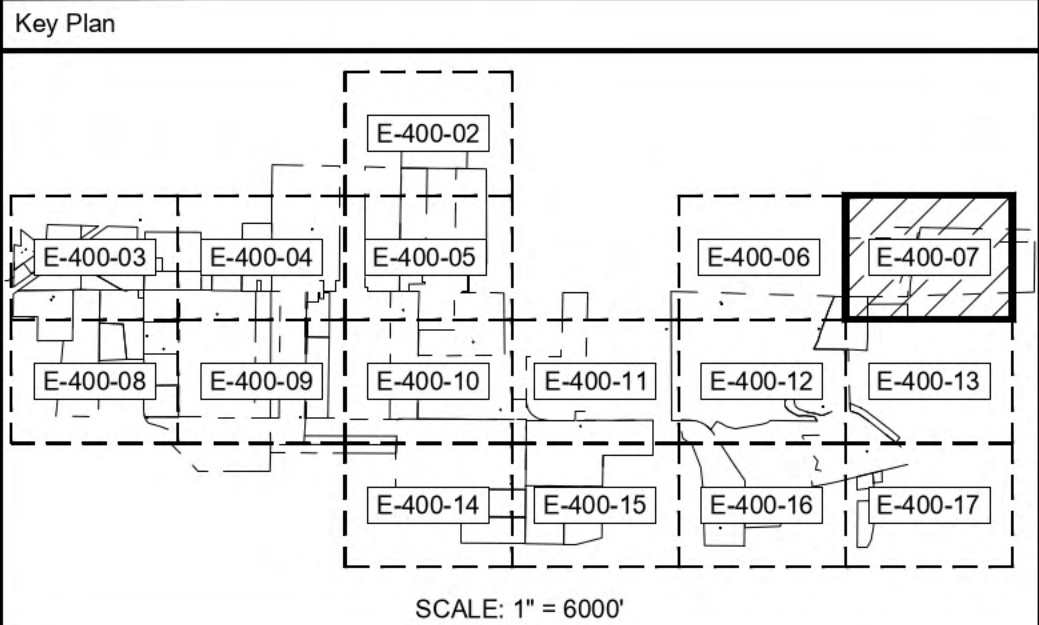




Legend			
	TAX PARCEL BOUNDARY		1 MVA STEP-UP XFMR
	FENCE		2 MVA STEP-UP XFMR
	GRAVEL ROAD		3 MVA STEP-UP XFMR
	NYSDEC WETLANDS		JUNCTION BOX
	FEDERAL WETLANDS		BORING AREAS
	STREAMS		PAD MOUNTED SWITCHGEAR
	SETBACK		PCS ID
	NYSDEC SETBACK		CONDUIT ID
	GAS		
	34.5KV AERIAL LINE		
	STRUCTURE & ID		
	PERMANENT EASEMENT FOR AERIAL LINE		
	AERIAL		IN CONDUIT
	IN TRENCH		FEEDER 1 CABLES
	FEEDER 2 CABLES		FEEDER 3 CABLES
	FEEDER 4 CABLES		34.5KV BESS CABLES



F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Client

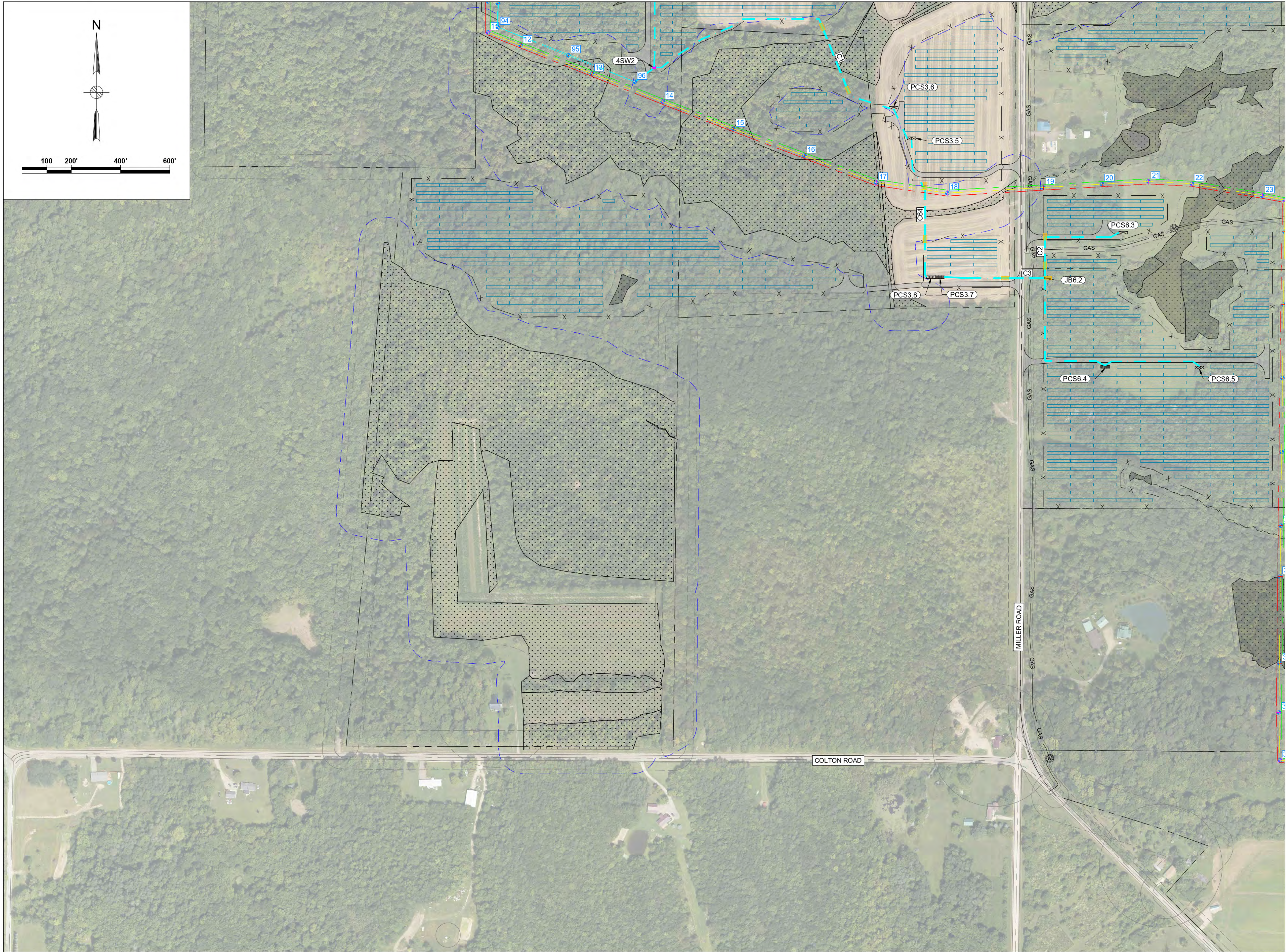
Title

SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
ARRAY PARCEL DETAIL 6

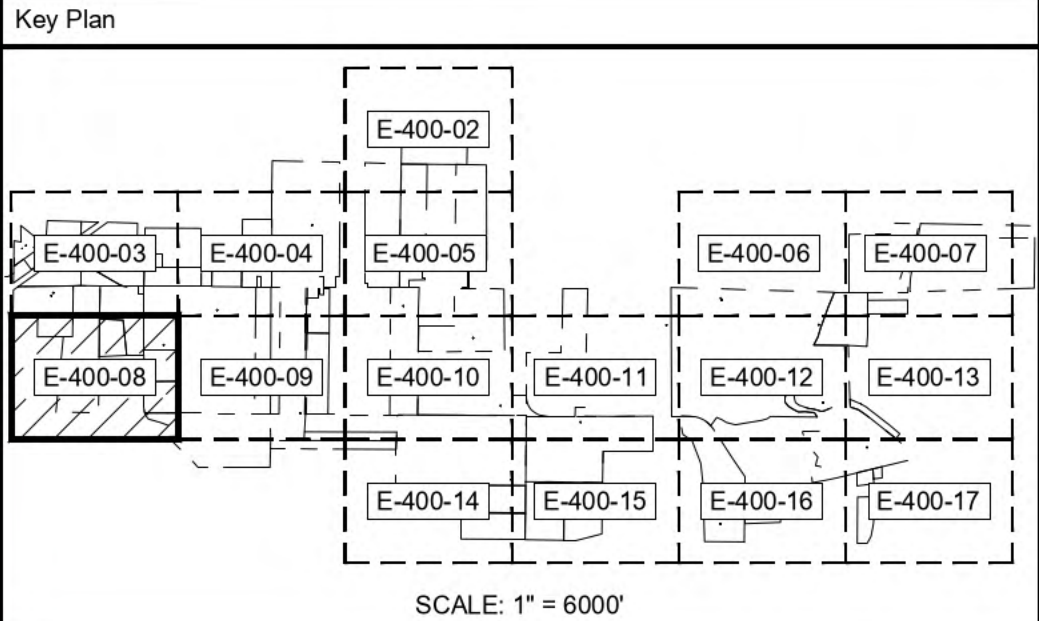
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D		Date	Rev
	1" = 200'		07/23/2021	F
Drawing Number		SRS-E-400-07		

© Mott MacDonald
It is a violation of New York state Education Law for any person, unless acting under the direction of a licensed engineer to alter this document in any way.
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

CONCEPTUAL - NOT FOR CONSTRUCTION



Legend			
	TAX PARCEL BOUNDARY		1 MVA STEP-UP XFMR
	FENCE		2 MVA STEP-UP XFMR
	GRAVEL ROAD		3 MVA STEP-UP XFMR
	NYSDEC WETLANDS		JUNCTION BOX
	FEDERAL WETLANDS		BORING AREAS
	STREAMS		PAD MOUNTED SWITCHGEAR
	SETBACK		PCS ID
	NYSDEC SETBACK		CONDUIT ID
	GAS		
	GAS LINE		
	34.5KV AERIAL LINE		
	STRUCTURE & ID		
	PERMANENT EASEMENT FOR AERIAL LINE		
	AERIAL		IN CONDUIT
			IN TRENCH
			FEEDER 1 CABLES
			FEEDER 2 CABLES
			FEEDER 3 CABLES
			FEEDER 4 CABLES
			34.5KV BESS CABLES



F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

MOTT MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Client

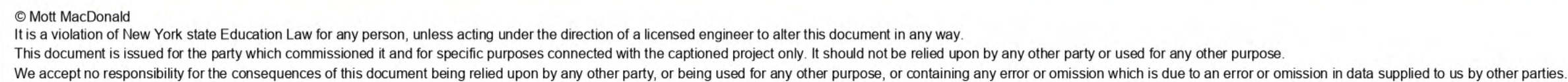
Title

**SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
ARRAY PARCEL DETAIL 7**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D		Date	Rev
	1" = 200'		07/23/2021	F
Drawing Number		SRS-E-400-08		

© Mott MacDonald
It is a violation of New York state Education Law for any person, unless acting under the direction of a licensed engineer to alter this document in any way.
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

CONCEPTUAL - NOT FOR CONSTRUCTION



CONCEPTUAL - NOT FOR CONSTRUCTION

Key Plan

SCALE: 1" = 6000"

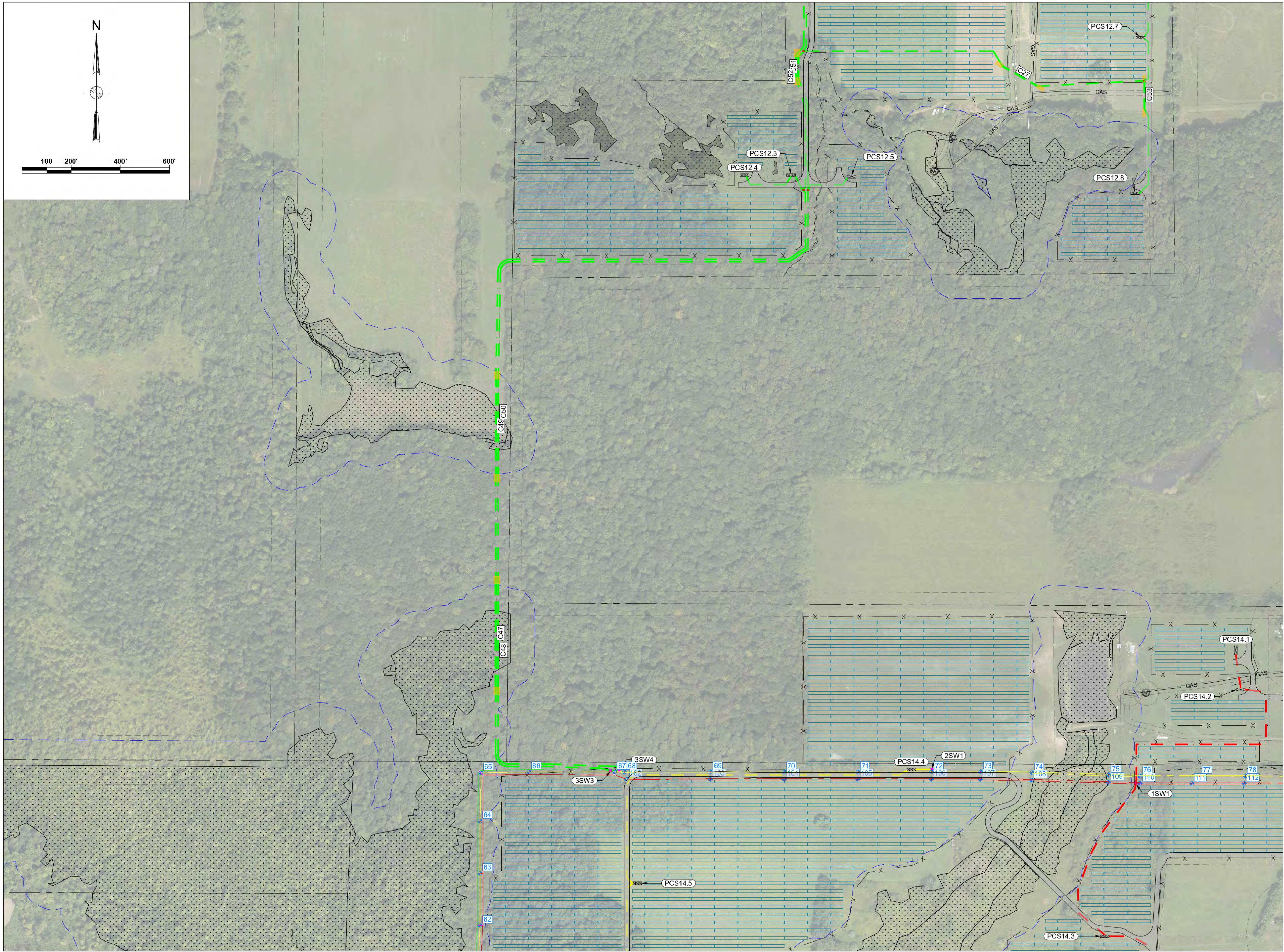
M M

**MOTT
MACDONALD**

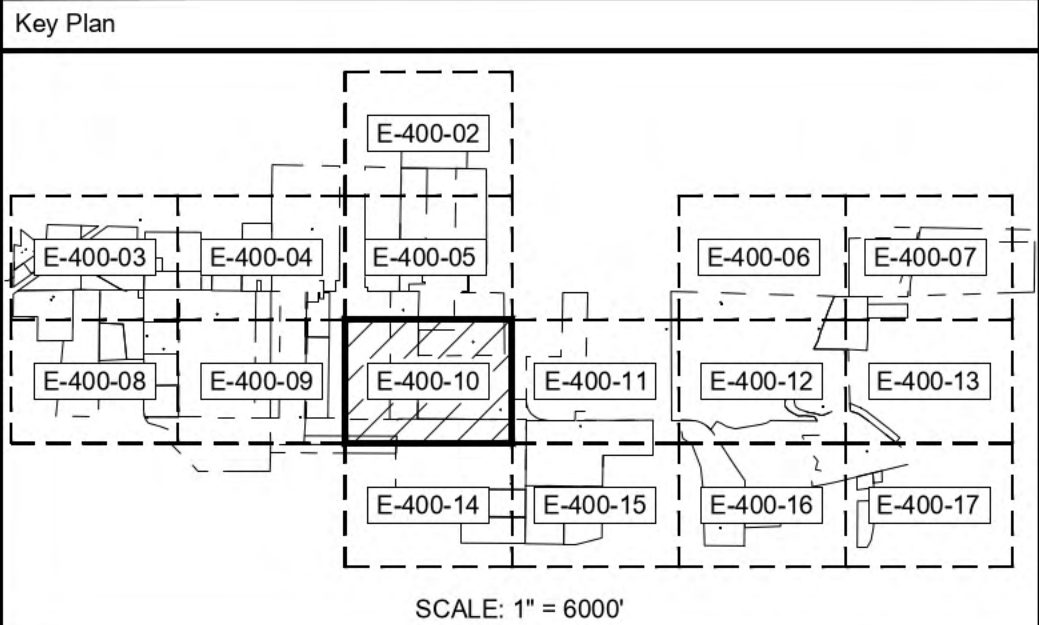
101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Title	SOUTH RIPLEY SOLAR ELECTRICAL SOLAR ARRAY PARCEL DETAIL 8
-------	---

<p align="center">PRELIMINARY NOT FOR CONSTRUCTION</p> <p align="center">REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION</p>	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D	Date	Rev	
	1" = 200"	07/23/2021	F	
<p>Drawing Number SRS-E-400-09</p>				



Legend			
	TAX PARCEL BOUNDARY		1 MVA STEP-UP XFMR
	FENCE		2 MVA STEP-UP XFMR
	GRAVEL ROAD		3 MVA STEP-UP XFMR
	NYSDEC WETLANDS		JUNCTION BOX
	FEDERAL WETLANDS		BORING AREAS
	STREAMS		PAD MOUNTED SWITCHGEAR
	SETBACK		PCS ID
	NYSDEC SETBACK		CONDUIT ID
	GAS		
	GAS LINE		
	34.5KV AERIAL LINE		
	STRUCTURE & ID		
	PERMANENT EASEMENT FOR AERIAL LINE		
<u>AERIAL</u>	<u>IN CONDUIT</u>	<u>IN TRENCH</u>	
			FEEDER 1 CABLES
			FEEDER 2 CABLES
			FEEDER 3 CABLES
			FEEDER 4 CABLES
			34.5KV BESS CABLES



