Department of Community Development
820 Mercer Street, Cherry Hill, NJ 080002
856-488-7870 (Phone) 856-661-4746 (Fax)
www.Cherryhill-NJ.com

LAND USE DEVELOPMENT APPLICATION

Submission Date: 3/31/2025 Application No.: 25-Z-0005

☐ PLANNING BOARD ☒ ZONING BOARD OF ADJUSTMENT

FOR OFFICE USE ONLY
TAXES PAID YES/NO_____ (INITIAL)
FEES $1,600.00 PROJ. # _____
ESCROW $4,000.00 ESCR. # 10251

1. APPLICANT

Name: Solar Landscape LLC
Address: 522 Cookman Avenue Unit 3
City: Asbury Park State: NJ Zip: 07712
Phone: (732) 855-6039* Fax: (732) 726-6560
Email: djennings@wilentz.com* *Applicant's Attorney
Interest in Property: Lessee

2. OWNER

Name: Cherry Umbrella LLC (Contact: Bernadette Skelly)
Address: 4 Radnor Corp Ctr Ste 105
City: Radnor State: PA Zip: 19087
Phone: (484) 320-7810 Fax: ( )
Email: bskelly@endurance-re.com

3. TYPE OF APPLICATION (check all that apply)

- ☐ Minor Subdivision
- ☐ Preliminary Major Subdivision [1]
- ☐ Final Major Subdivision
- ☐ Minor Site Plan
- ☐ Preliminary Major Site Plan [1]
- ☐ Final Major Site Plan
- ☐ Amended Plan
- ☒ Site Plan Waiver
- ☐ Concept Plan
- ☐ Interpretation [1]
- ☐ Appeal of Administrative Officer's Decision
- ☐ Certificate of Non-Conformity
- ☒ Use (d) Variance [1]
- ☒ Bulk (c) Variance [1]
- ☐ Conditional Use [1]
- ☐ Street Vacation Request
- ☐ Rezoning Request [1]
- ☐ Other: _____

[1] Legal advertisement and notice is required to all property owners within 200 feet.

4. ZONE (check all that apply)

RESIDENTIAL		COMMERCIAL	OFFICE	OTHER	OVERLAY
RA	RA/PC	B1	O1	IR	FP
R1	R7	B2	O2	IN	SBC
R2	R10	B3	O3		IR/B
R3	R20	B4			A-H/C

5. ATTORNEY (A corporation, partnership, limited liability company or partnership must be represented by a New Jersey Attorney)

Name: Donna M. Jennings, Esq.
Address: 90 Woodbridge Center Drive Suite 900
City: Woodbridge State: NJ Zip: 07095
Phone: (732) 855-6039 Fax: (732) 726-6560
Email: djennings@wilentz.com

6. APPLICANT'S PROFESSIONALS (Engineer, Surveyor, Planner, etc.)

Name: Kevin Shelly, PE
Profession: Engineer
Address: 1985 Highway 34, Suite A7
City: Wall State: NJ Zip: 07719
Phone: (732) 924-8100 Fax: (732) 924-8110
Email: kshelly@shorepointengineering.com

Name: Planner TBD
Profession:
Address:
City: State: Zip:
Phone: ( ) Fax: ( )
Email:

7. LOCATION OF PROPERTY

Street Address: 2 Keystone Ave
Tract Area: 3.2 acres
Block(s): 493.01
Lot(s): 1

8. LAND USE

Existing Land Use: Commercial/Office
Proposed Land Use (be specific): Rooftop community solar panels with associated ground-mounted equipment.

9. PROPERTY

Number of Existing Lots: 1
Number of Proposed Lots: 1
Are there Existing Deed Restrictions or Easements? ☒ No ☐ Yes (please attach copies)
Are there Proposed Deed Restrictions or Easements? ☒ No ☐ Yes (please attach copies)

Proposed Form of Ownership:
☐ Fee Simple ☐ Condominium *Lessee
☒ Rental ☐ Cooperative

10. UTILITIES (check all that apply)

N/A ☐ Public water ☐ Public sewer ☐ Private well ☐ Private septic system

11. APPLICATION SUBMISSION MATERIALS

List all plans, reports, photos, etc. (use additional sheets if necessary): See attached cover letter.

12. PREVIOUS OR PENDING APPLICATIONS

List all previous or pending applications for this parcel (use additional sheets if necessary): See attached cover letter.

13. ZONING SCHEDULE (complete all that apply)

	REQUIRED	EXISTING	PROPOSED
Minimum Lot Requirements			
Lot Area	20,000 sf	139,440 sf	No change
Frontage	120 ft	450 ft	No change
Lot Depth	120 ft	132 ft	No change
Minimum Yard Requirements			
Front Yard	30 ft	32.9 ft	No change
Secondary Front Yard	30 ft	None	No change
Rear Yard	20 ft	43.3 ft	No change
Side Yard	10 ft	23.8 ft	No change
Aggregate Side Yard	25 ft	>24 ft	NA
Building Height	35 ft	19 ft	<20 ft*
Lot Requirements			
Residential Buffer Strip	NA	NA	NA
Open Space	25%	7.1%	6.9%
Parking Setbacks			
Parking Setback to non-residential	5'	NA	NA
Parking Setback to residential	15'	NA	NA
Parking Setback to Right-of-Way	20'	NA	NA

*Solar panels add approximately 9.5 inches

	REQUIRED	EXISTING	PROPOSED
Accessory Uses			
Garage Area	NA	NA	NA
Garage Height	NA	NA	NA
Fence Height	NA	NA	NA
Pool Depth	NA	NA	NA
Shed Area	NA	NA	NA
Shed Height	NA	NA	NA
Signage Requirements			
Façade Sign area 1	NA	NA	NA
Façade Sign area 2	NA	NA	NA
Freestanding Sign area	NA	NA	NA
Freestanding Sign height	NA	NA	NA
Functional Sign(s) area	NA	NA	NA
Building Façade area	NA	NA	NA
Distance from Driveway	NA	NA	NA
Distance from R.O.W.	NA	NA	NA

Is the proposed site on a inside or corner lot?

(Inside) Corner

14. PARKING & LOADING REQUIREMENTS

Number of Parking Spaces REQUIRED: NA

Number of Parking Spaces PROVIDED: NA

Number of Loading Spaces REQUIRED: NA

Number of Loading Spaces PROVIDED: NA

15. RELIEF REQUESTED (check all that apply)

☒ Zoning Variances are requested.

☐ Exceptions from Municipal Requirements are requested *(N.J.S.A. 40:55D-51).*

☐ Exceptions from New Jersey Residential Site Improvement Standards (R.S.I.S.) are requested *(N.J.A.C. 5:21-3.1).*

☐ Waivers from New Jersey Residential Site Improvement Standards (R.S.I.S.) are requested *(N.J.A.C. 5:21-3.2).* Requires application to and approval of the New Jersey Site Improvement Advisory Board.

For any type of the above relief requested, a separate exhibit should be attached stating the factual basis, legal theory, and/or previously granted relief.

16. SIGNATURE OF APPLICANT

I certify that the foregoing statements and the materials submitted are true. I further certify that I am the individual applicant, or that I am an Officer of the Corporate applicant and authorized to sign the application for the Corporation, or a General Partner of the partnership application.

SWORN & SUBSCRIBED to before me this 7th day of March, 2025 (year)

(notary)

Lisa Haak
Notary Public, State of New Jersey
I.D. No. 50163068
My Commission Expires June 26, 2026

SIGNATURE (applicant) DATE 3/7/2025

Donna M. Jennings, Esq.*
PRINT NAME
*WGS on behalf of Applicant

Commonwealth of Pennsylvania - Notary Seal
Kristie T. Radcliffe, Notary Public
Delaware County
My commission expires February 26, 2028
Commission number 1240065
Member, Pennsylvania Association of Notaries

17. CONSENT OF OWNER

I certify that I am the Owner of the property which is the subject of this application, hereby consent to the making of this application and the approval of the plans submitted herewith. I further consent to the inspection of this property in connection with this application as deemed necessary by the municipal agency (if owned by a Corporation, a resolution must be attached authorizing the application and officer signature).

Bernadette Skelly — 12/23/24
SIGNATURE (owner) — DATE

BERNADETTE SKELLY
PRINT NAME

SWORN & SUBSCRIBED to before me this
23rd day of December, 2024 (year)
Kristie T. Radcliffe (notary)

18. DISCLOSURE STATEMENT (circle all that apply)

Pursuant to N.J.S.A. 40:55D-48.1 & 48.2, please answer the following questions:

Is this application to subdivide a parcel of land into six (6) or more lots?	Yes	(No)
Is this application for a variance to construct a multiple dwelling of twenty-five (25) or more units?	Yes	(No)
Is this application for approval of a site (or sites) for non-residential purposes?	(Yes)	No
Is the applicant a corporation?	Yes	(No)
Is the applicant a limited liability corporation?	(Yes)	No
Is the applicant a partnership?	Yes	(No)

If you responded YES to any of the above, please answer the following (use additional sheets if necessary):

List the names and addresses of all stockholders or individual partners owing at least 10% in stock of any class or at least 10% of the interest in partnership (whichever is applicable).

Does a corporation or partnership own 10% or more of the stock in this corporation or partnership? If yes, list the names and addresses of stockholders of that corporation holding 10% or more of the stock or 10% or greater interest in that partnership (whichever is applicable). This requirement is to be followed by every corporate stockholder or partnership, until the names and addresses of the non-corporate stockholders and individual partners with 10% or more ownership have been listed.

SIGNATURE (applicant) — DATE

19. SURVEY WAIVER CERTIFICATION

As of the date of this application, I hereby certify that the survey submitted with this application, under the date of April 16, 20 18 last revised May 17, 2018 shows and discloses the premises in its entirety, described as Block(s) 493.01 Lot(s) 1; and I further certify that no buildings, fences, or other facilities have been constructed, installed, or otherwise located on the premises after the date of the survey with the exception of the structures shown.

State of New Jersey; County of Camden:

Bernadette Skelly of full age, being duly
PRINT NAME

Bernadette Skelly — 12/23/24
SIGNATURE (applicant/owner) — DATE

SWORN & SUBSCRIBED to before me this
23rd day of December, 2024 (year)
Kristie T. Radcliffe (notary)

FOR OFFICE USE ONLY

The application was reviewed in accordance with the rules of the applicable Board and Ordinances of the Township of Cherry Hill and determined that all the checklist items are in order and this application has been deemed complete. The time within which the applicable Board must act on this application pursuant to *N.J.S.A. 40:55d-1 et seq.*, has commenced from this date.

SIGNATURE (administrative officer) — DATE

Commonwealth of Pennsylvania - Notary Seal
Kristie T. Radcliffe, Notary Public
Delaware County
My commission expires February 26, 2028
Commission number 1240065
Member, Pennsylvania Association of Notaries

WILENTZ
—ATTORNEYS AT LAW—
WILENTZ GOLDMAN & SPITZER P.A.

DONNA M. JENNINGS, ESQ.

T: 732.855.6039
F: 732.726.6560
djennings@wilentz.com

90 Woodbridge Center Drive
Suite 900 Box 10
Woodbridge, NJ 07095-0958
732.636.8000

February 11, 2025

VIA EMAIL
Jacob Richman, Zoning Board of Adjustment Secretary
Cherry Hill Township
820 Mercer Street
Chery Hill, NJ 08002

RE: Solar Landscape LLC
2 Keystone Ave
Block 493.01, Lot 1
Minor Site Plan and Use Variance

Dear Mr. Richman:

This office represents Solar Landscape LLC (the "Applicant") in this matter. Enclosed, for filing, please find the following:

1. Photographs of Existing Building; and
2. Structural Feasibility Report, prepared by Exactus Energy Inc., dated June 19, 2024.

Additionally, in response to your e-mail correspondence dated January 24, 2025, the Applicant proposes to install 928 modules, and the energy produced is 542.88 kW DC.

Should you require any additional information, please do not hesitate to contact this office. Thank you for your attention to this matter.

Very truly yours,

DONNA M. JENNINGS

w/encl.
cc: Solar Landscape LLC
Kevin Shelly, PE

WILENTZ
ATTORNEYS AT LAW
WILENTZ GOLDMAN & SPITZER P.A.

DONNA M. JENNINGS, ESQ.

T: 732.855.6039
F: 732.726.6560
djennings@wilentz.com

90 Woodbridge Center Drive
Suite 900 Box 10
Woodbridge, NJ 07095-0958
732.636.8000

March 7, 2025

VIA EMAIL
Jacob Richman, Zoning Board of Adjustment Secretary
Cherry Hill Township
820 Mercer Street
Chery Hill, NJ 08002

RE: Solar Landscape LLC
2 Keystone Ave
Block 493.01, Lot 1
Site Plan Waiver with Variances

Dear Mr. Richman:

This office represents Solar Landscape LLC (the "Applicant") in this matter. Enclosed, for filing, please find the following:

1. Amended Application Form Pages with Amended Rider.
2. Amended Fee Schedule.
3. Site Plan Waiver Layout, entitled "Site Plan Waiver Community Solar Rooftop System – 2 Keystone Avenue," prepared by Shore Point Engineering, dated February 21, 2025, consisting of three (3) sheets.

