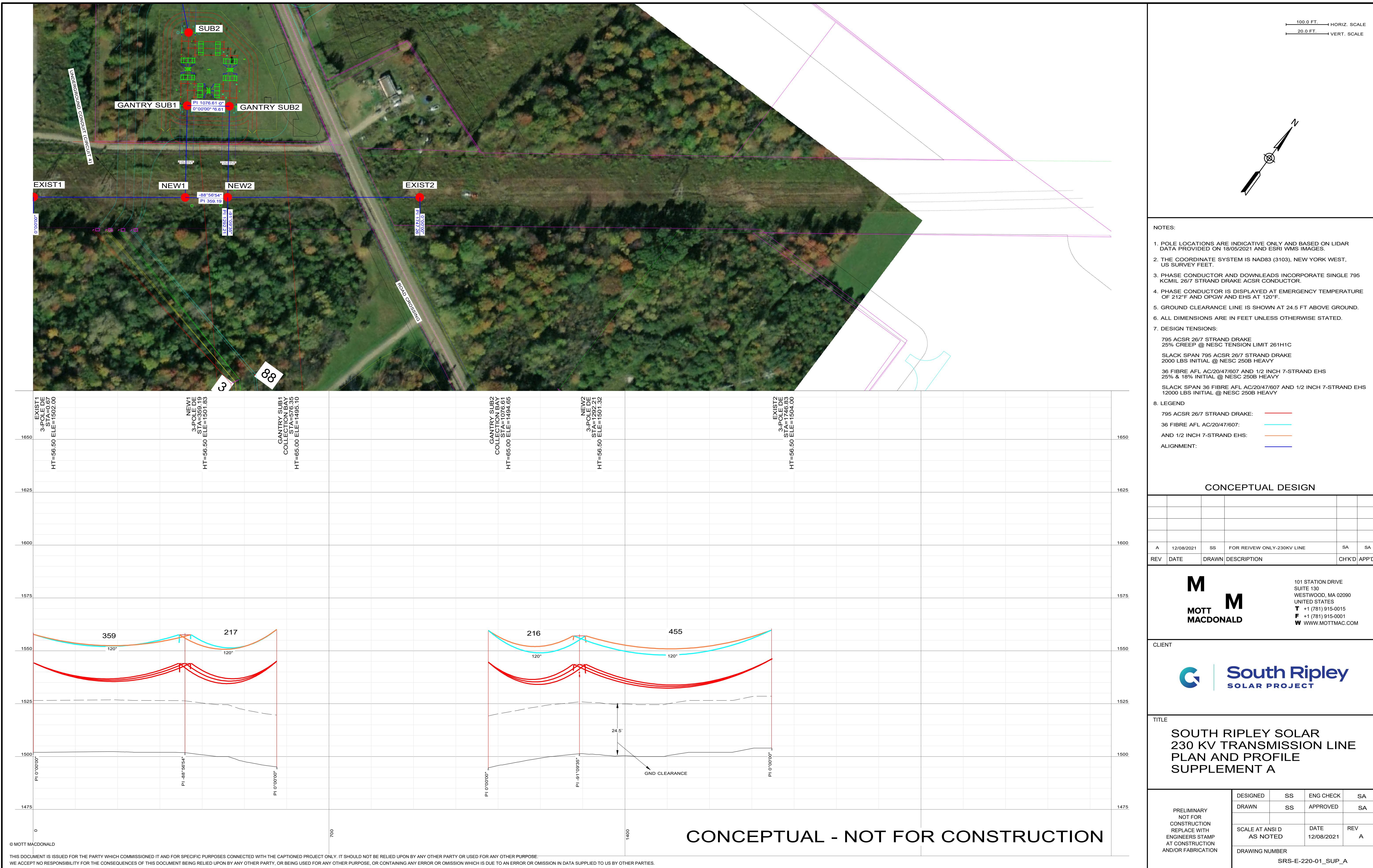
SECTION
J
212-01A
1/4"=1'-0"

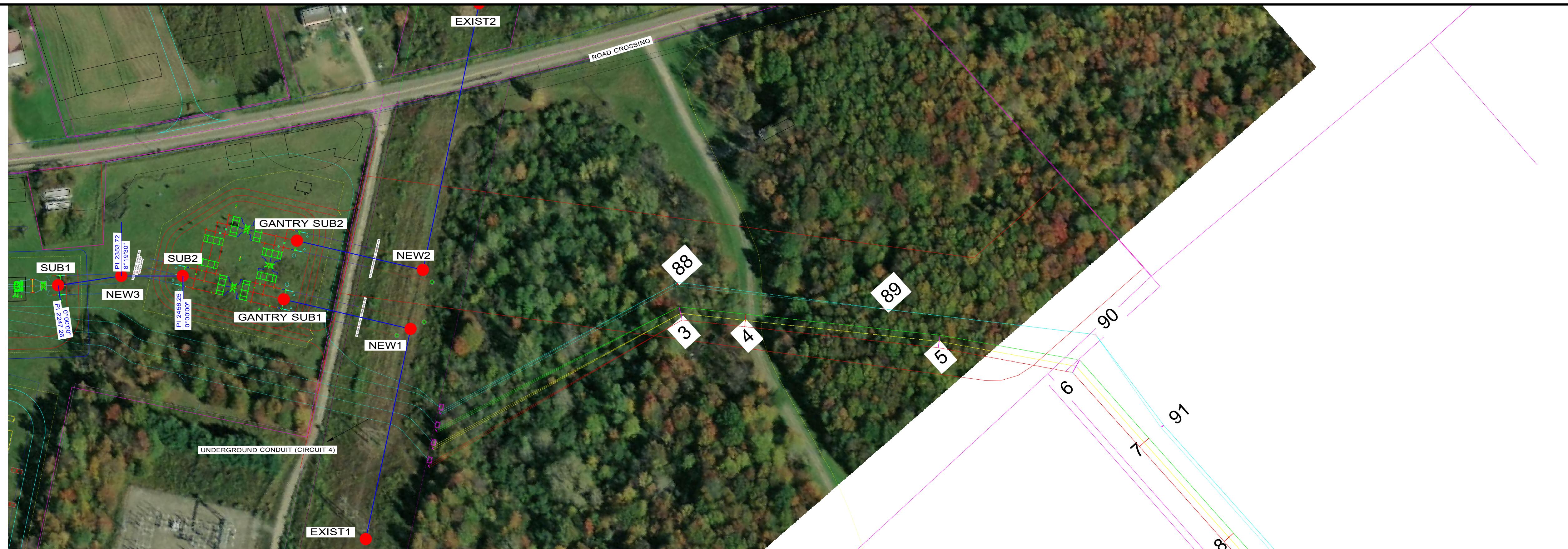
Reference Drawings					
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A	11/24/2021	DT	ISSUED FOR REVIEW	DH	KS
Rev	Date	Drawn	Description	Ch'k'd	App'd

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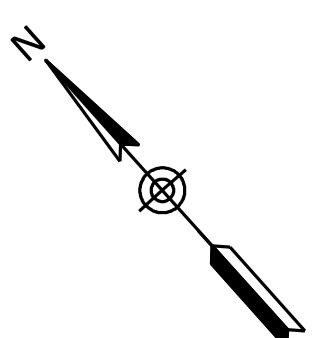
Client					
South Ripley SOLAR PROJECT					
Title SOUTHERN RIPLEY SOLAR POI SUBSTATION CONTROL ENCL. SECTIONS F-J SUPPLEMENTAL A					

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	DT	Eng check	KS
	Drawn	DT	Approved	KS
Dwg check	DT	Project Mngr	RA	
Scale at ANSI D AS NOTED	Date	Rev		
	11/12/2021			B
Drawing Number	SRS-E-213-07_SUP_A			





100.0 FT. HORIZ. SCALE
20.0 FT. VERT. SCALE



CONCEPTUAL DESIGN

A 12/08/2021 SS FOR REVIEW ONLY-230KV LINE SA SA

REV DATE DRAWN DESCRIPTION CHK'D APP'D

8. LEGEND

- 795 ACSR 26/7 STRAND DRAKE: —
- 36 FIBRE AFL AC/20/47/607: —
- AND 1/2 INCH 7-STRAND EHS: —
- ALIGNMENT: —

M **M**
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CLIENT
South Ripley
SOLAR PROJECT

TITLE
SOUTH RIPLEY SOLAR
230 KV TRANSMISSION LINE
PLAN AND PROFILE
SUPPLEMENT A

	DESIGNED	SS	ENG CHECK	SA
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	DRAWN	SS	APPROVED	SA
SCALE AT ANSI D AS NOTED	DATE	REV	REV	REV
	12/08/2021	A		
DRAWING NUMBER				SRS-E-220-02_SUP_A

