

COMMERCIAL ROOFTOP SOLAR SYSTEM

CSI CONGREGATION SONS OF ISRAEL RABBI RESIDENCE
1666 PLEASANTVILLE RD
BRIARCLIFF MANOR, NY 10510, USA
PHONE:
LOT: 98.05-1-31

SCOPE OF WORK

THE PROJECT SCOPE INCLUDES THE INSTALLATION OF SOLAR PHOTOVOLTAIC SYSTEM USING UNIRAC GRIDFLEX5 BALLAST AND SOLARMOUNT RAIL ROOF RACKING SYSTEM AT THE COMMERCIAL BUILDING STATED IN TITLE BLOCK.

THE INSTALLATION CONSISTS OF A GRID TIE SOLAR ARRAY, INVERTERS AND RELATED ELECTRICAL METERING AND SAFETY EQUIPMENT. ALL EQUIPMENT WILL BE INSTALLED AS REQUIRED BY APPLICABLE CODES AND THE LOCAL UTILITY COMPANY.

PLAN KEY

PV-1	TITLE SHEET
PV-2	SITE PLAN
PV-2.1	ROOF PLAN
PV-3	ELECTRICAL PLANS
PV-4	EQUIPMENT SPECS
PV-5	BALLAST DETAILS
PV-6	BALLAST DETAILS
PV-7	PITCH ROOF DETAILS
PV-8	ROOF ASSESSMENT

CODES & STANDARDS

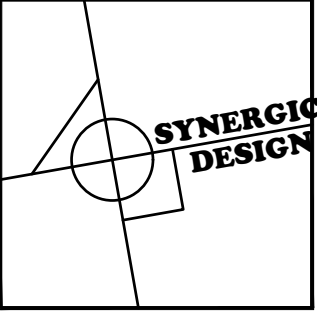
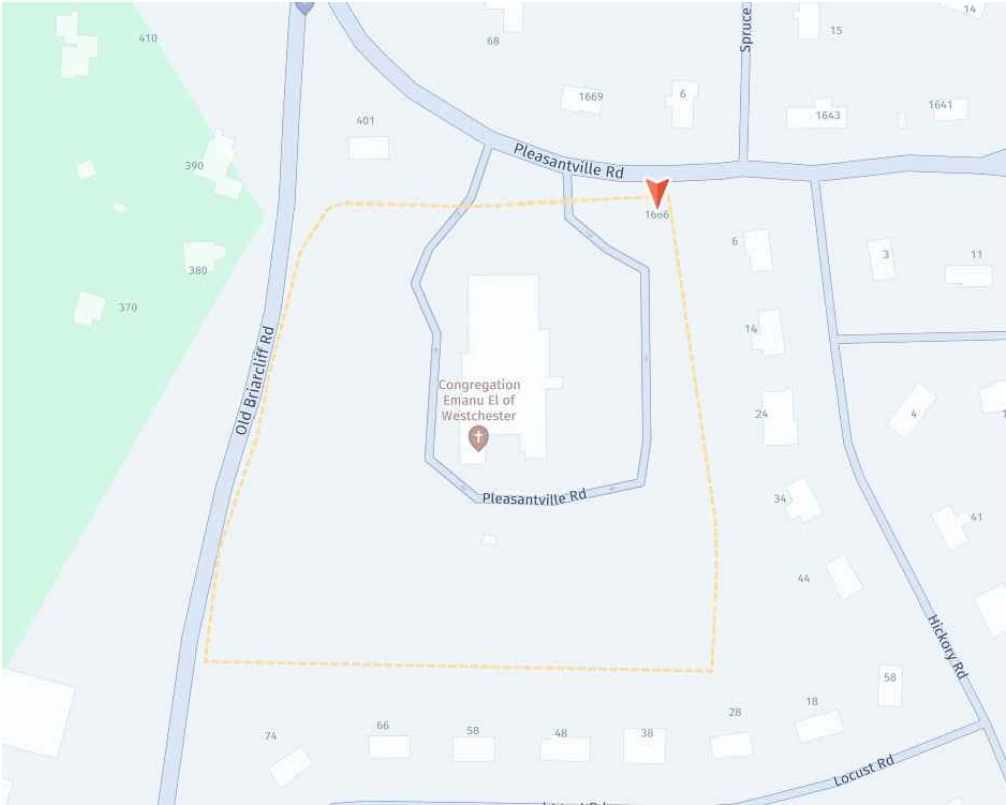
BUILDING CODE:
2020 NEW YORK STATE BUILDING CODE WITH AMENDMENTS
2020 NEW YORK STATE RESIDENTIAL CODE WITH AMENDMENTS
2020 NEW YORK STATE FIRE CODE WITH AMENDMENTS
2017 NATIONAL ELECTRICAL CODE

DESIGN CRITERIA WIND LOAD = 125 MPH
FLAT ROOF LOAD (INCLUDING SNOW LOAD 30PSF PLUS SOLAR PV PANELS 4.67PSF) = 34.67 PSF
PITCH ROOF LOAD (INCLUDING SNOW LOAD 30PSF PLUS SOLAR PV PANELS 2.8PSF) = 32.8 PSF

ROOF STRUCTURE
THE EXISTING ROOF STRUCTURE IS SUFFICIENT TO TAKE ADDITIONAL LOAD OF SOLAR PANELS SYSTEM.

SYSTEM INFOMRATION

TYPE OF SYSTEM	COMMERCIAL ROOFTOP			
SYSTEM SIZE	201,285 KW			
PANEL COUNT	497			
PANEL POWER RATING	405 W			
ARRAY	COUNT	AZIMUTH	TILT	SHADING (%)
1	101	180	5	94
2	67	180	10	88
3	68	90	19	94
4	128	270	10	94
5	58	90	19	94



SYNERGIC DESIGN

ARCHITECTURE . PLANNING . INTERIORS

31 DORR RD,
NEW PROVIDENCE, NJ 07974
TEL: 908.429.7707
FAX 908.464.6369

Malathi Ananthakrishnan
NJ Lic. no. A01574800

ALTERATIONS TO:

CSI CONGREGATION SONS OF ISRAEL RABBI RESIDENCE

1666 PLEASANTVILLE RD
BRIARCLIFF MANOR, NY 10510, USA

PHONE:

LOT: 98.05-1-31

REGISTERED ARCHITECT
MALATHI ANANTHAKRISHNAN
STATE OF NEW YORK
036233

REVISIONS

Malathi

DATE
4/17/2025

SCALE
AS NOTED

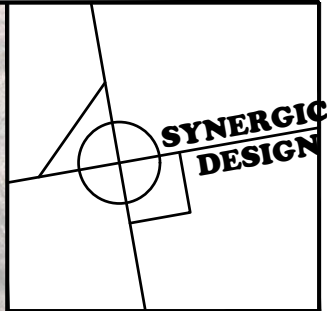
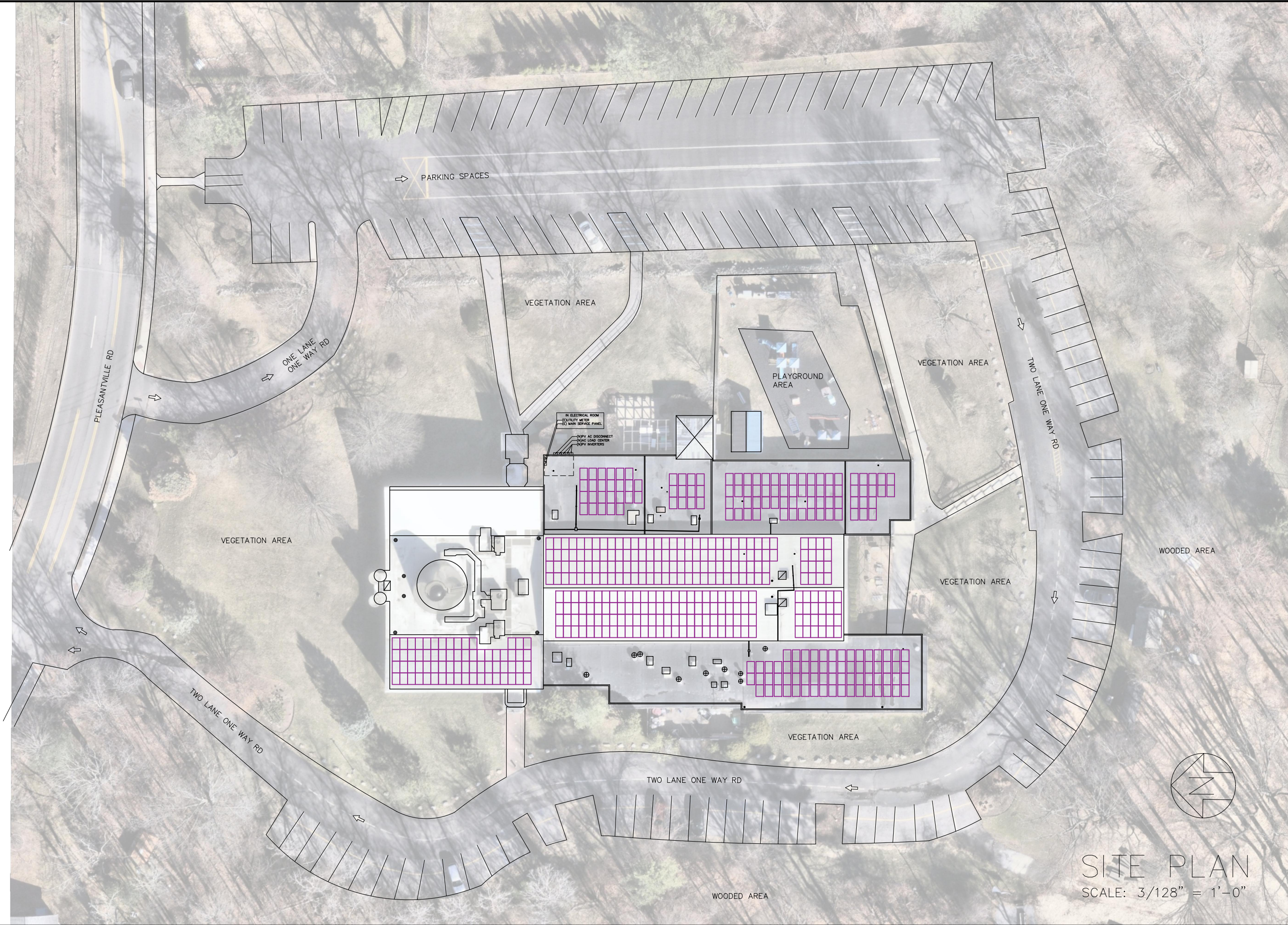
DRAWN
JS

TITLE SHEET

DWG NO.

PV-1

PROJ NO.NY25001 2016 SYNERGIC DESIGN



**SYNERGIC
DESIGN**
ARCHITECTURE . PLANNING . INTERIORS
31 DORR RD,
NEW PROVIDENCE, NJ 07974
TEL: 908.429.7707
FAX 908.464.6369
Malathi Ananthakrishnan
NJ Lic. no. A01574800

ALTERATIONS TO:
CSI CONGREGATION SONS OF
ISRAEL RABBI RESIDENCE
1666 PLEASANTVILLE RD
BRIARCLIFF MANOR, NY 10510,
USA
PHONE:
LOT: 98.05-1-31



REVISIONS
Malathi

DATE
4/17/2025
SCALE
AS NOTED
DRAWN
JS

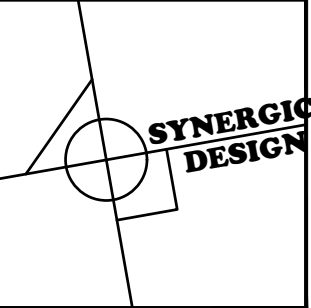
SITE PLAN

DWG NO.

PV-2

PROJ NO. NY25001 2016 SYNERGIC DESIGN

SITE PLAN
SCALE: 3/128" = 1'-0"

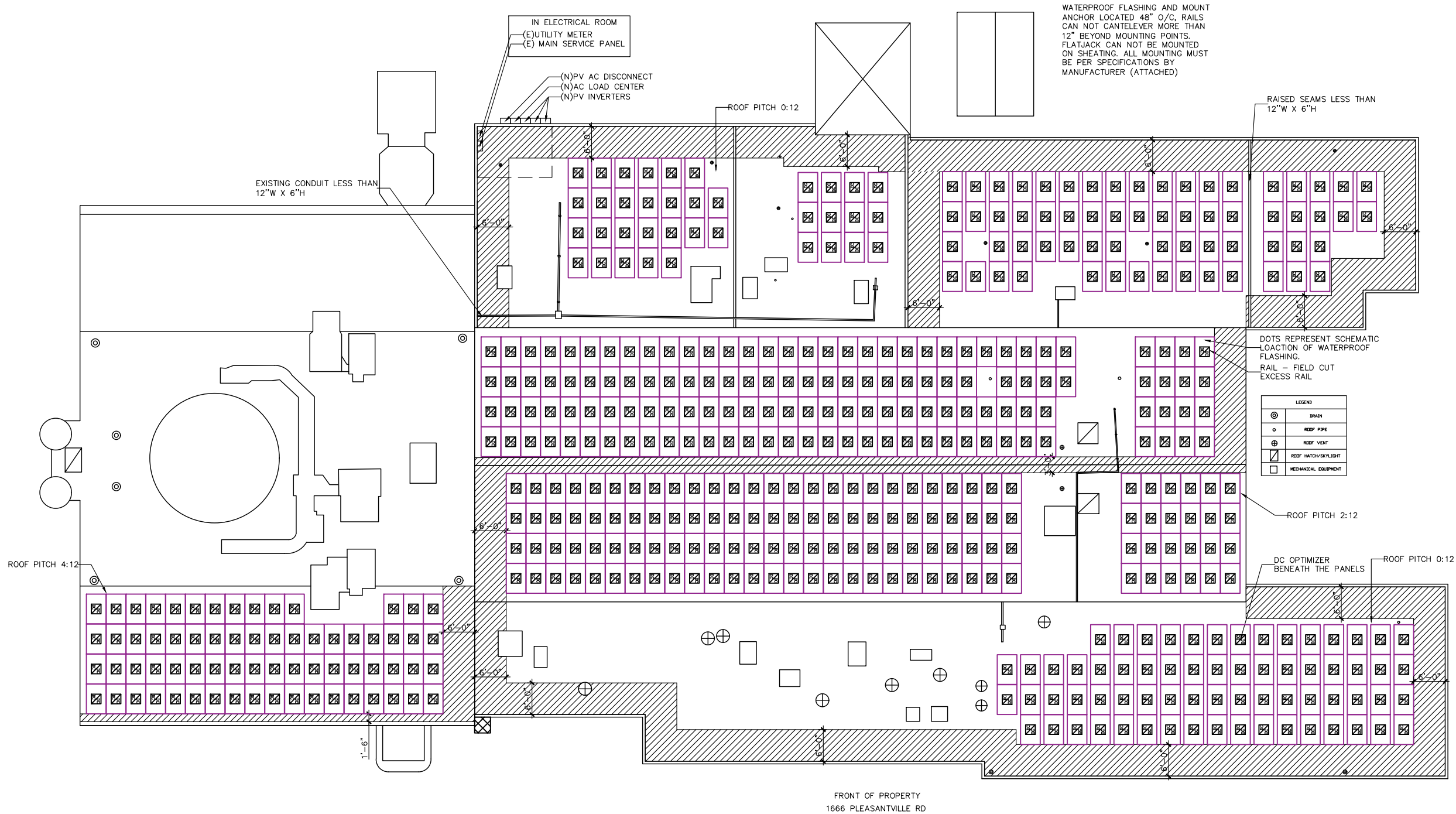


SYNERGIC
DESIGN
ARCHITECTURE . PLANNING . INTERIORS
31 DORR RD,
NEW PROVIDENCE, NJ 07974
TEL: 908.429.7707
FAX 908.464.6369
Malathi Ananthakrishnan
NJ Lic. no. A01574800