In furtherance of your request for additional information regarding the Applicant's compliance with the requirements of the New Jersey Community Solar Energy Program ("CSEP"), please accept this correspondence as the Applicant's statement that they will adhere to all applicable requirements. The Applicant's participation in the CSEP is contingent on adhering to these standards. Importantly, Community Solar Projects in the program are required to serve a majority of low-and-moderate-income customers.

Should you require any additional information, please do not hesitate to contact this office. Thank you for your attention to this matter.

Very truly yours,

DONNA M. JENNINGS

cc: Applicant
Kevin Shelly, PE
Luke H. Policastro, Esq.

RIDER
Solar Landscape LLC
Site Plan Waiver, Use Variance, and Bulk Variances
2 Keystone Ave
Block 493.01, Lot 1

Applicant's Proposal

Solar Landscape LLC ("Applicant") submits this application for site plan waiver, a use variance, and bulk variances to install rooftop community solar panels on the existing commercial structure with associated ground-mounted equipment located at 2 Keystone Avenue and identified as Block 493.01, Lot 1 on the Township's tax maps. The property is located in the Industrial Restricted (IR) Zone and within the Industrial Restricted—Restricted Business Overlay Zone (IR-RB Overlay) and is approximately 139,440 square feet.

The Applicant proposes to sell the power generated as part of the New Jersey Community Solar Energy Program. Solar energy systems are permitted in every zone so long as the system provides power for the principal use of the property and the power is not generated for commercial purposes pursuant to Ordinance Section 432-C(1)(a). Therefore, the proposed use is not permitted, and the Applicant requires a d(1) use variance. In addition, the Applicant requires the following bulk variances from Ordinance Section 421-E:

- Maximum Lot Coverage: 70% permitted / 93.1% proposed
- Minimum Open Space: 25% required / 6.9% proposed

Checklist Item 15. Required Approvals.

- New Jersey Community Solar Energy Program Acceptance
- JCP&L Utility Interconnection
- Department of Community Affairs Building, Electrical, and Fire

Checklist Item 16. Summary of Proposed Operations.

Once installed, employees will be on site regularly other than for routine maintenance. No truck traffic, noise, glare, odors or other hazards are anticipated, as the effect of the solar panels on the Property is de minimis.

SHORE POINT ENGINEERING

Solar Rooftop System – 2 Keystone Avenue
Block 493.01, Lot 1
Cherry Hill Township, Camden County, New Jersey

Completeness Checklist Waiver Request

The Applicant is requesting the following submission waivers.

- *Number 35 - Building Plans. Proposed structures and uses on the tract, i.e., size, height, location, arrangement, an architect's scaled elevation of the front, side and rear of any structure to be modified, with building lighting details and attached signs.*
  The application is for roof mounted solar panels and no additional structures are proposed.

- *Number 36 - Floor Plans where multiple dwelling units or more than one use is proposed that have different parking standards.*
  The application is for roof mounted solar panels that will have no impact on the floor plans.

- *Number 37 - Signs. Existing and proposed signs, including the location, size, height and necessary measurements and a Sign Location Plan.*
  The application is for roof mounted solar panels and has no impact on existing signage.

- *Number 38 - Streets. Existing and proposed street and lot layout, with dimensions correct to scale, showing that portion proposed for development in relation to the entire tract.*
  The application is for roof mounted solar panels and has no impact on existing roadways and is not proposing any roadways.

- *Number 39 - Easements & ROW. Name, width, and location of existing and proposed easements, right-of-ways, deed restrictions or covenants with reference source. The plans should note if none exist.*
  The application is for roof mounted solar panels and has no impact on existing easements or ROW.

- *Number 50 - Existing elevations and contour lines over the entire area of the proposed development and two (2) permanent bench marks based upon U.S.G.S. datum.*
  The application is for roof mounted solar panels and has no impact on existing topography.

- *Number 51 - Contours shall be shown at not more than two (2) foot intervals for areas with less than twenty (20%) percent slope, five (5) foot intervals for areas in excess of twenty (20%) percent slope.*
  The application is for roof mounted solar panels that will have no impact on existing topography.

- *Number 52 - Proposed grades in sufficient numbers to illustrate the proposed grading scheme.*
  The application is for roof mounted solar panels and has no impact on existing topography.

- *Number 53 - Locations and dimensions of artificial and/or natural features such as railroad rights-of-way, bridges, dams, soil types, wooded areas, etc.*
  The application is for roof mounted solar panels and has no impact on existing landscape.

1985 Highway 34, Suite A7, Wall, NJ 07719
T: 732-924-8100 F: 732-924-8110
Shorepointengineering.com

- *Number 55 - Locations of all existing and proposed water courses (i.e. lakes, streams, ponds, swamps or marsh areas, or underdrain) within 500 feet of the development, show the location and water level elevations.*
  The application is for roof mounted solar panels and has no impact on existing waterways.

- *Number 56 - Flood Plain limits as determined by most recent FEMA FIRM maps and onsite evaluations by a licensed professional engineer.*
  The application is for roof mounted solar panels and has no impact on existing floodplain.

- *Number 57 - Freshwater Wetlands & transition area boundaries, and stream buffer with NJDEP or accepted reference.*
  The application is for roof mounted solar panels and has no impact on existing freshwater wetlands.

- *Number 58 - Landscaping Plan showing number, size, species, and location.*
  The application is for roof mounted solar panels and has no impact on existing landscaping.

- *Number 61 - Utilities. Plans and profiles for all storm lines, underdrains and ditches whether onsite or off-tract, affected by the development including:*
  a. Location of each inlet, manhole or other appurtenance.
  b. Slope of line.
  c. Pipe material type.
  d. Strength, class or thickness.
  e. Erosion control and soil stabilization methods.
  The application is for roof mounted solar panels and has no impact on existing stormwater utilities.

- *Number 62 - Septic System infrastructure.*
  The application is for roof mounted solar panels and has no impact on existing septic system infrastructure.

- *Number 63 - Names, locations and dimensions of all existing streets and existing driveways, and any connections by the development to existing streets, sidewalks, bike routes, water, sewer, or gas mains within 200'*
  The application is for roof mounted solar panels and has no impact on surrounding properties or utilities.

- *Number 64 - Streets. Plans for all proposed streets or road improvements, whether onsite or off-tract, showing:*
  c. Fire lanes.
  d. Driveway aisle and dimensions.
  e. Parking spaces with size, number, location, and ADA spaces.
  f. Loading areas.
  g. Curbs.
  h. Radii of curb line.
  i. ADA ramps, signage, striping, etc.
  j. Sidewalks and bicycle routes.
  k. Any related facility for the movement and storage of goods, vehicles, persons, etc.

l. Directional and traffic signs with scaled drawings.
q. Fencing, railroad ties, bollards, and parking bumpers.
t. Center line profiles at a horizontal scale not less than 1"=50' for all existing adjoining streets and proposed streets. Standard details for curbing, sidewalks, bike paths, paving, stoned, or graveled surfaces, bollards, railroad ties and fences.

The application is for roof mounted solar panels and no additional streets, road improvements, or parking are proposed.

- *Number 65 - Lighting Plan showing photometric patterns, isolux, footcandles, etc.*
  The application is for roof mounted solar panels and no additional lighting is proposed.

- *Number 66 - Sewer & Water. Plans and profiles of water, and sewer layouts whether onsite, offsite or off-tract showing:*
  a. Size and types of pipes and mains.
  The application is for roof mounted solar panels and has no impact on existing sewer and water profiles.

- *Number 67 - If service is to be provided by an existing water or sewer utility company, a letter from that company shall be submitted, indicating that service shall be available before occupancy of any proposed structures.*
  The application is for roof mounted solar panels and has no impact on existing utilities.

CHERRY HILL township

You couldn't pick a better place.

Department of
Community Development

TO:	Cherry Hill Township Zoning Board Members
FROM:	Kathy Cullen, Director Jacob Richman, PP, AICP, Deputy Director Samuel Opal, Assistant Planner
RE:	**COMPLETENESS REVIEW** **Solar Landscape, LLC** **2 Keystone Avenue** **Cherry Hill, New Jersey 08003** **Block 493.01 Lot(s) 1** **Application No. 25-Z-0005**
DATE:	April 24, 2025

I. GENERAL INFORMATION

A. **Applicant & Owner.** Solar Landscape, LLC, 522 Cookman Avenue, Unit 3, Asbury Park, NJ 07712; Cherry Umbrella, LLC, 4 Radnor Corp, Center Suite 105, Radnor, PA 19087.

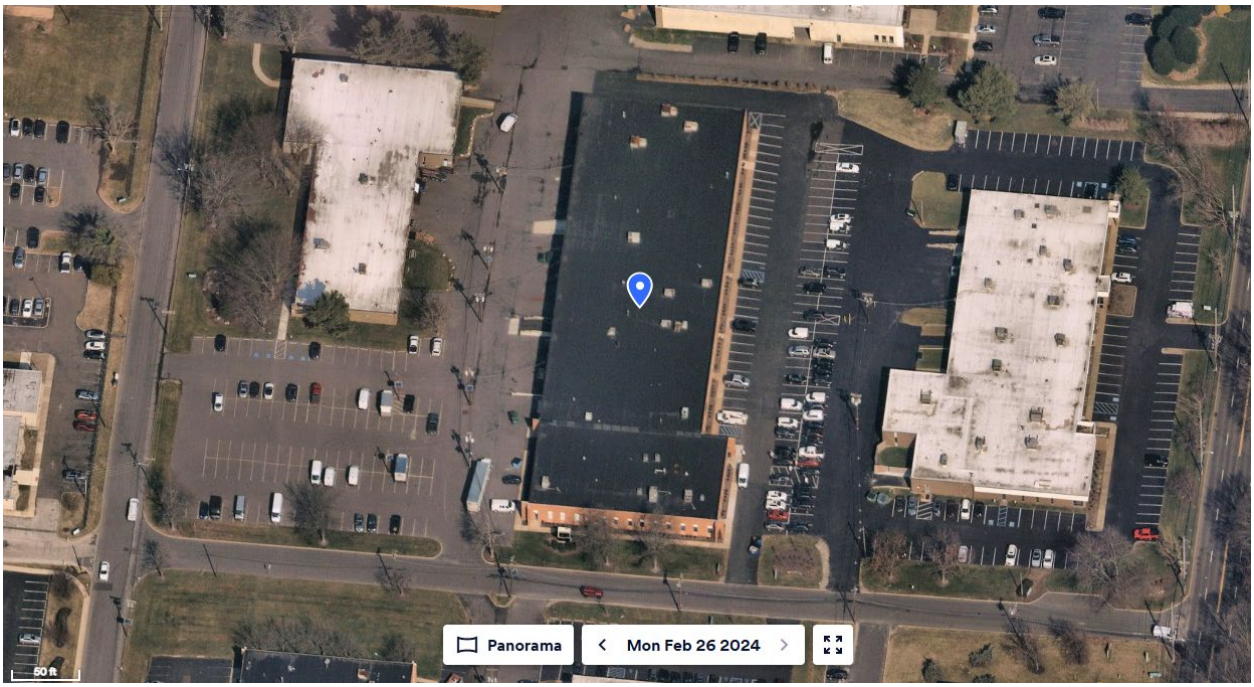
B. **Proposal.** Site Plan Waiver with a Use d(1) Variance and Bulk (C) Variances to install a 542.88 kW-DC rooftop solar photovoltaic (PV) system containing 928 panels on top of an existing commercial building along with associated ground and wall-mounted equipment. The system would fall under the NJ Community Solar Energy Program (CSEP) and would supply renewable energy back into the grid for prospective customers to purchase. The Zoning Ordinance only permits solar energy systems to provide power for the principal use of the property as opposed to off-site users.

C. **Zone.** Industrial Restricted (IR) with a Restricted Business (IR-RB) Overlay.

D. **Site Area.** The subject site is a 3.2-acre sized lot containing a multi-tenant industrial building located along the north side of Keystone Avenue, which is a private road. The site also has frontage on the east side of Olney Avenue. The Keystone Avenue access consists of two (2) separate driveways, with no direct access along Olney Avenue. The site is surrounded by other IR & IR-RB zoned properties containing various industrial uses (warehousing, manufacturing and storage) to the north, east and west. To the south is the Limited Office (O1) zoned section of the Deer Park industrial area, which houses mixture of uses from offices to various forms of residences. Nearby major roadways include Springdale Road (CR-673) to the east, Greentree Road (CR-674) and Marlton Pike East (SR-70).

E. **History.** According to Township Tax Assessor records, the shopping center was constructed around 1968, with the current owner of the property taking ownership in 2008. In December of 1994, the zoning board issued site plan waiver and Use D(1) variance approval (#6526-94) to permit a baseball school, with the sale of baseball related items and snacks within the building. In April of 2011, the zoning board issued Site Plan waiver and Use D(1) variance approval (#11-Z-0014) to permit the operation of a classic car sales and showroom on site. In July of 2012 the zoning board granted a relief of condition from the previous zoning board approval (#11-Z-0014) which allowed the classic car operation to expand its auto repair facility to any type of vehicle. In June of 2017, the planning board issued Site Plan waiver with Bulk (C) variance approval (#17-P-0010) to install a new generator in the front yard of the building. Numerous zoning permits for certificates of occupancy approvals have been issued for various industrial uses over the years with the most recent permit issuances involving "Logiwx, LLC" (ZP-24-00654) and "Bestwork Industries for the Blind, Inc." (ZP-24-00605) being issued in 2024. In November of 2023, a zoning permit (ZP-23-01297) was issued for roof mounted solar panels. In October of 2024, the aforementioned zoning permit (ZP-23-01297) was rescinded, due to the fact that the department of Community Development was made aware that the previously approved solar panels were intended for the use of "Community Solar" which is not permitted per §432.C.1.a of the Zoning Ordinance.