F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Client

South Ripley
SOLAR PROJECT

Title

**SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
ARRAY PARCEL DETAIL 9**

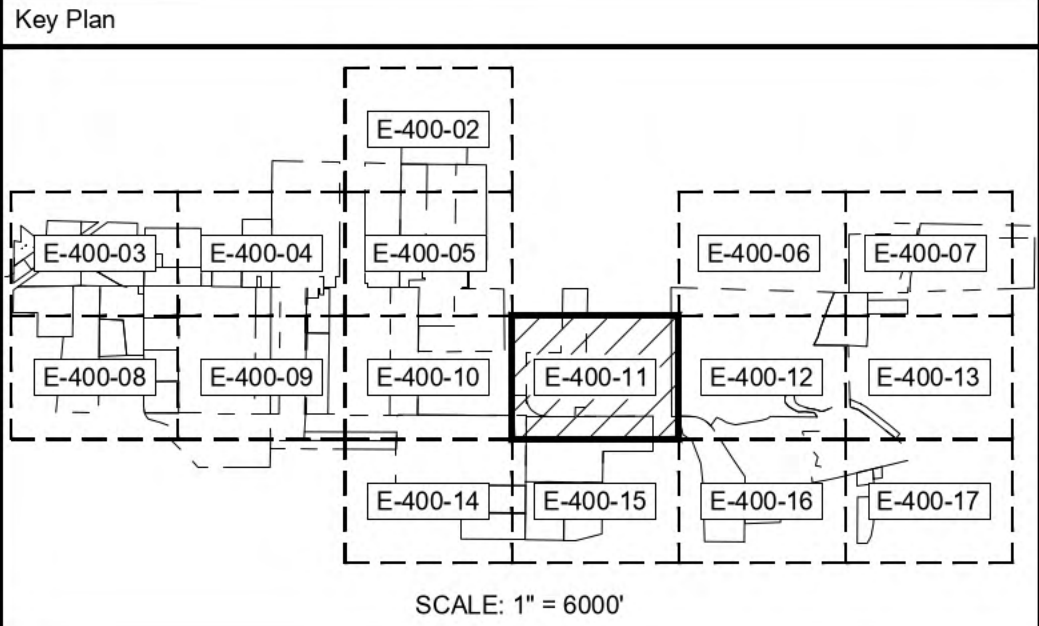
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D		Date	Rev
	1" = 200'		07/23/2021	F
Drawing Number		SRS-E-400-10		

© Mott MacDonald
It is a violation of New York state Education Law for any person, unless acting under the direction of a licensed engineer to alter this document in any way.
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

CONCEPTUAL - NOT FOR CONSTRUCTION



Legend	
	TAX PARCEL BOUNDARY
	FENCE
	GRAVEL ROAD
	NYSDEC WETLANDS
	FEDERAL WETLANDS
	STREAMS
	SETBACK
	NYSDEC SETBACK
	GAS
	34.5KV AERIAL LINE
	STRUCTURE & ID
	PERMANENT EASEMENT FOR AERIAL LINE
	1 MVA STEP-UP XFMR
	2 MVA STEP-UP XFMR
	3 MVA STEP-UP XFMR
	JUNCTION BOX
	BORING AREAS
	PAD MOUNTED SWITCHGEAR
	PCS ID
	CONDUIT ID
	AERIAL
	IN CONDUIT
	IN TRENCH
	FEEDER 1 CABLES
	FEEDER 2 CABLES
	FEEDER 3 CABLES
	FEEDER 4 CABLES
	34.5KV BESS CABLES



F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M

M

MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

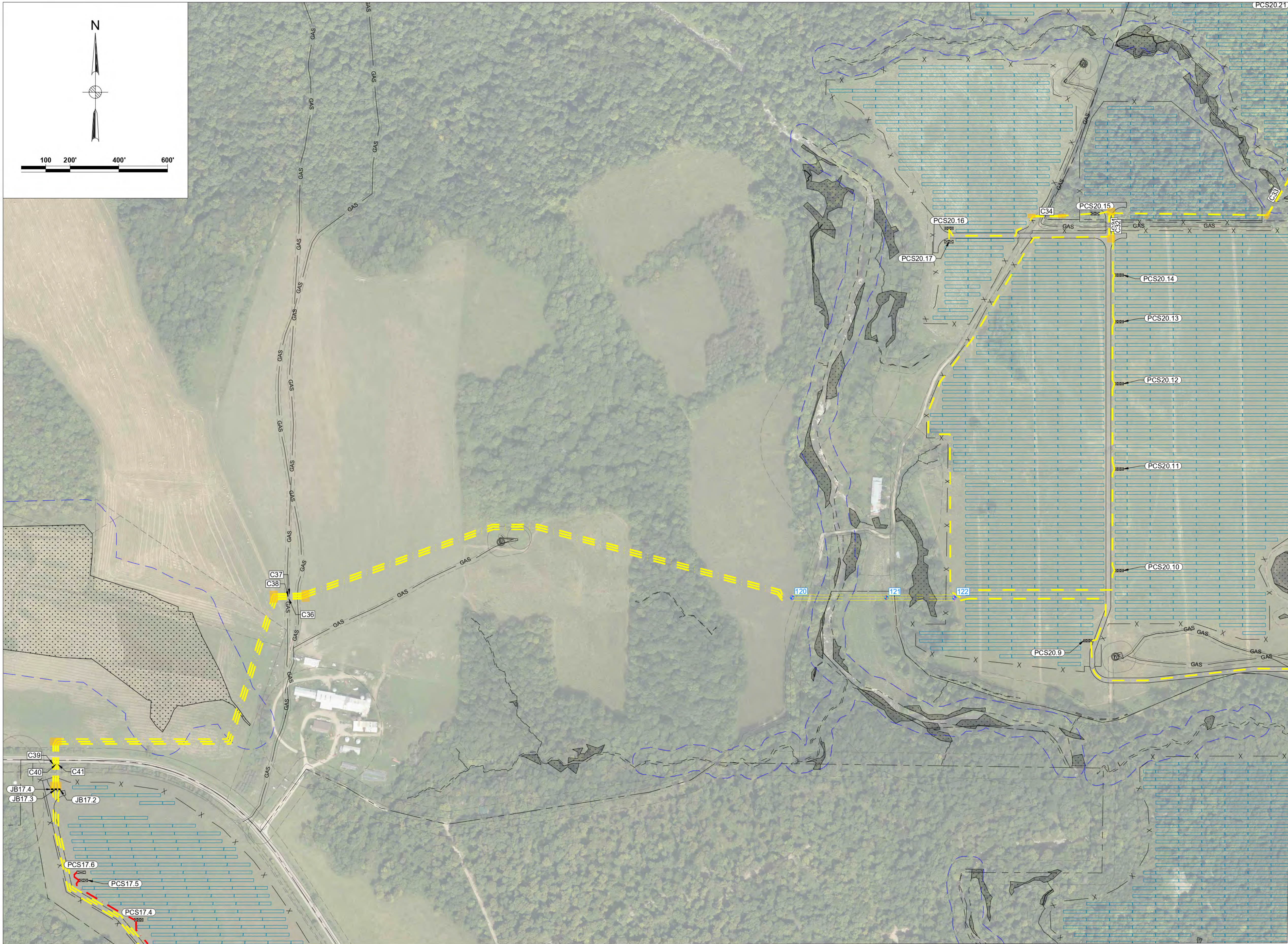
Client

Title

SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
ARRAY PARCEL DETAIL 11

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D		Date	Rev
	1" = 200'		07/23/2021	F
Drawing Number		SRS-E-400-11		

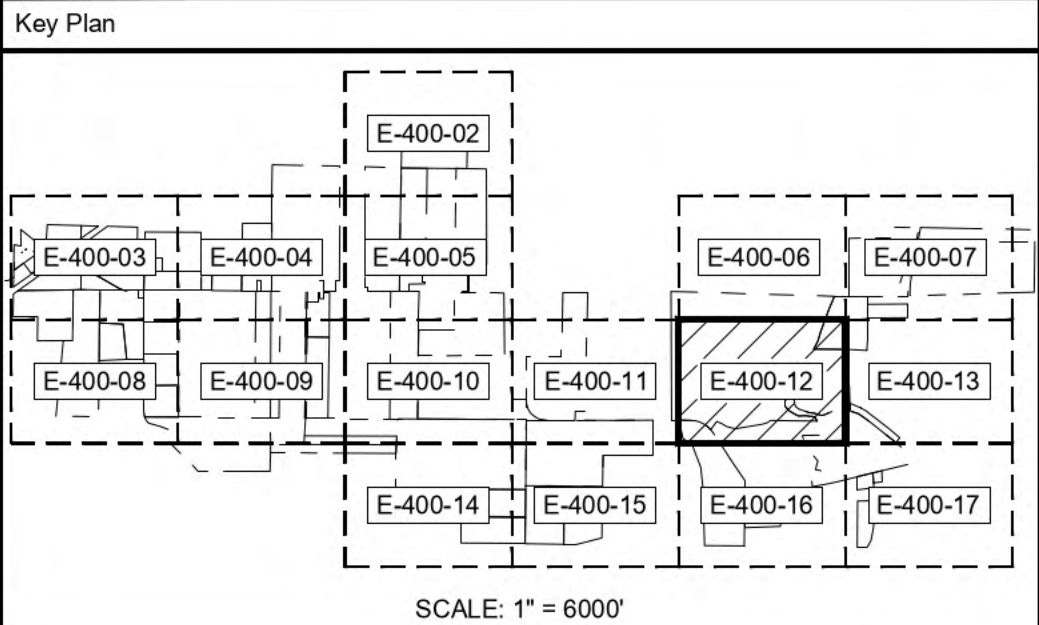
CONCEPTUAL - NOT FOR CONSTRUCTION



Legend

---	TAX PARCEL BOUNDARY	⊠	1 MVA STEP-UP XFMR
-X-	FENCE	⊠	2 MVA STEP-UP XFMR
---	GRAVEL ROAD	⊠	3 MVA STEP-UP XFMR
---	NYSDEC WETLANDS	■	JUNCTION BOX
---	FEDERAL WETLANDS	■	BORING AREAS
---	STREAMS	■	PAD MOUNTED SWITCHGEAR
---	SETBACK	(PCSXX.XX)	PCS ID
---	NYSDEC SETBACK	(CXX)	CONDUIT ID
---	GAS		
---	34.5KV AERIAL LINE		
---	STRUCTURE & ID		
---	PERMANENT EASEMENT FOR AERIAL LINE		

AERIAL	IN CONDUIT	IN TRENCH	FEEDER 1 CABLES
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---



F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M

M

MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Client

G

South Ripley

SOLAR PROJECT

Title

SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
ARRAY PARCEL DETAIL 11

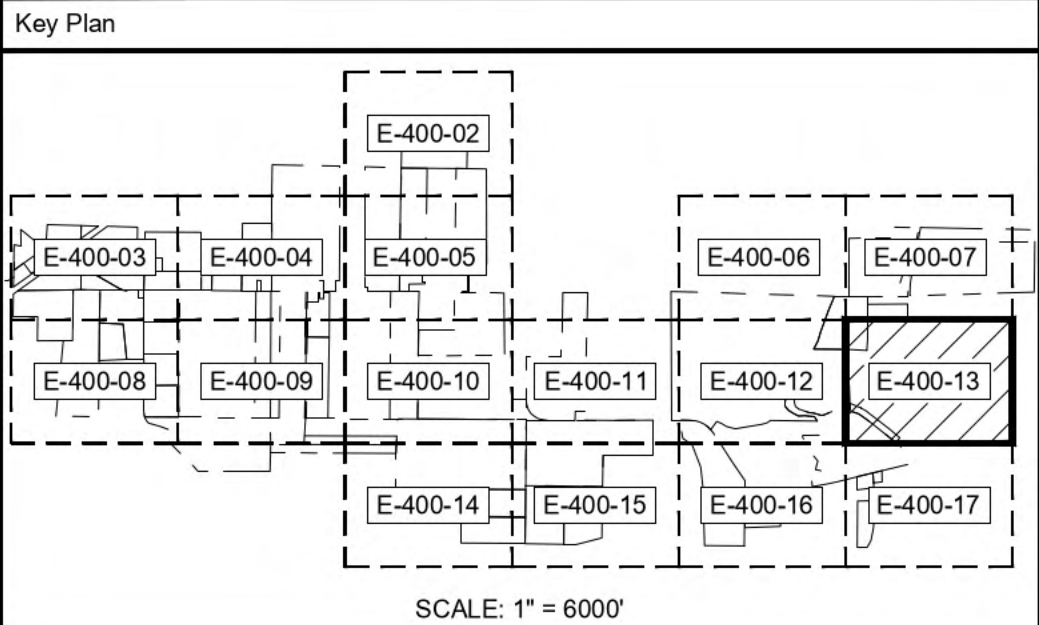
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D 1" = 200'	Date	07/23/2021	Rev F
	Drawing Number	SRS-E-400-12		

© Mott MacDonald
It is a violation of New York state Education Law for any person, unless acting under the direction of a licensed engineer to alter this document in any way.
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

CONCEPTUAL - NOT FOR CONSTRUCTION



Legend			
	TAX PARCEL BOUNDARY		1 MVA STEP-UP XFMR
	FENCE		2 MVA STEP-UP XFMR
	GRAVEL ROAD		3 MVA STEP-UP XFMR
	NYSDEC WETLANDS		JUNCTION BOX
	FEDERAL WETLANDS		BORING AREAS
	STREAMS		PAD MOUNTED SWITCHGEAR
	SETBACK		PCS ID
	NYSDEC SETBACK		CONDUIT ID
	GAS		
	GAS LINE		
	34.5KV AERIAL LINE		
	STRUCTURE & ID		
	PERMANENT EASEMENT FOR AERIAL LINE		
	AERIAL		IN CONDUIT
			IN TRENCH



F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

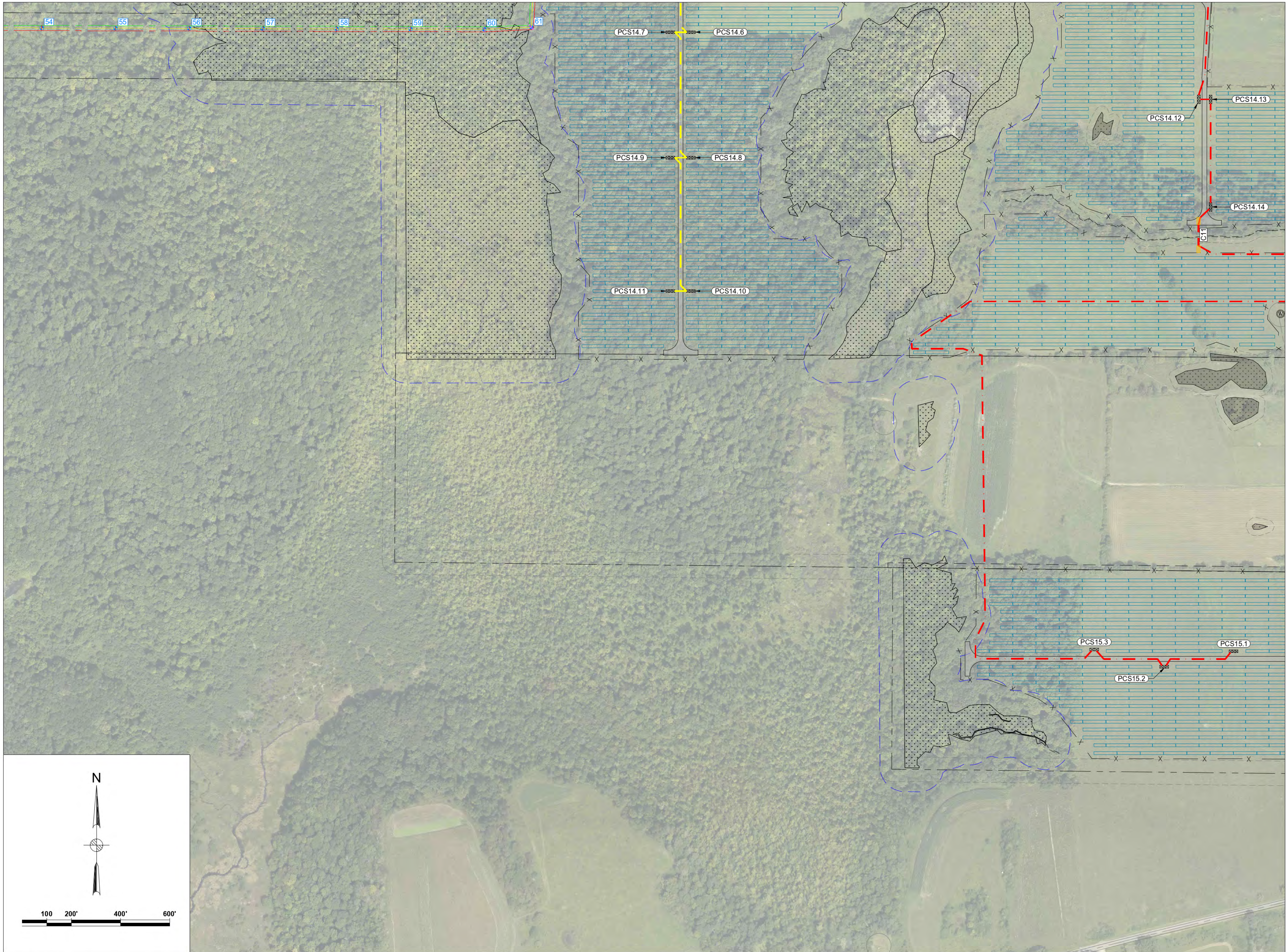
101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Client

