

MVAC Electrical Collector System Drawings															
Dwg. No.	Drawing Title	Date	Rev.	Date	Rev.	Date	Rev.	Date	Rev.	Date	Rev.	Date	Rev.	Date	Rev.
SRS-E-600-00	Cover Sheet and Drawing Index	01/29/21	A	05/21/21	B	07/02/21	C	07/20/21	D						
SRS-E-610-01	34.5kV Collector Line Plan and Profile - Key Map	01/29/21	A	07/02/21	B	07/20/21	C								
SRS-E-610-02	34.5kV Collector Line Plan and Profile - Sheet 1	01/29/21	A	07/02/21	B	07/20/21	C								
SRS-E-610-03	34.5kV Collector Line Plan and Profile - Sheet 2	01/29/21	A	07/02/21	B	07/20/21	C								
SRS-E-610-04	34.5kV Collector Line Plan and Profile - Sheet 3	01/29/21	A	07/02/21	B	07/20/21	C								
SRS-E-610-05	34.5kV Collector Line Plan and Profile - Sheet 4	01/29/21	A	07/02/21	B	07/20/21	C								
SRS-E-610-06	34.5kV Collector Line Plan and Profile - Sheet 5	01/29/21	A	07/02/21	B	07/20/21	C								
SRS-E-610-07	34.5kV Collector Line Plan and Profile - Sheet 6	01/29/21	A	07/02/21	B	07/20/21	C								
SRS-E-610-08	34.5kV Collector Line Plan and Profile - Sheet 7	01/29/21	A	07/02/21	B	07/20/21	C								
SRS-E-610-09	34.5kV Collector Line Plan and Profile - Sheet 8	01/29/21	A	07/02/21	B	07/20/21	C								
SRS-E-610-10	34.5kV Collector Line Plan and Profile - Sheet 9	01/29/21	A	07/02/21	B	07/20/21	C								
SRS-E-620-01	Single Line Diagram and Cable Schedule - Feeder 1	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-620-02	Single Line Diagram and Cable Schedule - Feeder 2	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-620-03	Single Line Diagram and Cable Schedule - Feeder 3	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-620-04	Single Line Diagram and Cable Schedule - Feeder 4	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-620-05	BESS Single Line Diagram and Cable Schedule	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-640-01	Cable Trenching and Burial Details	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-640-02	Underground Cable Splicing Details	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-640-03	Typical Road and Wetland Crossing Details	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-640-04	Typical Underground Pipeline Crossing Details	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-640-05	Typical Protected Vegetation Crossing Details	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-650-01	Junction Box Details	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-650-02	Pad-Mounted Switchgear Details	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-660-01	Typical Single Circuit Framing Details - Tangent Poles	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-660-02	Typical Single Circuit Framing Details - Dead-End Poles	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-660-03	Typical Triple Circuit H-Frame Details	01/29/21	A	05/21/21	B	07/02/21	C								
SRS-E-663-01	Typical Guy and Anchor Details	01/29/21	A	05/21/21	B	07/02/21	C								

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SOUTH RIPLEY SOLAR PROJECT

PREPARED FOR: CONNECTGEN CHAUTAUQUA COUNTY, LLC

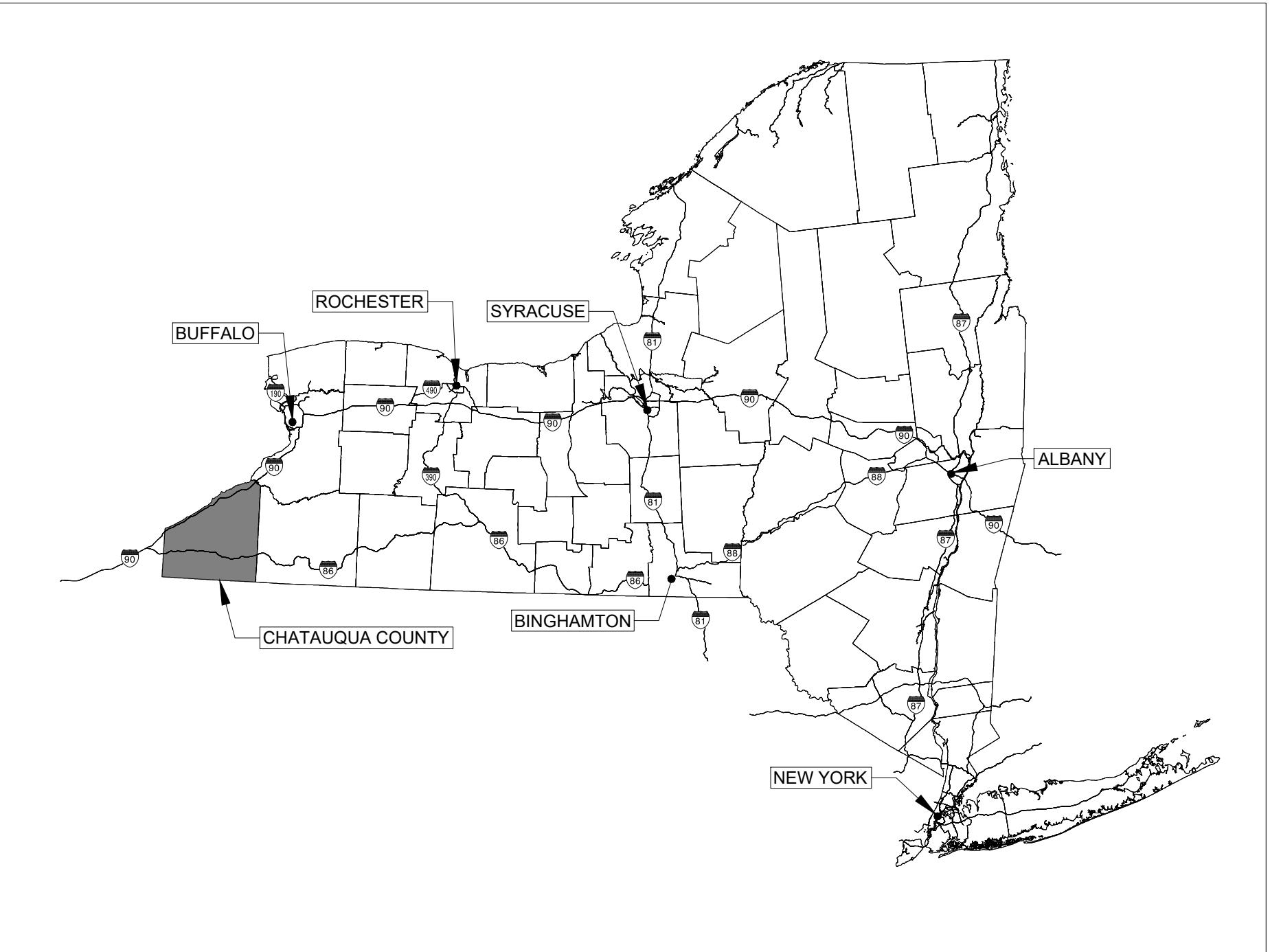
PREPARED BY: MOTT MACDONALD NY, INC

ISSUE DATE: JULY 20, 2021

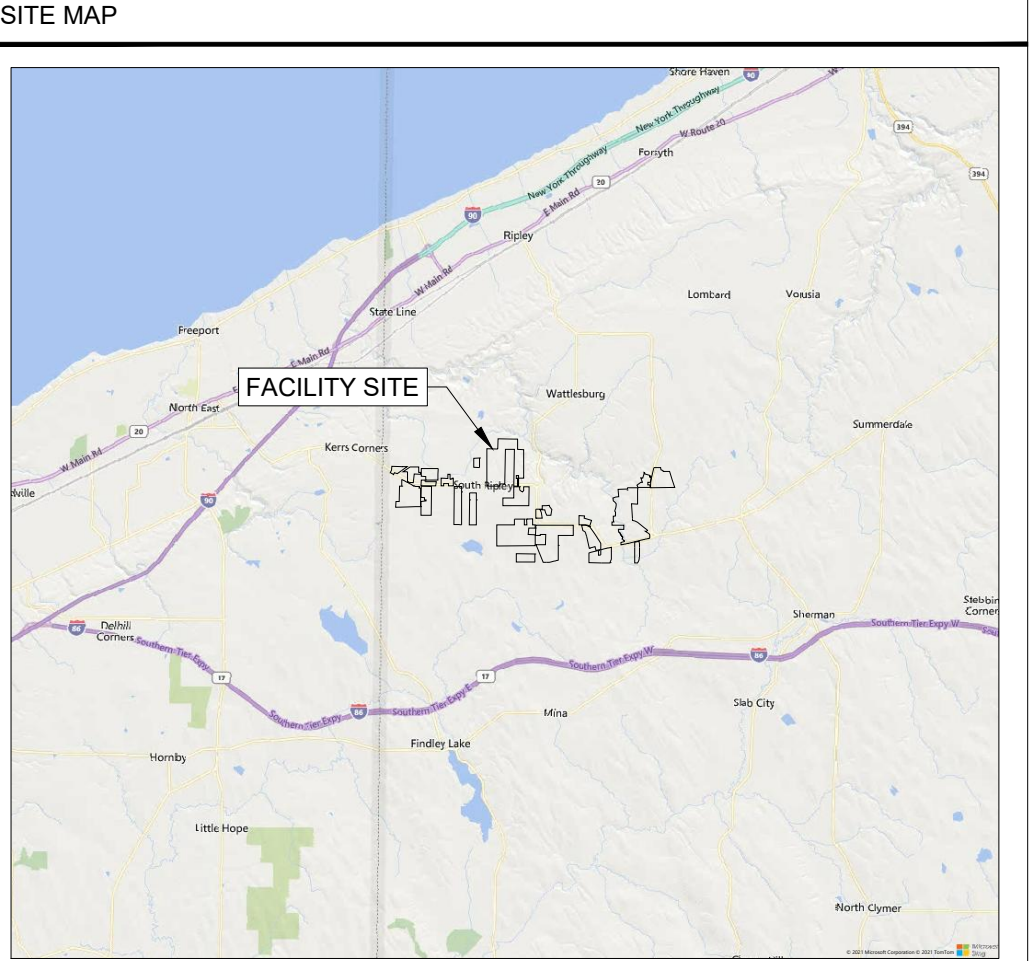
ISSUE STATUS: ISSUED FOR 94-C

PROJECT DATA:

LOCATION: CHAUTAUQUA COUNTY, NY
PROJECTION: STATE PLANE NAD 83 (NY83-WF)
POWER GENERATED: 270 MWac



THE STATE OF NEW YORK



SITE MAP

D	07/20/2021	EHK	ISSUED FOR 94-C	JS	RA
C	07/02/2021	EHK	ISSUED FOR REVIEW	JAB	JAB
B	05/18/2021	EHK	ISSUED FOR REVIEW		JB
A	01/29/2021	EHK	ISSUED FOR REVIEW	BG	JB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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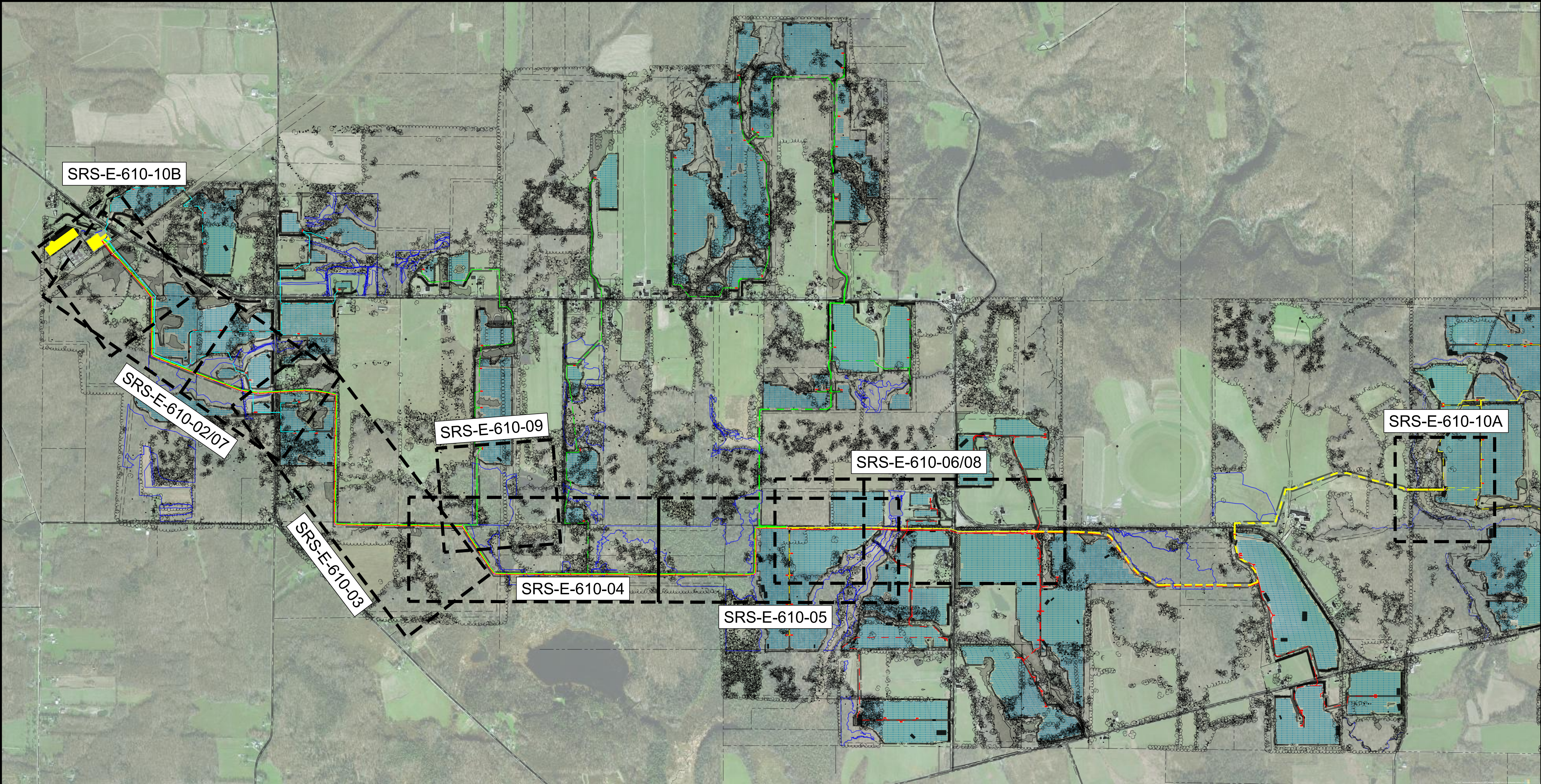


Title
SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
COVER SHEET AND DRAWING INDEX

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	EHK	Eng check	JS
	Drawn	EHK	Approved	RA
	Scale at ANSI D Not to Scale		Date 07/20/2021	Rev D
	Drawing Number SRS-E-600-00			

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CONCEPTUAL - NOT FOR CONSTRUCTION



Key Map

Symbol Legend

Plan View Legend (Collector System Feeders organized by color)

PROFILE VIEW COLOR

- Notes:
- POLE LOCATIONS ARE INDICATIVE ONLY AND BASED ON LIDAR DATA PROVIDED ON 05/18/2021 AND ESRI WMS IMAGES.
 - THE COORDINATE SYSTEM IS NAD83 (3103), NEW YORK WEST, US SURVEY FEET
 - PHASE CONDUCTOR AND DOWNLOADS INCORPORATE A TWIN 795 KCMIL 26/7 STRAND DRAKE ACSR CONDUCTOR, 36 FIBRE ALUMACORE OPGW AND 1/2 INCH 7-STRAND EHS.
 - PHASE CONDUCTOR IS DISPLAYED AT EMERGENCY TEMPERATURE OF 212°F AND OPGW AND EHS AT 120°F.
 - GROUND CLEARANCE LINE IS SHOWN AT 21 FT ABOVE GROUND.
 - ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE STATED.
 - DESIGN TENSIONS:
795 ACSR 26/7 STRAND DRAKE
25% CREEP @ NESC TENSION LIMIT 261H1C

36 FIBRE AFL AC/20/47/607 AND 1/2 INCH 7 STRAND EHS
20% CREEP @ NESC TENSION LIMIT 250B HEAVY

SLACK SPAN 795 ACSR 26/7 STRAND DRAKE
2000 LBS INITIAL @ NESC 250B HEAVY

SLACK SPAN 36 FIBRE AFL AC/20/47/607 AND 1/2 INCH 7-STRAND EHS
1000 LBS INITIAL @ NESC 250B HEAVY
 - LOCATIONS 3 TO 67: TRIPLE CIRCUIT
POLE 1, 2, 3, AND 68 TO 122: SINGLE CIRCUIT

C	07/20/2021	JD	ISSUED FOR 94C	EHK	JS
B	07/02/2021	JD	ISSUED FOR REVIEW	EHK	JAB
A	01/29/2021	EHK	ISSUED FOR REVIEW	BG	JB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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South Ripley
SOLAR PROJECT

Title

SOUTH RIPLEY SOLAR
34.5KV COLLECTOR SYSTEM
PLAN AND PROFILE
KEY MAP

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	JD	Eng check	EHK
	Drawn	JD	Approved	JAB
	Scale at ANSI D As Noted		Date	Rev
			07/20/2021	C
	Drawing Number		SRS-E-610-01	



Key Map

200.0 FT. → HORIZ. SCALE
30.0 FT. → VERT. SCALE

Symbol Legend

34.5KV STRUCTURE JUNCTION BOX (PCSXX.XX) PCS ID
20 STRUCTURE & ID PAD MOUNTED SWITCHGEAR

Plan View Legend (Collector System Feeders organized by color)

AERIAL	IN CONDUIT	IN TRENCH	
			FEEDER 1 CABLES
			FEEDER 2 CABLES
			FEEDER 3 CABLES
			FEEDER 4 CABLES
			34.5KV BESS CABLES

PROFILE VIEW COLOR

795 ACSR 26/7 STRAND DRAKE
36 FIBRE AFL AC-20/47/607 OPGW
1/2-INCH 7-STRAND EHS

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25% CREEP @ NESC TENSION LIMIT 261H1C
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SLACK SPAN 795 ACSR 26/7 STRAND DRAKE
2000 LBS INITIAL @ NESC 250B HEAVY
SLACK SPAN 36 FIBRE AFL AC/20/47/607 AND 1/2 INCH 7-STRAND EHS
1000 LBS INITIAL @ NESC 250B HEAVY
- LOCATIONS 3 TO 67: TRIPLE CIRCUIT
POLE 1, 2, 3, AND 68 TO 122: SINGLE CIRCUIT

Rev	Date	Drawn	Description	Ch'k'd	App'd
C	07/20/2021	JD	ISSUED FOR 94C	EHK	JAB
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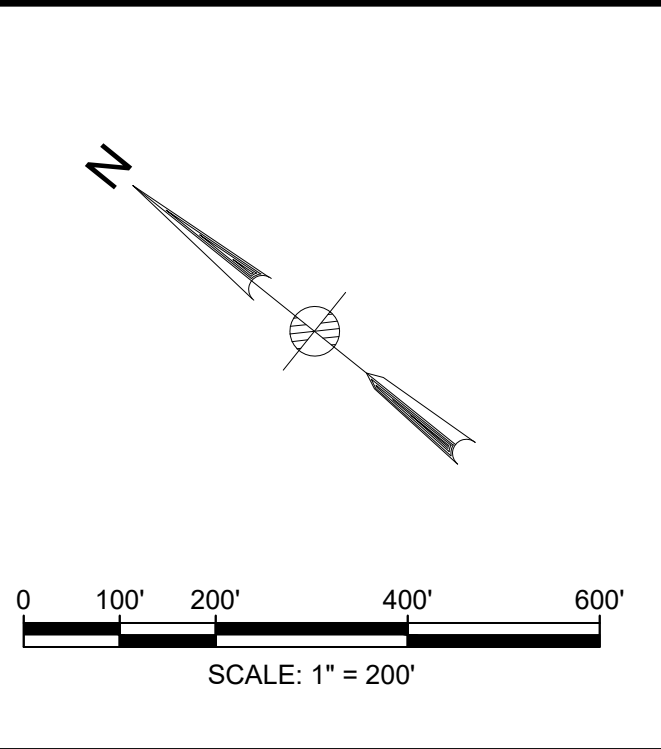
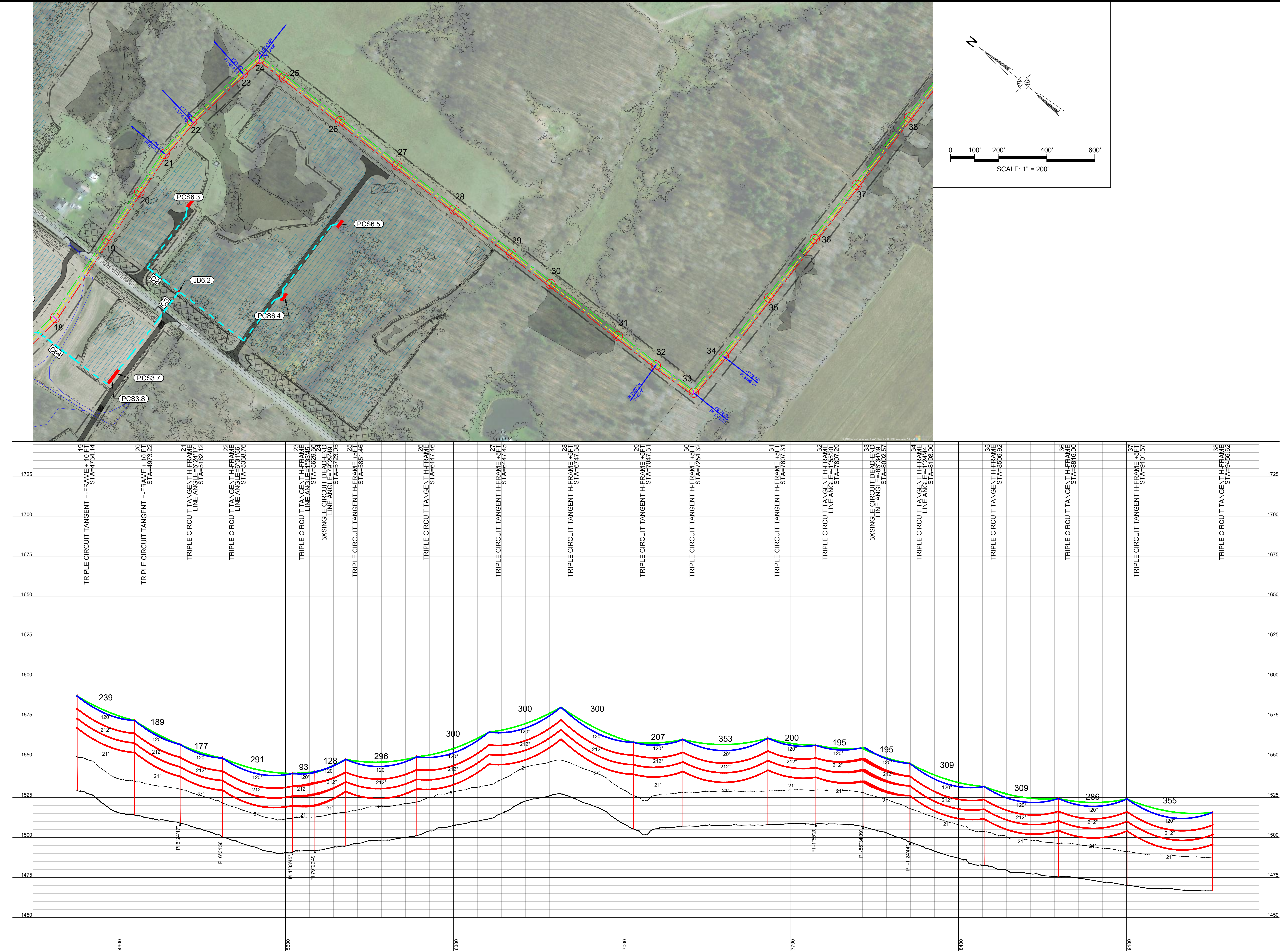
**SOUTH RIPLEY SOLAR
34.5KV COLLECTOR SYSTEM
PLAN AND PROFILE
SHEET 1**

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AT CONSTRUCTION
AND/OR FABRICATION

Designed	EK	Eng check	BG
Drawn	EK	Approved	JB
Scale at ANSI D As Noted	Date 07/20/2021	Rev C	
Drawing Number	SRS-E-610-02		

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Key Map

200.0 FT. → HORIZ. SCALE
30.0 FT. → VERT. SCALE

Symbol Legend

34.5KV STRUCTURE

JUNCTION BOX

PCS ID

20 STRUCTURE & ID

PAD MOUNTED SWITCHGEAR

Plan View Legend (Collector System Feeders organized by color)

AERIAL

IN CONDUIT

IN TRENCH

FEEDER 1 CABLES

FEEDER 2 CABLES

FEEDER 3 CABLES

FEEDER 4 CABLES

34.5KV BESS CABLES

PROFILE VIEW COLOR

795 ACSR 26/7 STRAND DRAKE

36 FIBER AFL AC/20/47/607 OPGW

1/2-INCH 7-STRAND EHS

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36 FIBRE AFL AC/20/47/607 AND 1/2 INCH 7 STRAND EHS
20% CREEP @ NESC TENSION LIMIT 250B HEAVY

SLACK SPAN 795 ACSR 26/7 STRAND DRAKE
2000 LBS INITIAL @ NESC 250B HEAVY

SLACK SPAN 36 FIBRE AFL AC/20/47/607 AND 1/2 INCH 7-STRAND EHS
1000 LBS INITIAL @ NESC 250B HEAVY
 - LOCATIONS 3 TO 67: TRIPLE CIRCUIT
POLE 1, 2, 3, AND 68 TO 122: SINGLE CIRCUIT

C	07/20/2021	JD	ISSUED FOR 94C	EHK	JS
B	07/02/2021	JD	ISSUED FOR REVIEW	EHK	JAB
A	01/29/2021	EHK	ISSUED FOR REVIEW	BG	JB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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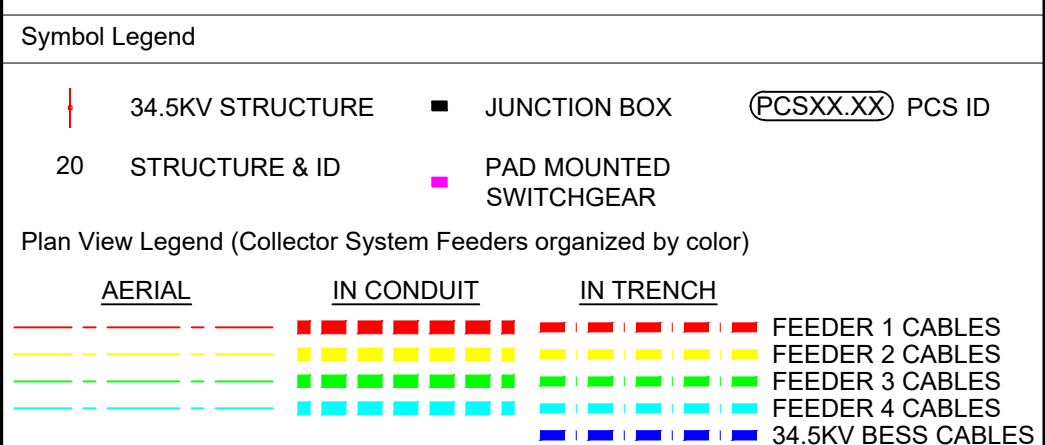
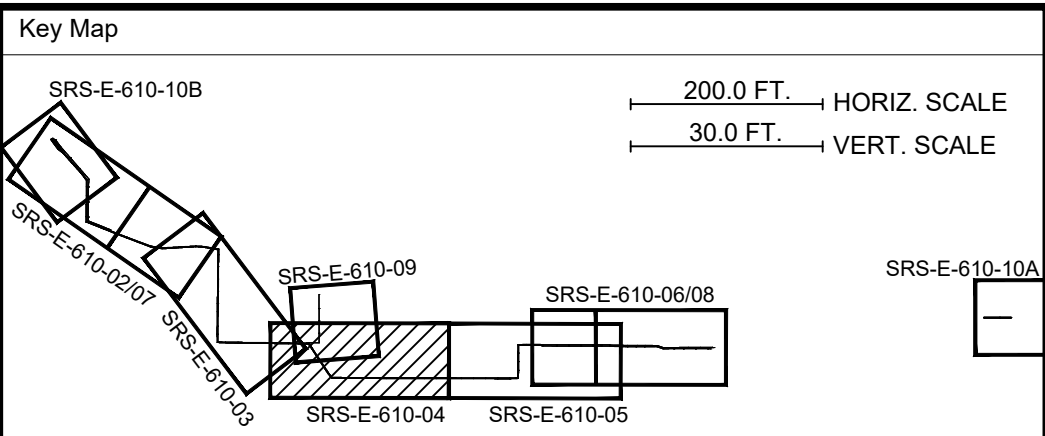
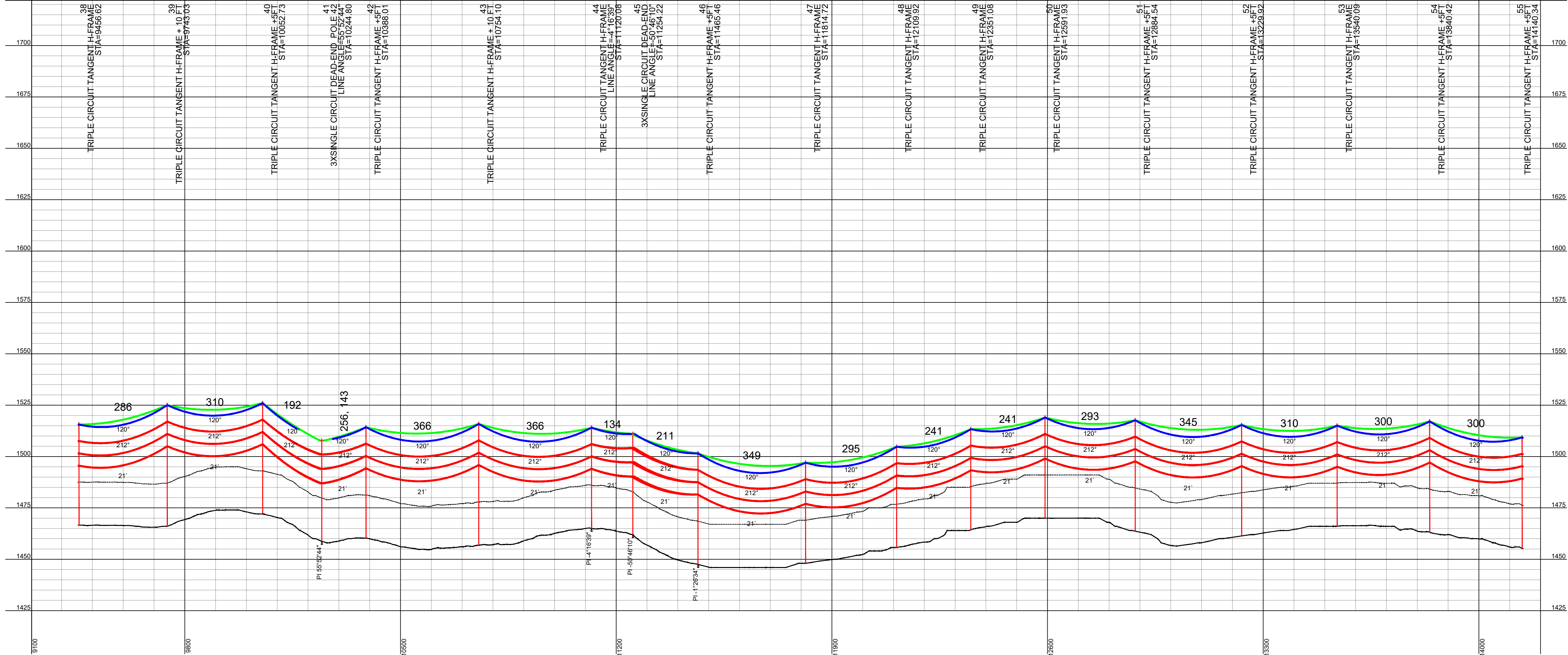
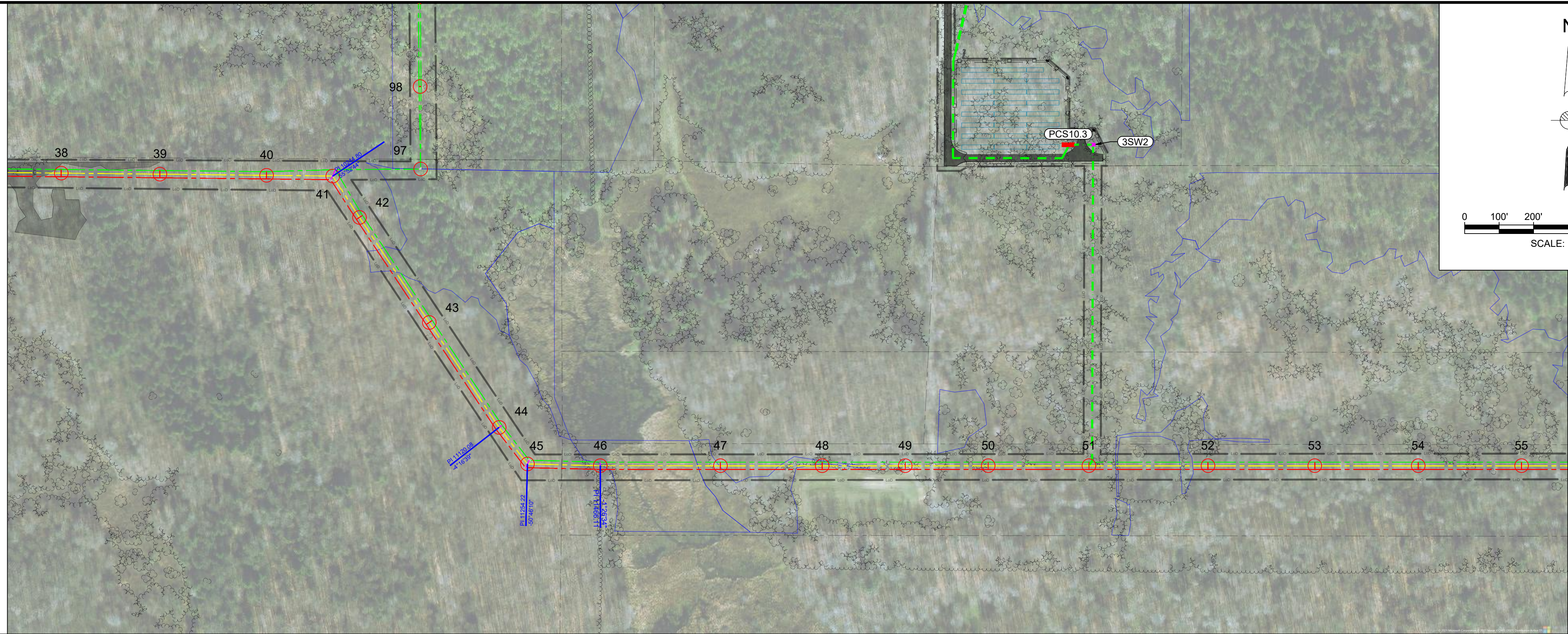
SOUTH RIPLEY SOLAR
34.5KV COLLECTOR SYSTEM
PLAN AND PROFILE
SHEET 2