F. **Jurisdiction Determination.** Per §432.C.1.a of the Zoning Ordinance, the general requirements for solar energy systems are as follows: *"The solar energy system shall provide power for the principal use of the property whereon said system is to be located and shall not be for the generation of power for commercial purposes, although this provision shall not be interpreted to prohibit the sale of excess power generated from time to time from a wind or solar energy system designed to meet the energy needs of the principal use."* In receiving an application for a Community Solar project, the Department reviewed and determined that a Use (D) Variance would be required as the applicant's project description did not conform to the general requirements governing solar energy systems. Specifically, the Department determined that the project did not comply with the following key phrase: "*shall not be for the generation of power for commercial purposes...*" As the intention of this project is to sell all energy generated from the solar energy system to community solar members in the local area, the applicant is utilizing the solar energy system primarily to sell and provide power to off-site users (i.e. for commercial purposes) as opposed to providing: "*power for the principal use of the property…"* While the Ordinance does allow for: *"the sale of excess power generated from time to time"* the solar energy system shall be primarily designed to: *"meet the energy needs of the principal use."* Again, in this instance, the primary purpose of this project is to sell all energy generated from the system to people in the local area as opposed to primarily powering the underlying building (At Home and Big Lots). Therefore, the Department affirms that the Zoning Board of Adjustment has jurisdiction to consider the requested Use (D) Variance and associated Site Plan Waiver request.



II. COMPLETENESS REVIEW

A. **Submitted Items.** The following information has been submitted in support for this application and reviewed by the Cherry Hill Township Department of Community Development for conformance to the Zoning Ordinance:

1. Community Solar Site Plan Waiver Plan prepared by *Kevin E. Shelly, PE* of *Shore Point Engineering* dated *February 21, 2025*:
   a. Title Sheet, Sheet 1 of 3;
   b. Site Plan, Sheet 2 of 3; and
   c. Construction Details, Sheet 3 of 3.
2. Structural Feasibility Report prepared by *J. Trampe* of *Exactus Energy, Inc.* dated *June 19, 2024.*
3. Site and Aerial Photographs.
4. Submission Waivers Request Letter.
5. Application Overview Rider with List of Variances.
6. Cover Letter with Solar Installation Overview dated February 11, 2025.
7. Cover Letter with CSEP Compliance Statement dated March 7, 2025.
8. Land Use Development Application.

B. **Checklist.** Waivers requested and recommended for residual checklist items (items reviewed are the only checklist items applicable to the application):

14. *Photographs of the site showing area in question.* **Utilizing the provided aerial and site photographs, the applicant shall provide testimony regarding the existing site conditions and signify which areas will be impacted by the development footprint (i.e. roof areas and areas where electrical infrastructure will be installed).**
15. *Required Approvals.* List and provide applications and permits of regulatory agencies (NJDOT, NJDEP, CCSC, etc.). **Waiver requested and the Department <u>does not object</u> as no additional outside agency approvals are required for the proposed change of use.**
16. *Summary. A written description of the proposed use(s) and operation(s) of the building(s), i.e., the number of employee or users of non-residential buildings, the proposed number of shifts to be worked, the maximum number of employees on each shift, expected truck traffic, noise,*

glare, radiation, heat, odor, safety hazards, air and water pollution. **The applicant shall provide detailed testimony to the Board regarding the proposed solar installation and related improvements including but not limited to the following: 1) The CSEP details; 2) The total number of panels; and 3) The proposed roof and ground-mounted electrical infrastructure (i.e. inverters, meters, utility cabinets, utility pole connections and electrical wiring [above and below ground]). Please also provide testimony regarding the differences, if any, between a solar installation whose primary purpose is to generate electricity for the underlying use and one whose primary purpose is to send energy back out to the grid. Lastly, the applicant shall address whether any tree removal is necessary to accommodate the proposed solar installation.**

32. *Zoning Schedule showing required, existing, and proposed lot & yard requirements for relevant zone(s) including, area, frontage, depth, setbacks, height, etc.* **Please review the zoning schedule provided in Section III.A below and confirm to the Board the accuracy of the indicated requirements.**
35. *Building Plans. Proposed structures and uses on the tract, i.e., size, height, location, arrangement, an architect's scaled elevation of the front, side and rear of any structure to be modified, with building lighting details and attached signs.* **The applicant shall verify that the only changes to the exterior of the building are the installation of the rooftop panels and the associated electrical infrastructure that is to be ground-mounted.**
36. *Floor Plans where multiple dwelling units or more than one use is proposed that have different parking standards.* **Waiver requested and the Department <u>does not object</u> to the granting of this waiver as no building additions are proposed.**
37. *Signs. Existing and proposed signs, including the location, size, height and necessary measurements and a Sign Location Plan.* **Waiver requested and the Department <u>does not object</u> to the granting of this waiver as no signage is proposed.**

C. **Determination.** This application has been **<u>deemed technically complete</u>**. The above-referenced items shall be addressed on revised plans and items submitted for conformance review.

III. DEPARTMENT OF COMMUNITY DEVELOPMENT COMMENTS

A. **Zoning Requirements.** Community Solar Energy projects are not a permitted principal use in the Industrial Restricted (IR) zone nor the Restricted-Business (IR-RB) overlay zone per §432.C.1.a via §419.D.12 (and §421.D) of the Zoning Ordinance. The zoning requirements for solar energy systems (for roof-mounted systems only) are found in §432.C as well as the coverage requirements for the Restricted-Business (IR-RB) overlay zone (§421.E) are noted below:

CODE SECTION	MINIMUM REQUIREMENTS	REQUIRED	EXISTING	PROPOSED	CONFORM
§421.E	Building Coverage	30%	36.6%	No Change	ENC
§421.E	Lot Coverage	70%	92.9%	93.1%	**V (Bulk)**
§421.E	Open Space	25%	7.1%	6.9%	**V (Bulk)**
§432.C.1.a	Power Generation for Principal Use	Shall not to be used for Commercial Purposes	N/A	For Sale to Local Area (Commercial Purposes)	**V (Use)**

§432.C.1.c	Glare	Shall not create glare that poses a nuisance or danger to surroundings	N.A	Testimony to be provided	TBD
§432.C.2.a	Roof-Mounting Height	<3' from finished roof	N/A	9.5"	C
§432.C.2.b	Placement on Roof	Shall not extend beyond the edge or pitch of the roof	N/A	Contained within edge of roof	C

[V] Variance

[ENC] Existing Non-conformance

[C] Conforms

B. **Use (D) Variance.** A use d(1) variance is necessary from §432.C.1.a via §419.D.12 (and §421.D) of the Zoning Ordinance to permit the installation of a solar energy system that is principally designed to send all energy generated back to the grid and then, for commercial purposes, sold to the community, where such use is not specifically permitted (NJSA 40:55D-70(d)(1)). Justification should be provided for the requested variance in accordance with N.J.S.A. §40:55D-70(d)(1), where the Township recommends that the burden of proof be provided by a licensed New Jersey Professional Planner (P.P.). In considering a request for a use (d) variance(s), the Zoning Board of Adjustment must be assured that the Applicant has demonstrated either that:
   1. The positive criteria are met if at least one of the following is proven by the applicant:
      a. The proposed use inherently serves the public good; or
      b. The project advances one or more of the purposes of the municipal land use law (N.J.S.A. 40:55D-2); or
      c. The property owner would suffer "undue hardship" if compelled to use the property in conformity with the permitted uses in the zone (zoned into inutility); or
      d. The proposed site is particularly suitable for the proposed use.
   2. To meet the negative criteria the applicant must show that the proposed use can be granted without:
      a. Substantial detriment to the public good.
      b. Substantially impairing the intent and purpose of the zone plan and zoning ordinance.

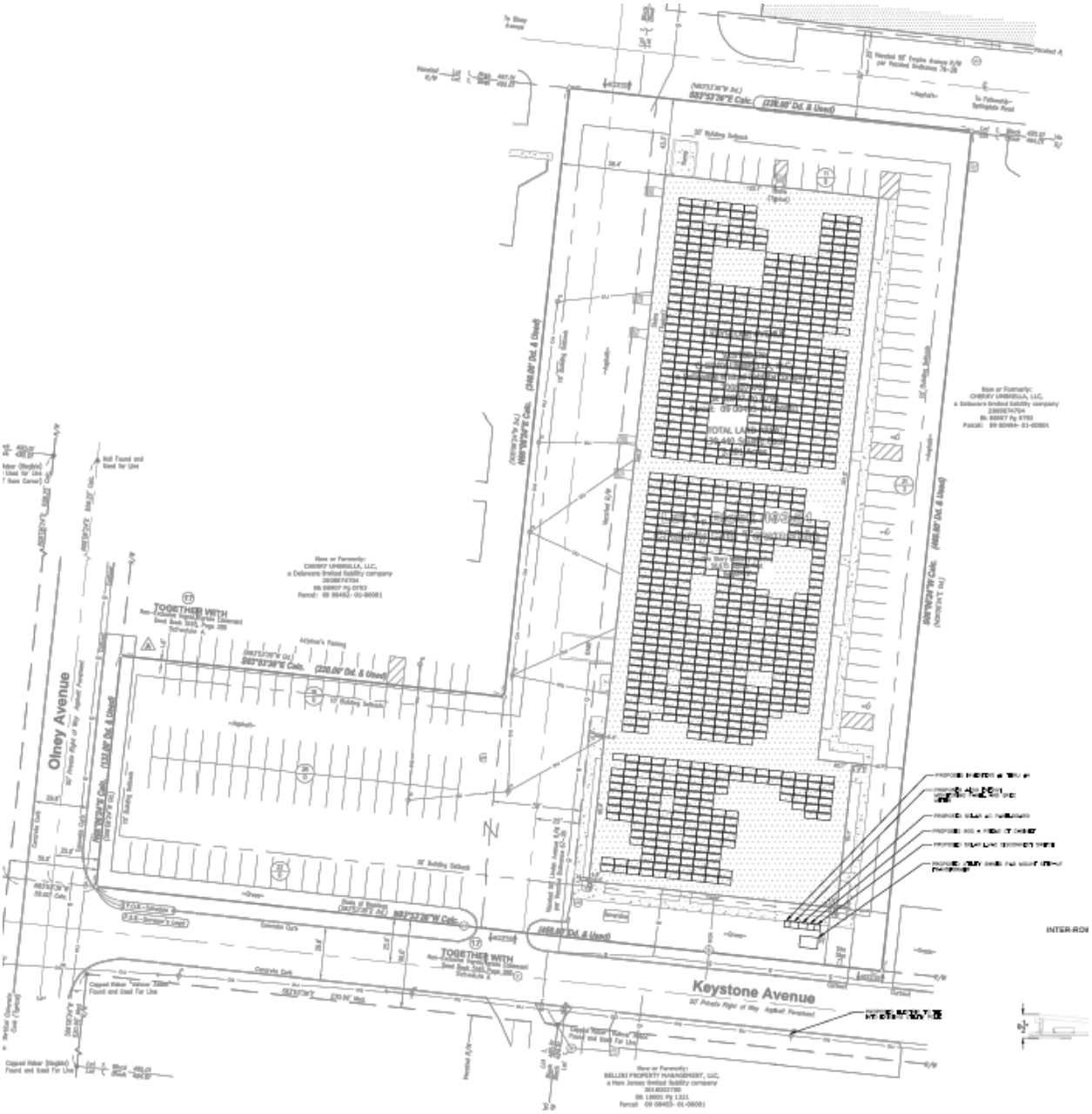
C. **Bulk (C) Variances.** It is recommended, although not required, that justification be provided by a licensed New Jersey Professional Planner (P.P.), for the requested variances in accordance with N.J.S.A. §40:55D-70:of Adjustment must be assured that the Applicant has demonstrated either that:
   1. From §421.E, to permit a building coverage of 36.6%, where a maximum building coverage of 30% is permitted. ***This represents a pre-existing nonconforming condition that is unaffected by the proposed application.***
   2. From §421.E, to permit a lot coverage of 93.1%, where a maximum lot coverage of 70% is permitted and 92.9% exists. **The concrete pad associated with the proposed ground-based**

equipment triggers a slight exacerbation of the existing nonconforming condition. Thus a new variance is required.

3. From §421.E, to permit an open space coverage of 6.9%, where a minimum open space coverage of 25% is required and 7.1% exists. **The concrete pad associated with the proposed ground-based equipment triggers a slight exacerbation of the existing nonconforming condition. Thus a new variance is required.**
4. Any other variances deemed necessary by the Zoning Board of Adjustment.