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C. Software Output Files

CASE 1

EMF Calculation Results

Row #	Measurem	Measurem	Measurem	B		B		EF			Space			Space	Space	Space		
	ent X (ft)	ent Y (ft)	ent Z (ft)	B Real (mG)	Imaginar	B Angle (deg)	Magnitude (mG)	B Polarization Axial Ratio %	H Magnitude (A/m)	EF Real (kV/m)	Imaginary (kV/m)	EF Angle (deg)	EF Magnitude (kV/m)	EF Polarization Axial Ratio %	Potential Real (kV)	Potential Imaginary (kV)	Potential Angle (deg)	Potential Magnitude (kV)
1	830090.6	803437.4	1493.70	0.00	0.00	37.300	0.00000	37.1	0.000	0.000	0.00000	66.0	0.000	3.400	0	0	62.4	0
2	830087.8	803433.3	1493.70	0.17	0.13	37.300	0.21700	37.1	0.017	0.000	0.00000	66.0	0.000	3.400	0.001	0.001	62.4	0.001
3	830085.1	803429.1	1493.70	0.18	0.14	37.300	0.22200	37.2	0.018	0.000	0.00000	65.9	0.000	3.400	0.001	0.001	62.3	0.001
4	830082.3	803424.9	1493.70	0.18	0.14	37.300	0.22700	37.3	0.018	0.000	0.00000	65.7	0.000	3.400	0.001	0.001	62.1	0.001
5	830079.5	803420.8	1493.70	0.19	0.14	37.400	0.23200	37.4	0.018	0.000	0.00000	65.6	0.000	3.500	0.001	0.001	62	0.001
6	830076.8	803416.6	1493.70	0.19	0.14	37.400	0.23800	37.6	0.019	0.000	0.00000	65.4	0.000	3.500	0.001	0.001	61.9	0.001
7	830074	803412.4	1493.60	0.19	0.15	37.400	0.24300	37.7	0.019	0.000	0.00000	65.3	0.000	3.500	0.001	0.001	61.7	0.001
8	830071.3	803408.3	1493.60	0.20	0.15	37.400	0.24900	37.8	0.020	0.000	0.00000	65.2	0.000	3.600	0.001	0.001	61.6	0.001
9	830068.5	803404.1	1493.60	0.20	0.16	37.500	0.25400	37.9	0.020	0.000	0.00000	65.0	0.001	3.600	0.001	0.001	61.4	0.001
10	830065.7	803399.9	1493.60	0.21	0.16	37.500	0.26000	38.1	0.021	0.000	0.00000	64.8	0.001	3.600	0.001	0.001	61.3	0.001
11	830063	803395.8	1493.50	0.21	0.16	37.500	0.26700	38.2	0.021	0.000	0.00000	64.7	0.001	3.700	0.001	0.001	61.1	0.001
12	830060.2	803391.6	1493.50	0.22	0.17	37.500	0.27300	38.3	0.022	0.000	0.00000	64.5	0.001	3.700	0.001	0.001	61	0.002
13	830057.4	803387.4	1493.40	0.22	0.17	37.500	0.28000	38.5	0.022	0.000	0.00100	64.4	0.001	3.700	0.001	0.001	60.8	0.002
14	830054.7	803383.3	1493.40	0.23	0.18	37.600	0.28700	38.6	0.023	0.000	0.00100	64.2	0.001	3.800	0.001	0.001	60.7	0.002
15	830051.9	803379.1	1493.40	0.15	0.15	45.700	0.21400	51.9	0.017	0.000	0.00100	53.1	0.001	6.400	0.001	0.001	64.9	0.002
16	830049.1	803374.9	1493.30	0.15	0.16	45.600	0.22000	51.9	0.018	0.000	0.00100	53.1	0.001	6.400	0.001	0.001	64.8	0.002
17	830046.4	803370.8	1493.20	0.16	0.16	45.500	0.22700	51.9	0.018	0.000	0.00100	53.0	0.001	6.300	0.001	0.002	64.8	0.002
18	830043.6	803366.6	1493.10	0.16	0.17	45.500	0.23300	51.9	0.019	0.000	0.00100	53.0	0.001	6.300	0.001	0.002	64.8	0.002
19	830040.8	803362.4	1493.00	0.17	0.17	45.400	0.24000	51.9	0.019	0.000	0.00100	52.9	0.001	6.300	0.001	0.002	64.7	0.002
20	830038.1	803358.3	1492.90	0.17	0.18	45.300	0.24800	51.9	0.020	0.000	0.00100	52.9	0.001	6.300	0.001	0.002	64.7	0.002
21	830035.3	803354.1	1492.80	0.18	0.18	45.200	0.25500	51.9	0.020	0.000	0.00100	52.9	0.001	6.200	0.001	0.002	64.5	0.002
22	830032.6	803349.9	1492.70	0.19	0.19	45.100	0.26300	51.9	0.021	0.001	0.00100	52.8	0.001	6.200	0.001	0.002	64.5	0.002
23	830029.8	803345.8	1492.70	0.19	0.19	45.100	0.27100	52.0	0.022	0.001	0.00100	52.8	0.001	6.200	0.001	0.002	64.3	0.002
24	830027	803341.6	1492.60	0.20	0.20	45.000	0.28000	52.0	0.022	0.001	0.00100	52.7	0.001	6.200	0.001	0.002	64.2	0.002
25	830024.3	803337.4	1492.50	0.20	0.20	44.900	0.28800	52.0	0.023	0.001	0.00100	52.7	0.001	6.100	0.001	0.002	64.1	0.002
26	830021.5	803333.3	1492.40	0.21	0.21	44.900	0.29800	52.0	0.024	0.001	0.00100	52.6	0.001	6.100	0.001	0.002	64.1	0.002
27	830018.7	803329.1	1492.30	0.22	0.22	44.800	0.30700	52.0	0.024	0.001	0.00100	52.6	0.001	6.100	0.001	0.002	64	0.002
28	830016	803324.9	1492.10	0.23	0.22	44.700	0.31700	52.1	0.025	0.001	0.00100	52.5	0.001	6.100	0.001	0.002	63.9	0.002
29	830013.2	803320.8	1492.00	0.23	0.23	44.600	0.32700	52.1	0.026	0.001	0.00100	52.5	0.001	6.000	0.001	0.002	63.9	0.002
30	830010.4	803316.6	1491.90	0.31	0.27	40.300	0.41000	43.0	0.033	0.001	0.00100	50.7	0.001	7.600	0.001	0.002	64.8	0.002
31	830007.7	803312.4	1491.70	0.32	0.27	40.400	0.42000	43.3	0.033	0.001	0.00100	50.7	0.001	7.600	0.001	0.002	64.9	0.002
32	830004.9	803308.3	1491.50	0.33	0.28	40.500	0.43200	43.6	0.034	0.001	0.00100	50.7	0.001	7.500	0.001	0.002	65	0.002
33	830002.1	803304.1	1491.40	0.34	0.29	40.600	0.44300	43.9	0.035	0.001	0.00100	50.6	0.001	7.500	0.001	0.002	64.9	0.002
34	829999.4	803299.9	1491.40	0.35	0.30	40.700	0.45600	44.2	0.036	0.001	0.00100	50.6	0.001	7.400	0.001	0.002	64.5	0.003
35	829996.6	803295.8	1491.40	0.36	0.31	40.700	0.46800	44.5	0.037	0.001	0.00100	50.6	0.001	7.300	0.001	0.002	64.2	0.003
36	829993.9	803291.6	1491.40	0.37	0.32	40.800	0.48200	44.7	0.038	0.001	0.00100	50.5	0.001	7.200	0.001	0.002	63.9	0.003
37	829991.1	803287.4	1491.40	0.38	0.33	40.900	0.49600	45.0	0.039	0.001	0.00100	50.5	0.001	7.200	0.001	0.003	63.7	0.003
38	829988.3	803283.3	1491.30	0.39	0.34	41.000	0.51000	45.3	0.041	0.001	0.00100	50.4	0.001	7.100	0.001	0.003	63.4	0.003
39	829985.6	803279.1	1491.30	0.40	0.35	41.100	0.52500	45.6	0.042	0.001	0.00100	50.4	0.001	7.100	0.001	0.003	63.2	0.003
40	829982.8	803274.9	1491.20	0.41	0.36	41.100	0.54100	45.9	0.043	0.001	0.00100	50.3	0.001	7.000	0.001	0.003	62.9	0.003
41	829980	803270.8	1491.20	0.42	0.37	41.200	0.55800	46.2	0.044	0.001	0.00100	50.3	0.001	6.900	0.001	0.003	62.7	0.003
42	829977.3	803266.6	1491.10	0.43	0.38	41.300	0.57500	46.5	0.046	0.001	0.00100	50.2	0.001	6.900	0.002	0.003	62.4	0.003
43	829974.5	803262.4	1491.10	0.45	0.39	41.400	0.59300	46.8	0.047	0.001	0.00100	50.1	0.002	6.800	0.002	0.003	62.2	0.003
44	829971.7	803258.3	1491.00	0.46	0.41	41.500	0.61200	47.1	0.049	0.001	0.00100	50.1	0.002	6.800	0.002	0.003	62	0.004
45	829969	803254.1	1490.90	0.47	0.42	41.500	0.63200	47.4	0.050	0.001	0.00100	50.0	0.002	6.700	0.002	0.003	61.7	0.004
46	829966.2	803249.9	1490.90	0.49	0.43	41.600	0.65300	47.7	0.052	0.001	0.00100	49.9	0.002	6.600	0.002	0.003	61.4	0.004
47	829963.4	803245.8	1490.80	0.50	0.45	41.700	0.67500	48.0	0.054	0.001	0.00100	49.9	0.002	6.600	0.002	0.003	61.1	0.004

48	829960.7	803241.6	1490.80	0.52	0.47	41.800	0.69800	48.3	0.056	0.001	0.00100	49.8	0.002	6.500	0.002	0.004	60.8	0.004
49	829957.9	803237.4	1490.70	0.54	0.48	41.800	0.72200	48.6	0.057	0.001	0.00200	49.7	0.002	6.500	0.002	0.004	60.4	0.004
50	829955.1	803233.3	1490.70	0.56	0.50	41.900	0.74700	48.9	0.059	0.001	0.00200	49.6	0.002	6.400	0.002	0.004	60.1	0.004
51	829952.4	803229.1	1490.60	0.58	0.52	42.000	0.77400	49.2	0.062	0.001	0.00200	49.5	0.002	6.300	0.002	0.004	59.8	0.004
52	829949.6	803224.9	1490.60	0.60	0.54	42.100	0.80200	49.5	0.064	0.002	0.00200	49.4	0.002	6.300	0.002	0.004	59.4	0.005
53	829946.9	803220.8	1490.50	0.62	0.56	42.100	0.83100	49.8	0.066	0.002	0.00200	49.3	0.002	6.200	0.002	0.004	59.2	0.005
54	829944.1	803216.6	1490.40	0.64	0.58	42.200	0.86300	50.1	0.069	0.002	0.00200	49.2	0.003	6.200	0.003	0.004	58.8	0.005
55	829941.3	803212.4	1490.30	0.66	0.60	42.300	0.89600	50.4	0.071	0.002	0.00200	49.1	0.003	6.100	0.003	0.004	58.5	0.005
56	829938.6	803208.3	1490.20	0.69	0.63	42.300	0.93000	50.7	0.074	0.002	0.00200	49.0	0.003	6.100	0.003	0.004	58.2	0.005
57	829935.8	803204.1	1490.10	0.71	0.65	42.400	0.96700	51.1	0.077	0.002	0.00200	48.8	0.003	6.000	0.003	0.005	57.9	0.005
58	829933	803199.9	1489.90	0.74	0.68	42.400	1.00600	51.4	0.080	0.002	0.00200	48.7	0.003	6.000	0.003	0.005	57.6	0.006
59	829930.3	803195.8	1489.80	0.77	0.71	42.500	1.04700	51.7	0.083	0.002	0.00200	48.6	0.003	5.900	0.003	0.005	57.3	0.006
60	829927.5	803191.6	1489.70	0.80	0.74	42.500	1.09000	52.0	0.087	0.002	0.00300	48.4	0.003	5.900	0.003	0.005	57	0.006
61	829924.7	803187.4	1489.60	0.99	0.81	39.400	1.27800	46.6	0.102	0.003	0.00300	42.3	0.004	6.400	0.002	0.005	71.9	0.006
62	829922	803183.3	1489.40	1.02	0.84	39.600	1.32600	47.1	0.105	0.003	0.00300	42.4	0.004	6.400	0.002	0.005	71.5	0.006
63	829919.2	803179.1	1489.30	1.06	0.88	39.700	1.37600	47.6	0.110	0.003	0.00300	42.5	0.004	6.300	0.002	0.005	71	0.006
64	829916.4	803174.9	1489.30	1.10	0.92	39.900	1.43000	48.2	0.114	0.003	0.00300	42.6	0.005	6.200	0.002	0.006	69.6	0.006
65	829913.7	803170.8	1489.10	1.14	0.96	40.000	1.48700	48.7	0.118	0.004	0.00300	42.6	0.005	6.200	0.002	0.006	69.3	0.006
66	829910.9	803166.6	1488.80	1.18	1.00	40.200	1.54700	49.3	0.123	0.004	0.00400	42.7	0.005	6.100	0.002	0.006	69.4	0.006
67	829908.2	803162.4	1488.60	1.23	1.04	40.300	1.61100	49.8	0.128	0.004	0.00400	42.7	0.005	6.100	0.002	0.006	69.6	0.006
68	829905.4	803158.3	1488.30	1.28	1.09	40.500	1.67900	50.4	0.134	0.004	0.00400	42.7	0.006	6.000	0.002	0.006	69.9	0.006
69	829902.6	803154.1	1488.10	1.33	1.14	40.600	1.75200	50.9	0.139	0.005	0.00400	42.7	0.006	6.000	0.002	0.006	70.1	0.006
70	829899.9	803149.9	1487.80	1.39	1.19	40.700	1.83000	51.5	0.146	0.005	0.00400	42.7	0.006	5.900	0.002	0.006	70.4	0.006
71	829897.1	803145.8	1487.60	1.45	1.25	40.900	1.91200	52.0	0.152	0.005	0.00500	42.6	0.007	5.900	0.002	0.006	70.7	0.006
72	829894.3	803141.6	1487.30	1.51	1.31	41.000	2.00100	52.6	0.159	0.005	0.00500	42.6	0.007	5.800	0.002	0.006	71.1	0.006
73	829891.6	803137.4	1487.30	1.58	1.38	41.100	2.09600	53.1	0.167	0.006	0.00500	42.5	0.008	5.700	0.002	0.006	69.8	0.006
74	829888.8	803133.3	1487.30	1.65	1.45	41.300	2.19900	53.7	0.175	0.006	0.00600	42.4	0.008	5.700	0.002	0.006	67.7	0.007
75	829886	803129.1	1487.30	1.73	1.53	41.400	2.30900	54.2	0.184	0.006	0.00600	42.3	0.009	5.600	0.003	0.006	65.7	0.007
76	829883.3	803124.9	1487.30	1.82	1.61	41.500	2.42800	54.8	0.193	0.007	0.00600	42.1	0.009	5.500	0.003	0.007	63.8	0.008
77	829880.5	803120.8	1487.30	1.91	1.70	41.700	2.55500	55.4	0.203	0.007	0.00700	41.9	0.010	5.500	0.004	0.007	61.9	0.008
78	829877.7	803116.6	1487.10	1.96	1.79	42.400	2.65700	56.4	0.211	0.008	0.00700	40.8	0.011	5.500	0.003	0.008	66.3	0.008
79	829875	803112.5	1487.00	2.07	1.89	42.500	2.80500	56.9	0.223	0.009	0.00700	40.7	0.011	5.500	0.004	0.008	65.4	0.009
80	829872.2	803108.3	1486.80	2.18	2.00	42.600	2.96300	57.4	0.236	0.009	0.00800	40.5	0.012	5.400	0.004	0.008	65.2	0.009
81	829869.4	803104.1	1486.50	2.30	2.12	42.700	3.13100	58.0	0.249	0.010	0.00800	40.2	0.013	5.400	0.003	0.007	66.4	0.008
82	829866.7	803100	1486.10	2.43	2.25	42.700	3.31300	58.6	0.264	0.011	0.00900	40.0	0.014	5.300	0.003	0.007	68.8	0.007
83	829863.9	803095.8	1485.80	2.57	2.39	42.800	3.50800	59.2	0.279	0.012	0.01000	39.7	0.015	5.300	0.002	0.006	71.9	0.007
84	829861.2	803091.6	1485.50	2.72	2.53	42.900	3.71900	59.8	0.296	0.013	0.01000	39.4	0.016	5.300	0.001	0.006	76.8	0.006
85	829858.4	803087.5	1485.20	2.89	2.69	43.000	3.94700	60.4	0.314	0.014	0.01100	39.0	0.018	5.200	0.001	0.005	82.8	0.005
86	829855.6	803083.3	1485.00	3.06	2.87	43.100	4.19500	61.1	0.334	0.015	0.01200	38.6	0.019	5.200	0	0.004	88.3	0.004
87	829852.9	803079.1	1484.80	3.25	3.06	43.200	4.46400	61.8	0.355	0.016	0.01300	38.2	0.021	5.200	0	0.004	-82.9	0.004
88	829850.1	803075	1484.60	3.46	3.26	43.300	4.75500	62.5	0.378	0.018	0.01400	37.7	0.022	5.100	-0.001	0.003	-68.8	0.003
89	829847.3	803070.8	1484.40	3.68	3.49	43.500	5.07000	63.2	0.403	0.019	0.01500	37.2	0.024	5.100	-0.002	0.002	-47.8	0.003
90	829844.6	803066.6	1484.20	3.92	3.73	43.600	5.41100	64.0	0.431	0.021	0.01600	36.6	0.026	5.100	-0.003	0.001	-23.5	0.003
91	829841.8	803062.5	1484.00	4.18	4.00	43.700	5.78100	64.8	0.460	0.023	0.01700	36.0	0.029	5.000	-0.004	0	-4	0.004
92	829839	803058.3	1483.80	4.46	4.29	43.900	6.18300	65.7	0.492	0.025	0.01800	35.3	0.031	5.000	-0.006	-0.001	8.6	0.006
93	829836.3	803054.1	1483.60	4.76	4.60	44.100	6.61900	66.6	0.527	0.028	0.01900	34.6	0.034	5.000	-0.008	-0.002	16.2	0.008
94	829833.5	803050	1483.40	5.08	4.95	44.300	7.09300	67.6	0.564	0.031	0.02100	33.8	0.037	4.900	-0.01	-0.004	20.6	0.011
95	829830.7	803045.8	1483.30	5.44	5.33	44.500	7.61500	68.6	0.606	0.034	0.02200	32.9	0.041	4.900	-0.012	-0.005	22.4	0.013
96	829828	803041.6	1483.30	5.82	5.76	44.700	8.19000	69.6	0.652	0.038	0.02300	31.9	0.044	4.900	-0.012	-0.005	22.7	0.013
97	829825.2	803037.5	1483.30	6.24	6.23	45.000	8.81700	70.7	0.702	0.042	0.02500	30.7	0.049	4.800	-0.013	-0.006	22.7	0.014
98	829822.5	803033.3	1483.30	6.69	6.75	45.200	9.50200	71.9	0.756	0.047	0.02600	29.5	0.053	4.800	-0.014	-0.006	22.4	0.015
99	829819.7	803029.1	1483.30	7.18	7.32	45.600	10.24900	73.1	0.816	0.052	0.02800	28.1	0.059	4.800	-0.015	-0.006	21.8	0.016
100	829816.9	803025	1483.30	7.70	7.95	45.900	11.06500	74.4	0.881	0.058	0.02900	26.5	0.065	4.800	-0.016	-0.006	20.7	0.018