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	EK	Eng check	BG
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	Scale at ANSI D As Noted		Date	Rev
	Drawing Number		07/20/2021	C

SRS-E-610-03

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PROFILE VIEW COLOR

- 795 ACSR 26/7 STRAND DRAKE
- 36 FIBRE AFL AC-20/47/607 OPGW
- 1/2-INCH 7-STRAND EHS

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 - 20% CREEP @ NESC TENSION LIMIT 250B HEAVY
 - SLACK SPAN 795 ACSR 26/7 STRAND DRAKE
 - 2000 LBS INITIAL @ NESC 250B HEAVY
 - SLACK SPAN 36 FIBRE AFL AC/20/47/607 AND 1/2 INCH 7-STRAND EHS
 - 1000 LBS INITIAL @ NESC 250B HEAVY
 - LOCATIONS 3 TO 67: TRIPLE CIRCUIT POLE 1, 2, 3, AND 68 TO 122: SINGLE CIRCUIT

Rev	Date	Drawn	Description	Ch'k'd	App'd
C	07/20/2021	JD	ISSUED FOR 94C	EHK	JS
B	07/02/2021	JD	ISSUED FOR REVIEW	EHK	JAB
A	01/29/2021	EHK	ISSUED FOR REVIEW	BG	JB

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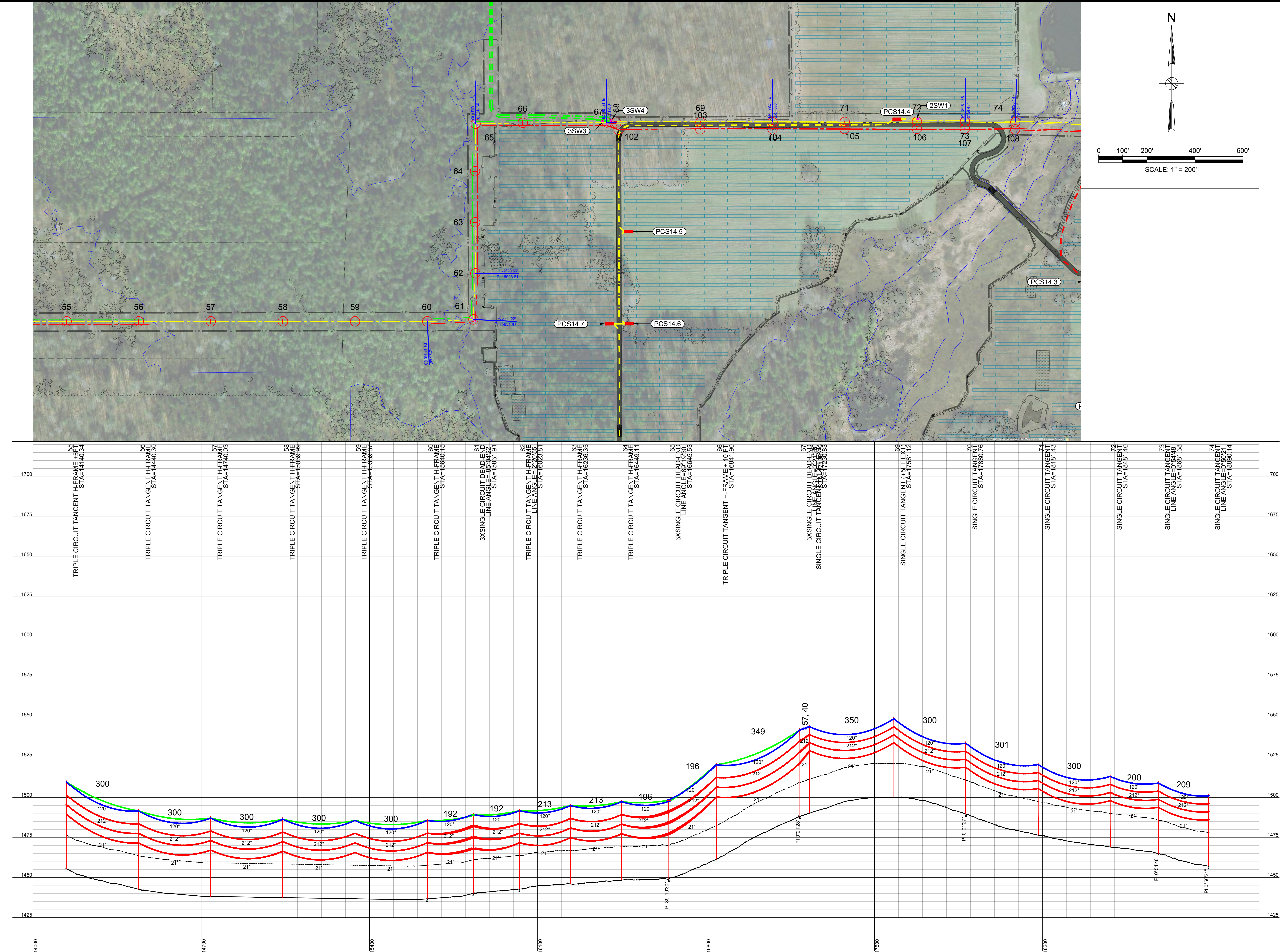
Title

**SOUTH RIPLEY SOLAR
34.5KV COLLECTOR SYSTEM
PLAN AND PROFILE
SHEET 3**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	JD	Eng check	EHK
	Drawn	JD	Approved	JS
	Scale at ANSI D As Noted	Date 07/20/2021	Rev C	
	Drawing Number	SRS-E-610-04		

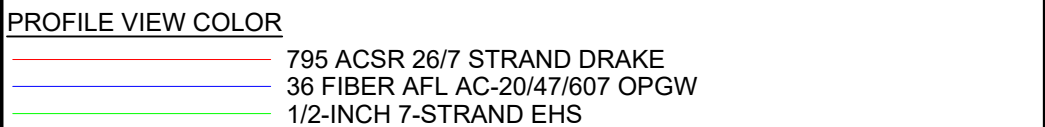
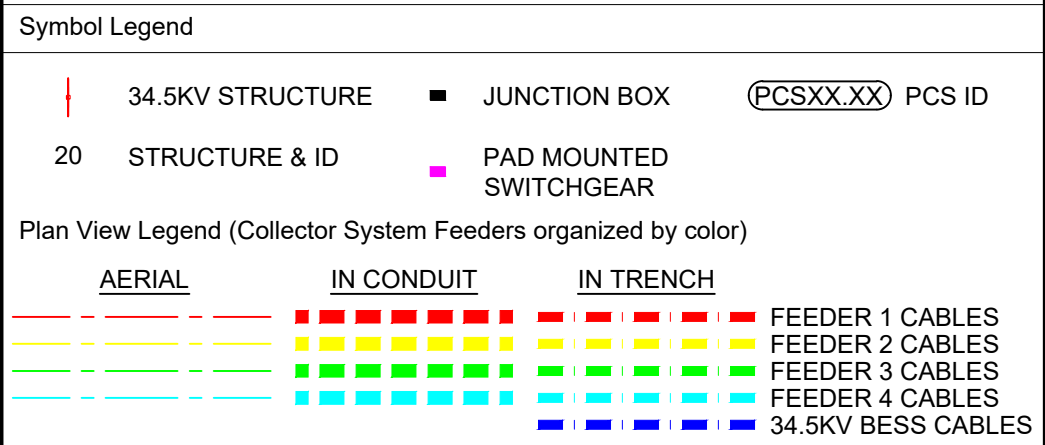
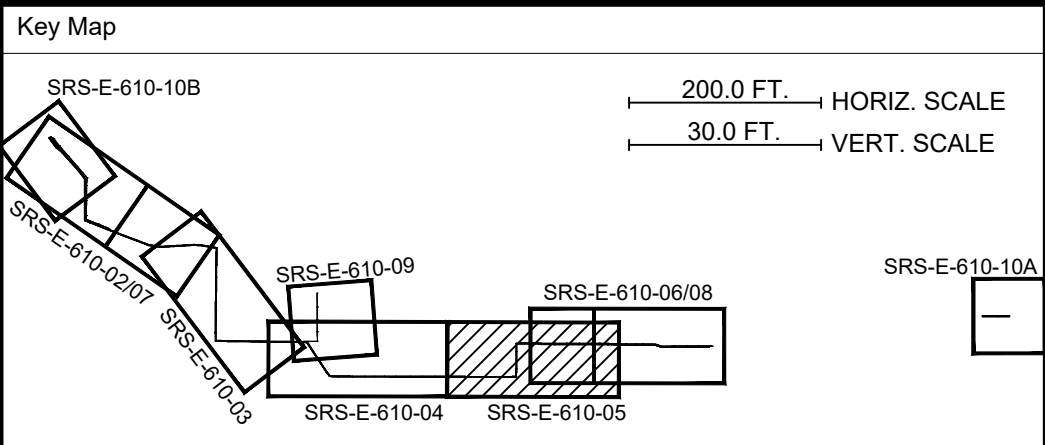
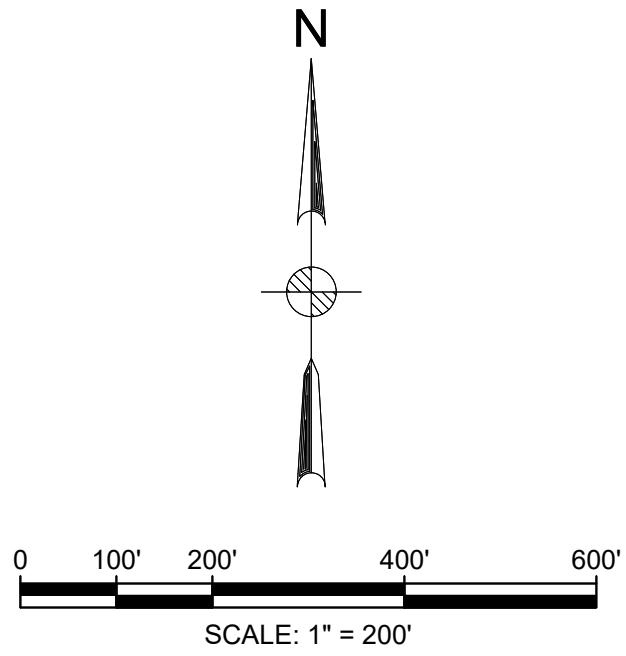
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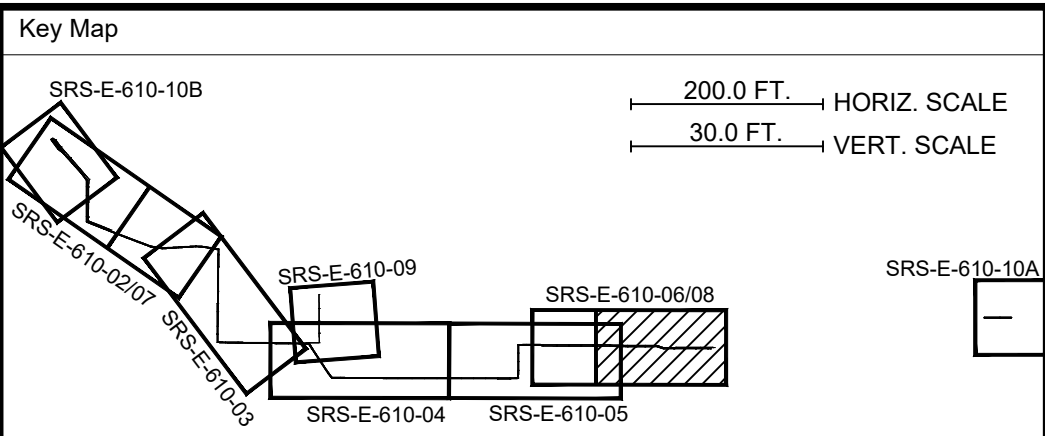
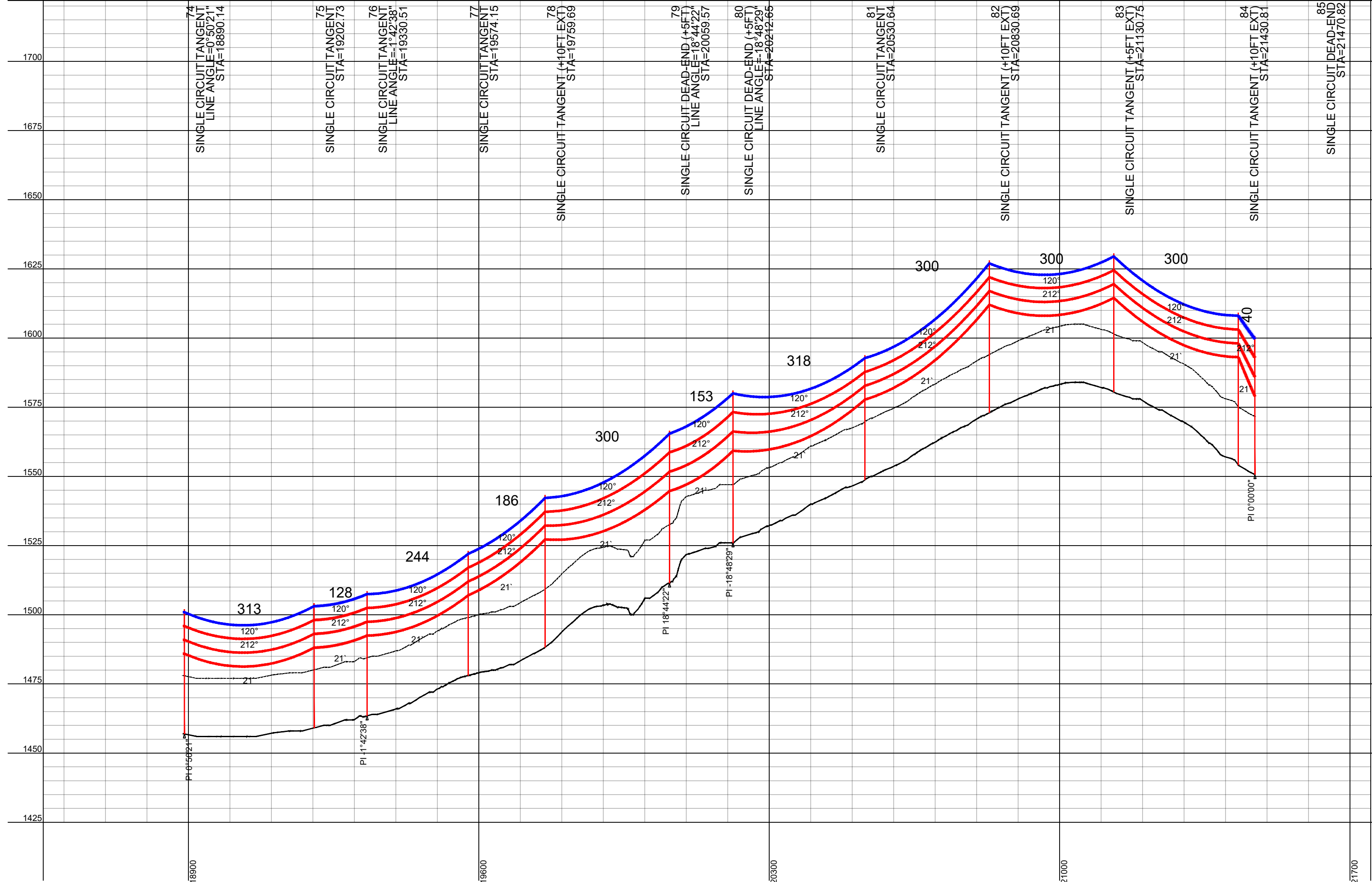
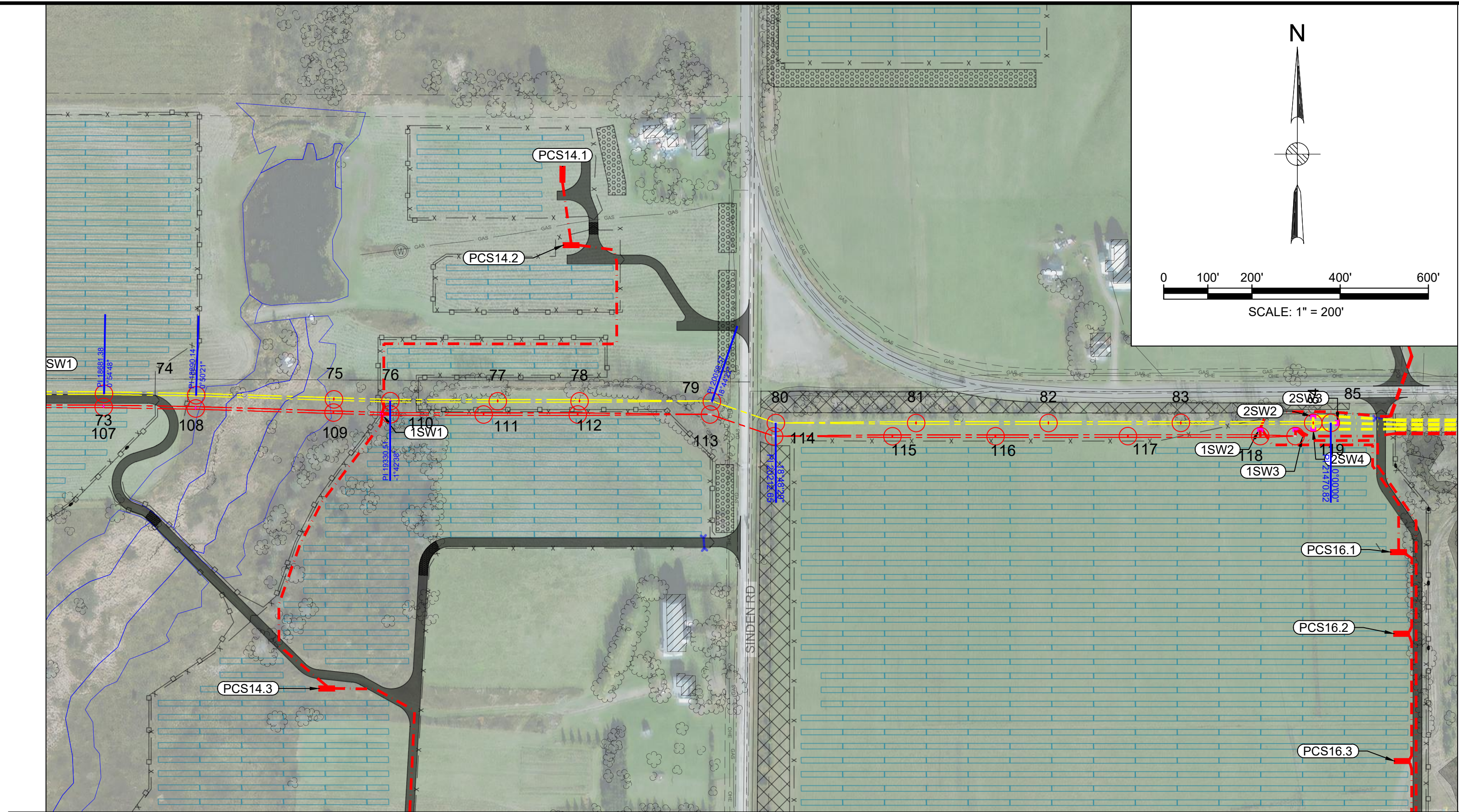
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Client

Title
South Ripley Solar
34.5KV COLLECTOR SYSTEM
PLAN AND PROFILE
Sheet 4

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	JD	Eng check	EHK
	Drawn	JD	Approved	JS
	Scale at ANSI D As Noted	Date 07/20/2021	Rev C	
	Drawing Number SRS-E-610-05			



Symbol Legend

34.5KV STRUCTURE	JUNCTION BOX	PCS ID
20 STRUCTURE & ID	PAD MOUNTED SWITCHGEAR	

Plan View Legend (Collector System Feeders organized by color)

AERIAL	IN CONDUIT	IN TRENCH	FEEDER 1 CABLES	FEEDER 2 CABLES	FEEDER 3 CABLES	FEEDER 4 CABLES	34.5KV BESS CABLES

PROFILE VIEW COLOR

- 795 ACSR 26/7 STRAND DRAKE
- 36 FIBRE AFL AC-20/47/607 OPGW
- 1/2-INCH 7-STRAND EHS

- Notes:
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 - DESIGN TENSIONS:
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 - 25% CREEP @ NESC TENSION LIMIT 261H1C
 - 36 FIBRE AFL AC-20/47/607 AND 1/2 INCH 7 STRAND EHS
 - 20% CREEP @ NESC TENSION LIMIT 250B HEAVY
 - SLACK SPAN 795 ACSR 26/7 STRAND DRAKE
 - 2000 LBS INITIAL @ NESC 250B HEAVY
 - SLACK SPAN 36 FIBRE AFL AC-20/47/607 AND 1/2 INCH 7-STRAND EHS
 - 1000 LBS INITIAL @ NESC 250B HEAVY
 - LOCATIONS 3 TO 67: TRIPLE CIRCUIT
POLE 1, 2, 3, AND 68 TO 122: SINGLE CIRCUIT

C	07/20/2021	JD	ISSUED FOR 94C	EHK	JS
B	07/02/2021	JD	ISSUED FOR REVIEW	EHK	JAB
A	01/29/2021	EHK	ISSUED FOR REVIEW	BG	JB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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Client

South Ripley SOLAR PROJECT

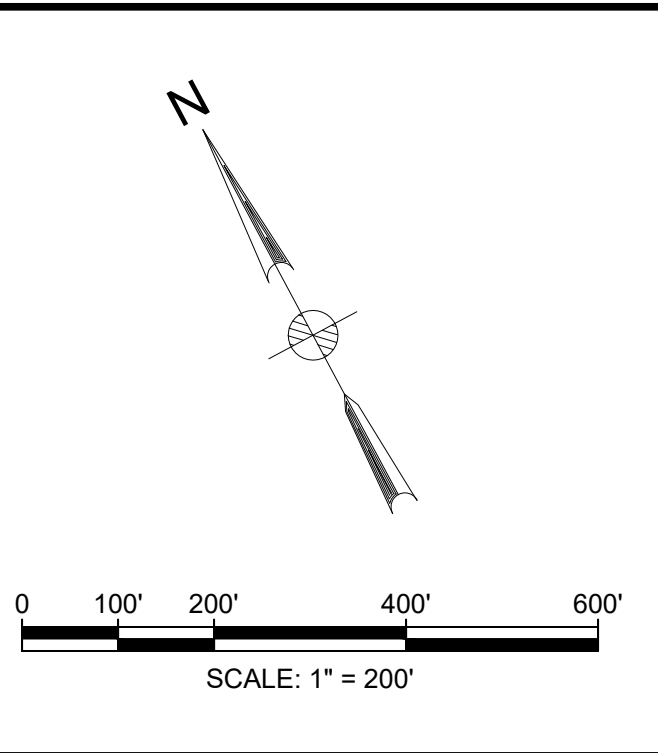
Title

**SOUTH RIPLEY SOLAR
34.5KV COLLECTOR SYSTEM
PLAN AND PROFILE
SHEET 5**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	JD	Eng check	EHK
	Drawn	JD	Approved	JS
	Scale at ANSI D As Noted	Date 07/20/2021	Rev C	
	Drawing Number	SRS-E-610-06		

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Key Map

Symbol Legend

- 34.5KV STRUCTURE
- JUNCTION BOX
- PCS ID
- 20 STRUCTURE & ID
- PAD MOUNTED SWITCHGEAR

Plan View Legend (Collector System Feeders organized by color)

AERIAL	IN CONDUIT	IN TRENCH	FEEDER 1 CABLES	FEEDER 2 CABLES	FEEDER 3 CABLES	FEEDER 4 CABLES	34.5KV BESS CABLES
(Red dashed line)	(Red dashed line)	(Red dashed line)	(Red dashed line)	(Red dashed line)	(Red dashed line)	(Red dashed line)	(Red dashed line)
(Yellow dashed line)	(Yellow dashed line)	(Yellow dashed line)	(Yellow dashed line)	(Yellow dashed line)	(Yellow dashed line)	(Yellow dashed line)	(Yellow dashed line)
(Green dashed line)	(Green dashed line)	(Green dashed line)	(Green dashed line)	(Green dashed line)	(Green dashed line)	(Green dashed line)	(Green dashed line)
(Blue dashed line)	(Blue dashed line)	(Blue dashed line)	(Blue dashed line)	(Blue dashed line)	(Blue dashed line)	(Blue dashed line)	(Blue dashed line)

PROFILE VIEW COLOR

- 795 ACSR 26/7 STRAND DRAKE
- 36 FIBRE AFL AC/20/47/607 OPGW
- 1/2-INCH 7-STRAND EHS

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 - SLACK SPAN 795 ACSR 26/7 STRAND DRAKE
 - 2000 LBS INITIAL @ NESC 250B HEAVY
 - SLACK SPAN 36 FIBRE AFL AC/20/47/607 AND 1/2 INCH 7-STRAND EHS
 - 1000 LBS INITIAL @ NESC 250B HEAVY
 - LOCATIONS 3 TO 67: TRIPLE CIRCUIT
POLE 1, 2, 3, AND 68 TO 122: SINGLE CIRCUIT

C	07/20/2021	JD	ISSUED FOR 94C	EHK	JS
B	07/02/2021	JD	ISSUED FOR REVIEW	EHK	JAB
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Rev	Date	Drawn	Description	Ch'k'd	App'd

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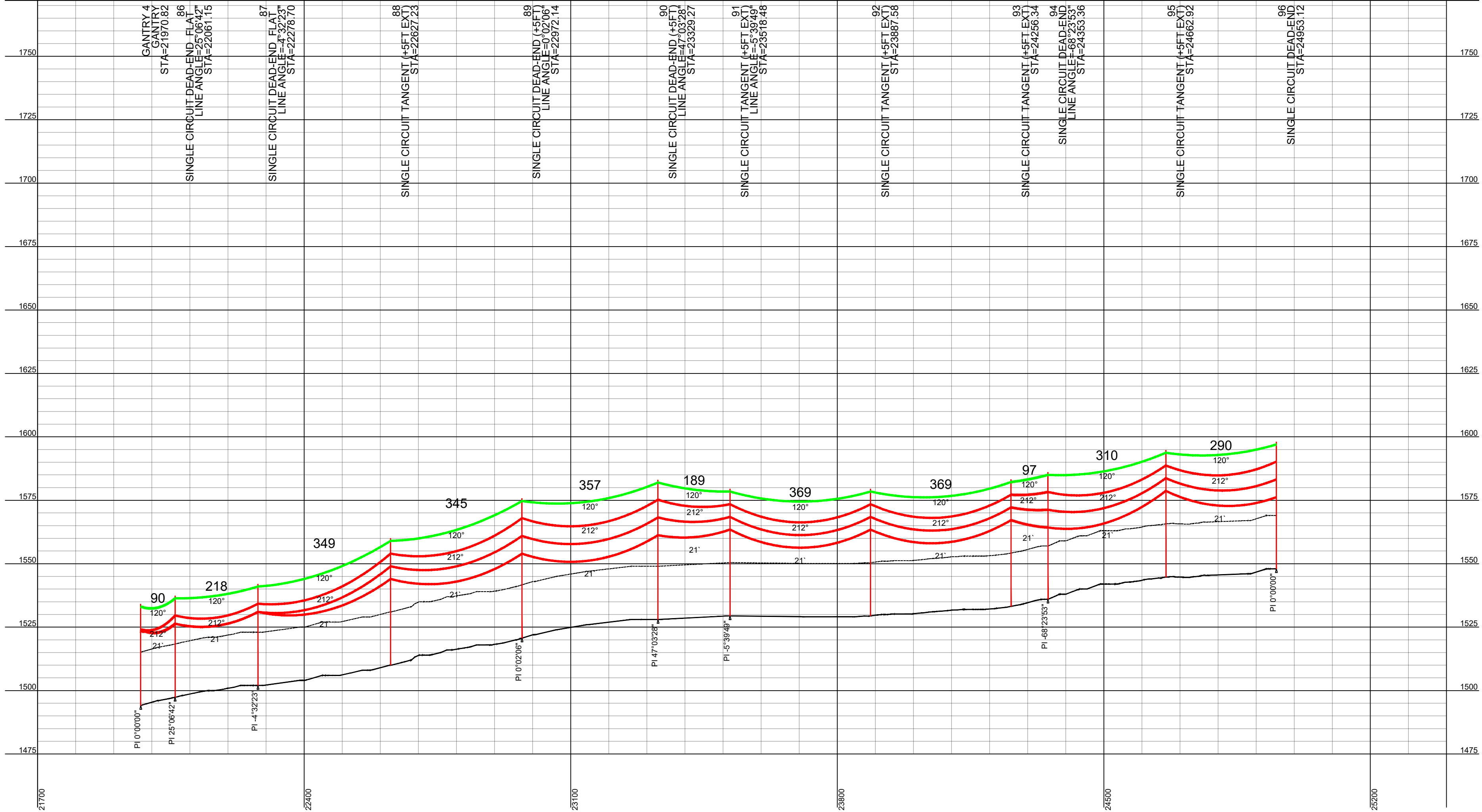
Client