D. **Design Waivers.** No design waivers are requested or required as part of this application.

E. **Standards of Review.** The following standards for review apply for Site Plan Waivers, per §804, "Where site plans are required, the Administrative Officer may determine that the purposes of this Ordinance and the public interest can be served by approval of a site plan waiver. A site plan waiver may be requested provided that such change in use or modification of an existing conforming use would not involve any of one or more of the following:
    1. A significant structural improvement that would alter the exterior of the building (**Not Applicable – The improvements will be located on top of the roof with the exception of ground-based equipment**).
    2. Drainage modifications, including but not limited to:
        a. Major storm drainage installations (**Not Applicable**).
        b. An increase of stormwater runoff of more than one cubic foot per second during a twenty-five year rainfall event (**Not Applicable**).
        c. Redirecting of stormwater runoff (**Not Applicable**).
    3. Any change in vehicular traffic circulation patterns or intensity of use **(Not applicable as the improvements are primarily contained to the roof with electrical infrastructure contained on the front of the building).**
    4. No approval for the proposal is required by outside agencies, such as the County or State (**Not Applicable**)**.**
    5. The requirement for a major or minor site plan would not forward the purposes of this Ordinance or otherwise serve the public interest (**Not Applicable as excepting for the rooftop solar infrastructure, no major physical changes are being proposed for the property**).



F. **Comments.** The applicant shall address the following comments:

1. The applicant shall provide testimony regarding the proposed solar installation including but not limited to the total number of panels, the power generation of the installation, the associated electrical infrastructure/ground-based equipment, and compliance with the Community Solar Energy Program (CSEP) requirements.
2. Per the requirements of §432.C.2 of the Zoning Ordinance, the solar panel system shall not extend beyond the edge or pitch of the roof, nor shall the system be mounted more than three (3') feet higher than the finished roof to which it is mounted upon. Per §432.C.1.c, the installation of solar panels shall not create glare that is a nuisance or pose a danger to surrounding properties and the general public. The applicant shall affirm that the proposed solar energy system will comply with said requirements.

a. Furthermore, utilizing the performance standards established in §502.A, testimony shall be provided regarding any applicable impacts as it relates to: air quality, emissions, drainage, glare, heat, noise, odor, waste, ventilation, vibration and sight triangle visibility.

3. While 2018 Master Plan does not specifically indicate a position on Community Solar Energy systems, the Land Use Element does state the following: *"It is recommend to comprehensively review the standards for ground-mounted and roof-mounted solar systems to ensure that they meet the needs of industry providers. Additional alternative energy systems (e.g., small wind energy, electric vehicle charging stations) should also be considered for inclusion in the Zoning Ordinance, where appropriate."*
   a. Furthermore, the NJ MLUL Section 40:55D-4 indicates that solar energy systems are classified as an inherently beneficial use which establishes the positive criteria. However, in order to determine whether the negative criteria is satisfied, the Zoning Board shall consider the whether there is any perceived or apparent negative impact with respect to sending renewable energy back into the grid -- as opposed to just allowing power generation for the underlying principal use -- for purchase.
4. Please see Checklist item #16 above. Testimony shall be provided by the applicant in regard to the purpose of the proposed solar facility and the scope of work necessary in order to accommodate said facility.
5. The applicant shall be advised that the project shall comply with the Cherry Hill Tree Ordinance. If any trees require removal, such trees shall be replaced in-kind or be subject to a fee submission into the Cherry Hill Tree Fund in the amount of $300.00 per tree. **This shall be a condition of approval.**
6. The applicant shall provide testimony regarding the findings/analyses contained with the submitted Structural Analysis. The applicant and the Board shall be advised that the submitted Structural Analysis will be reviewed for UCC compliance by the Township's Construction Office during building permit review (following the issuance of a zoning permit once plans are deemed compliant). The applicant shall comply with all UCC requirements with respect to the solar energy system installation. **This shall be a condition of approval.**
7. While not explicitly required for solar installations, in general all rooftop mechanical and electrical equipment shall be screened to the greatest extent possible from view at ground level by a parapet wall, within the roof structure itself, or properly screened. Ground-mounted mechanical and electrical equipment shall also be screened with landscaping and/or fencing (if not already screened from the ROW by the building), where feasible. The applicant shall address whether any screening measures are proposed. **This shall be a condition of approval.**
8. The application may be subject to additional comments by members Zoning Board, the Cherry Hill Department of Community Development, the Township's zoning board consultants, and/or the public.
9. The statements, opinions, and conclusions contained within this Completeness Review are based upon the information, plans, and other documents provided to the Department as of the date of its issuance. The Department reserves the right to supplement or amend any of the statements, opinions, and/or conclusions contained herein at any time up to, and including, at the time of the hearing of this application.

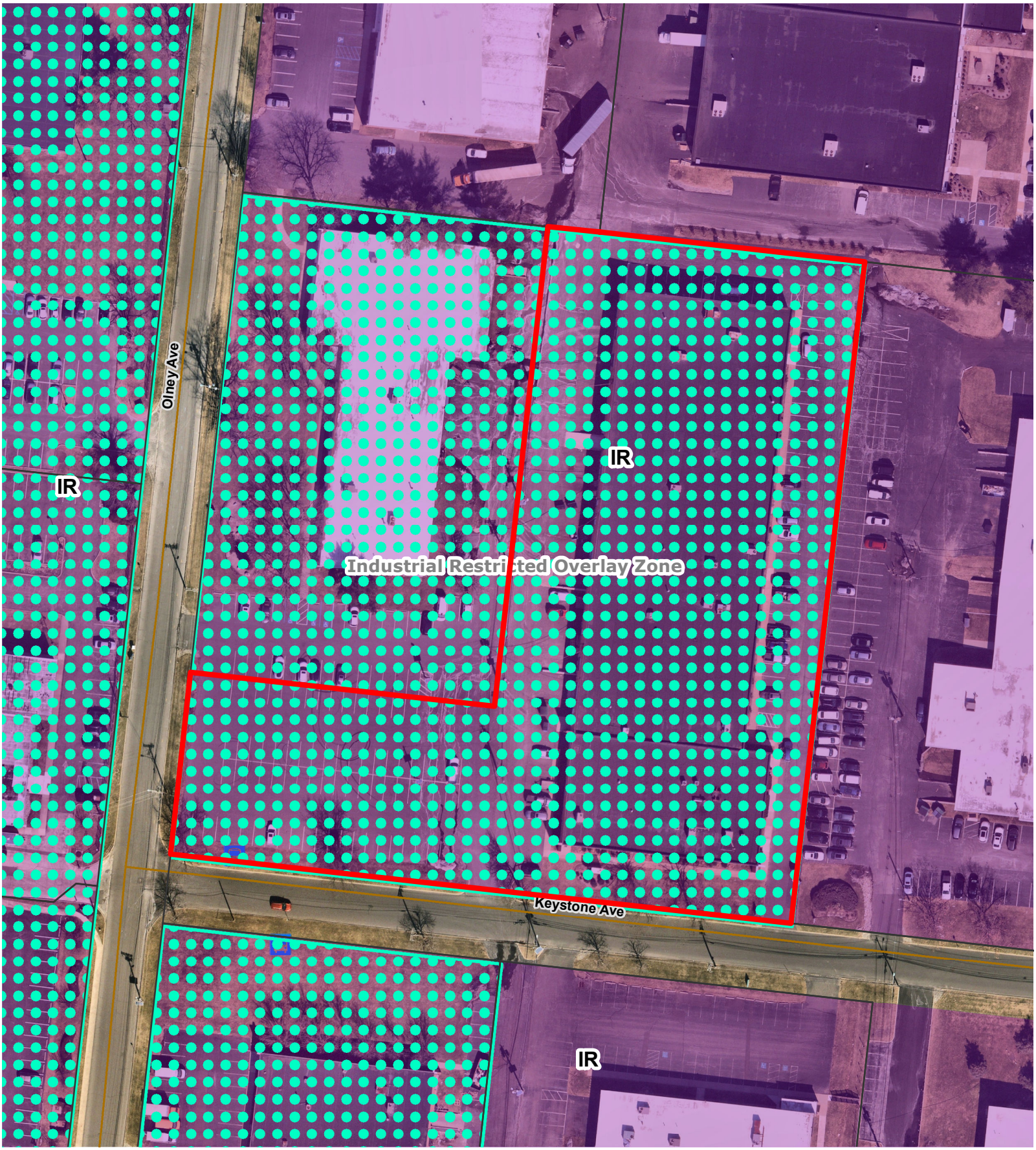
E. **Conditions.** Should the Zoning Board consider and grant the requested relief to permit the proposed improvements, they may impose reasonable conditions, as they deem necessary, in addition to the following recommended conditions of approval:
   1. All taxes and assessments shall be paid on the property for which this application is made. The Applicant shall submit proof that no taxes or assessments for local improvements are due or delinquent on the property for which the application is made.
   2. Any and all conditions made a part of any approval, including those noted by reference in this or any other reports of any consultants to the Zoning Board, or as set forth on the record at the Zoning Board hearing, must be satisfied.
   3. The Applicant shall pay all required escrows, costs and professional fees associated with the application to the Department of Community Development within fourteen (14) days of receipt of a written request for payment of escrow funds. The failure to pay the required escrow funds within the fourteen (14) day period after receipt of written notice may result in the voiding of this approval. Negative escrow account balances shall incur interest at the rate of 1.5% per month.
   4. Any and all outside agency reviews and/or approvals shall be obtained, if applicable.
   5. The failure of the Applicant to comply with any of the conditions contained in this Resolution will permit the Zoning Officer to withhold or rescind any zoning permits issued to the Applicant, pursue any other enforcement actions permitted by the Cherry Hill Township Zoning Ordinance, and/or refer the matter back to the Zoning Board where it may, at its sole option, revoke the approval being granted by any Resolution of Approval.

IV. APPROVAL PROCESS

If approved, the following items are required to complete the approval process (notwithstanding any other needed items due to the unique nature of the application):

1. After the resolution is memorialized, a **Notice of Decision** will be published in the Courier Post by the Department of Community Development.
2. If applicable, **two (2) copies of revised site plans along with an electronic copy**, which provide completeness items and all conditions of approval, shall be submitted to the Department of Community Development for review.
3. Submit any **draft legal documents** (agreements, deeds, easements, etc.) for review by the Zoning Board Engineer and Solicitor. Revise as necessary.
4. If applicable, **a**fter comments from the Department of Community Development and the Board Engineer have been provided, **revise (if needed), and submit six (6) copies of finalized plans for signature along with an electronic copy**.
5. Payment of any outstanding **Review Escrow**.
6. Complete and submit a **Zoning Permit** for the proposed solar energy system. *To learn about how to submit a zoning, please visit the following webpage:* http://www.chnj.gov/203/Zoning *or contact our Zoning Officer at* zoning@chnj.gov with any questions.

cc: *Solar Landscape, LLC (via email)*
Cherry Umbrella, LLC (via email)
Kevin Shelly, PE (via email)
Fred Kuhn (via email)
Kathleen Gaeta (via email)
Mike Raio (via email)
Donna M Jennings, Esq. (via email)
Luke Policastro, Esq. (via email)
Allen Zeller, Esq. (via email)
Sharon Walker (via email)
Kathy Cullen (via email)
Danielle Hammond (via email)



2 KEYSTONE AVE

BLOCK 493.01 LOT 1

1 inch = 90 feet

N

0 55 110 220 Feet

Legend

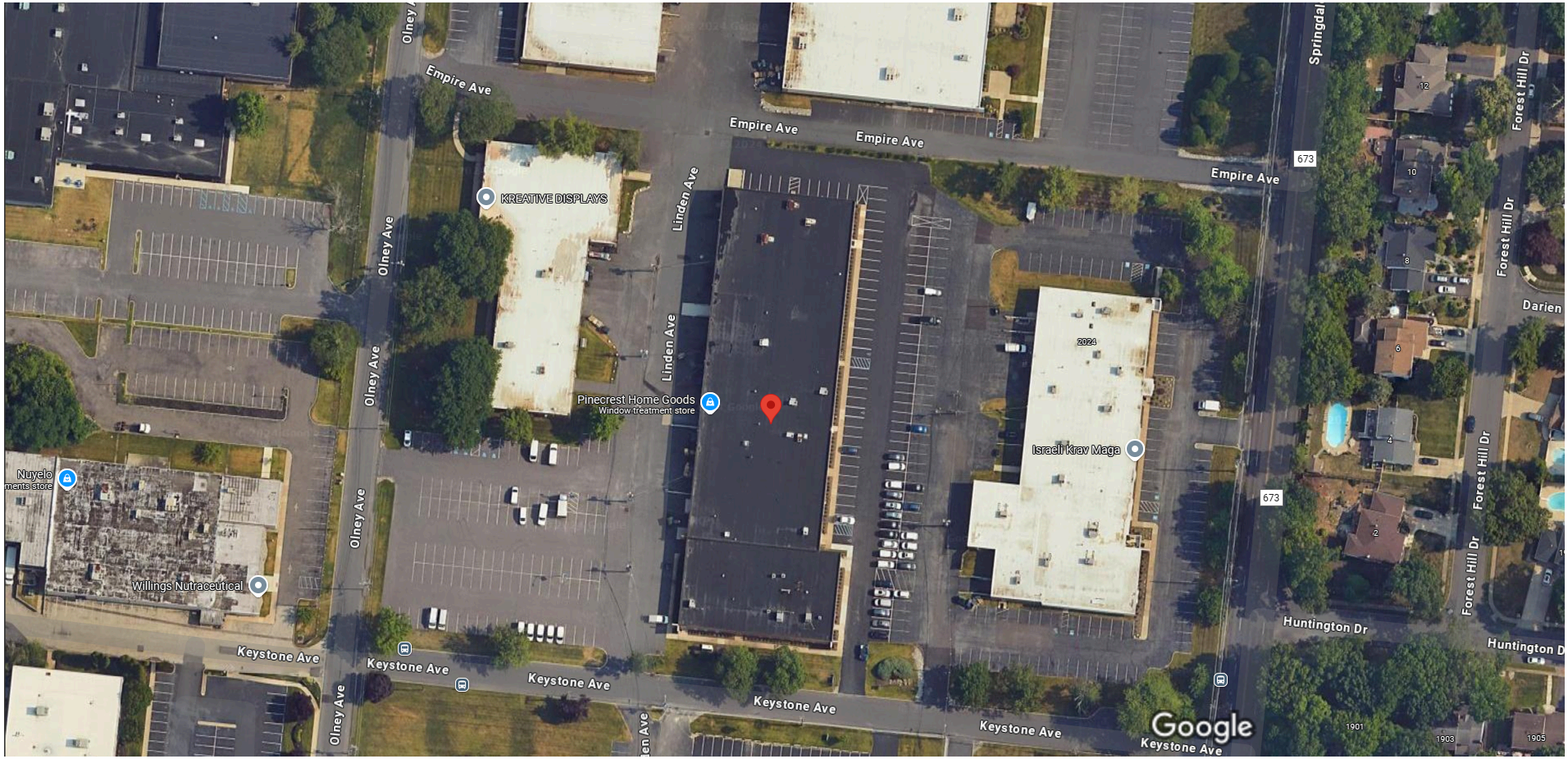
- Parcels selection
- Parcels
- Bus Stops
- Rail Lines

CHERRY HILL Township
You couldn't pick a better place.