101	829814.2	803020.8	1483.30	8.26	8.65	46.300	11.96500	75.7	0.952	0.065	0.03000	24.7	0.071	4.800	-0.017	-0.006	18.6	0.017
102	829811.4	803016.6	1484.30	8.97	9.56	46.800	13.10700	76.8	1.043	0.072	0.03000	22.6	0.078	4.700	0.004	0.004	47.9	0.005
103	829808.6	803012.5	1485.30	9.73	10.59	47.400	14.38100	77.8	1.144	0.081	0.03000	20.2	0.086	4.700	0.028	0.013	26	0.031
104	829805.9	803008.3	1485.50	10.48	11.63	48.000	15.65600	78.8	1.246	0.091	0.02900	17.4	0.095	4.700	0.038	0.016	22.9	0.042
105	829803.1	803004.1	1485.70	11.27	12.80	48.600	17.05500	79.5	1.357	0.102	0.02600	14.2	0.105	4.600	0.051	0.018	19.7	0.054
106	829800.3	803000	1486.00	12.11	14.11	49.400	18.59200	79.8	1.479	0.114	0.02100	10.3	0.116	4.600	0.065	0.019	16.2	0.068
107	829797.6	802995.8	1486.20	12.98	15.57	50.200	20.26700	79.5	1.613	0.127	0.01300	5.8	0.128	4.700	0.081	0.018	12.2	0.083
108	829794.8	802991.6	1486.30	13.87	17.18	51.100	22.07900	78.5	1.757	0.142	0.00700	2.9	0.142	4.900	0.098	0.013	7.6	0.099
109	829792	802987.5	1486.50	14.76	18.98	52.100	24.04500	76.7	1.913	0.157	0.02300	8.2	0.158	5.400	0.117	0.004	1.9	0.117
110	829789.3	802983.3	1486.70	15.64	20.99	53.300	26.17400	74.2	2.083	0.171	0.05000	16.4	0.179	6.300	0.139	-0.013	-5.3	0.14
111	829786.5	802979.1	1486.80	16.42	23.17	54.700	28.39800	70.8	2.260	0.185	0.09100	26.1	0.206	7.500	0.159	-0.039	-13.8	0.164
112	829783.7	802975	1487.00	17.06	25.53	56.300	30.70600	66.8	2.443	0.195	0.14700	37.0	0.245	8.700	0.177	-0.079	-24.1	0.194
113	829781	802970.8	1487.10	17.47	28.11	58.100	33.09100	61.9	2.633	0.199	0.22500	48.5	0.301	9.700	0.193	-0.14	-36	0.239
114	829778.2	802966.6	1487.30	17.52	30.88	60.400	35.50100	56.1	2.825	0.193	0.33100	59.7	0.383	10.000	0.201	-0.23	-48.8	0.306
115	829775.5	802962.5	1487.30	16.99	33.69	63.200	37.73400	49.4	3.003	0.172	0.46900	69.8	0.500	9.300	0.191	-0.344	-61	0.393
116	829772.7	802958.3	1487.50	15.81	36.79	66.700	40.03900	41.7	3.186	0.133	0.64400	78.3	0.657	8.500	0.163	-0.508	-72.2	0.534
117	829769.9	802954.1	1487.60	13.75	40.13	71.100	42.42200	33.0	3.376	0.080	0.85400	84.6	0.857	7.500	0.108	-0.716	-81.4	0.724
118	829767.2	802950	1487.70	10.82	43.83	76.100	45.14800	24.0	3.593	0.086	1.08800	85.5	1.091	6.300	0.021	-0.951	-88.7	0.951
119	829764.4	802945.8	1487.80	7.71	48.16	80.900	48.77800	16.0	3.882	0.183	1.32200	82.1	1.334	5.200	-0.091	-1.2	85.7	1.203
120	829761.6	802941.6	1487.90	6.89	53.16	82.600	53.60900	11.0	4.266	0.297	1.52000	78.9	1.549	4.300	-0.215	-1.425	81.4	1.441
121	829758.9	802937.5	1488.00	9.96	58.31	80.300	59.15700	8.8	4.708	0.395	1.64200	76.5	1.689	3.500	-0.322	-1.564	78.4	1.597
122	829756.1	802933.3	1488.00	14.13	62.79	77.300	64.36200	7.2	5.122	0.458	1.66200	74.6	1.724	2.900	-0.395	-1.598	76.1	1.646
123	829753.3	802929.1	1488.10	17.66	65.93	75.000	68.25700	5.5	5.432	0.479	1.58400	73.2	1.655	2.500	-0.436	-1.565	74.4	1.624
124	829750.6	802925	1488.20	19.88	66.95	73.500	69.83900	4.0	5.558	0.466	1.43000	72.0	1.504	2.400	-0.442	-1.449	73.1	1.515
125	829747.8	802920.8	1488.30	20.81	65.75	72.400	68.96400	4.1	5.488	0.431	1.23600	70.8	1.309	2.400	-0.419	-1.272	71.8	1.34
126	829745	802916.6	1488.30	20.80	62.86	71.700	66.20700	6.0	5.269	0.388	1.03300	69.4	1.104	2.500	-0.384	-1.078	70.4	1.145
127	829742.3	802912.5	1488.40	20.19	58.83	71.100	62.19700	8.5	4.949	0.343	0.84400	67.9	0.911	2.800	-0.345	-0.888	68.8	0.953
128	829739.5	802908.3	1488.40	19.27	54.18	70.400	57.50400	11.2	4.576	0.302	0.67900	66.0	0.743	3.100	-0.305	-0.714	66.9	0.776
129	829736.8	802904.1	1488.40	18.24	49.38	69.700	52.63600	13.9	4.189	0.266	0.54200	63.8	0.603	3.500	-0.269	-0.567	64.6	0.628
130	829734	802900	1488.40	17.16	44.66	69.000	47.84000	16.5	3.807	0.235	0.43000	61.4	0.490	3.700	-0.236	-0.445	62.1	0.504
131	829731.2	802895.8	1488.40	16.13	40.24	68.200	43.34600	19.1	3.449	0.207	0.34100	58.7	0.399	4.000	-0.209	-0.351	59.2	0.409
132	829728.5	802891.6	1488.40	15.12	36.14	67.300	39.17300	21.5	3.117	0.183	0.27100	55.9	0.327	4.100	-0.185	-0.276	56.2	0.332
133	829725.7	802887.5	1488.50	14.16	32.45	66.400	35.40400	23.8	2.817	0.162	0.21600	53.0	0.270	4.200	-0.166	-0.22	52.9	0.275
134	829722.9	802883.3	1488.50	13.24	29.10	65.500	31.96500	25.9	2.544	0.144	0.17200	50.1	0.225	4.300	-0.148	-0.173	49.5	0.228
135	829720.2	802879.1	1488.60	12.37	26.12	64.700	28.90000	27.8	2.300	0.128	0.13800	47.2	0.188	4.300	-0.134	-0.139	46.1	0.193
136	829717.4	802875	1488.60	11.55	23.46	63.800	26.15100	29.6	2.081	0.113	0.11200	44.5	0.159	4.300	-0.122	-0.112	42.7	0.166
137	829714.6	802870.8	1488.70	10.77	21.11	63.000	23.69400	31.3	1.885	0.101	0.09000	41.9	0.135	4.400	-0.111	-0.091	39.4	0.144
138	829711.9	802866.6	1488.80	10.04	19.01	62.200	21.50000	32.8	1.711	0.090	0.07400	39.4	0.116	4.500	-0.102	-0.075	36.3	0.127
139	829709.1	802862.5	1488.80	9.34	17.14	61.400	19.51600	34.2	1.553	0.080	0.06000	37.1	0.100	4.500	-0.092	-0.06	33.2	0.11
140	829706.3	802858.3	1488.80	8.68	15.46	60.700	17.73000	35.5	1.411	0.071	0.04900	34.9	0.086	4.500	-0.082	-0.048	30.1	0.095
141	829703.6	802854.1	1488.90	8.08	13.99	60.000	16.15300	36.7	1.285	0.063	0.04100	32.8	0.075	4.600	-0.075	-0.039	27.3	0.085
142	829700.8	802850	1488.90	7.53	12.68	59.300	14.74400	37.7	1.173	0.056	0.03400	30.9	0.065	4.800	-0.069	-0.032	24.7	0.076
143	829698	802845.8	1489.00	7.01	11.52	58.700	13.48100	38.7	1.073	0.050	0.02800	29.1	0.057	4.900	-0.064	-0.026	22.3	0.069
144	829695.3	802841.6	1489.10	6.53	10.48	58.100	12.34700	39.6	0.983	0.045	0.02300	27.4	0.050	5.000	-0.059	-0.022	20	0.063
145	829692.5	802837.5	1489.20	6.09	9.55	57.500	11.33000	40.4	0.902	0.040	0.01900	25.8	0.044	5.100	-0.055	-0.018	17.8	0.058
146	829689.8	802833.3	1489.30	5.69	8.73	56.900	10.41500	41.2	0.829	0.035	0.01600	24.3	0.039	5.300	-0.051	-0.014	15.8	0.053
147	829687	802829.1	1489.40	5.32	7.99	56.400	9.59800	41.9	0.764	0.032	0.01300	22.9	0.034	5.400	-0.048	-0.012	14	0.05
148	829684.2	802825	1489.60	4.97	7.33	55.800	8.85900	42.5	0.705	0.028	0.01100	21.5	0.030	5.500	-0.046	-0.01	12.3	0.047
149	829681.5	802820.8	1489.70	4.66	6.74	55.300	8.19200	43.1	0.652	0.025	0.00900	20.2	0.027	5.700	-0.043	-0.008	10.7	0.044
150	829678.7	802816.6	1489.80	4.37	6.20	54.800	7.58900	43.6	0.604	0.023	0.00800	18.9	0.024	5.800	-0.04	-0.006	9.1	0.041
151	829675.9	802812.5	1489.90	4.11	5.72	54.300	7.04300	44.1	0.560	0.020	0.00600	17.7	0.021	5.900	-0.038	-0.005	7.6	0.038
152	829673.2	802808.3	1490.10	3.87	5.29	53.800	6.55300	44.5	0.521	0.018	0.00500	16.5	0.019	6.000	-0.036	-0.004	6.3	0.036
153	829670.4	802804.1	1490.30	3.65	4.90	53.300	6.11000	44.9	0.486	0.016	0.00400	15.3	0.017	6.200	-0.035	-0.003	5.1	0.035