Title

**SOUTH RIPLEY SOLAR
34.5KV COLLECTOR SYSTEM
PLAN AND PROFILE
SHEET 6**

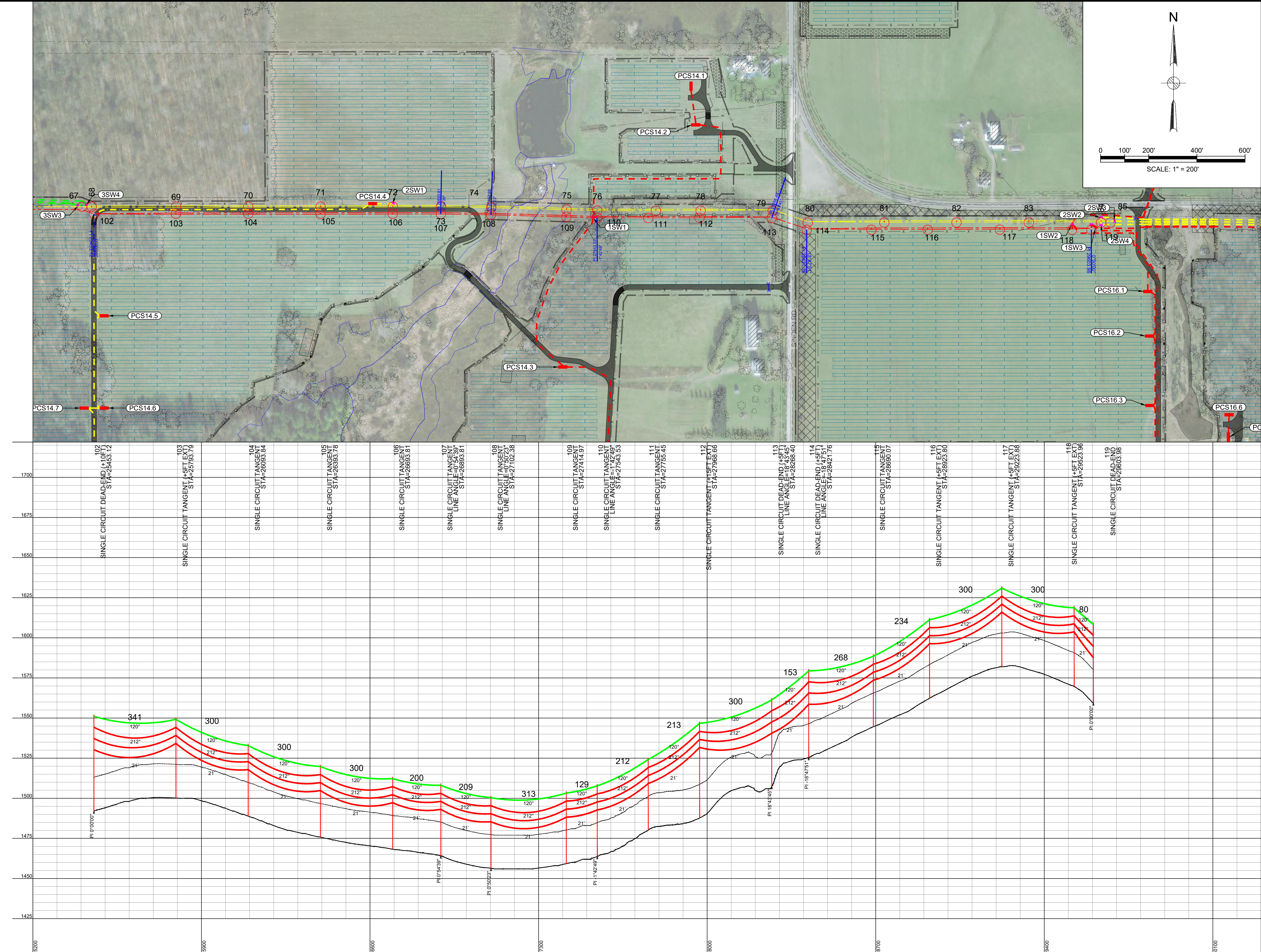
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	JD	Eng check	EHK
	Drawn	JD	Approved	JS
	Scale at ANSI D As Noted		Date	Rev
	Drawing Number		07/20/2021	C

SRS-E-610-07



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CONCEPTUAL - NOT FOR CONSTRUCTION



Key Map

200.0 FT. → HORIZ. SCALE
30.0 FT. → VERT. SCALE

Symbol Legend

34.5KV STRUCTURE JUNCTION BOX (PCSXX.XX) PCS ID

20 STRUCTURE & ID PAD MOUNTED SWITCHGEAR

Plan View Legend (Collector System Feeders organized by color)

AERIAL	IN CONDUIT	IN TRENCH	FEEDER 1 CABLES	FEEDER 2 CABLES	FEEDER 3 CABLES	FEEDER 4 CABLES	34.5KV BESS CABLES
—	—	—	—	—	—	—	—

PROFILE VIEW COLOR

795 ACSR 26/7 STRAND DRAKE
36 FIBRE AFL AC/20/47/607 OPGW
1/2-INCH 7-STRAND EHS

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SLACK SPAN 795 ACSR 26/7 STRAND DRAKE
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Rev	Date	Drawn	Description	Ch'k'd	App'd
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B	07/02/2021	JD	ISSUED FOR REVIEW	EHK	JAB
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South Ripley
SOLAR PROJECT

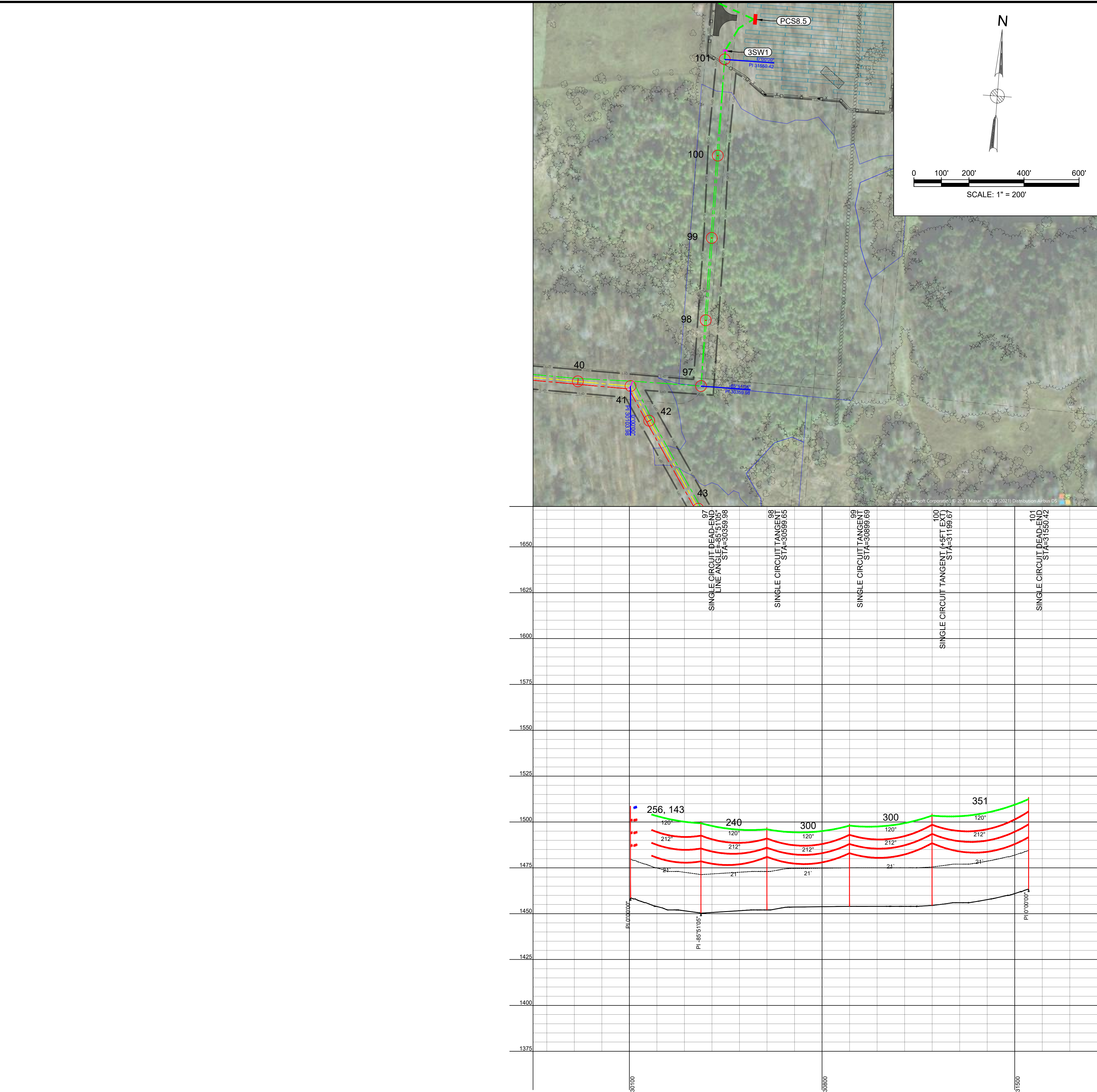
Title

**SOUTH RIPLEY SOLAR
34.5KV COLLECTOR SYSTEM
PLAN AND PROFILE
SHEET 7**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	JD	Eng check	EHK
	Drawn	JD	Approved	JS
	Scale at ANSI D As Noted		Date	Rev
	Drawing Number		C	

SRS-E-610-08

CONCEPTUAL - NOT FOR CONSTRUCTION



Key Map

SRS-E-610-10B

200.0 FT. → HORIZ. SCALE
30.0 FT. → VERT. SCALE

SRS-E-610-02/07 SRS-E-610-09 SRS-E-610-06/08 SRS-E-610-10A
SRS-E-610-04 SRS-E-610-05

Symbol Legend

34.5KV STRUCTURE

JUNCTION BOX

PCS ID

20 STRUCTURE & ID

PAD MOUNTED SWITCHGEAR

Plan View Legend (Collector System Feeders organized by color)

AERIAL

IN CONDUIT

IN TRENCH

FEEDER 1 CABLES

FEEDER 2 CABLES

FEEDER 3 CABLES

FEEDER 4 CABLES

34.5KV BESS CABLES

PROFILE VIEW COLOR

795 ACSR 26/7 STRAND DRAKE

36 FIBRE AFL AC-20/47/607 OPGW

1/2-INCH 7-STRAND EHS

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8. LOCATIONS 3 TO 67: TRIPLE CIRCUIT
POLE 1, 2, 3, AND 68 TO 122: SINGLE CIRCUIT

C	07/20/2021	JD	ISSUED FOR 94C	EHK	JS
B	07/02/2021	JD	ISSUED FOR REVIEW	EHK	JAB
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Rev	Date	Drawn	Description	Ch'k'd	App'd

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South Ripley
SOLAR PROJECT

Title

SOUTH RIPLEY SOLAR
34.5KV COLLECTOR SYSTEM
PLAN AND PROFILE
SHEET 8

PRELIMINARY
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CONSTRUCTION
REPLACE WITH
ENGINEERS STAMP
AT CONSTRUCTION
AND/OR FABRICATION

Designed

JD

Eng check

EHK

Drawn

JD

Approved

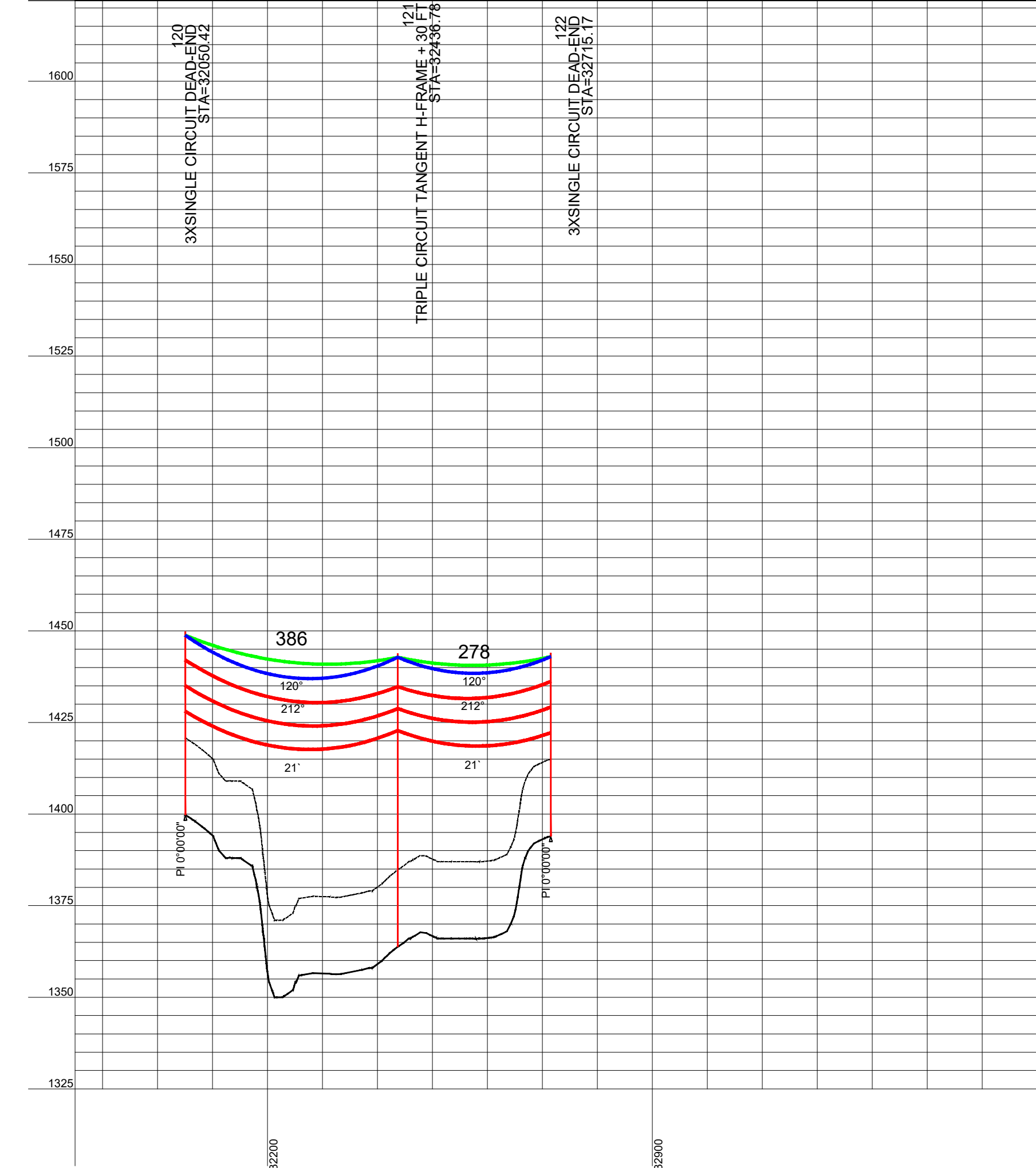
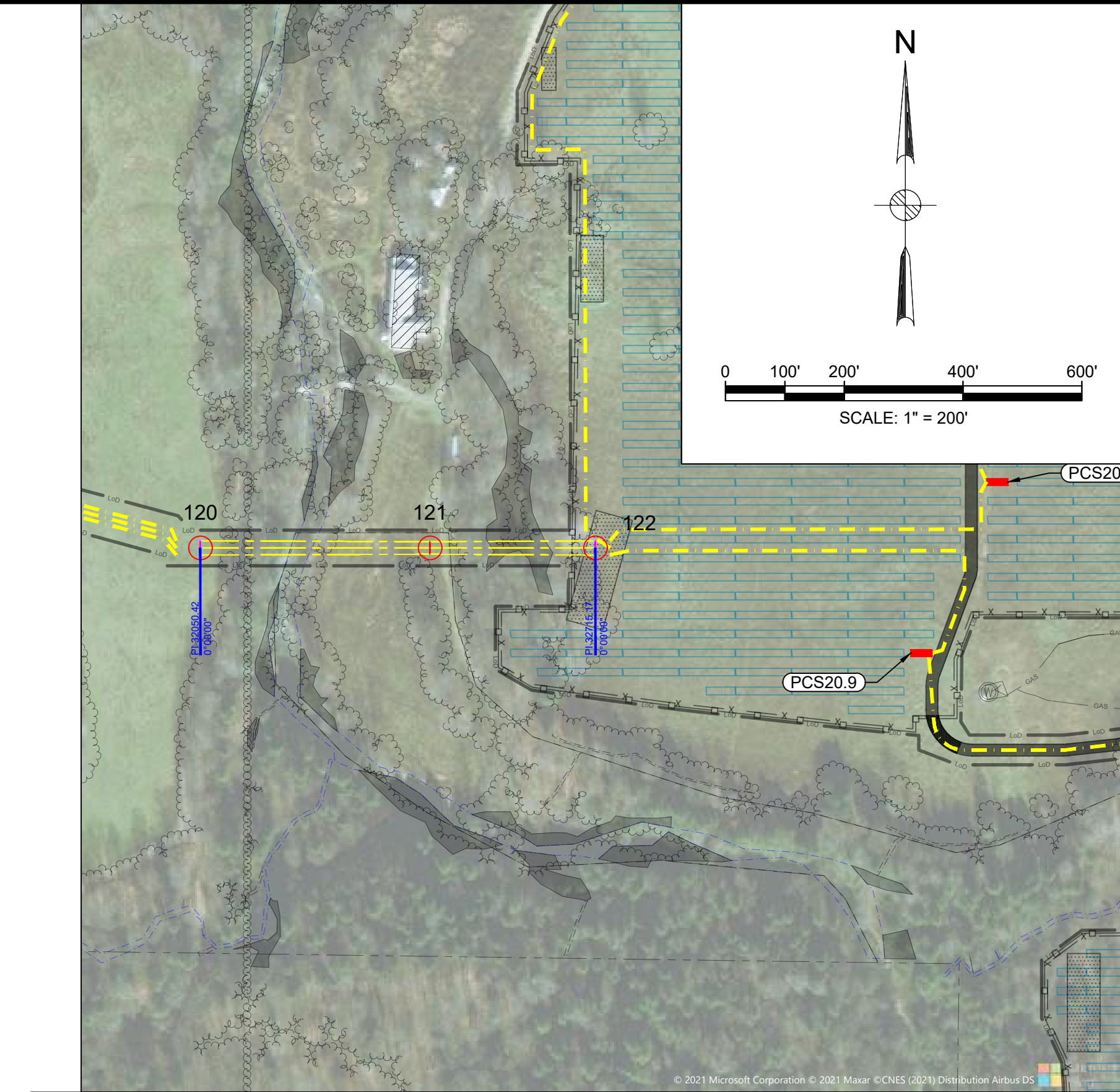
JS

Scale at ANSI D
As Noted

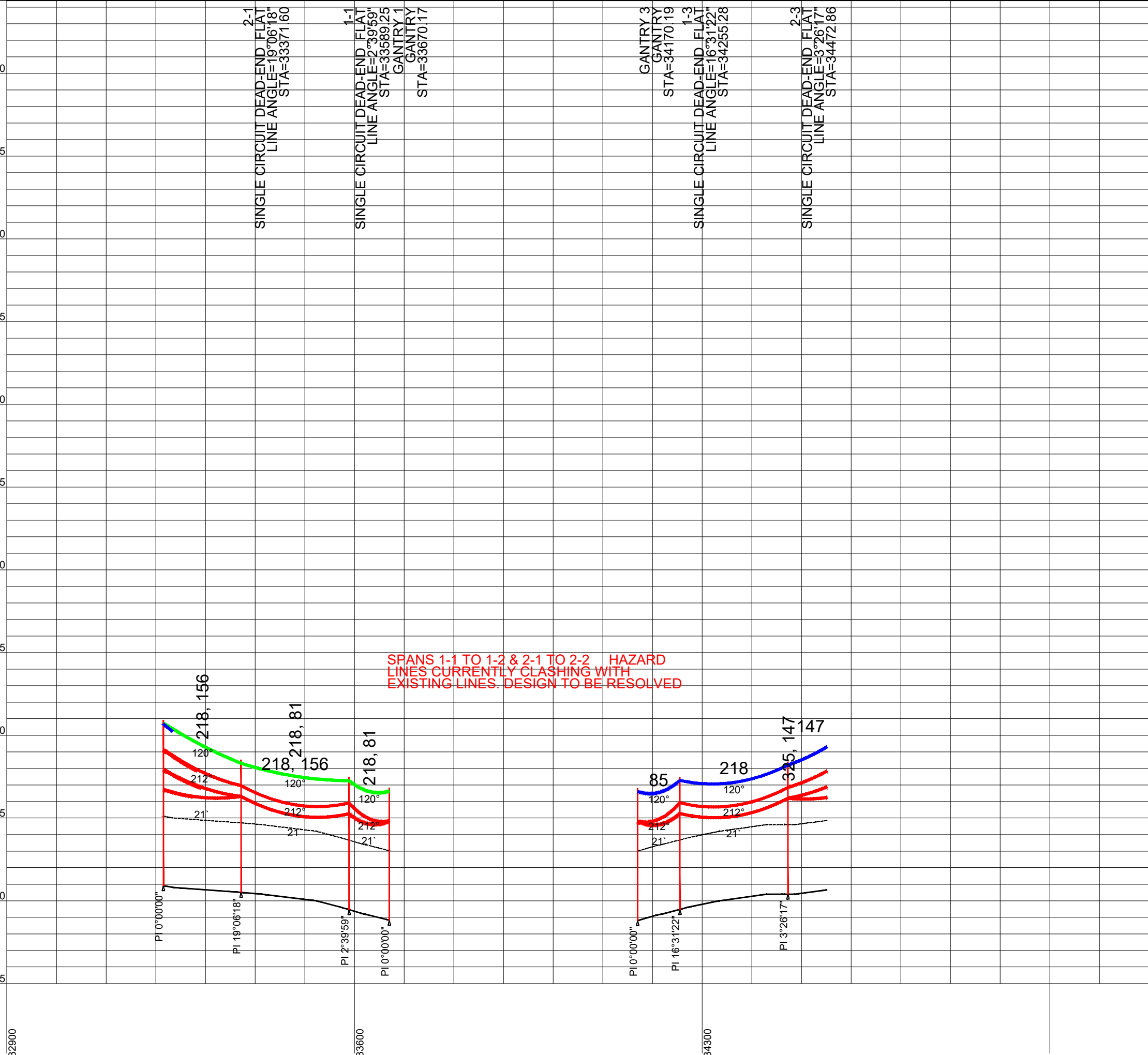
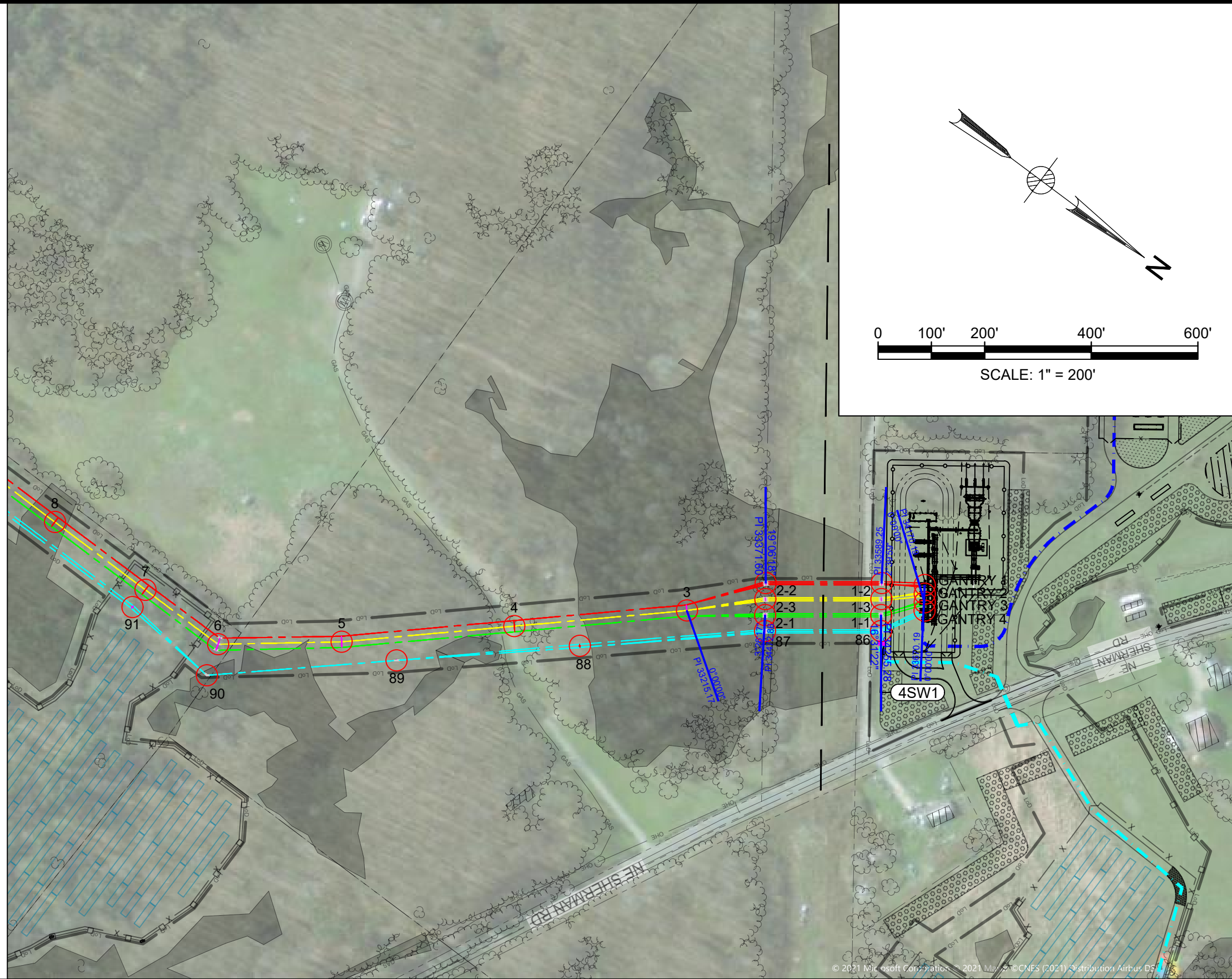
Date
07/20/2021

Rev
C

Drawing Number
SRS-E-610-09



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Key Map

SRS-E-610-10B

SRS-E-610-09

SRS-E-610-08

SRS-E-610-07

SRS-E-610-06

SRS-E-610-05

SRS-E-610-04

SRS-E-610-03

SRS-E-610-02

SRS-E-610-01

SRS-E-610-00

200.0 FT. → HORIZ. SCALE
30.0 FT. → VERT. SCALE

Symbol Legend

34.5KV STRUCTURE

JUNCTION BOX

PCS ID

20 STRUCTURE & ID

PAD MOUNTED SWITCHGEAR

Plan View Legend (Collector System Feeders organized by color)

AERIAL

IN CONDUIT

IN TRENCH

FEEDER 1 CABLES

FEEDER 2 CABLES

FEEDER 3 CABLES

FEEDER 4 CABLES

34.5KV BESS CABLES

PROFILE VIEW COLOR

795 ACSR 26/7 STRAND DRAKE

36 FIBRE AFL AC/20/47/607 OPGW

1/2-INCH 7-STRAND EHS

Notes:

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1000 LBS INITIAL @ NESC 250B HEAVY

8. LOCATIONS 3 TO 67: TRIPLE CIRCUIT
POLE 1, 2, 3, AND 68 TO 122: SINGLE CIRCUIT

C	07/20/2021	JD	ISSUED FOR 94C	EHK	JS
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South Ripley SOLAR PROJECT

Title

SOUTH RIPLEY SOLAR

34.5KV COLLECTOR SYSTEM

PLAN AND PROFILE

SHEET 9

PRELIMINARY
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ENGINEERS STAMP
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AND/OR FABRICATION

Designed	JD	Eng check	EHK
Drawn	JD	Approved	JS
Scale at ANSI D As Noted	Date 07/20/2021	Rev C	

① TO BREAKER 52F1
(SEE SUBSTATION SINGLE LINE)

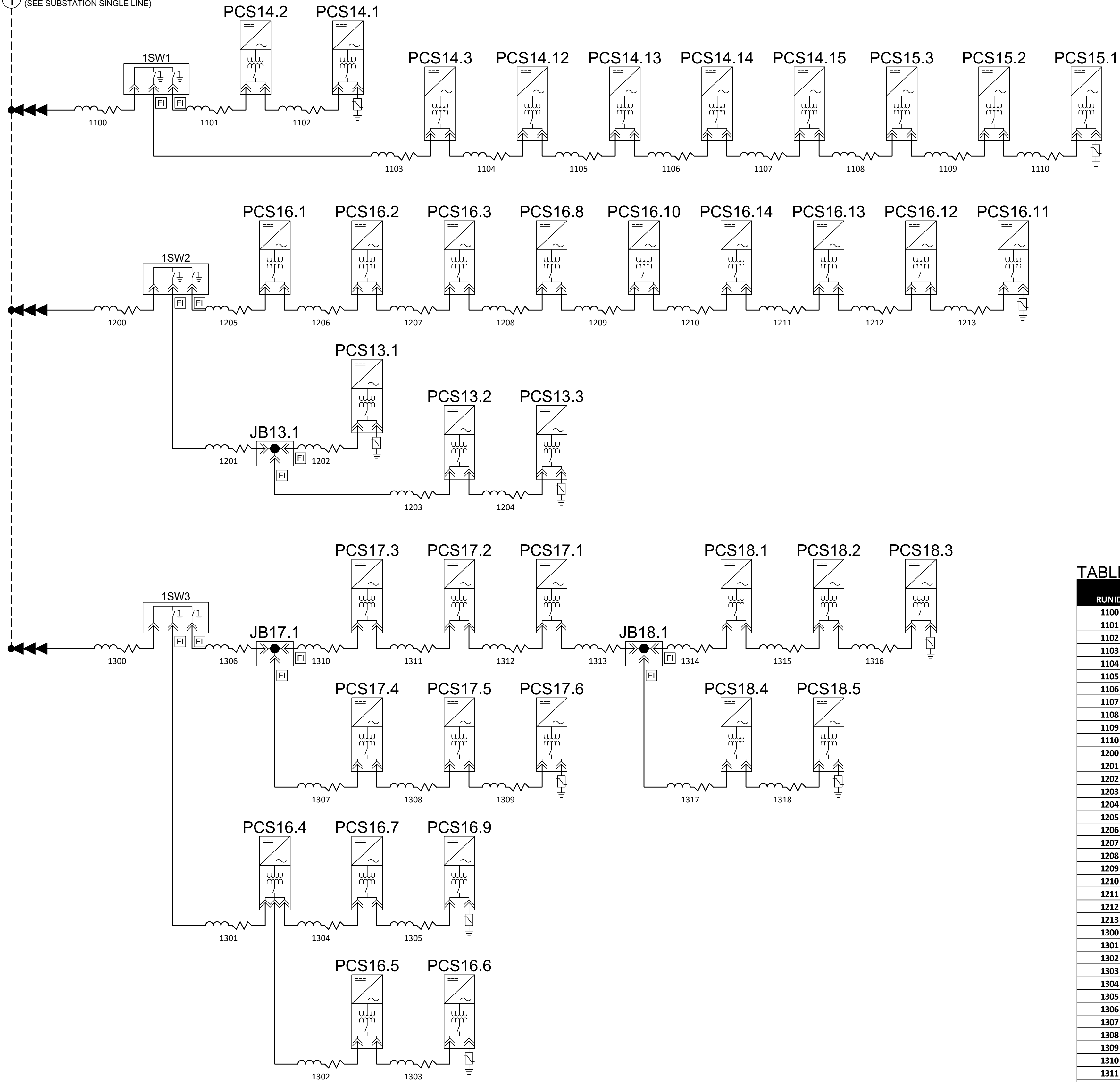


TABLE 1.1 - POWER CABLE SCHEDULE (SEE NOTE 4)

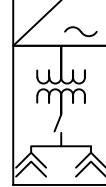
RUNID	SUBSTATION BREAKER ID	FROM	TO	CIRCUIT LENGTH	POWER CABLE DESCRIPTION	PARALLEL SETS
1100	F1	RISER	1SW1	88 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1101	F1	1SW1	PCS14.2	1,011 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1102	F1	PCS14.2	PCS14.1	178 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1103	F1	1SW1	PCS14.3	782 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1104	F1	PCS14.3	PCS14.12	611 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1105	F1	PCS14.12	PCS14.13	77 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1106	F1	PCS14.13	PCS14.14	442 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1107	F1	PCS14.14	PCS14.15	967 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1108	F1	PCS14.15	PCS15.3	3,970 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1109	F1	PCS15.3	PCS15.2	333 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1110	F1	PCS15.2	PCS15.1	327 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1200	F1	RISER	1SW2	82 ft	1250kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1201	F1	1SW2	JB13.1	2,263 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1202	F1	JB13.1	PCS13.1	1,131 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1203	F1	JB13.1	PCS13.2	542 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1204	F1	PCS13.2	PCS13.3	91 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1205	F1	1SW2	PCS16.1	707 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1206	F1	PCS16.1	PCS16.2	221 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1207	F1	PCS16.2	PCS16.3	318 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1208	F1	PCS16.3	PCS16.8	668 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1209	F1	PCS16.8	PCS16.10	539 ft	4/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1210	F1	PCS16.10	PCS16.14	642 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1211	F1	PCS16.14	PCS16.13	482 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1212	F1	PCS16.13	PCS16.12	318 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1213	F1	PCS16.12	PCS16.11	313 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1300	F1	RISER	1SW3	83 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	2
1301	F1	1SW3	PCS16.4	1,186 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1302	F1	PCS16.4	PCS16.5	290 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1303	F1	PCS16.5	PCS16.6	108 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1304	F1	PCS16.6	PCS16.7	465 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1305	F1	PCS16.7	PCS16.9	543 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1306	F1	1SW3	JB17.1	4,541 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1307	F1	JB17.1	PCS17.4	368 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1308	F1	PCS17.4	PCS17.5	342 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1309	F1	PCS17.5	PCS17.6	87 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1310	F1	JB17.1	PCS17.3	215 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1311	F1	PCS17.3	PCS17.2	523 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1312	F1	PCS17.2	PCS17.1	476 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
1313	F1	PCS17.1	JB18.1	1,672 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1314	F1	JB18.1	PCS18.1	851 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1315	F1	PCS18.1	PCS18.2	72 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1316	F1	PCS18.2	PCS18.3	266 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1317	F1	JB18.1	PCS18.4	1,607 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
1318	F1	PCS18.4	PCS18.5	66 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1

Notes

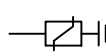
- THIS SINGLE LINE CORRESPONDS TO PV LAYOUTS ON SHEETS SRS-E-400-01 THROUGH SRS-E-400-17 .
- UNDERGROUND CABLE LENGTHS SHOWN REPRESENT TRENCH LENGTH PLUS TAILS AND RISERS.
- ALL CABLES AND EQUIPMENT SHOWN ON THIS SHEET ARE RATED FOR 35KV OPERATION UNLESS OTHERWISE NOTED.
- ALL CABLE SIZES ARE PRELIMINARY. FINAL CABLE SIZING IS TO BE DETERMINED BY THE ENGINEER RESPONSIBLE FOR THE FINAL DESIGN.
- ALL TRENCHES AND CONDUITS CONTAINING MVAC POWER CABLES SHALL ALSO CONTAIN A CONTINUOUS BARE GROUND WIRE, UNLESS OTHERWISE NOTED. SEE TRENCH DETAILS FOR PLACEMENT.
- THIS IS A MULTI-BONDED SYSTEM. BOND ALL CABLE SHIELDS TO THE TRENCH OR EQUIPMENT GROUND AT ALL CABLE SPLICE AND TERMINATION LOCATIONS.