PREPARED BY:
JACOB RICHMAN, PP, AICP, SENIOR PLANNER
DEPARTMENT OF COMMUNITY DEVELOPMENT
LICENSE NO. 33LI00629000

Google Maps

2 Keystone Ave



Imagery ©2025 Airbus, Maxar Technologies, Map data ©2025 Google 50 ft


GROUND MOUNTED EQUIPMENT
2 KEYSTONE AVENUE
PINECREST HOME GOODS
Endurance
2
200

STRUCTURAL FEASIBILITY REPORT

Prepared By

J. Trampe
June 19, 2024

Reviewed By

D. Hernandez, PE
June 19, 2024

Site

2 Keystone Ave, Cherry Hill, NJ 08003-1605

Prepared For

Solar Landscape
522 Cookman Ave, Unit 3, Asbury Park, NJ 07712
Attention: Shishira Bhargav

Exactus Energy Inc.

New Age Engineering
14 Neilor Crescent, Toronto, ON, M9C 1K4
1-833-392-2887 | www.exactusenergy.com

EXACTUS ENERGY
NEW AGE ENGINEERING

Table of Contents

Re: Structural feasibility report for installation of a solar PV system at

2 Keystone Ave, Cherry Hill, NJ 08003-1605

Exactus Energy Inc. has been retained to review the structural condition for the site: 2 Keystone Ave, Cherry Hill, NJ 08003-1605. The roof of this building was assessed to determine its capacity to support additional loads imposed by the installation of a solar PV system. The conclusions and findings of this investigation are summarized in this technical document.

The feasibility assessment for the site concludes:

- Roof A has additional structural capacity for up to 4 psf
- Roof B has additional structural capacity for up to 6 psf

1. Background

1.1. Report Scope

A site inspection of the roof structure to obtain structural specifications was conducted on June 6, 2024. Structural specifications are detailed in site inspection documentation. Architectural/structural drawings or existing documentation was not provided.

The plan view of the site is provided in Figure 1. The roofs included in this assessment are highlighted.

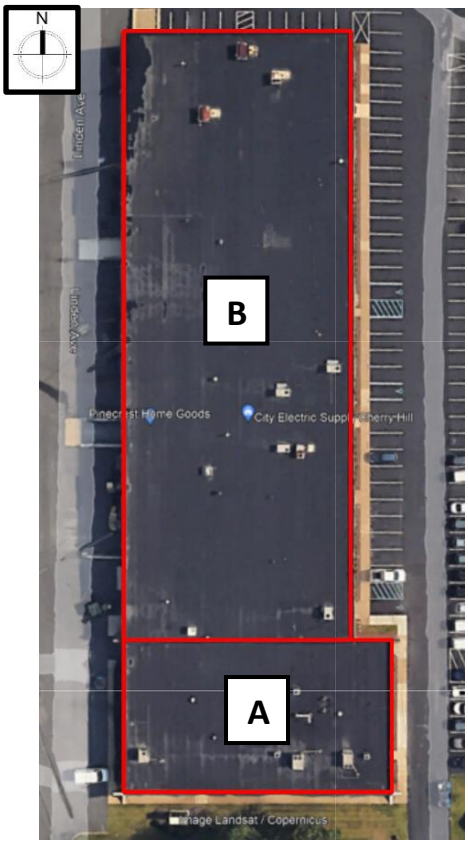


Figure 1: Roof structures included in this assessment

1.2. Roof System Compositions and Structures

Upon review, Roof A was determined to consist of built-up EPDM roofing atop unknown decking and are assumed to be supported by steel beams and columns. Roof B was determined to consist of built-up EPDM roofing membrane atop steel decking and are supported by systems of steel beams and columns. Photographs of the structural members of each roof are provided in Figure 2 and Figure 3.

Figure 2: Roof A Steel beams and columns

Figure 3: Roof B steel beams and columns

2. Assumptions

The following assumptions have been made for this assessment:

- The roof surfaces are not expected to support any other additional loading for the life of the solar PV system.
- The solar PV system installation will not cause an increase in the snow load.
- Steel deck assumed to have reserve capacity
- All connections of structural members impacted by additional PV system weight have sufficient reserve capacity to withstand the system weight.
- Roof A was assumed to have the same structural configuration as Roof B due to no access for Roof A

The structural analysis and assessment are based upon visual inspection and measurements collected on site. The loading capacity was established in accordance with the requirements of

- ASCE 7-16
- International Building Code (2021) – New Jersey Edition

3. Analysis and Methodology

3.1. Design Loads and Criteria

The governing design loads used in this assessment are detailed in Table 1. Mechanical loads and accumulated snow have also been considered. The building has been classified as Risk Category II.

Table 1: Design loads

		Current Analysis (2024)	Load Description
Roof A, B	Risk Category	II	2021 IBC – NJ Ed. Sec. 1604.5
	Exposure Category	B	2021 IBC – NJ Ed. Sec. 1609.4.3
	Dead Load	15 psf	Roof System
	Live Load	20 psf	Roof Live Load
	Exposure Factor (C_e)	1.0	ASCE Table 7.3-1
	Thermal Factor (C_t)	1.0	ASCE Table 7.3-2
	Snow Load	25 psf	Ground Snow Load
	Wind Load	115 mph	Wind Speed

3.2. Existing Structure Condition

The assessed condition of each roofs' structural components and roof system is given in Table 2.

Table 2: Condition Assessment

Roof	Condition Assessment
A	• Thermoplastic membrane system appears well-sealed. • Roof system and structural condition was not evaluated due to no access. Roof A was assumed to have the same structural configuration as Roof B
B	• Thermoplastic membrane system appears well-sealed. • No indication of significant leakage or damage to structural members. • Overall, the roof system and structure are in acceptable condition.

4. Results

4.1. Loading Capacity

It is determined that the capacity of each roof area to support additional loads imposed by the installation of a solar PV system is as follows:
Roof A: 4 psf (Blue)
Roof B: 6 psf (Green)

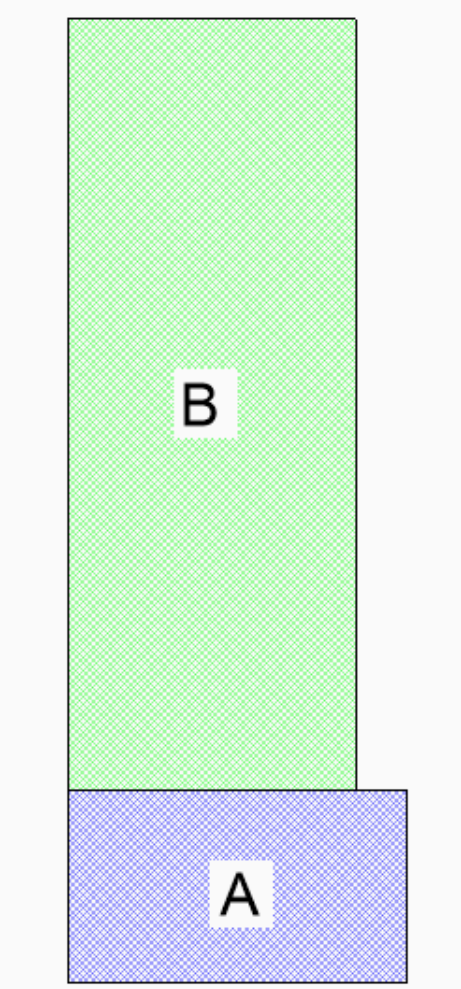
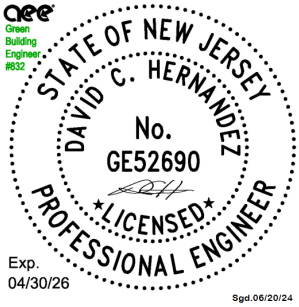


Figure 4: Allowable Capacity Map

4.2. Conclusions

This assessment has been conducted to evaluate the additional loading capacity of each roof structure as labelled in Figure 1 to support additional loads imposed by the installation of a solar PV system. The additional loading capacities and other information given in this report should not be used for any other purposes. The engineer must be contacted for any other type of equipment installation.

Acknowledged by:



_____

David Hernandez, PE

Appendix A

A1 – ASCE 7-16 Table 7.3-1 and Table 7.3-2

Table 7.3-1 Exposure Factor, C_e

Surface Roughness Category	Exposure of Roof[a]		
	Fully Exposed	Partially Exposed	Sheltered
B (see Section 26.7)	0.9	1.0	1.2
C (see Section 26.7)	0.9	1.0	1.1
D (see Section 26.7)	0.8	0.9	1.0
Above the tree line in windswept mountainous areas	0.7	0.8	NA
In Alaska, in areas where trees do not exist within a 2-mi (3-km) radius of the site	0.7	0.8	NA

Table 7.3-2 Thermal Factor, C_t

Thermal Condition[a]	C_t
All structures except as indicated below	1.0
Structures kept just above freezing and others with cold, ventilated roofs in which the thermal resistance (R-value) between the ventilated space and the heated space exceeds $25°F \times h \times ft^2/Btu$ ($4.4\ K \times m^2/W$)	1.1
Unheated and open air structures	1.2
Freezer building	1.3
Continuously heated greenhouses[b] with a roof having a thermal resistance (R-value) less than $2.0°F \times h \times ft^2/Btu$ ($0.4\ K \times m^2/W$)	0.85

A2 – AISC 360-16 Equation H1.2, H1-1b

H1. DOUBLY AND SINGLY SYMMETRIC MEMBERS SUBJECT TO FLEXURE AND AXIAL FORCE

1. Doubly and Singly Symmetric Members Subject to Flexure and Compression

The interaction of flexure and compression in doubly symmetric members and singly symmetric members constrained to bend about a geometric axis (x and/or y) shall be limited by Equations H1-1a and H1-1b.

User Note: Section H2 is permitted to be used in lieu of the provisions of this section.

