APPENDIX D ONE LINE DIAGRAM AND SWITCHYARD LAYOUT

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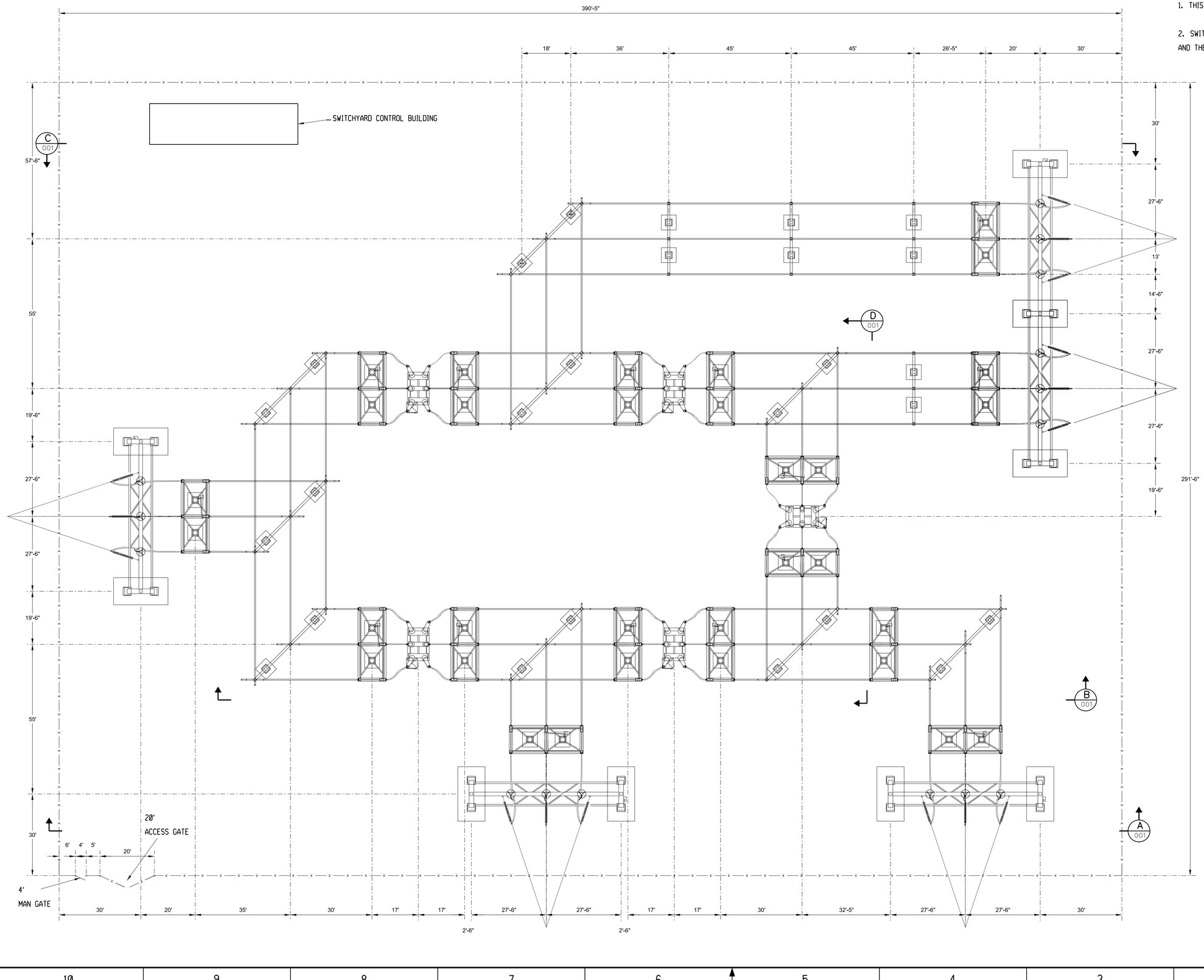
NOTE:

1. THIS DRAWING IS CONCEPTUAL AND IS NOT INTENDED FOR DETAIL DESIGN.

2. SWITCHYARD SHALL HAVE A MINIMUM 30' DRIVE ISLE BETWEEN EQUIPMENT AND THE FENCE.



N

NOT FOR CONSTRUCTION
FOR PERMITTING ONLY

REV	DATE	DESCRIPTION	DRAWN	CHECKED	LEAD DESIGNER	ENGINEER/ TECH. SPEC.	ENGINEER MANAGER	PROJECT MANAGER
A	03 27 13	ISSUED FOR 3D MODEL	PA	AB	PA	AB	AB	RH	AZ

PRELIMINARY STATUS — DATE — REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.
LDE

APPROVED STATUS — DATE — REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.
LDE

ORIGINATING PERSONNEL

DRAWN BY: P. ANGUIANO
CHECKED BY: A. BOLSTAD
LEAD DESIGNER: P. ANGUIANO
ENGINEER/TECH SPECIALIST: A. BOLSTAD
PROJECT ENGINEERING MANAGER: R. HILL
PROJECT MANAGER: A. ZIMMERMAN

Zero Harm — Leadership, No Incidents, Safe Behavior

PROFESSIONAL ENGINEER'S SEAL

ORIGINALLY PREPARED UNDER THE RESPONSIBLE SUPERVISION OF
PE: _____ STATE: _____
LIC. NO.: _____ DATE: _____

WorleyParsons
resources & energy

CLIENT/PROJECT TITLE
NEXTERA BLYTHE SOLAR ENERGY CENTER
BLYTHE SOLAR POWER PROJECT
RIVERSIDE COUNTY, CA

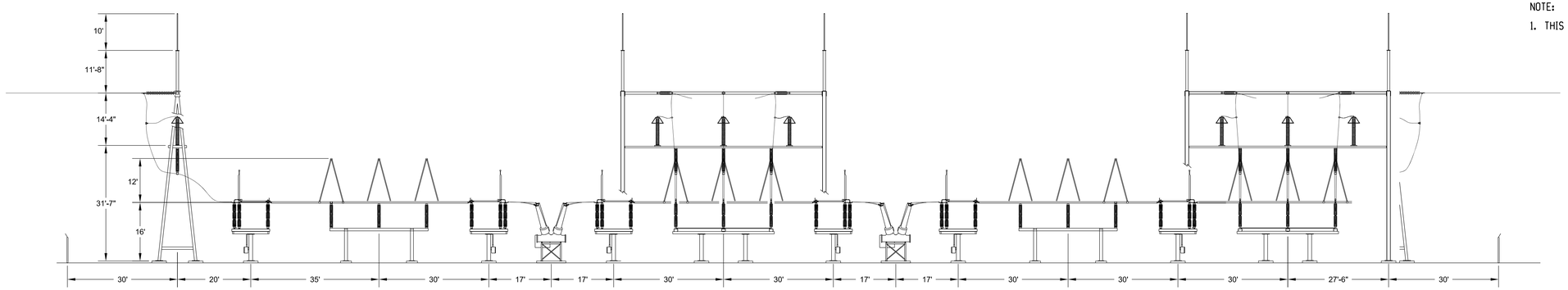
230kV SWITCHYARD GENERAL ARRANGEMENT

SCALE: 1/16" = 1'-0"
DRAWING SIZE: ARCH D (36" x 24")
WORLEYPARSONS DWG. NO.: BSPP-1-SK-111-102-002
REV: A

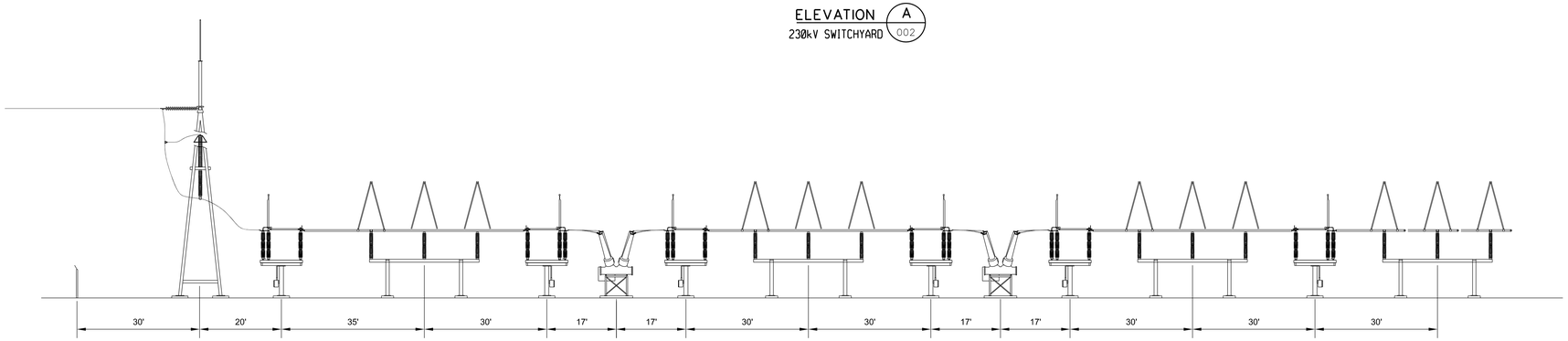
$$DESIGN-FILE-NAME$$
$$$DATE$$$ $$$$TIME$$$$

NOTE:

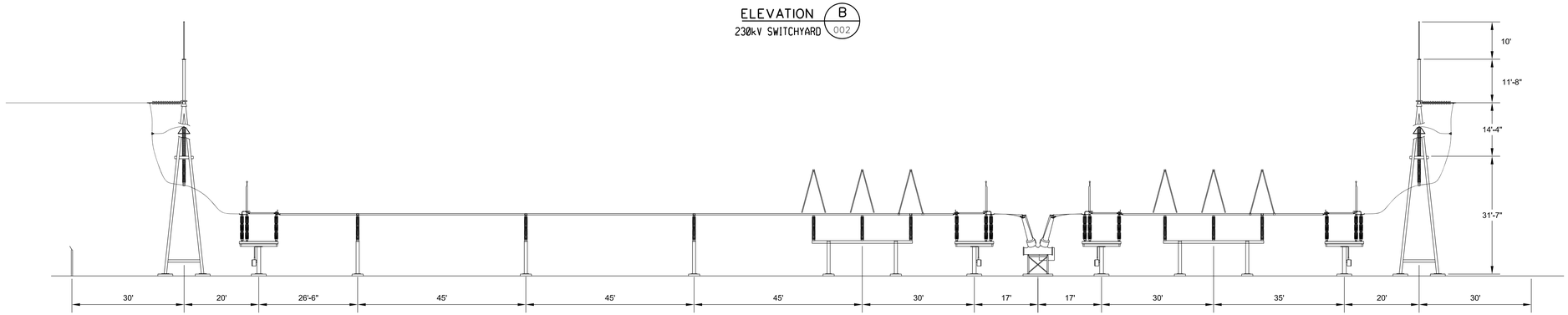
1. THIS DRAWING IS CONCEPTUAL AND IS NOT INTENDED FOR DETAIL DESIGN.



