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-0011

☐ 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. # 10257

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
Address: 4 Radnor Corp Ctr Ste 105
Radnor, PA 19087
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: 2040 Springdale Road
Block(s): 468.05
Tract Area: Approximately 5.27 acres
Lot(s): 1

8. LAND USE

Existing Land Use: Commercial/Retail
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

Proposed Form of Ownership:

☐ Fee Simple ☐ Condominium *Lessee
☒ Rental ☐ Cooperative

Are there Existing Deed Restrictions or Easements? ☒ No ☐ Yes (please attach copies)
Are there Proposed Deed Restrictions or Easements? ☒ No ☐ Yes (please attach copies)

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	220,481 sf	No change
Frontage	120 ft	295.9 ft	No change
Lot Depth	120 ft	295.9 ft	No change
Minimum Yard Requirements			
Front Yard	30 ft	98.7 ft	No change
Secondary Front Yard	30 ft	64.4 ft; 365.6 ft	No change
Rear Yard	20 ft	N/A	N/A
Side Yard	10 ft	72.9 ft	No change
Aggregate Side Yard	NA	NA	NA
Building Height	35 ft	17 ft	<18 ft*
Lot Requirements			
Residential Buffer Strip	NA	NA	NA
Open Space	25%	21.4%	21.3%
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 8.5 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)

Lisa Haak (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

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)

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

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 1/17/2025

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 13, 2018 last revised May 14, 2018 shows and discloses the premises in its entirety, described as Block(s) 468.05 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)

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

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

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

January 30, 2025

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

RE: Solar Landscape LLC
2040 Springdale Road
Block 468.05, 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 Analysis Report, prepared by Pure Power Engineering, Inc., dated February 8, 2024.

In addition, in response to your e-mail correspondence dated January 24, 2025, the Applicant proposes to install 850 modules, and the energy production is 408 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
2040 Springdale Road
Block 468.05, Lot 1
Site Plan Waiver with Variances

Dear Mr. Richman:

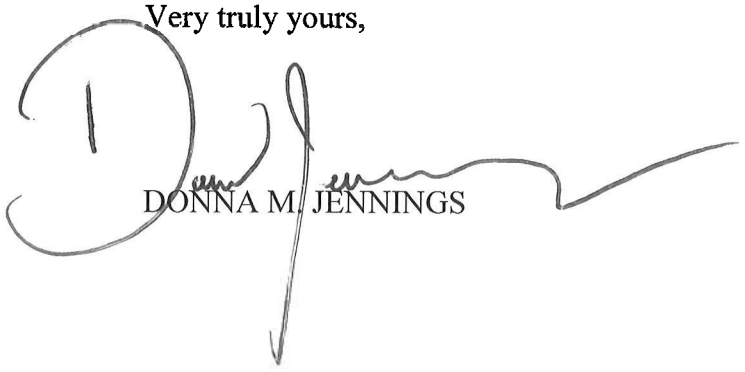
This office represents Solar Landscape LLC (the "Applicant") in this matter. Enclosed, for filing, please find the following:

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 – 2040 Springdale Road," 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
2040 Springdale Road
Block 468.05, Lot 1

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 2040 Springdale Road and identified as Block 468.05, Lot 1 on the Township's tax maps. The property is located in the Industrial Restricted (IR) Zone and is approximately 229,481 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 419-F:

- Maximum Lot Coverage: 70% permitted / 78.7% proposed
- Minimum Open Space: 25% required / 21.3% proposed

Checklist Item 15. Required Approvals.

- Camden County Planning Board
- 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 – 2040 Springdale Road
Block 468.05, 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** **2040 Springdale Road** **Cherry Hill, New Jersey 08003** **Block 468.05 Lot(s) 1** **Application No. 25-Z-0011**
DATE:	April 24, 2025

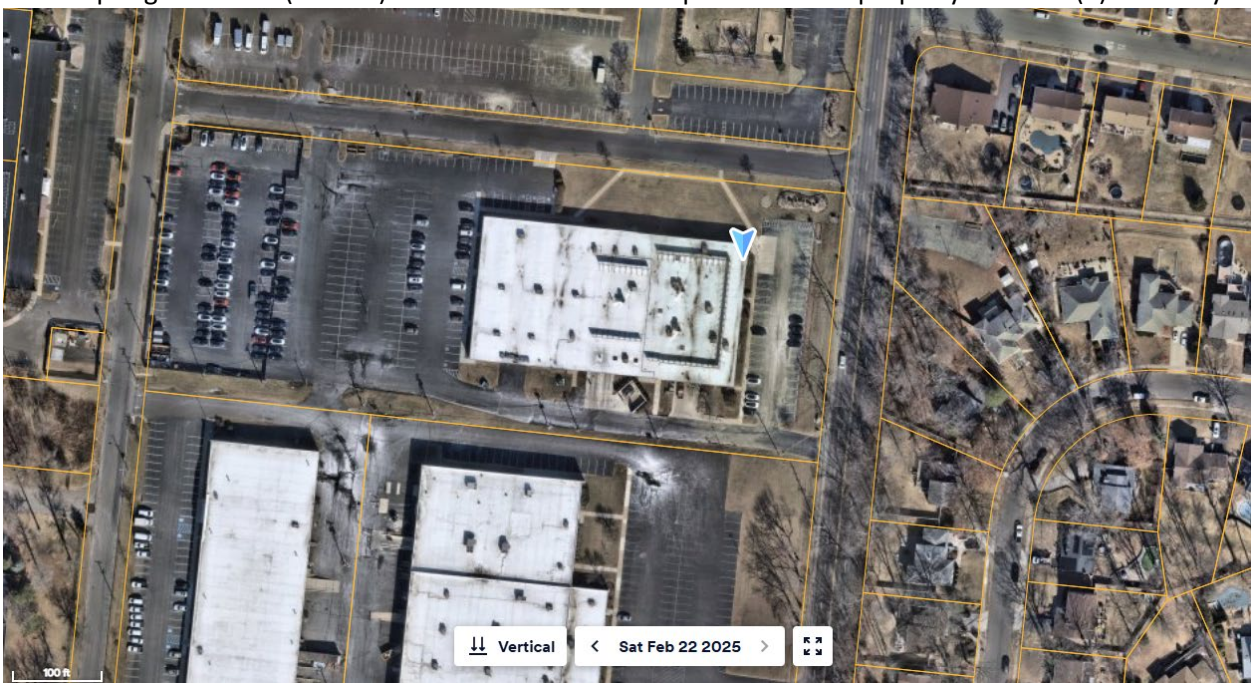
I. GENERAL INFORMATION

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 408 kW-DC rooftop solar photovoltaic (PV) system containing 850 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).

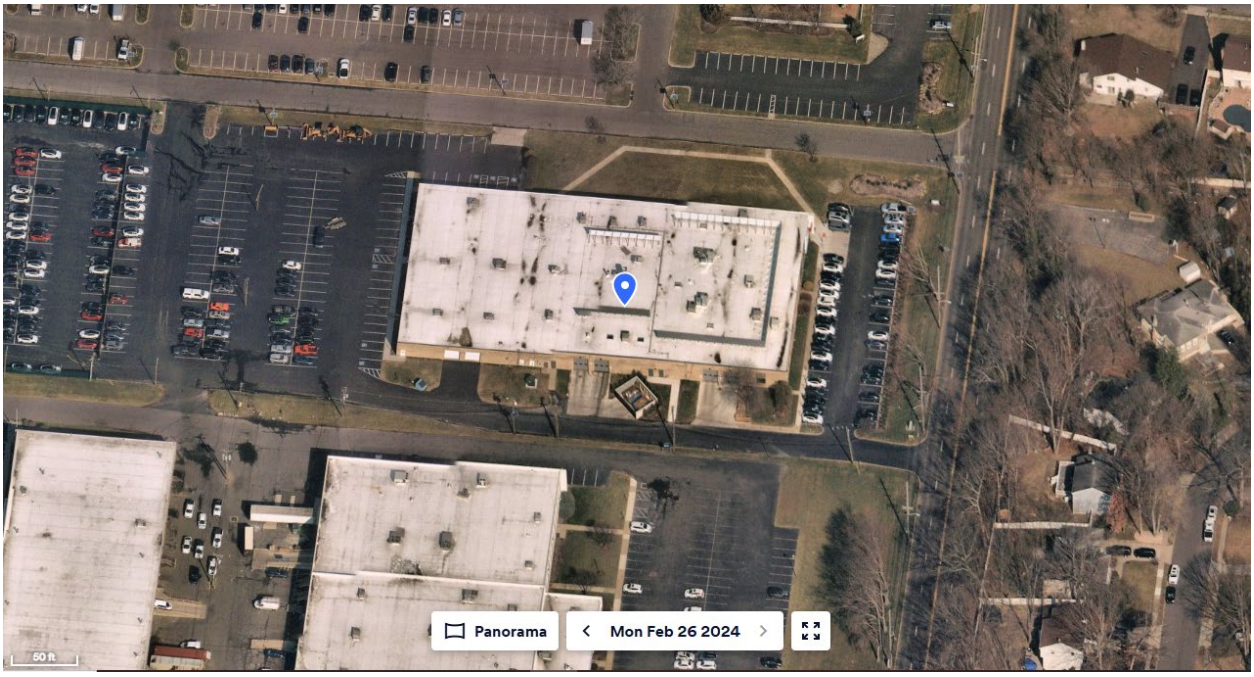
D. **Site Area.** The subject site is a 5.27-acre sized lot containing a multi-tenant industrial building located on the corners of Springdale Road (CR-673), to the east, and Pin Oak Avenue, to the north, and Olney Avenue, to the west and Pin Oak Avenue, to the north. Pin Oak Avenue is a private road. The site access consists of three (3) separate driveways, and has one (1) access along Springdale Road (CR-673) located in the southern portion of the property and two (2) driveways



along Pin Oak avenue. The site is surrounded by other IR & IR-RB zoned properties containing various industrial uses (warehousing, manufacturing and storage) to the north, south and east. Further 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. To the east is residentially zoned (RAPC) Point of Woods neighborhood.