(a) When $\frac{P_r}{P_c} \geq 0.2$

$$\frac{P_r}{P_c} + \frac{8}{9}\left(\frac{M_{rx}}{M_{cx}} + \frac{M_{ry}}{M_{cy}}\right) \leq 1.0 \qquad \text{(H1-1a)}$$

(b) When $\frac{P_r}{P_c} < 0.2$

$$\frac{P_r}{2P_c} + \left(\frac{M_{rx}}{M_{cx}} + \frac{M_{ry}}{M_{cy}}\right) \leq 1.0 \qquad \text{(H1-1b)}$$

EXACTUS ENERGY
NEW AGE ENGINEERING

Appendix B
Calculations

ETABS Steel Frame Design

AISC 360-16 Steel Section Check (Strength Summary)

Element Details

Level	Element	Unique Name	Location (in)	Combo	Element Type	Section	Classification
Story1	B25	34	138	DStlS3	Ordinary Moment Frame	W12X19	Slender

LLRF and Demand/Capacity Ratio

L (in)	LLRF	Stress Ratio Limit
276.0000	1	0.95

Analysis and Design Parameters

Provision	Analysis	2nd Order	Reduction
ASD	Direct Analysis	General 2nd Order	Tau-b Fixed

Stiffness Reduction Factors

$\alpha P_r/P_y$	$\alpha P_r/P_e$	τ_b	EA factor	EI factor
-1.062E-04	-6.055E-05	1	0.8	0.8

Design Code Parameters

Ω_b	Ω_c	Ω_{TY}	Ω_{TF}	Ω_V	$\Omega_{V\text{-}RI}$	Ω_{VT}
1.67	1.67	1.67	2	1.67	1.5	1.5

Section Properties

A (in²)	J (in⁴)	I_{33} (in⁴)	I_{22} (in⁴)	A_{v3} (in²)	A_{v2} (in²)
5.57	0.18	130	3.76	2.81	2.87

Design Properties

S_{33} (in³)	S_{22} (in³)	Z_{33} (in³)	Z_{22} (in³)	r_{33} (in)	r_{22} (in)	C_w (in⁶)
21.31	1.88	24.7	2.98	4.8311	0.8216	132.05

Material Properties

E (lb/in²)	f_y (lb/in²)	R_y	C_{pr}	α
29000000	50000	1.1	1.4	NA

Stress Check Message - l/r > 300

Stress Check forces and Moments

Location (in)	P_r (kip)	M_{r33} (kip-ft)	M_{r22} (kip-ft)	V_{r2} (kip)	V_{r3} (kip)	T_r (kip-ft)
138	0.018	15.1396	0	0	0	0

Axial Force & Biaxial Moment Design Factors (H1.2,H1-1b)

	L Factor	K_1	K_2	B_1	B_2	C_m
Major Bending	1	1	1	1	1	1
Minor Bending	1	1	1	1	1	1

Parameters for Lateral Torsion Buckling

L_{ltb}	K_{ltb}	C_b
0.5	1	1.035

Demand/Capacity (D/C) Ratio Eqn.(H1.2,H1-1b)

D/C Ratio =	$(P_r/2P_c) + (M_{r33}/M_{c33}) + (M_{r22}/M_{c22})$
0.617 =	5.542E-05 + 0.617 + 0

Axial Force and Capacities

P_r Force (kip)	P_{nc}/Ω (kip)	P_{nt}/Ω (kip)
0.018	7.419	166.766

Moments and Capacities

	M_r Moment (kip-ft)	M_n/Ω (kip-ft)	M_n/Ω No LTB (kip-ft)	M_n/Ω Cb=1 (kip-ft)
Major Bending	15.1396	24.5488	61.6267	23.7072
Minor Bending	0	7.4351		

Shear Design

	V_r Force (kip)	V_n/Ω (kip)	Stress Ratio
Major Shear	0	57.34	0
Minor Shear	0	50.425	0

End Reaction Major Shear Forces

Left End Reaction (kip)	Load Combo	Right End Reaction (kip)	Load Combo
2.633	DStlS3	2.633	DStlS3

SITE PLAN WAIVER
COMMUNITY SOLAR
SOLAR ROOFTOP SYSTEM - 2 KEYSTONE AVE

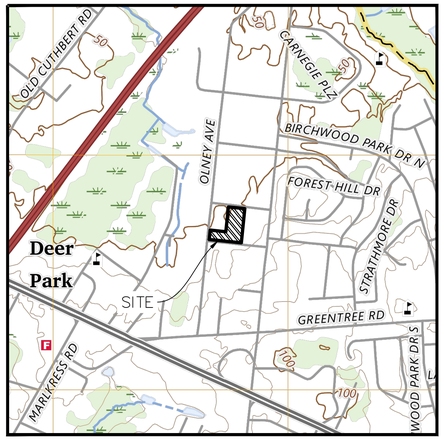
BLOCK 493.01, LOT 1

TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY

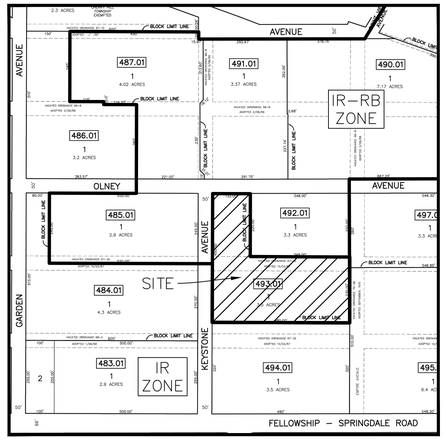
GENERAL NOTES:

1. APPLICANT
   SOLAR LANDSCAPE, LLC
   522 COOKMAN AVE – UNIT 3
   ASBURY PARK, NJ 07712

   OWNER
   CHERRY UMBRELLA, LLC
   4 RADNOR CORP CTR STE 105
   RADNOR, PA 19087
2. SITE IS KNOWN AND DESIGNATED AS BLOCK 493.01, LOT 1 AS SHOWN ON THE CURRENT TAX ASSESSMENT MAP OF THE TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY (SHEET 329).
3. EXISTING BOUNDARY AND STRUCTURES INFORMATION SHOWN ON PLAN ENTITLED "2 KEYSTONE AVENUE; CITY OF CHERRY HILL; COUNTY OF CAMDEN; STATE OF NEW JERSEY" PREPARED BY MILLMAN NATIONAL LAND SERVICES, DATED 04/16/18.
4. SITE COORDINATES: 1,116,782' N, 1,270,151' E
5. HORIZONTAL DATUM: NAD 83 VERTICAL DATUM: NAVD 88
6. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR IS REQUIRED TO CALL THE BOARD OF PUBLIC UTILITIES ONE CALL DAMAGE PROTECTION SYSTEM OR UTILITY MARK OUT IN ADVANCE OF ANY EXCAVATION.
7. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. ADDITIONALLY, ALL WORK SHALL ALSO COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER/DEVELOPER. CONTRACTOR HAS SOLE RESPONSIBILITY FOR SITE SAFETY AND TO CONFORM TO AND ABIDE BY ALL CURRENT OSHA STANDARDS OR REGULATIONS. SAFE CONSTRUCTION PRACTICES REMAIN THE OBLIGATION OF THE CONTRACTOR.
8. THE CONTRACTOR SHALL NOTIFY ALL AGENCIES HAVING JURISDICTION AT LEAST 72 HOURS IN ADVANCE OF ANY WORK.
9. UNLESS OTHERWISE INDICATED, ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
10. ALL TRAFFIC CONTROL DEVICES WITHIN THE RIGHT OF WAY TO BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
11. THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF THE WORK ARE SHOWN ON THE PLANS. THE ACCURACY AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED BY THE ENGINEER, AND THE CONTRACTOR IS ADVISED TO VERIFY IN THE FIELD ALL THE FACTS CONCERNING THE LOCATION OF THESE UTILITIES OR OTHER POTENTIAL CONFLICT PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY AFFECT THE PROJECT DESIGN. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES AND ALL OTHER SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
12. THE PROPOSED SOLAR PANEL APPLICATION IS PART OF NEW JERSEY'S COMMUNITY SOLAR PROGRAM.
13. ONCE THE SYSTEM IS INSTALLED AND OPERATIONAL, THERE IS NO IMPACT ON THE CURRENT SITE OPERATIONS. THERE IS NO ON-SITE STAFF FOR MAINTENANCE OR OPERATIONS. SOLAR LANDSCAPE HAS A MAINTENANCE AND INSPECTION SCHEDULE FOR THEIR PROJECTS, WHICH TYPICALLY INCLUDES A 2-MAN INSPECTION TEAM THAT WOULD VISIT THE SITE TWICE PER YEAR TO PERFORM INSPECTIONS AND ROUTINE MAINTENANCE OF THE SYSTEM.
14. ALL CONSTRUCTION IS TO BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL AND FIRE CODES.
15. ALL SIGNAGE RELATED TO THE PROPOSED SOLAR PANELS WILL BE PROVIDED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
16. THE APPLICANT WILL OBTAIN APPROVAL FROM THE CHERRY HILL FIRE OFFICIAL FOR THE PROPOSED DEVELOPMENT.
17. SIGNED AND SEALED FINAL DESIGN PLANS, ENGINEERING UPLIFT CALCULATIONS AND ROOFING ANALYSIS WILL BE PROVIDED.
18. NO ADDITIONAL SITE IMPROVEMENTS BEYOND THE ROOF MOUNTED SOLAR PANELS AND THE GROUND MOUNTED ELECTRICAL EQUIPMENT ARE PROPOSED AS PART OF THIS APPLICATION.
19. THE PROPOSED SITE IMPROVEMENTS WILL HAVE NO IMPACT ON SITE SECURITY, CIRCULATION, PARKING OR OPERATIONS.
20. AS ASBUILT DRAWING FOR THE GROUND-MOUNTED EQUIPMENT AND UNDERGROUND UTILITIES WILL BE PROVIDED ONCE CONSTRUCTION IS COMPLETED.
21. ACCORDING TO THE NEW JERSEY SOIL EROSION AND SEDIMENT CONTROL ACT, A PROJECT IS DEFINED AS "ANY DISTURBANCE OF MORE THAN 5,000 SQUARE FEET OF THE SURFACE AREA OF LAND". THEREFORE, NO SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED ON THIS PROJECT SINCE WE ARE DISTURBING LESS THAN 5,000 SF.



LOCATION MAP
MOORESTOWN QUADRANGLE
NAD 83
800 400 0 1000 2000 3000
1000 600 200
GRAPHIC SCALE
1 INCH = 1000 FEET



KEY MAP
TAX MAP SHEET 329
NAD 83
400 200 0 500 1000 1500
500 300 100
GRAPHIC SCALE
1 INCH = 500 FEET

AERIAL MAP
NAD 83
400 200 0 500 1000 1500
500 300 100
GRAPHIC SCALE
1 INCH = 500 FEET

Variances Requested
• D Use Variance. Although Solar energy infrastructure is a permitted accessory use in the IR-RB zone (§Section 421.D) they are not permitted when not powering the principal building. (Section §432.C.1.a)
• Bulk Variance. The maximum permitted impervious lot coverage is 70%. The proposed lot coverage is 93.1%. (Section § 421.E)
• Bulk Variance. The minimum required open space for the lot is 25%. The proposed open space is 6.9%. (Section § 421.E)
Pre-Existing Non-Conforming Conditions
• The maximum permitted building coverage is 30%. The current total building coverage is 36.6%. (Section § 421.E)

INDUSTRIAL RESTRICTED-RESTRICTED BUSINESS (IR-RB) OVERLAY ZONING SCHEDULE
2 KEYSTONE AVE - BLOCK 493.01, LOT 1
PROPOSED USE: COMMUNITY SOLAR ENERGY PROJECT[1]

	REQUIRED	EXISTING	PROPOSED	COMPLIES
MIN. LOT AREA	20,000 SF	139,440 SF	NO CHANGE	YES
MIN. LOT FRONTAGE	120 FT	450 FT	NO CHANGE	YES
MIN. LOT DEPTH	120 FT	132 FT	NO CHANGE	YES
MIN. FRONT YARD SETBACK	30 FT	32.9 FT	NO CHANGE	YES
MIN. REAR YARD SETBACK	20 FT	43.3 FT	NO CHANGE	YES
MIN. SIDE YARD SETBACK				
ONE SIDE	10 FT	23.8 FT	NO CHANGE	YES
AGGREGATE	24 FT	> 24 FT	NO CHANGE	YES
MAX. BUILDING HEIGHT**	35 FT	19 FT	NO CHANGE***	YES
MAX. LOT COVERAGE	70 %	92.9 %	93.1 %	NO[2]
MIN. OPEN SPACE	25 %	7.1 %	6.9 %	NO[2]
MAX. BUILDING COVERAGE	30 %	36.6 %	NO CHANGE	NO*

[1] *Use Variance Requested*
[2] *Bulk Variance Requested*
**Existing Non-Conformity*
***BUILDING HEIGHT - The vertical distance from finished grade to the top of the highest roof beams on a flat or shed roof, the deck level on a mansard roof, and the average distance between the eaves and the ridge level for gable, hip, and gambrel roofs*
****Solar Panels will add about 9.5 inches to building height thus not significantly affecting overall height.*

DRAWING INDEX

No.	Description	Revision Date
1.	TITLE SHEET	ORIGINAL SUBMISSION
2.	SITE PLAN	ORIGINAL SUBMISSION
3.	CONSTRUCTION DETAILS	ORIGINAL SUBMISSION

200' PROPERTY OWNERS LIST

BLOCK	LOT	QUALIFIER	OWNER	OWNER ADDRESS	CITY	STATE	ZIP
483.01	1		BELLINI PROPERTY MANAGEMENT LLC	2010 SPRINGDALE ROAD	CHERRY HILL	NJ	08003
484.01	1		CHERRY UMBRELLA LLC	4 RADNOR CORP CTR STE 105	RADNOR	PA	19087
485.01	1		CHERRY UMBRELLA LLC	4 RADNOR CORP CTR STE 105	RADNOR	PA	19087
487.01	1		BREGAN LLC	1934 OLNEY AVE STE-200	CHERRY HILL	NJ	08003
490.01	1		GWL 1938 OLNEY LLC	1399 FRANKLIN AVE STE 100	GARDEN CITY	NY	11530
491.01	1		RUIKE REALTY LLC	1936 OLNEY AVENUE	CHERRY HILL	NJ	08003
492.01	1		CHERRY UMBRELLA LLC	4 RADNOR CORP CTR STE 105	RADNOR	PA	19087
494.01	1		CHERRY UMBRELLA LLC	4 RADNOR CORP CTR STE 105	RADNOR	PA	19087
495.01	1		CHERRY UMBRELLA LLC	4 RADNOR CORP CTR STE 105	RADNOR	PA	19087
497.01	1		CHERRY UMBRELLA LLC	4 RADNOR CORP CTR STE 105	RADNOR	PA	19087