154	829667.6	802800	1490.40	3.45	4.54	52.800	5.70500	45.2	0.454	0.014	0.00400	14.1	0.015	6.300	-0.033	-0.002	3.8	0.033
155	829664.9	802795.8	1490.70	3.27	4.23	52.300	5.34100	45.5	0.425	0.013	0.00300	13.0	0.013	6.400	-0.032	-0.002	2.9	0.032
156	829662.1	802791.7	1491.00	3.10	3.94	51.800	5.01000	45.7	0.399	0.011	0.00200	11.9	0.012	6.500	-0.03	-0.001	1.9	0.03
157	829659.3	802787.5	1491.20	2.95	3.67	51.300	4.70800	45.8	0.375	0.010	0.00200	10.7	0.010	6.700	-0.029	0	0.9	0.029
158	829656.6	802783.3	1491.30	2.81	3.43	50.700	4.43100	45.9	0.353	0.009	0.00200	9.6	0.009	6.800	-0.027	0	-0.2	0.027
159	829653.8	802779.2	1491.30	2.67	3.21	50.200	4.17800	45.9	0.332	0.008	0.00100	8.4	0.008	6.900	-0.026	0.001	-1.3	0.026
160	829651.1	802775	1491.30	2.55	3.01	49.700	3.94700	45.8	0.314	0.007	0.00100	7.3	0.007	7.100	-0.024	0.001	-2.4	0.024
161	829648.3	802770.8	1491.30	2.44	2.83	49.200	3.73700	45.7	0.297	0.006	0.00100	6.2	0.006	7.200	-0.023	0.001	-3.4	0.023
162	829645.5	802766.7	1491.30	2.34	2.66	48.600	3.54500	45.5	0.282	0.006	0.00100	5.2	0.006	7.300	-0.022	0.002	-4.3	0.022
163	829642.8	802762.5	1491.40	2.25	2.51	48.100	3.37100	45.3	0.268	0.005	0.00000	4.5	0.005	7.400	-0.021	0.002	-5.1	0.021
164	829640	802758.3	1491.80	2.17	2.37	47.500	3.21400	45.0	0.256	0.004	0.00000	4.4	0.004	7.700	-0.02	0.002	-5.8	0.02
165	829637.2	802754.2	1492.20	2.10	2.24	47.000	3.07000	44.6	0.244	0.004	0.00000	5.3	0.004	8.100	-0.02	0.002	-6.4	0.02
166	829634.5	802750	1492.50	2.02	2.13	46.400	2.93600	44.2	0.234	0.003	0.00000	6.9	0.003	8.400	-0.019	0.002	-7.1	0.019
167	829631.7	802745.8	1492.60	1.96	2.02	45.900	2.81300	43.7	0.224	0.003	0.00000	9.2	0.003	8.800	-0.018	0.003	-7.8	0.018
168	829628.9	802741.7	1492.80	1.90	1.92	45.300	2.69900	43.2	0.215	0.002	0.00100	12.2	0.002	9.500	-0.017	0.003	-8.5	0.018
169	829626.2	802737.5	1493.20	1.84	1.83	44.800	2.59600	42.6	0.207	0.002	0.00100	16.0	0.002	10.900	-0.017	0.003	-9.3	0.017
170	829623.4	802733.3	1494.20	1.79	1.75	44.200	2.50300	42.1	0.199	0.002	0.00100	20.8	0.002	14.500	-0.017	0.003	-10.1	0.017
171	829620.6	802729.2	1495.10	1.75	1.67	43.700	2.41700	41.5	0.192	0.001	0.00100	26.7	0.001	20.100	-0.016	0.003	-11.1	0.016
172	829617.9	802725	1495.70	1.71	1.60	43.100	2.33600	40.8	0.186	0.001	0.00100	33.9	0.001	27.700	-0.015	0.003	-12.2	0.016
173	829615.1	802720.8	1496.00	1.66	1.53	42.600	2.25900	40.1	0.180	0.001	0.00100	42.4	0.001	36.800	-0.015	0.003	-13.2	0.015
174	829612.4	802716.7	1496.10	1.62	1.47	42.100	2.18700	39.3	0.174	0.001	0.00100	51.7	0.001	47.100	-0.014	0.003	-14.1	0.014
175	829609.6	802712.5	1496.10	1.58	1.41	41.600	2.12000	38.5	0.169	0.000	0.00100	59.6	0.001	53.400	-0.013	0.003	-14.8	0.014
176	829606.8	802708.3	1495.90	1.55	1.35	41.200	2.05700	37.7	0.164	0.000	0.00100	62.8	0.001	50.000	-0.013	0.003	-15.4	0.013
177	829604.1	802704.2	1495.90	1.51	1.30	40.700	1.99800	36.9	0.159	0.000	0.00100	59.9	0.001	41.700	-0.012	0.003	-16.1	0.012
178	829601.3	802700	1495.90	1.48	1.26	40.300	1.94300	36.1	0.155	0.001	0.00100	54.5	0.001	33.100	-0.011	0.003	-16.7	0.012
179	829598.5	802695.8	1495.90	1.45	1.21	39.900	1.89200	35.3	0.151	0.001	0.00100	49.0	0.001	26.300	-0.011	0.003	-17.4	0.011
180	829595.8	802691.7	1495.80	1.42	1.17	39.500	1.84200	34.5	0.147	0.001	0.00100	44.2	0.001	21.000	-0.01	0.003	-17.8	0.011
181	829593	802687.5	1495.70	1.39	1.13	39.100	1.79600	33.8	0.143	0.001	0.00100	40.2	0.001	17.200	-0.01	0.003	-18.1	0.011
182	829590.2	802683.3	1495.80	1.37	1.10	38.700	1.75200	33.0	0.139	0.001	0.00100	36.9	0.001	14.300	-0.01	0.003	-18.7	0.01
183	829587.5	802679.2	1495.60	1.34	1.06	38.400	1.71000	32.2	0.136	0.001	0.00100	34.2	0.001	12.100	-0.009	0.003	-18.8	0.01
184	829584.7	802675	1495.40	1.32	1.03	38.100	1.67000	31.5	0.133	0.001	0.00100	31.9	0.001	10.300	-0.009	0.003	-18.7	0.01
185	829581.9	802670.8	1495.50	1.29	1.00	37.700	1.63200	30.8	0.130	0.001	0.00100	30.0	0.002	9.000	-0.009	0.003	-19.3	0.009
186	829579.2	802666.7	1495.70	1.27	0.97	37.400	1.59600	30.1	0.127	0.001	0.00100	28.3	0.002	7.900	-0.008	0.003	-20	0.009
187	829576.4	802662.5	1495.60	1.24	0.94	37.200	1.56000	29.4	0.124	0.002	0.00100	26.9	0.002	7.000	-0.008	0.003	-20	0.009
188	829573.6	802658.3	1495.40	1.22	0.92	36.900	1.52500	28.8	0.121	0.002	0.00100	25.6	0.002	6.200	-0.008	0.003	-19.9	0.008
189	829570.9	802654.2	1495.30	1.20	0.89	36.700	1.49200	28.2	0.119	0.002	0.00100	24.5	0.002	5.600	-0.008	0.003	-19.7	0.008
190	829568.1	802650	1495.30	1.17	0.87	36.400	1.45900	27.6	0.116	0.002	0.00100	23.5	0.002	5.000	-0.008	0.003	-19.9	0.008
191	829565.4	802645.8	1495.30	1.15	0.84	36.200	1.42700	27.0	0.114	0.002	0.00100	22.7	0.002	4.600	-0.007	0.003	-20	0.008
192	829562.6	802641.7	1495.20	1.13	0.82	36.000	1.39600	26.5	0.111	0.002	0.00100	21.9	0.002	4.200	-0.007	0.003	-19.9	0.008
193	829559.8	802637.5	1495.10	1.11	0.80	35.800	1.36500	26.0	0.109	0.002	0.00100	21.2	0.002	3.800	-0.007	0.003	-19.7	0.008
194	829557.1	802633.3	1495.00	1.09	0.78	35.700	1.33500	25.5	0.106	0.002	0.00100	20.5	0.002	3.500	-0.007	0.002	-19.4	0.007
195	829554.3	802629.2	1494.90	1.06	0.76	35.500	1.30500	25.0	0.104	0.002	0.00100	19.9	0.002	3.300	-0.007	0.002	-19.2	0.007
196	829551.5	802625	1494.80	1.04	0.74	35.400	1.27600	24.6	0.102	0.002	0.00100	19.4	0.002	3.000	-0.007	0.002	-18.9	0.007
197	829548.8	802620.8	1494.70	1.02	0.72	35.300	1.24600	24.2	0.099	0.002	0.00100	18.9	0.002	2.800	-0.007	0.002	-18.7	0.007
198	829546	802616.7	1494.60	1.00	0.70	35.100	1.21700	23.8	0.097	0.002	0.00100	18.4	0.002	2.600	-0.007	0.002	-18.4	0.007
199	829543.2	802612.5	1494.50	1.09	0.75	34.500	1.31700	21.0	0.105	0.002	0.00100	21.5	0.002	3.000	-0.007	0.002	-14.5	0.007
200	829540.5	802608.3	1494.40	1.06	0.73	34.400	1.28700	20.7	0.102	0.002	0.00100	21.1	0.002	2.800	-0.007	0.002	-14.2	0.007
201	829537.7	802604.2	1494.30	1.04	0.71	34.300	1.25700	20.4	0.100	0.002	0.00100	20.6	0.002	2.700	-0.007	0.002	-13.8	0.007
202	829534.9	802600	1494.20	1.01	0.69	34.300	1.22700	20.1	0.098	0.002	0.00100	20.2	0.002	2.500	-0.007	0.002	-13.5	0.007
203	829532.2	802595.8	1494.10	0.99	0.67	34.200	1.19700	19.9	0.095	0.002	0.00100	19.8	0.002	2.400	-0.006	0.002	-13.3	0.007
204	829529.4	802591.7	1494.10	0.97	0.66	34.200	1.16700	19.7	0.093	0.002	0.00100	19.5	0.002	2.300	-0.006	0.001	-13.1	0.007
205	829526.7	802587.5	1494.10	0.94	0.64	34.200	1.13700	19.5	0.091	0.002	0.00100	19.1	0.002	2.200	-0.006	0.001	-13	0.006
206	829523.9	802583.3	1494.00	0.92	0.62	34.200	1.10800	19.3	0.088	0.002	0.00100	18.8	0.002	2.100	-0.006	0.001	-12.8	0.006