E. **History.** According to Township Tax Assessor records, the shopping center was constructed around 1975 with the current owner of the property taking ownership in 2008. In August of 1990, the planning board issued preliminary and final major site plan approval (#8065-P&F) for a 34,688 square foot two story addition and granted variances (#8065-V) for driveway length, parking stall sizes, parking setbacks and open space. In February of 1996, the zoning board issued an abbreviated site plan and Use D(2) variance (#6581-96 A&B) for the expansion of an existing retail show outlet. In February of 1998, the zoning board issued an abbreviated site plan and Use D(2) variance (#6712-98 A&B) to permit a 2,000 square foot expansion of an existing retail space in the warehouse. In June of 2001, the zoning board issued a Use D(2) variance for the expansion of a non-conforming retail use within a shoe warehouse. In September of 2019, the planning board issued site plan waiver with bulk (C) variance approval (#19-P-0017) for the installation of additional façade signs. In October of 2022, the planning board issued preliminary and final major site plan approval (#22-P-0030) for conversion of 34,739 SF of the existing 49,592 SF building into a "Tesla" repair facility. Numerous zoning permits for certificates of occupancy and signage approvals have been issued for various industrial uses over the years with the most recent permit issuances involving "Monster Mini Golf" (ZP-18-00864) and "Tesla" (ZP-22-01656) being issued in 2018 and 2022 respectively. In November of 2023 a zoning permit (ZP-23-01305) was issued for roof mounted solar panels. In October of 2024, the aforementioned zoning permit (ZP-23-01305) 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 *Ahmed Youssef, PE* and *Patrick Bair, PE* of *Pure Power Engineering* dated *January 23, 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 January 30, 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. The applicant shall double-check the lot and open space coverage values as a former application that was constructed within the past couple of years (#22-P-0030) indicated a proposed lot coverage of 81.44% and a proposed open space coverage of 18.56%. The provided plans may not have incorporated those recent improvements.**
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 does not object 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 does not object to the granting of this waiver as no signage is proposed.**

C. **Determination.** This application has been **deemed technically complete**. 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 per §432.C.1.a via §419.D.12 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 Industrial Restricted (IR) zone (§419.F.1) are noted below:

CODE SECTION	MINIMUM REQUIREMENTS	REQUIRED	EXISTING	PROPOSED	CONFORM
§419.F.1	Building Coverage	30%	21.6%	No Change	C
§419.F.1	Lot Coverage	70%	78.6%	78.7%	**V (Bulk)**
§419.F.1	Open Space	25%	21.4%	21.3%	**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	8.5"	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 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.

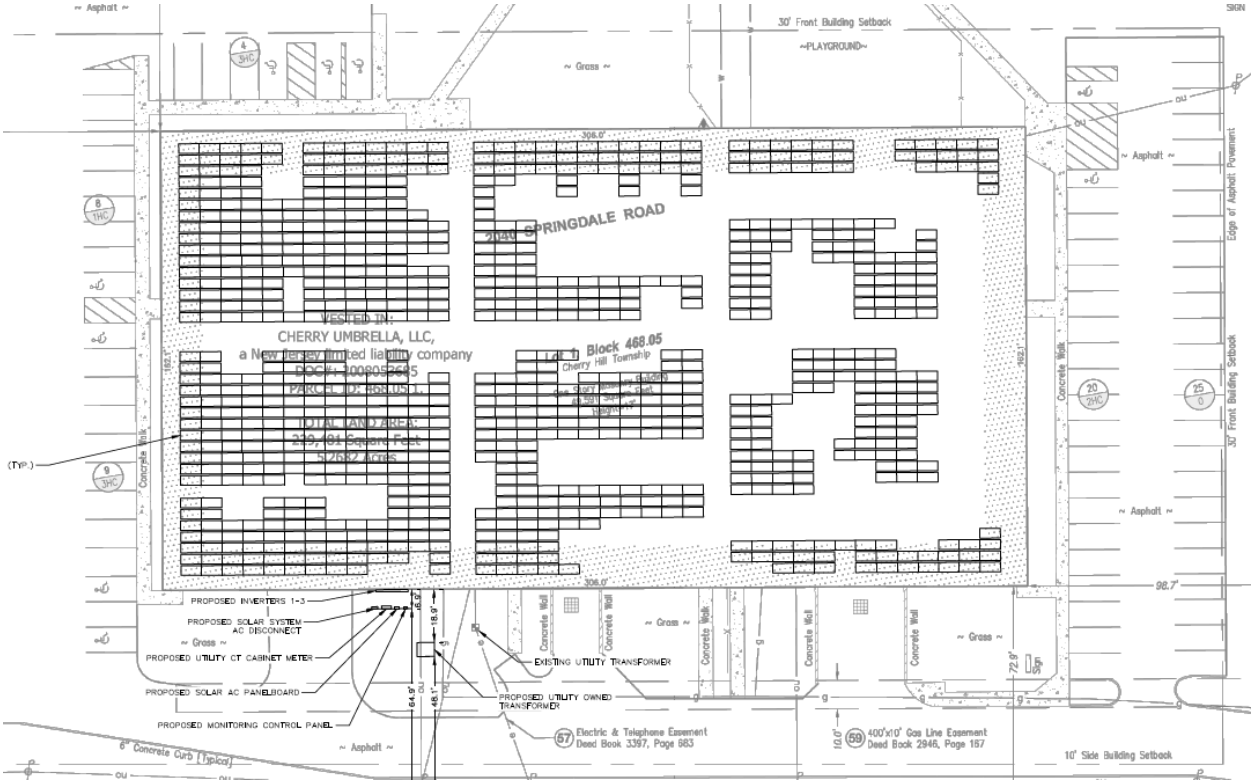
C. **Bulk (C) Variances.** It is recommended, although not required, that justification be provided by a licensed New Jersey Professional Planner (P.P.), for the requested variances in accordance with N.J.S.A. §40:55D-70:of Adjustment must be assured that the Applicant has demonstrated either that:
   1. From §419.F.1, to permit a lot coverage of 78.7%, where a maximum lot coverage of 70% is permitted and 78.6% exists. **The concrete pads associated with the proposed ground-based**

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

2. From §419.F.1, to permit an open space coverage of 21.3%, where a minimum open space coverage of 25% is required and 21.4% exists. **The concrete pads associated with the proposed ground-based equipment triggers a slight exacerbation of the existing nonconforming condition. Thus a new variance is required.**
3. 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 side 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

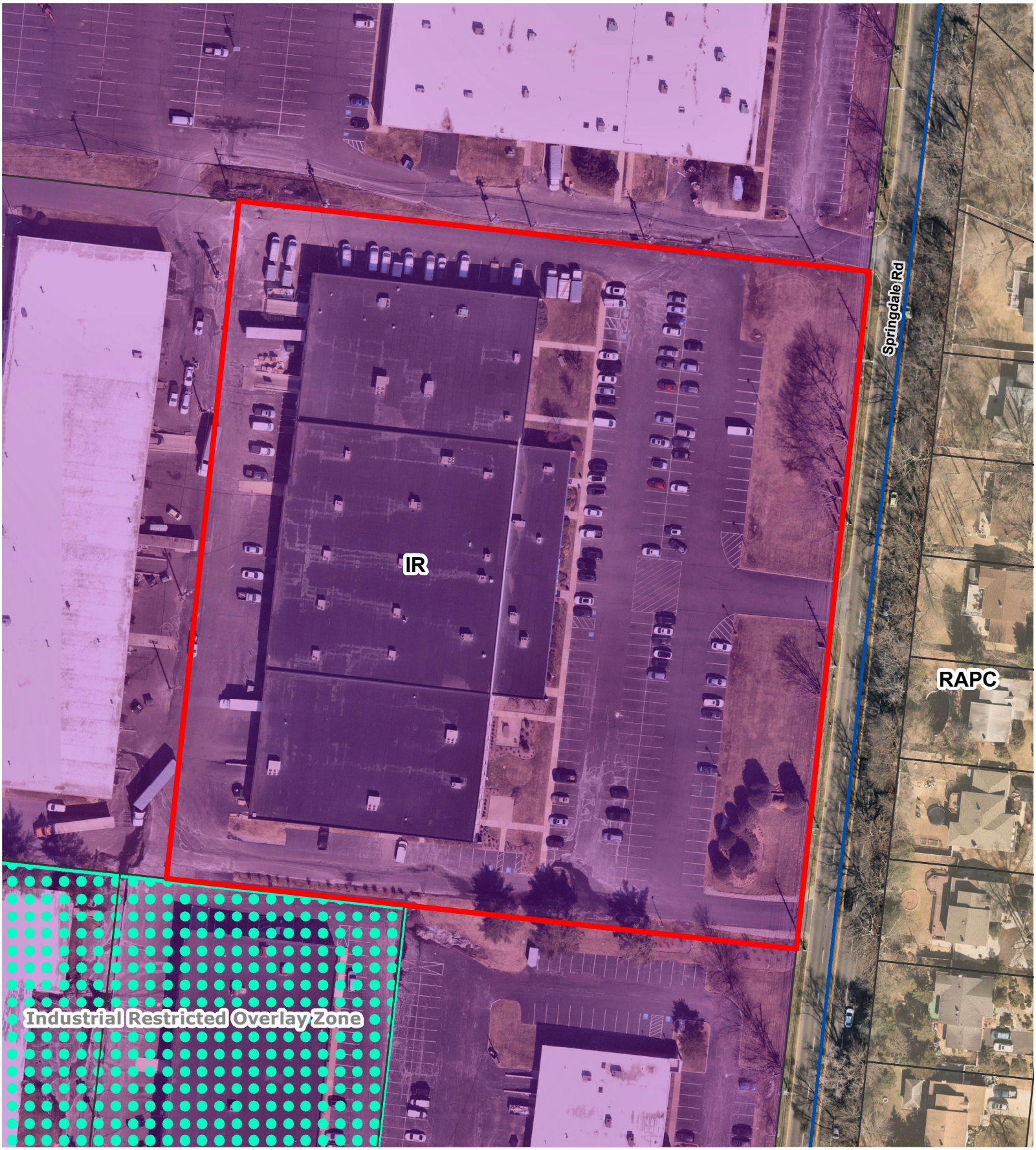
Applicant, pursue any other enforcement actions permitted by the Cherry Hill Township Zoning Ordinance, and/or refer the matter back to the Zoning Board where it may, at its sole option, revoke the approval being granted by any Resolution of Approval.