Legend

PCS



POWER CONVERSION SKID
WITH INTEGRAL STEP-UP VOLTAGE TRANSFORMER
RATINGS VARY PER DC SCHEMATICS (3-PH, 60Hz)



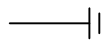
METAL OXIDE SURGE ARRESTOR ELBOW
34.5KV, 600A, 24.4KV MCOV (MINIMUM)
(ONE PER MV PHASE BUSHING)



TEST POINT RESET CABLE FAULT INDICATOR
WITH REMOTE INDICATION
35KV, 1200A, DELAY TRIP, INRUSH RESTRAINT



DEADFRONT JUNCTION BOX
(3-WAY SHOWN)
35KV, 900A, 3-PH, NEMA 3R



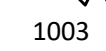
GROUND LOCATION



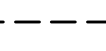
35KV, DEADBREAK CABLE TERMINATION AND BUSHING



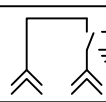
SKIRTED CABLE TERMINATION
35KV, 3-PH, NEMA 2-HOLE PAD, 150KV BIL



35KV, 3-PH, UNDERGROUND POWER CABLE
WITH RUNDIP PER CABLE SCHEDULE



35KV, 3-PH, AERIAL POWER CABLE



PAD-MOUNTED SECTIONALIZING SWITCH
35KV, 3-PH, NEMA 3R, SF6, 600A, 150KV BIL

C	07/02/2021	EHK	ISSUED FOR 94-C	JAB	JAB
B	05/18/2021	EHK	ISSUED FOR REVIEW	BG	JB
A	01/29/2021	EHK	ISSUED FOR REVIEW	BG	JB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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Client



Title
**SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
SINGLE LINE DIAGRAM
AND CABLE SCHEDULE
FEEDER 1**

PRELIMINARY
NOT FOR
CONSTRUCTION
REPLACE WITH
ENGINEERS STAMP
AT CONSTRUCTION
AND/OR FABRICATION

Designed	EHK	Eng check	JAB
Drawn	EHK	Approved	JAB
Scale at ANSI D Not to Scale	Date 07/02/2021	Rev C	
Drawing Number	SRS-E-620-01		

CONCEPTUAL - NOT FOR CONSTRUCTION

② TO BREAKER 52F2
(SEE SUBSTATION SINGLE LINE)

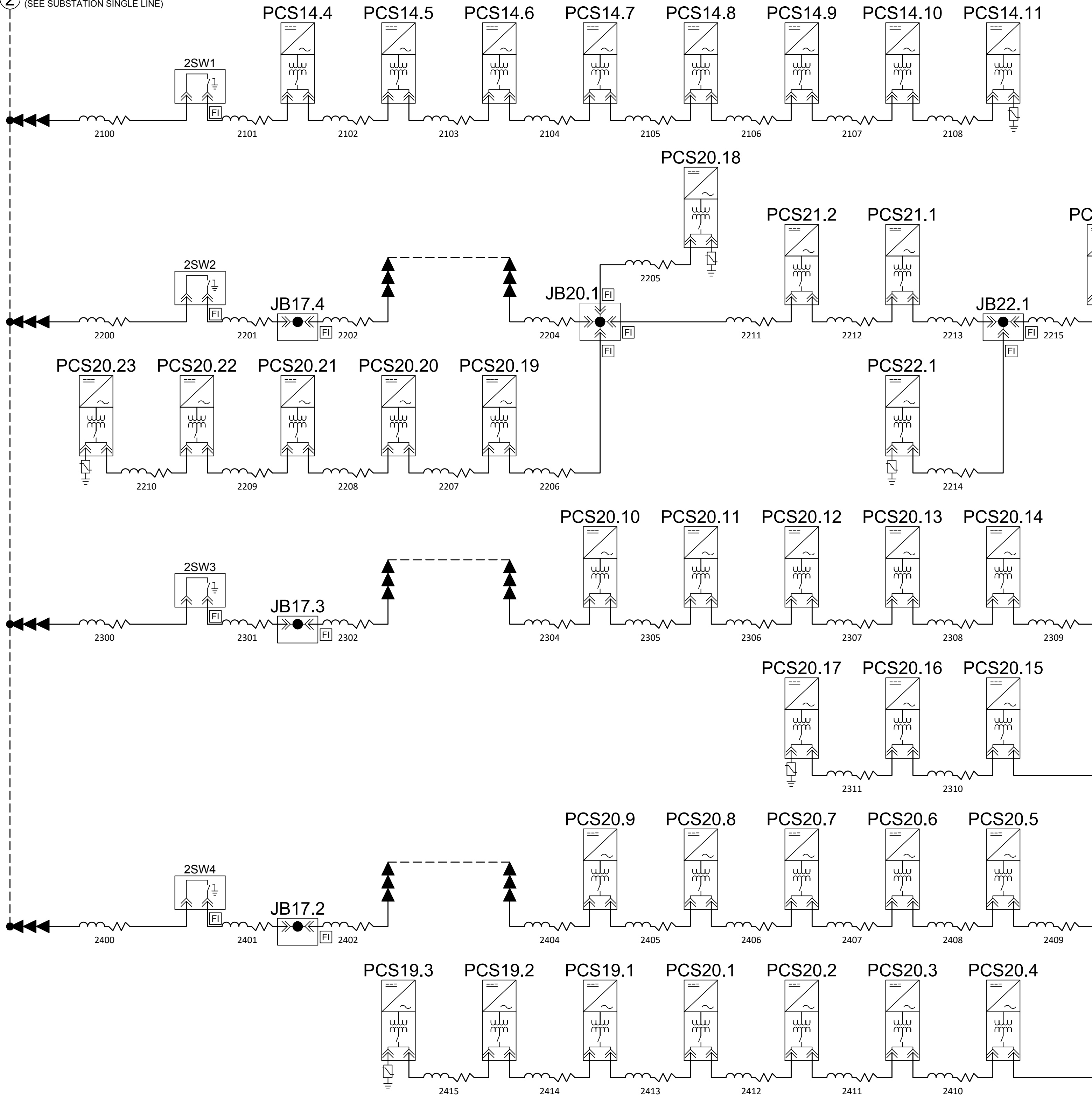


TABLE 1.2 - POWER CABLE SCHEDULE (SEE NOTE 4)

RUNID	SUBSTATION BREAKER ID	FROM	TO	CIRCUIT LENGTH	POWER CABLE DESCRIPTION	PARALLEL SETS
2100	F2	RISER	2SW1	78 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2101	F2	2SW1	PCS14.4	107 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2102	F2	PCS14.4	PCS14.5	1,614 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2103	F2	PCS14.5	PCS14.6	443 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2104	F2	PCS14.6	PCS14.7	87 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2105	F2	PCS14.7	PCS14.8	570 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2106	F2	PCS14.8	PCS14.9	87 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2107	F2	PCS14.9	PCS14.10	602 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2108	F2	PCS14.10	PCS14.11	87 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2200	F2	RISER	2SW2	83 ft	1250kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2201	F2	2SW2	JB17.4	5,716 ft	1250kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2202	F2	JB17.4	RISER	3,790 ft	1250kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2204	F2	RISER	JB20.1	5,716 ft	1250kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2205	F2	JB20.1	PCS20.18	1,433 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2206	F2	JB20.1	PCS20.19	289 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2207	F2	PCS20.19	PCS20.20	233 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2208	F2	PCS20.20	PCS20.21	162 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2209	F2	PCS20.21	PCS20.22	339 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2210	F2	PCS20.22	PCS20.23	629 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2211	F2	JB20.1	PCS21.2	2,054 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2212	F2	PCS21.2	PCS21.1	259 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2213	F2	PCS21.1	JB22.1	874 ft	4/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2214	F2	JB22.1	PCS22.1	134 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2215	F2	JB22.1	PCS22.2	390 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2216	F2	PCS22.2	PCS22.3	696 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2217	F2	PCS22.3	JB22.2	68 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2218	F2	JB22.2	PCS22.4	1,213 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2219	F2	JB22.2	PCS22.5	480 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2220	F2	PCS22.5	PCS22.6	456 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2300	F2	RISER	2SW3	82 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2301	F2	2SW3	JB17.3	5,478 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2302	F2	JB17.3	RISER	3,770 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2304	F2	RISER	PCS20.10	789 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2305	F2	PCS20.10	PCS20.11	461 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2306	F2	PCS20.11	PCS20.12	392 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2307	F2	PCS20.12	PCS20.13	298 ft	4/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2308	F2	PCS20.13	PCS20.14	234 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2309	F2	PCS20.14	PCS20.15	348 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2310	F2	PCS20.15	PCS20.16	584 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2311	F2	PCS20.16	PCS20.17	77 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2400	F2	RISER	2SW4	82 ft	1000kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2401	F2	2SW4	JB17.2	5,483 ft	1000kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2402	F2	JB17.2	RISER	5,721 ft	1000kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2404	F2	RISER	PCS20.9	858 ft	1000kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2405	F2	PCS20.9	PCS20.8	2,118 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2406	F2	PCS20.8	PCS20.7	71 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2407	F2	PCS20.7	PCS20.6	403 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2408	F2	PCS20.6	PCS20.5	71 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2409	F2	PCS20.5	PCS20.4	374 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
2410	F2	PCS20.4	PCS20.3	71 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2411	F2	PCS20.3	PCS20.2	234 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2412	F2	PCS20.2	PCS20.1	77 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2413	F2	PCS20.1	PCS19.1	954 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2414	F2	PCS19.1	PCS19.2	1,321 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
2415	F2	PCS19.2	PCS19.3	910 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1

- Notes
- THIS SINGLE LINE CORRESPONDS TO PV LAYOUTS ON SHEETS SRS-E-400-01 THROUGH SRS-E-400-17.
 - UNDERGROUND CABLE LENGTHS SHOWN REPRESENT TRENCH LENGTH PLUS TAILS AND RISERS.
 - ALL CABLES AND EQUIPMENT SHOWN ON THIS SHEET ARE RATED FOR 35KV OPERATION UNLESS OTHERWISE NOTED.
 - ALL CABLE SIZES ARE PRELIMINARY. FINAL CABLE SIZING IS TO BE DETERMINED BY THE ENGINEER RESPONSIBLE FOR THE FINAL DESIGN.
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 - THIS IS A MULTI-BONDED SYSTEM. BOND ALL CABLE SHIELDS TO THE TRENCH OR EQUIPMENT GROUND AT ALL CABLE SPLICE AND TERMINATION LOCATIONS.

Legend

PCS

POWER CONVERSION SKID
WITH INTEGRAL STEP-UP VOLTAGE TRANSFORMER
RATINGS VARY PER DC SCHEMATICS (3-PH, 60Hz)

METAL OXIDE SURGE ARRESTOR ELBOW
34.5KV, 600A, 24.4KV MC9V (MINIMUM)
(ONE PER MV PHASE BUSHING)

TEST POINT RESET CABLE FAULT INDICATOR
WITH REMOTE INDICATION
35KV, 1200A, DELAY TRIP, INRUSH RESTRAINT

1JB1

DEADFRONT JUNCTION BOX
(3-WAY SHOWN)
35KV, 900A, 3-PH, NEMA 3R

GROUND LOCATION

35KV, DEADBREAK CABLE TERMINATION AND BUSHING

SKIRTED CABLE TERMINATION
35KV, 3-PH, NEMA 2-HOLE PAD, 150KV BIL

35KV, 3-PH, UNDERGROUND POWER CABLE
WITH RUNID PER CABLE SCHEDULE

35KV, 3-PH, AERIAL POWER CABLE

PAD-MOUNTED SECTIONALIZING SWITCH
35KV, 3-PH, NEMA 3R, SF6, 600A, 150KV BIL

C	07/02/2021	EHK	ISSUED FOR 94-C	JAB	JAB
B	05/18/2021	EHK	ISSUED FOR REVIEW		JB
A	01/29/2021	EHK	ISSUED FOR REVIEW	BG	JB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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Client

Title

**SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
SINGLE LINE DIAGRAM
AND CABLE SCHEDULE
FEEDER 2**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	EHK	Eng check	JAB
	Drawn	EHK	Approved	JAB
	Scale at ANSI D Not to Scale		Date	Rev
	Drawing Number		07/02/2021	C
	SRS-E-620-02			

CONCEPTUAL - NOT FOR CONSTRUCTION

③ TO BREAKER 52F3
(SEE SUBSTATION SINGLE LINE)

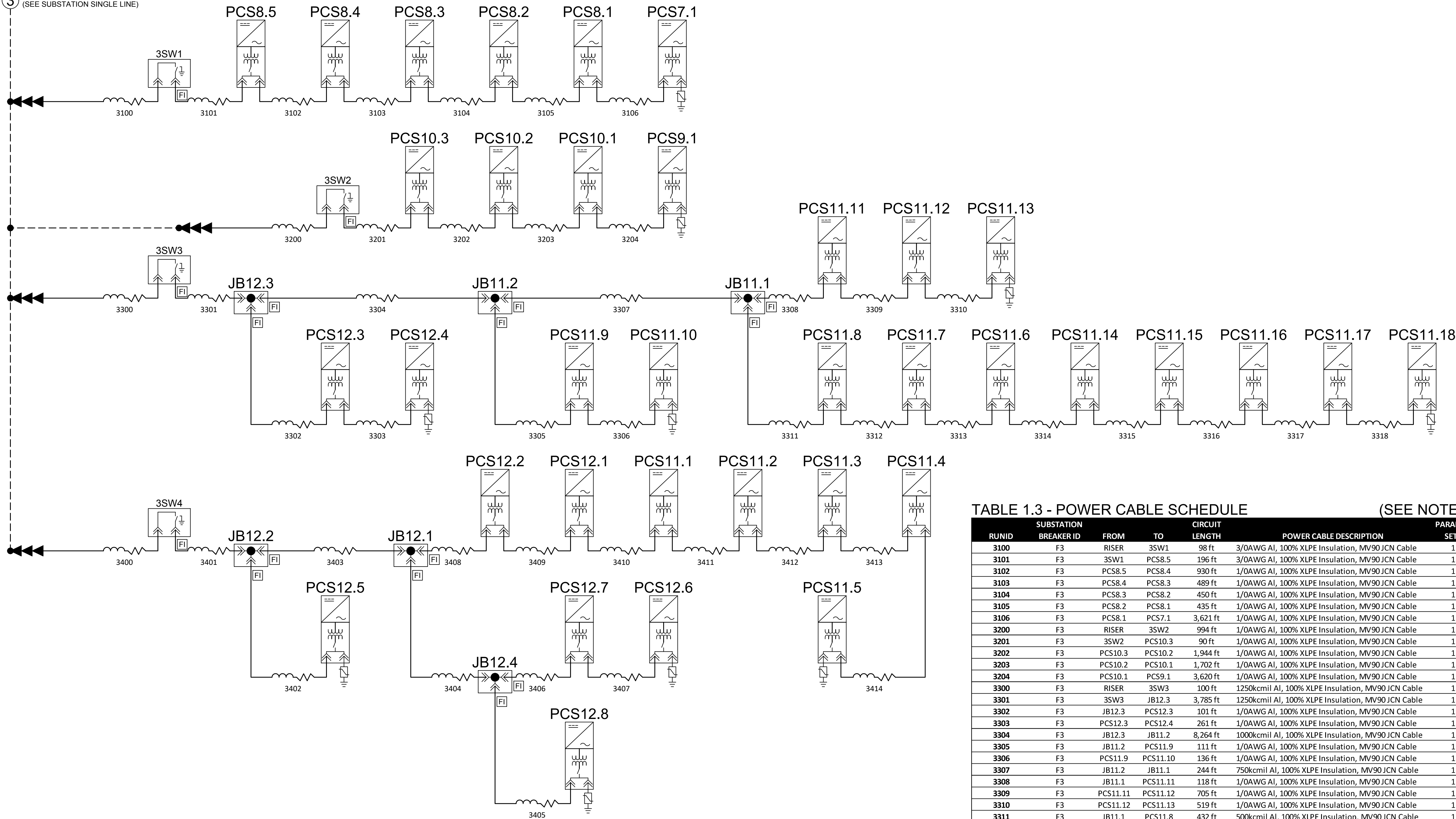


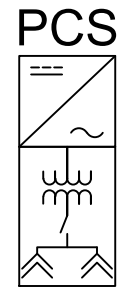
TABLE 1.3 - POWER CABLE SCHEDULE (SEE NOTE 4)

RUNID	SUBSTATION BREAKER ID	FROM	TO	CIRCUIT LENGTH	POWER CABLE DESCRIPTION	PARALLEL SETS
3100	F3	RISER	3SW1	98 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3101	F3	3SW1	PCS8.5	196 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3102	F3	PCS8.5	PCS8.4	930 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3103	F3	PCS8.4	PCS8.3	489 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3104	F3	PCS8.3	PCS8.2	450 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3105	F3	PCS8.2	PCS8.1	435 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3106	F3	PCS8.1	PCS7.1	3,621 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3200	F3	RISER	3SW2	994 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3201	F3	3SW2	PCS10.3	90 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3202	F3	PCS10.3	PCS10.2	1,944 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3203	F3	PCS10.2	PCS10.1	1,702 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3204	F3	PCS10.1	PCS9.1	3,620 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3300	F3	RISER	3SW3	100 ft	1250kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3301	F3	3SW3	JB12.3	3,785 ft	1250kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3302	F3	JB12.3	PCS12.3	101 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3303	F3	PCS12.3	PCS12.4	261 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3304	F3	JB12.3	JB11.2	8,264 ft	1000kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3305	F3	JB11.2	PCS11.9	111 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3306	F3	PCS11.9	PCS11.10	136 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3307	F3	JB11.2	JB11.1	244 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3308	F3	JB11.1	PCS11.11	118 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3309	F3	PCS11.11	PCS11.12	705 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3310	F3	PCS11.12	PCS11.13	519 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3311	F3	JB11.1	PCS11.8	432 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3312	F3	PCS11.8	PCS11.7	1,037 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3313	F3	PCS11.7	PCS11.6	1,131 ft	4/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3314	F3	PCS11.6	PCS11.14	612 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3315	F3	PCS11.14	PCS11.15	2,242 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3316	F3	PCS11.15	PCS11.16	468 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3317	F3	PCS11.16	PCS11.17	504 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3318	F3	PCS11.17	PCS11.18	538 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3400	F3	RISER	3SW4	223 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3401	F3	3SW4	JB12.2	3,794 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3402	F3	JB12.2	PCS12.5	225 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3403	F3	JB12.2	JB12.1	617 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3404	F3	JB12.1	JB12.4	1,476 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3405	F3	JB12.4	PCS12.8	40 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3406	F3	JB12.4	PCS12.7	707 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3407	F3	PCS12.7	PCS12.6	40 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3408	F3	JB12.1	PCS12.2	331 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3409	F3	PCS12.2	PCS12.1	340 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
3410	F3	PCS12.1	PCS11.1	2,774 ft	4/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3411	F3	PCS11.1	PCS11.2	1,006 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3412	F3	PCS11.2	PCS11.3	620 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3413	F3	PCS11.3	PCS11.4	981 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
3414	F3	PCS11.4	PCS11.5	300 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1

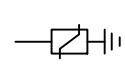
Notes

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- UNDERGROUND CABLE LENGTHS SHOWN REPRESENT TRENCH LENGTH PLUS TAILS AND RISERS.
- ALL CABLES AND EQUIPMENT SHOWN ON THIS SHEET ARE RATED FOR 35KV OPERATION UNLESS OTHERWISE NOTED.
- ALL CABLE SIZES ARE PRELIMINARY. FINAL CABLE SIZING IS TO BE DETERMINED BY THE ENGINEER RESPONSIBLE FOR THE FINAL DESIGN.
- ALL TRENCHES AND CONDUITS CONTAINING MVAC POWER CABLES SHALL ALSO CONTAIN A CONTINUOUS BARE GROUND WIRE, UNLESS OTHERWISE NOTED. SEE TRENCH DETAILS FOR PLACEMENT.
- THIS IS A MULTI-BONDED SYSTEM. BOND ALL CABLE SHIELDS TO THE TRENCH OR EQUIPMENT GROUND AT ALL CABLE SPLICE AND TERMINATION LOCATIONS.

Legend



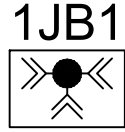
POWER CONVERSION SKID
WITH INTEGRAL STEP-UP VOLTAGE TRANSFORMER
RATINGS VARY PER DC SCHEMATICS (3-PH, 60Hz)



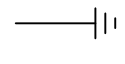
METAL OXIDE SURGE ARRESTOR ELBOW
34.5kV, 600A, 24.4kV MCOV (MINIMUM)
(ONE PER MV PHASE BUSHING)



TEST POINT RESET CABLE FAULT INDICATOR
WITH REMOTE INDICATION
35KV, 1200A, DELAY TRIP, INRUSH RESTRAINT



DEADFRONT JUNCTION BOX
(3-WAY SHOWN)
35KV, 900A, 3-PH, NEMA 3R



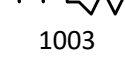
GROUND LOCATION



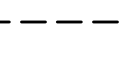
35KV, DEADBREAK CABLE TERMINATION AND BUSHING



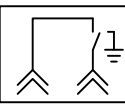
SKIRTED CABLE TERMINATION
35KV, 3-PH, NEMA 2-HOLE PAD, 150KV BIL



35KV, 3-PH, UNDERGROUND POWER CABLE
WITH RUNID PER CABLE SCHEDULE



35KV, 3-PH, AERIAL POWER CABLE



PAD-MOUNTED SECTIONALIZING SWITCH
35KV, 3-PH, NEMA 3R, SF6, 600A, 150KV BIL

C	07/02/2021	EHK	ISSUED FOR 94-C	JAB	JAB
B	05/18/2021	EHK	ISSUED FOR REVIEW		JB
A	01/29/2021	EHK	ISSUED FOR REVIEW	BG	JB
Rev	Date	Drawn	Description	Ch'k'd	App'd

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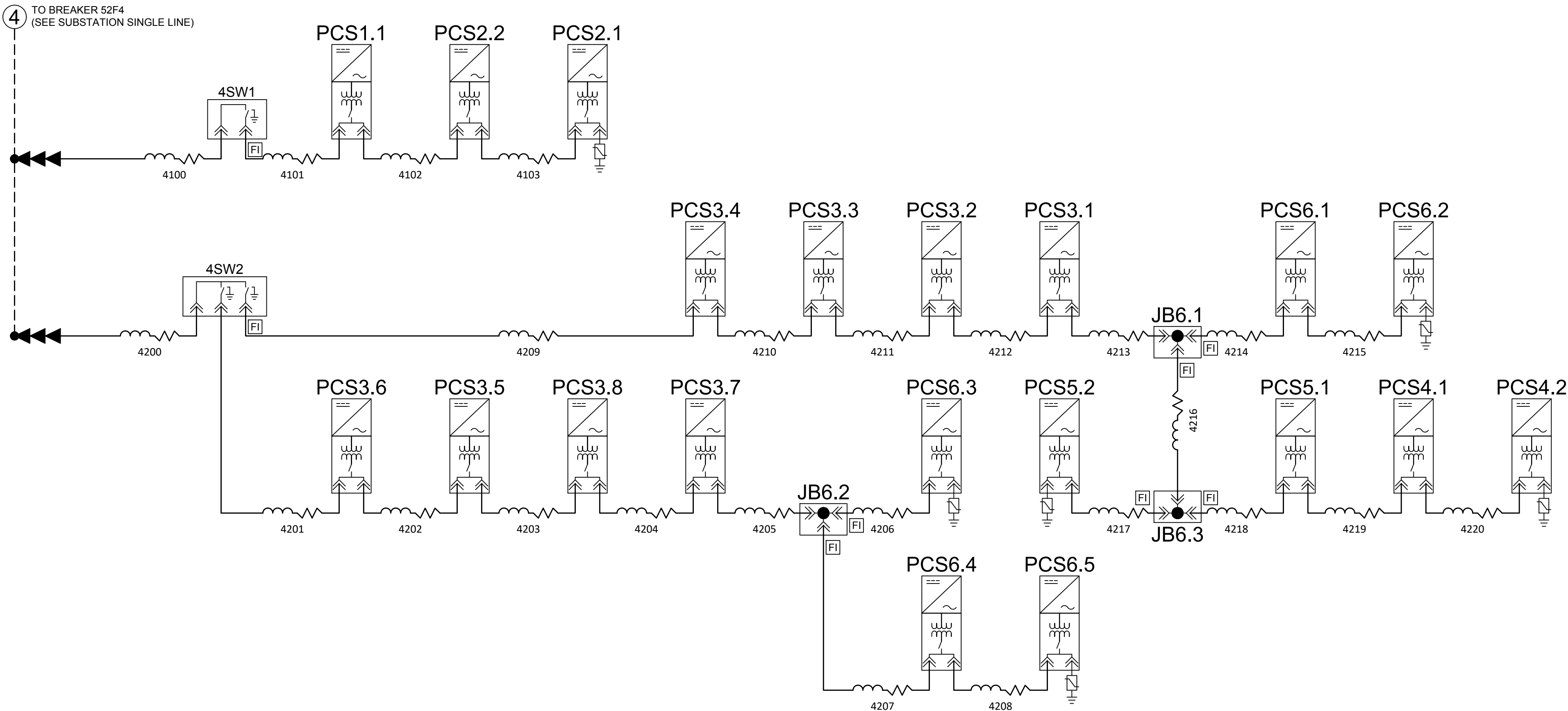


Title
**SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
SINGLE LINE DIAGRAM
AND CABLE SCHEDULE
FEEDER 3**

PRELIMINARY
NOT FOR
CONSTRUCTION
REPLACE WITH
ENGINEERS STAMP
AT CONSTRUCTION
AND/OR FABRICATION

Designed	EHK	Eng check	JAB
Drawn	EHK	Approved	JAB
Scale at ANSI D Not to Scale	Date 07/02/2021	Rev C	
Drawing Number	SRS-E-620-03		

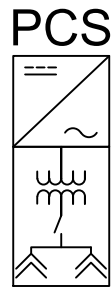
CONCEPTUAL - NOT FOR CONSTRUCTION



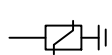
Notes

1. THIS SINGLE LINE CORRESPONDS TO PV LAYOUTS ON SHEETS SRS-E-400-01 THROUGH SRS-E-400-17 .
2. UNDERGROUND CABLE LENGTHS SHOWN REPRESENT TRENCH LENGTH PLUS TAILS AND RISERS.
3. ALL CABLES AND EQUIPMENT SHOWN ON THIS SHEET ARE RATED FOR 35KV OPERATION UNLESS OTHERWISE NOTED.
4. ALL CABLE SIZES ARE PRELIMINARY. FINAL CABLE SIZING IS TO BE DETERMINED BY THE ENGINEER RESPONSIBLE FOR THE FINAL DESIGN.
5. ALL TRENCHES AND CONDUITS CONTAINING MVAC POWER CABLES SHALL ALSO CONTAIN A CONTINUOUS BARE GROUND WIRE, UNLESS OTHERWISE NOTED. SEE TRENCH DETAILS FOR PLACEMENT.
6. THIS IS A MULTI-BONDED SYSTEM. BOND ALL CABLE SHIELDS TO THE TRENCH OR EQUIPMENT GROUND AT ALL CABLE SPLICE AND TERMINATION LOCATIONS.