207	829521.1	802579.2	1493.90	0.89	0.61	34.100	1.07800	19.1	0.086	0.002	0.00100	18.5	0.002	2.000	-0.006	0.001	-12.6	0.006
208	829518.4	802575	1493.90	0.87	0.59	34.200	1.04800	19.0	0.083	0.002	0.00100	18.2	0.002	1.900	-0.006	0.001	-12.5	0.006
209	829515.6	802570.8	1493.80	0.84	0.57	34.200	1.01800	18.8	0.081	0.002	0.00100	18.0	0.002	1.800	-0.006	0.001	-12.3	0.006
210	829512.8	802566.7	1493.80	0.82	0.56	34.200	0.98900	18.7	0.079	0.002	0.00100	17.7	0.002	1.700	-0.006	0.001	-12.2	0.006
211	829510.1	802562.5	1493.70	0.79	0.54	34.200	0.95900	18.7	0.076	0.002	0.00100	17.4	0.002	1.700	-0.006	0.001	-12	0.006
212	829507.3	802558.3	1493.70	0.77	0.52	34.300	0.93000	18.6	0.074	0.002	0.00100	17.2	0.002	1.600	-0.006	0.001	-12	0.006
213	829504.5	802554.2	1493.60	0.74	0.51	34.300	0.90100	18.6	0.072	0.002	0.00100	17.0	0.002	1.500	-0.006	0.001	-11.9	0.006
214	829501.8	802550	1493.60	0.72	0.49	34.400	0.87200	18.6	0.069	0.002	0.00100	16.7	0.002	1.500	-0.006	0.001	-11.8	0.006
215	829499	802545.8	1493.50	0.69	0.48	34.500	0.84200	18.6	0.067	0.002	0.00100	16.5	0.002	1.400	-0.005	0.001	-11.7	0.006
216	829496.2	802541.7	1493.40	0.67	0.46	34.600	0.81400	18.6	0.065	0.002	0.00100	16.3	0.002	1.400	-0.005	0.001	-11.7	0.005
217	829493.5	802537.5	1493.40	0.65	0.45	34.700	0.78500	18.7	0.062	0.002	0.00100	16.1	0.002	1.400	-0.005	0.001	-11.6	0.005
218	829490.7	802533.3	1493.30	0.62	0.43	34.800	0.75700	18.8	0.060	0.002	0.00100	15.9	0.002	1.300	-0.005	0.001	-11.6	0.005
219	829487.9	802529.2	1493.30	0.60	0.42	35.000	0.72900	18.9	0.058	0.002	0.00100	15.7	0.002	1.300	-0.005	0.001	-11.6	0.005
220	829485.2	802525	1493.30	0.57	0.40	35.100	0.70100	19.0	0.056	0.002	0.00000	15.5	0.002	1.300	-0.005	0.001	-11.8	0.005
221	829482.4	802520.8	1493.30	0.55	0.39	35.300	0.67300	19.2	0.054	0.002	0.00000	15.3	0.002	1.300	-0.005	0.001	-12	0.005
222	829479.7	802516.7	1493.30	0.26	0.25	43.400	0.36200	31.9	0.029	0.002	0.00100	19.6	0.002	1.100	-0.005	0.001	-7.7	0.005
223	829476.9	802512.5	1493.30	0.24	0.24	44.200	0.34100	32.5	0.027	0.002	0.00100	19.4	0.002	1.100	-0.005	0.001	-7.9	0.005
224	829474.1	802508.3	1493.30	0.23	0.23	45.100	0.32000	33.1	0.025	0.002	0.00100	19.2	0.002	1.100	-0.005	0.001	-8.1	0.005
225	829471.4	802504.2	1493.30	0.21	0.22	46.000	0.30000	33.7	0.024	0.002	0.00100	19.1	0.002	1.100	-0.005	0.001	-8.3	0.005
226	829468.6	802500	1493.30	0.19	0.21	47.100	0.28100	34.3	0.022	0.002	0.00100	18.9	0.002	1.000	-0.005	0.001	-8.6	0.005
227	829465.8	802495.8	1493.30	0.18	0.20	48.200	0.26300	34.9	0.021	0.002	0.00100	18.7	0.002	1.000	-0.004	0.001	-8.9	0.005
228	829463.1	802491.7	1493.30	0.16	0.19	49.400	0.24600	35.4	0.020	0.002	0.00100	18.5	0.002	1.000	-0.004	0.001	-9.1	0.004
229	829460.3	802487.5	1493.30	0.15	0.18	50.700	0.23100	35.9	0.018	0.002	0.00100	18.4	0.002	1.000	-0.004	0.001	-9.4	0.004
230	829457.5	802483.3	1493.30	0.13	0.17	51.900	0.21600	36.4	0.017	0.002	0.00100	18.2	0.002	1.000	-0.004	0.001	-9.8	0.004
231	829454.8	802479.2	1493.30	0.12	0.16	53.000	0.20400	37.0	0.016	0.002	0.00100	18.0	0.002	1.000	-0.004	0.001	-10.1	0.004
232	829452	802475	1493.30	0.11	0.16	54.000	0.19200	37.8	0.015	0.002	0.00000	17.9	0.002	0.900	-0.004	0.001	-10.5	0.004
233	829449.2	802470.8	1493.30	0.11	0.15	54.600	0.18300	38.9	0.015	0.001	0.00000	17.7	0.002	0.900	-0.004	0.001	-10.9	0.004
234	829446.5	802466.7	1493.30	0.10	0.14	54.700	0.17500	40.4	0.014	0.001	0.00000	17.5	0.002	0.900	-0.004	0.001	-11.3	0.004
235	829443.7	802462.5	1493.30	0.10	0.14	54.400	0.16900	42.5	0.013	0.001	0.00000	17.3	0.001	0.900	-0.004	0.001	-11.7	0.004
236	829441	802458.4	1493.30	0.10	0.13	53.500	0.16500	45.0	0.013	0.001	0.00000	17.2	0.001	0.900	-0.003	0.001	-12.1	0.004
237	829438.2	802454.2	1493.30	0.10	0.13	52.000	0.16300	47.5	0.013	0.001	0.00000	17.0	0.001	0.900	-0.003	0.001	-12.6	0.003
238	829435.4	802450	1493.30	0.10	0.13	50.200	0.16300	49.7	0.013	0.001	0.00000	16.8	0.001	1.000	-0.003	0.001	-13.1	0.003
239	829432.7	802445.9	1493.30	0.11	0.12	48.100	0.16400	51.2	0.013	0.001	0.00000	16.6	0.001	1.000	-0.003	0.001	-13.6	0.003
240	829429.9	802441.7	1493.30	0.12	0.12	45.900	0.16600	51.6	0.013	0.001	0.00000	16.5	0.001	1.000	-0.003	0.001	-14.1	0.003
241	829427.1	802437.5	1493.30	0.20	0.33	58.400	0.39000	37.8	0.031	0.001	0.00000	15.0	0.001	1.000	-0.003	0.001	-12.1	0.003

CASE 2

EMF Calculation Results

Row #	EMF Calculation Results												Space Potential			Space Potential		
	Measurement X (ft)	Measurement Y (ft)	Measurement Z (ft)	B Real (mG)	B Imaginary (mG)	B Angle (deg)	B Magnitude (mG)	B Polarization Axial Ratio %	H Magnitude (A/m)	EF Real (kV/m)	EF Imaginary (kV/m)	EF Angle (deg)	EF Magnitude (kV/m)	EF Polarization Axial Ratio %	Space Potential Real (kV)	Space Potential Imaginary (kV)	Space Potential Angle (deg)	Space Potential Magnitude (kV)
1	830578.8	803031.3	1509.30	1.56	0.75	25.700	1.73200	2.3	0.138	0.007	0.00200	13.7	0.007	1.600	0.015	0.005	19	0.016
2	830574.7	803028.4	1509.30	1.67	0.80	25.500	1.85200	2.4	0.147	0.007	0.00200	13.9	0.008	1.500	0.017	0.006	18.8	0.018
3	830570.6	803025.5	1509.30	1.72	0.81	25.300	1.90400	2.6	0.152	0.008	0.00200	14.5	0.008	1.500	0.019	0.006	19	0.02
4	830566.5	803022.6	1509.30	1.77	0.83	25.000	1.95600	2.9	0.156	0.009	0.00200	14.9	0.009	1.400	0.02	0.007	19.3	0.022
5	830562.4	803019.8	1509.10	1.82	0.84	24.800	2.00800	3.2	0.160	0.010	0.00300	15.4	0.010	1.400	0.022	0.008	19.6	0.023
6	830558.3	803016.9	1509.00	1.87	0.86	24.500	2.06000	3.6	0.164	0.011	0.00300	15.8	0.012	1.300	0.024	0.008	19.9	0.025
7	830554.2	803014	1508.90	1.93	0.87	24.300	2.11100	4.1	0.168	0.012	0.00400	16.2	0.013	1.300	0.025	0.009	20.1	0.027
8	830550.1	803011.2	1508.70	1.98	0.88	24.000	2.16300	4.6	0.172	0.014	0.00400	16.5	0.014	1.200	0.027	0.01	20.3	0.029
9	830546	803008.3	1508.60	2.03	0.89	23.800	2.21600	5.1	0.176	0.015	0.00500	16.8	0.016	1.200	0.029	0.011	20.5	0.031
10	830541.9	803005.4	1508.40	2.08	0.91	23.600	2.27100	5.8	0.181	0.017	0.00500	17.1	0.018	1.100	0.032	0.012	20.7	0.034
11	830537.8	803002.5	1508.30	2.14	0.93	23.400	2.33000	6.6	0.185	0.019	0.00600	17.3	0.020	1.000	0.034	0.013	20.8	0.037
12	830533.7	802999.7	1508.10	2.20	0.95	23.400	2.39700	7.4	0.191	0.022	0.00700	17.5	0.023	1.000	0.037	0.014	21	0.04
13	830529.7	802996.8	1508.00	2.27	0.98	23.400	2.47700	8.3	0.197	0.025	0.00800	17.6	0.026	0.900	0.04	0.015	21	0.043
14	830525.6	802993.9	1507.80	2.36	1.03	23.500	2.57600	9.2	0.205	0.028	0.00900	17.7	0.029	0.900	0.044	0.017	21	0.047
15	830521.5	802991.1	1507.70	2.48	1.09	23.800	2.70500	10.1	0.215	0.031	0.01000	17.8	0.033	0.900	0.047	0.018	21	0.051
16	830517.4	802988.2	1507.50	2.62	1.18	24.200	2.87500	10.7	0.229	0.035	0.01100	17.8	0.037	0.800	0.051	0.02	21	0.055
17	830513.3	802985.3	1507.40	2.82	1.29	24.700	3.09900	11.1	0.247	0.040	0.01300	17.7	0.042	0.800	0.055	0.021	20.9	0.059
18	830509.2	802982.4	1507.30	3.07	1.44	25.100	3.39100	11.2	0.270	0.045	0.01400	17.6	0.047	0.700	0.06	0.023	20.8	0.065
19	830505.1	802979.6	1507.30	3.40	1.62	25.500	3.76100	11.0	0.299	0.051	0.01600	17.5	0.054	0.700	0.068	0.025	20.5	0.072
20	830501	802976.7	1507.30	3.81	1.83	25.700	4.22900	10.4	0.337	0.058	0.01800	17.4	0.061	0.700	0.076	0.028	20.3	0.081
21	830496.9	802973.8	1507.30	4.33	2.09	25.800	4.80500	9.7	0.382	0.065	0.02000	17.2	0.068	0.600	0.085	0.031	20	0.09
22	830492.8	802971	1507.30	5.05	2.50	26.400	5.63200	9.5	0.448	0.073	0.02200	16.8	0.077	0.600	0.094	0.033	19.4	0.1
23	830488.7	802968.1	1507.30	5.79	2.83	26.000	6.44200	8.5	0.513	0.083	0.02400	16.5	0.086	0.600	0.105	0.036	19	0.112
24	830484.6	802965.2	1507.30	6.67	3.22	25.700	7.40800	7.7	0.589	0.093	0.02700	16.3	0.096	0.600	0.118	0.04	18.7	0.124
25	830480.5	802962.3	1507.30	7.67	3.64	25.400	8.48900	7.0	0.676	0.103	0.03000	16.0	0.108	0.600	0.131	0.043	18.4	0.138
26	830476.4	802959.5	1507.20	8.76	4.10	25.100	9.67600	6.4	0.770	0.115	0.03300	15.8	0.119	0.500	0.143	0.047	18.1	0.151
27	830472.3	802956.6	1507.00	9.94	4.58	24.700	10.94500	5.9	0.871	0.127	0.03500	15.6	0.132	0.500	0.149	0.048	17.9	0.157
28	830468.3	802953.7	1506.90	11.19	5.08	24.400	12.28900	5.5	0.978	0.140	0.03800	15.3	0.145	0.400	0.158	0.05	17.7	0.166
29	830464.2	802950.9	1506.80	12.48	5.60	24.200	13.68000	5.2	1.089	0.152	0.04100	15.1	0.158	0.400	0.167	0.053	17.4	0.175
30	830460.1	802948	1506.60	13.80	6.12	23.900	15.09300	4.9	1.201	0.165	0.04400	14.9	0.171	0.400	0.175	0.054	17.3	0.183
31	830456	802945.1	1506.50	15.10	6.64	23.700	16.49700	4.7	1.313	0.178	0.04700	14.8	0.184	0.300	0.18	0.055	17.1	0.188
32	830451.9	802942.2	1506.40	16.39	7.15	23.600	17.88200	4.5	1.423	0.190	0.04900	14.6	0.196	0.300	0.188	0.057	17	0.197
33	830447.8	802939.4	1506.20	17.61	7.65	23.500	19.19600	4.4	1.528	0.202	0.05200	14.5	0.208	0.300	0.189	0.057	16.9	0.198
34	830443.7	802936.5	1506.00	18.76	8.12	23.400	20.44000	4.3	1.627	0.212	0.05400	14.4	0.219	0.300	0.191	0.058	16.8	0.199
35	830439.6	802933.6	1505.80	19.82	8.56	23.400	21.58700	4.2	1.718	0.222	0.05700	14.3	0.230	0.300	0.189	0.057	16.8	0.197
36	830435.5	802930.8	1505.60	20.76	8.97	23.400	22.61900	4.2	1.800	0.232	0.05900	14.2	0.239	0.300	0.182	0.055	16.8	0.19
37	830431.4	802927.9	1505.50	21.58	9.21	23.100	23.46700	4.7	1.867	0.240	0.06100	14.2	0.247	0.200	0.186	0.057	16.9	0.195
38	830427.3	802925	1505.40	22.38	9.57	23.100	24.34300	4.7	1.937	0.247	0.06200	14.2	0.255	0.200	0.194	0.059	16.8	0.203
39	830423.2	802922.1	1505.40	23.08	9.90	23.200	25.11500	4.6	1.999	0.253	0.06400	14.2	0.261	0.200	0.202	0.06	16.6	0.211
40	830419.1	802919.3	1505.40	23.69	10.19	23.300	25.78700	4.6	2.052	0.258	0.06500	14.1	0.266	0.200	0.209	0.062	16.5	0.218
41	830415	802916.4	1505.30	24.19	10.44	23.300	26.34300	4.6	2.096	0.263	0.06600	14.1	0.271	0.200	0.211	0.062	16.4	0.219
42	830410.9	802913.5	1505.30	24.63	10.67	23.400	26.83700	4.6	2.136	0.266	0.06700	14.1	0.275	0.200	0.218	0.063	16.2	0.227
43	830406.9	802910.7	1505.30	25.00	10.87	23.500	27.25500	4.6	2.169	0.269	0.06800	14.1	0.278	0.200	0.227	0.065	16	0.236
44	830402.8	802907.8	1505.20	25.29	11.04	23.600	27.59200	4.6	2.196	0.271	0.06800	14.1	0.280	0.200	0.232	0.066	15.8	0.242
45	830398.7	802904.9	1505.10	25.50	11.17	23.700	27.84000	4.6	2.215	0.273	0.06900	14.1	0.282	0.300	0.23	0.065	15.7	0.239
46	830394.6	802902	1505.00	25.66	11.29	23.700	28.03000	4.6	2.231	0.274	0.06900	14.1	0.283	0.300	0.227	0.063	15.6	0.236
47	830390.5	802899.2	1504.90	25.77	11.38	23.800	28.17100	4.6	2.242	0.275	0.06900	14.1	0.284	0.300	0.224	0.062	15.4	0.232