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)



2040 SPRINGDALE RD

BLOCK 468.05 LOT 1

1 inch = 100 feet

N

0 62.5 125 250 Feet

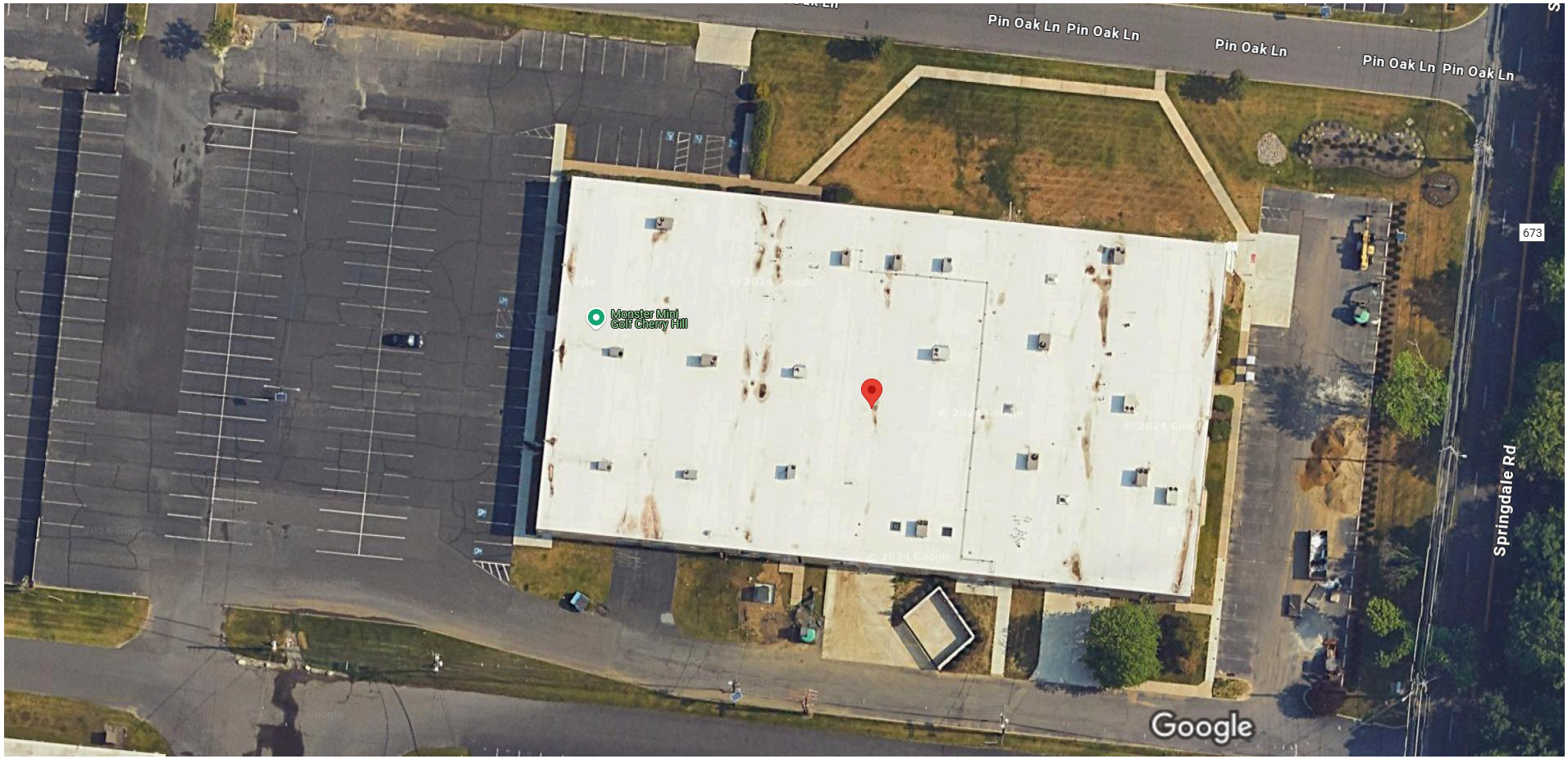
Legend

- 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 2040 Springdale Rd



Imagery ©2025 Airbus, Map data ©2025 20 ft


GROUND MOUNTED EQUIPMENT


Monster Mini Golf

Structural Analysis of Building for a Proposed Rooftop Solar PV System

For The Project:

Cherry Hill 2040

2040 Springdale Road, Cherry Hill, NJ 08003

Presented to:

solarlandscape

601 Bangs Ave, Suite 301
Asbury Park, NJ 07712

Presented by:

PUREPOWER ENGINEERING

Pure Power Engineering, Inc.
111 River Street - Suite 1110
Hoboken, NJ 07030
www.PurePower.com
(201) 687-9975

PPE Project No. PPE-08653.02

STATE OF NEW JERSEY
AHMED YOUSSEF
No.
GE58645
LICENSED
PROFESSIONAL ENGINEER

Digitally signed by Ahmed Youssef
DN: CN=Ahmed Youssef, dnQualifier=A01410C0000018D5685741A00049BBB, O=New Jersey, C=US
Location: 111 River Street, hoboken, Nj 07030
Reason: I have reviewed this document
Contact Info: 201-240-2123
Date: 2024.03.06 21:27:10-05'00'

Ahmed Youssef, PE
Patrick Bair, PE

February 8, 2024

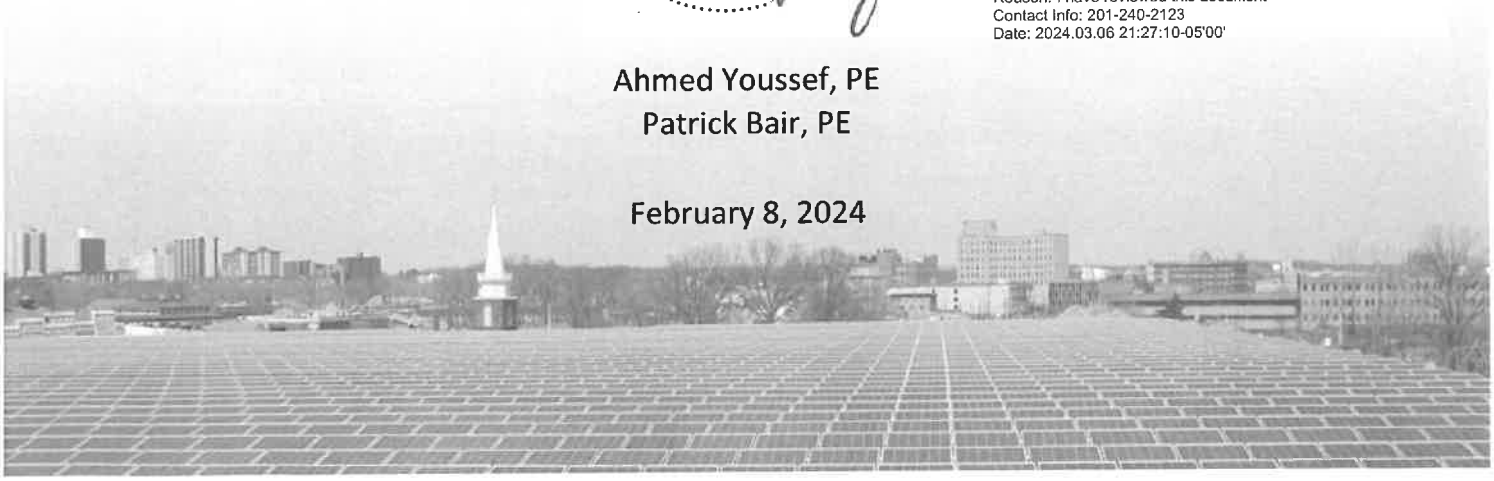


Table of Contents

Executive Summary

A (PV) Solar Array is proposed to be installed with modules mounted to a ballasted (and/or mechanically attached) racking system and supported on the rooftop of the subject building. Pure Power has performed a structural analysis and determined the following:

- Existing building is feasible for PV solar system.
- Reserved capacity and maximum allowable deck loads for the existing roof:

Reserved Capacity =	**4.0 psf**	
Maximum system wt =	**195,622 lb**	
Deck Downward =	**335 lb**	(in a 2.0' wide strip X 6.67' long spans, point loads spaced at 3.0 ft and 3.7' o.c.)