ALTERATIONS TO:
CSI CONGREGATION SONS OF
ISRAEL RABBI RESIDENCE
1666 PLEASANTVILLE RD
BRIARCLIFF MANOR, NY 10510,
USA
PHONE:
LOT: 98.05-1-31

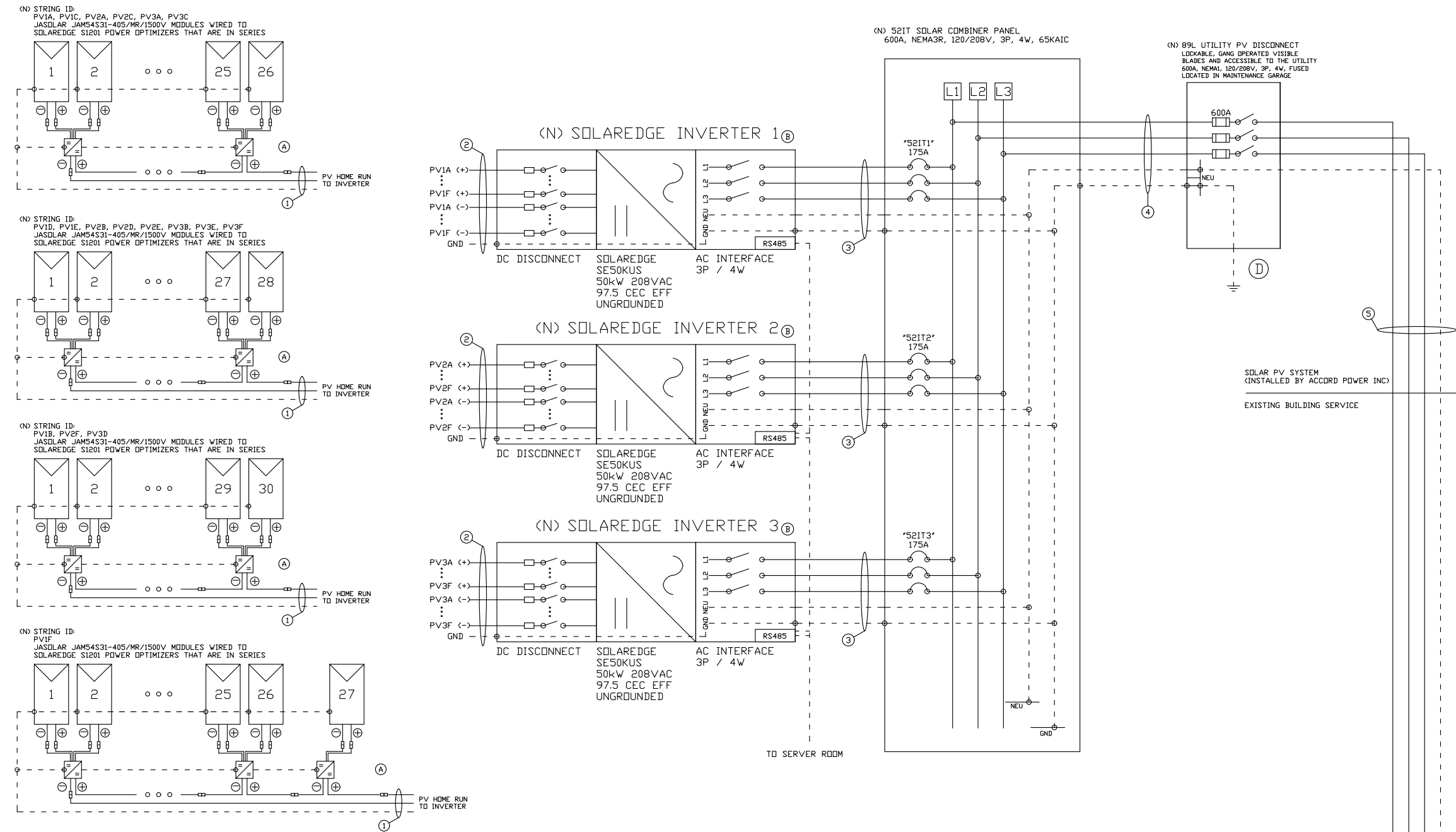


DATE 4/17/2025
SCALE AS NOTED
DRAWN JS
ROOF PLAN
DWG NO. PV-2.1
PROJ NO. NY25001 2016 SYNERGIC DESIGN



ROOF PLAN
SCALE: 3/64" = 1'-0"

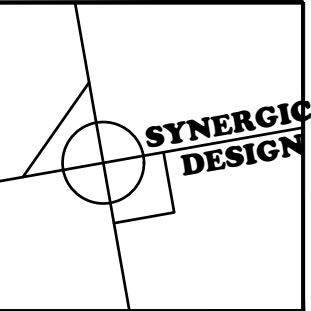
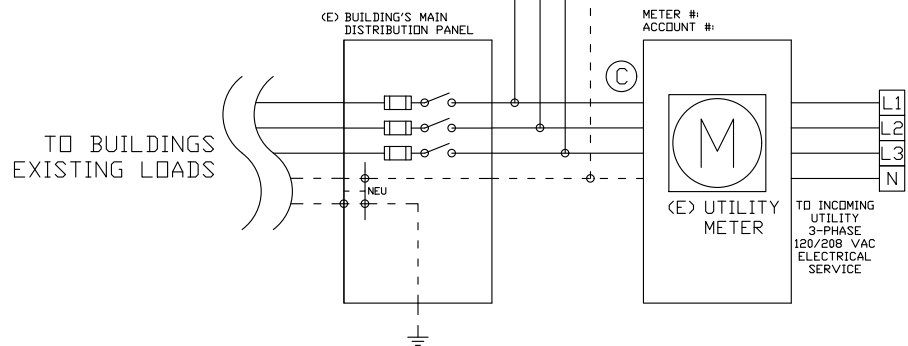
TYPE OF SYSTEM		COMMERCIAL ROOFTOP			
SYSTEM SIZE		201.285 KW			
PANEL COUNT		497			
PANEL POWER RATING		405 W			
ARRAY	COUNT	AZIMUTH	TILT	SHADING (%)	
1	101	180	5	94	
2	67	180	10	88	
3	68	90	19	94	
4	128	270	10	94	
5	58	90	19	94	



ELECTRICAL NOTES

- (A) SOLAREEDGE S1201 POWER OPTIMIZERS LOCATED BENEATH EACH PV MODULE & CONNECTED IN SERIES
- (B) INVERTERS EQUIPPED WITH ANTI-ISLANDING VOLTAGE AND FREQUENCY SETTINGS IN ACCORDANCE WITH IEEE 1547-2018
- (C) SUPPLY SIDE CONNECTION TO BUILDING'S EXISTING ELECTRICAL SERVICE AFTER THE BUILDING'S EXISTING UTILITY METER AS PER NEC 240.21(B)(1)
- (D) SOLAR PV GROUND BONDED TO BUILDING'S EXISTING GEC AND SUPPLEMENTED WITH GROUNDING ROD