48	830386.4	802896.3	1504.70	25.85	11.45	23.900	28.27300	4.6	2.250	0.276	0.06900	14.1	0.284	0.300	0.22	0.06	15.3	0.228
49	830382.3	802893.4	1504.60	25.88	11.51	24.000	28.32400	4.6	2.254	0.276	0.06900	14.1	0.284	0.300	0.212	0.057	15.1	0.22
50	830378.2	802890.6	1504.30	25.88	11.54	24.000	28.33300	4.6	2.255	0.276	0.06900	14.1	0.284	0.300	0.201	0.054	14.9	0.208
51	830374.1	802887.7	1504.10	25.85	11.57	24.100	28.31600	4.6	2.253	0.275	0.06900	14.1	0.284	0.300	0.188	0.05	14.7	0.195
52	830370	802884.8	1503.90	25.80	11.58	24.200	28.27600	4.6	2.250	0.275	0.06900	14.1	0.283	0.300	0.176	0.046	14.5	0.182
53	830365.9	802881.9	1503.70	25.73	11.59	24.200	28.21800	4.6	2.246	0.274	0.06900	14.1	0.282	0.300	0.163	0.042	14.3	0.168
54	830361.8	802879.1	1503.50	25.65	11.59	24.300	28.15000	4.6	2.240	0.273	0.06900	14.1	0.281	0.300	0.152	0.038	14	0.156
55	830357.7	802876.2	1503.30	25.70	11.74	24.600	28.25200	4.2	2.248	0.272	0.06800	14.1	0.280	0.300	0.139	0.035	14	0.143
56	830353.6	802873.3	1503.30	25.65	11.75	24.600	28.21500	4.2	2.245	0.271	0.06800	14.1	0.279	0.400	0.143	0.035	13.8	0.148
57	830349.5	802870.5	1503.10	25.54	11.73	24.700	28.10700	4.2	2.237	0.270	0.06800	14.1	0.278	0.300	0.129	0.031	13.5	0.132
58	830345.5	802867.6	1502.80	25.41	11.70	24.700	27.97600	4.2	2.226	0.268	0.06800	14.1	0.277	0.300	0.108	0.025	13.2	0.111
59	830341.4	802864.7	1502.60	25.30	11.68	24.800	27.86100	4.2	2.217	0.267	0.06700	14.1	0.276	0.300	0.096	0.022	12.9	0.098
60	830337.3	802861.8	1502.30	25.18	11.65	24.800	27.74200	4.2	2.208	0.266	0.06700	14.1	0.274	0.300	0.083	0.018	12.5	0.085
61	830333.2	802859	1502.20	25.06	11.63	24.900	27.62600	4.2	2.198	0.265	0.06700	14.1	0.273	0.300	0.072	0.015	12.1	0.073
62	830329.1	802856.1	1502.10	24.96	11.61	24.900	27.53100	4.2	2.191	0.263	0.06600	14.1	0.272	0.300	0.069	0.015	12	0.07
63	830325	802853.2	1502.00	24.87	11.59	25.000	27.43400	4.2	2.183	0.262	0.06600	14.1	0.270	0.300	0.066	0.014	11.9	0.068
64	830320.9	802850.4	1501.90	24.77	11.57	25.000	27.33500	4.2	2.175	0.261	0.06600	14.1	0.269	0.300	0.064	0.013	11.8	0.065
65	830316.8	802847.5	1501.80	24.67	11.55	25.100	27.23500	4.2	2.167	0.260	0.06500	14.1	0.268	0.300	0.061	0.013	11.7	0.062
66	830312.7	802844.6	1501.80	24.57	11.53	25.100	27.13500	4.2	2.159	0.259	0.06500	14.1	0.267	0.300	0.059	0.012	11.7	0.06
67	830308.6	802841.7	1501.70	24.47	11.51	25.200	27.03700	4.2	2.152	0.257	0.06500	14.1	0.265	0.300	0.058	0.012	11.7	0.059
68	830304.5	802838.9	1501.70	24.38	11.49	25.200	26.95700	4.2	2.145	0.256	0.06400	14.1	0.264	0.300	0.062	0.013	12	0.064
69	830300.4	802836	1501.80	24.32	11.49	25.300	26.89800	4.2	2.140	0.255	0.06400	14.1	0.263	0.300	0.073	0.016	12.4	0.075
70	830296.3	802833.1	1501.90	24.27	11.49	25.300	26.84700	4.2	2.136	0.254	0.06400	14.1	0.262	0.300	0.087	0.02	12.7	0.089
71	830292.2	802830.3	1501.90	24.20	11.48	25.400	26.78300	4.2	2.131	0.253	0.06400	14.1	0.261	0.300	0.095	0.022	12.9	0.098
72	830288.1	802827.4	1501.90	24.13	11.47	25.400	26.72100	4.2	2.126	0.252	0.06300	14.1	0.260	0.300	0.103	0.024	13.1	0.106
73	830284.1	802824.5	1501.90	24.05	11.46	25.500	26.64400	4.2	2.120	0.251	0.06300	14.1	0.259	0.300	0.106	0.025	13.2	0.109
74	830280	802821.6	1501.90	23.98	11.45	25.500	26.57000	4.2	2.114	0.250	0.06300	14.1	0.258	0.300	0.108	0.026	13.3	0.111
75	830275.9	802818.8	1501.80	23.91	11.45	25.600	26.51200	4.2	2.110	0.250	0.06300	14.1	0.257	0.300	0.114	0.027	13.5	0.117
76	830271.8	802815.9	1501.90	23.85	11.45	25.600	26.46200	4.2	2.106	0.249	0.06300	14.1	0.257	0.300	0.12	0.029	13.6	0.124
77	830267.7	802813	1501.70	23.77	11.45	25.700	26.38500	4.2	2.100	0.248	0.06200	14.1	0.256	0.300	0.116	0.028	13.7	0.119
78	830263.6	802810.2	1501.60	23.70	11.44	25.800	26.31400	4.2	2.094	0.248	0.06200	14.1	0.255	0.300	0.112	0.028	13.9	0.115
79	830259.5	802807.3	1501.70	23.67	11.46	25.800	26.29900	4.2	2.093	0.247	0.06200	14.2	0.255	0.300	0.122	0.031	14	0.126
80	830255.4	802804.4	1501.70	23.65	11.49	25.900	26.29500	4.2	2.092	0.247	0.06200	14.2	0.254	0.300	0.133	0.034	14.2	0.137
81	830251.3	802801.5	1501.70	23.62	11.50	26.000	26.27200	4.2	2.091	0.246	0.06200	14.2	0.254	0.200	0.135	0.035	14.4	0.14
82	830247.2	802798.7	1501.60	23.59	11.53	26.000	26.25700	4.2	2.089	0.246	0.06200	14.2	0.254	0.200	0.136	0.035	14.5	0.14
83	830243.1	802795.8	1501.50	23.56	11.55	26.100	26.23800	4.2	2.088	0.246	0.06200	14.2	0.254	0.200	0.132	0.035	14.7	0.136
84	830239	802792.9	1501.30	23.51	11.57	26.200	26.20400	4.2	2.085	0.246	0.06200	14.2	0.254	0.200	0.12	0.032	15	0.124
85	830234.9	802790.1	1501.30	23.53	11.62	26.300	26.24400	4.2	2.088	0.247	0.06200	14.2	0.254	0.200	0.125	0.034	15.1	0.129
86	830230.8	802787.2	1501.30	23.57	11.68	26.400	26.30200	4.1	2.093	0.247	0.06300	14.2	0.255	0.200	0.13	0.035	15.2	0.134
87	830226.7	802784.3	1501.20	23.61	11.74	26.400	26.37000	4.1	2.098	0.248	0.06300	14.2	0.256	0.200	0.132	0.036	15.4	0.137
88	830222.7	802781.4	1501.10	23.66	11.81	26.500	26.44100	4.1	2.104	0.249	0.06300	14.2	0.257	0.200	0.129	0.036	15.6	0.134
89	830218.6	802778.6	1500.90	23.69	11.88	26.600	26.50400	4.1	2.109	0.251	0.06400	14.3	0.258	0.200	0.118	0.034	15.9	0.122
90	830214.5	802775.7	1500.80	23.77	11.97	26.700	26.61400	4.1	2.118	0.252	0.06400	14.3	0.260	0.200	0.112	0.033	16.2	0.117
91	830210.4	802772.8	1500.60	23.87	12.07	26.800	26.74500	4.1	2.128	0.255	0.06500	14.3	0.263	0.200	0.105	0.031	16.5	0.109
92	830206.3	802770	1500.60	24.03	12.20	26.900	26.94800	4.0	2.144	0.257	0.06600	14.3	0.266	0.100	0.107	0.032	16.6	0.111
93	830202.2	802767.1	1500.70	24.28	12.37	27.000	27.24700	4.0	2.168	0.261	0.06700	14.3	0.269	0.100	0.123	0.036	16.5	0.128
94	830198.1	802764.2	1500.90	24.57	12.57	27.100	27.59600	3.9	2.196	0.265	0.06800	14.3	0.273	0.100	0.14	0.041	16.3	0.146
95	830194	802761.3	1501.00	24.91	12.79	27.200	28.00300	3.8	2.228	0.270	0.06900	14.4	0.278	0.100	0.157	0.046	16.2	0.164
96	830189.9	802758.5	1501.10	25.31	13.05	27.300	28.47500	3.7	2.266	0.276	0.07100	14.4	0.285	0.100	0.176	0.051	16.2	0.183
97	830185.8	802755.6	1501.30	25.78	13.34	27.400	29.02500	3.7	2.310	0.283	0.07300	14.4	0.292	0.100	0.196	0.057	16.1	0.204
98	830181.7	802752.7	1501.30	26.28	13.65	27.400	29.61200	3.6	2.356	0.292	0.07500	14.5	0.301	0.100	0.207	0.06	16.1	0.215
99	830177.6	802749.9	1501.30	26.87	14.01	27.500	30.29600	3.6	2.411	0.303	0.07800	14.5	0.312	0.100	0.218	0.063	16.1	0.227
100	830173.5	802747	1501.30	27.55	14.41	27.600	31.09500	3.5	2.475	0.315	0.08200	14.5	0.326	0.100	0.23	0.067	16.2	0.24