Assuming using U-Anchor 2400/2600 with 8-#15 fasteners and w/ PanelClaw racking system with U-bracket

Uplift =	**450.0 lb**
Shear =	**310 lb**

Assuming using OMG PowerGrip Plus with 8-#15 fasteners and w/ PanelClaw racking system with U-bracket

Uplift =	**500.0 lb**
Shear =	**333 lb**

Assuming using Facet with 8-#15 fasteners and w/ PanelClaw racking system with U-bracket

Uplift =	**450 lb**
Shear =	**330 lb**

Notes:

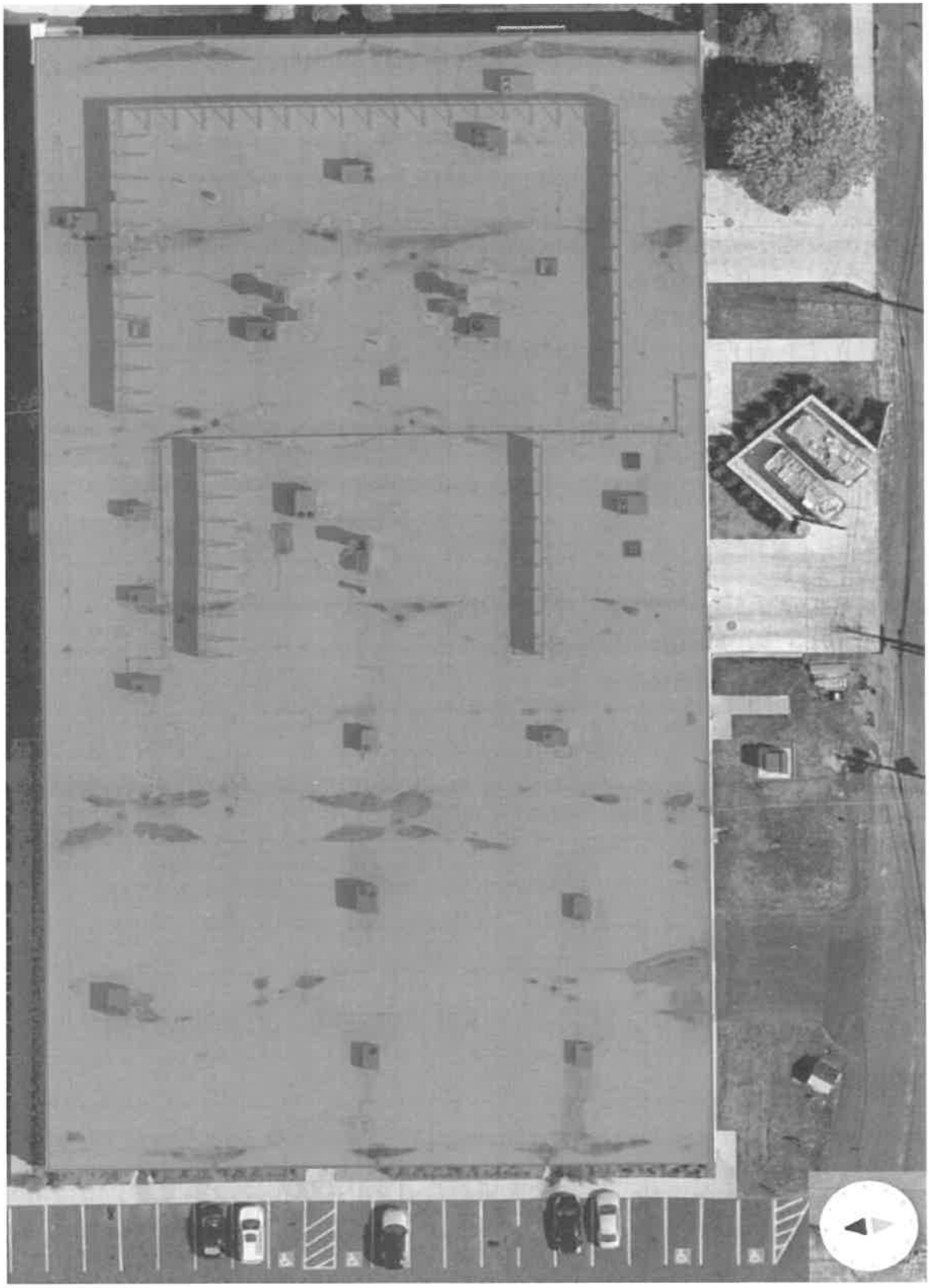
PPE has reviewed the racking package produced by PanelClaw dated 02/07/2024 and verified conformance to the structural loading limitations presented in this report.

Existing Structure

The original structure is Cherry Hill 2040 building located at 2040 Springdale Road, Cherry Hill, NJ 08003. The referenced building is a one story steel frame structure, which was built circa 1970. The approximate total area is 49400 square feet. Typical roof construction consists of 1.5" Metal Deck x Gauge 22 supported by open web joists and structural steel girders.

Reserved Load Plan/Snow Drift Plan

(Blue Shaded Area A)
Reserved Capacity = 4 psf



Standard Conditions for Engineering Services on Existing Structures

- The analysis is based on the information gathered from the field and/or information provided to Pure Power Engineering and is assumed to be current and accurate.

- Unless noted otherwise, the structure and the foundation system are assumed to be in good condition, free of defects, and can achieve theoretical strength.

- It is assumed that the structure has been properly maintained and shall be properly maintained during its service. The superstructure and the foundation system are assumed to be designed with proper engineering practice and fabricated, constructed and erected in accordance with the design documents. Pure Power will accept no liability which may arise due to any existing deficiency in design, material, fabrication, erection, construction, etc. or lack of maintenance.

- The analysis results are only applicable for the proposed additions and alterations specified in this report. Any deviation of the proposed equipment and placement, etc., will require Pure Power to generate an additional structural analysis.

- The analysis does not include the design of the racking system or the ballast it requires. The analysis is performed to verify the capacity of the main structural system. Connections are assumed to have the capacity of the main structural members.

- Pure Power assumes that the existing building has NOT been modified or altered from its original design. Building landlord/client shall inform PPE with any kind of modification and/or alteration that may have been done to the existing building during its lifetime.

Proposed PV-Panels and Preliminary Design

- PV solar panels shall be installed on the roof as arrays on a ballasted racking system. A typical ballasted racking system is designed to resist wind uplift and sliding by placing concrete blocks (ballast) as counterweight on the racks. The system does not increase uplift on the building because the ballast should be designed to resist the additional uplift in order to provide the code required factor of safety.

- If the PV racking system is mechanically attached to the roof deck, then the uplift and shear forces at each mechanical attachment are not to exceed the capacity noted in this report under the executive summary section.

- It is assumed that the panels will be approximately 12 inches above the rooftop at the high end.

- It is assumed that the average design weight includes the weight of the panels, racking system and the ballast and all required assemblies.

Existing Building Code Allowance

- Pursuant to New Jersey Rehabilitation Subcode section 5.23-6.32, an addition shall not increase the forces in any structural element of the existing building or structure by more than five percent, unless the increased forces on the element are still in compliance with the building subcode for new structures.

- Pursuant to International Existing Building Code Sections 805.3, any existing lateral load-carrying structural element whose demand-capacity ratio with the addition and/or alteration considered is no more than 10 percent greater than its demand-capacity ratio with the addition and/or alteration ignored shall be permitted to remain unaltered, thus considered to be Code-compliant and adequate. If the demand- capacity ratio increase is more than 10 percent, the subject structural element is checked against the applicable Code criteria for new structures.

- Pursuant International Building Code section 1607.14.4.1, where PV panels are installed on building roof, it is not necessary to include roof live load in the area(s) covered by the panels when these area(s) are inaccessible, or signs are posted prohibiting storage under the panels. Therefore, Pure Power has applied the roof live/snow load in all areas that are still accessible and subject to foot traffic, maintenance workers, storage, etc., but not directly under the modules.

Codes and References

2021 International Building Code, NJ Edition

Minimum Design Loads for Buildings and Other Structures, ASCE 7-16

Standard Specifications for Steel Joists & Joist Girders, SJI 44th Edition

Specifications for Structural Steel Buildings, ANSI/AISC 360-16

Design Criteria

Snow Load (Service)

Ground Snow Load:	25 psf
Risk Category:	II
Snow Exposure: C_e:	1.0
Snow Load Important Factor I_s:	1.0
Thermal Factor C_t:	1.0
Flat Snow Load:	**20.0 psf**

Roof Live Load (Service) 20.0 psf

Note: The racking manufacturer/the racking manufacturer's structural engineer shall be responsible to verify the design criteria when designing the racking system.

Analysis Assumptions for Existing Roof

PPE performed a complete analysis of the existing roof framing system. Based on the site visit conducted on January 15, 2024 and the analysis results, the roof member design capacity is as listed below:

Total Roof DL =	14.0 psf
Live Load	20.0 psf
Snow Load	20.0 psf
Total Roof Load =	**34.0 psf**

PPE understands that the area where the clear space between the panels and rooftop is not more than 24 in. Therefore, as per the current state code (section 1607.14.4.1), roof live load does NOT need to be considered on areas where the proposed PV system will be installed.

The proposed PV system is to weigh a maximum **4.0 psf**

Based on PPE's experience with simliar type of buildings, and field observations, the actual loading, including the weight of the PV system is as follows:

Roofing & Insulation	2.0 psf
Deck	2.0 psf
Joists	2.8 psf
Girders	1.0 psf
MEP	2.0 psf
Sprinklers & Misc.	2.0 psf
Total Roof DL =	**11.75 psf**
PV System Weight	4.0 psf
Snow Load	20.0 psf
Total Roof Load =	**35.75 psf**

Photovoltaic (PV) modules are not designed to support any overhead foot traffic, and their low profile nature prevents access and foot traffic below. For this reason, the dead load of the PV system and roof live loads are assumed to act non-concurrently. Since the actual roof member loading breakdown is less than the roof member design capacity, it can be concluded that the array does not increase the gravity loads carried by the roof framing. Therefore, per IBC 1607.13.5.1 and IEBC Section 806.2, the structure may remain unaltered.