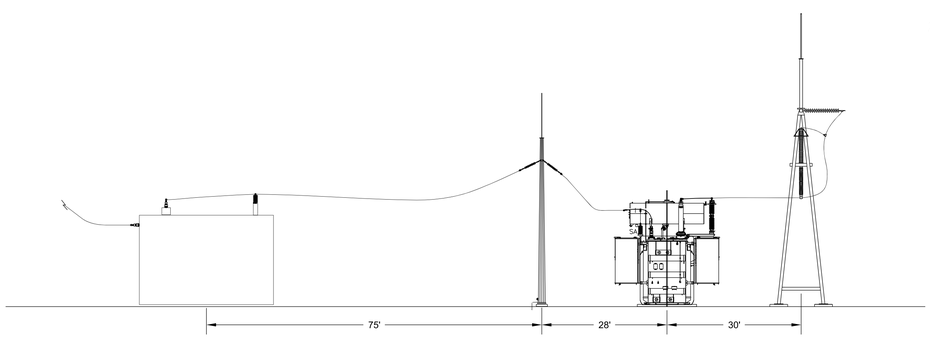
ELEVATION A
230kV SWITCHYARD 002



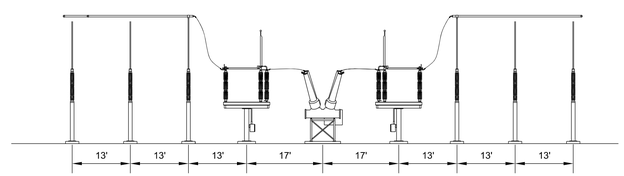
ELEVATION B
230kV SWITCHYARD 002



ELEVATION C
230kV SWITCHYARD 002



34.5kV CIRCUIT BREAKER AND
GSUs AT EACH UNIT IN THE FIELD
(UNIT STEP UP TRANSFORMER)



ELEVATION D
230kV SWITCHYARD 002

NOT FOR CONSTRUCTION
FOR PERMITTING ONLY

REV	DATE	DESCRIPTION	DRAWN	CHECKED	LEAD DESIGNER	ENGINEER/ TECH. SPEC.	LEAD ENGINEER	PROJ. ENGR. MANAGER	PROJECT MANAGER
B	03 27 13	ISSUED FOR 3D MODEL	PA	AB	PA	AB	AB	RH	AZ
A	02 07 13	ISSUED FOR 3D MODEL	PA	AB	PA	AB	AB	RH	AZ

PRELIMINARY STATUS — DATE — LDE
REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.

APPROVED STATUS — DATE — LDE
REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.

ORIGINATING PERSONNEL

DRAWN BY: P. ANGUIANO
CHECKED BY: A. BOLSTAD
LEAD DESIGNER: P. ANGUIANO
ENGINEER/TECH SPECIALIST: A. BOLSTAD
PROJECT ENGINEERING MANAGER: R. HILL
PROJECT MANAGER: A. ZIMMERMAN