SYSTEM INFO				MODULE INFO		INVERTER 1&2&3 INFO		CONDUCTOR SCHEDULE						
		MODEL TYPE	JASDLAR JAM54S31-405/MR/1500V	NAME PLATE STC	405	INVERTER TYPE	SOLAREEDGE SE50KUS	CIRCUIT	TYPE	CONDUCTORS	EGC	CONDUIT RUNS	Size	CONDUIT TYPE
DC NAMEPLATE RATING (kW)	201.285					# OF STRINGS	6	①	PV WIRE	2x #10	#6	--	--	--
AC NOMINAL POWER (kW)	150	VMP	31.21			# OF INVERTERS	3	②	PV WIRE	12 x #10	#6	1	1"	RMC
MAXIMUM APPARENT POWER (kW)	150	IMP	12.98			# MODULES / INVERTERS	163/165/166	③	PV WIRE	4 x #2/0	#6	1	2"	RMC
AZIMUTH	90/180/270	VDC	37.23			MAX POWER POINT VOLTAGE	600	④	THHN	4x #350	#1	2	3"	RMC
TILT	5/10/19	ISC	13.87			MAX POWER POINT CURRENT	3X46.5	⑤	THHN	4x #350	-	2	2-1/2"	EMT
NUMBER OF MODULES	497	TEMP COEF (VDC)	-0.275			OUTPUT SYSTEM VOLTAGE	120/208							
						MAX CIRCUIT CURRENT	139.5							



SYNERGIC DESIGN

ARCHITECTURE . PLANNING . INTERIORS

31 DORR RD,
NEW PROVIDENCE, NJ 07974
TEL: 908.429.7707
FAX 908.464.6369

Malathi Ananthakrishnan
NJ Lic. no. A01574800

ALTERATIONS TO:

CSI CONGREGATION SONS OF
ISRAEL RABBI RESIDENCE
1666 PLEASANTVILLE RD
BRIARCLIFF MANOR, NY 10510,
USA

PHONE:

LOT: 98.05-1-31



REVISIONS

Malathi

DATE
4/17/2025

SCALE
AS NOTED

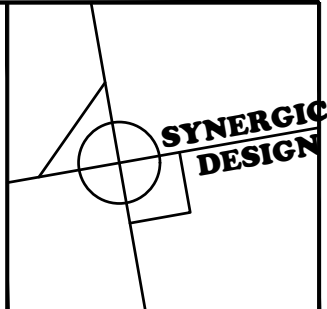
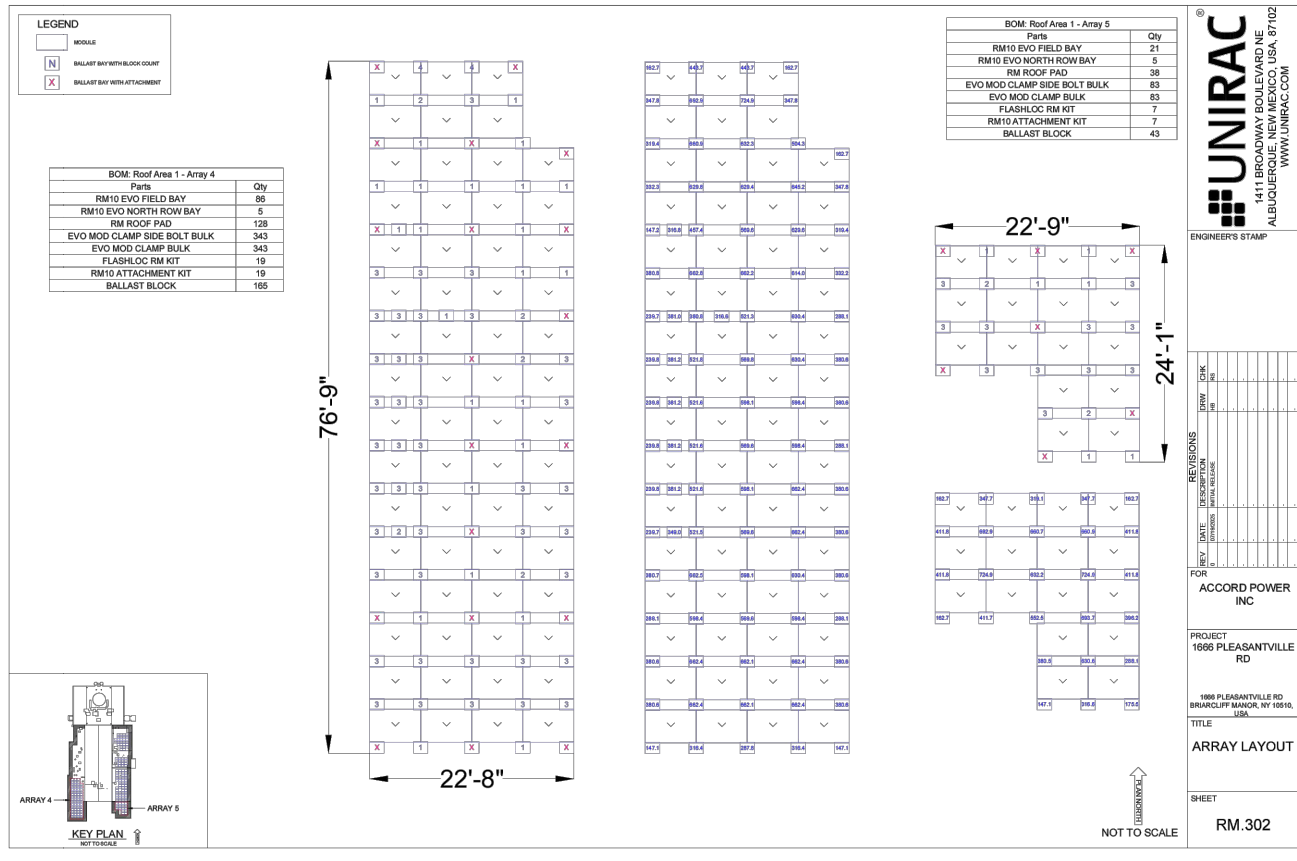
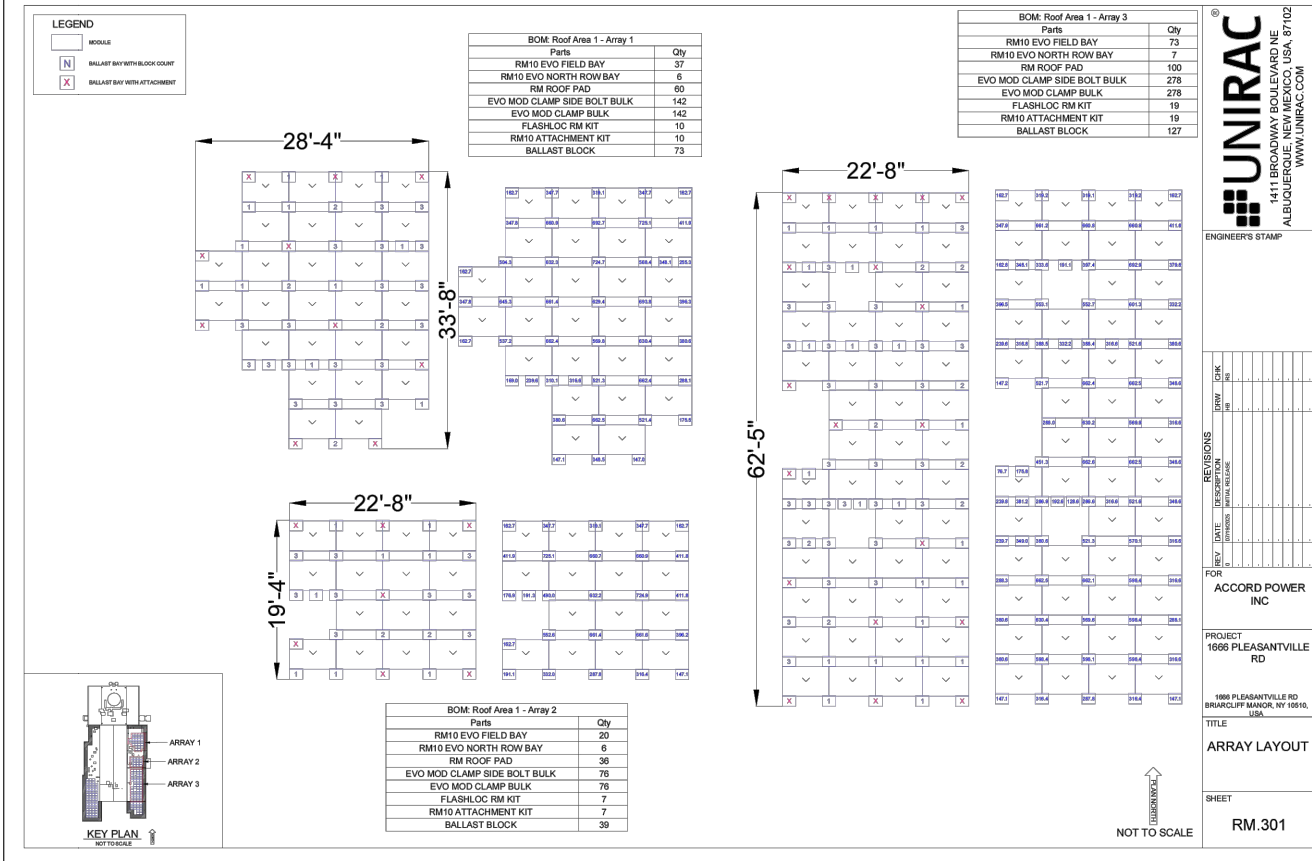
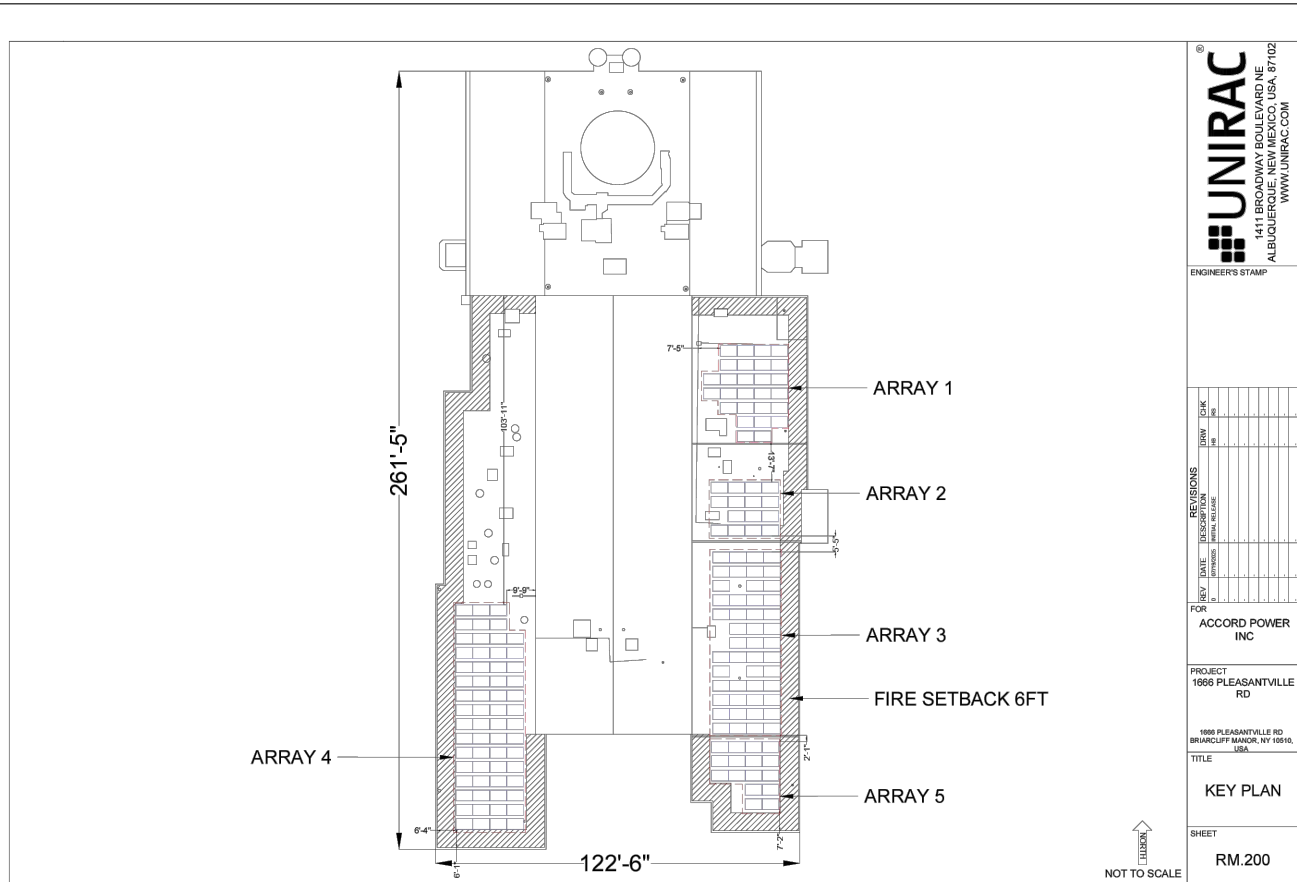
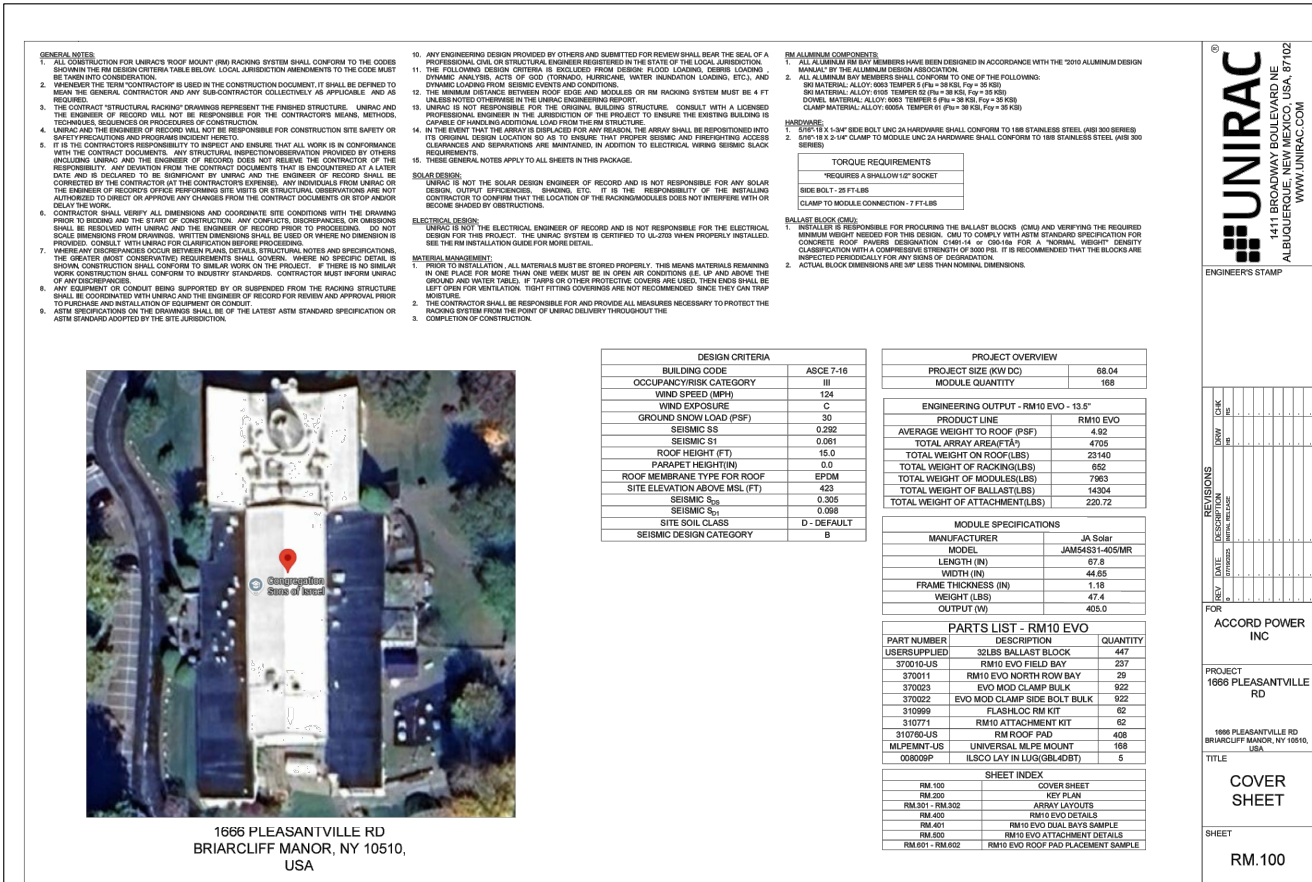
DRAWN
JS

ELECTRICAL PLANS

DWG NO.