Conclusion

Based on our experience and engineering analysis of the information available at the time of this writing, it is the opinion of this organization that the added stresses due to the weight of the proposed PV modules are considered acceptable and will not exceed the capacity of the existing roof structure. Therefore, the proposed PV modules may be installed at Cherry Hill 2040 under the conditions outlined in the body of this report.

Do not stage pallets on roof unless staging plan drawing is provided by PPE.

This report does not represent an approval of the proposed PV system design. It is the racking designer's responsibility to ensure any proposed racking system is within the limits stated in this report and their system is designed in accordance with the requirements in the governing building code. PPE can review the existing framing adequacy for anchorage reaction loads upon request and if the racking design are supplied to PPE by the racking designer.

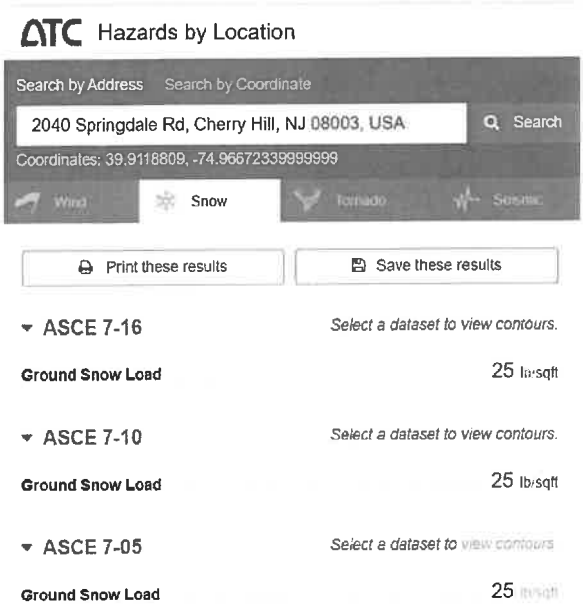
Sincerely,

Ahmed Youssef, PE
Patrick Bair, PE

APPENDIX A
CALCULATIONS

A. Gravity Loads

A.1. Snow Loads



SL = 20 psf

In accordance with ASCE7-16

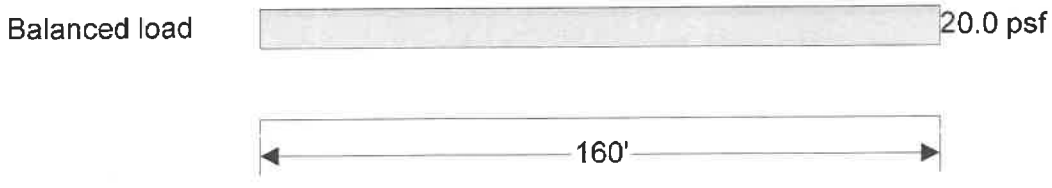
Tedds calculation version 1.0.11

Building details

Roof type	Flat
Width of roof	b = **160.00** ft

Ground snow load

Ground snow load (Figure 7.2-1)	p_g = **25.00** lb/ft^2
Density of snow	γ = min(0.13 × p_g / 1ft + 14lb/ft^3, 30lb/ft^3) = **17.25** lb/ft^3
Terrain typeSect. 26.7	C
Exposure condition (Table 7.3-1)	Partially exposed
Exposure factor (Table 7.3-1)	C_e = **1.00**
Thermal condition (Table 7.3-2)	All
Thermal factor (Table 7.3-2)	C_t = **1.00**
Importance category (Table 1.5-1)	II
Importance factor (Table 1.5-2)	I_s = **1.00**
Min snow load for low slope roofs (Sect 7.3.4)	p_{f_min} = I_s × 20 lb/ft^2 = **20.00** lb/ft^2
Flat roof snow load (Sect 7.3)	p_f = 0.7 × C_e × C_t × I_s × p_g = **17.50** lb/ft^2



Roof elevation

A.2. Load Combinations (ASD)

The weight of the proposed PV system shall be considered a dead load

Dead Load, DL = 11.75 psf
Solar Load, PV = 4 psf (considered as DL)
Live Load, LL = 0 psf (concurrent with solar)
Snow Load, SL = 20 psf

LC1: DL	=	11.75 psf
LC2: DL + PV + SL	=	35.75 psf
LC3: DL + LL	=	11.75 psf

Therefore, LC2 governs.

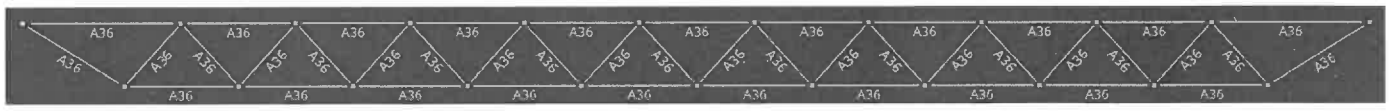
A.3. Joists

A.3.1. J1 Joist

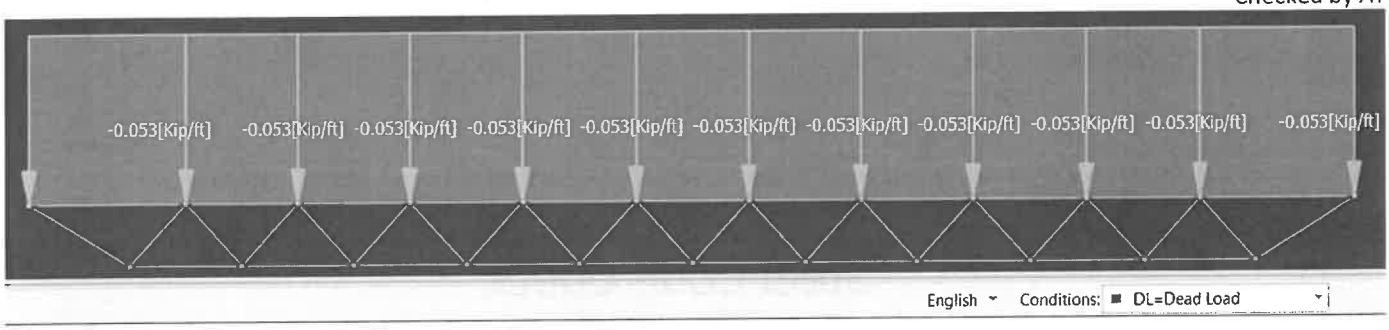
Span: 50-0"
Joist Spacing: 6.67'
Proposed Loads:
DL = 11.75 psf – 2.8 psf (steel self-weight) – 1.0 psf (girder self-weight) = 7.95 psf * 6.67' = 53 plf
SL = 20 psf * 6.67' = 133 plf
PV = 4 psf * 6.67' = 27 plf