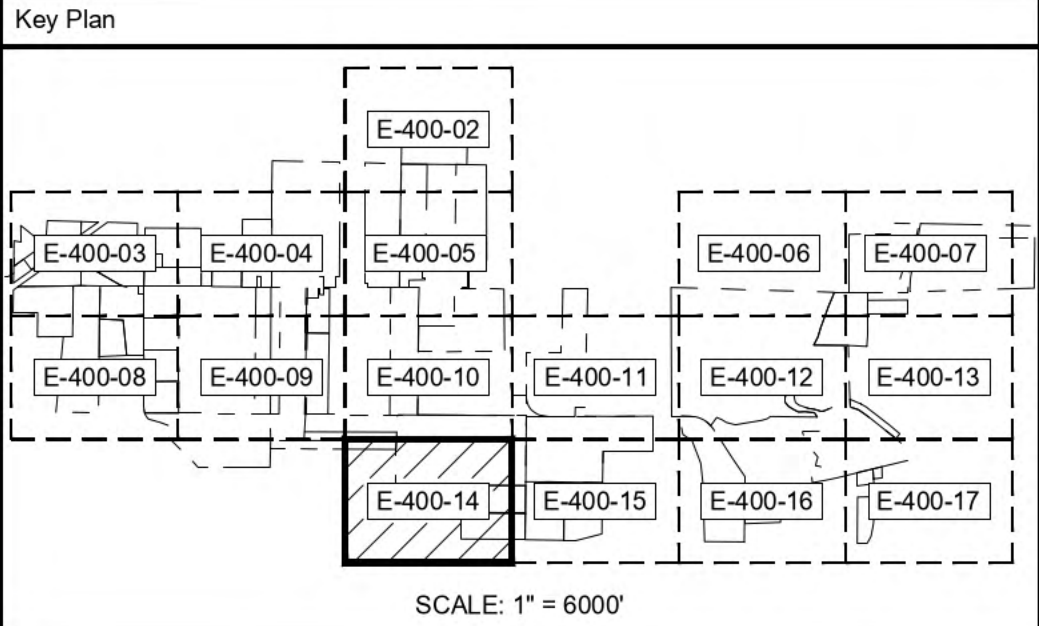
Title

SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
ARRAY PARCEL DETAIL 12

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D 1" = 200'	Date	07/23/2021	Rev F
	Drawing Number	SRS-E-400-13		



Legend			
	TAX PARCEL BOUNDARY		1 MVA STEP-UP XFMR
	FENCE		2 MVA STEP-UP XFMR
	GRAVEL ROAD		3 MVA STEP-UP XFMR
	NYSDEC WETLANDS		JUNCTION BOX
	FEDERAL WETLANDS		BORING AREAS
	STREAMS		PAD MOUNTED SWITCHGEAR
	SETBACK		PCS ID
	NYSDEC SETBACK		CONDUIT ID
	GAS		
	34.5KV AERIAL LINE		
	STRUCTURE & ID		
	PERMANENT EASEMENT FOR AERIAL LINE		
	AERIAL		FEEDER 1 CABLES
	IN CONDUIT		FEEDER 2 CABLES
			FEEDER 3 CABLES
			FEEDER 4 CABLES
			34.5KV BESS CABLES



F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

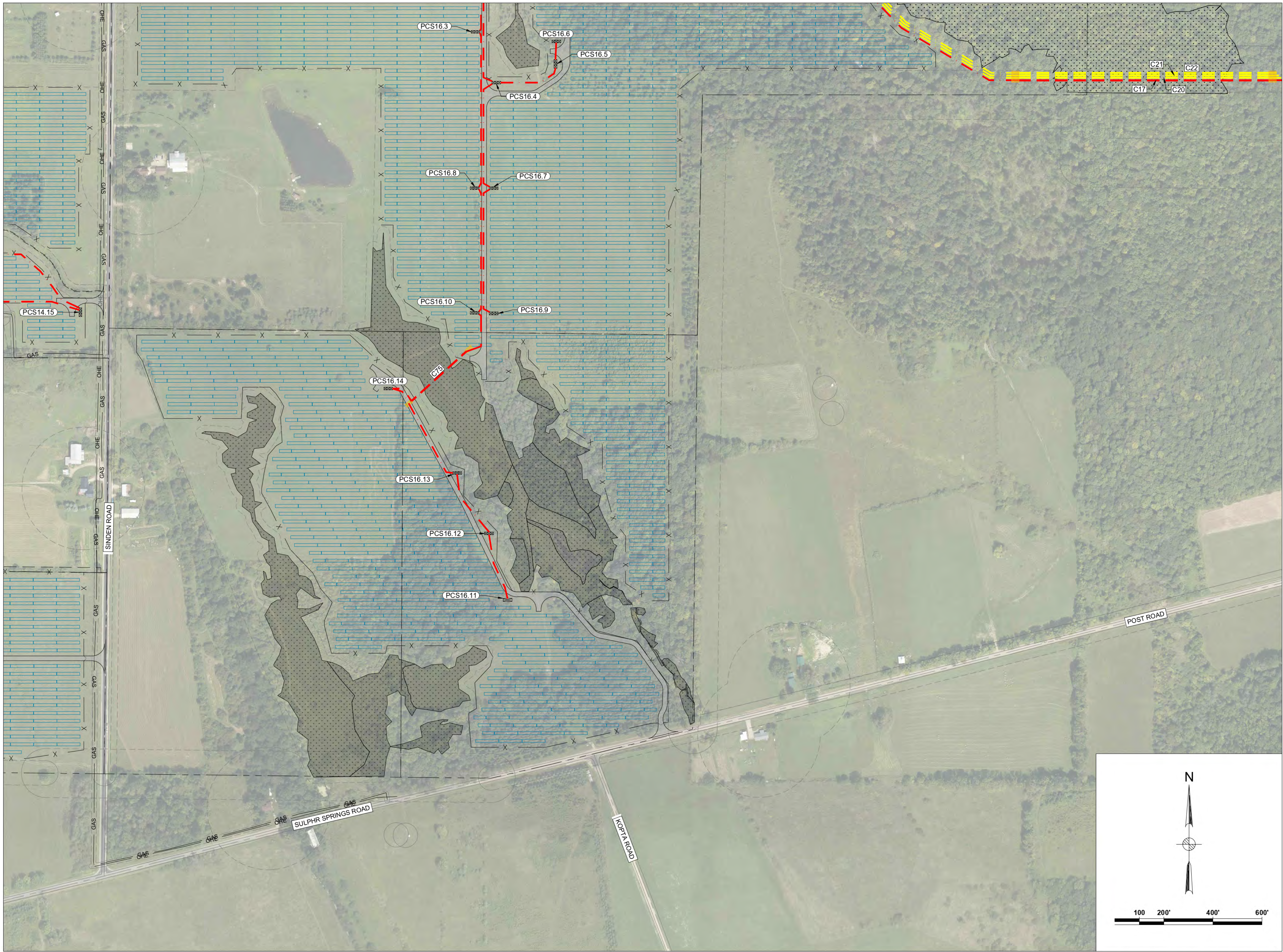
Client

Title

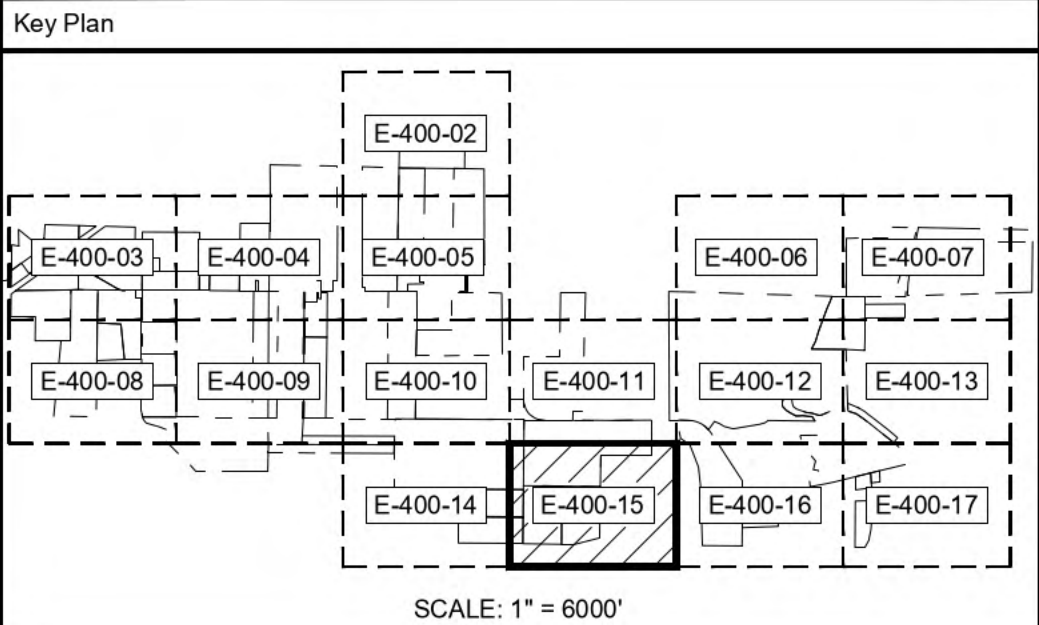
**SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
ARRAY PARCEL DETAIL 13**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D		Date	Rev
			07/23/2021	F
Drawing Number		SRS-E-400-14		

CONCEPTUAL - NOT FOR CONSTRUCTION



Legend			
	TAX PARCEL BOUNDARY		1 MVA STEP-UP XFMR
	FENCE		2 MVA STEP-UP XFMR
	GRAVEL ROAD		3 MVA STEP-UP XFMR
	NYSDEC WETLANDS		JUNCTION BOX
	FEDERAL WETLANDS		BORING AREAS
	STREAMS		PAD MOUNTED SWITCHGEAR
	SETBACK		PCS ID
	NYSDEC SETBACK		CONDUIT ID
	GAS		
	34.5KV AERIAL LINE		
	STRUCTURE & ID		
	PERMANENT EASEMENT FOR AERIAL LINE		
<u>AERIAL</u>	<u>IN CONDUIT</u>	<u>IN TRENCH</u>	
			FEEDER 1 CABLES
			FEEDER 2 CABLES
			FEEDER 3 CABLES
			FEEDER 4 CABLES
			34.5KV BESS CABLES



F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Client

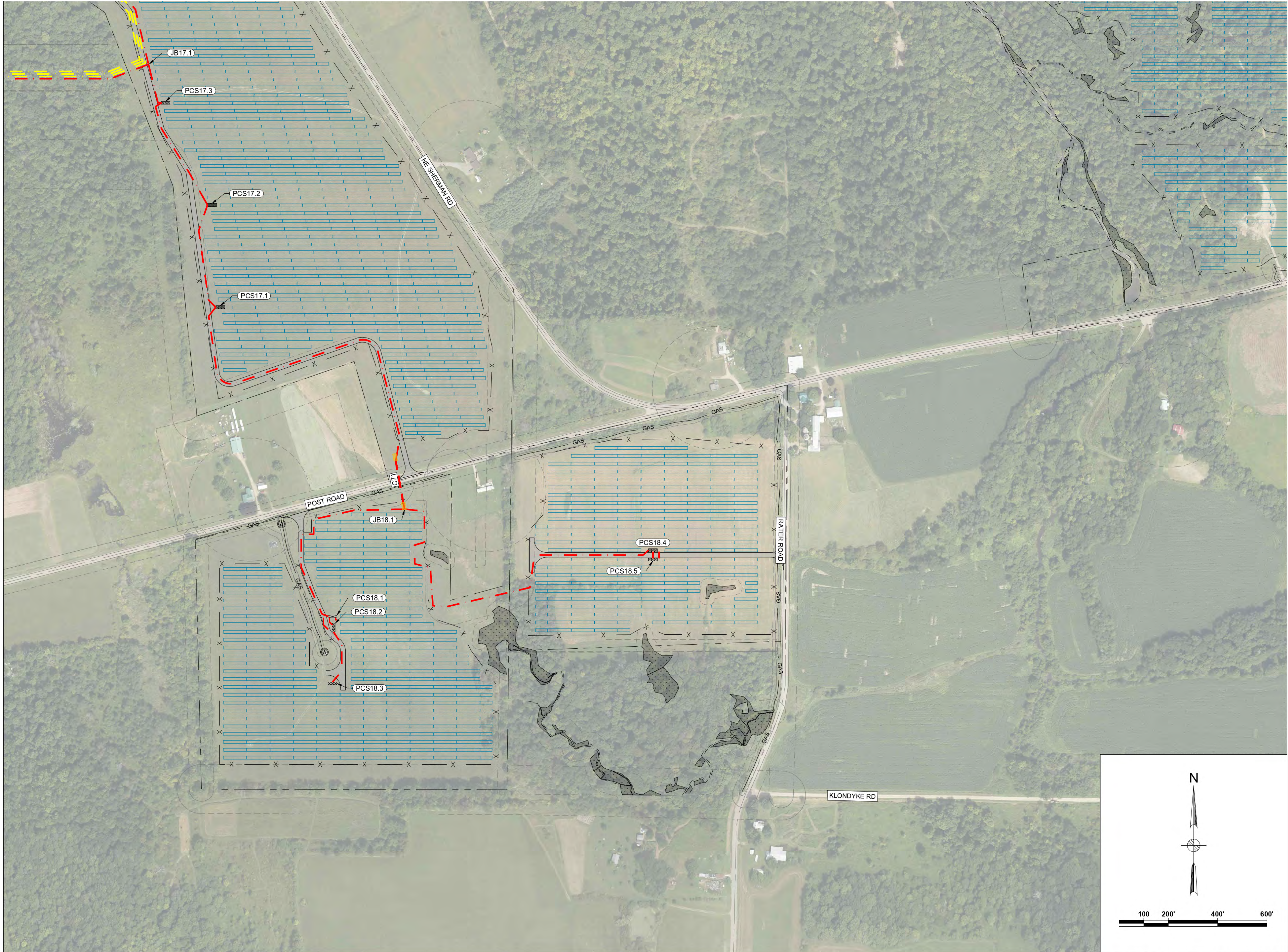
Title

**SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
ARRAY PARCEL DETAIL 14**

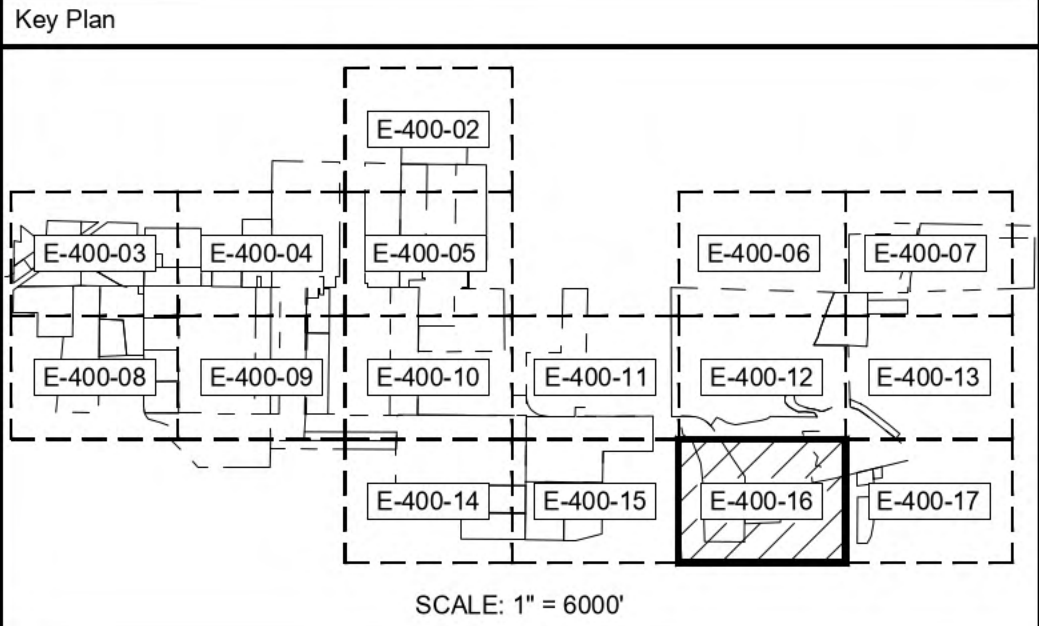
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D		Date	Rev
			07/23/2021	F
Drawing Number		SRS-E-400-15		

© Mott MacDonald
It is a violation of New York state Education Law for any person, unless acting under the direction of a licensed engineer to alter this document in any way.
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

CONCEPTUAL - NOT FOR CONSTRUCTION



Legend		
	TAX PARCEL BOUNDARY	1 MVA STEP-UP XFMR
	FENCE	2 MVA STEP-UP XFMR
	GRAVEL ROAD	3 MVA STEP-UP XFMR
	NYSDEC WETLANDS	JUNCTION BOX
	FEDERAL WETLANDS	BORING AREAS
	STREAMS	PAD MOUNTED SWITCHGEAR
	SETBACK	PCS ID
	NYSDEC SETBACK	CONDUIT ID
	GAS	
	34.5KV AERIAL LINE	
	STRUCTURE & ID	
	PERMANENT EASEMENT FOR AERIAL LINE	
	AERIAL	
	IN CONDUIT	
	IN TRENCH	
	FEEDER 1 CABLES	
	FEEDER 2 CABLES	
	FEEDER 3 CABLES	
	FEEDER 4 CABLES	
	34.5KV BESS CABLES	



F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Client

Title
**SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
ARRAY PARCEL DETAIL 15**

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

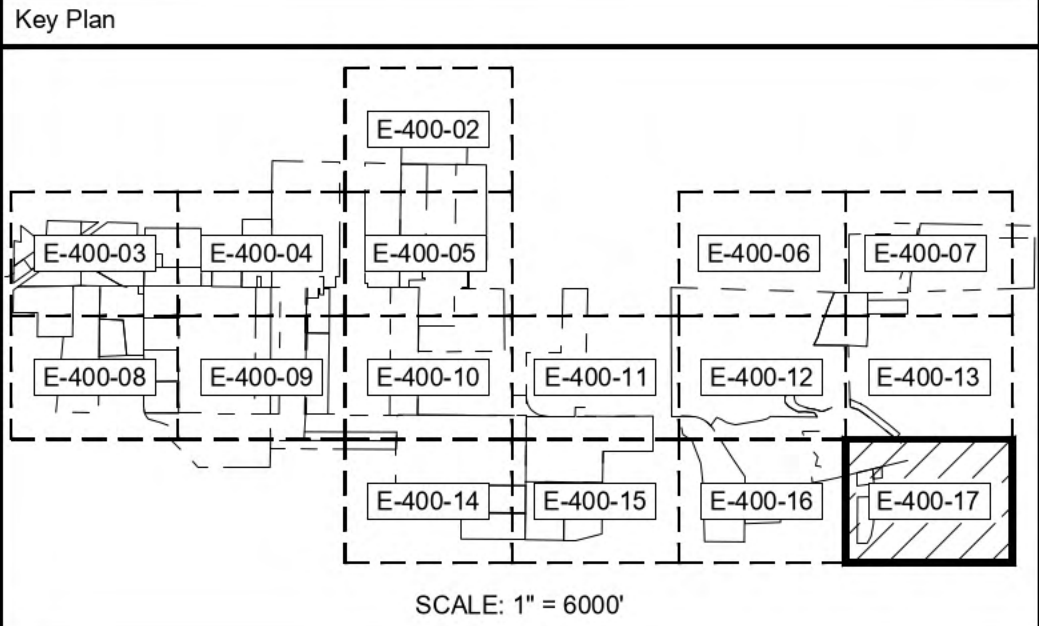
Designed	BG	Eng check	JS
Drawn	JLL	Approved	JAB
Dwg check		Project Mngr	RA
Scale at ANSI D		Date	Rev
1" = 200'		07/23/2021	F
Drawing Number	SRS-E-400-16		