PV-3

PROJ NO. NY25001 2016 SYNERGIC DESIGN



SYNERGIC
DESIGN
ARCHITECTURE . PLANNING . INTERIORS

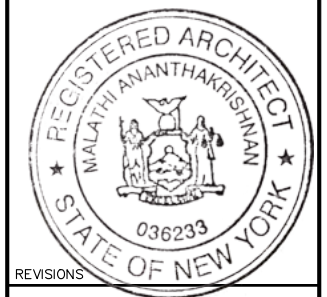
31 DORR RD,
NEW PROVIDENCE, NJ 07974
TEL: 908.429.7707
FAX 908.464.6369

Malathi Ananthakrishnan
NJ Lic. no. A01574500

ALTERATIONS TO:

CSI CONGREGATION SONS OF
ISRAEL RABBI RESIDENCE
1666 PLEASANTVILLE RD
BRIARCLIFF MANOR, NY 10510,
USA

PHONE:
LOT: 98.05-1-31



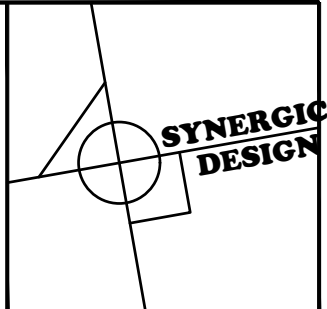
DATE
4/17/2025
SCALE
AS NOTED
DRAWN
JS

BALLAST DETAILS

DWG NO.