Legend



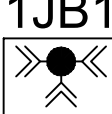
POWER CONVERSION SKID
WITH INTEGRAL STEP-UP VOLTAGE TRANSFORMER
RATINGS VARY PER DC SCHEMATICS (3-PH, 60Hz)



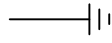
METAL OXIDE SURGE ARRESTOR ELBOW
34.5KV, 600A, 24.4KV MCOV (MINIMUM)
(ONE PER MV PHASE BUSHING)



TEST POINT RESET CABLE FAULT INDICATOR
WITH REMOTE INDICATION
35KV, 1200A, DELAY TRIP, INRUSH RESTRAINT



DEADFRONT JUNCTION BOX
(3-WAY SHOWN)
35KV, 900A, 3-PH, NEMA 3R



GROUND LOCATION



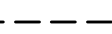
35KV, DEADBREAK CABLE TERMINATION AND BUSHING



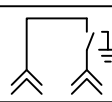
SKIRTED CABLE TERMINATION
35KV, 3-PH, NEMA 2-HOLE PAD, 150KV BIL



35KV, 3-PH, UNDERGROUND POWER CABLE
WITH RUNID PER CABLE SCHEDULE



35KV, 3-PH, AERIAL POWER CABLE



PAD-MOUNTED SECTIONALIZING SWITCH
35KV, 3-PH, NEMA 3R, SF6, 600A, 150KV BIL

C	07/02/2021	EHK	ISSUED FOR 94-C	JAB	JAB
B	05/18/2021	EHK	ISSUED FOR REVIEW		JB
A	01/29/2021	EHK	ISSUED FOR REVIEW	BG	JB
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Title

SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
SINGLE LINE DIAGRAM
AND CABLE SCHEDULE
FEEDER 4

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Designed	EHK	Eng check	JAB
Drawn	EHK	Approved	JAB
Scale at ANSI D Not to Scale		Date 07/02/2021	Rev C
Drawing Number SRS-E-620-04			

TABLE 1.4 - POWER CABLE SCHEDULE (SEE NOTE 4)

RUN/ID	SUBSTATION BREAKER ID	FROM	TO	CIRCUIT LENGTH	POWER CABLE DESCRIPTION	PARALLEL SETS
4100	F4	RISER	4SW1	79 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4101	F4	4SW1	PCS1.1	1,278 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4102	F4	PCS1.1	PCS2.2	1,798 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4103	F4	PCS2.2	PCS2.1	599 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4200	F4	RISER	4SW2	185 ft	1250kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
4201	F4	4SW2	PCS3.6	1,269 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4202	F4	PCS3.6	PCS3.5	169 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4203	F4	PCS3.5	PCS3.8	615 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4204	F4	PCS3.8	PCS3.7	40 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4205	F4	PCS3.7	JB6.2	446 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4206	F4	JB6.2	PCS6.3	489 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4207	F4	JB6.2	PCS6.4	622 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4208	F4	PCS6.4	PCS6.5	435 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4209	F4	4SW2	PCS3.4	315 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
4210	F4	PCS3.4	PCS3.3	354 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
4211	F4	PCS3.3	PCS3.2	507 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
4212	F4	PCS3.2	PCS3.1	580 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4213	F4	PCS3.1	JB6.1	599 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4214	F4	JB6.1	PCS6.1	408 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4215	F4	PCS6.1	PCS6.2	423 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4216	F4	JB6.1	JB6.3	506 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4217	F4	JB6.3	PCS5.2	1,215 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4218	F4	JB6.3	PCS5.1	886 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4219	F4	PCS5.1	PCS4.1	942 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
4220	F4	PCS4.1	PCS4.2	492 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1

CONCEPTUAL - NOT FOR CONSTRUCTION

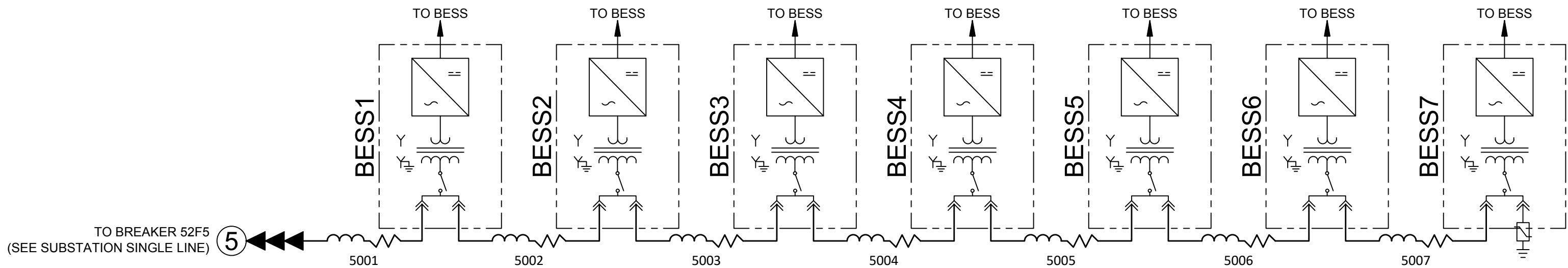


TABLE 1.5 - POWER CABLE SCHEDULE (SEE NOTE 3)

RUNID	SUBSTATION BREAKER ID	FROM	TO	CIRCUIT LENGTH	POWER CABLE DESCRIPTION	PARALLEL SETS
5001	F5	SUB	BESS1	777 ft	750kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
5002	F5	BESS1	BESS2	102 ft	500kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
5003	F5	BESS2	BESS3	102 ft	350kcmil Al, 100% XLPE Insulation, MV90 JCN Cable	1
5004	F5	BESS3	BESS4	102 ft	4/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
5005	F5	BESS4	BESS5	102 ft	3/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
5006	F5	BESS5	BESS6	102 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1
5007	F5	BESS6	BESS7	102 ft	1/0AWG Al, 100% XLPE Insulation, MV90 JCN Cable	1

- Notes
1. UNDERGROUND CABLE LENGTHS SHOWN REPRESENT TRENCH LENGTH PLUS TAILS AND RISERS.
 2. ALL CABLES AND EQUIPMENT SHOWN ON THIS SHEET ARE RATED FOR 35KV OPERATION UNLESS OTHERWISE NOTED.
 3. ALL CABLE SIZES ARE PRELIMINARY. FINAL CABLE SIZING IS TO BE DETERMINED BY THE ENGINEER RESPONSIBLE FOR THE FINAL DESIGN.
 4. ALL TRENCHES AND CONDUITS CONTAINING MVAC POWER CABLES SHALL ALSO CONTAIN A CONTINUOUS BARE GROUND WIRE, UNLESS OTHERWISE NOTED. SEE TRENCH DETAILS FOR PLACEMENT.
 5. THIS IS A MULTI-BONDED SYSTEM. BOND ALL CABLE SHIELDS TO THE TRENCH OR EQUIPMENT GROUND AT ALL CABLE SPLICE AND TERMINATION LOCATIONS.

Legend

BESS YARD POWER CONVERSION SKID
WITH INTEGRAL STEP-UP VOLTAGE TRANSFORMER
3.45MVA, 3-PH, 60Hz

METAL OXIDE SURGE ARRESTOR ELBOW
34.5KV, 600A, 24.4KV MCOV (MINIMUM)

35KV, DEADBREAK CABLE TERMINATION AND BUSHING

SKIRTED CABLE TERMINATION
35KV, 3-PH, NEMA 2-HOLE PAD, 150KV BIL

35KV, 3-PH, UNDERGROUND POWER CABLE
WITH RUNID PER CABLE SCHEDULE

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Rev	Date	Drawn	Description	Ch'k'd	App'd

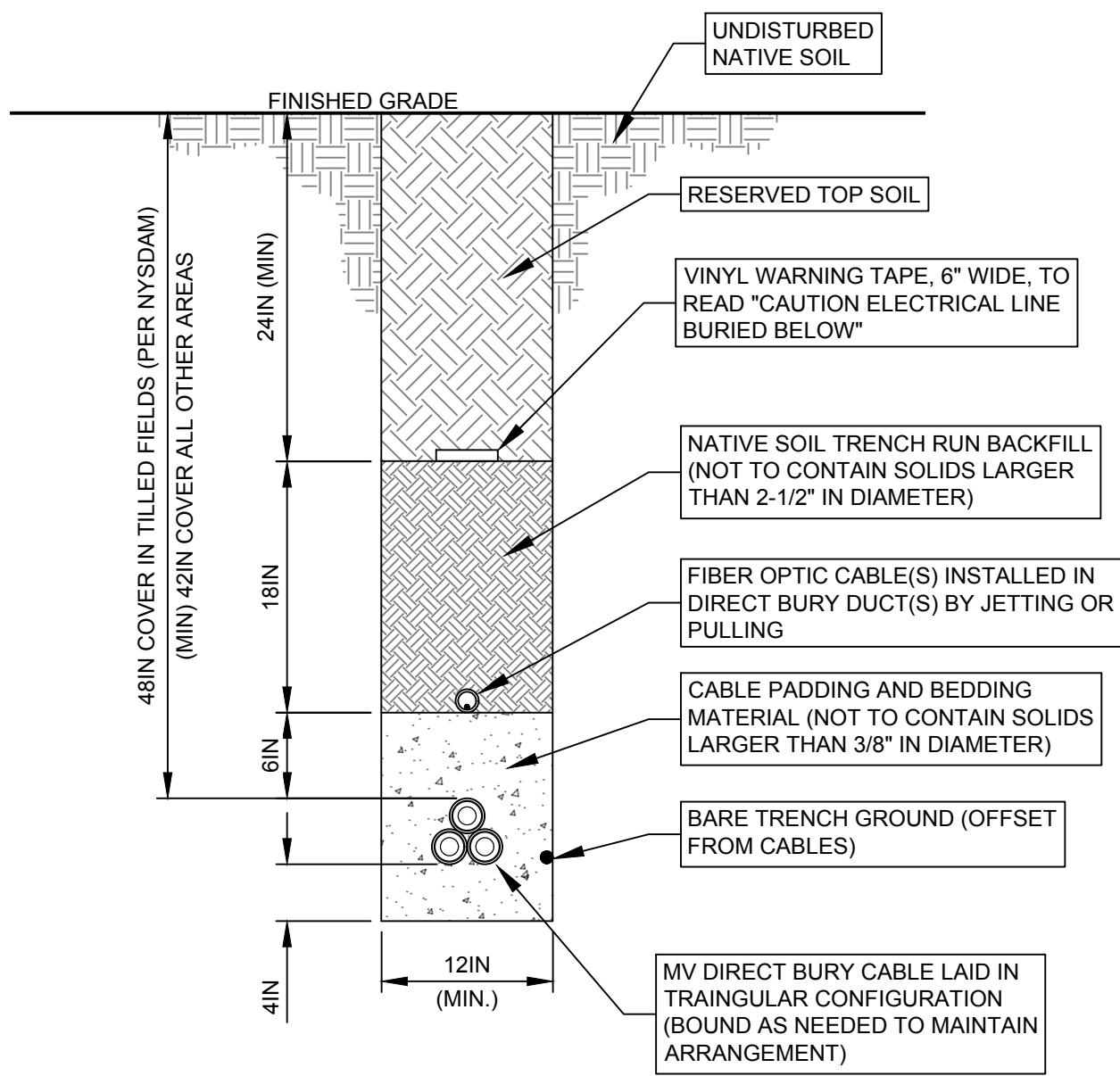
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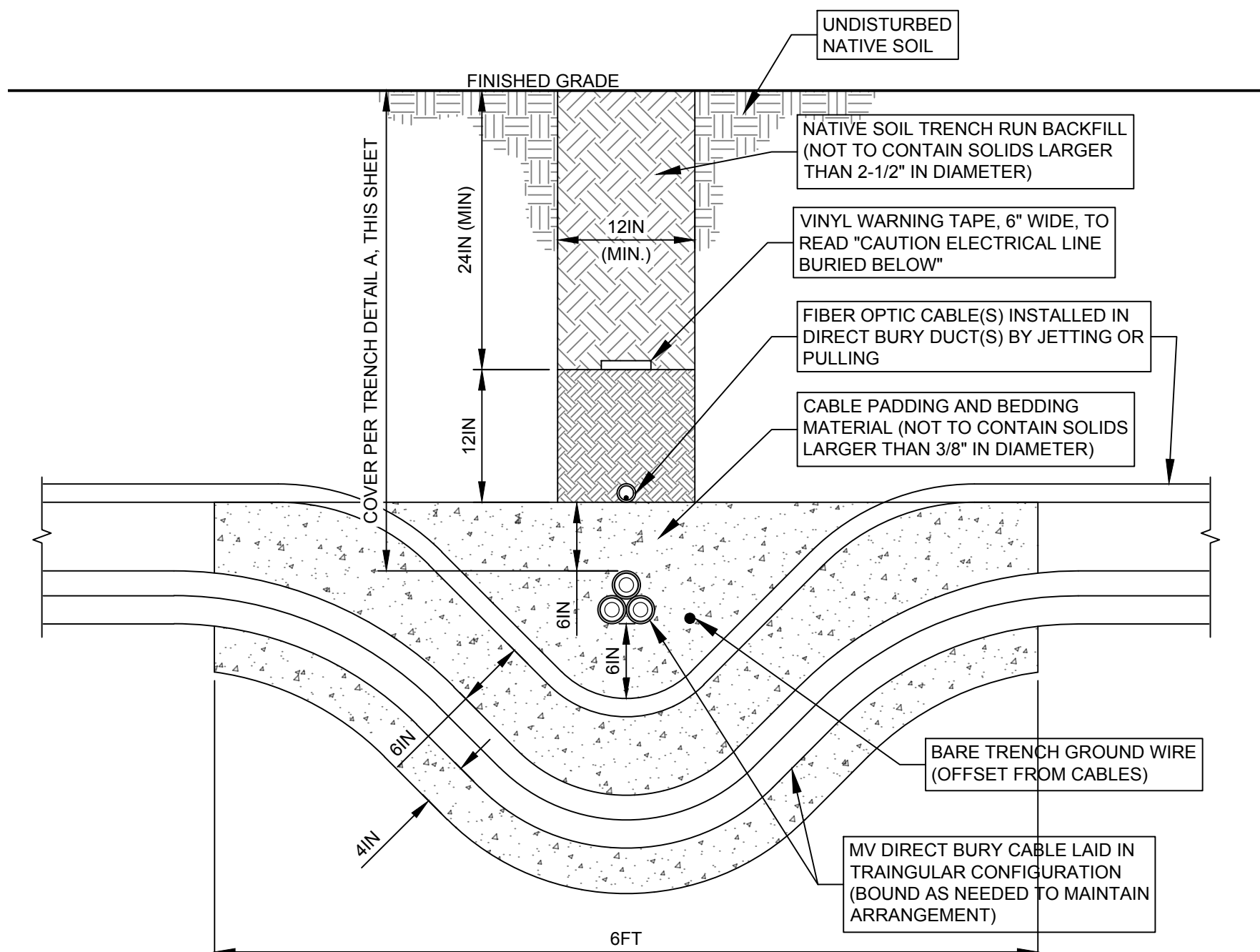
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SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
BESS SINGLE LINE DIAGRAM
AND CABLE SCHEDULE

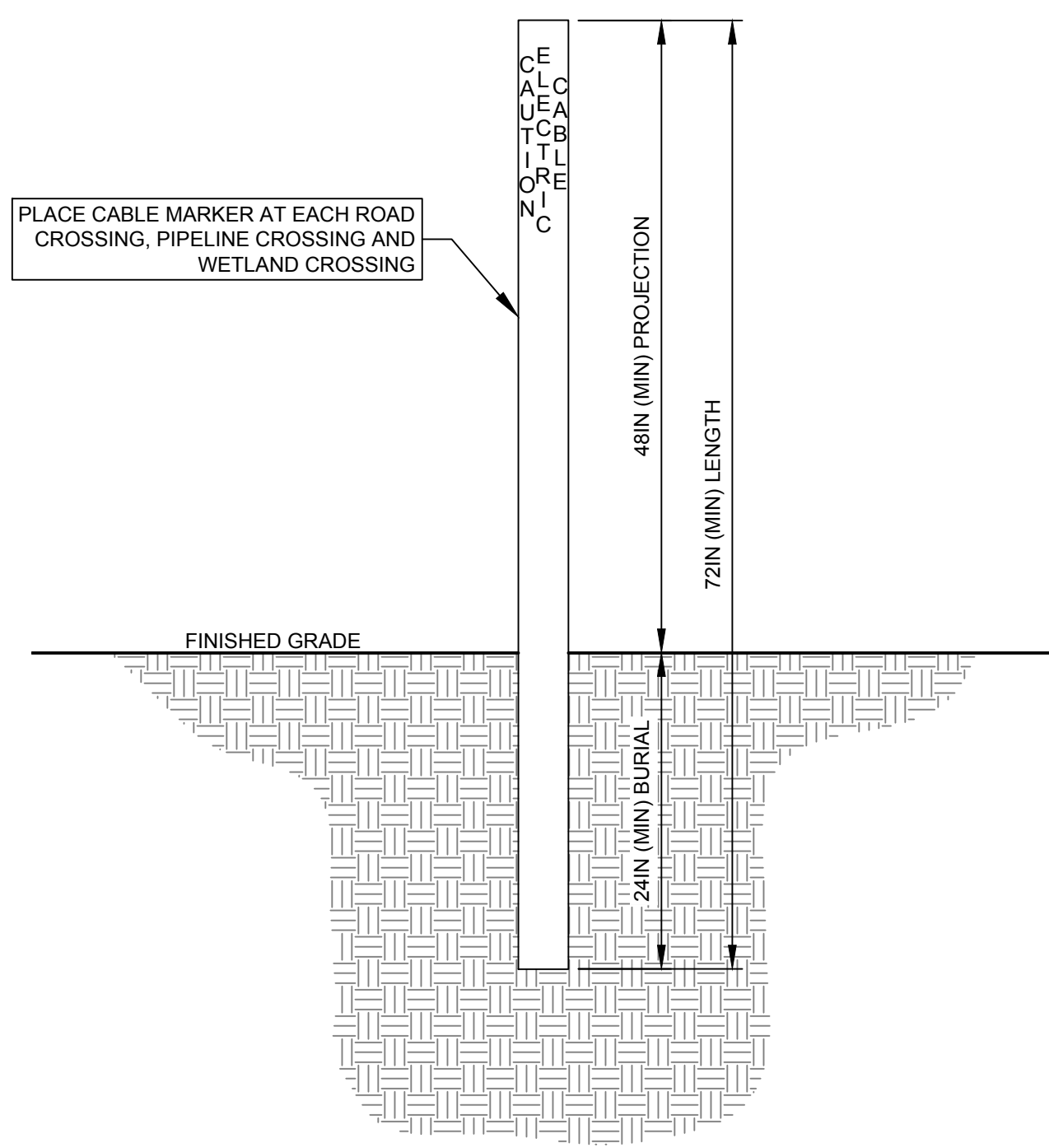
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	EHK	Eng check	JAB
	Drawn	EHK	Approved	JAB
	Scale at ANSI D Not to Scale		Date 07/02/2021	Rev C
	Drawing Number			
	SRS-E-620-05			



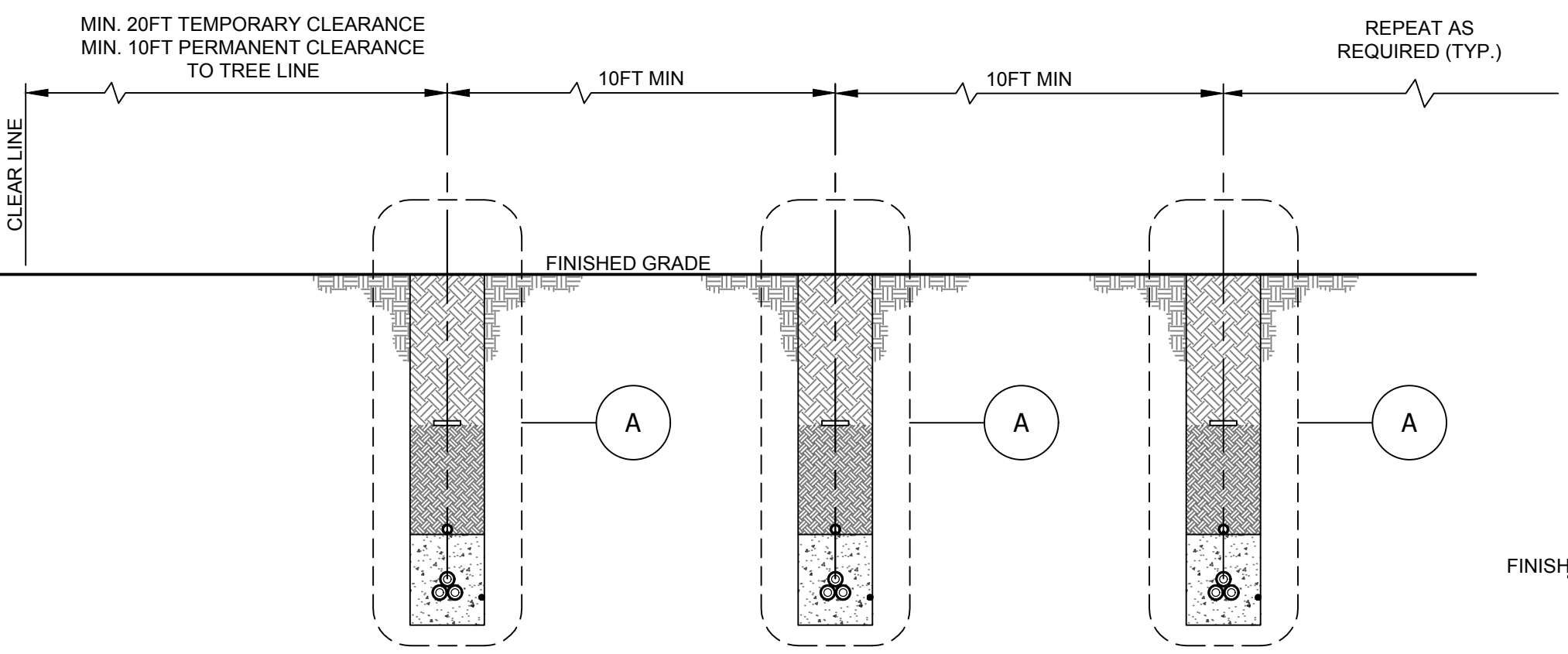
A MV CABLE TRENCH WITH FIBER OPTIC
Not to Scale



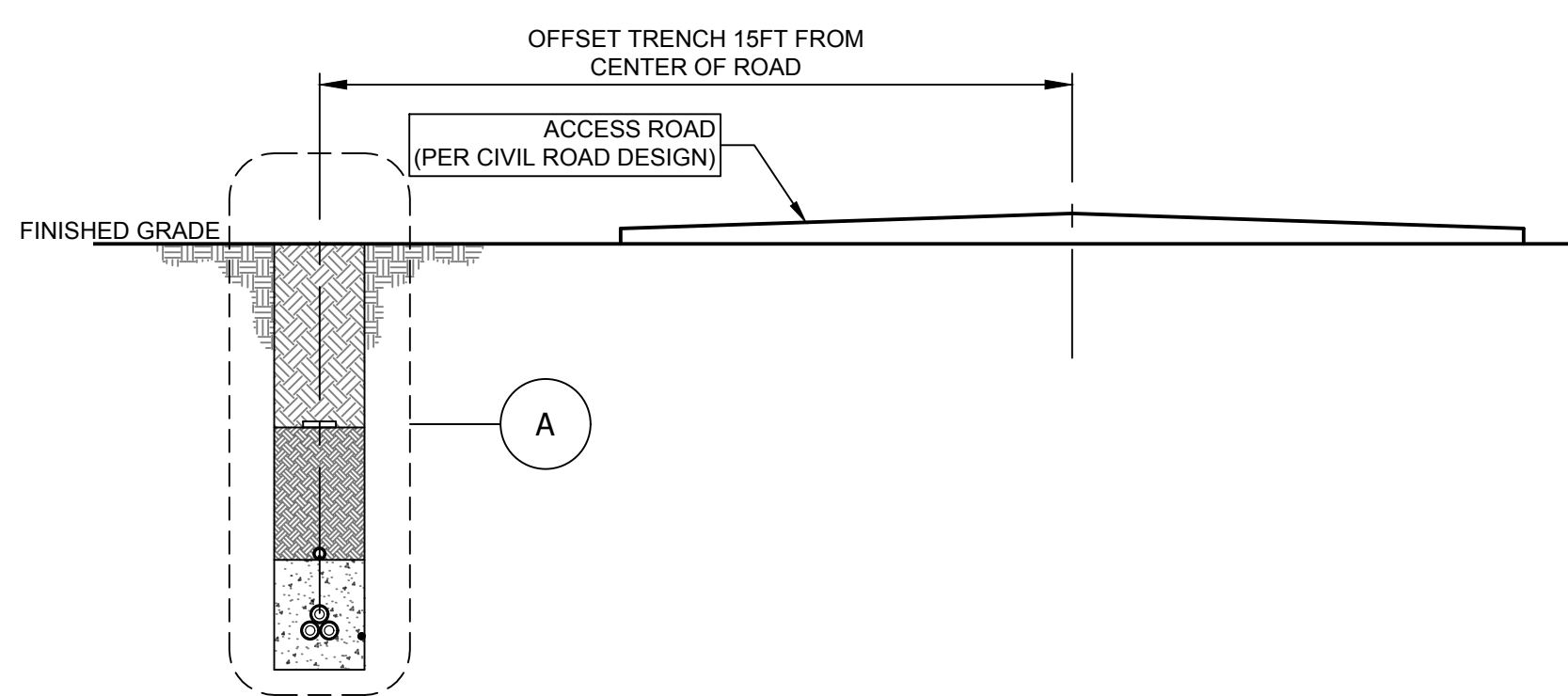
B TYPICAL DIRECT BURIED MV CABLE CROSSING
Not to Scale



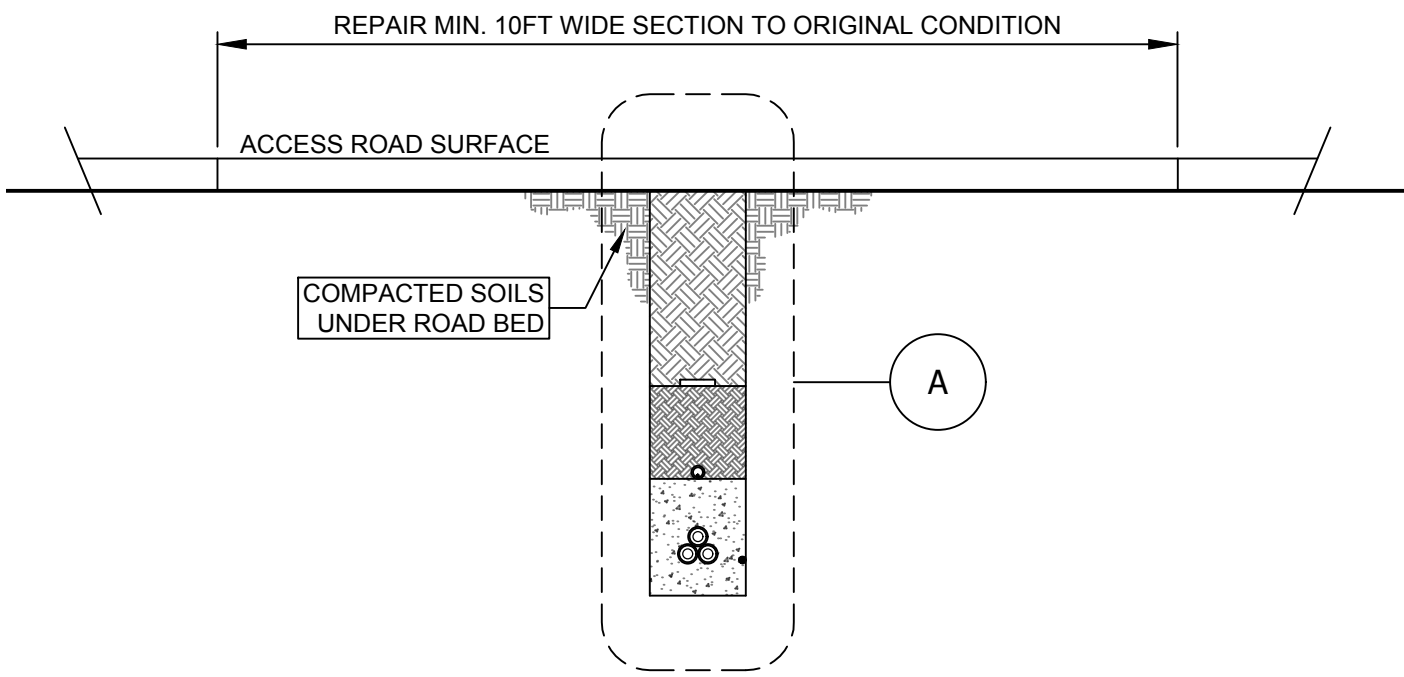
C CABLE MARKER DETAIL
Not to Scale



D PARALLEL MV CABLE TRENCH SPACING DETAIL
Not to Scale



E CABLED TRENCHED BESIDE ACCESS RD
Not to Scale



F CABLE TRENCHED THROUGH ACCESS ROAD
Not to Scale

- Notes
1. ALL EXISTING UTILITIES MUST BE LOCATED BEFORE ANY EXCAVATION/TRENCHING IS STARTED. REGARDLESS OF OTHER UTILITY CONTACTS, CONTRACTOR MUST NOTIFY LOCAL LOCATING CLEARING HOUSE (I.E. ONECALL) OR OTHER STATE BODY.
 2. ALL GRADE SURFACES THAT ARE DISTURBED SHALL BE RESTORED TO ESSENTIALLY ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER.
 3. EVERY TRENCH MUST BE A MINIMUM OF 12-INCHES WIDE (WITH PROPER SLOPE FOR WEAK SOILS), AND MUST PROVIDE SUFFICIENT SPACE TO ALLOW COMPACTION AS SPECIFIED WITH THE EQUIPMENT BEING UTILIZED. THE CONTRACTOR SHALL ENSURE THAT SUFFICIENT AMOUNT OF FINE SOIL IS ADDED ABOVE CABLE FOR BACKFILLS.
 4. CONTRACTOR SHALL PROTECT ALL TRENCHES AND OTHER EXCAVATIONS FROM SURFACE WATER RUNOFF. ANY WATER THAT HAS ACCUMULATED IN THE EXCAVATION SHALL BE REMOVED AND ANY SOFT TRENCH BOTTOM REMOVED AND REPLACED PRIOR TO THE INSTALLATION OF THE CABLES. THIS INCLUDES REMOVAL AND REPLACEMENT OF SAND BACKFILL THAT HAS BECOME CONTAMINATED WITH SILT, ROCKS, MUD, CLAY, ETC. THE REMOVAL OF WATER AND CORRECTION OF SOFT GROUND CONDITIONS DUE TO SURFACE WATER WILL BE THE RESPONSIBILITY OF CONTRACTOR.
 5. CONTRACTOR MUST PROTECT THE PUBLIC AND LIVESTOCK FROM ALL TRENCHES AND EXCAVATIONS BY UTILIZING SUITABLE BARRICADES OR OTHER WARNING DEVICES.
 6. ALL TRENCHES SHALL BE EXCAVATED TO DEPTH AS NECESSARY TO MAINTAIN THE SPECIFIED COVER OVER THE INSTALLED CABLE. IF THE BOTTOM OF THE TRENCH CONTAINS ROCKS, WOOD, VEGETATION MATERIAL OR OTHER HARD, ROUGH, OR SHARP MATERIALS THAT COULD DAMAGE THE CABLE, THE TRENCH SHALL BE OVER-EXCAVATED AND BACKFILLED WITH A 4-INCH LAYER OF COMPACTED FINE CLEAN SOIL (NOTHING LARGER THAN WHAT WOULD PASS THROUGH A 3/8-INCH SCREEN) OR SAND PRIOR TO THE CABLE BEING LAID IN PLACE.
 7. ALL EXCAVATED AREAS, INCLUDING TRENCHES AND BELL HOLES MUST BE THOROUGHLY COMPACTED TO NO LESS THAN 85% STANDARD PROCTOR, UNLESS OTHERWISE NOTED IN THE PROJECT GEO-TECHNICAL REPORT. COMPACTION SHALL BE BY PROVEN METHODOLOGY. SPECIAL CARE MUST BE TAKEN IN THE AREAS WHERE THE THERMAL TESTING OF SOILS IN THAT AREA INDICATES A POTENTIALLY HIGH RESISTIVITY. COMPACTION BY FLOODING WILL NOT BE PERMITTED.
 8. THE CONTRACTOR SHALL FILL THE TRENCH TO PRE-CONSTRUCTION GRADE WITH THE STOCKPILED TOP SOIL AND WITH ADDITIONAL BACKFILL ADDED TO ALLOW FOR SETTLING. CONTRACTOR MAY SLIGHTLY OVERFILL TRENCH IN ORDER TO ALLOW FOR SETTLING.
 9. EXCAVATED SOIL AND ROCK THAT IS NOT REUSED IN BACKFILLING THE TRENCHES IS TO BE DISTRIBUTED ACROSS THE SITE PER THE DIRECTION OF THE OWNER.
 10. ALL EXCAVATION, TRENCHING AND ELECTRICAL SYSTEM CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THE FORMAL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE PROJECT.
 11. A MINIMUM OF 10 FEET OF SEPARATION IS REQUIRED BETWEEN PARALLEL HOME RUN CIRCUITS AS NOTED ON SYSTEM MAP. A MINIMUM OF 15 FEET OF SEPARATION IS REQUIRED BETWEEN ALL OTHER PARALLEL CIRCUITS. A MAXIMUM OF FOUR PARALLEL CIRCUITS IS ANTICIPATED.