© Mott MacDonald
It is a violation of New York state Education Law for any person, unless acting under the direction of a licensed engineer to alter this document in any way.
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

CONCEPTUAL - NOT FOR CONSTRUCTION



Legend			
	TAX PARCEL BOUNDARY		1 MVA STEP-UP XFMR
	FENCE		2 MVA STEP-UP XFMR
	GRAVEL ROAD		3 MVA STEP-UP XFMR
	NYSDEC WETLANDS		JUNCTION BOX
	FEDERAL WETLANDS		BORING AREAS
	STREAMS		PAD MOUNTED SWITCHGEAR
	SETBACK		PCS ID
	NYSDEC SETBACK		CONDUIT ID
	GAS		
	GAS LINE		
	34.5KV AERIAL LINE		
	STRUCTURE & ID		
	PERMANENT EASEMENT FOR AERIAL LINE		
	AERIAL		IN CONDUIT
			IN TRENCH
			FEEDER 1 CABLES
			FEEDER 2 CABLES
			FEEDER 3 CABLES
			FEEDER 4 CABLES
			34.5KV BESS CABLES



F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

MOTT MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Client

Title

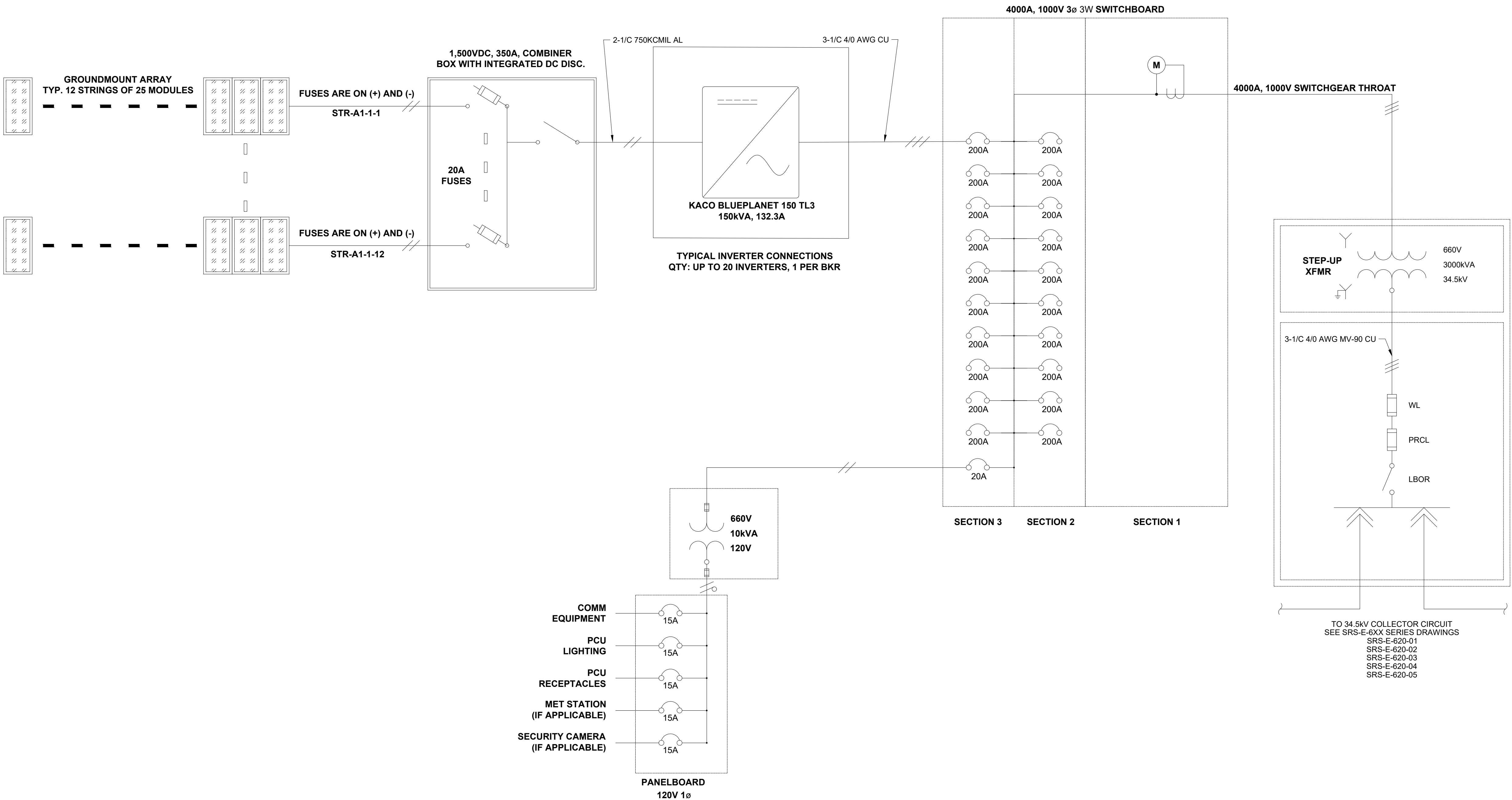
**SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
ARRAY PARCEL DETAIL 16**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D		Date	Rev
	1" = 200'		07/23/2021	F
Drawing Number		SRS-E-400-17		

© Mott MacDonald
It is a violation of New York state Education Law for any person, unless acting under the direction of a licensed engineer to alter this document in any way.
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

CONCEPTUAL - NOT FOR CONSTRUCTION

INVERTER SUMMARY		
TRANSFORMER SIZE	MAX INVERTER QUANTITY	SWITCHBOARD AMPACITY
3 MVA	UP TO 20	3000A
2 MVA	UP TO 13	2000A
1 MVA	UP TO 6	1200A



- Notes
- EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE TO NEC 690.46 AND 690.47.
 - ELECTRICAL EQUIPMENT MUST BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS.
 - CONDUCTORS IN CONDUIT AND CONDUIT FITTINGS INSTALLED OUTDOORS MUST BE LISTED FOR USE IN WET LOCATIONS.
 - GROUNTING TERMINALS AND HARDWARE INSTALLED OUTDOORS SHALL BE CORROSION RESISTANT.
 - DRAWING IDENTIFIES 20 INVERTER LAYOUT WITH 3MVA TRANSFORMER, SOME ARRANGEMENTS WILL INCLUDE A SMALLER TRANSFORMER AND FEWER INVERTERS. SEE LAYOUT DRAWINGS FOR INVERTER QUANTITIES AND TRANSFORMER SIZES.
 - SPECIFIC EQUIPMENT MODELS ARE PRELIMINARY AND SUBJECT TO CHANGE WITHIN THE CONFINES OF PERMITTED VISUAL AND SOUND IMPACTS.

Legend

- POWER CONVERSION STATION
- SYSTEM GROUND
- FUSE
- INVERTER
- FINGER SAFE FUSE
- PV MODULE
- DISCONNECT
- METER

F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

MOTT MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Client

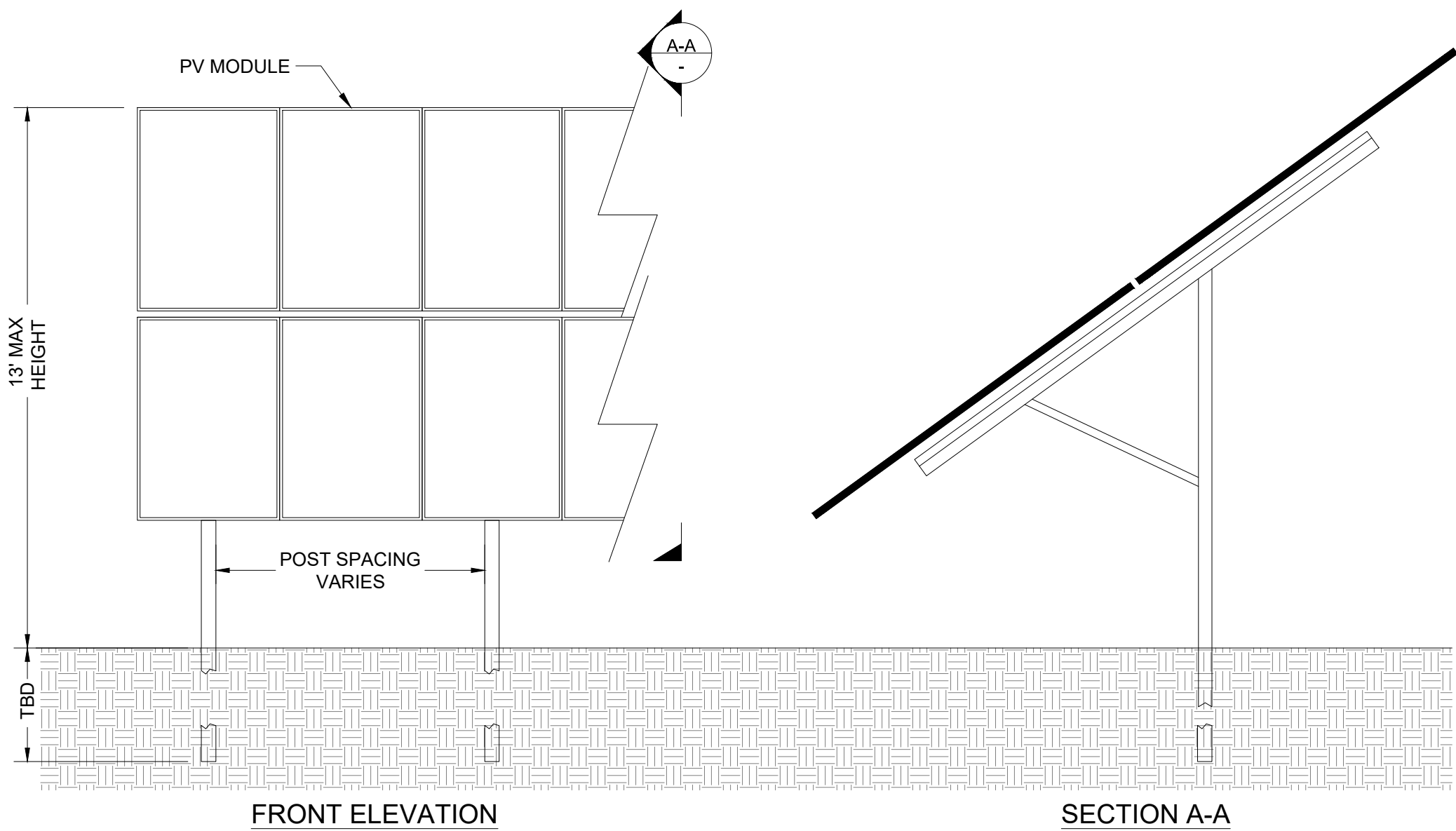
South Ripley
SOLAR PROJECT

Title

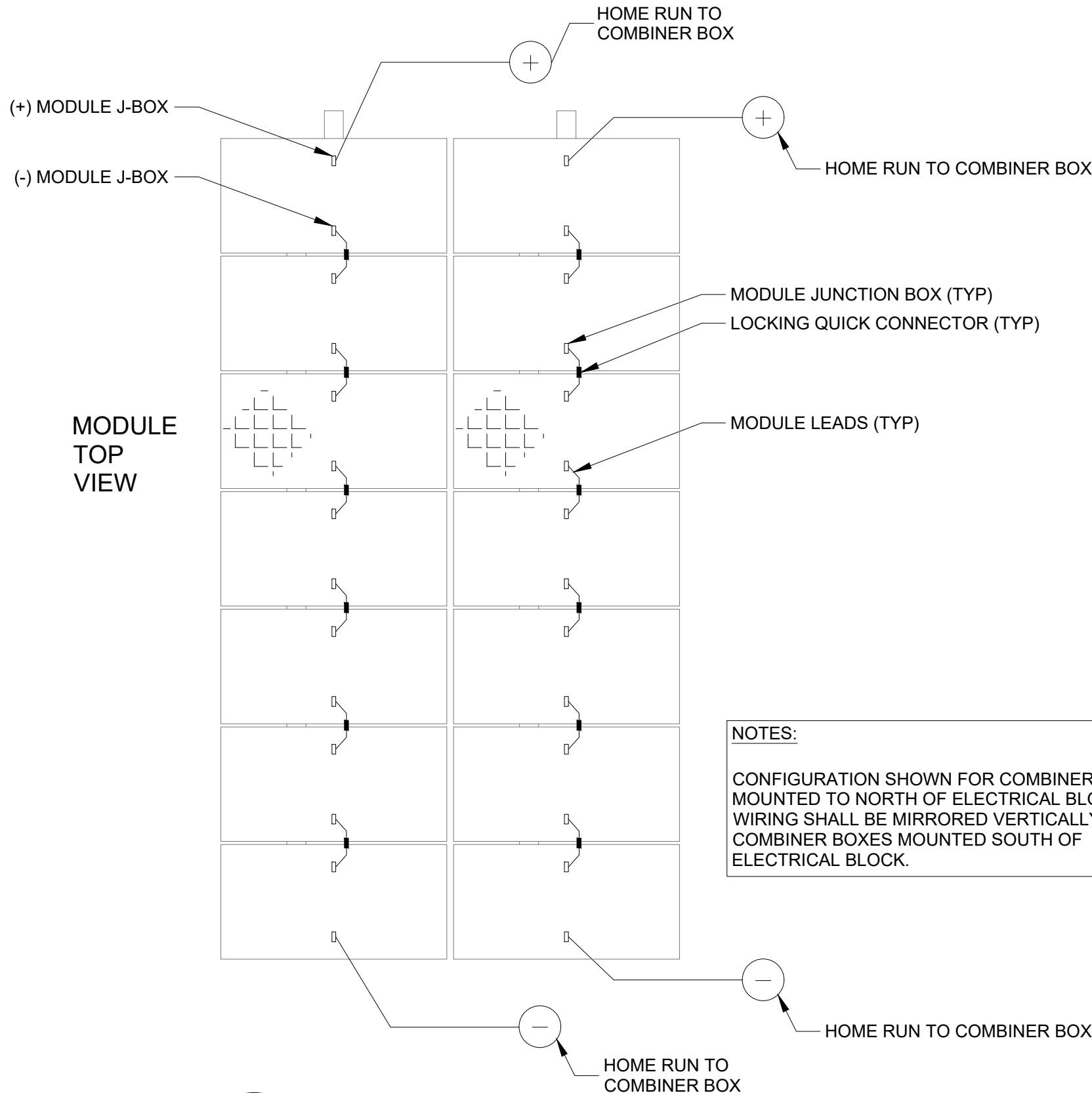
SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
TYPICAL DC ONE LINE

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D	NONE	Date	Rev
			07/23/2021	F
Drawing Number SRS-E-401-00				

CONCEPTUAL - NOT FOR CONSTRUCTION

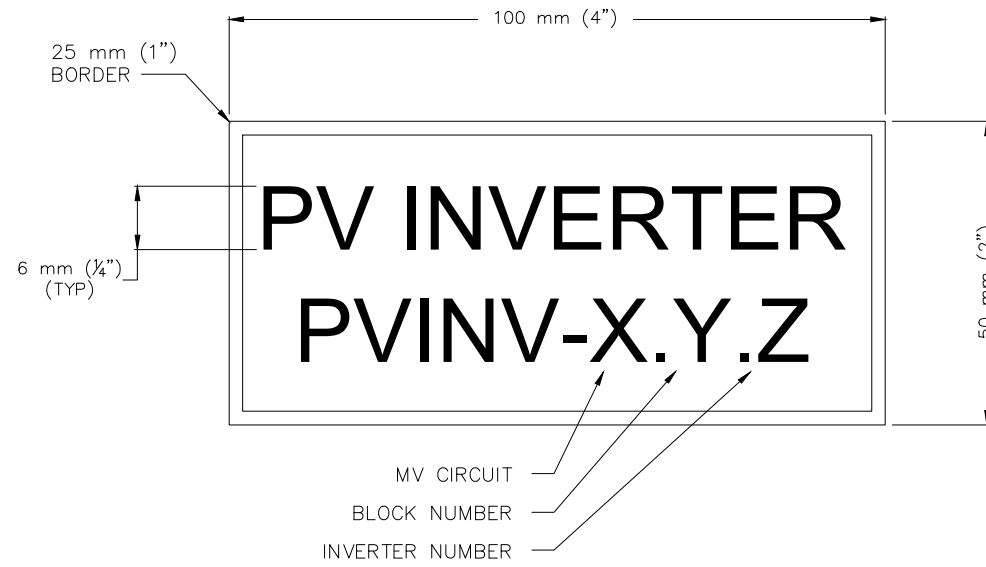


1 RACK ELEVATION DETAIL
--- (NOT TO SCALE)



2 MODULE WIRING DETAIL
--- (NOT TO SCALE)

NOTES:
CONFIGURATION SHOWN FOR COMBINER BOXES MOUNTED TO NORTH OF ELECTRICAL BLOCK. WIRING SHALL BE MIRRORED VERTICALLY FOR COMBINER BOXES MOUNTED SOUTH OF ELECTRICAL BLOCK.