PV-5

PROJ NO.NY25001 2016 SYNERGIC DESIGN



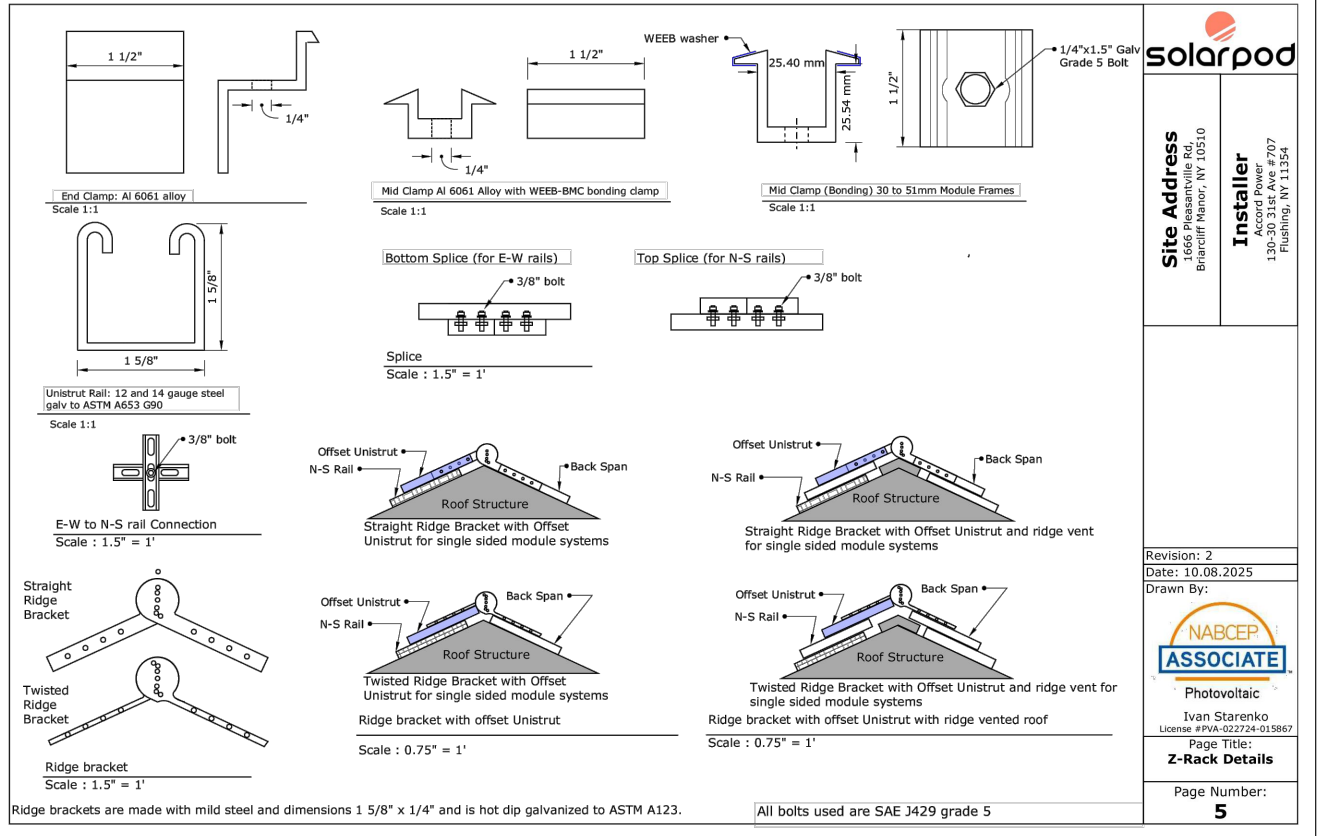
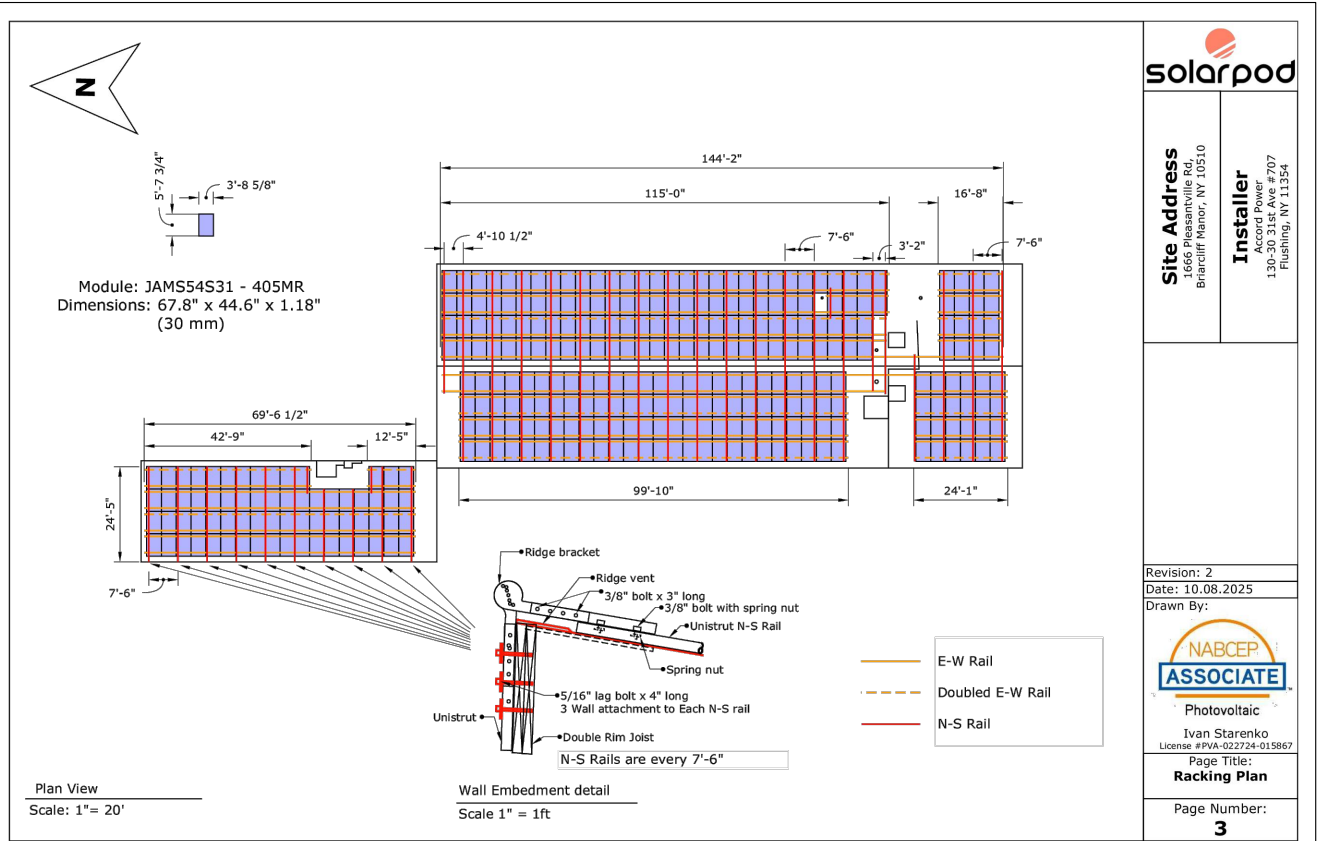
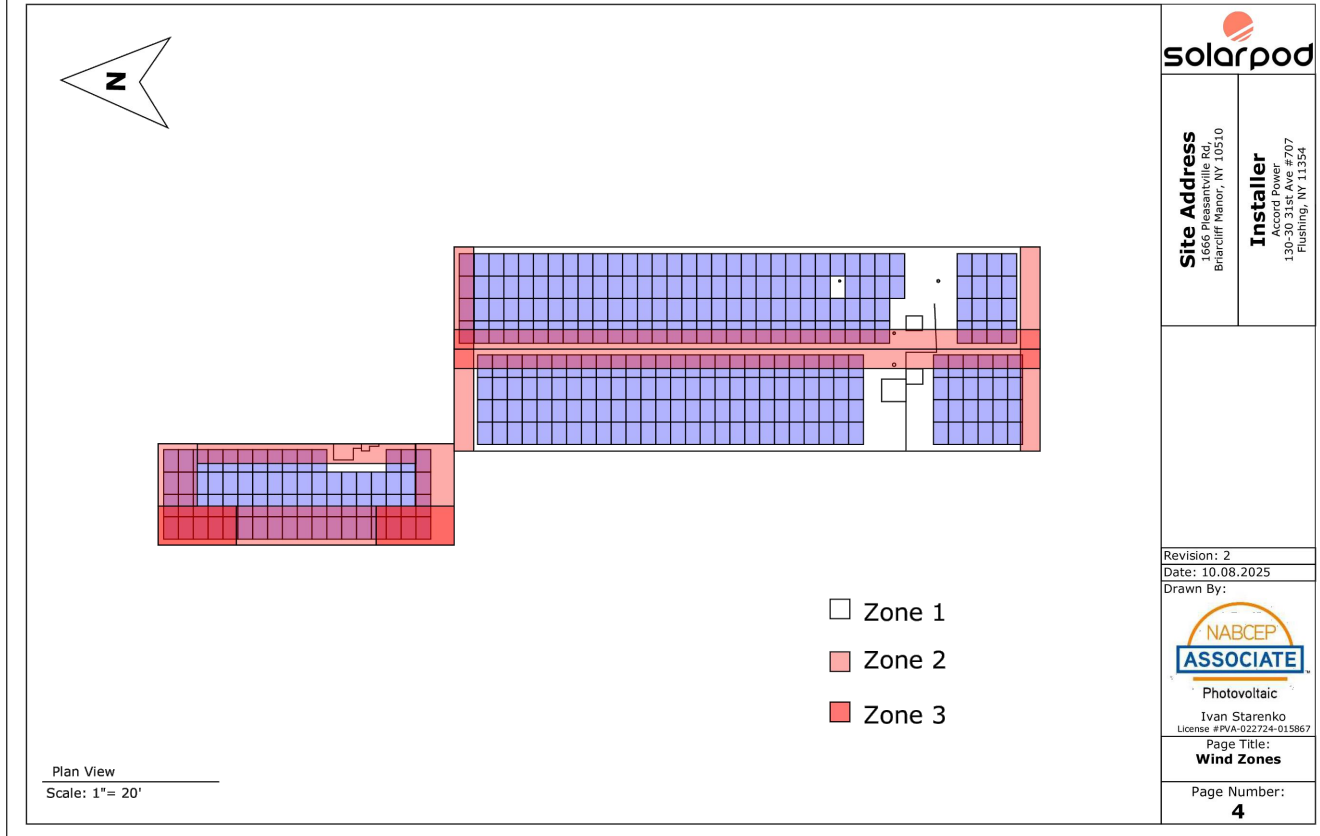
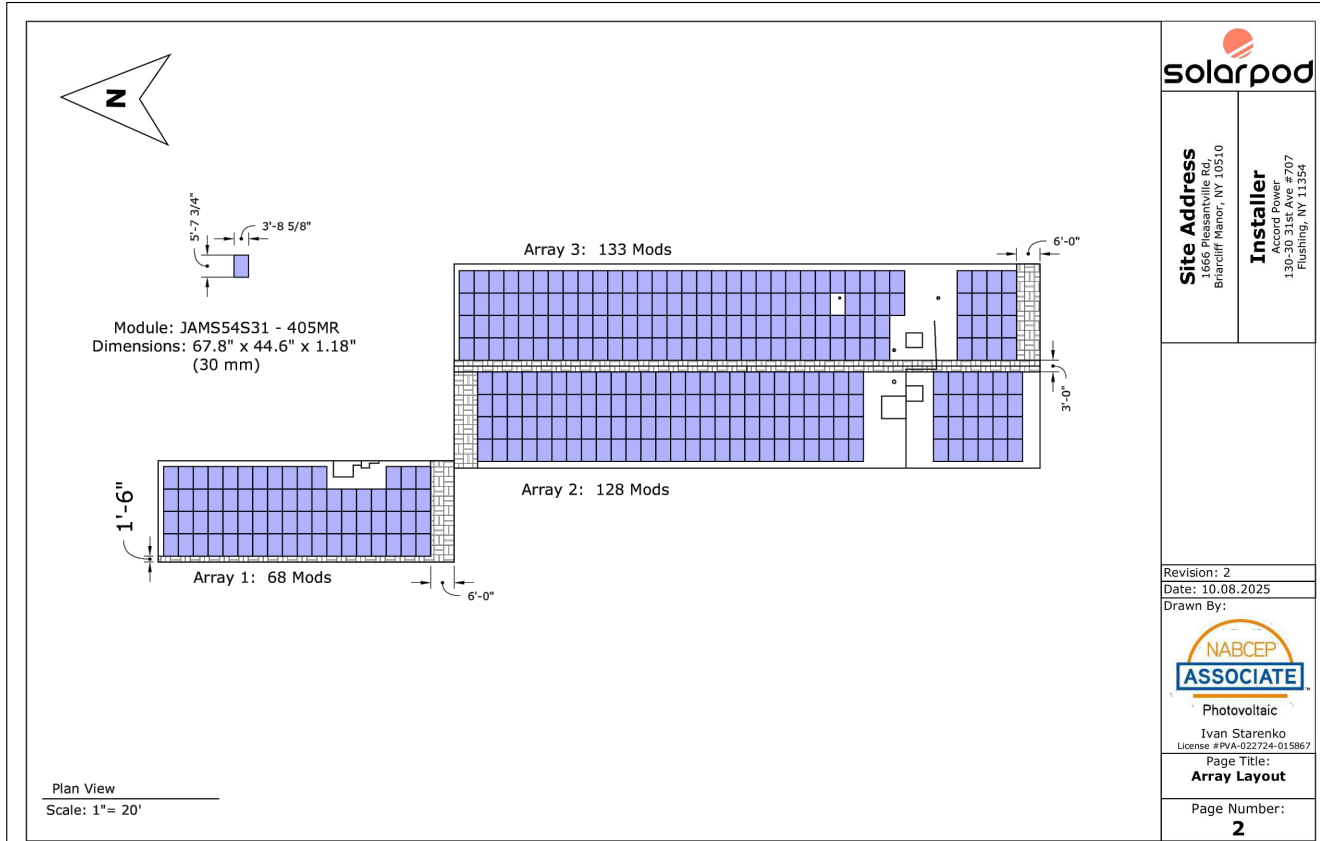
SYNERGIC
DESIGN
ARCHITECTURE . PLANNING . INTERIORS
31 DORR RD,
NEW PROVIDENCE, NJ 07974
TEL: 908.429.7707
FAX 908.464.6369
Malathi Ananthakrishnan
NJ Lic. no. A01574800