Legend

C	07/02/2021	EHK	ISSUED FOR 94-C	JAB	JAB
B	05/18/2021	EHK	ISSUED FOR REVIEW		JB
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Rev	Date	Drawn	Description	Ch'k'd	App'd

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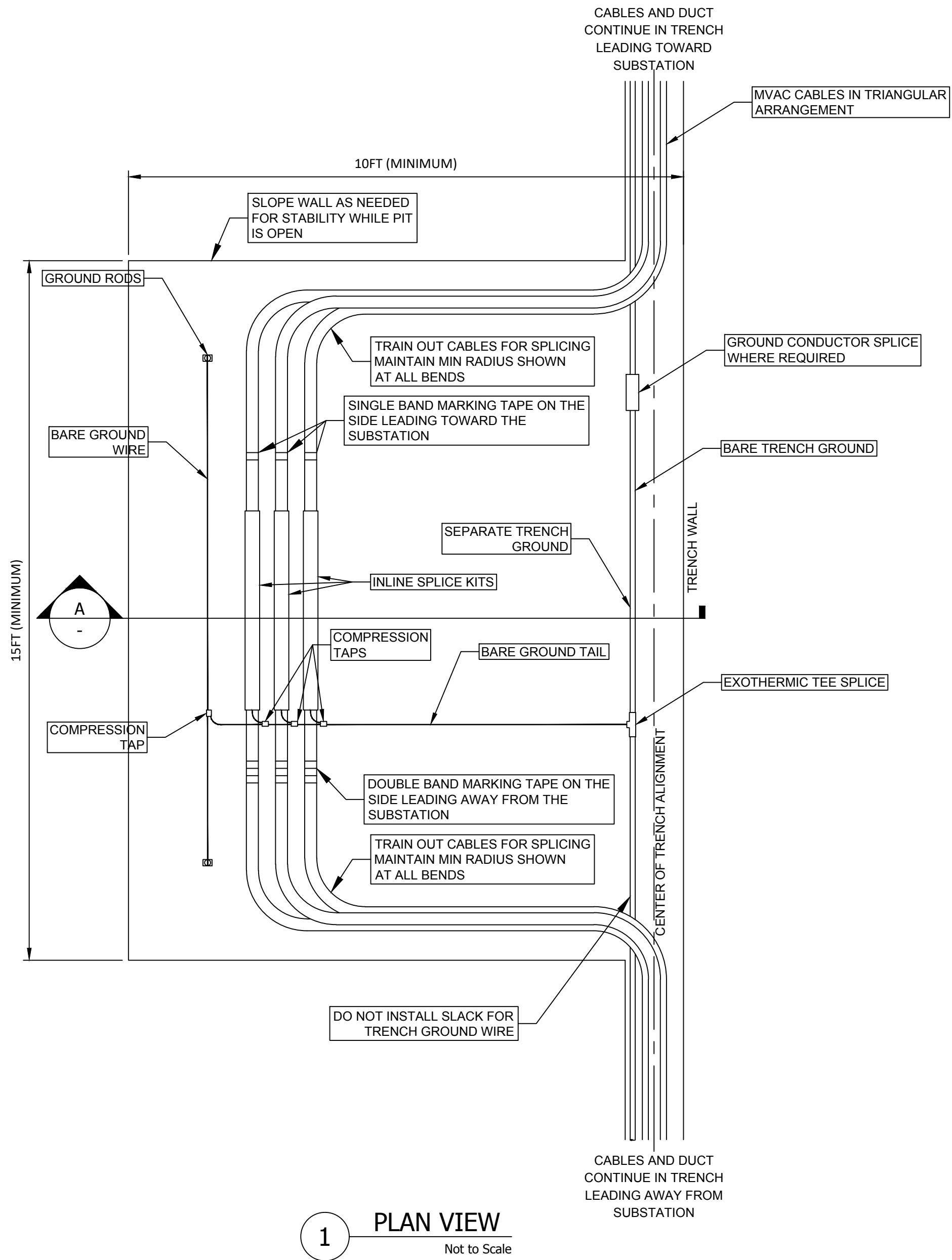
South Ripley SOLAR PROJECT

Title

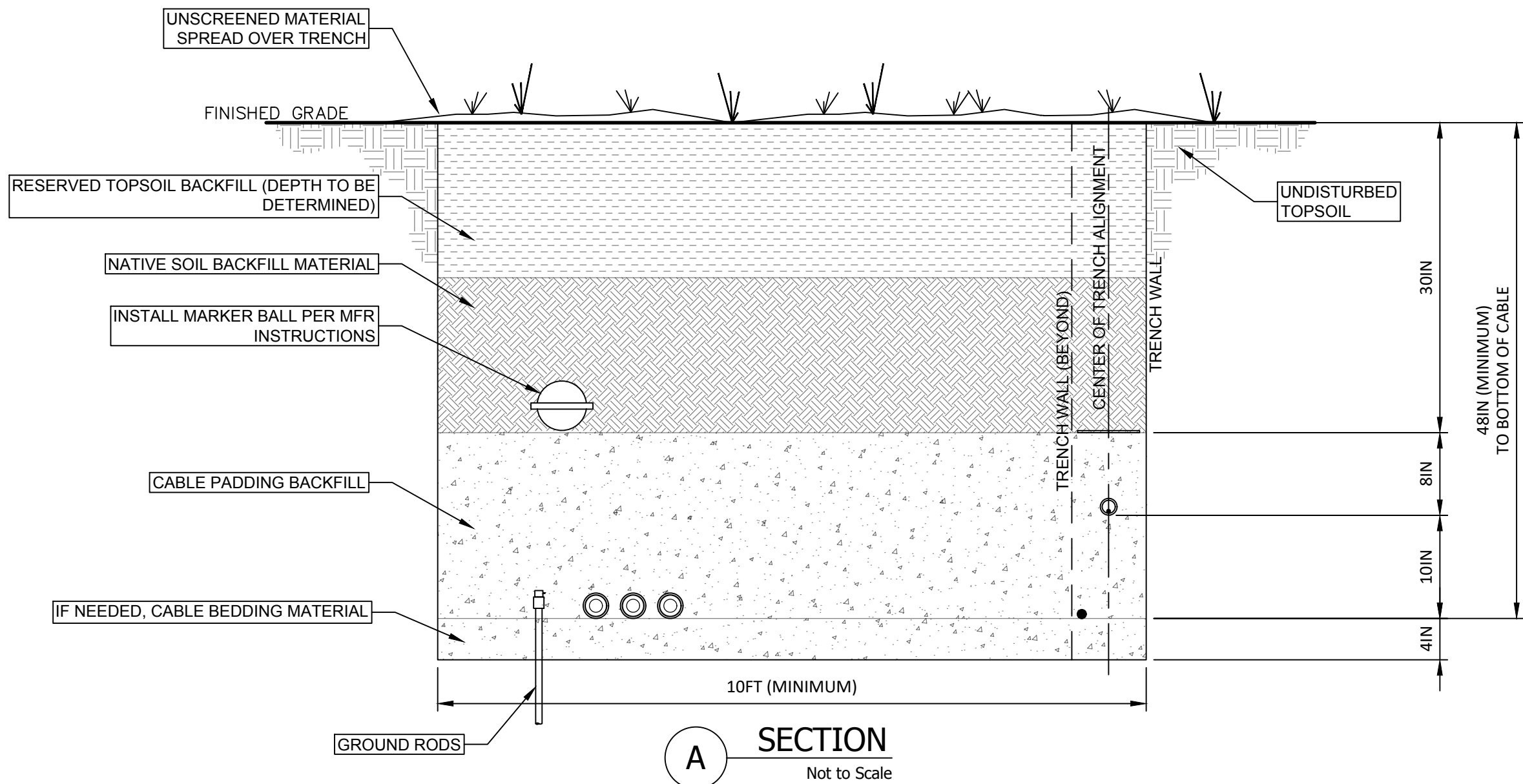
**SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
CABLE TRENCHING AND BURIAL DETAILS**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	EHK	Eng check	JAB
	Drawn	EHK	Approved	JAB
	Scale at ANSI D Not to Scale		Date 07/02/2021	Rev C
	Drawing Number SRS-E-640-01			

CONCEPTUAL - NOT FOR CONSTRUCTION



1 PLAN VIEW
Not to Scale



Notes

- EXISTING UNDERGROUND UTILITIES MAY BE PRESENT NEAR THE SPLICING LOCATION. CONTACT THE LOCAL "ONE CALL" UTILITY LOCATING SERVICE PRIOR TO EXCAVATION AND MAINTAIN ANY LOCATION MARKS UNTIL INSTALLATION IS APPROVED AND COMPLETED.
- INSTALL ALL SPLICES PER THE MANUFACTURER'S INSTRUCTIONS, AND THIS DRAWING.
- SPLICES ARE TO BE MINIMIZED BY CAREFUL REEL MANAGEMENT. OTHERWISE, SPLICES MAY BE INSTALLED AT CROSSING BORES OR AT THE END OF A FULL REEL OF CABLE. DO NOT INSTALL SPLICES IN DESIGNATED WETLAND AREAS, AREAS PRONE TO CATCHING SURFACE WATER, OR TRENCHES WITH WET BOTTOMS.
- DO NOT SPlice TOGETHER CABLES OF DIFFERENT SIZE.
- DO NOT BEND CABLE WITHIN 12-INCHES OF THE END OF A SPlice.
- AFTER THE CABLE IS CUT, APPLY END CAPS TO ANY EXPOSED ENDS OF CABLE TO PREVENT DIRT AND MOISTURE ENTERING THE CABLE.
- BOND THE SHIELD WIRES TO THE TRENCH GROUND WIRE AT ALL SPlice LOCATIONS.
- RECORD THE GPS COORDINATES AND MARKER BALL RFID FOR EACH SPlice KIT INSTALLED ON THE AS-BUILT COLLECTION SYSTEM DRAWINGS.

Legend

Rev	Date	Drawn	Description	Ch'k'd	App'd
C	07/02/2021	EHK	ISSUED FOR 94-C	JAB	JAB
B	05/18/2021	EHK	ISSUED FOR REVIEW		JB
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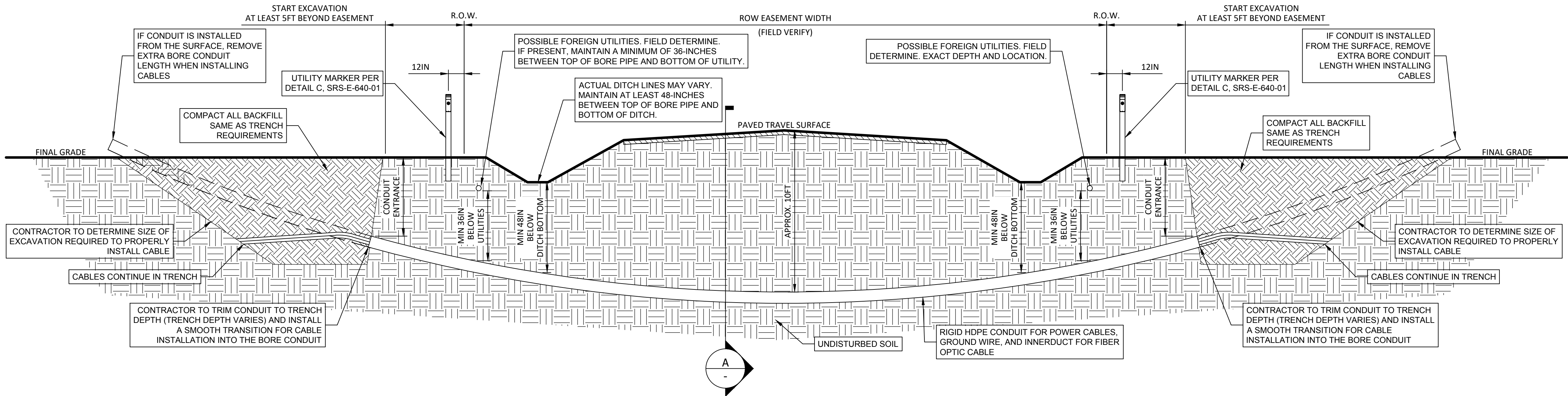


Title
SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
UNDERGROUND CABLE SPLICING DETAILS

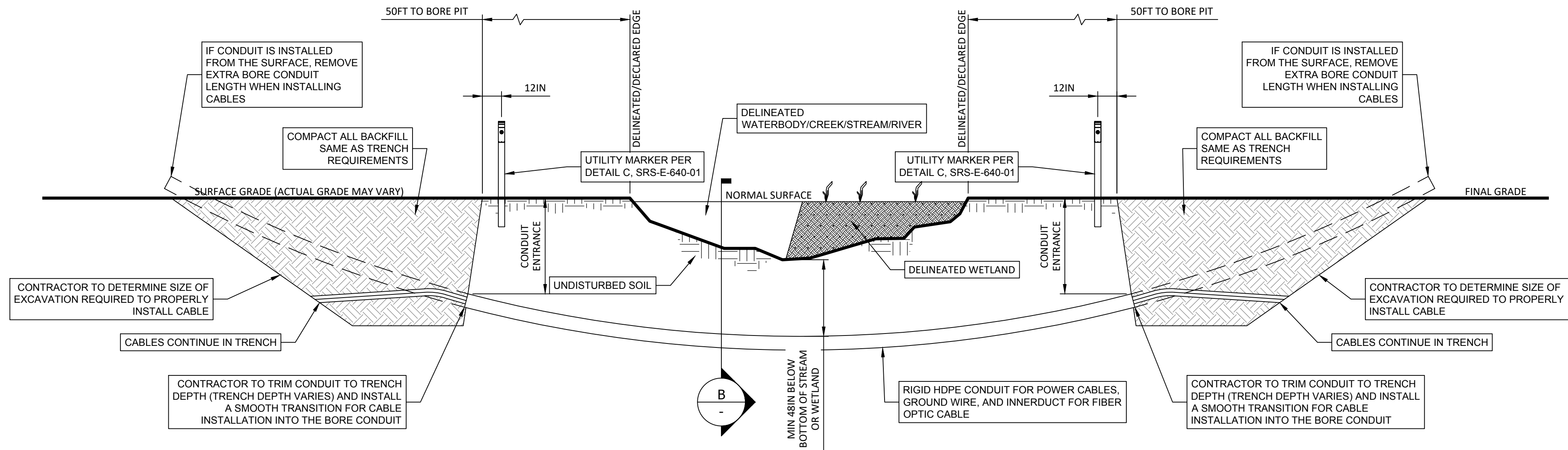
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Designed	EHK	Eng check	JAB
Drawn	EHK	Approved	JAB
Scale at ANSI D	Date	Rev	
Not to Scale	07/02/2021	C	
Drawing Number	SRS-E-640-02		

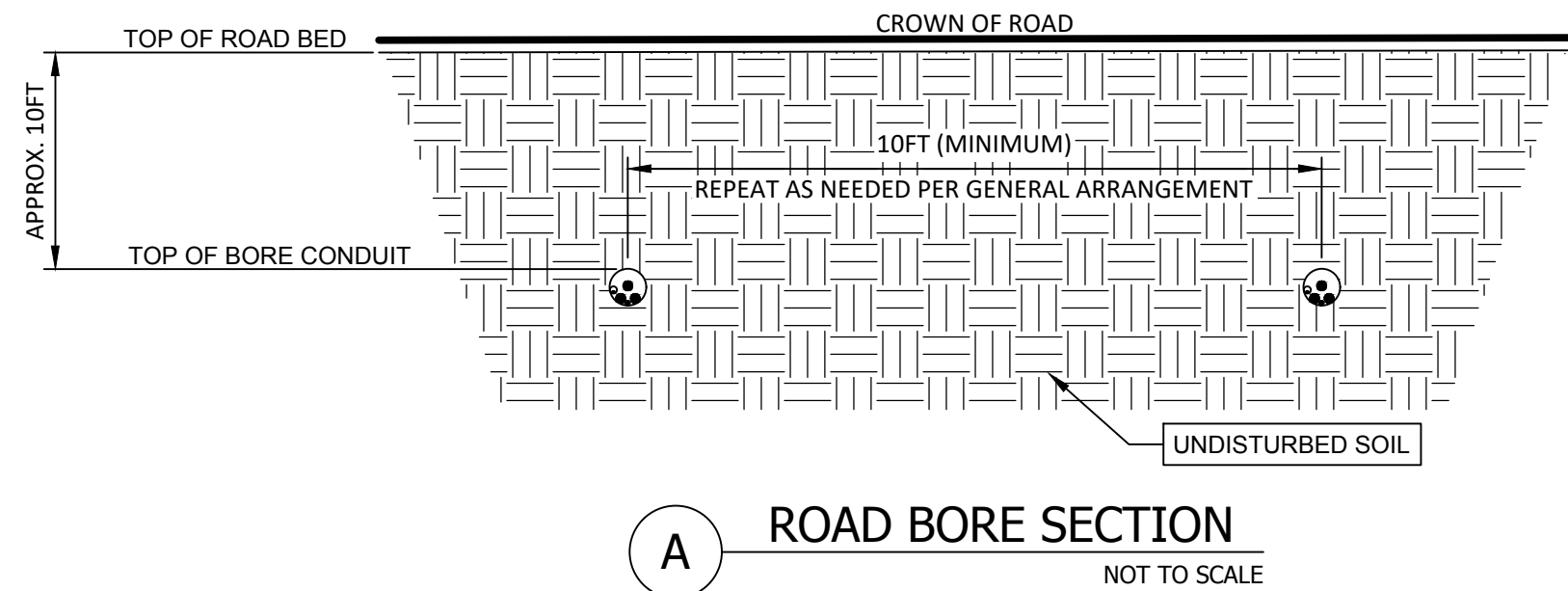
CONCEPTUAL - NOT FOR CONSTRUCTION



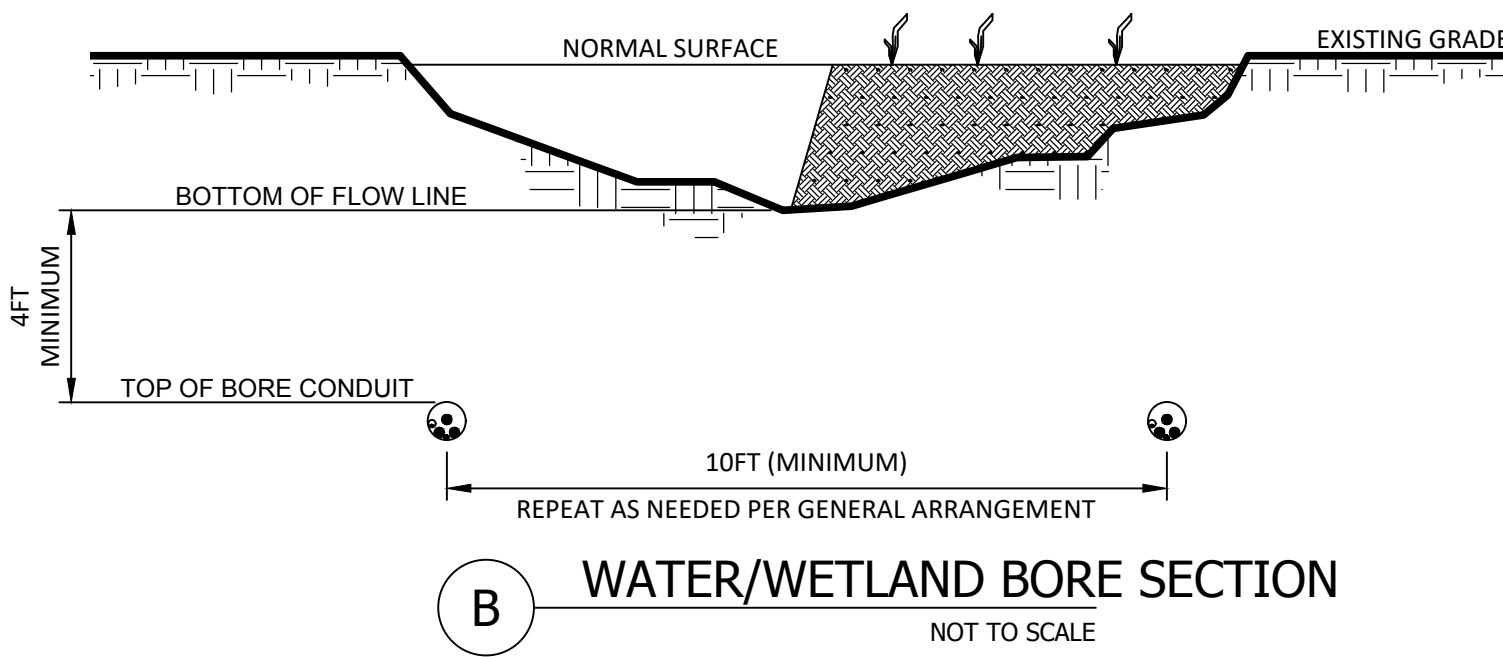
1 TYPICAL BORE SECTION UNDER LOCAL PAVED ROADS
NOT TO SCALE



2 TYPICAL BORE SECTION UNDER DELINEATED WATER OR WETLAND
NOT TO SCALE



A ROAD BORE SECTION
NOT TO SCALE



B WATER/WETLAND BORE SECTION
NOT TO SCALE

CONCEPTUAL - NOT FOR CONSTRUCTION

- Notes
1. UNDERGROUND OR EXISTING UTILITIES MAY BE PRESENT WITHIN OR ADJACENT TO THE EXCAVATION AREA(S). CONTACT LOCAL "ONE CALL" UTILITY LOCATING SERVICE AT LEAST 48 HOURS PRIOR TO EXCAVATION. MAINTAIN LOCATION MARKS AS NEEDED UNTIL INSTALLATION IS COMPLETED.
 2. REFERENCES TO ANY UNDERGROUND OR EMBEDDED FACILITIES ARE PROVIDED TO ASSIST THE CONTRACTOR /INSTALLER IN THE FIELD LOCATING THOSE FACILITIES AND OTHER POSSIBLE UNDERGROUND OR EMBEDDED INTERFERENCES WITH THE WORK.
 3. CONTRACTOR SHALL COMPLY WITH ANY SPECIFIC AGREEMENTS AND PERMITS OBTAINED FOR EACH INSTALLATION. IN THE CASE THAT THIS DOCUMENT CONFLICTS WITH THESE SPECIFIC AGREEMENTS AND/OR PERMITS, THE CONTRACTOR SHALL COMPLY WITH THE AGREEMENTS/PERMITS AND NOTIFY THE ENGINEER OF RECORD OF THE CONFLICT.
 4. ALL COUNTY ROAD CROSSINGS MUST MAINTAIN AT LEAST 36 INCHES UNDER ANY EXISTING UTILITIES, OR 48 INCHES UNDER THE CENTERLINE OF THE ROAD, OR 48 INCHES BELOW THE DITCH LINES, WHICHEVER IS DEEPER. VERIFY DEPTH REQUIRED WITH ENGINEER BEFORE CROSSING IS COMMENCED.
 5. INSTALL ALL CABLES CROSSING UNDER COUNTY ROADS IN CONDUIT. INSTALL CABLES CROSSING UNDER TURBINE ACCESS ROADS IN TRENCH.
 6. WHEN CROSSING LOCAL AND/OR COUNTY ROADS, ALL EXCAVATION WORK SHALL HAPPEN AT LEAST 5 FEET OUTSIDE THE ROAD EASEMENT, UNLESS APPROVED OTHERWISE BY THE AUTHORITY HAVING JURISDICTION. ANY DISTURBED PORTIONS OF THE ROADWAY OR ITS RIGHT-OF-WAY SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR.
 7. ALL EXCAVATIONS FOR DRILLING, JACKING, RAMMING, BORING, RECEIVING, OR CABLE INSTALLATION SHALL BE BACKFILLED AND COMPACTED TO MATCH TRENCH BACKFILL AND COMPACTION REQUIREMENTS.
 8. WHEN CROSSING DELINEATED SURFACE WATER, WETLAND, OR STREAM FEATURES, ALL EXCAVATION WORK SHALL HAPPEN NO CLOSER THAN 50FT BEYOND THE DESIGNATED EDGE OF SAID FEATURE. IF THIS SEPARATION IS NOT FEASIBLE, CONTRACTOR SHALL KEEP EXCAVATION AREA AS FAR AS POSSIBLE AND AS SMALL AS POSSIBLE TO SAFELY INSTALL CONDUIT AND/OR CABLE.
 9. IF NEEDED TO MAINTAIN CABLE INSTALLATION REQUIREMENTS, INSTALL A SPLICE MAY BE INSTALLED AT OR NEAR THE CONDUIT ENTRANCE. DO NOT ALLOW THE SPLICE TO ENTER THE CONDUIT. INSTALL THE SPLICE ACCORDING TO THE DETAILS AND INSTRUCTIONS ON SRS-E-640-02.

Legend

Rev	Date	Drawn	Description	Ch'k'd	App'd
C	07/02/2021	EHK	ISSUED FOR 94-C	JAB	JAB
B	05/18/2021	EHK	ISSUED FOR REVIEW		JB
A	01/29/2021	EHK	ISSUED FOR REVIEW	BG	JB



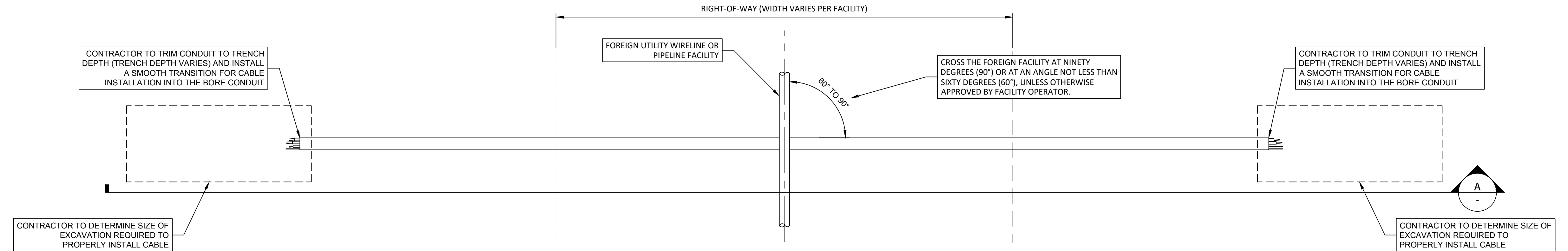
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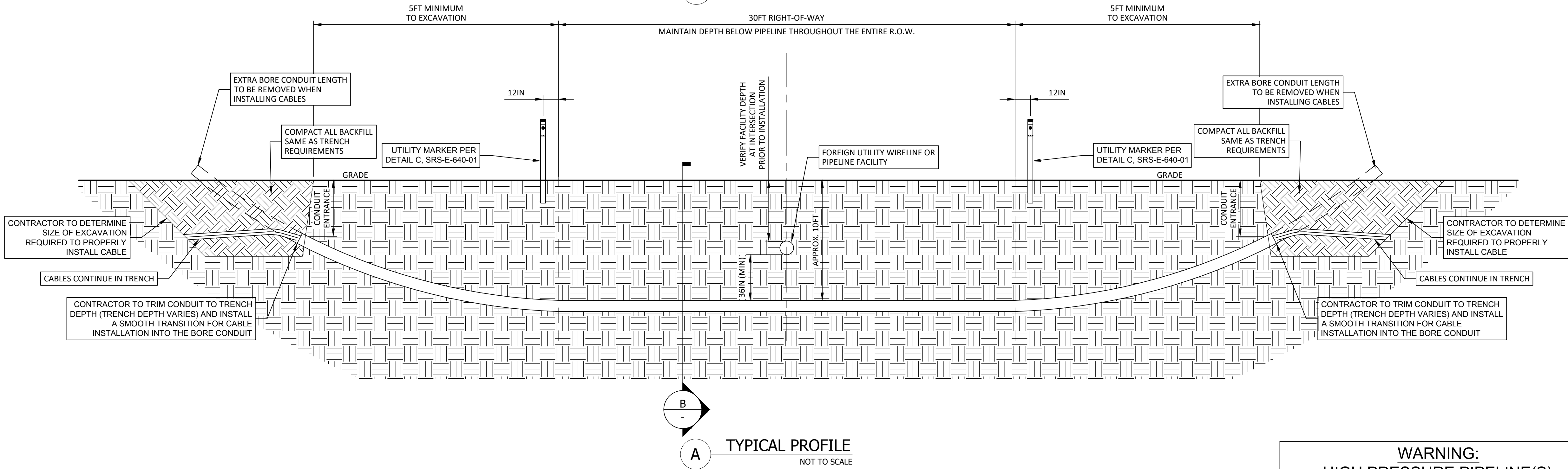


Title
SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
TYPICAL ROADWAY AND WETLAND
UNDERGROUND CROSSING DETAILS

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	EHK	Eng check	JAB
	Drawn	EHK	Approved	JAB
	Scale at ANSI D Not to Scale	Date 07/02/2021	Rev C	
	Drawing Number	SRS-E-640-03		

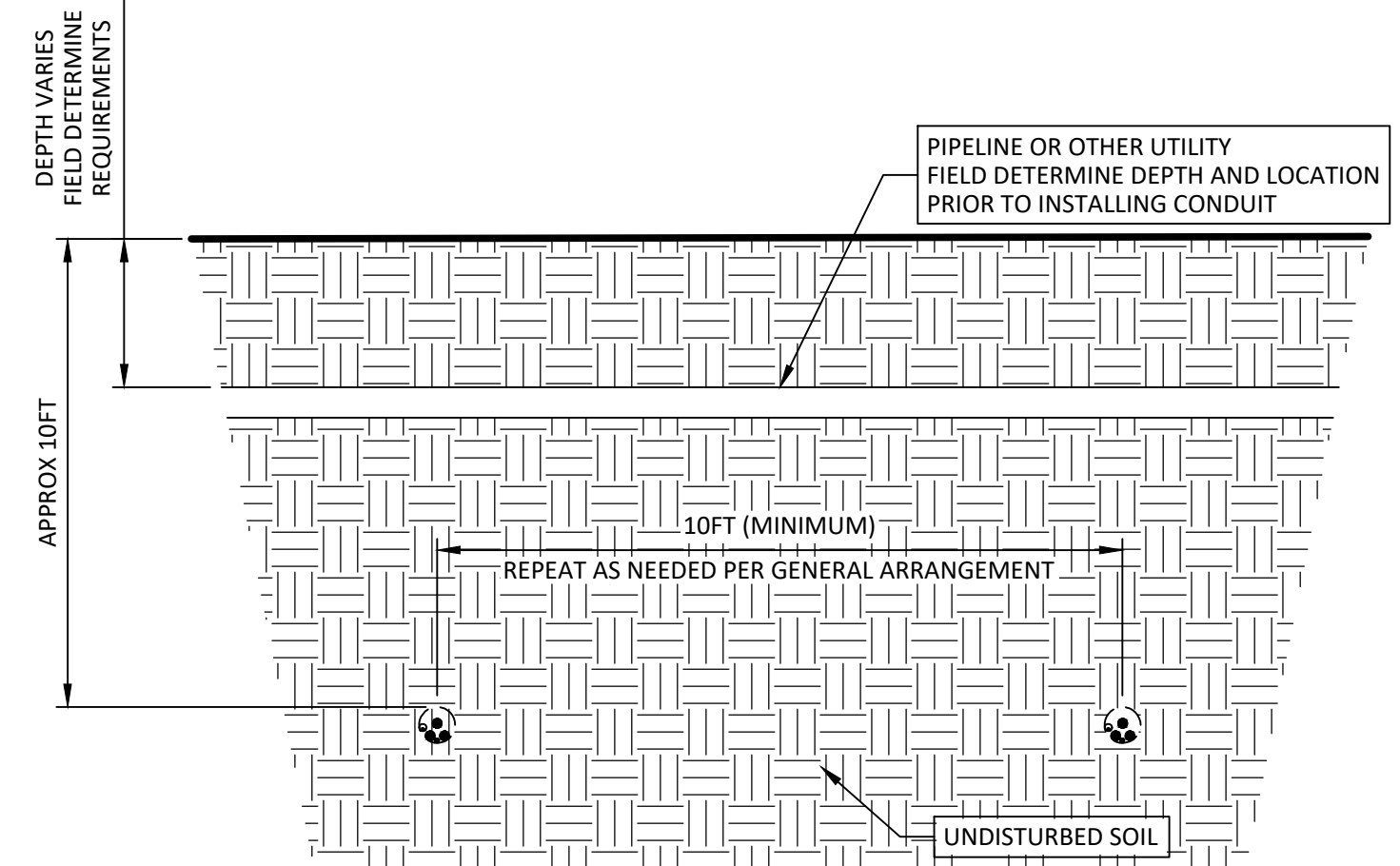


1 TYPICAL PLAN VIEW
NOT TO SCALE



B TYPICAL PROFILE
NOT TO SCALE

WARNING:
HIGH PRESSURE PIPELINE(S)
NO EXCAVATION OR CONSTRUCTION IN THIS AREA
WITHOUT CONTACTING THE STATE ONE CALL CENTER



B DETAIL
NOT TO SCALE

- Notes
1. FOREIGN EXISTING UNDERGROUND FACILITIES MAY BE PRESENT WITHIN OR ADJACENT TO THE EXCAVATION AREA(S) AND POINT OF INTERSECTION. CONTACT LOCAL "ONE CALL" UTILITY LOCATING SERVICE AT LEAST 48 HOURS PRIOR TO EXCAVATION. MAINTAIN LOCATION MARKS AS NEEDED UNTIL INSTALLATION IS COMPLETED.
 2. ENSURE THAT ALL TEMPORARY AND PERMANENT FACILITY MARKERS INSTALLED BY FACILITY OPERATOR ARE PROTECTED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION OR CROSSING RELATED ACTIVITY. NO WORK IS ALLOWED TO COMMENCE UNTIL, IN THE OPINION OF FACILITY OPERATOR, SUFFICIENT MARKERS ARE IN PLACE.
 3. FOR THE SAFETY OF THE PUBLIC AND TO LESSEN THE RISK OF A BREAK, LEAK, RUPTURE, OR OTHER DAMAGE TO FACILITY AND IN FURTHERANCE OF THE STATE CODE, FACILITY SHALL BE POSITIVELY LOCATED BY FACILITY OPERATOR BEFORE ANY CROSSINGS ARE CONSTRUCTED OR INSTALLED NEAR FACILITY.
 4. THE IMPOUNDMENT OF WATER WITHIN THE FACILITY EASEMENT IS NOT ALLOWED.
 5. ALL EXCAVATION WITHIN EIGHTEEN INCHES (18") OF ANY FACILITY WILL BE PERFORMED BY HAND. AT THE DISCRETION OF FACILITY OPERATOR'S REPRESENTATIVE, EXCAVATORS MAY BE USED TO DIG BEGINNING AT A DISTANCE GREATER THAN EIGHTEEN INCHES.
 6. TEMPORARY SOIL EROSION AND SEDIMENT CONTROL DEVICES AND STORM WATER DETENTION BASINS/TRAPS WILL NOT BE PERMITTED WITHIN THE FACILITY EASEMENT UNLESS OTHERWISE AGREED TO IN WRITING BY FACILITY OPERATOR.
 7. ALL EXCAVATION WORK SHALL HAPPEN AT LEAST OUTSIDE THE FACILITY EASEMENT. DO NOT EXCAVATE INSIDE THE RIGHT OF WAY WITHOUT PRIOR APPROVAL FROM THE UTILITY AUTHORITY. ANY DISTURBED PORTIONS OF THE RIGHT-OF-WAY SHALL BE RESTORED TO ORIGINAL CONDITION, OR BETTER.
 8. FOR HORIZONTAL DIRECTIONALLY DRILLED BORE CROSSINGS, MAINTAIN AT LEAST 36IN OF CLEARANCE BELOW FACILITY FOR THE ENTIRE WIDTH OF THE RIGHT-OF-WAY.
 9. EXCAVATE FACILITIES AT THE POINT OF THE PROPOSED CROSSING ON THE APPROACH SIDE TO VERIFY THE AUGER HEAD, BORING AND INSTALLATION PROCESS WILL NOT DAMAGE THE PIPELINE FACILITIES.
 10. NO VERTICAL OR HORIZONTAL BENDS ALLOWED WITHIN FACILITY EASEMENT UNLESS APPROVED BY EASEMENT OWNER.
 11. IF NEEDED TO MAINTAIN CABLE INSTALLATION REQUIREMENTS, INSTALL A MAXIMUM OF ONE SPLICE PER BORING INSTALLATION. WHEN INSTALLING A SPLICE, PLACE THE SPLICE INSIDE THE PIT USED TO ESTABLISH CONDUIT ENTRANCE. DO NOT ALLOW THE SPLICE TO ENTER THE CONDUIT. INSTALL THE SPLICE ACCORDING TO THE DETAILS AND INSTRUCTIONS ON SRS-E-640-02 WITH SLACK ON BOTH SIDES OF THE SPLICE.