PROFESSIONAL ENGINEER'S SEAL

Zero Harm — Leadership, No Incidents, Safe Behavior

ORIGINALLY PREPARED UNDER THE RESPONSIBLE SUPERVISION OF
PE: _____ STATE: _____
LIC. NO.: _____ DATE: _____

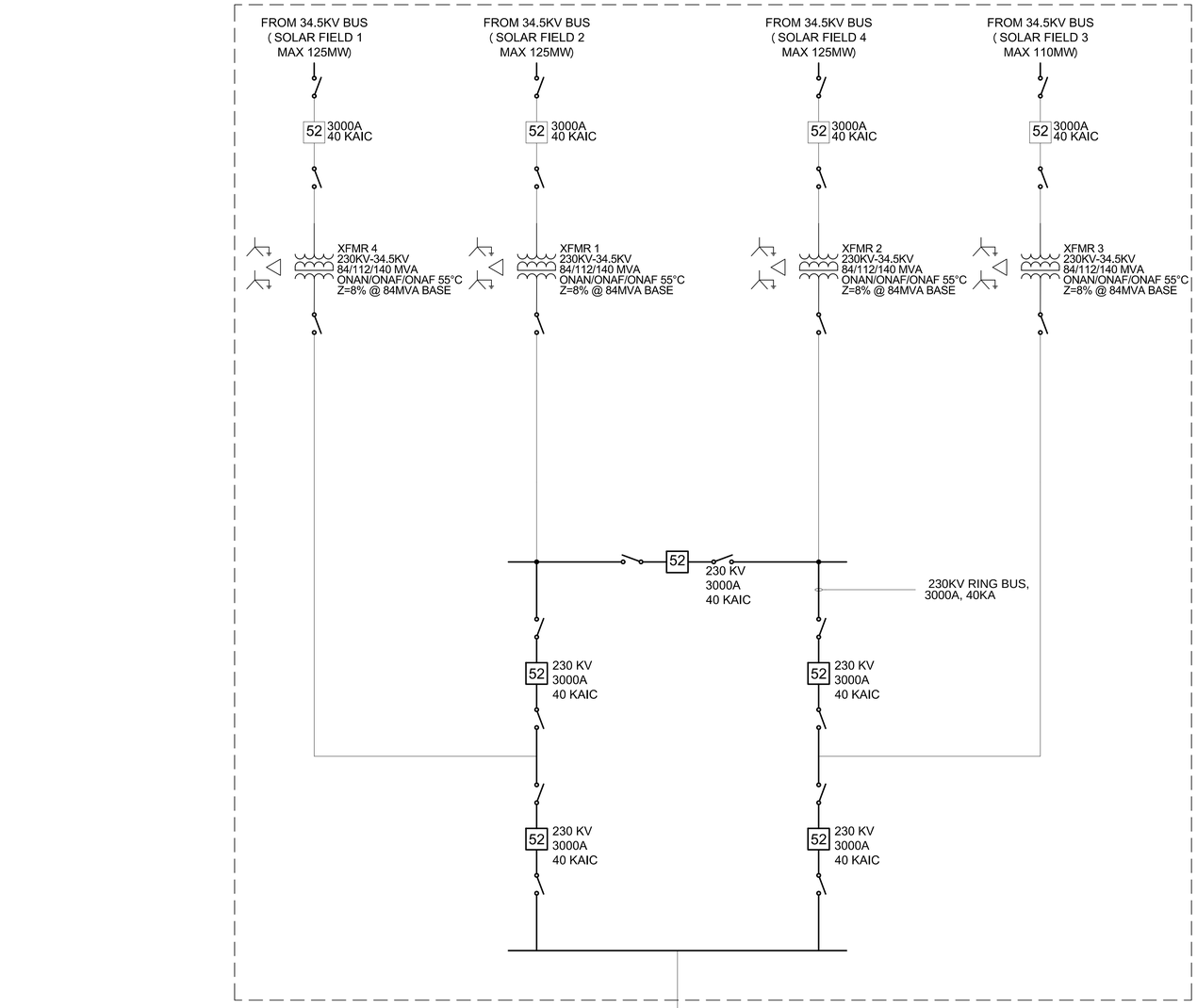
WorleyParsons
resources & energy

CLIENT/PROJECT TITLE
NEXTERA BLYTHE SOLAR ENERGY CENTER
BLYTHE SOLAR POWER PROJECT
RIVERSIDE COUNTY, CA

230kV SWITCHYARD
ELEVATIONS

SCALE: 1/16" = 1'-0"
DRAWING SIZE: ARCH D (36" x 24")
WORLEYPARSONS DWG. NO.: BSPP-1-SK-111-102-001
REV: B

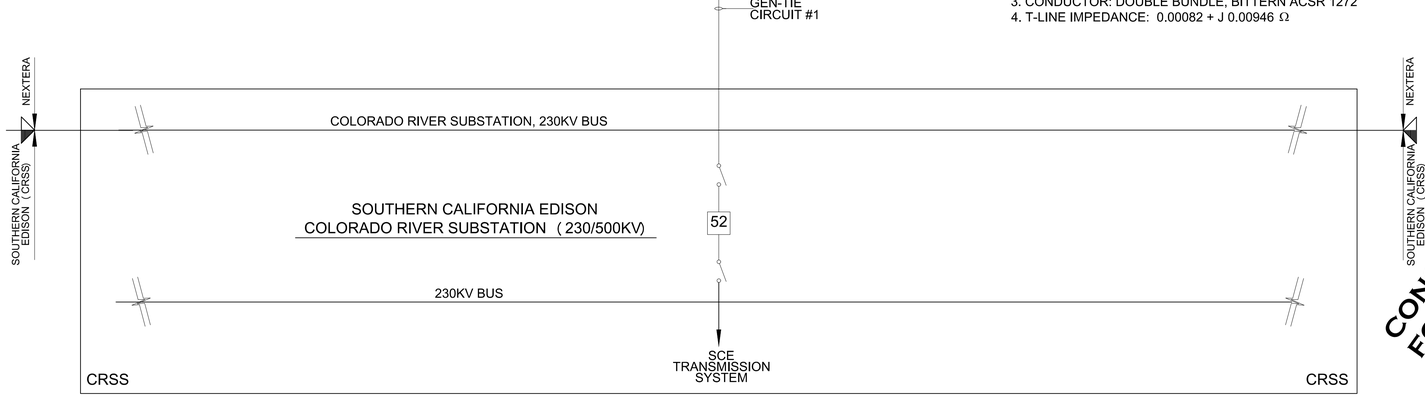
$$DESIGN-FILE-NAME$$
$$$$DATE$$$$ $$$$TIME$$$$