101	830169.4	802744.1	1501.30	28.37	14.88	27.700	32.03100	3.5	2.549	0.331	0.08600	14.6	0.342	0.100	0.245	0.071	16.2	0.255
102	830165.3	802741.2	1501.30	29.32	15.42	27.700	33.12700	3.6	2.636	0.350	0.09100	14.6	0.362	0.100	0.262	0.076	16.2	0.273
103	830161.3	802738.4	1501.30	30.45	16.04	27.800	34.41300	3.8	2.738	0.373	0.09800	14.6	0.386	0.100	0.282	0.082	16.2	0.294
104	830157.2	802735.5	1501.30	31.78	16.76	27.800	35.92600	4.0	2.859	0.401	0.10500	14.7	0.415	0.100	0.306	0.089	16.2	0.318
105	830153.1	802732.6	1501.40	33.42	17.61	27.800	37.77700	4.4	3.006	0.435	0.11500	14.8	0.450	0.100	0.347	0.1	16.1	0.362
106	830149	802729.8	1501.50	35.38	18.62	27.800	39.97600	5.0	3.181	0.477	0.12600	14.8	0.493	0.100	0.399	0.115	16.1	0.415
107	830144.9	802726.9	1501.60	37.71	19.79	27.700	42.58600	5.7	3.389	0.527	0.14000	14.9	0.546	0.200	0.46	0.132	16	0.478
108	830140.8	802724	1501.70	40.50	21.16	27.600	45.69500	6.5	3.636	0.588	0.15800	15.0	0.609	0.200	0.534	0.154	16	0.555
109	830136.7	802721.1	1501.80	43.82	22.77	27.500	49.38200	7.6	3.930	0.661	0.17900	15.2	0.685	0.300	0.618	0.179	16.1	0.644
110	830132.6	802718.3	1501.90	47.80	24.67	27.300	53.79000	8.8	4.281	0.747	0.20600	15.4	0.775	0.400	0.72	0.21	16.3	0.75
111	830128.5	802715.4	1502.00	52.53	26.92	27.100	59.02900	10.2	4.697	0.847	0.23900	15.8	0.880	0.500	0.836	0.248	16.5	0.872
112	830124.4	802712.5	1502.10	58.15	29.60	27.000	65.24700	11.8	5.192	0.957	0.27900	16.3	0.997	0.800	0.967	0.295	17	1.011
113	830120.3	802709.7	1502.10	64.69	32.78	26.900	72.52300	13.7	5.771	1.071	0.32800	17.0	1.120	1.100	1.102	0.351	17.7	1.157
114	830116.2	802706.8	1502.20	72.10	36.51	26.900	80.82000	15.7	6.431	1.175	0.38700	18.2	1.237	1.700	1.218	0.414	18.8	1.287
115	830112.1	802703.9	1502.20	80.22	40.88	27.000	90.03400	18.0	7.165	1.247	0.45300	20.0	1.326	2.500	1.297	0.484	20.5	1.384
116	830108	802701	1502.20	88.76	45.98	27.400	99.95900	20.5	7.954	1.253	0.52200	22.6	1.358	3.900	1.319	0.562	23.1	1.434
117	830103.9	802698.2	1502.20	96.80	51.68	28.100	109.73100	23.2	8.732	1.160	0.58300	26.7	1.298	6.000	1.229	0.628	27	1.38
118	830099.9	802695.3	1502.20	103.71	57.91	29.200	118.78100	25.8	9.452	0.946	0.61500	33.0	1.128	9.700	1.024	0.671	33.2	1.225
119	830095.8	802692.4	1502.30	108.49	64.23	30.600	126.07800	28.1	10.033	0.627	0.58700	43.1	0.859	18.200	0.694	0.66	43.6	0.957
120	830091.7	802689.6	1502.30	110.24	69.82	32.300	130.49100	29.7	10.384	0.326	0.47200	55.4	0.574	46.700	0.263	0.552	64.5	0.611
121	830087.6	802686.7	1502.30	108.61	73.59	34.100	131.19600	30.3	10.440	0.465	0.28100	31.2	0.543	58.700	-0.2	0.327	-58.6	0.384
122	830083.5	802683.8	1502.40	104.70	75.22	35.700	128.92400	29.8	10.259	0.831	0.27500	18.3	0.876	21.200	-0.644	0.004	-0.3	0.645
123	830079.4	802680.9	1502.50	98.50	73.77	36.800	123.06500	28.3	9.793	1.141	0.58300	27.1	1.282	11.300	-1.022	-0.387	20.8	1.093
124	830075.3	802678.1	1502.60	90.40	69.02	37.400	113.73800	26.2	9.051	1.341	0.90400	34.0	1.617	7.100	-1.279	-0.76	30.7	1.488
125	830071.2	802675.2	1502.60	81.10	61.63	37.200	101.86500	23.8	8.106	1.426	1.13600	38.5	1.823	4.600	-1.388	-1.024	36.4	1.725
126	830067.1	802672.3	1502.60	71.89	53.20	36.500	89.43500	21.4	7.117	1.422	1.25700	41.5	1.898	3.000	-1.399	-1.172	39.9	1.825
127	830063	802669.5	1502.50	63.43	44.81	35.200	77.66200	18.7	6.180	1.364	1.28700	43.3	1.875	1.900	-1.343	-1.213	42.1	1.81
128	830058.9	802666.6	1502.50	56.48	37.49	33.600	67.79200	15.5	5.395	1.287	1.26200	44.4	1.802	1.200	-1.276	-1.207	43.4	1.756
129	830054.8	802663.7	1502.60	51.41	31.79	31.700	60.44600	11.4	4.810	1.216	1.21900	45.1	1.722	0.700	-1.225	-1.191	44.2	1.708
130	830050.7	802660.8	1502.60	48.27	28.06	30.200	55.83500	6.3	4.443	1.167	1.18300	45.4	1.662	0.300	-1.19	-1.173	44.6	1.671
131	830046.6	802658	1502.60	47.17	26.67	29.500	54.18300	0.4	4.312	1.150	1.16800	45.4	1.639	0.100	-1.176	-1.165	44.7	1.655
132	830042.6	802655.1	1502.60	48.00	27.68	30.000	55.40300	5.9	4.409	1.166	1.17900	45.3	1.658	0.300	-1.171	-1.155	44.6	1.645
133	830038.5	802652.2	1502.50	50.98	31.16	31.400	59.74500	11.3	4.754	1.212	1.21100	45.0	1.713	0.700	-1.201	-1.169	44.2	1.676
134	830034.4	802649.4	1502.70	56.58	37.21	33.300	67.71800	15.4	5.389	1.281	1.24900	44.3	1.790	1.200	-1.325	-1.261	43.6	1.829
135	830030.3	802646.5	1502.90	64.02	44.94	35.100	78.22100	18.7	6.225	1.357	1.27100	43.1	1.859	1.900	-1.462	-1.334	42.4	1.979
136	830026.2	802643.6	1503.00	73.01	53.85	36.400	90.71600	21.5	7.219	1.414	1.23900	41.2	1.880	3.200	-1.583	-1.349	40.4	2.08
137	830022.1	802640.7	1503.20	83.03	63.11	37.200	104.29700	24.1	8.300	1.419	1.11800	38.2	1.807	5.100	-1.648	-1.256	37.3	2.072
138	830018	802637.9	1503.30	92.81	71.05	37.400	116.88200	26.6	9.301	1.336	0.88700	33.6	1.604	8.100	-1.565	-0.989	32.3	1.851
139	830013.9	802635	1503.30	101.54	76.39	37.000	127.06900	28.9	10.112	1.141	0.57400	26.7	1.277	13.400	-1.322	-0.592	24.1	1.448
140	830009.8	802632.1	1503.30	108.70	78.53	35.800	134.10200	30.5	10.672	0.839	0.29900	19.6	0.891	25.600	-0.944	-0.157	9.4	0.956
141	830005.7	802629.3	1503.30	113.52	77.27	34.200	137.32400	31.1	10.928	0.492	0.33300	34.1	0.594	67.400	-0.457	0.233	-27	0.513
142	830001.6	802626.4	1503.30	115.33	73.20	32.400	136.59500	30.5	10.870	0.376	0.50900	53.5	0.633	47.000	0.08	0.512	81.1	0.518
143	829997.5	802623.5	1503.30	113.78	67.31	30.600	132.19700	28.8	10.520	0.667	0.61200	42.5	0.905	19.600	0.59	0.661	48.2	0.886
144	829993.4	802620.6	1503.30	109.05	60.65	29.100	124.77600	26.3	9.929	0.981	0.63000	32.7	1.166	10.700	1.001	0.7	35	1.221
145	829989.3	802617.8	1503.30	101.83	54.02	27.900	115.27400	23.5	9.173	1.190	0.59000	26.4	1.328	6.600	1.267	0.668	27.8	1.433
146	829985.2	802614.9	1503.30	93.17	47.90	27.200	104.76400	20.7	8.337	1.277	0.52300	22.3	1.380	4.300	1.387	0.601	23.4	1.512
147	829981.2	802612	1503.30	84.09	42.48	26.800	94.21300	18.1	7.497	1.262	0.45000	19.6	1.340	2.900	1.387	0.524	20.7	1.483
148	829977.1	802609.2	1503.30	75.35	37.82	26.700	84.31200	15.7	6.709	1.182	0.38100	17.9	1.242	1.900	1.309	0.448	18.9	1.384
149	829973	802606.3	1503.30	67.41	33.86	26.700	75.43700	13.5	6.003	1.070	0.32100	16.7	1.117	1.300	1.191	0.382	17.8	1.25
150	829968.9	802603.4	1503.30	60.45	30.52	26.800	67.71400	11.6	5.389	0.949	0.27100	15.9	0.987	0.900	1.058	0.325	17.1	1.107
151	829964.8	802600.5	1503.30	54.48	27.70	27.000	61.11400	9.9	4.863	0.834	0.23000	15.4	0.865	0.600	0.929	0.278	16.7	0.97
152	829960.7	802597.7	1503.30	49.42	25.32	27.100	55.52900	8.5	4.419	0.730	0.19700	15.1	0.756	0.400	0.811	0.239	16.4	0.846
153	829956.6	802594.8	1503.30	45.16	23.31	27.300	50.82300	7.2	4.044	0.640	0.17000	14.9	0.662	0.300	0.707	0.208	16.4	0.737