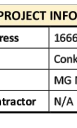
ALTERATIONS TO:
CSI CONGREGATION SONS OF
ISRAEL RABBI RESIDENCE
1666 PLEASANTVILLE RD
BRIARCLIFF MANOR, NY 10510,
USA
PHONE:
LOT: 98.05-1-31



REVISIONS
DATE
4/17/2025
SCALE
AS NOTED
DRAWN
JS

PITCH ROOF DETAILS
DWG NO.
PV-7
PROJ NO. NY25001 2016 SYNERGIC DESIGN



FRANKLIN & OAK, INC		Roof Certification Report			
		Client: Accord Power			
111 Oak Street Brooklyn, NY 11222 NYC DOB SIA License # 005758		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">Report #1 REVISION</td> <td style="width: 50%; padding: 5px;">5/10/2025</td> </tr> </table>		Report #1 REVISION	5/10/2025
Report #1 REVISION	5/10/2025				
GENERAL PROJECT INFORMATION					
Project Address	1666 Pleasantville Rd, Briarcliff Manor, NY 10510	Site Representative	David Pasternak		
Architect	Conklin Rossant Architects P.C.	F&O Inspector	Leon Kokoszka		
Engineer	MG McLaren P.C.	NYC DOB #	N/A		
General Contractor	N/A	Weather/Temperature	N/A		
GENERAL INSPECTION INFORMATION					
Applicable Codes	NYS Building Code				
Inspection Type	☐ Continuous ☒ Periodic ☐ Approved Drawings Ref #/Date 				
Inspection Documents	☐ Approved Submittals Ref #/Date ☒ Other Ref #/Date Historic CD's 10/08/1991				
ROOF CERTIFICATION STATEMENT					
Based on a field assessment and review of historic drawings, the roof structure has been deemed adequate to support proposed solar installation utilizing the Unirac SM Rails for Pitched Roofs & Gridflex Ballasted System (up to 5 PSF) for flat roofs, which fulfills criteria for loads as per NYS code & applicable regulations.					
STATEMENT OF CONFORMANCE					
☒ CONFORMANCE – To the best of my knowledge, based on a field assessment and drawing review, the roof structure as specifically noted, has been deemed adequate to accommodate the referenced solar panel system. Franklin & Oak is not responsible for inadequate installation or deviation from either designed/intended work or approved construction documents, which may jeopardize the structural integrity of the roof framing & its deck.					
☐ WORK-IN-PROGRESS – The work area(s) inspected was/were not completed at the time of inspection. Re-inspection is required. List of items required for re-inspection are listed below.					
☐ NON-CONFORMANCE – The work area(s) inspected was/were not in conformance. Re-inspection is required.					
SUMMARY OF ITEMS NEEDING:					
☐ Documentation ☐ Clarification ☐ Corrective Action (today) ☐ Corrective Action (carryover)					
No additional items are needed at this time.					
Michael Kokoszka, P.E.	5/12/2025				
Supervisor Name	Date				

Page 1 of 11



FRANKLIN & OAK, INC
 111 Oak Street
 Brooklyn, NY 11222
 NYC DOB SIA License # 005758

Roof Certification Report

Client: Accord Power

Report #1	5/10/2025
REVISION	



FRANKLIN & OAK, INC
 111 Oak Street
 Brooklyn, NY 11222
 NYC DOB SIA License # 005758

Roof Certification Report

Client: Accord Power

Report #1	5/10/2025
REVISION	

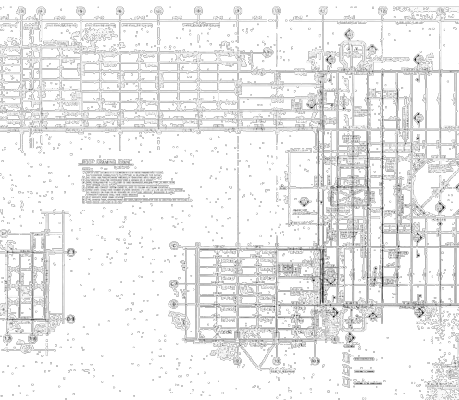


Figure 2: Roof structural plan



FRANKLIN & OAK, INC
111 Oak Street
Brooklyn, NY 11222
NYC DOB SIA License # 005758

Roof Certification Report

Client: Accord Power

Report #1	5/10/2025
REVISION	

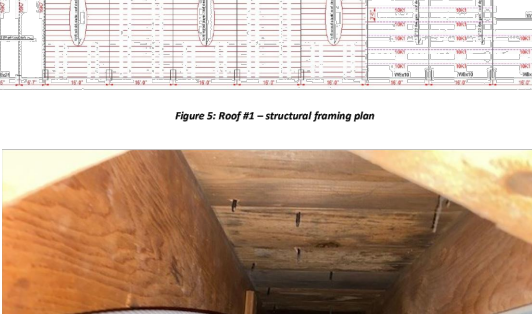


Figure 5: Roof #1 – structural framing plan

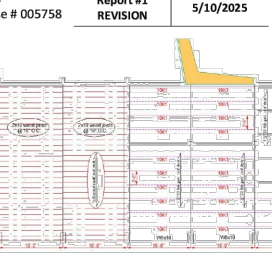


Figure 6: 2x10 wood joist roof framing conditions

Roof Certification Report

FRANKLIN & OAK, INC
111 Oak Street
Brooklyn, NY 11222
NYC DOB SIA License # 005758

Client: Accord Power
Report #1
REVISION 5/10/2025

Figure 7: Current roof #1 surface conditions

Figure 8: Roof #2 – structural framing plan

Page 7 of 11



FRANKLIN & OAK, INC
 111 Oak Street
 Brooklyn, NY 11222
 NYC DOB SIA License # 005758

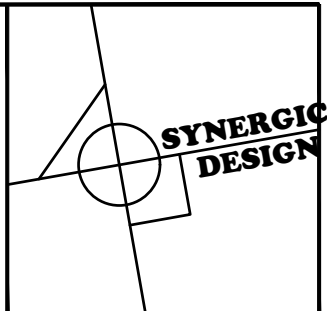
Roof Certification Report

Client: Accord Power

Report #1	5/10/2025
REVISION	



Figure 13: Current roof #3 surface conditions



**SYNERGIC
DESIGN**
ARCHITECTURE . PLANNING . INTERIORS

31 DORR RD,
NEW PROVIDENCE, NJ 07974
TEL: 908.429.7707
FAX 908.464.6369

Malathi Ananthakrishnan
NJ Lic. no. A01574800

ALTERATIONS TO:
CSI CONGREGATION SONS OF
ISRAEL RABBI RESIDENCE
1666 PLEASANTVILLE RD
BRIARCLIFF MANOR, NY 10510,
USA
PHONE:
LOT: 98.05-1-31



Al Mahathen

DATE 4/17/2025
SCALE AS NOTED
DRAWN JS

ROOF ASSESSMENT

DWG NO.

PV-8

PROJ NO.NY25001 2016 SYNERGIC DESIGN