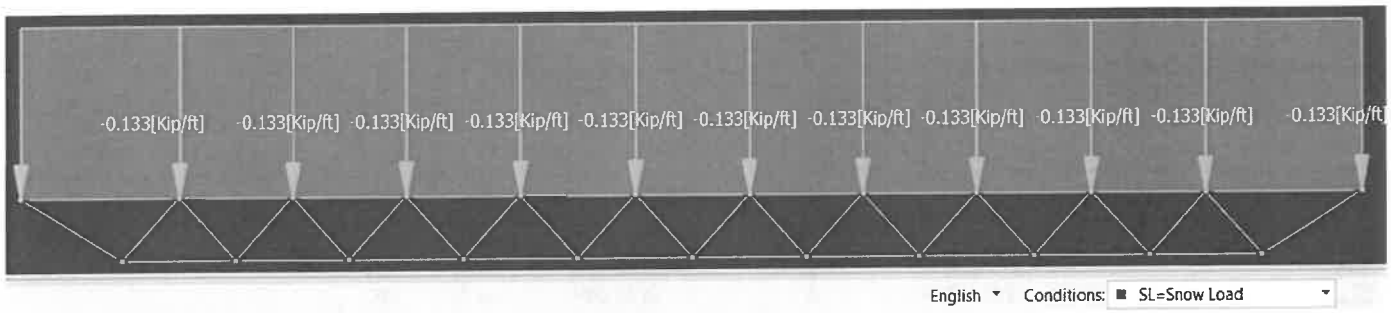
Nodal Coordinates

Member Sections



Member Material


-0.053[Kip/ft] -0.053[Kip/ft] -0.053[Kip/ft] -0.053[Kip/ft] -0.053[Kip/ft] -0.053[Kip/ft] -0.053[Kip/ft] -0.053[Kip/ft] -0.053[Kip/ft] -0.053[Kip/ft] -0.053[Kip/ft]
English
Conditions: DL=Dead Load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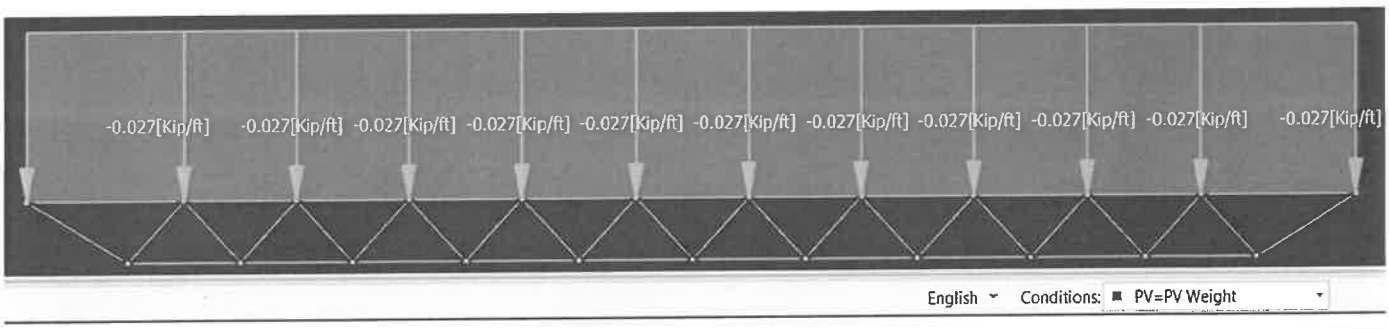
English
Conditions: SL=Snow Load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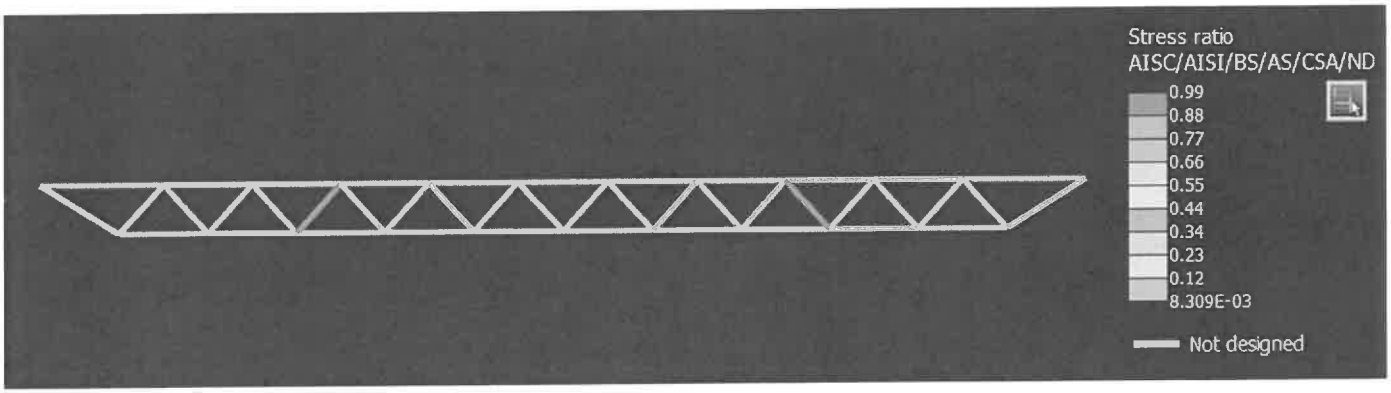
English
Conditions: PV=PV Weight


Stress ratio
AISC/AISI/BS/AS/CSA/ND
0.99
0.88
0.77
0.66
0.55
0.44
0.34
0.23
0.12
8.309E-03
Not designed

RAM Elements

Current Date: 2/8/2024 7:12 AM
Units system: English
File name: C:\OneDrive\OneDrive - Pure Power Engineering, Inc\Solar Landscape Documents - Solar Landscape\08653 - CSEP '24 Batch 1 Gr 2\.02 - Cherry Hill 2040\06 STRX\04 Design\Joists - Beams\2024.02.08\J1 - modified.retx

Steel Code Check
Summary - Group by description

Load conditions to be included in design :
LC1=1.2DL+1.2PV+1.6SL
LC2=1.2DL+1.6SL

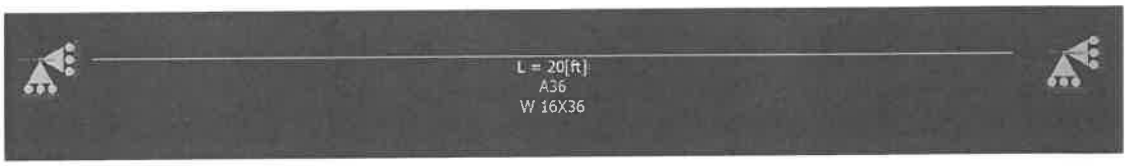
Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
BC	*T 3x4x0.253x0.303*	16	LC1 at 62.50%	0.81	OK	
Diag	*L 1.25 x 1.25 x 0.25*	27	LC1 at 50.00%	**0.99**	**OK**	
TC	*T 4x5.25x0.266x0.304*	6	LC1 at 50.00%	0.75	OK	

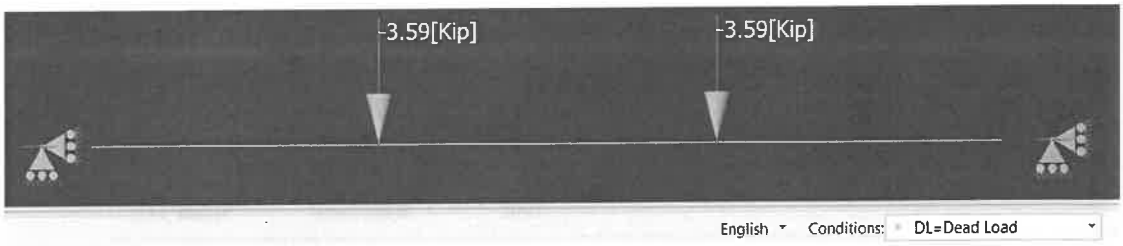
Utilization = 99% OK

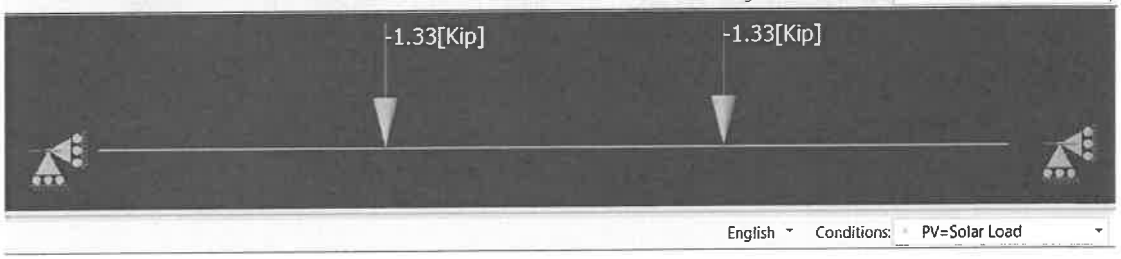
A.4. Girders

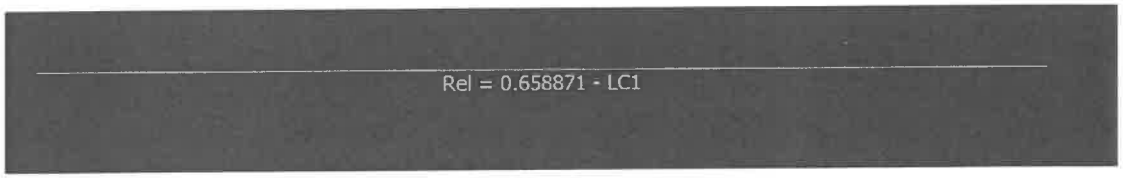
A.4.1. G1 W16x36

Span: 20-0"
Number of Spaces: 3
Joist Spacing: 20'-0" / 3 = 6.67'
Girder Trib = 50'
Girder Point loads:
DL = 11.75 psf – 1 psf (girder self-wight) = 10.75 psf *6.67' * 50' = 3.59 k
SL = 20 psf * 6.67'*50' = 6.67 k
PV = 4 psf * 6.67' * 50' = 1.33 k









Steel Code Check
Concise Report

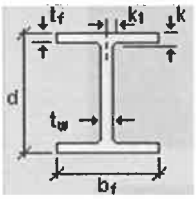
AISC 360-2016 LRFD (Hot-rolled)

Member : 1 - OK

Section information

Section name: W 16X36 **(US)**

Dimensions



bf	=	6.990	[in]	Width
d	=	15.900	[in]	Depth
k	=	0.832	[in]	Distance k
k1	=	0.750	[in]	Distance k1
tf	=	0.430	[in]	Flange thickness
tw	=	0.295	[in]	Web thickness

Properties	Unit	Major axis	Minor axis
Gross area of the section. (Ag)	[in2]	10.600	
Moment of Inertia (local axes) (I)	[in4]	448.000	24.500
Moment of Inertia (principal axes) (I')	[in4]	448.000	24.500
Bending constant for moments (principal axis) (J')	[in]	0.000	0.000
Radius of gyration (local axes) (r)	[in]	6.501	1.520
Radius of gyration (principal axes) (r')	[in]	6.501	1.520
Saint-Venant torsion constant. (J)	[in4]	0.545	
Section warping constant. (Cw)	[in6]	1460.000	
Distance from centroid to shear center (principal axis) (xo,yo)	[in]	0.000	0.000
Top elastic section modulus of the section (local axis) (Ssup)	[in3]	56.500	7.000
Bottom elastic section modulus of the section (local axis) (Sinf)	[in3]	56.500	7.000
Top elastic section modulus of the section (principal axis) (S'sup)	[in3]	56.500	7.000
Bottom elastic section modulus of the section (principal axis) (S'inf)	[in3]	56.500	7.000
Plastic section modulus (local axis) (Z)	[in3]	64.000	10.800
Plastic section modulus (principal axis) (Z')	[in3]	64.000	10.800
Polar radius of gyration. (ro)	[in]	6.676	
Area for shear (Aw)	[in2]	6.010	4.690
Torsional constant. (C)	[in3]	1.170	

Material : A36

Properties	Unit	Value
Yield stress (Fy):	[Kip/in2]	36.00
Tensile strength (Fu):	[Kip/in2]	58.00
Elasticity Modulus (E):	[Kip/in2]	29000.00
Shear modulus for steel (G):	[Kip/in2]	11507.94