NOTES:

1. NOMINAL GENERATION OUTPUT (485 MW) EXCLUDES POWER SYSTEM LOSSES.

GEN-TIE DATA:
1. DISTANCE: 10.00 MILES
2. NO. CIRCUITS: 1
3. CONDUCTOR: DOUBLE BUNDLE, BITTERN ACSR 1272
4. T-LINE IMPEDANCE: 0.00082 + J 0.00946 Ω



CONCEPTUAL FOR REVIEW ONLY

LEGEND

- TRANSFORMER WINDING CONNECTION
- POWER TRANSFORMER
- 52 GAS CIRCUIT BREAKER
- DISCONNECT SWITCH

NEXTera ENERGY RESOURCES

DRAWN BY	GO
DESIGNED BY	DG
CHECKED BY	SP

DATE:	DESCRIPTION:
11/01/12	CONCEPTUAL REVIEW
1/2/13	DOWNSIZE (485MW)

PROJECT:

BLYTHE SOLAR POWER PROJECT

CLIENT

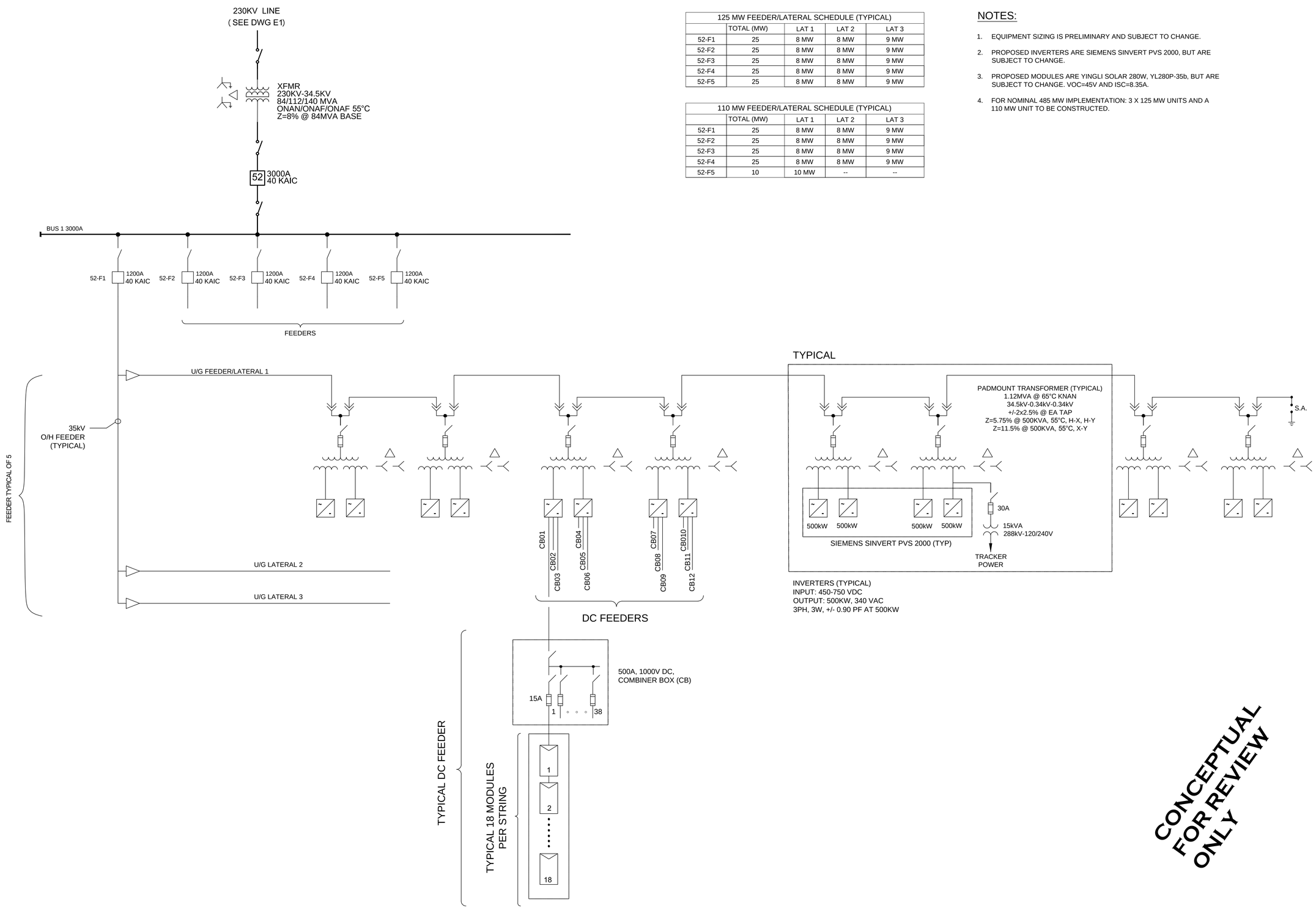
NEXTERA

SHEET TITLE:

CONCEPTUAL HIGH VOLTAGE SINGLE LINE DIAGRAM

SHEET NO.:

E1



125 MW FEEDER/LATERAL SCHEDULE (TYPICAL)				
	TOTAL (MW)	LAT 1	LAT 2	LAT 3
52-F1	25	8 MW	8 MW	9 MW
52-F2	25	8 MW	8 MW	9 MW
52-F3	25	8 MW	8 MW	9 MW
52-F4	25	8 MW	8 MW	9 MW