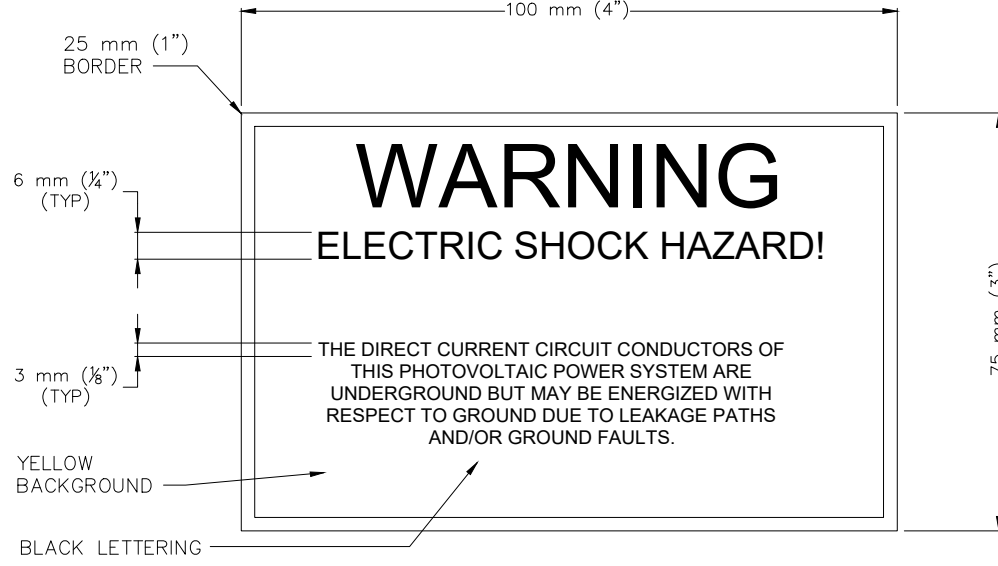


INVERTER LABEL NOTE:

1. TO BE MOUNTED TO ALL PV INVERTERS WITH RESPECTIVE NOMENCLATURE.

INVERTER LABEL

SCALE: NTS



DC WARNING LABEL NOTES:

1. TO BE MOUNTED ON ALL JUNCTION BOXES, COMBINER BOXES, DISCONNECTS AND DEVICES WHERE UNDERGROUND CIRCUITS MAY BE EXPOSED DURING SERVICE.
2. TEXT HEIGHT TO BE THE SAME AS FOR DC DISCONNECT LABEL.

INVERTER GROUND-FAULT WARNING

SCALE: NTS

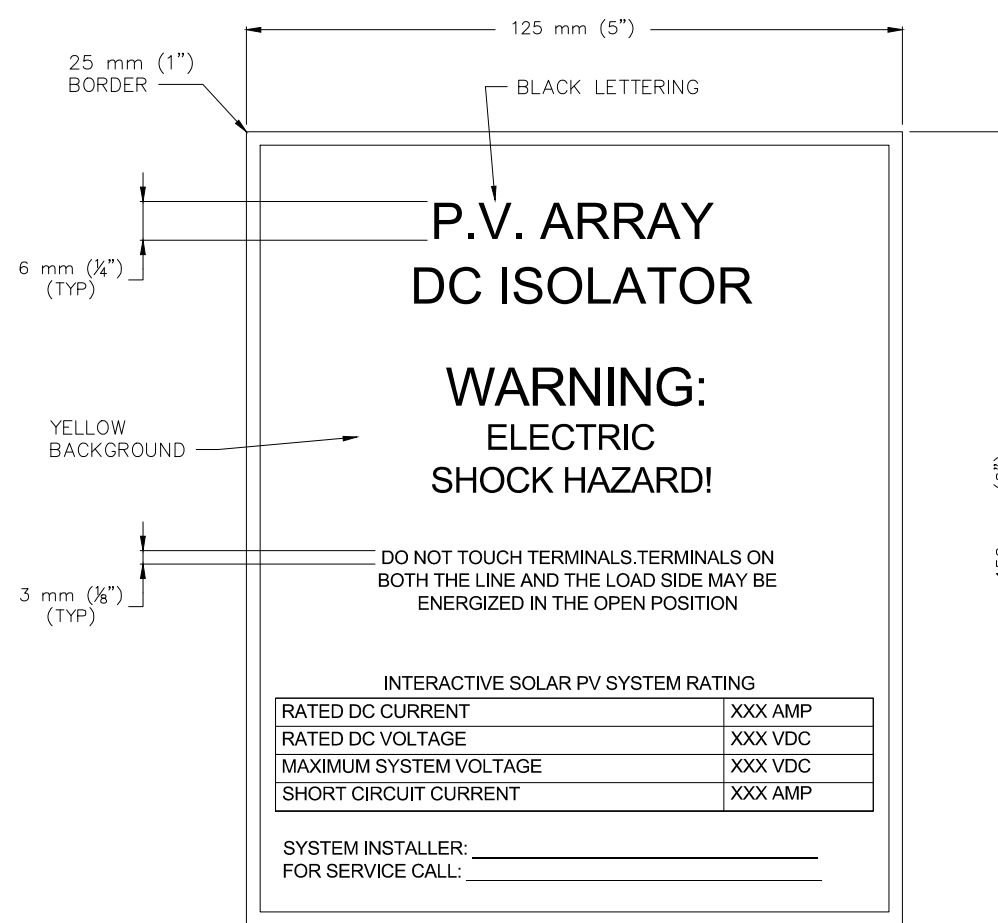
WARNING: PHOTOVOLTAIC POWER SOURCE

NOTES:

1. RED BACKGROUND WHITE LETTERING
2. MINIMUM 3/8" LETTER HEIGHT
3. ARIAL OR SIMILAR FONT, NON-BOLD
4. REFLECTIVE, WEATHER RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT (DURABLE ADHESIVE MATERIALS MAY MEET THIS REQUIREMENT)

MARKING FOR DC RACEWAYS, ENCLOSURES CABLE ASSEMBLIES AND JUNCTION BOXES

SCALE: NTS

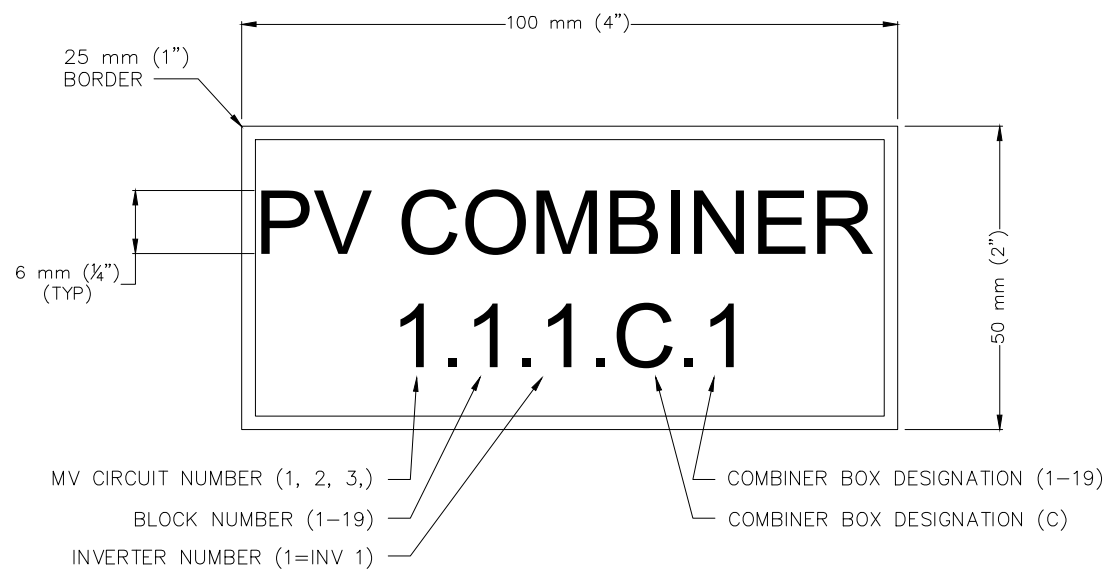


DC COMBINER BOX WARNING LABEL NOTES:

1. TO BE MOUNTED ON EACH STRING PV COMBINER BOX.
2. TEXT HEIGHTS SHALL BE THE SAME AS FOR THE DISCONNECT LABEL.

COMBINER BOX LABEL

SCALE: NTS

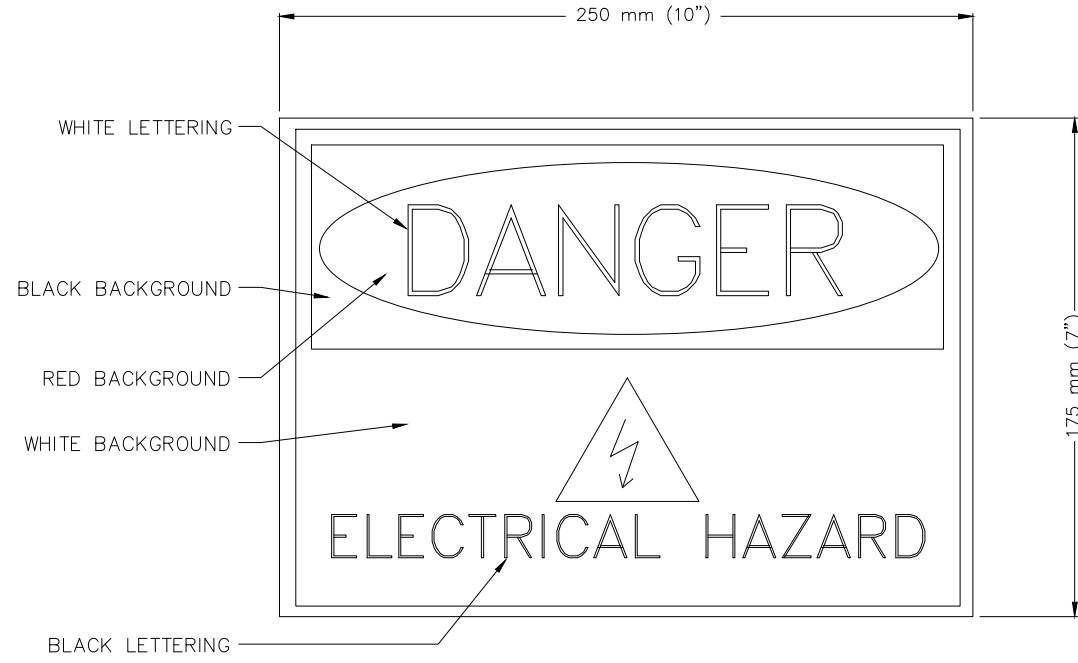


PV STRING COMBINER LABEL NOTE:

1. TO BE MOUNTED TO EACH PV STRING COMBINER BOX WITH RESPECTIVE NOMENCLATURE.

COMBINER NAMEPLATE

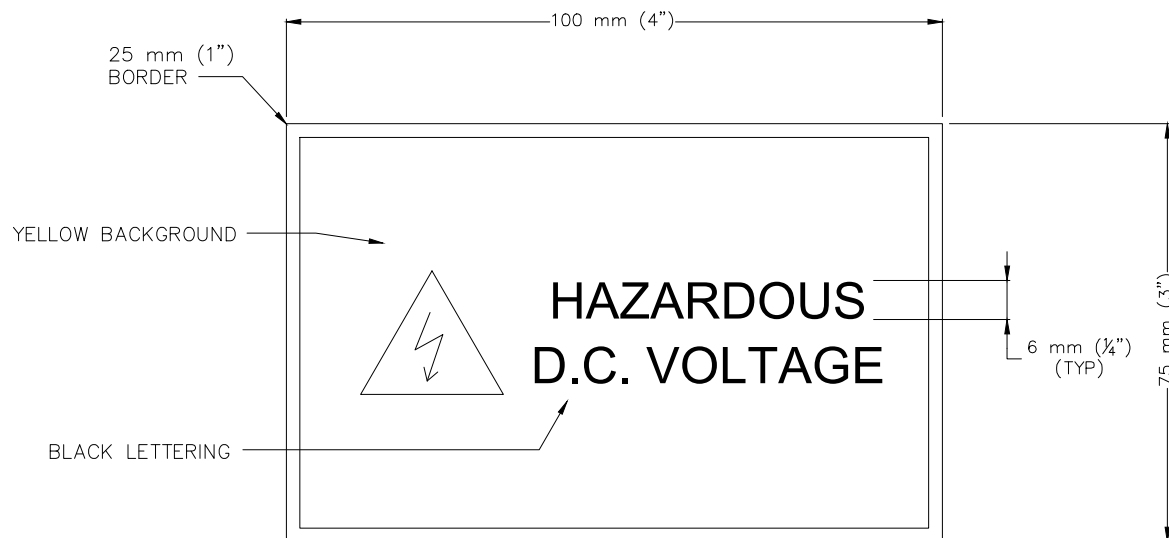
SCALE: NTS



1. SIGN SHALL BE 250 mm (10") x 175 mm (7") x 1 mm (0.04") THICK (MIN.) ALUMINUM SHEET.

PV STRUCTURE/FENCE WARNING SIGN

SCALE: NTS



PV ARRAY AND PV STRING JUNCTION BOX LABEL NOTES:

1. TO BE MOUNTED ON ALL PV ARRAYS AND STRING JUNCTION BOXES.

PV ARRAY AND PV STRING JUNCTION BOXES

SCALE: NTS



NOTES:

1. TOP OF SIGN TEXT 125 mm (5") MIN CLEAR SPACE FROM GATE OR DOOR JAMB (STRIKE SIDE).
2. PROVIDE A BLANK PANEL FOR BACK SIDE.
3. CONTRAST BETWEEN CHARACTER, SYMBOLS AND THEIR BACKGROUND SHALL BE 70% MINIMUM AND HAVE A NON-GLARE FINISH.
4. CHARACTERS SHALL HAVE A WIDTH-TO-HEIGHT RATIO OF BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO OF BETWEEN 1:5 AND 1:10.
5. SIGN SHALL BE 1 mm (0.04") THK (MIN) ALUMINUM SHEET.
6. RAISED, UPPERCASE LETTER 1 mm (1/8") TALL, MIN.

AUTHORIZED PERSONNEL SIGNAGE

SCALE: NTS

Notes

1. FOLLOW AND ADHERE TO ALL MANUFACTURERS INSTALLATION INSTRUCTIONS.
2. ALL BACKFILL AND COMPACTION SHALL COMPLY WITH GEOTECH REPORT.
3. LINE AND LOAD CONDUCTORS SHALL BE BRACED AND SUPPORTED (LASHED, HELD FIRMLY IN PLACE) IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S SPECIFICATIONS AND APPROVED INSTALLATION PRACTICES.
4. PLASTIC CABLE TIES AND FIXINGS NOT TO BE USED AS PRIMARY CABLE SUPPORT WHERE EXPOSED TO UV.
5. PROVIDE PHENOLIC NAMEPLATE WITH WHITE LETTERING ON BLACK BACKGROUND FOR EACH ELECTRICAL EQUIPMENT. PROVIDE PERMANENT MEANS OF ATTACHMENT THAT WILL NOT VIOLATE EQUIPMENT RATING OR EQUIPMENT WARRANTY.
6. REFER TO THE DRAWINGS FOR LOCATIONS AND SPACE REQUIREMENTS OF ELECTRICAL EQUIPMENT.
7. ELECTRICAL CONSTRUCTOR SHALL PROVIDE COMPLETE ELECTRICAL INSTALLATION IN ACCORDANCE WITH ESTABLISHED TECHNIQUES AND ACCEPTED PRACTICES AND ALL LOCAL, AND NATIONAL CODES.
8. ALL CONDUCTORS SHALL BE ALUMINUM OR COPPER STRANDED, AND HAVE INSULATION TEMPERATURE RATING NOT LESS THAN 90°C, UNLESS OTHERWISE NOTED.
9. CONDUCTOR COLOR CODES SHALL MEET THE NATIONAL ELECTRIC CODE (NEC).

Design Specification

ITEM	UNITS	NOTES
MOUNTING MANUFACTURER	FLEXRACK SERIES G3-X	
MOUNTING TYPE	FIXED TILT AXIS	
ARRAY AZIMUTH		
MODULE MANUFACTURER	CS6Y-560MB-AG	560Wp
MODULE TYPE	POLY c-Si	BI-FACIAL
INVERTER NAMEPLATE CAPACITY	150KVA @ 25°C	
AC NAMEPLATE	270 MWAC @ POI	
MINIMUM TEMPERATURE (DESIGN)	-20.3°C	DC SYSTEM VOLTAGE < 1500V FOR TEMPERATURE
MAXIMUM TEMPERATURE (DESIGN)	30.7°C	OUTDOOR EQUIPMENT RATED FOR OPERATION UP TO 50°C

PRELIMINARY RACK AND PILE SCHEDULE

FULL LENGTH PV TABLE QUANTITY:	11,320
PILES PER FULL LENGTH PV TABLE:	11
HALF LENGTH PV TABLE QUANTITY:	2,013
PILES PER HALF LENGTH PV TABLE:	8
TOTAL PILE QUANTITY:	140,624