Design Criteria

Description	Unit	Value
Length for tension slenderness ratio (L)	[ft]	20.00

Distance between member lateral bracing points

Length (Lb) [ft] Top	Bottom
6.67	20.00

Laterally unbraced length

Length [ft] Major axis(L33)	Minor axis(L22)	Torsional axis(Lt)	Effective length factor Major axis(K33)	Minor axis(K22)	Torsional axis(Kt)
20.00	20.00	20.00	1.0	1.0	1.0

Additional assumptions

Continuous lateral torsional restraint	No
Tension field action	No
Continuous flexural torsional restraint	No
Effective length factor value type	None
Major axis frame type	Sway
Minor axis frame type	Sway

Design Checks

Axial Tension Design ✓

Axial tension

Ratio	:	0.00			
Capacity	:	343.44 [Kip]	Reference	:	Cl.D2
Demand	:	0.00 [Kip]	Ctrl Eq.	:	LC1 at 0.00%

Intermediate results	Unit	Value	Reference
Factored axial tension capacity(ϕP_n):	[Kip]	343.44	Cl.D2

Axial Compression Design ✓

Compression in the major axis 33

Ratio	:	0.00			
Capacity	:	311.30 [Kip]	Reference	:	Cl.E3
Demand	:	0.00 [Kip]	Ctrl Eq.	:	LC1 at 0.00%

Intermediate results	Unit	Value	Reference
Section classification			
Factored flexural buckling strength(ϕP_{n33}):	[Kip]	311.30	Cl.E3

Compression in the minor axis 22

Ratio	:	0.00			
Capacity	:	96.09 [Kip]	Reference	:	Cl.E3
Demand	:	0.00 [Kip]	Ctrl Eq.	:	LC1 at 0.00%

Intermediate results	Unit	Value	Reference
Section classification			
Factored flexural buckling strength(ϕP_{n22}):	[Kip]	96.09	Cl.E3
Factored torsional or flexural-torsional buckling strength(ϕP_{n11}):	[Kip]	202.89	Cl.E4

Flexural Design ✔

Bending about major axis, M33

Ratio	: 0.66			
Capacity	: 170.97 [Kip*ft]	Reference	:	Cl.F2.2
Demand	: 112.65 [Kip*ft]	Ctrl Eq.	:	LC1 at 50.00%

Intermediate results	Unit	Value	Reference
Section classification			
Factored yielding strength(ϕM_n):	[Kip*ft]	172.80	Cl.F2.1
Factored lateral-torsional buckling strength(ϕM_n):	[Kip*ft]	170.97	Cl.F2.2

Bending about minor axis, M22

Ratio	: 0.00			
Capacity	: 29.16 [Kip*ft]	Reference	:	Cl.F6.1
Demand	: 0.00 [Kip*ft]	Ctrl Eq.	:	LC1 at 0.00%

Intermediate results	Unit	Value	Reference
Section classification			
Factored yielding strength about a geometric axis(ϕM_n):	[Kip*ft]	29.16	Cl.F6.1

Shear Design ✔

Shear in major axis 33

Ratio	: 0.00			
Capacity	: 116.86 [Kip]	Reference	:	Cl.G1
Demand	: 0.00 [Kip]	Ctrl Eq.	:	LC1 at 0.00%

Intermediate results	Unit	Value	Reference
Factored shear capacity(ϕV_n):	[Kip]	116.86	Cl.G1

Shear in minor axis 22

Ratio	: 0.17			
Capacity	: 101.30 [Kip]	Reference	:	Cl.G1
Demand	: 17.02 [Kip]	Ctrl Eq.	:	LC1 at 100.00%

Intermediate results	Unit	Value	Reference
Factored shear capacity(ϕV_n):	[Kip]	101.30	Cl.G1

Combined Actions Design ✔

Combined flexure and axial

Ratio	:	0.66			
Ctrl Eq.	:	LC1 at 50.00%	Reference	:	Eq.H1-1b

Intermediate results	Unit	Value	Reference
Interaction of flexure and axial force:	--	0.66	Eq.H1-1b

Utilization: 66% ≤ 105% ⇒ OK

B. Lateral Loads

As per the existing building code, the lateral load resistance system shall be permitted to remain unaltered if the stresses are increased by 10% or less. Roof diaphragm is one of the lateral load-carrying members and the reserved capacity will be governed by its capacity.

Total roof area = 49,400 ft^2
Original Dead Load = 14 psf

DL = 14 psf x 49,400 ft^2 = 691,600 lbs
Wall weight = 2 x ½ x 160 ft x 16.5 ft x 58 psf (8" CMU grouted at 24") = 153,120 lbs
Roof Diaphragm Original Total Mass Dead Loads; Wpx-Orig. = 844,720 lbs

Existing Current Dead Load = 11.75 psf

PV-System Max. Weight = 10% x 844,720 lbs + (14 psf – 11.75 psf) * 49,400 ft^2 = 195,622 lbs

PV-System Max. Weight = 195,622 lbs / 49,400 ft^2 = 4.0 psf

C. Roof Deck

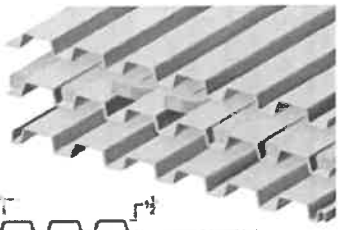
1 ½" x 22-gage Type B metal roof deck
Span = 6.67'

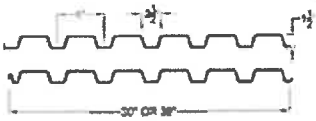
Max load = 4 psf roofing, insulation, and deck + 4 psf PV + 20 psf SL = 28 psf

VULCRAFT

1.5 B, BI, BA, BIA, BSV

Maximum Sheet Length 42'-0
Extra charge for lengths under 6'-0
ICC ER-3415
FM Global Approved





SECTION PROPERTIES

Deck Type	Design Thickness	Wt.	Section Properties				V_a	F_y	M^+	M^-
B24		1.46						80	0.360	0.39
B22									0.307	0.31
B20		2.14			0.222	0.247	2193	33	0.386	0.40
B19		2.49							0.457	0.47
B18								33	0.525	0.53
B16		3.54					3678	33	0.673	0.67

VERTICAL LOADS FOR TYPE 1.5B

No. of Spans	Deck Type	Max. SDI Const. Span	Allowable Total (PSF) / Load Ca Span (ft.-in.)				
			5-0	5-6	6-0	6-6	7-0
1	B24	4'-8	115 / 56	95 / 42	80 / 32	68 / 26	59 / 20
	B22	5'-7	98 / 81	81 / 61	68 / 47	58 / 37	50 / 30
	B20	6'-5	123 / 105	102 / 79	86 / 61	73 / 48	63 / 38
	B19	7'-1	146 / 129	121 / 97	101 / 75	86 / 59	74 / 47
	B18	7'-8	168 / 152	138 / 114	116 / 88	99 / 69	85 / 55
	B16	8'-8	215 / 196	178 / 147	149 / 113	127 / 89	110 / 71
2	B24	5'-10	124 / 153	103 / 115	86 / 88	74 / 70	64 / 56
	B22	6'-11	100 / 213	83 / 160	70 / 124	59 / 97	51 / 78
	B20	7'-9	128 / 267	106 / 201	89 / 155	76 / 122	66 / 97
	B19	8'-5	150 / 320	124 / 240	104 / 185	89 / 145	77 / 116
	B18	9'-1	169 / 369	140 / 277	118 / 213	101 / 168	87 / 134
	B16	10'-3	213 / 471	176 / 354	149 / 273	127 / 214	110 / 172
3	B24	5'-10	154 / 120	128 / 90	108 / 69	92 / 55	79 / 44
	B22	6'-11	124 / 167	103 / 126	87 / 97	74 / 76	64 / 61
	B20	7'-9	159 / 209	132 / 157	111 / 121	95 / 95	82 / 76

Allowable Load = 64 psf
Utilization = 28 / 64 = 44% ⇒ **OK**

PUREPOWER ENGINEERING

3/6/2024

Prepared by PB
Checked by AY

Mechanical Attachment Capacity

Mechanical Attachment :	**U-Anchor 2400/2600**	1.5 Metal Deck	x	22 ga.	Loading:		
Fastener :	#15	Fu2= 45,000 psi			**Uplift =**	**450**	**lb**
# of Fasteners :	8	Deck thickness, t2=	0.0295	in	**Shear =**	**310**	**lb**
Anchor Ø =	4.125 in				x-eccentricity =	0	in
Ω =	3				y-eccentricity =	3.25	in
Fastener Ø,d =	0.313 in				M = Uplift*x-ecen + Shear*y-ecen =	1007.5	lb-in

Tension Check

P_{not} = 0.85 * 0.0295 in * 0.3125 in 45000 psi = 352.62 lbs

P_{not}/Ω = 352.62 lbs / 3 = 117.5 lbs

$T_{racking}$ = 450 lbs / 8 = 56.25 lbs

T_{pryout} = 1007.5 in-lb / 4.125 in / 4 = 61.06 lbs

T_{total} = 117.3 lbs ≤ 117.54 lbs

Utilzation 99.81% **OK**

Shear Check

P_{nv} = 4.2 (t23 d) ½ Fu2 = 535.33 lbs

P_{nv}/Ω = 535.33 lbs / 3 = 178.44 lbs

$Q_{racking}$ = 310 lbs / 8 = 38.75 lbs ≤ 178.44 lbs

Utilzation 21.72% **OK**

Combined Check

$Q_{racking}/P_{nv} + T_{total}/P_{not} < 1.15/\Omega$ where $\Omega = 2.55$

0.405 ≤ 0.451

Utilzation 89.82% **OK**

PUREPOWER ENGINEERING

3/6/2024

Prepared by PB
Checked by AY

Mechanical Attachment Capacity

Mechanical Attachment : **OMG PowerGrip Plus**
Fastener : #15
# of Fasteners : 8
Anchor Ø = 9.625 in
Ω = 3
Fastener Ø,d = 0.313 in