APPROVED BY THE TOWNSHIP OF CHERRY HILL ZONING BOARD OF ADJUSTMENT AS A SITE PLAN WAIVER:

CHAIRMAN DATE

SECRETARY DATE

ENGINEER DATE

DATE	REVISIONS	BY

SHORE POINT ENGINEERING
Certificate of Authorization No. 24GA28317800
Kevin E. Shelly P.E. PE No. GE05031300
PO Box 257, Manasquan, NJ 08736
T: 732-924-8100 | F: 732-924-8110
www.shorepointengineering.com

Date

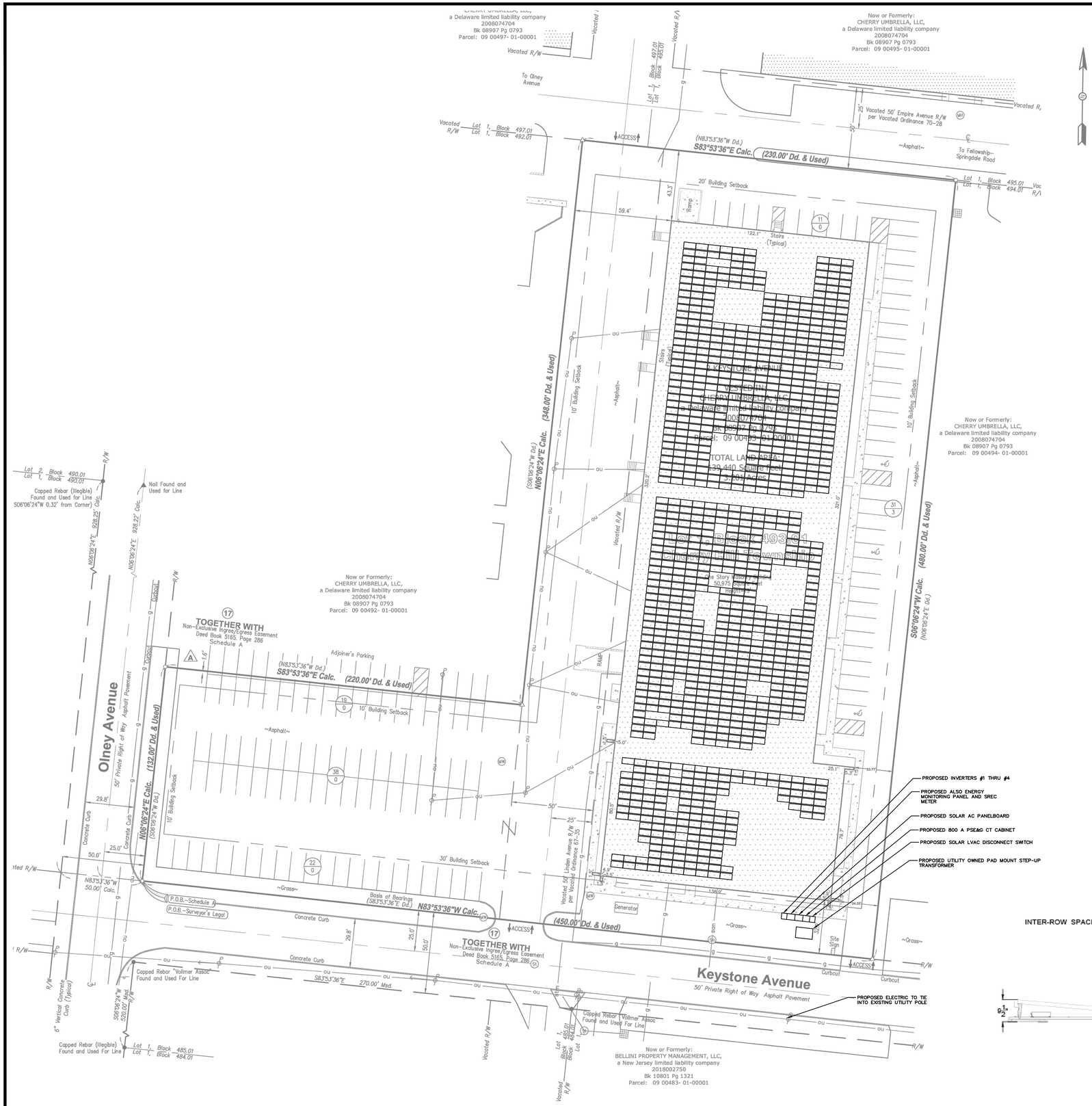
Kevin E. Shelly, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE05031300

SITE PLAN WAIVER
COMMUNITY SOLAR
SOLAR ROOFTOP SYSTEM - 2 KEYSTONE AVE
BLOCK 493.01, LOT 1
SITUATED IN
TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY

TITLE SHEET

SCALE: AS SHOWN	PROJECT No.: SLA-2419
RELEASED BY: KES	DATE: 02/21/25
CHECKED BY: RZH	Sheet Number 1 OF 3
DRAWN BY: DAC	

File Name: C:\Users\YhoH\OneDrive - Shore Point Engineering\Clients\Solar Landscape\Jobs\SLA-2419 - 2 Keystone Ave - Cherry Hill\DWG\Site Plan.dwg
Plot time: Feb 27, 2025 - 3:48pm



20 0 30 60 90
30 10
GRAPHIC SCALE
1 INCH = 30 FEET

LAYOUT NOTES

1. APPLICANT: SOLAR LANDSCAPE, LLC
2. SITE IS KNOWN AND DESIGNATED AS BLOCK 493.01, LOT 1 AS SHOWN ON THE CURRENT TAX ASSESSMENT MAP OF THE TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY (SHEET 329).
3. EXISTING BOUNDARY AND STRUCTURES INFORMATION SHOWN ON PLAN ENTITLED "2 KEYSTONE AVENUE; CITY OF CHERRY HILL; COUNTY OF CAMDEN; STATE OF NEW JERSEY" PREPARED BY MILLMAN NATIONAL LAND SERVICES, DATED 04/16/18.
4. SITE COORDINATES: 1,116,782' N, 1,270,151' E
5. HORIZONTAL DATUM: NAD 83 VERTICAL DATUM: NAVD 88
6. UNLESS OTHERWISE INDICATED, ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
7. ACCORDING TO THE NEW JERSEY SOIL EROSION AND SEDIMENT CONTROL ACT, A PROJECT IS DEFINED AS "ANY DISTURBANCE OF MORE THAN 5,000 SQUARE FEET OF THE SURFACE AREA OF LAND". THEREFORE, NO SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED ON THIS PROJECT SINCE WE ARE DISTURBING LESS THAN 5,000 SF.

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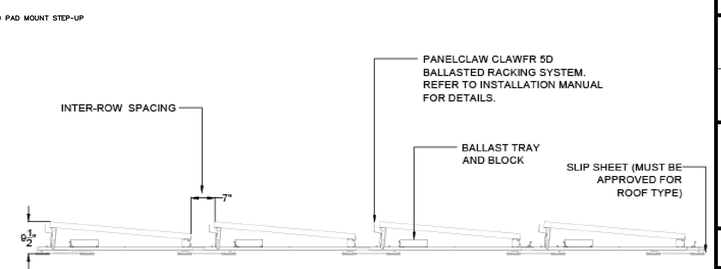
****Solar Panels will add about 9.5 inches to building height thus not significantly affecting overall height.*



0 PANEL CLAW RM5 RACKING DETAIL
E-41 SCALE: NTS

RACKING DETAIL

DATE	REVISIONS	BY

SHORE POINT ENGINEERING
Certificate of Authorization No. 24GA28317800
Kevin E. Shelly P.E. PE No. GE05031300
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Date
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SITE PLAN WAIVER
COMMUNITY SOLAR
SOLAR ROOFTOP SYSTEM - 2 KEYSTONE AVE
BLOCK 493.01, LOT 1
SITUATED IN
TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY

SITE PLAN

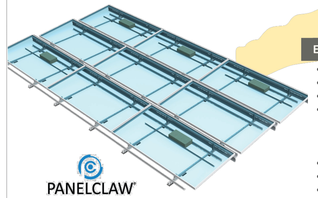
SCALE: 1"=30'	PROJECT No.: SLA-2419
RELEASED BY: KES	DATE: 02/21/25
CHECKED BY: RZH	Sheet Number 2 OF 3
DRAWN BY: DAC	

File Name: C:\Users\MichaelWaske\OneDrive - Shore Point Engineering\Clients\Solar Landscape\Jobs\SLA-2419 - 2 Keystone Ave - Cherry Hill\DWG\Site Plan.dwg
Plot time: Feb 21, 2025 - 12:49pm

clawFR® 5°

Flat Roof Racking Specialists

PanelClaw® is the only major racking provider in North America focused exclusively on flat roof racking. Our 11+ years of focus on flat roof result in a competitive advantage for our partners. No one knows more about flat roof racking than PanelClaw; no one delivers a more thoroughly tested and reliable platform; and no one matches our level of service. Our mission is to accelerate the deployment of flat roof PV and the best way to do this is to continue to lower its life-cycle cost while maintaining the highest levels of reliability. The clawFR platform is the result of this experience and commitment to flat roof.



Engineered for Speed

- Single M6 bold hardware kit
- No tool module attachment method
- 90 degree single-module tilt-up feature
- Flexible order of operations installation process allows for optimized coordination of building trades on the roof
- Integrated roof protection pads
- 6.9"+ access ways between modules
- Only 1 ground lug required per array

SYSTEM COMPONENTS

Applications
< 5° slope flat roofs (up to 7° possible w/engineering review)

Roof Type Compatibility
Membrane, tar and gravel, ballasted, BUR, concrete, asphalt (not compatible with metal roofs)

2 Shade Ratio Options
2.0:1 | 2.5:1

Platform Load
~ 2.3 - ~ 8.0 psf

Module Orientation
Landscape

Module Attachment
Airy point flange mounted

Basic Wind Speed
Up to 190 mph
(>190 mph by approval)

Wind Exposure Category
B and C (D required engineering review)

USGS Seismic Categories
A, B, C, D (others require engineering review)

Building Height
No building height limitations

Corrosion Resistance
ZAM coating provides 5x better resistance than G90

Warranty and Certifications
25 year warranty

ANSI/UL 2703-2015 Listed
System Fire Rating
Class A with Type 1 and Type 2 modules

Intelligent Componet Design

- A single Ballast Rail part number covers all compatible 60 and 72 cell modules
- The Base does not change with module changes
- The wind deflector has 2 part numbers that cover all 72 cell module lengths
- The Module Connector and Deflector each have 2 part numbers have cover all compatible 72 cell modules

Safety and Reliability

clawFR has been tested well beyond code requirements in the US. In addition to wind tunnel testing and ANSI/UL 2703-2015 listing, we have completed a battery of reliability and performance tests which can all be found at panelclaw.com.

PANELCLAW
(978) 688.4900 | sales@panelclaw.com
panelclaw.com
Made in USA

O&M Features

Construction designed specifically for O&M, and to assist providers

- Recessed Deflector allows for visual inspection of module connections and optimizer equipment
- ZAM coating with 5x better corrosion resistance than G90
- If mechanical roof attachments are needed, they are always placed in the North/South module gaps for simplified O&M inspection

clawFR® 5°

AlsoEnergy

The operating system for the grid of the future

PowerLogger Commercial Solution 600 (PLCS 600)

AlsoEnergy now offers a convenient standardized monitoring solution for small to mid-sized commercial PV systems. This solution combines our standard commercial datalogger with a revenue grade meter, a weatherproof NEMA 4 enclosure, and other supporting hardware. Customers may choose to add weather sensors and/or a cellular modem. The PLCS 600 is recommended for 3-phase systems with up to 20 external inverters. Performance data is uploaded to the web-based PowerTrack Platform which provides a suite of analytic and diagnostic tools for O&M and asset managers.