Legend

C	07/02/2021	EHK	ISSUED FOR 94-C	JAB	JAB
B	05/18/2021	EHK	ISSUED FOR REVIEW		JB
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Title
**SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
TYPICAL UNDERGROUND PIPELINE
CROSSING DETAIL**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	EHK	Eng check	JAB
	Drawn	EHK	Approved	JAB
	Scale at ANSI D Not to Scale		Date 07/02/2021	Rev C
	Drawing Number SRS-E-640-04			

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- C 4-WAY JUNCTION BOX - PLAN**
Not to Scale

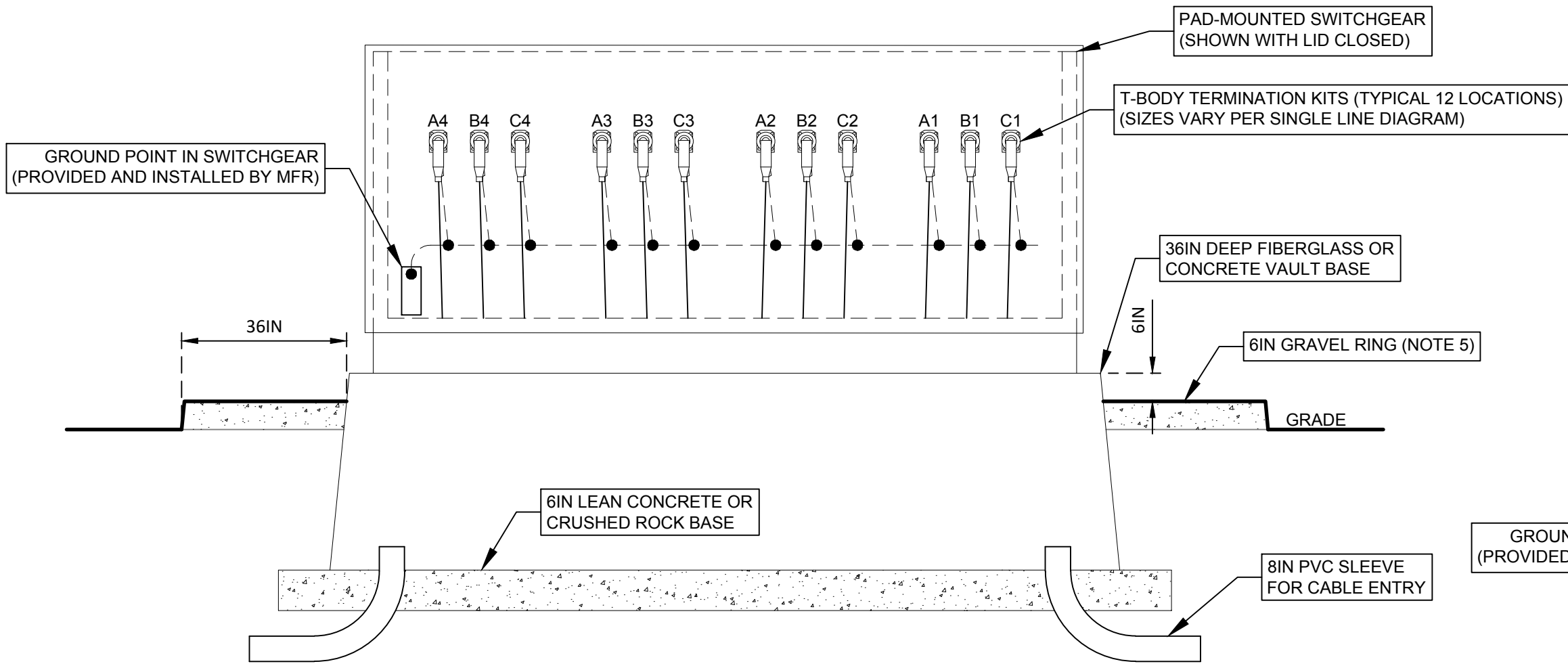


- ## 5 BOLLARD AND MARKER PLACEMENT

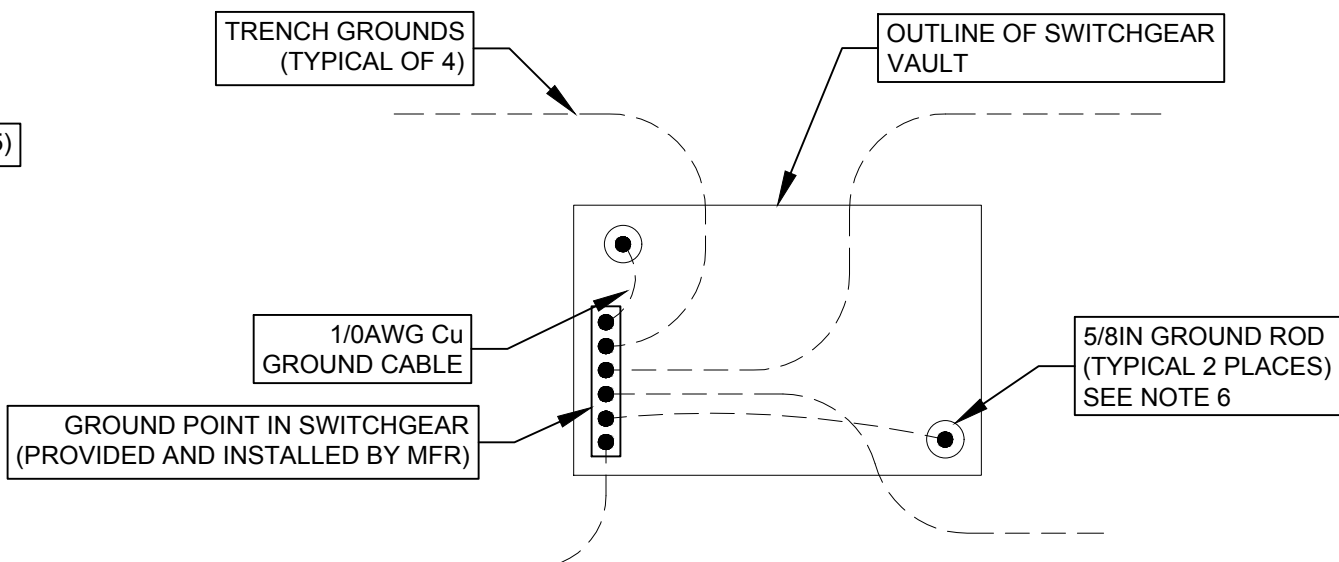
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Rev	Date	Drawn	Description	Ch'kd	App'd

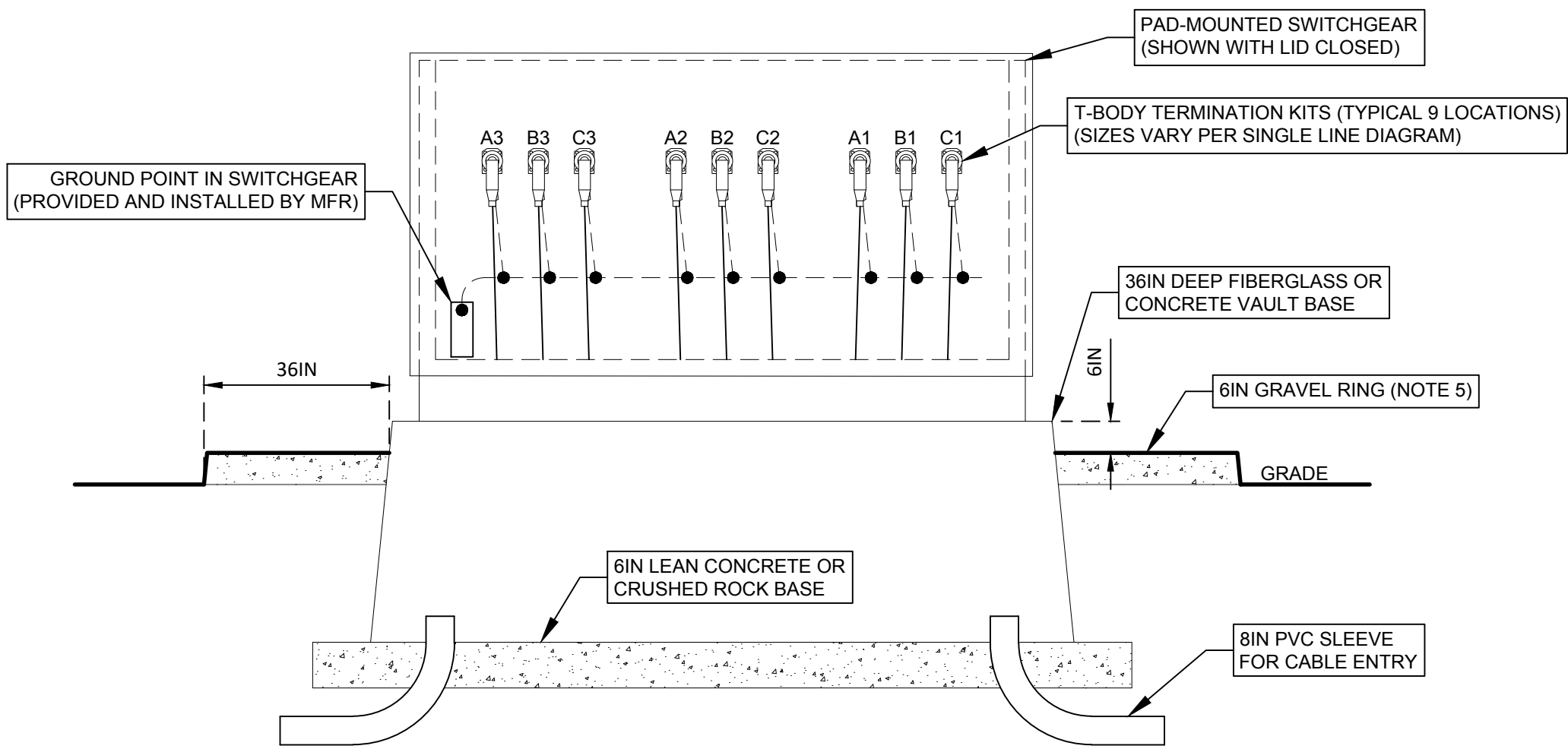
Designed	EHK	Eng check	JAB
Drawn	EHK	Approved	JAB
Scale at ANSI D Not to Scale	Date 07/02/2021	Rev C	
Drawing Number SRS-E-650-01			



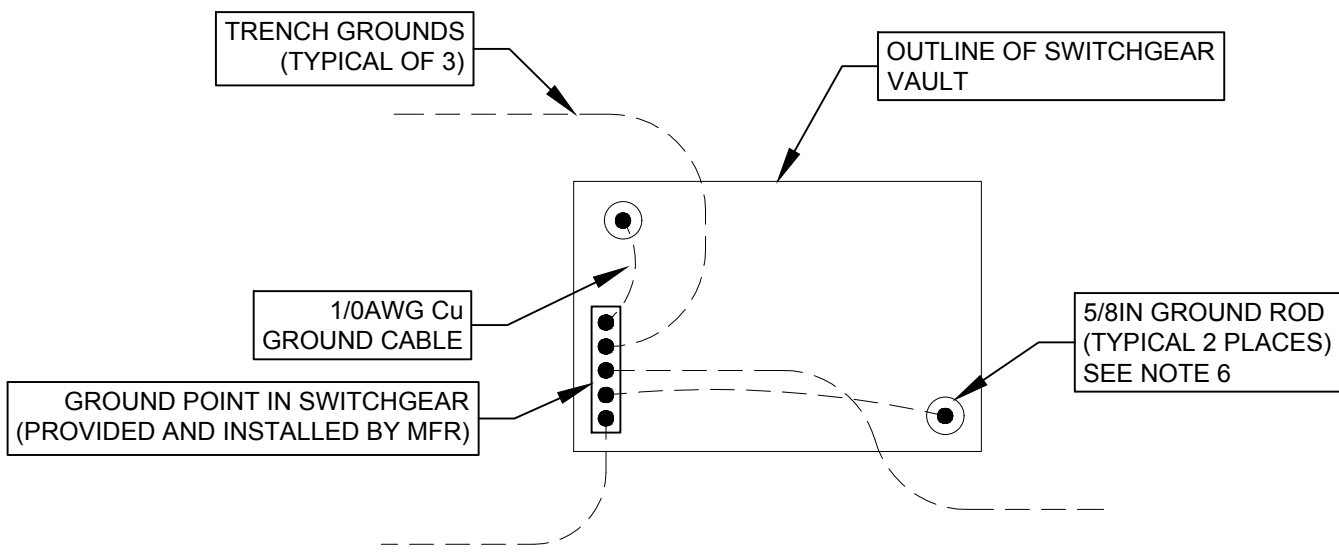
3 4-WAY SWITCHGEAR - ELEVATION
Not to Scale



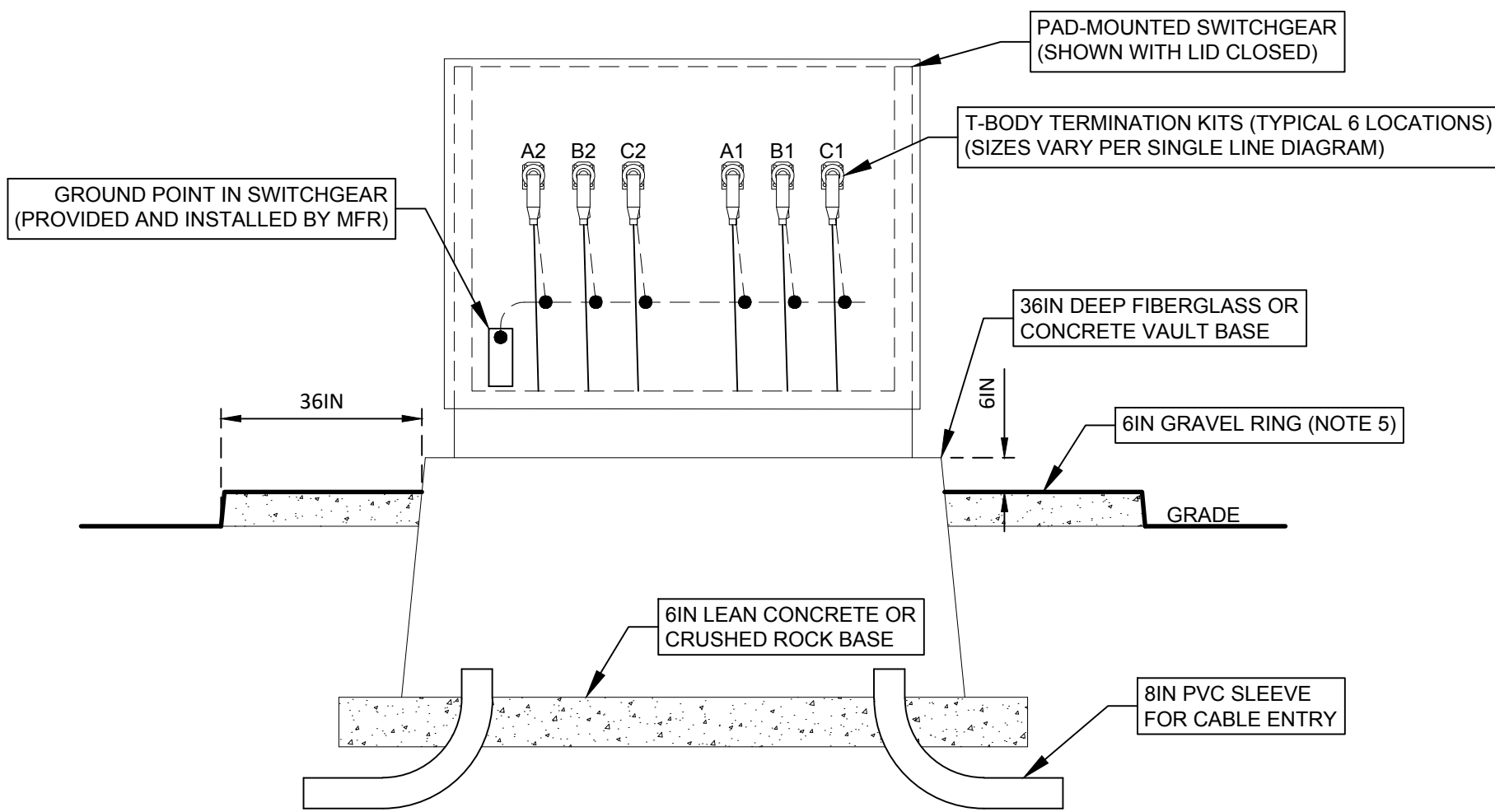
C 4-WAY SWITCHGEAR - PLAN
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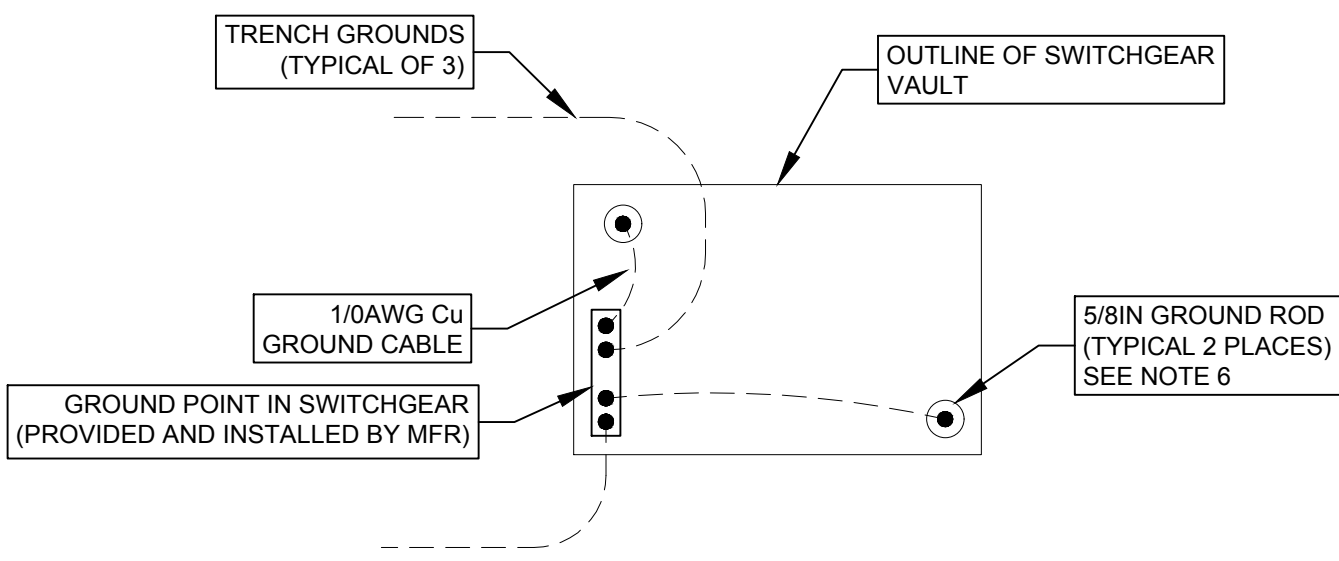
2 3-WAY SWITCHGEAR - ELEVATION
Not to Scale



B 3-WAY SWITCHGEAR - PLAN
Not to Scale



1 2-WAY SWITCHGEAR - ELEVATION
Not to Scale



A 2-WAY SWITCHGEAR - PLAN
Not to Scale

- Notes
1. BACKFILL SHALL BE COMPACTED TO AT LEAST 85% UNLESS OTHERWISE NOTED IN GEOTECHNICAL REQUIREMENTS.
 2. INSTALL BOLLARDS AT EACH OPEN CORNER. (SEE BOLLARD DETAIL, SHEET SRS-E-650-01).
 3. FIBER CABLES SHALL NOT ENTER THE SWITCHGEAR OR ITS BASEMENT.
 4. SEE ONE LINE FOR FAULT INDICATOR LOCATIONS. REMOTE VIEWING SHALL BE INSTALLED IN COVER FACING ROADWAY.
 5. ALL SWITCHGEAR SHALL HAVE A SIX INCH THICK AND THREE FOOT WIDE RING OF CRUSHED LIMESTONE AROUND THE PERIMETER TO PROTECT PERSONNEL FROM STEP & TOUCH VOLTAGES.
 6. INSTALL (2) GROUND RODS AT ALL SWITCHGEAR. TOP OF RODS SHALL BE BELOW ROCK BASE IN ORDER TO PROTECT CABLE SLACK STORED INSIDE BASE EXTENDERS.
 7. IF POSSIBLE WHILE MAINTAINING MINIMUM RADIUS AND WITHOUT DAMAGING CABLE, STORE CABLE SLACK IN BASE OF SWITCHGEAR.

Legend

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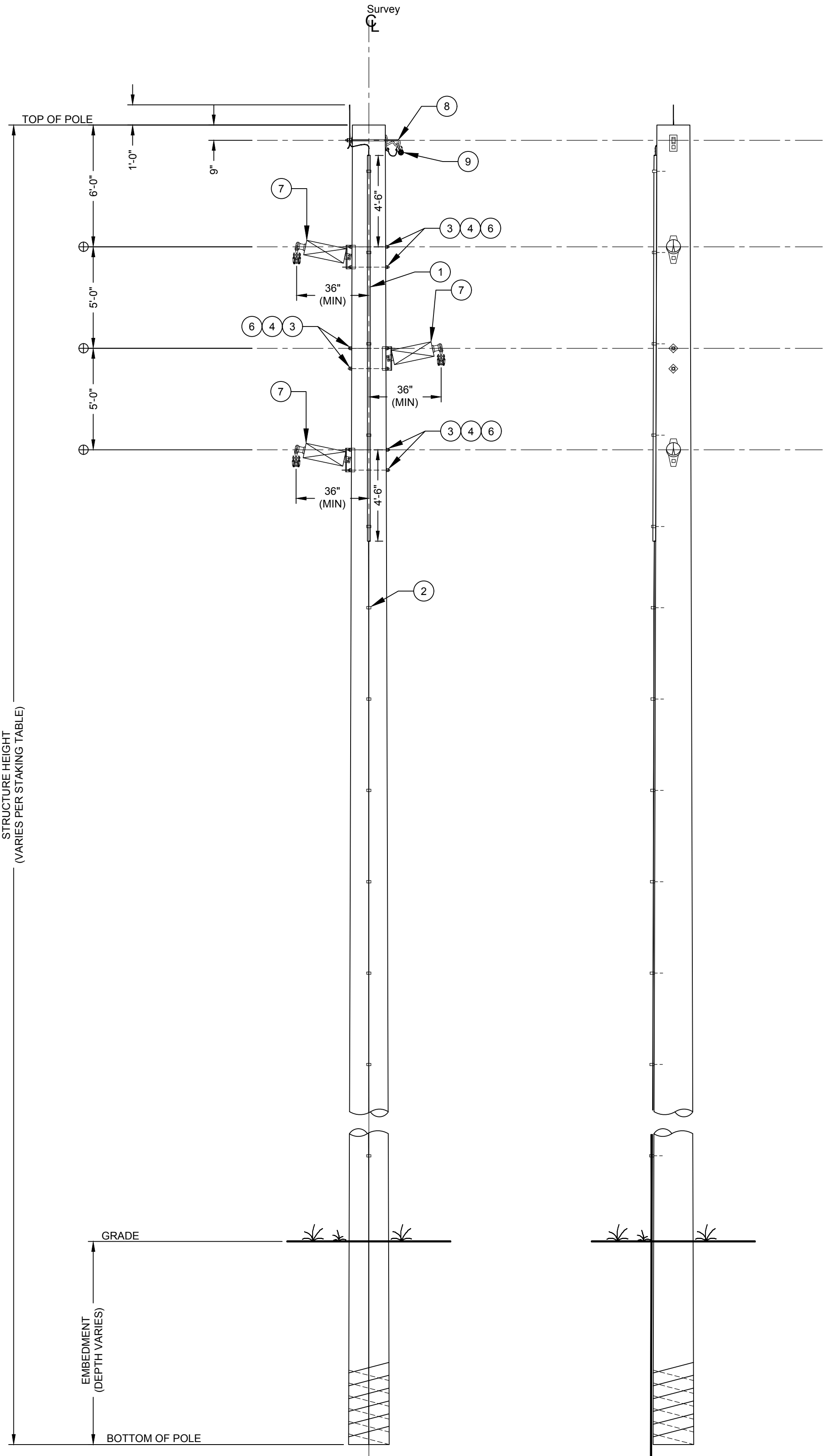
Title

SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
PAD-MOUNTED SWITCHGEAR DETAILS

PRELIMINARY
NOT FOR
CONSTRUCTION
REPLACE WITH
ENGINEERS STAMP
AT CONSTRUCTION
AND/OR FABRICATION

Designed	EHK	Eng check	JAB
Drawn	EHK	Approved	JAB
Scale at ANSI D	Date	Rev	
Not to Scale	07/02/2021	C	
Drawing Number	SRS-E-650-02		

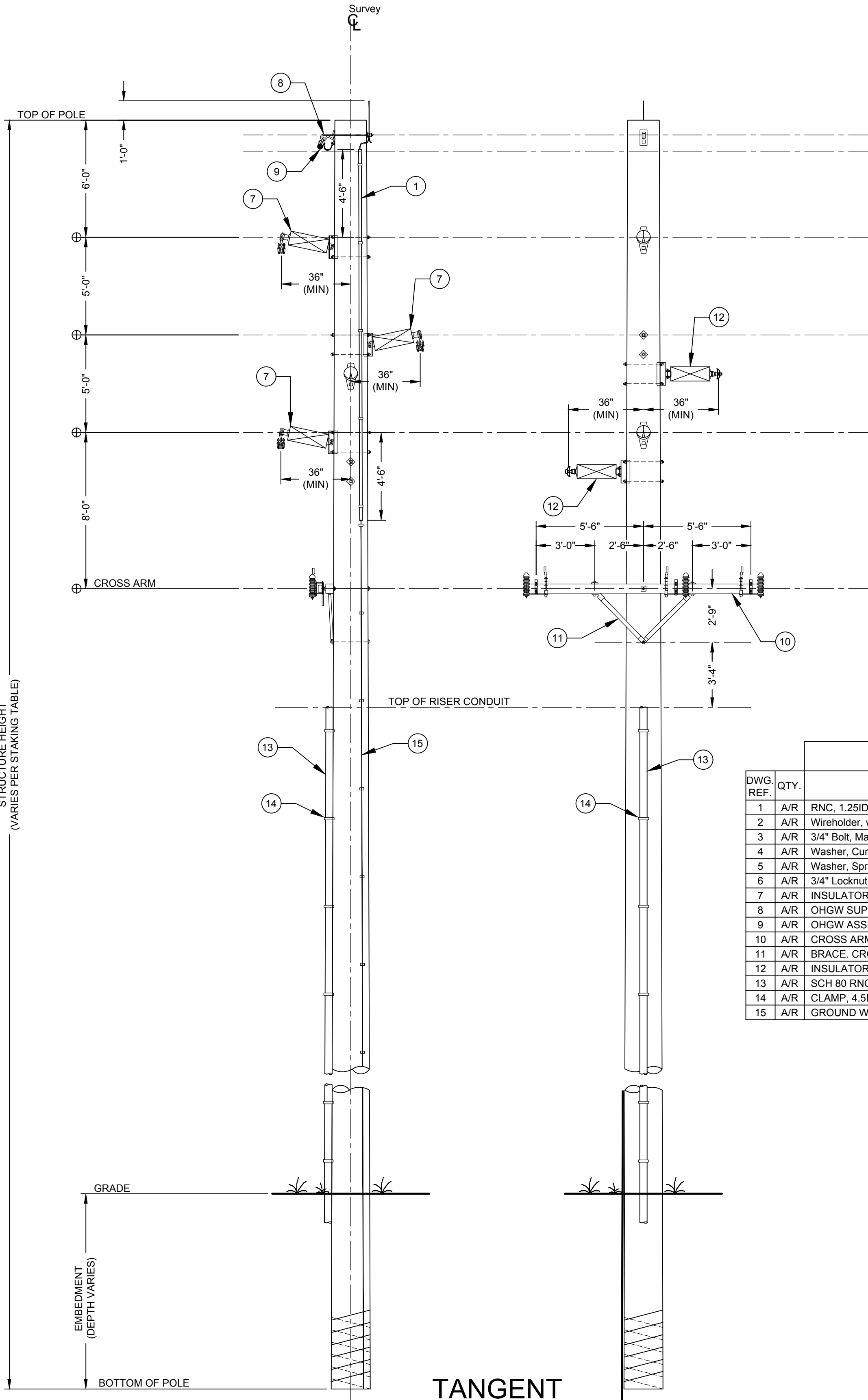
CONCEPTUAL - NOT FOR CONSTRUCTION



FRONT VIEW

PROFILE VIEW

TANGENT



FRONT VIEW

PROFILE VIEW

TANGENT
W/RISER

LIST OF MATERIALS					
DWG. REF.	QTY.	DESCRIPTION	ITEM	DET.	CODE No.
1	A/R	RNC, 1.25ID, SCH40	-	-	
2	A/R	Wireholder, w/ #22 wood screw	-	-	
3	A/R	3/4" Bolt, Machine by req'd length	-	-	
4	A/R	Washer, Curved, 4"sq x 1/4", 13/16hole	-	-	
5	A/R	Washer, Spring, 13/16" hole	-	-	
6	A/R	3/4" Locknut, MF Type	-	-	
7	A/R	INSULATOR, HORIZONTAL POST, W/CLAMP	-	-	
8	A/R	OHGW SUPPORT ASSEMBLY	-	-	
9	A/R	OHGW ASSEMBLY, TANGENT	-	-	
10	A/R	CROSS ARM, 4-5/8"x5-5/8"x12'-0", #28	-	-	
11	A/R	BRACE, CROSS-ARM, 60"/30"	-	-	
12	A/R	INSULATOR, HORIZONTAL POST, W/CLAMP	-	-	
13	A/R	SCH 80 RNC 4IN RISER CONDUIT	-	-	
14	A/R	CLAMP, 4.5IN DIA, W/4IN LAG SCREWS	-	-	
15	A/R	GROUND WIRE	-	-	

- Notes
1. FINAL EMBEDMENTS AND POLE DIMENSIONS WILL BE DETERMINED DURING DETAILED DESIGN.
 2. REFER TO WOOD POLE GROUNDING DETAIL.