154	829952.5	802591.9	1503.30	41.59	21.60	27.400	46.86100	6.1	3.729	0.564	0.14900	14.8	0.583	0.200	0.619	0.182	16.4	0.645
155	829948.4	802589.1	1503.30	38.58	20.14	27.600	43.52200	5.1	3.463	0.501	0.13100	14.7	0.518	0.100	0.544	0.161	16.5	0.567
156	829944.3	802586.2	1503.30	36.05	18.89	27.700	40.70000	4.3	3.239	0.449	0.11700	14.6	0.464	0.100	0.48	0.143	16.6	0.501
157	829940.2	802583.3	1503.30	33.91	17.82	27.700	38.30800	3.7	3.048	0.405	0.10500	14.5	0.419	0.100	0.427	0.129	16.8	0.446
158	829936.1	802580.4	1503.30	32.10	16.89	27.800	36.27300	3.2	2.887	0.370	0.09600	14.5	0.382	0.100	0.383	0.117	17	0.4
159	829932	802577.6	1503.30	30.56	16.09	27.800	34.53400	2.8	2.748	0.340	0.08800	14.5	0.352	0.100	0.346	0.107	17.2	0.362
160	829927.9	802574.7	1503.30	29.24	15.39	27.800	33.04400	2.5	2.630	0.316	0.08100	14.4	0.327	0.200	0.314	0.099	17.5	0.329
161	829923.8	802571.8	1503.30	28.11	14.78	27.700	31.76200	2.4	2.528	0.296	0.07600	14.4	0.306	0.200	0.288	0.092	17.7	0.302
162	829919.8	802569	1503.30	27.14	14.25	27.700	30.65400	2.3	2.439	0.279	0.07200	14.4	0.288	0.200	0.265	0.086	18	0.278
163	829915.7	802566.1	1503.30	26.30	13.78	27.700	29.69500	2.2	2.363	0.265	0.06800	14.4	0.274	0.200	0.245	0.081	18.2	0.258
164	829911.6	802563.2	1503.30	25.58	13.37	27.600	28.86400	2.3	2.297	0.254	0.06500	14.4	0.262	0.200	0.229	0.076	18.4	0.242
165	829907.5	802560.3	1503.30	24.96	13.01	27.500	28.14500	2.3	2.240	0.244	0.06200	14.3	0.252	0.200	0.216	0.073	18.6	0.228
166	829903.4	802557.5	1503.30	24.42	12.69	27.500	27.51700	2.3	2.190	0.236	0.06000	14.3	0.243	0.200	0.205	0.07	18.8	0.217
167	829899.3	802554.6	1503.30	23.95	12.40	27.400	26.96700	2.4	2.146	0.229	0.05800	14.3	0.236	0.200	0.196	0.067	19	0.207
168	829895.2	802551.7	1503.30	23.52	12.15	27.300	26.47500	2.5	2.107	0.223	0.05700	14.3	0.230	0.300	0.185	0.064	19.1	0.196
169	829891.1	802548.9	1503.30	23.15	11.92	27.200	26.03900	2.5	2.072	0.218	0.05500	14.3	0.225	0.200	0.175	0.061	19.3	0.185
170	829887	802546	1503.40	22.85	11.72	27.200	25.67600	2.5	2.043	0.214	0.05400	14.3	0.220	0.200	0.17	0.06	19.4	0.181
171	829882.9	802543.1	1503.40	22.58	11.54	27.100	25.35500	2.6	2.018	0.210	0.05300	14.2	0.217	0.200	0.167	0.059	19.3	0.177
172	829878.8	802540.2	1503.40	22.34	11.38	27.000	25.06800	2.6	1.995	0.207	0.05300	14.2	0.214	0.200	0.163	0.057	19.3	0.173
173	829874.7	802537.4	1503.50	22.13	11.23	26.900	24.81300	2.6	1.975	0.204	0.05200	14.2	0.211	0.200	0.159	0.056	19.3	0.169
174	829870.6	802534.5	1503.50	21.94	11.10	26.800	24.59100	2.6	1.957	0.202	0.05100	14.2	0.208	0.200	0.157	0.055	19.3	0.166
175	829866.5	802531.6	1503.60	21.78	10.98	26.800	24.39300	2.7	1.941	0.200	0.05100	14.2	0.206	0.200	0.155	0.054	19.2	0.164
176	829862.4	802528.8	1503.60	21.64	10.87	26.700	24.22000	2.7	1.927	0.199	0.05000	14.2	0.205	0.200	0.154	0.053	19.1	0.163
177	829858.4	802525.9	1503.70	21.51	10.77	26.600	24.06100	2.7	1.915	0.197	0.05000	14.2	0.203	0.200	0.152	0.052	19	0.161
178	829854.3	802523	1503.70	21.40	10.68	26.500	23.91600	2.7	1.903	0.196	0.05000	14.2	0.202	0.200	0.15	0.051	18.9	0.159
179	829850.2	802520.1	1503.70	21.29	10.60	26.500	23.78500	2.7	1.893	0.195	0.04900	14.2	0.201	0.200	0.148	0.051	18.8	0.157
180	829846.1	802517.3	1503.70	21.20	10.52	26.400	23.66500	2.7	1.883	0.194	0.04900	14.2	0.200	0.200	0.147	0.05	18.7	0.155
181	829842	802514.4	1503.70	21.12	10.44	26.300	23.55500	2.7	1.874	0.193	0.04900	14.2	0.199	0.100	0.145	0.049	18.6	0.153
182	829837.9	802511.5	1503.80	21.04	10.37	26.200	23.45200	2.7	1.866	0.192	0.04900	14.2	0.199	0.100	0.144	0.048	18.5	0.152
183	829833.8	802508.7	1503.70	20.95	10.29	26.200	23.34300	2.7	1.858	0.192	0.04900	14.2	0.198	0.100	0.14	0.047	18.5	0.147
184	829829.7	802505.8	1503.60	20.85	10.22	26.100	23.22200	2.7	1.848	0.191	0.04900	14.3	0.197	0.100	0.131	0.044	18.6	0.138
185	829825.6	802502.9	1503.50	20.77	10.14	26.000	23.11100	2.7	1.839	0.191	0.04800	14.3	0.197	0.100	0.124	0.042	18.7	0.131
186	829821.5	802500	1503.60	20.70	10.08	26.000	23.01800	2.7	1.832	0.190	0.04800	14.3	0.196	0.100	0.124	0.042	18.6	0.131
187	829817.4	802497.2	1503.60	20.62	10.01	25.900	22.92300	2.7	1.824	0.190	0.04800	14.3	0.196	0.100	0.123	0.041	18.5	0.13
188	829813.3	802494.3	1503.70	20.56	9.95	25.800	22.83500	2.7	1.817	0.189	0.04800	14.3	0.195	0.100	0.126	0.042	18.2	0.133
189	829809.2	802491.4	1503.70	20.48	9.88	25.700	22.73700	2.7	1.809	0.189	0.04800	14.3	0.195	0.100	0.128	0.042	18.1	0.135
190	829805.1	802488.6	1503.70	20.38	9.80	25.700	22.61700	2.7	1.800	0.188	0.04800	14.3	0.194	0.100	0.127	0.041	18	0.133
191	829801	802485.7	1503.70	20.28	9.72	25.600	22.49200	2.7	1.790	0.187	0.04800	14.3	0.193	0.100	0.127	0.041	17.9	0.134
192	829797	802482.8	1503.80	20.17	9.63	25.500	22.35200	2.7	1.779	0.186	0.04800	14.3	0.192	0.100	0.127	0.041	17.8	0.134
193	829792.9	802479.9	1503.80	20.04	9.54	25.500	22.18900	2.7	1.766	0.186	0.04700	14.3	0.191	0.100	0.126	0.04	17.8	0.132
194	829788.8	802477.1	1503.80	19.88	9.44	25.400	22.00700	2.7	1.751	0.184	0.04700	14.3	0.190	0.100	0.125	0.04	17.7	0.131
195	829784.7	802474.2	1503.80	19.71	9.32	25.300	21.80000	2.7	1.735	0.183	0.04700	14.3	0.189	0.100	0.123	0.039	17.7	0.13
196	829780.6	802471.3	1503.80	19.51	9.20	25.200	21.57100	2.7	1.717	0.182	0.04600	14.3	0.188	0.100	0.124	0.039	17.6	0.13
197	829776.5	802468.5	1503.80	19.29	9.06	25.200	21.30900	2.7	1.696	0.180	0.04600	14.3	0.186	0.100	0.123	0.039	17.6	0.129
198	829772.4	802465.6	1503.80	19.03	8.91	25.100	21.00900	2.7	1.672	0.178	0.04600	14.3	0.184	0.100	0.122	0.039	17.6	0.128
199	829768.3	802462.7	1503.80	18.72	8.75	25.000	20.66500	2.7	1.644	0.176	0.04500	14.4	0.181	0.100	0.119	0.038	17.6	0.125
200	829764.2	802459.8	1503.80	18.38	8.56	25.000	20.27700	2.7	1.614	0.173	0.04400	14.4	0.179	0.100	0.116	0.037	17.7	0.122
201	829760.1	802457	1503.80	17.99	8.36	24.900	19.83700	2.7	1.579	0.170	0.04400	14.4	0.176	0.100	0.111	0.036	17.8	0.117
202	829756	802454.1	1503.70	17.54	8.14	24.900	19.33900	2.7	1.539	0.167	0.04300	14.4	0.172	0.100	0.104	0.034	18	0.109
203	829751.9	802451.2	1503.60	17.06	7.90	24.900	18.79600	2.8	1.496	0.163	0.04200	14.4	0.168	0.000	0.099	0.032	18.2	0.104
204	829747.8	802448.4	1503.70	16.53	7.65	24.800	18.21300	2.8	1.449	0.159	0.04100	14.4	0.164	0.000	0.098	0.032	18.2	0.103
205	829743.7	802445.5	1503.70	15.95	7.38	24.800	17.57500	2.8	1.399	0.154	0.04000	14.5	0.159	0.000	0.097	0.032	18.2	0.102
206	829739.6	802442.6	1503.70	15.31	7.09	24.800	16.87300	2.8	1.343	0.149	0.03900	14.5	0.154	0.000	0.093	0.031	18.3	0.098

207	829735.6	802439.7	1503.70	14.63	6.78	24.900	16.12300	2.9	1.283	0.144	0.03700	14.6	0.148	0.000	0.09	0.03	18.4	0.095
208	829731.5	802436.9	1503.70	13.89	6.46	24.900	15.31600	2.9	1.219	0.138	0.03600	14.6	0.142	0.000	0.084	0.028	18.7	0.089
209	829727.4	802434	1503.60	13.11	6.12	25.000	14.47200	3.0	1.152	0.131	0.03400	14.7	0.136	0.000	0.08	0.027	18.9	0.084
210	829723.3	802431.1	1503.60	12.30	5.78	25.200	13.58700	3.1	1.081	0.125	0.03300	14.8	0.129	0.000	0.073	0.026	19.2	0.078
211	829719.2	802428.3	1503.60	11.47	5.42	25.300	12.68600	3.2	1.010	0.118	0.03100	14.9	0.122	0.000	0.07	0.025	19.4	0.074
212	829715.1	802425.4	1503.60	10.62	5.07	25.500	11.76800	3.3	0.936	0.111	0.03000	15.0	0.115	0.000	0.066	0.024	19.7	0.07
213	829711	802422.5	1503.60	9.77	4.71	25.700	10.84400	3.4	0.863	0.104	0.02800	15.1	0.107	0.100	0.061	0.022	20.1	0.065
214	829706.9	802419.6	1503.50	8.92	4.35	26.000	9.92400	3.6	0.790	0.097	0.02600	15.3	0.100	0.100	0.055	0.021	20.6	0.058
215	829702.8	802416.8	1503.40	8.09	4.00	26.300	9.02300	3.9	0.718	0.089	0.02500	15.4	0.093	0.100	0.048	0.019	21.3	0.051
216	829698.7	802413.9	1503.30	7.29	3.66	26.700	8.15500	4.2	0.649	0.082	0.02300	15.6	0.086	0.100	0.042	0.017	22.1	0.045
217	829694.6	802411	1503.10	6.52	3.33	27.100	7.32400	4.5	0.583	0.076	0.02100	15.7	0.079	0.100	0.034	0.015	23.3	0.037
218	829690.5	802408.2	1502.70	5.80	3.02	27.500	6.54000	4.9	0.520	0.069	0.02000	15.9	0.072	0.100	0.023	0.012	26.4	0.026
219	829686.4	802405.3	1502.20	5.14	2.72	27.900	5.81200	5.5	0.463	0.063	0.01800	16.0	0.066	0.100	0.012	0.008	34.1	0.015
220	829682.3	802402.4	1502.10	4.53	2.45	28.300	5.15000	6.0	0.410	0.057	0.01700	16.1	0.060	0.100	0.009	0.007	38	0.012
221	829678.2	802399.5	1501.90	3.98	2.19	28.800	4.54600	6.7	0.362	0.052	0.01500	16.3	0.054	0.100	0.006	0.006	45	0.009
222	829674.2	802396.7	1501.90	3.49	1.96	29.300	4.00300	7.5	0.319	0.047	0.01400	16.4	0.049	0.100	0.005	0.006	48.2	0.008
223	829670.1	802393.8	1501.80	3.06	1.74	29.700	3.51800	8.5	0.280	0.042	0.01300	16.5	0.044	0.100	0.004	0.006	51.5	0.007
224	829666	802390.9	1501.70	2.67	1.55	30.100	3.09100	9.6	0.246	0.038	0.01100	16.5	0.040	0.100	0.004	0.005	55.2	0.006
225	829661.9	802388.1	1501.60	2.35	1.38	30.400	2.72000	10.8	0.216	0.034	0.01000	16.6	0.036	0.100	0.002	0.005	65.4	0.005
226	829657.8	802385.2	1501.60	2.07	1.22	30.600	2.39900	12.1	0.191	0.031	0.00900	16.6	0.032	0.100	0.002	0.004	67.3	0.005
227	829653.7	802382.3	1501.50	1.83	1.09	30.700	2.12700	13.5	0.169	0.028	0.00800	16.6	0.029	0.100	0.002	0.004	69.1	0.004
228	829649.6	802379.4	1501.50	1.63	0.97	30.600	1.89800	14.9	0.151	0.025	0.00700	16.5	0.026	0.100	0.002	0.004	69.2	0.004
229	829645.5	802376.6	1501.40	1.48	0.87	30.400	1.71100	16.2	0.136	0.022	0.00700	16.5	0.023	0.100	0.001	0.004	73.1	0.004
230	829641.4	802373.7	1501.30	1.35	0.78	30.000	1.56000	17.2	0.124	0.020	0.00600	16.3	0.021	0.100	0.001	0.004	81.6	0.004
231	829637.3	802370.8	1501.10	1.26	0.71	29.400	1.44100	17.9	0.115	0.018	0.00500	16.2	0.019	0.100	-0.001	0.003	-76.7	0.003
232	829633.2	802368	1501.10	1.18	0.65	28.700	1.34200	18.3	0.107	0.016	0.00500	16.0	0.017	0.100	0	0.003	-82.5	0.003
233	829629.1	802365.1	1500.30	1.13	0.60	28.100	1.27700	18.2	0.102	0.015	0.00400	15.8	0.015	0.200	-0.004	0.002	-29.5	0.004
234	829625	802362.2	1499.80	1.08	0.56	27.400	1.21900	17.9	0.097	0.013	0.00400	15.5	0.014	0.200	-0.005	0.002	-18.9	0.005
235	829620.9	802359.3	1499.80	1.04	0.53	26.900	1.16800	17.4	0.093	0.012	0.00300	15.3	0.012	0.200	-0.004	0.002	-22.5	0.005
236	829616.8	802356.5	1499.80	1.01	0.50	26.400	1.12500	16.8	0.090	0.011	0.00300	14.9	0.011	0.200	-0.004	0.002	-25.9	0.004
237	829612.8	802353.6	1499.70	1.10	0.69	32.100	1.29500	23.4	0.103	0.010	0.00300	14.3	0.010	0.700	-0.003	0.001	-23.6	0.004
238	829608.7	802350.7	1499.60	1.07	0.67	31.900	1.26500	23.4	0.101	0.009	0.00200	13.9	0.009	0.700	-0.003	0.001	-26.5	0.003
239	829604.6	802347.9	1499.50	1.05	0.65	31.700	1.23700	23.4	0.098	0.008	0.00200	13.5	0.008	0.800	-0.003	0.001	-28.4	0.003
240	829600.5	802345	1499.40	0.98	0.62	32.200	1.15900	24.7	0.092	0.007	0.00200	14.1	0.008	0.800	-0.003	0.001	-23.2	0.003
241	829596.4	802342.1	1499.30	1.31	0.75	29.800	1.50900	17.8	0.120	0.007	0.00200	15.2	0.007	0.800	-0.003	0.001	-24	0.003