F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

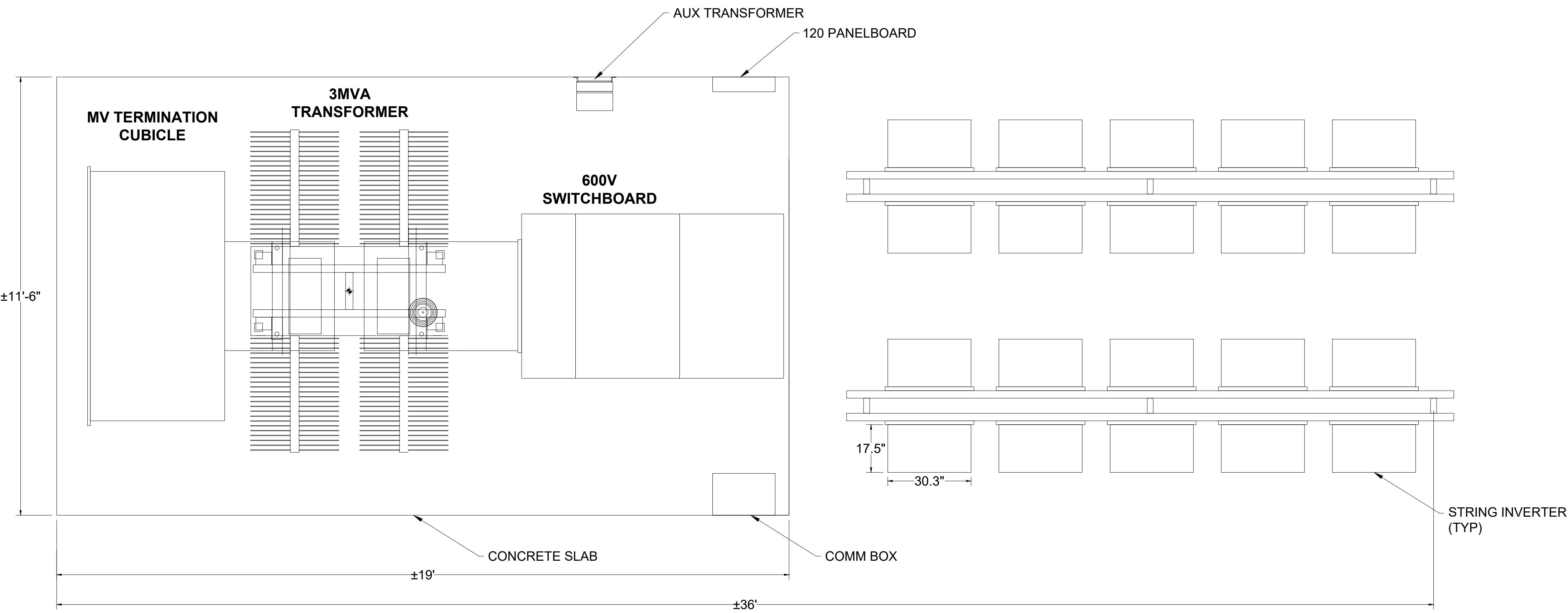
Client



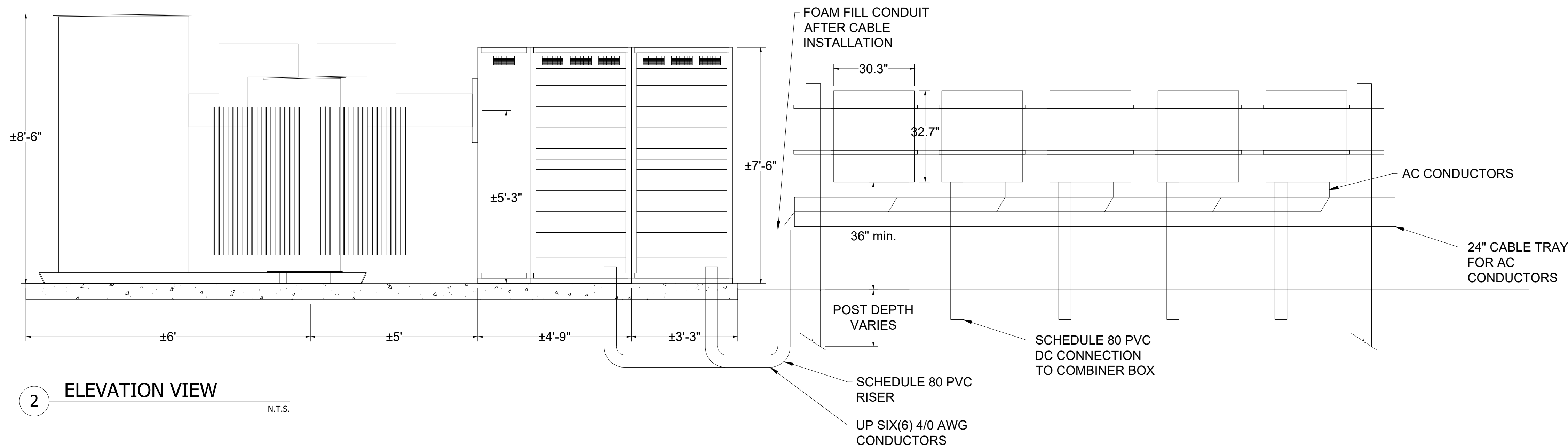
Title
SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
PV TYPICAL

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D	NONE	Date	Rev
			07/23/2021	F
	Drawing Number	SRS-E-402-01		

CONCEPTUAL - NOT FOR CONSTRUCTION



1 PLAN VIEW N.T.S.



2 ELEVATION VIEW N.T.S.

- Notes
- ELECTRICAL EQUIPMENT MUST BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS.
 - DRAWING IDENTIFIES 20 INVERTER LAYOUT WITH 3MVA TRANSFORMER, SOME ARRANGEMENTS WILL INCLUDE A SMALLER TRANSFORMER AND FEWER INVERTERS. SEE LAYOUT DRAWINGS FOR INVERTER QUANTITIES AND TRANSFORMER SIZES.
 - 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

F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M

MOTT MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

Client

G

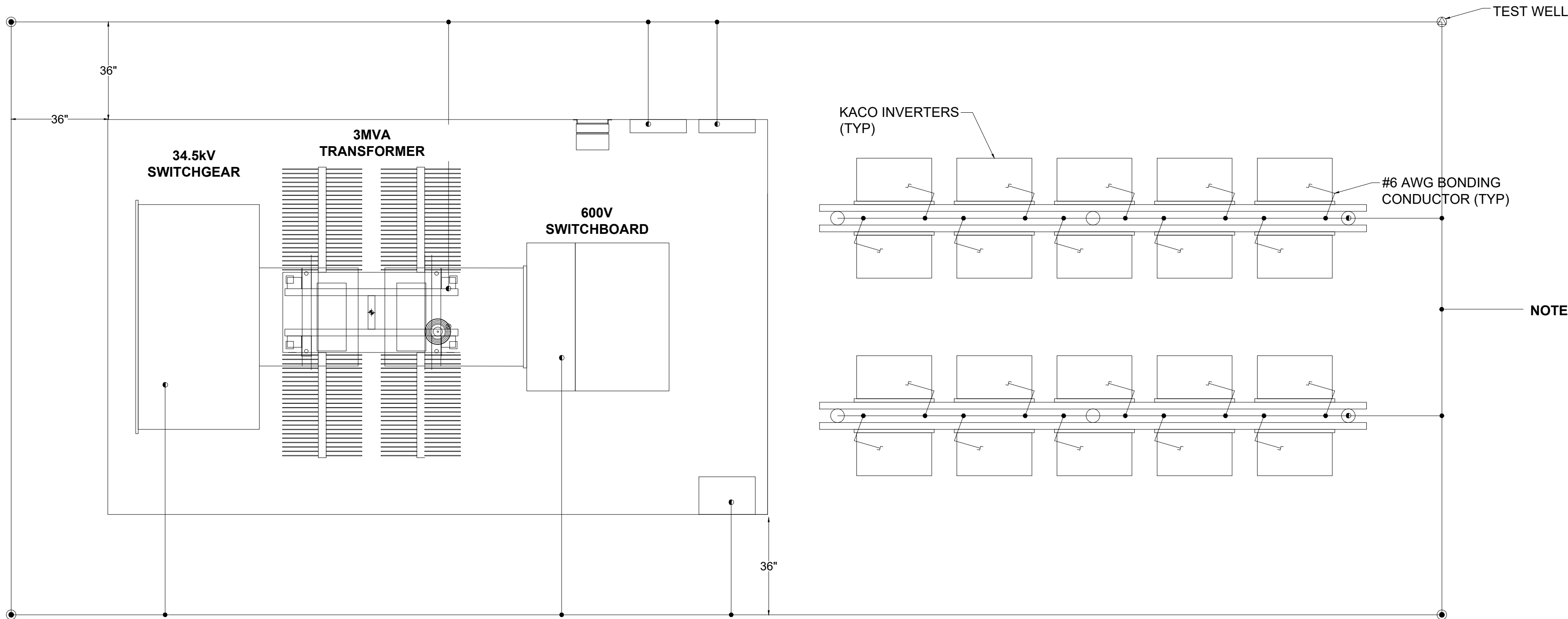
South Ripley

SOLAR PROJECT

Title SOUTH RIPLEY SOLAR TRANSFORMER STATION SECTIONS AND ELEVATIONS

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D	NONE	Date	Rev
			07/23/2021	F
Drawing Number SRS-E-403-01				

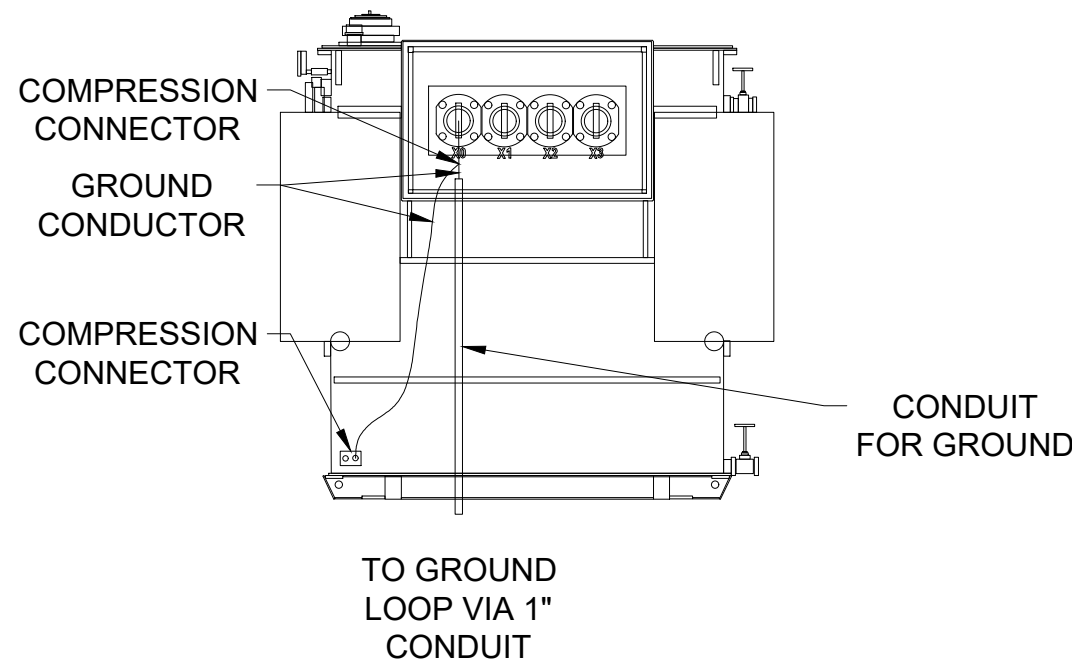
CONCEPTUAL - NOT FOR CONSTRUCTION



A PLAN VIEW

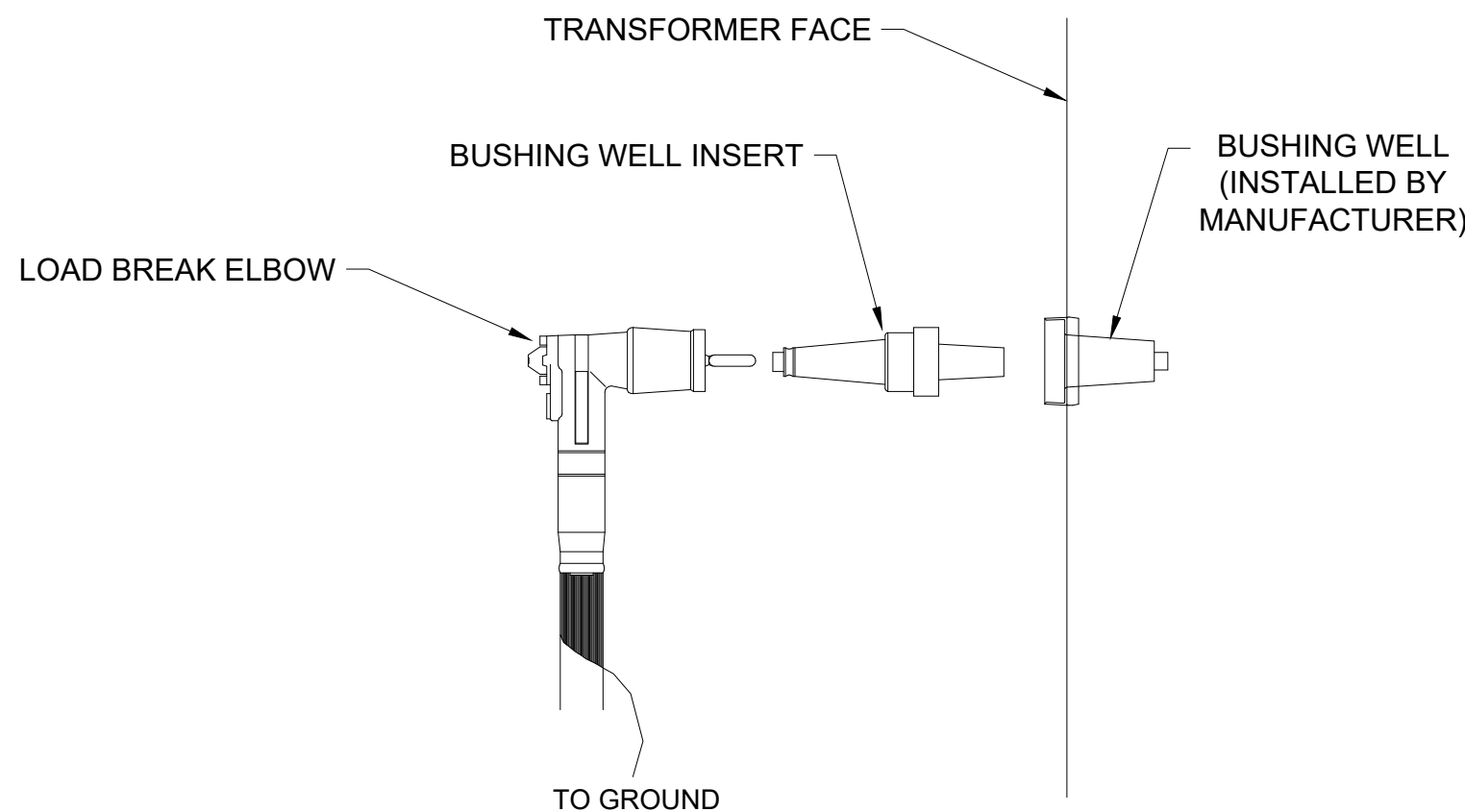
N.T.S.

LEGEND	
SYMBOL	DESCRIPTION
	GROUND ROD (2.4m)
	EXOTHERMIC CONNECTION, APPROVED FOR GROUNDING
	COMPRESSION CONNECTOR, APPROVED FOR GROUNDING
	4/0 AWG BARE COPPER WIRE
	GROUNDING TEST WELL



B GROUNDING DETAILS - 3MVA TRANSFORMER

N.T.S.



C TRANSFORMER CONNECTION DETAIL

N.T.S.

BILL OF MATERIAL		
PART NUMBER	MANUFACTURER	DESCRIPTION
LB1225X	EATON	200A LOAD BREAK BUSHING INSERT
LEJ225DD08GSX	EATON	200A LOAD BREAK ELBOW WITH JACKET SEAL AND GROUND STRAP

- Notes
- INVERTER GROUND WIRES TO BE TERMINATED ON GROUND BUS IN SWITCHBOARD.
 - EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH NEC SECTION 250.
 - DRAWING IDENTIFIES 20 INVERTER LAYOUT WITH 3MVA TRANSFORMER, SOME ARRANGEMENTS WILL INCLUDE A SMALLER TRANSFORMER AND FEWER INVERTERS. SEE LAYOUT DRAWINGS FOR INVERTER QUANTITIES AND TRANSFORMER SIZES.
 - GROUND CONDUCTOR SHALL BE RAN WITH DC HOME-RUNS FROM COMBINER BOXES TO INVERTERS. GROUND WIRE SHALL ALSO CONNECT TO EACH PILE FOR ARRAY BONDING, SEE DETAIL E BELOW.
 - TRANSFORMER ENCLOSURE SHALL BE BONDED AND TRANSFORMER NEUTRAL SHALL BE CONNECTED TO GROUND EITHER AT THE TRANSFORMER OR 120V PANEL BOARD.
 - 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.

F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

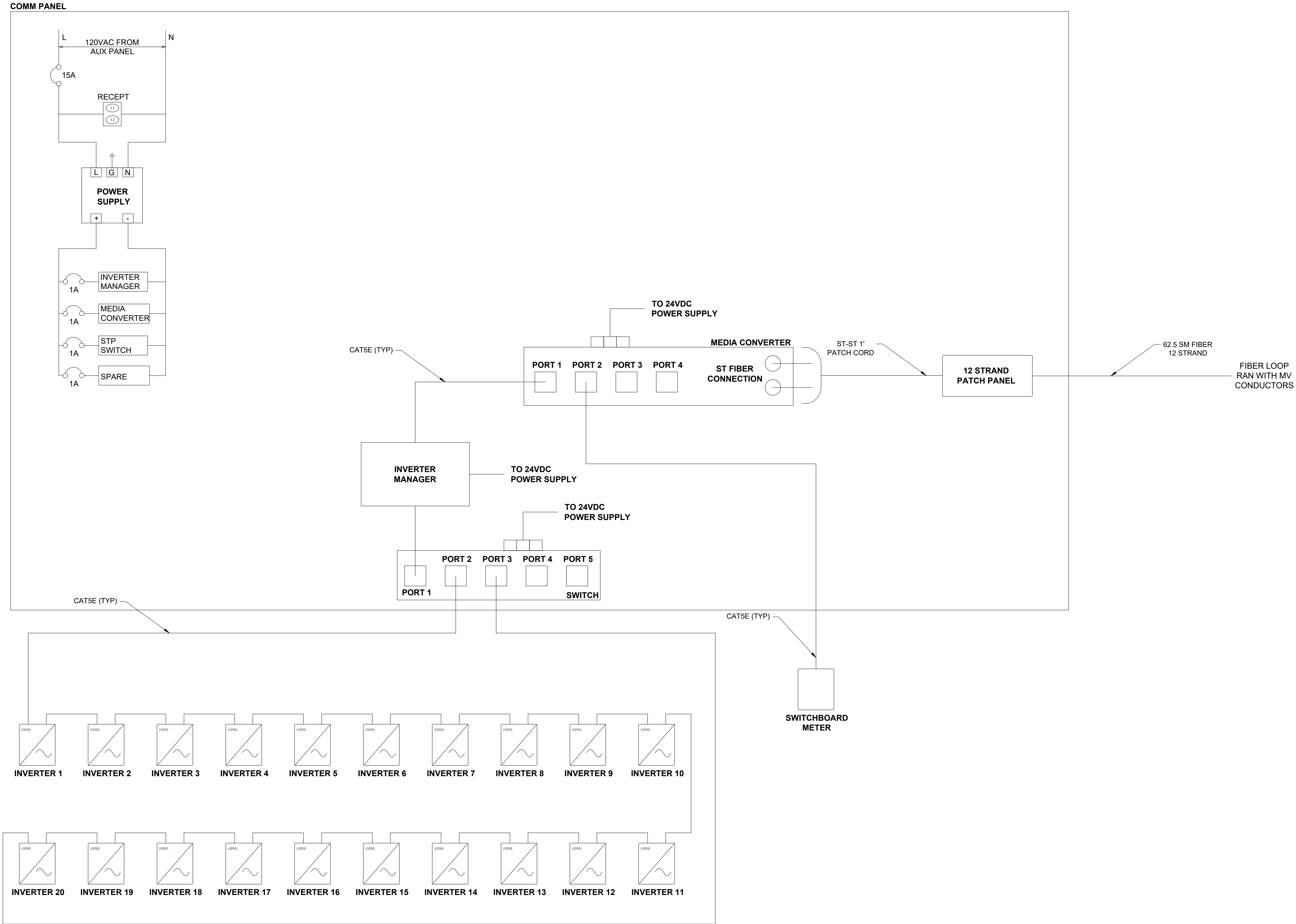
Client



Title
**SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
GROUNDING DETAILS**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D	NONE	Date	07/23/2021
	Drawing Number	SRS-E-404-01		

CONCEPTUAL - NOT FOR CONSTRUCTION



- Notes
1. COMMUNICATION SYSTEM EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
 2. DRAWING IDENTIFIES 20 INVERTER LAYOUT WITH 3MVA TRANSFORMER, SOME ARRANGEMENTS WILL INCLUDE A SMALLER TRANSFORMER AND FEWER INVERTERS. SEE LAYOUT DRAWINGS FOR INVERTER QUANTITIES AND TRANSFORMER SIZES.