Standardized PLCS 600 includes:

- Datalogger with LCD touchscreen display
- Revenue grade energy meter compatible with all 5A CTs (sold separately)
- Optional weather station choices (2) may add data for irradiance, back-of-module panel temperature, ambient temperature, and wind speed
- 5 port Ethernet Switch
- NEMA4 weatherproof enclosure
- Optional 4G Cell Modem (requires the addition of a cellular plan to utilize the cell modem)

Solution Features

- Up to 20 external inverters
- Modbus via RS-485 or TCP connections to inverters
- Cellular or Ethernet connectivity
- Remote firmware updates
- Up to 1 minute data granularity
- Uploads at 5 minute intervals
- Suitable for demand meter, relay, other non-PV use cases
- For systems with a single metering point; direct metering or PT secondary voltage up to 600VAC
- Satisfies reporting requirements for most US electricity sector agencies
- All parts except weather sensors and cell modem covered with standard AlsoEnergy 5-year warranty
- Supported on PowerTrack only

PLCS-600-CM-PLUS	+ cell modem, + reference cell, BOM panel temperature, ambient temperature, wind speed
PLCS-600-CM-BASE	+ cell modem, + reference cell, BOM panel temperature
PLCS-600-CM-00	+ cell modem, no environmental sensors
PLCS-600-00-PLUS	no cell modem, + reference cell, BOM panel temperature, ambient temperature, wind speed
PLCS-600-00-BASE	no cell modem, + reference cell, BOM panel temperature
PLCS-600-00-00	no cell modem, no environmental sensors

To find out more or schedule a demo, contact us at alsoenergy.com

AlsoEnergy

The operating system for the grid of the future

Specifications

PLCS-600

Assembly

Enclosure dimensions	15.7" x 15.7" x 7.9" (400mm x 400mm x 200mm)
Enclosure rating	NEMA4
Operating temperature	-13° to 158°F (-25° to 70°C), <95% relative humidity non-condensing
Power supply	120-277VAC
Communication Ports	Three available 10/100 Ethernet ports, two half-duplex rs485 ports
Regulatory	UL listed 508A

Datalogger

Devices supported	Up to 40 connected Modbus RTU enabled devices (20 per rs485 port) / *Recommended limit 32*
Storage	Removable 2GB industrial rated micro SD card
Serial	RS-485 with integrated 120 ohm termination resistor
Primary protocols	Modbus TCP, Modbus RTU, most proprietary inverter protocols
Touch screen	Color, resistive touch screen 2" by 2.75"
Warranty	Standard 5 year warranty

Meter

Voltage inputs	90-600VAC
Accuracy	Meter 0.2% (see CT datasheet for CT accuracy information)
CTs	Any CT with 5A secondary current ratio (sold separately)
CT accuracy	Refer to CT datasheet
Warranty	Standard 5 year warranty

Irradiance Sensor
(included with Base and Plus weather station option)

Irradiance sensor type	Monocrystalline Silicon reference cell with mounting bracket and 3m twisted pair shielded cable
Absolute accuracy	±5W/m² ± 2.5% of reading
Dimensions	Width x Height x Depth: 3.34 inches x 6.10 inches x 1.54 inches (85mm x 155mm s 39mm)
Warranty	1 year against defects in materials and workmanship

Back of Module Panel Temperature Sensor
(included with Base and Plus weather station option)

Form	3m cable with 9-pin connector compatible with paired reference cell - sensor cable cannot be extended
Sensor type	PT1000 Class A
Mounting	Self-adhesive for attaching to a solar module
Warranty	1 year against defects in materials and workmanship

Wind Speed Sensor (included with Plus weather station option)

Form	Cup star anemometer with 5m 2-pin connector compatible with paired reference cell
Sensor type	Reed relay
Mounting	Mounting bracket for pole or surface mounting included
Accuracy	0.5 m/s or 5% of reading
Sensor range	0.9 – 40m/s (2 – 90 mph)
Warranty	1 year against defects in materials and workmanship

Ambient Temperature Sensor
(included with Plus weather station option)

Form	Pt1000 1/3 Class B with integrated modbus RTU digitizer
Dimensions	Width x Height x Depth: 3.34" x 6.10" x 1.54" (85mm x 155mm x 39mm)
Wiring	Includes 3 meters of twisted-pair, shielded cable
Warranty	1 year against defects in materials and workmanship

Cell Modem

Cellular data	4G LTE
Warranty	1 year

To find out more or schedule a demo, contact us at alsoenergy.com

Three Phase Inverter with Synergy Technology

For the 277/480V Grid for North America

SE80KUS / SE100KUS / SE110KUS / SE120KUS

INVERTERS

Powered by unique pre-commissioning process for rapid system installation

- Pre-commissioning feature for automated validation of system components and wiring during the site installation process and prior to grid connection
- Easy 2-person installation with lightweight, modular design (each inverter consists of 2 or 3 Synergy units and one Synergy Manager)
- Independent operation of each Synergy unit enables higher uptime and easy serviceability
- Built-in thermal sensors detect faulty wiring ensuring enhanced protection and safety
- Built-in arc fault protection and rapid shutdown
- Built-in PID mitigation for maximized system performance
- Monitored* and field-replaceable surge protection devices, to better withstand surges caused by lightning or other events
- Built-in module-level monitoring with Ethernet or cellular communication for full system visibility

*Applicable only for DC and AC SPDs

solaredge.com

solaredge

/ Three Phase Inverter with Synergy Technology

For the 277/480V Grid for North America

SE80KUS / SE100KUS / SE110KUS/ SE120KUS

Applicable to inverter with Part Numbers	SExxxK-USxx8xxxx SE80KUS	SE100KUS	SE110KUS	SE120KUS	
OUTPUT					
Rated AC Active Output Power	80000	100000	110000	120000	W
Maximum AC Apparent Output Power	80000	100000	120000	120000	VA
AC Output Line Connections	3W + PE, 4W + PE				
Supported Grids	WYE: TN-C, TN-S, TN-C-S, TT, IT; Delta: IT				
AC Output Voltage Minimum-Nominal-Maximum[1] (L-N)	244 - 277 - 305				Vac
AC Output Voltage Minimum-Nominal-Maximum[1] (L-L)	422.5 - 480 - 529				Vac
AC Frequency Min-Nom-Max[1]	59.5 - 60 - 60.5				Hz
Maximum Continuous Output Current (per Phase, PF=1)	96.5	120	144.3		Aac
GFDI Threshold	1				A
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes				
Total Harmonic Distortion	≤ 3				%
Power Factor Range	+/-0.2 to 1				
INPUT					
Maximum DC Power (Module STC) Inverter / Synergy Unit	120000 / 60000	150000 / 50000	180000 / 60000		W
Transformer-less, Ungrounded	Yes				
Maximum Input Voltage DC+ to DC-	1000				Vdc
Operating Voltage Range	850 - 1000				Vdc
Maximum Input Current	2 x 48.25	3 x 40	3 x 48.25		Adc
Reverse-Polarity Protection	Yes				
Ground-Fault Isolation Detection	167kΩ sensitivity per Synergy Unit[2]				
CEC Weighted Efficiency	98.5				%
Nighttime Power Consumption	< 8	< 12			W
ADDITIONAL FEATURES					
Supported Communication Interfaces[3]	2xRS485, Ethernet, Wi-Fi (optional), Cellular (optional)				
Smart Energy Management	Export Limitation				
Inverter Commissioning	With the SetApp mobile application, using built-in Wi-Fi access point for local connection				
Arc Fault Protection	Built-in, User Configurable (According to UL1699B)				
Photovoltaic Rapid Shutdown System	NEC 2014, 2017 and 2020, Built-in				
PID Rectifier	Nighttime, built-in				
RS485 Surge Protection (ports 1+2)	Type II, field replaceable, integrated				
AC, DC Surge Protection	Type II, field replaceable, integrated				
DC Fuses (Single Pole)	25A, integrated				
DC SAFETY SWITCH					
DC Disconnect	Built-in				
STANDARD COMPLIANCE					
Safety	UL1699B, UL1741, UL1741 SA, UL1998, CSA C22.2#107.1, Canadian AFCI according to T.I.L. M-07				
Grid Connection Standards	IEEE 1547, Rule 21, Rule 14 (HI)				
Emissions	FCC part 15 class A				

(1) For other regional settings please contact SolarEdge support
(2) Where permitted by local regulations
(3) For specifications of the optional communication options, visit https://www.solaredge.com/products/communication or the Resource Library webpage: https://www.solaredge.com/downloadpdf, to download the relevant product datasheet

Surge protective devices

Eaton's SPD Series

For integration into electrical distribution equipment

Introduction

Eaton's SPD Series surge protective devices

Eaton's SPD Series surge protective devices are the latest and most advanced UL® 1449 4th Edition certified surge protectors. Units are available integrated within Eaton electrical assemblies, including panelboards, switchboards, motor control centers, switchgear and bus plugs. Application of SPD Series units throughout a facility will ensure that equipment is protected with the safest and most reliable surge protective devices available.

SPD Series units are available in all common voltages and configurations, and also in a variety of surge current capacity ratings from 50 kA through 400 kA. Three feature package options are also available to choose from.

Applications

The increasing necessity for facility-wide surge protection

The ever-increasing use of microprocessors and other sensitive electronic equipment has increased the necessity for facility-wide surge protection. These sensitive electronic components are used within many pieces of equipment, including computers, programmable logic controllers, and other commonly used electrical and electronic equipment. Surges can wreak havoc on equipment, causing catastrophic failures, process interruptions and premature aging leading to failure. The application of surge protective devices (SPDs) can mitigate problems with sensitive electronic equipment, keeping the equipment and the related processes up and running reliably without disruption or damage due to surge-related events.

In addition to externally generated surge events, such as lightning and grid switching, equipment is also susceptible to damage by internally generated surges. In fact, the majority of surges are generated internally by commonly used items, such as fluorescent lighting ballasts, light dimmers, photocopiers, fax machines and variable frequency drives. This further reinforces the necessity for facility-wide surge protection applied at all stages of the electrical distribution system, from the electrical service entrance down to the single-phase loads.

Standards and certifications

- UL 1449 4th Edition recognized component for the United States and Canada, covered by Underwriters Laboratories certification and follow-up service

c UL us

Features

- Uses thermally protected metal oxide varistor (MOV) technology
- 20 kA nominal discharge current (In) rating (maximum rating assigned by UL)
- 50 through 400 kA surge current capacity ratings
- Three feature package options
- 200 kA short-circuit current rating (SCCR)
- Available integrated within the following Eaton electrical assemblies: panelboards, switchboards, motor control centers, switchgear, automatic transfer switches and bus plugs
- Can be used for UL 96A compliance
- Can be used for NFPA 780 compliance
- Can be used for RoHS compliance
- 10-year warranty

The breadth of the SPD Series' features, options and configurations ensures that the correct unit is available for all electrical applications, including service entrances, distribution switchboards, panelboards and point-of-use applications.

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Powering Business Worldwide

Specifications

Description	Ratings
Surge current capacity per phase	50, 80, 100, 120, 160, 200, 250, 300 and 400 kA ratings available
Nominal discharge current (I_n)	20 kA
Short-circuit current rating (SCCR)	200 kA
SPD type	Basic feature package = Type 1 (can also be used in Type 2 applications) Standard and standard with surge counter feature packages = Type 2
System voltages available (Vac)	
Single split-phase (three-wire plus ground)	120/240
Three-phase wye (four-wire plus ground)	120/208, 127/220, 230/400, 277/480, 347/600
Three-phase delta (three-wire plus ground)	240, 480, 600
Three-phase high leg delta (four-wire plus ground)	120/240
Input power frequency	50/60 Hz
Protection modes	
Single split-phase	L-N, L-G, L-L, N-G
Three-phase wye	L-N, L-G, L-L, N-G
Three-phase delta	L-G, L-L
Three-phase high leg delta	L-N, L-G, L-L, N-G
Operating temperature	–40 °F to +122 °F (–40 °C to +50 °C)
Operating humidity	5% through 95%, noncondensing
Agency certifications and approvals	UL 1449 4th Edition recognized component for the United States and Canada UL 1283 7th Edition (Type 2 SPDs only)
Warranty	10 years

SPD Series catalog number configuration for units integrated into electrical distribution equipment

SPD 250 480D 2 J

Series	I_n Rating	Voltage code	Feature package	Application
SPD = Surge protective device	50 = 50 kA per phase 80 = 80 kA per phase 100 = 100 kA per phase 120 = 120 kA per phase 160 = 160 kA per phase 200 = 200 kA per phase 250 = 250 kA per phase 300 = 300 kA per phase 400 = 400 kA per phase	240S = 120/240 single split-phase 208Y = 120/208 wye (WW + G) 220Y = 127/220 wye (WW + G) 400Y = 230/400 wye (WW + G) 480Y = 277/480 wye (WW + G) 600Y = 347/600 wye (WW + G) 240D = 240 delta (DW + G) 480D = 480 delta (3W + G) 600D = 600 delta (3W + G) 240H = 240 delta high leg (WW + G) on "B" phase ❶	1 = Basic 2 = Standard 3 = Standard + surge counter	Integrated units ❷ A = Panelboards (PRL1a, 2a, 3a, 3E), direct bus mounted B = Switchgear (includes remote display) C = Panelboards (PRL1a, 2a, 3a, 3E, 4), switchboards, busway J = Motor control centers

Example: SPD250480D2J = SPD Series, 250 kA per phase, 480D voltage, standard feature package, motor control center application

❶ Please consult the factory for 240 delta high leg (WW + G) applications with high leg on "C" phase.
❷ Not sound in PRL1a, 2a, 3a and 3E panelboard applications are available in 50–200 kA ratings only. Use the "C" option for PRL1a, 2a, 3a and 3E panelboard applications when unit is connected through a circuit breaker.

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SITE PLAN WAIVER COMMUNITY SOLAR

SOLAR ROOFTOP SYSTEM - 2 KEYSTONE AVE
BLOCK 493.01, LOT 1

SITUATED IN
TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY

CONSTRUCTION DETAILS

SCALE: AS SHOWN	PROJECT No.: SLA-2419
RELEASED BY: KES	DATE: 02/21/25
CHECKED BY: RZH	Sheet Number 3 OF 3
DRAWN BY: DAC	

File Name: C:\Users\MichaelWasko\OneDrive - Shore Point Engineering\Clients\Solar Landscape\Jobs\SLA-2419 - 2 Keystone Ave - Cherry Hill\DWG\Site Plan.dwg
Plot time: Feb 19, 2025 - 11:30am