52-F5	25	8 MW	8 MW	9 MW

110 MW FEEDER/LATERAL SCHEDULE (TYPICAL)				
	TOTAL (MW)	LAT 1	LAT 2	LAT 3
52-F1	25	8 MW	8 MW	9 MW
52-F2	25	8 MW	8 MW	9 MW
52-F3	25	8 MW	8 MW	9 MW
52-F4	25	8 MW	8 MW	9 MW
52-F5	10	10 MW	--	--

NOTES:

1. EQUIPMENT SIZING IS PRELIMINARY AND SUBJECT TO CHANGE.
2. PROPOSED INVERTERS ARE SIEMENS SINVERT PVS 2000, BUT ARE SUBJECT TO CHANGE.
3. PROPOSED MODULES ARE YINGLI SOLAR 280W, YL280P-35b, BUT ARE SUBJECT TO CHANGE. VOC=45V AND ISC=8.35A.
4. FOR NOMINAL 485 MW IMPLEMENTATION: 3 X 125 MW UNITS AND A 110 MW UNIT TO BE CONSTRUCTED.

CONCEPTUAL FOR REVIEW ONLY

NEXTera ENERGY RESOURCES

DRAWN BY	GO
DESIGNED BY	DG
CHECKED BY	SP

DATE:	DESCRIPTION:
11/01/12	CONCEPTUAL REVIEW
1/2/13	DOWNSIZE (485 MW)

PROJECT:

BLYTHE SOLAR POWER PROJECT

CLIENT

NEXTERA

SHEET TITLE:

CONCEPTUAL MV COLLECTOR SYSTEM

SINGLE LINE DIAGRAM

E2