F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com



Title

**SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
PCS COMMUNICATION DIAGRAM**

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D	NONE	Date	Rev
	Drawing Number		07/23/2021	F

SRS-E-405-01

NEW

Preliminary Technical Information Sheet

CanadianSolar

BIFACIAL MONO PERC

550 W ~ 565 W

UP TO 30% MORE POWER FROM THE BACK SIDE

CS6Y-550|555|560|565MB-AG

Module power up to 565 W

Module efficiency up to 20.8 %

Lower LCOE & BOS cost, cost effective product for utility power plant

Comprehensive LID / LeTID mitigation technology, up to 50% lower degradation

Compatible with mainstream trackers

Better shading tolerance

Minimizes micro-crack impacts

Heavy snow load up to 5400 Pa, wind load up to 2400 Pa*

12 Years

Enhanced Product Warranty on Materials and Workmanship*

30 Years

Linear Power Performance Warranty*

1* year power degradation no more than 2%

Subsequent annual power degradation no more than 0.45%

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2015 / Quality management system

ISO 14001:2015 / Standards for environmental management system

OHSAS 18001:2007 / International standards for occupational health & safety

CERTIFICATES*

* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. No. 1 module supplier for quality and performance/price ratio in JHS Module Customer Insight Survey. As a leading PV project developer and manufacturer of solar modules with over 40 GW deployed around the world since 2001.

* For detailed information, please refer to the Installation Manual.

CANADIAN SOLAR (USA), INC.

3000 Oak Road, Suite 400, Walnut Creek, CA 94597, USA | www.canadiansolar.com/na | sales.us@canadiansolar.com

ENGINEERING DRAWING (mm)

Rear View

Frame Cross Section A-A

CS6Y-560MB-AG / I-V CURVES

ELECTRICAL DATA | STC*

	Nominal Power (Pmax)	Opt. Voltage (Vmp)	Opt. Current (Imp)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)	Module Efficiency (%)	
CS6Y-550MB-AG	550 W	43.6 V	12.62 A	52.4 V	13.41 A	20.2%	
Bifacial	578 W	43.6 V	13.26 A	52.4 V	14.08 A	21.3%	
Gain**	10%	605 W	43.6 V	13.88 A	52.4 V	14.75 A	22.2%
	20%	660 W	43.6 V	15.14 A	52.4 V	16.09 A	24.3%
	30%	715 W	43.6 V	16.41 A	52.4 V	17.43 A	26.3%
CS6Y-555MB-AG	555 W	43.8 V	12.68 A	52.6 V	13.46 A	20.4%	
Bifacial	583 W	43.8 V	13.31 A	52.6 V	14.13 A	21.4%	
Gain**	10%	611 W	43.8 V	13.96 A	52.6 V	14.81 A	22.5%
	20%	666 W	43.8 V	15.22 A	52.6 V	16.15 A	24.5%
	30%	722 W	43.8 V	16.49 A	52.6 V	17.50 A	26.5%
CS6Y-560MB-AG	560 W	44.0 V	12.73 A	52.8 V	13.51 A	20.6%	
Bifacial	588 W	44.0 V	13.37 A	52.8 V	14.19 A	21.6%	
Gain**	10%	616 W	44.0 V	14.00 A	52.8 V	14.86 A	22.6%
	20%	672 W	44.0 V	15.28 A	52.8 V	16.21 A	24.7%
	30%	728 W	44.0 V	16.55 A	52.8 V	17.56 A	26.8%
CS6Y-565MB-AG	565 W	44.2 V	12.79 A	53.0 V	13.56 A	20.8%	
Bifacial	593 W	44.2 V	13.43 A	53.0 V	14.24 A	21.8%	
Gain**	10%	622 W	44.2 V	14.04 A	53.0 V	14.92 A	22.9%
	20%	678 W	44.2 V	15.35 A	53.0 V	16.27 A	24.9%
	30%	735 W	44.2 V	16.64 A	53.0 V	17.63 A	27.0%

MECHANICAL DATA

Specification

Data

Cell Type

Mono-crystalline

Cell Arrangement

156 (2x13 x6)

Dimensions

2422 x 1123 x 35 mm (95.4 x 44.2 x 1.38 in)

Weight

34.4 kg (75.8 lbs)

Front / Back Glass

2.0 mm heat strengthened glass

Frame

Anodized aluminum alloy

Box

IP68, 3 diodes

Cable

4.0 mm² (IEC), 12 AWG (UL)

Cable Length (Including Connector)

Portrait: 400 mm (15.7 in) (n) / 280 mm (11.0 in) (s) Landscape: 1400 mm (55.1 in) leap-frog connection: 2000 mm (78.7 in)**

Connector

T4 series or MC4

Per Panel

20 pieces

Per Container (40' HQ)

540 pieces

* For detailed information, please contact your local Canadian Solar sales and technical representatives.

ELECTRICAL DATA

Operating Temperature

-40°C ~ +85°C

Max. System Voltage

1500 V (IEC/UL) or 1000 V (IEC/UL)

Module Fire Performance

TYPE 3 (UL 61730) or CLASS C (IEC61730)

Max. Series Fuse Rating

30 A

Application Classification

Class A

Power Tolerance

0 ~ +10 W

Power Bifaciality*

70 %

* Power Bifaciality = Pmax_{front} / Pmax_{back}, both Pmax_{front} and Pmax_{back} are tested under STC, Bifaciality Tolerance ± 5 %

* The specifications and key features contained in this datasheet may deviate slightly from the actual products due to the ongoing innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the information described herein at any time without further notice. Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

CANADIAN SOLAR (USA), INC.

June 2020 | All rights reserved | PV Module Datasheet v1.0_Fix_P1_NA

KACO

new energy.

blueplanet 150 TL3

Transformerless, three-phase string inverter.

The trendsetter among inverters.

Optimized for solar power plants with 1500 volt modules

Special properties for extreme climatic conditions

Lean commissioning and maintenance via remote services

Extensive grid management functions

Farsighted technical features for future requirements

www.kaco-newenergy.com

Technical Data

DC input data	150 TL3
Max. recommended PV generator power	225 000 W
MPP range	960 ~ 1 300 V
Operating range	960 ~ 1 450 V
Rated DC voltage / start voltage	1 000 V / 1 100 V
Max. no-load voltage	1 500 V
Max. input current	160 A
Max. short circuit current I _{sc max}	300 A
Number of MPP tracker	1
Connection per tracker	1 ~ 2

AC output data	
Rated output	150 000 VA
Max. power	150 000 VA
Line voltage	660 V (3P+N)
Voltage range (Ph-Ph)	480 ~ 760 V
Rated frequency (range)	50 Hz / 60 Hz (45 ~ 65 Hz)
Rated current	3 x 132 A
Max. current	3 x 132.3 A
Reactive power / cos phi	0 ~ 100 % Snom / 0.30 ind. ~ 0.30 cap.
Max. total harmonic distortion (THD)	≤ 3 %
Number of grid phases	3

General data	
Max. efficiency	99.2 %
Europe efficiency	99.1 %
CEC efficiency	99.0 %
Standby consumption	< 10 W
Circuitry topology	Transformerless

Mechanical data	
Display	LEDs
Control units	Webserver, supports mobile devices
Interfaces	Ethernet (Modbus TCP, Sunspec) RS485 (Modbus RTU, Sunspec, KACO-protocol) USB, optional: 4x RJ45, WiFi
Fault signalling relay	Potential-free NOC max. 30 V / 1 A
DC connection	cable lug, max. 240 mm² (0.372 in²) Cu or Al
AC connection	cable lug, max. 240 mm² (0.372 in²) Cu or Al
Ambient temperature	-25 °C ~ +40 °C
Humidity	0 ~ 100 %
Max. installation elevation (above MSL)	3 000 m
Min. distance from coast	500 m
Cooling	temperature controlled fan
Protection class	IP66 / NEMA 4X
Noise emission	55.2 dB (A)
H x W x D	719 x 699 x 450 mm
Weight	78.2 kg

Certifications	
Safety	UL6109-1, UL1741, CSA-C22.2 No. 62109-1, CSA-C22.2 No. 62109-2, CSA-C22.2 No. 1071, IEC 62109-1/-2, EN 61000-6-1/-2/-3, EN 61000-3-1/-2/-12
Grid connection rule	overview see homepage / download area

Versions	S	XL
Number of DC inputs	1 ~ 2	1 ~ 2
DC switch	-	✓
DC SPD	Type 1 + 2	Type 1 + 2
AC SPD	0	0
RS485 interface SPD	0	0
Ethernet interface SPD	0	0
PID Set	0	0

standard = ✓ upgradeable = 0

in f t y u o i a

KACO new energy GmbH | Carl-Zeiss-Str. 1 | 74172 Neckarsulm | Germany

THE FLEXRACK SERIES G3-X

SOLAR FLEXRACK

A Division of Northern States Metals

150 FlexRack Series G3P-X racks

1.9MW Tucson Farms Project | West Friendship, MD

Pick your preference

Solar Developers and EPCs demand choices and continued innovation to maintain their leadership position. The Field Assembled G3-X Ground Rack joins our flagship Pre-assembled G3L and G2P series as the latest advancement in our ongoing quest to provide products which meet project-specific needs. Solar FlexRack stands alone as the only racking company able to provide you with these options.

Easy assembly

The G3-X system is easily staged on the jobsite, can be assembled in the field by crews of nearly any skill level, and has been third-party verified for speed of installation by The Industrial Time Study Institute, Inc. Multiple pre-drilled holes, slot to slot connections, and generous construction tolerances make the G3-X an efficient and adaptable model on the jobsite.

Seamless flexibility

The G3-X, available in both Portrait and Landscape orientations, leverages the knowledge gained in delivering nearly 1 GW of pre-assembled ground mounts into a racking system which is assembled in the field. This product is a perfect fit for projects where labor costs are low and field assembly is preferred.

Intelligent design

The series G3-X is value-engineered by our professional team of best-in-class engineers to optimize materials and limit components to create a cost-effective solution. Our field engineering team will work with you personally to ensure that whatever system you choose will be the most cost-effective solution for your project needs.

Bankability

Solar FlexRack is a product of Northern States Metals, a full service manufacturer with over 40 years of experience. With close to 1 GW of installed capacity Solar FlexRack has the experience and sustainability to be a reliable partner for your next successful solar project. The G3-X series also comes standard with a 20 year warranty.

+ TURN-KEY SERVICES

We're here for you because we care about your projects. From engineering to installation, you can also leverage our expert turn-key services on any job from start to finish.

Contact us to see how our team of project engineers, field techs, geologists and other specialists can help make sure your next project is a success.

Experience the Flex

CALL US TO FIND OUT HOW THIS GROUND-BREAKING RACK CAN IMPROVE HOW YOU DO SOLAR

1.888.380.8138 | SOLARFLEXRACK.COM

SOLAR FLEXRACK

A Division of Northern States Metals

FLEXRACK SERIES G3-X | Specifications

MATERIALS	
Hardware	Mounting hardware is Magni 560 coated standard. Stainless available upon request.
Racking Structure	G 90 galvanized steel standard. Higher coatings available for high corrosion areas
Foundations	Hot Dipped Galvanized

DESIGN	
Orientation	Landscape or Portrait
Tilt Angle	5° - 45° (custom tilts can be accommodated)
Adjustability	20% E/W Landscape, 20% E/W Portrait
Wind Speed	Any
Snow Load	Any
Module Accommodation	Any 60 or 72 cell framed module along with any frameless module
Module Mounting Type	Direct bolt to vertical rails (bonded connection)
Foundation Accommodation	W-Section, SmartPost, Round Post, Helical Pier, Ballast
Warranty	20 Years

CERTIFICATIONS AND TESTING	
UL Compliance	UL 2703 (Issue 2) compliant.
Wind Tunnel Testing	CPP third party testing laboratory
Structural Connection Testing	Accutek Testing Laboratory
Code Compliance	Racks are designed using local environmental loads (wind, snow, and seismic) per the governing and/or local building codes
Finite Element Modeling	Risa 3D
Engineering	PE stamped drawings and calculations

SERVICES	
Geotechnical Engineering	Field investigation and engineering, laboratory testing, engineering analysis, push/pull tests, foundation design
Structural/Civil Engineering	Preliminary investigation, engineering, layout
Installation	Foundation, racking, module, and module pre-wiring

Solar FlexRack, a division of Northern States Metals, is an integrated solar company that offers custom-designed, fixed tilt ground mount and single-axis solar tracking systems in the commercial, community solar and utility-scale solar mounting industries. Solar FlexRack offers full turnkey packages including engineering, geotechnical, pullout testing, field, layout, and installation services to address the actual site conditions of an installation and provide a full scope of services from design to delivery and installation. Solar FlexRack has completed over 2 GW of solar racking installations in 40 states across America and five countries globally.

For more information on Solar FlexRack visit: www.solarflexrack.com

Notes

1. EQUIPMENT IS PRELIMINARY AND SUBJECT TO CHANGE WITH FINAL DETAILED DESIGN.

F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M

M

MOTT MACDONALD

101 Station Drive

Suite 130

Westwood, MA 02090

United States

T +1 (781) 915-0015

F +1 (781) 915-0001

W www.mottmac.com

Client

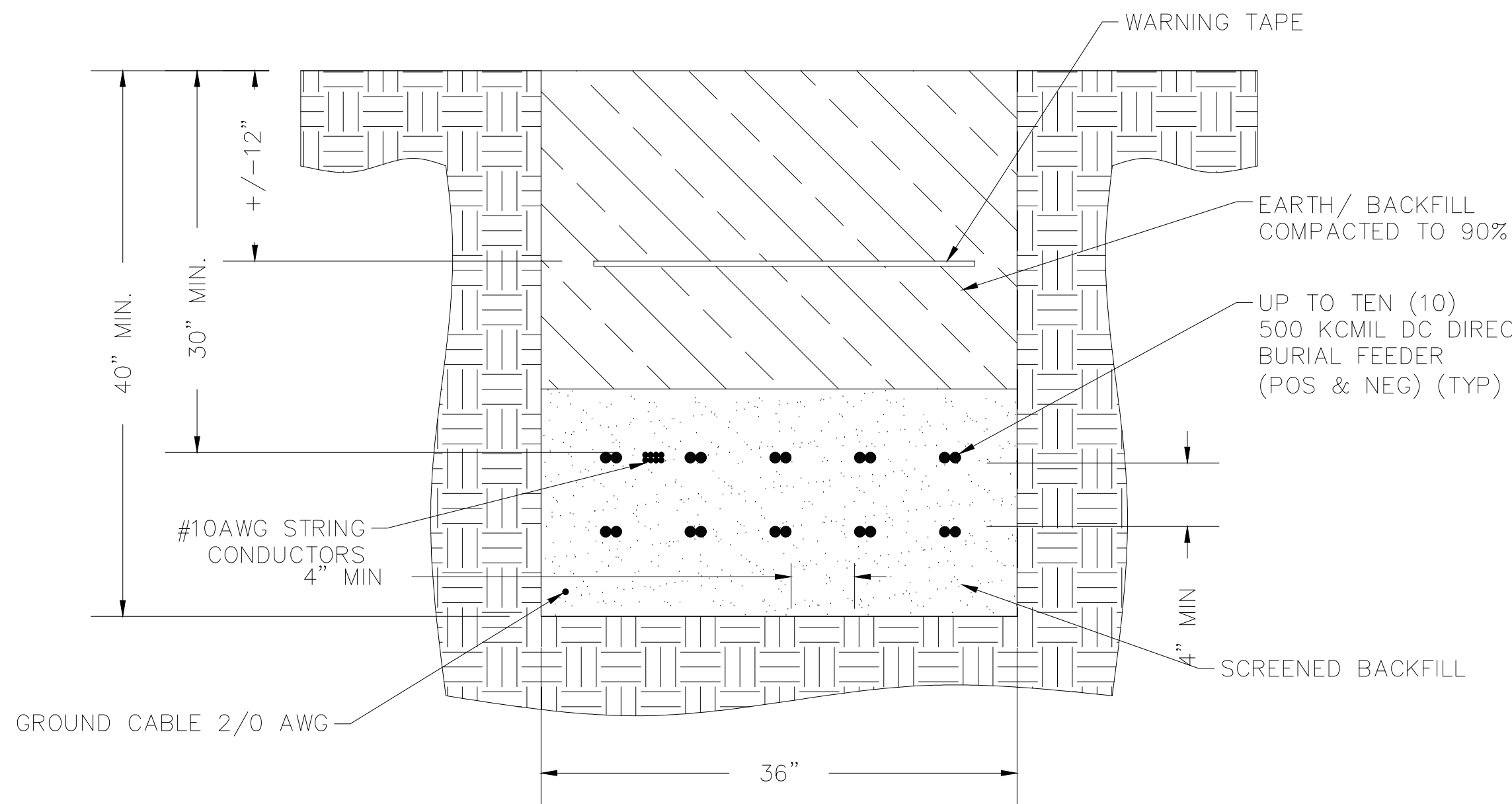
Title

SOUTH RIPLEY SOLAR ELECTRICAL SOLAR EQUIPMENT SPECIFICATIONS

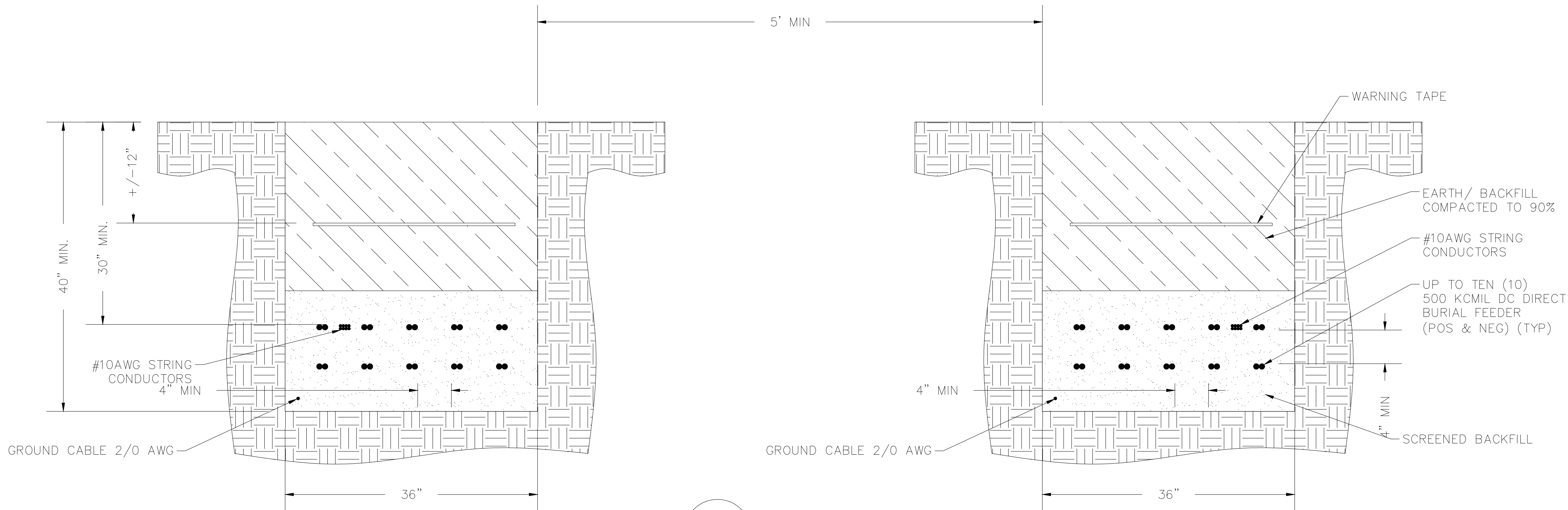
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D NONE	Date 07/23/2021	Rev	F
	Drawing Number	SRS-E-406-01		