Legend

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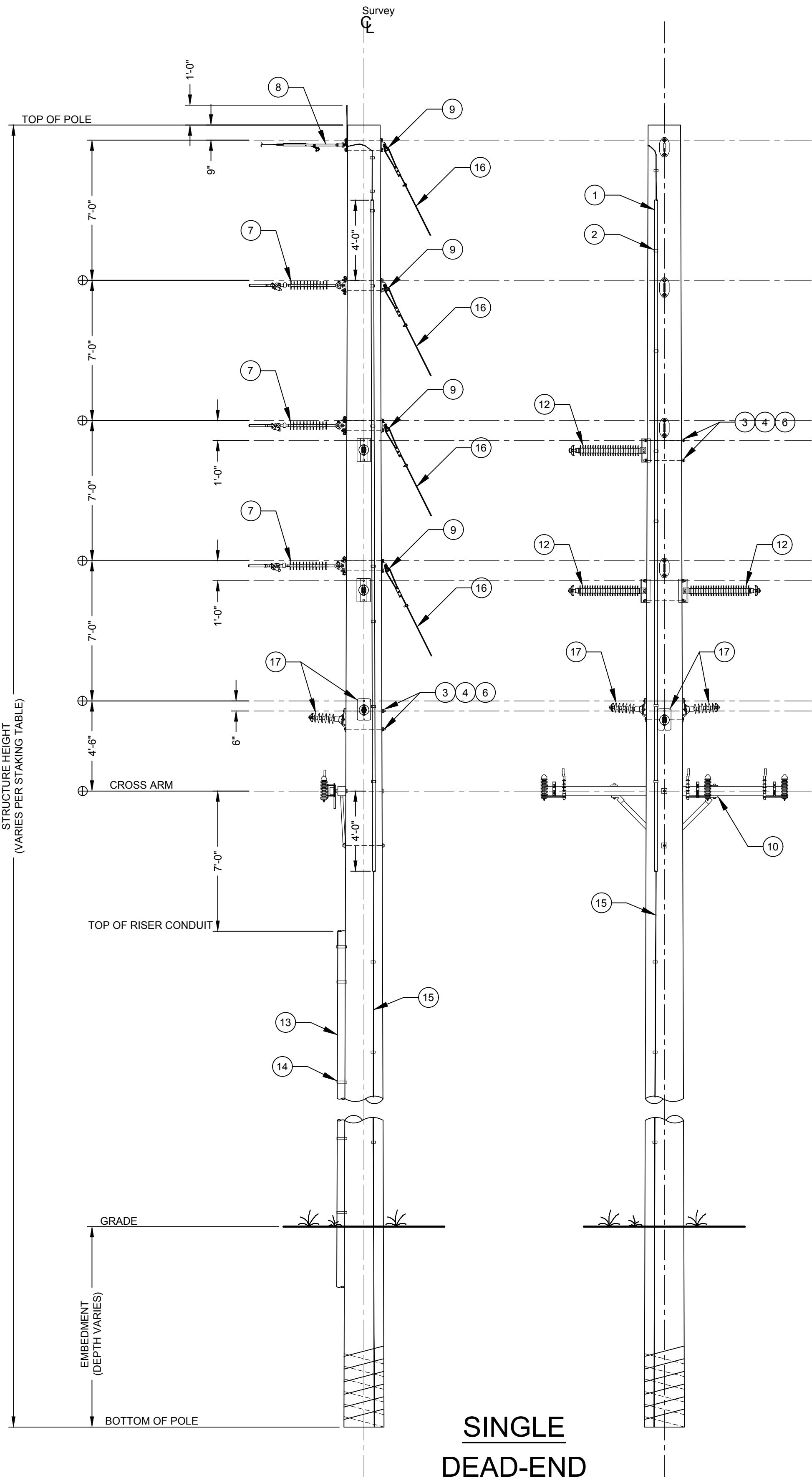


Title
SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
TYPICAL SINGLE CIRCUIT FRAMING DETAILS
TANGENT POLES

PRELIMINARY
NOT FOR
CONSTRUCTION
REPLACE WITH
ENGINEERS STAMP
AT CONSTRUCTION
AND/OR FABRICATION

Designed	EHK	Eng check	JAB
Drawn	EHK	Approved	JAB
Scale at ANSI D Not to Scale		Date 07/02/2021	Rev C
Drawing Number		SRS-E-660-01	

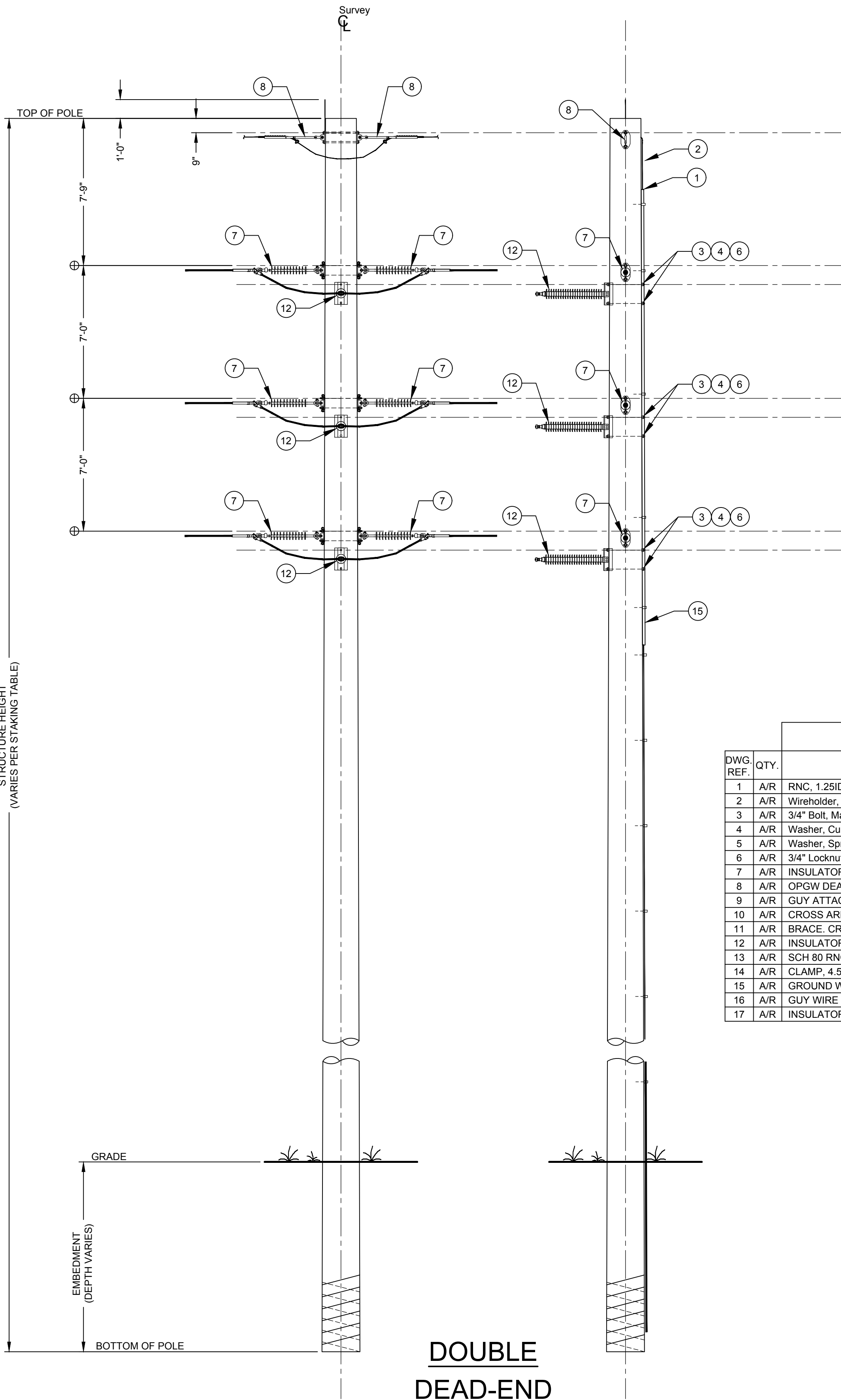
CONCEPTUAL - NOT FOR CONSTRUCTION



**SINGLE
DEAD-END**

PROFILE VIEW

FRONT VIEW



**DOUBLE
DEAD-END**

FRONT VIEW

PROFILE VIEW

LIST OF MATERIALS					
DWG. REF.	QTY.	DESCRIPTION	ITEM	DET.	CODE No.
1	A/R	RNC, 1.25ID, SCH40	-	-	
2	A/R	Wireholder, w/ #22 wood screw	-	-	
3	A/R	3/4" Bolt, Machine by req'd length	-	-	
4	A/R	Washer, Curved, 4"sq x 1/4", 13/16hole	-	-	
5	A/R	Washer, Spring, 13/16" hole	-	-	
6	A/R	3/4" Locknut, MF Type	-	-	
7	A/R	INSULATOR, SUSPENSION, 30KIP	-	-	
8	A/R	OPGW DEADEND ASSEMBLY	-	-	
9	A/R	GUY ATTACHMENT ASSEMBLY	-	-	
10	A/R	CROSS ARM, 4-5/8"x5-5/8"x12'-0", #28	-	-	
11	A/R	BRACE, CROSS-ARM, 60"/30"	-	-	
12	A/R	INSULATOR, HORIZONTAL POST, W/CLAMP	-	-	
13	A/R	SCH 80 RNC 4IN RISER CONDUIT	-	-	
14	A/R	CLAMP, 4.5IN DIA, W/4IN LAG SCREWS	-	-	
15	A/R	GROUND WIRE	-	-	
16	A/R	GUY WIRE	-	-	
17	A/R	INSULATOR, HORIZONTAL POST, MINI	-	-	

- Notes
1. FINAL EMBEDMENTS AND POLE DIMENSIONS WILL BE DETERMINED DURING DETAILED DESIGN.
 2. REFER TO WOOD POLE GROUNDING DETAIL.

Legend

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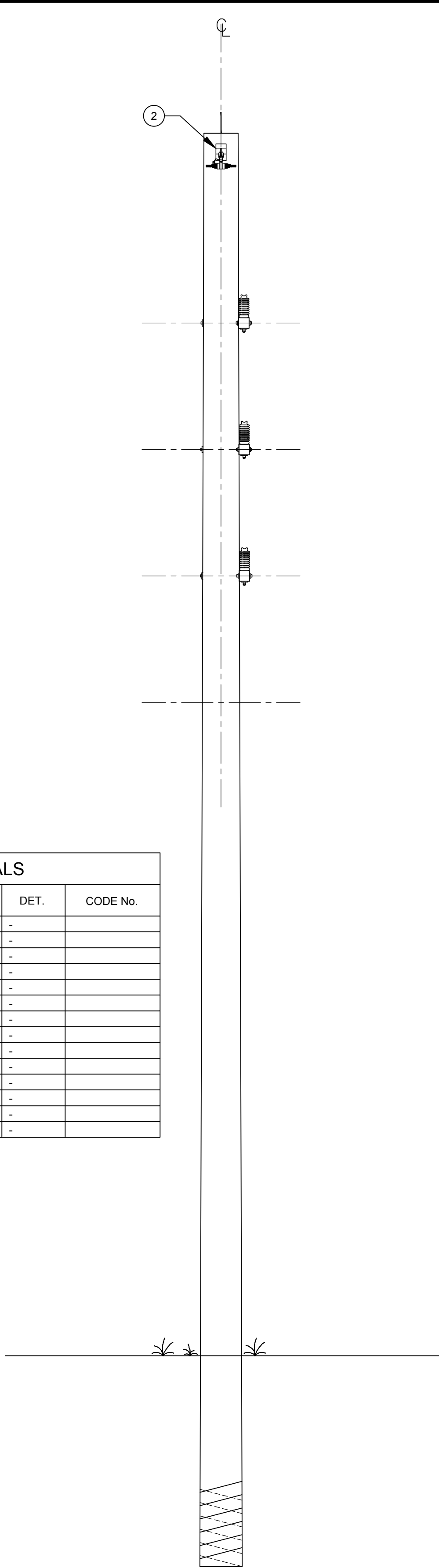


Title
**SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
TYPICAL SINGLE CIRCUIT FRAMING DETAILS
DEAD-END POLES**

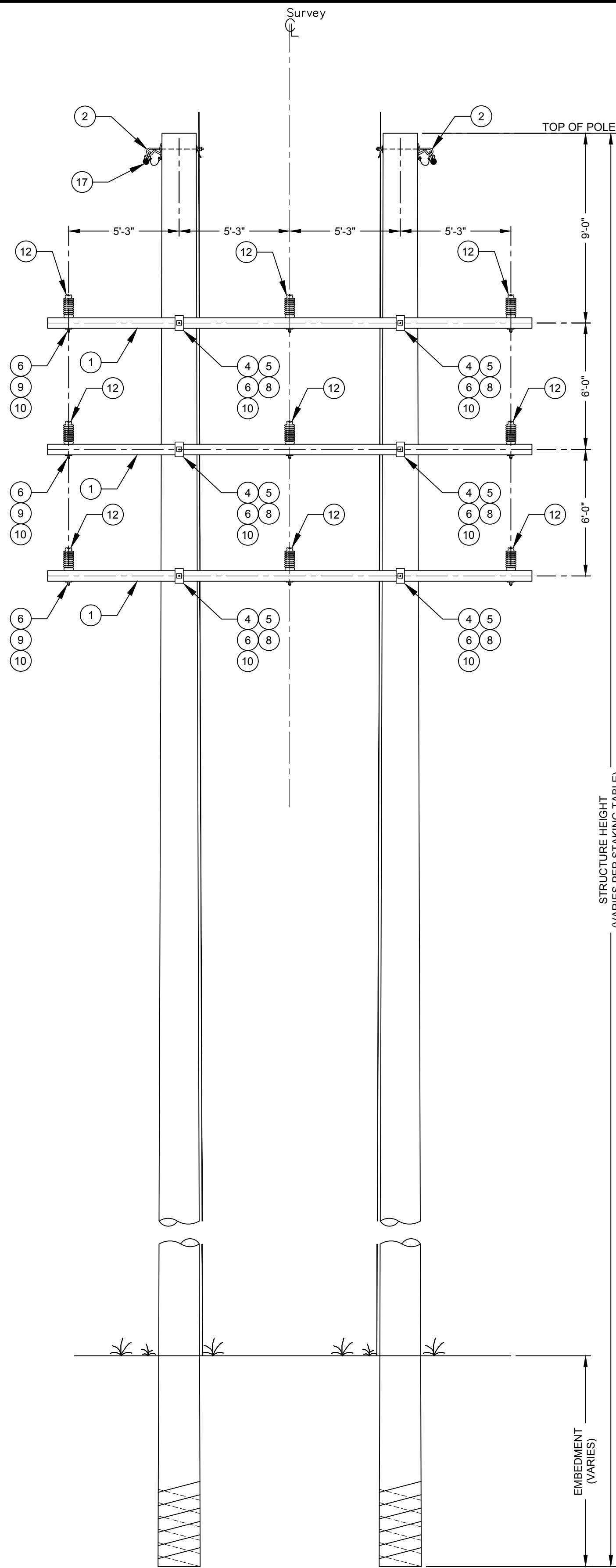
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Drawing Number		SRS-E-660-02	

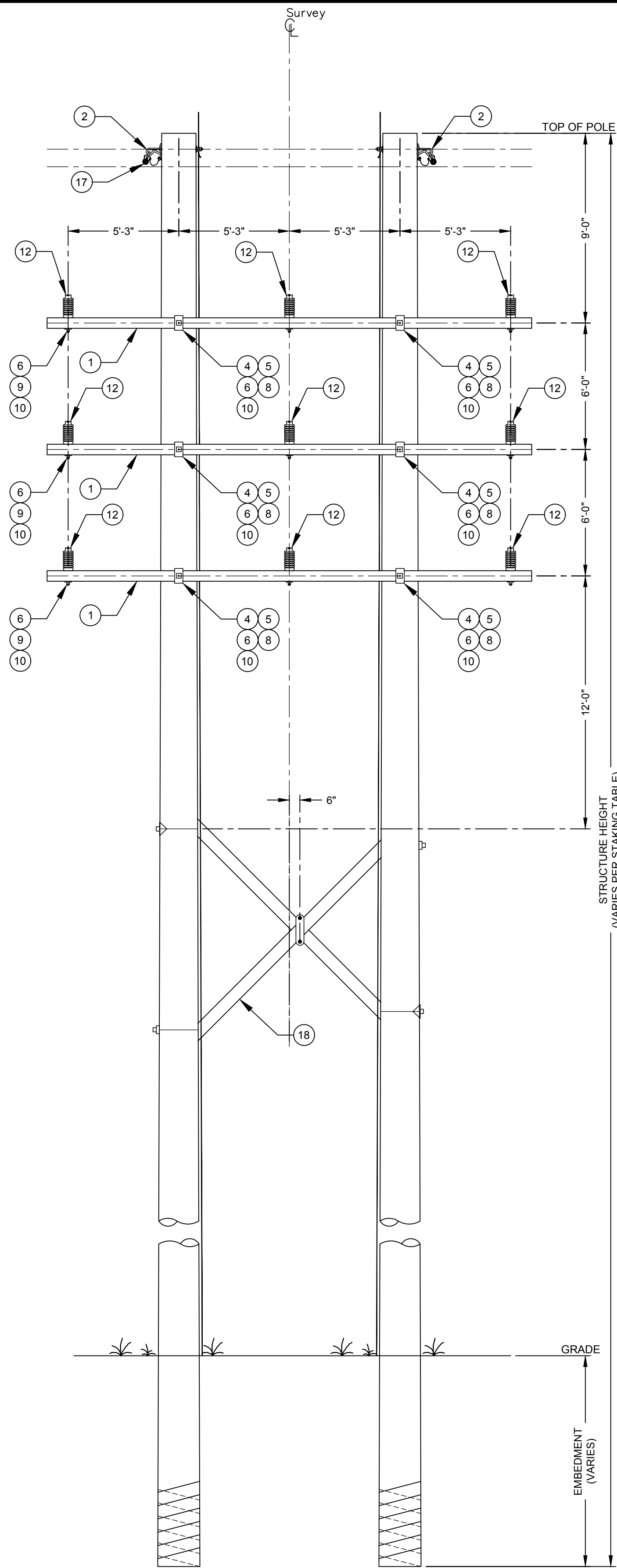
LIST OF MATERIALS					
DWG. REF.	QTY.	DESCRIPTION	ITEM	DET.	CODE No.
1	A/R	X-Arm, 5-5/8"x7-3/8"x22'-0", #41	-	-	
2	A/R	Bracket, Swinging Angle, 3/4" bar	-	-	
3	A/R	Plate, X-Arm Reinforcing	-	-	
4	A/R	3/4" Bolt, Machine, by req'd length	-	-	
5	A/R	3/4" Bolt, Clevis, by req'd length	-	-	
6	A/R	3/4" Bolt, Shoulder Eye, by req'd l.	-	-	
7	A/R	1/2" Bolt, Washer Head, w/Washer Nut	-	-	
8	A/R	Washer, Curved, 4"sq x1/4", 13/16" hole	-	-	
9	A/R	Washer, Flat, 4"sq x3/16", 13/16" hole	-	-	
10	A/R	3/4" Locknut, MF Type	-	-	
11	A/R	1/2" Locknut, MF Type	-	-	
13	A/R	INSULATOR ASSEMBLY, TANGENT	-	-	
17	A/R	OHGW ASSEMBLY, TANGENT	-	-	
18	A/R	X-BRACE ASSEMBLY	-	-	



PROFILE VIEW



TANGENT FRONT VIEW



LARGE ANGLE TANGENT FRONT VIEW

CONCEPTUAL - NOT FOR CONSTRUCTION

Notes

1. FINAL EMBEDMENTS AND POLE DIMENSIONS WILL BE DETERMINED DURING DETAILED DESIGN.
2. REFER TO WOOD POLE GROUNDING DETAIL.

Legend

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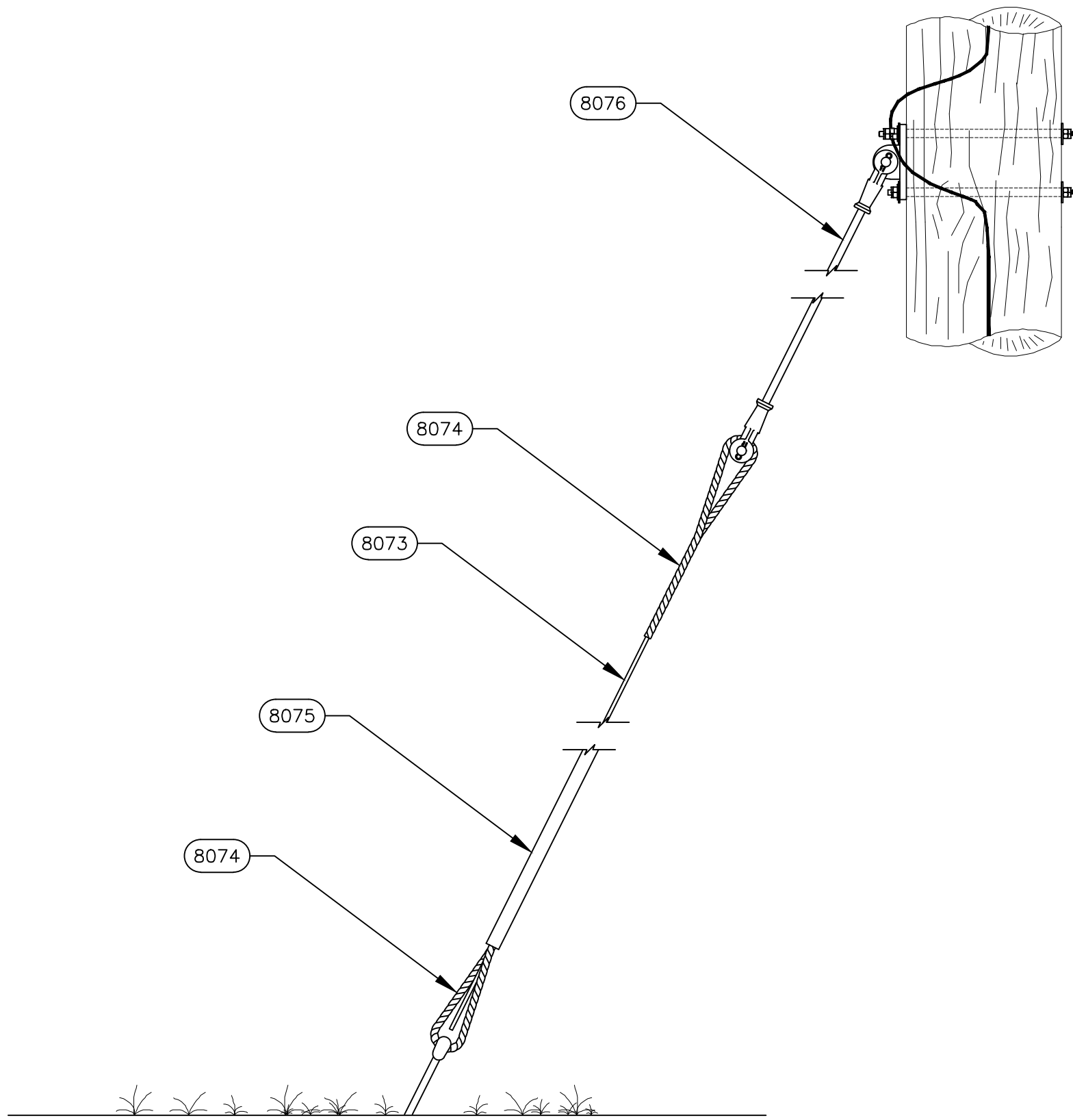
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South Ripley
SOLAR PROJECT

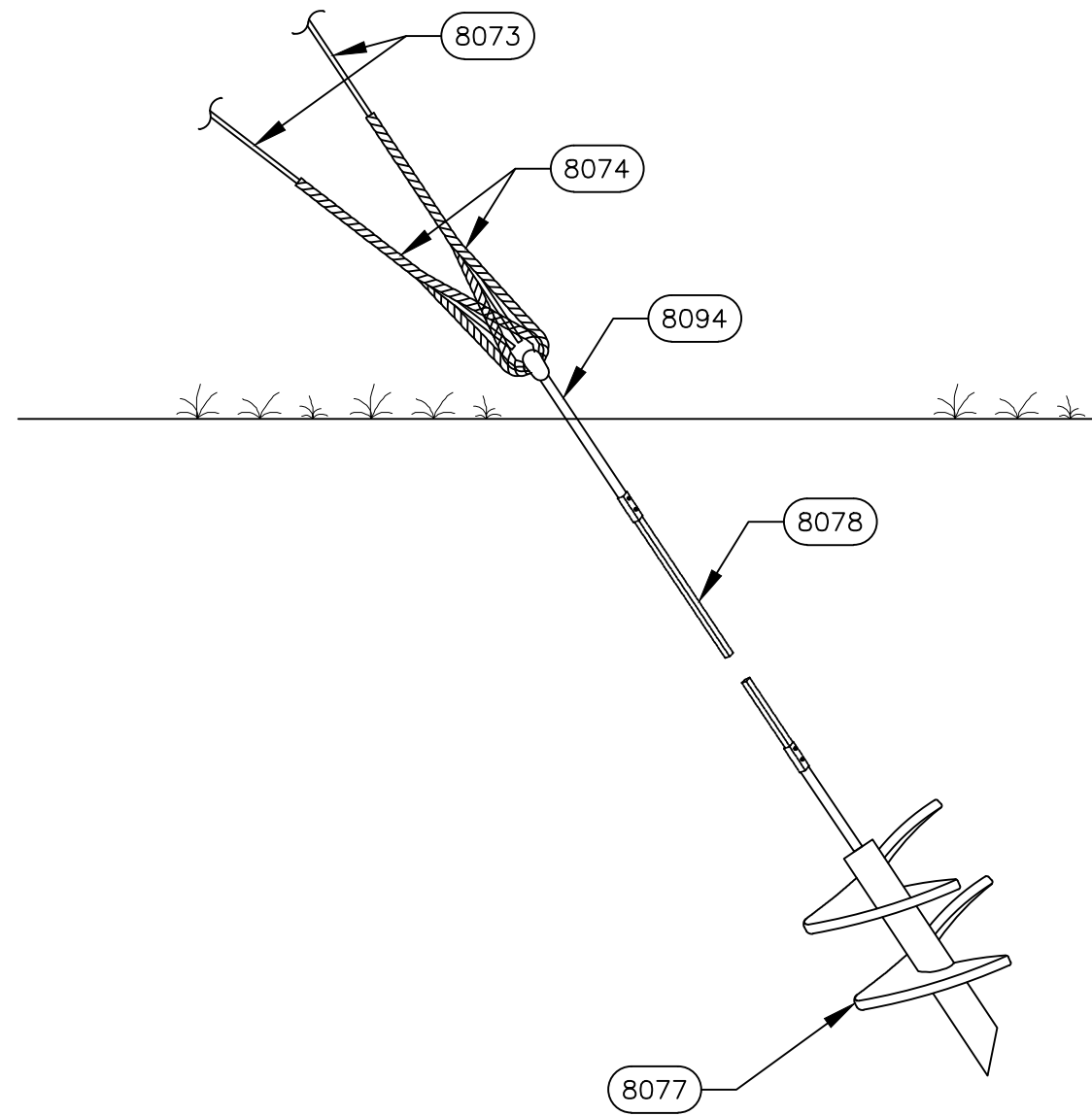
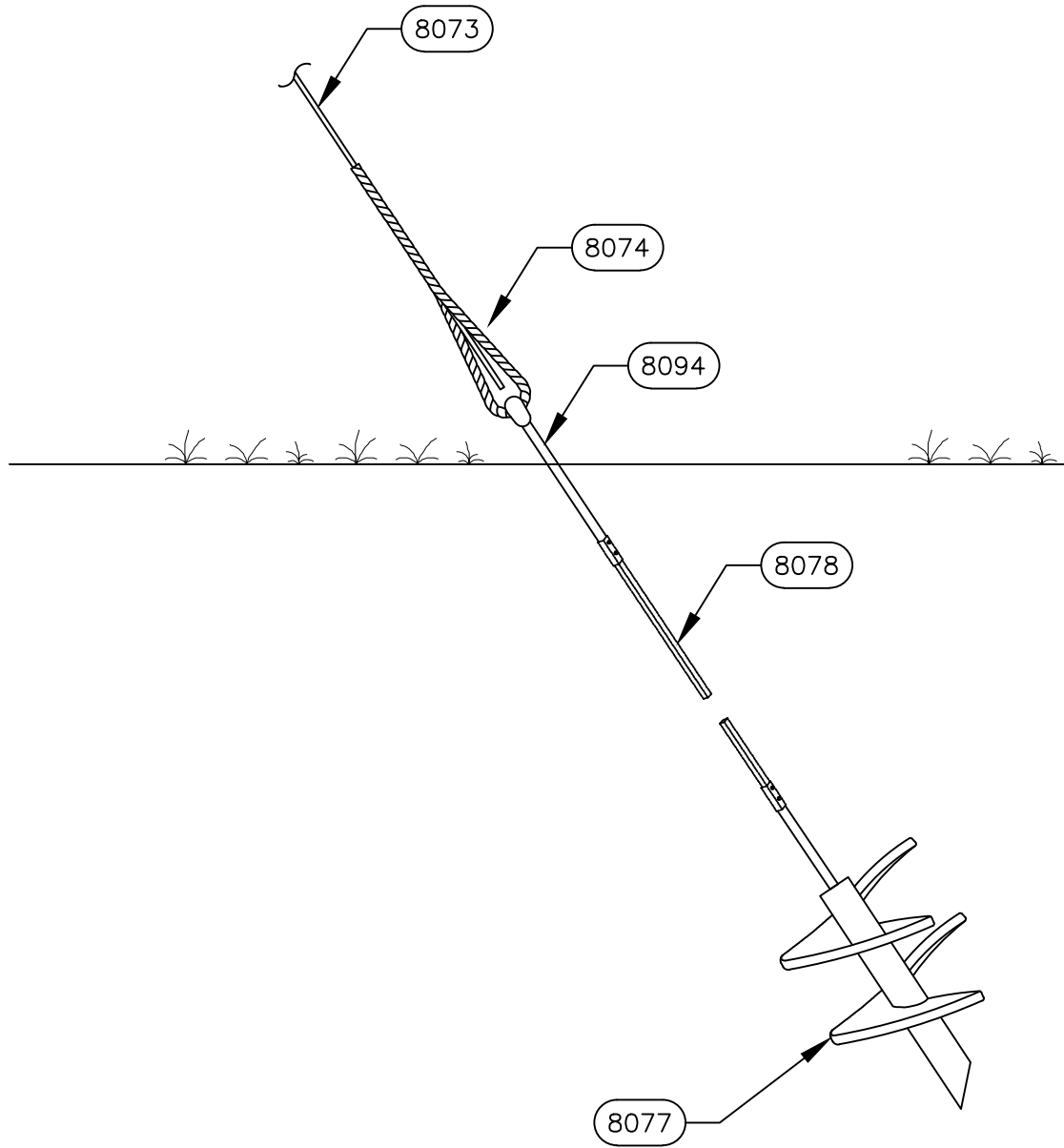
Title

SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
TRIPLE CIRCUIT TANGENT H-FRAME
FRAMING DETAILS

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	EHK	Eng check	JAB
	Drawn	EHK	Approved	JAB
	Scale at ANSI D Not to Scale		Date 07/02/2021	Rev C
	Drawing Number SRS-E-660-03			



Item ID	Item Description
8073	Guy Wire, 1/2" 7 Strand EHS
8074	Guy Grip, 1/2" Guy
8075	Cattle Guard, single piece
8076	Guy Strain Insulator, Clevis - Thimble, 30,000lbs
8077	Single Guy Eyenut for 1" Diameter Rod
8078	1" Diameter Power Hub Rod
8094	Double Guy Eyenut for 1" Diameter Rod



- Notes
- GUY AND ANCHOR LOCATIONS AND QUANTITIES TO BE DETERMINED DURING DETAILED DESIGN.
 - USE HELICAL ANCHORS WHERE SOIL CONDITIONS ALLOW, HOWEVER DUE TO THE PRESENCE OF SHALLOW LIMESTONE AT MUCH OF THE SITE, IT IS EXPECTED THAT HELICAL ANCHOR MAY ENCOUNTER REFUSAL. IF SOIL CONDITIONS DO NOT ALLOW THE USE OF HELICAL ANCHORS DUE TO REFUSAL, AND THE ANCHOR IS NOT IN A DESIGNATED WETLAND AREA, THEN PLATE ANCHORS WITH CONCRETE BACKFILL MAY BE USED. HOWEVER, IF THE SOIL IS SOLID OR HOMOGENOUS ROCK, THEN ROCK ANCHORS MAY BE USED.
 - FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR ANCHOR EMBEDMENT DEPTH

Legend

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South Ripley
SOLAR PROJECT

Title

SOUTH RIPLEY SOLAR
MVAC ELECTRICAL COLLECTOR SYSTEM
GUY AND ANCHOR DETAILS

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	EHK	Eng check	JAB
	Drawn	EHK	Approved	JAB
	Scale at ANSI D Not to Scale		Date 07/02/2021	Rev C
	Drawing Number SRS-E-663-01			

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