© Mott MacDonald
It is a violation of New York state Education Law for any person, unless acting under the direction of a licensed engineer to alter this document in any way.
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

CONCEPTUAL - NOT FOR CONSTRUCTION



1 40" x 36" TRENCH DETAIL
1-1/2" = 1'-0"



2 TWO (2) 40" x 36" TRENCH DETAIL
1-1/2" = 1'-0"

CONCEPTUAL - NOT FOR CONSTRUCTION

- Notes
- TRENCHING SHALL BE COMPLETED IN ACCORDANCE WITH THE NEC ARTICLE 300.
 - AMPACITY CALCULATIONS SHALL BE COMPLETED DURING DETAILED DESIGN TO CONFIRM TRENCHING ARRANGEMENTS.
 - CABLE SPACING AND TRENCH SPACING IS PRELIMINARY AND SUBJECT TO CHANGE WITH FINAL DETAIL DESIGN.

F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	ISSUED FOR REVIEW	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

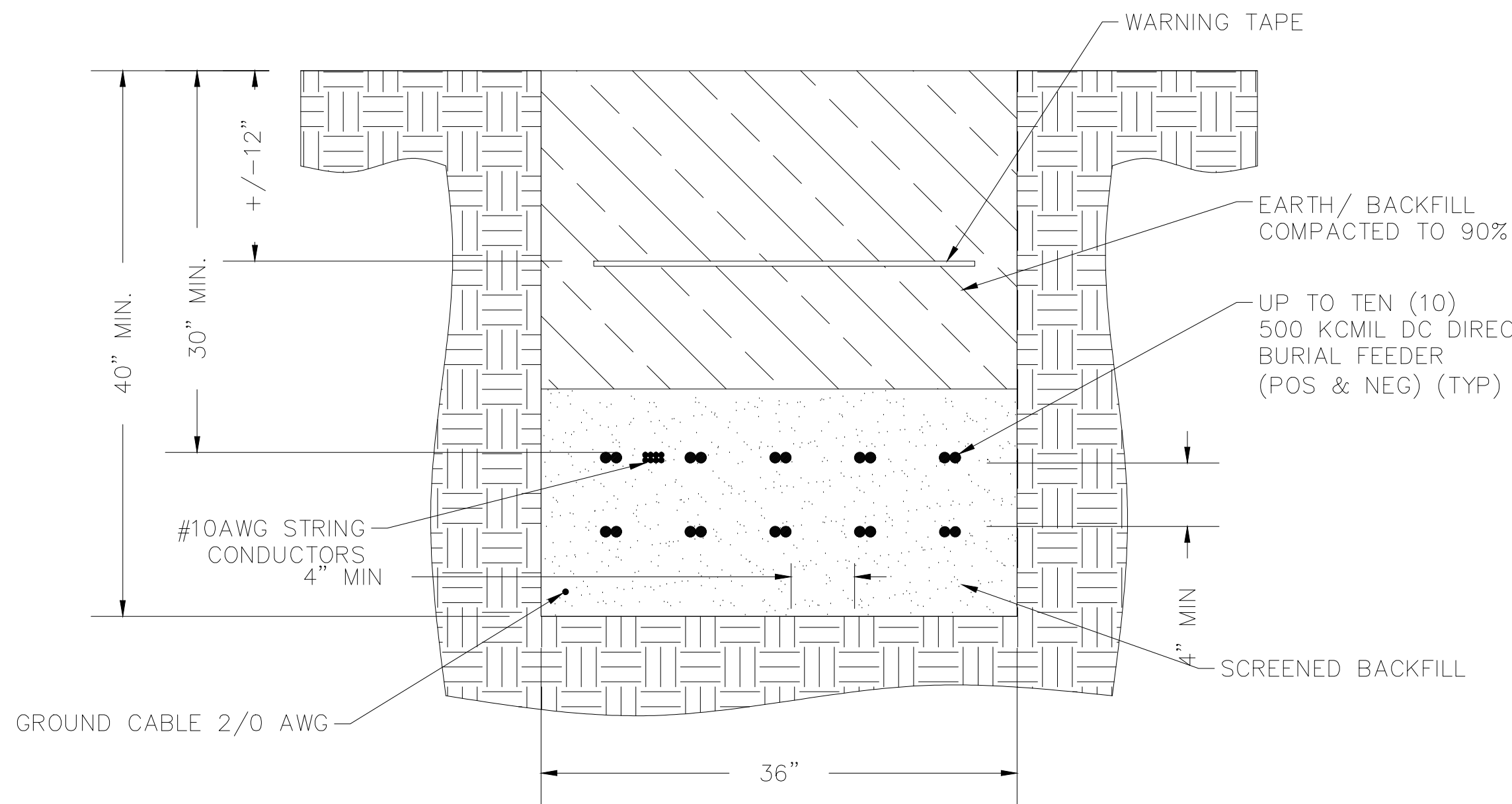
Client

South Ripley
SOLAR PROJECT

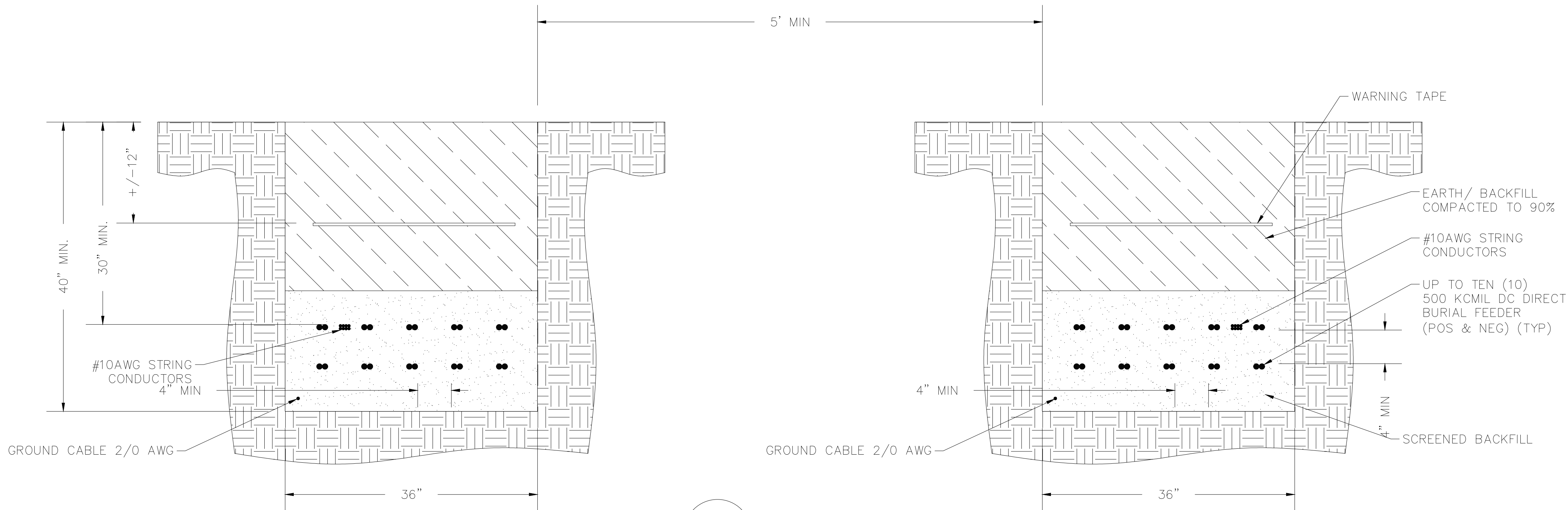
Title

SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
TYPICAL DC TRENCH DETAILS

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D	NONE	Date	Rev
	Drawing Number	SRS-E-407-01		



1 30" x 36" TRENCH DETAIL
1-1/2" = 1'-0"



2 TWO (2) 30" x 36" TRENCH DETAIL
1-1/2" = 1'-0"

CONCEPTUAL - NOT FOR CONSTRUCTION

- Notes
- TRENCHING SHALL BE COMPLETED IN ACCORDANCE WITH THE NEC ARTICLE 300.
 - AMPACITY CALCULATIONS SHALL BE COMPLETED DURING DETAILED DESIGN TO CONFIRM TRENCHING ARRANGEMENTS.
 - CABLE SPACING AND TRENCH SPACING IS PRELIMINARY AND SUBJECT TO CHANGE WITH FINAL DETAIL DESIGN.

F	07/23/2021	JLL	ISSUED FOR 94-C	JS	JAB
E	07/14/2021	JLL	ISSUED FOR REVIEW	JS	JAB
D	06/18/2021	JLL	ISSUED FOR REVIEW	DD	JAB
C	06/04/2021	JLL	ISSUED FOR REVIEW	DD	JAB
B	05/21/2021	JLL	RE-ISSUED FOR 94C	DD	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com

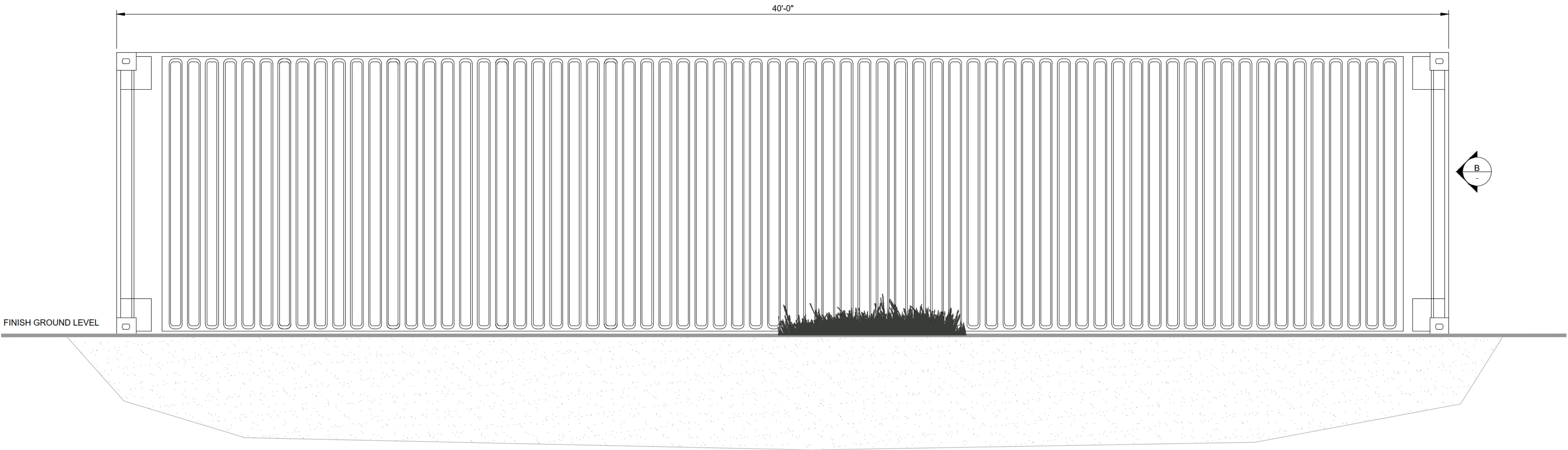
Client

South Ripley
SOLAR PROJECT

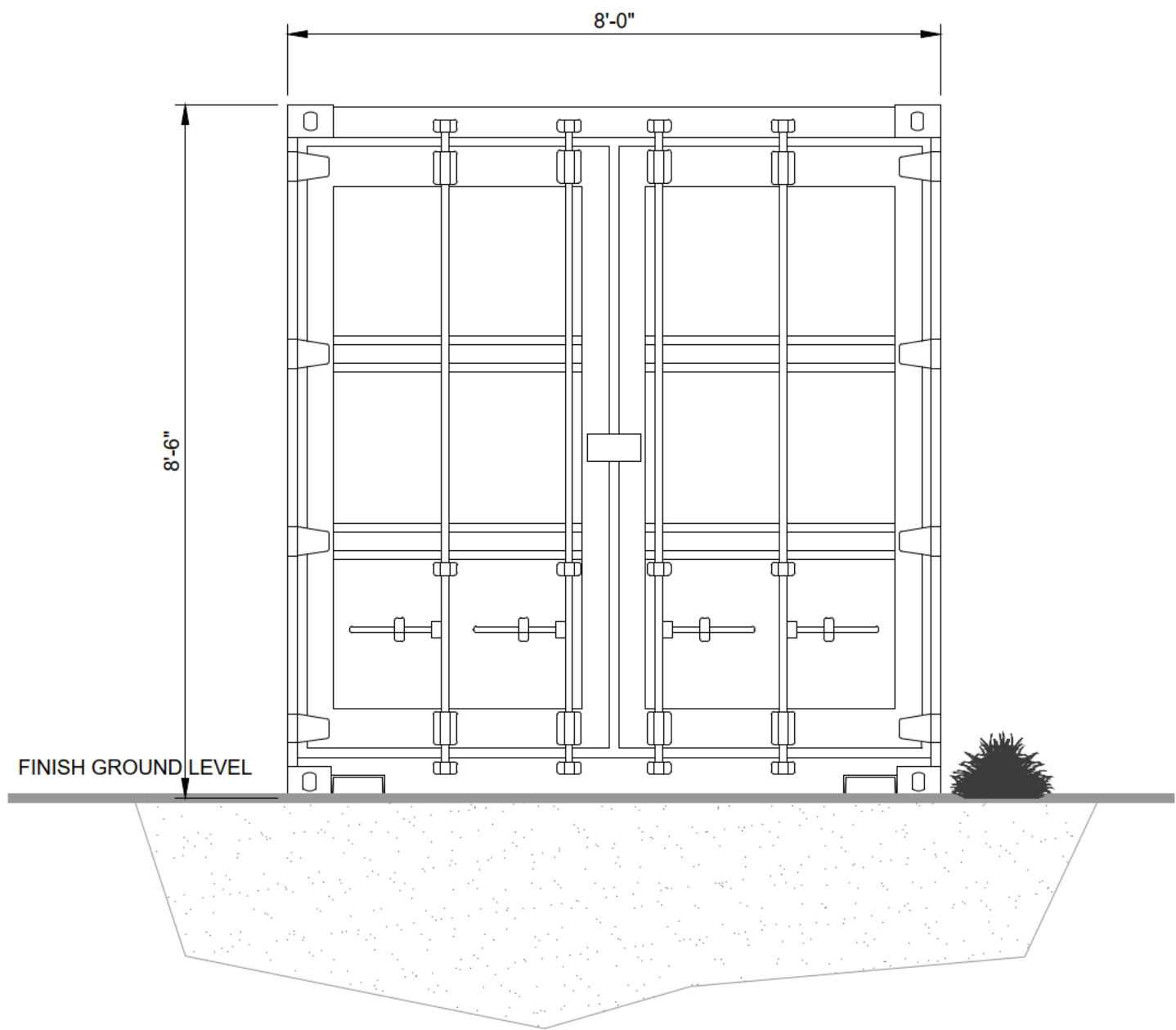
Title

SOUTH RIPLEY SOLAR
ELECTRICAL SOLAR
TYPICAL DC TRENCH DETAILS

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	BG	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D		Date	Rev
	NONE		07/23/2021	F
	Drawing Number			
		SRS-E-408-01		



40FT O&M STORAGE CONTAINER-SIDE VIEW
NOT TO SCALE



40FT O&M STORAGE CONTAINER-FRONT VIEW
NOT TO SCALE

- Notes
- EQUIPMENT IS PRELIMINARY AND SUBJECT TO CHANGE WITH FINAL DETAILED DESIGN.
 - 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

Drawing Reference

A	12/08/2021	JLL	ISSUED FOR 94-C	JS	JAB
Rev	Date	Drawn	Description	Ch'k'd	App'd

M
MOTT
MACDONALD

101 Station Drive
Suite 130
Westwood, MA 02090
United States
T +1 (781) 915-0015
F +1 (781) 915-0001
W www.mottmac.com



Title

SOUTH RIPLEY SOLAR
EXTERIOR O&M STORAGE -
SUPPLEMENTAL A

PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION	Designed	JLL	Eng check	JS
	Drawn	JLL	Approved	JAB
	Dwg check		Project Mngr	RA
	Scale at ANSI D		Date	Rev
	NONE		12/08/2021	A
	Drawing Number			
SRS-E-409-01_SUP_A				