1.5 Metal Deck x 22 ga.
Fu2= 45,000 psi
deck thickness, t2= 0.0295 in

Loading:
Uplift = 500 lb
Shear = 333 lb
x-eccentricity = 0 in
y-eccentricity = 3.25 in
M = Uplift*x-ecen + Shear*y-ecen = 1082.25 lb-in

Tension Check

Pnot = 0.85 * 0.0295 in * 0.3125 in 45000 psi = 352.617 lbs
Pnot/Ω = 352.62 lbs / 3 = 117.5 lbs
$T_{racking}$ = 500 lbs / 8 = 62.5 lbs
T_{pryout} = 1082.25 in-lb / 9.625 in / 4 = 28.11 lbs
T_{total} = 90.61 lbs ≤ 117.54 lbs
Utilzation 77.09% **OK**

Shear Check

P_{nv} = 4.2 $(t_2^3 d)^{½} F_{u2}$ = 535.33 lbs
P_{nv}/Ω = 535.33 lbs / 3 = 178.44 lbs
$Q_{racking}$ = 333 lbs / 8 = 41.625 lbs ≤ 178.44 lbs
Utilzation 23.33% **OK**

Combined Check

$Q_{racking}/P_{nv} + T_{total}/P_{not} < 1.15/\Omega$ where Ω = 2.55
0.335 ≤ 0.451
Utilzation 74.22% **OK**

PUREPOWER ENGINEERING

3/6/2024

Prepared by PB
Checked by AY

Mechanical Attachment Capacity

Mechanical Attachment :	**Facet**		1.5 Metal Deck x 22 ga.		Loading:		
Fastener :	#15		Fu2= 45,000 psi		**Uplift =**	**450**	**lb**
# of Fasteners :	8		Deck thickness, t2=	0.0295 in	**Shear =**	**330**	**lb**
Anchor Ø =	4.375	in			x-eccentricity =	0	in
Ω =	3				y-eccentricity =	3.25	in
Fastener Ø,d =	0.313	in			M = Uplift*x-ecen + Shear*y-ecen =	1072.5	lb-in

Tension Check

P_{not} = 0.85 * 0.0295 in * 0.3125 in 45000 psi = 352.617 lbs

P_{not}/Ω = 352.62 lbs / 3 = 117.5 lbs

$T_{racking}$ = 500 lbs / 8 = 56.25 lbs

T_{pryout} = 1072.5 in-lb / 4.375 in / 4 = 61.29 lbs

T_{total} = 117.5 lbs ≤ 117.54 lbs

Utilzation 100.0% **OK**

Shear Check

P_{nv} = 4.2 $(t_2^3\ d)^{½}$ F_{u2} = 535.33 lbs

P_{nv}/Ω = 535.33 lbs / 3 = 178.44 lbs

$Q_{racking}$ = 330 lbs / 8 = 41.25 lbs ≤ 178.44 lbs

Utilzation 23.12% **OK**

Combined Check

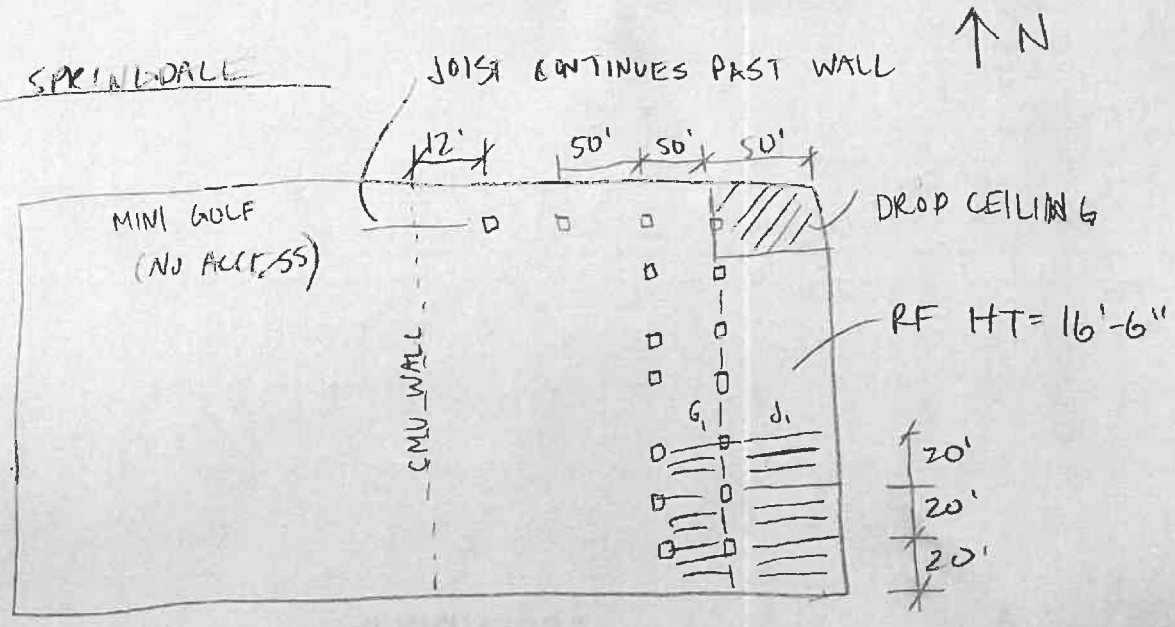
$Q_{racking}/P_{nv} + T_{total}/P_{not} < 1.15/\Omega$ where Ω = 2.55

0.410 ≤ 0.451

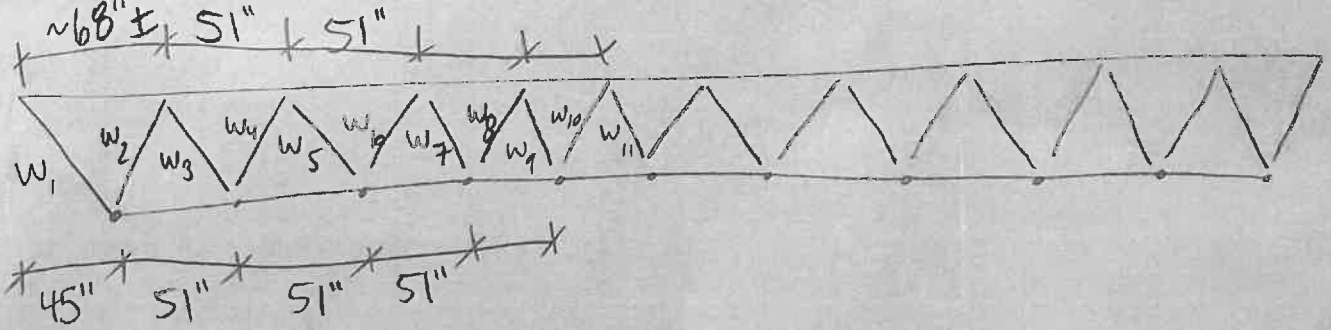
Utilzation 91.00% **OK**

APPENDIX B
EXISTING DRAWINGS

2040 SPRINGDALE

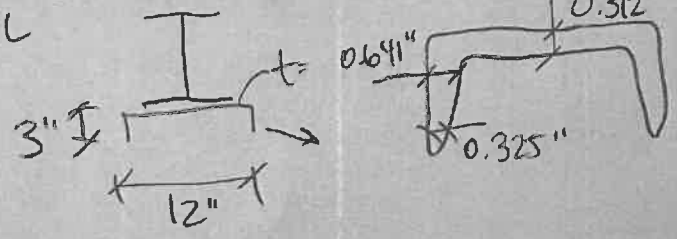


J1 : SPACING : 20'/3 SPAN. DEPTH: 32"



G1 : WF ; SIMP. SUPPORT ; d= 16" ; b= 7" ; t_f= 0.466"

* SOME GIRDERS HAVE REINFORCED BTTM FLANGE W/ WELDED CHANNEL



STITCH PLATE: MIDSPAN

W_1 ⊥L $b = 1\frac{1}{4}"$; $d = 1\frac{1}{4}"$; $s = 0.283"$; $t = 0.218"$

W_2 ⊥L $b = 1"$ $(1\frac{1}{16})$; $d = 1"$ $(1\frac{1}{16})$; $s = 0.282"$, $t = 0.193$

W_3 L $b = 1.5"$; $d = 1.5"$; $t = 0.201"$

W_4 L $b = 1.5"$; $d = 1.5"$ $t = 0.211$

W_5 L $b = 1\frac{1}{4}"$; $d = 1\frac{1}{4}"$ $t = 0.213"$

W_6 L $b = 1\frac{1}{4}"$ $d = 1\frac{1}{4}"$ $t = 0.216"$

W_7 L $b = 1"$ $d = 1"$ $t = 0.205"$

W_8 L $b = 1"$ $d = 1"$ $t = 0.208"$

W_9 L $b = 1"$ $d = 1"$ $t = 0.202"$

W_{10} L $b = 1"$ $d = 1"$ $t = 0.203"$

TC T $b = 5.25"$ $d = 4"$ $t_n = 0.304"$, $t_v = 0.266"$

BC ⊥ $b = 4"$; $d = 3"$; $t_n = 0.303"$; $t_v = 0.253"$

SITE PLAN WAIVER
COMMUNITY SOLAR
SOLAR ROOFTOP SYSTEM - 2040 SPRINGDALE ROAD

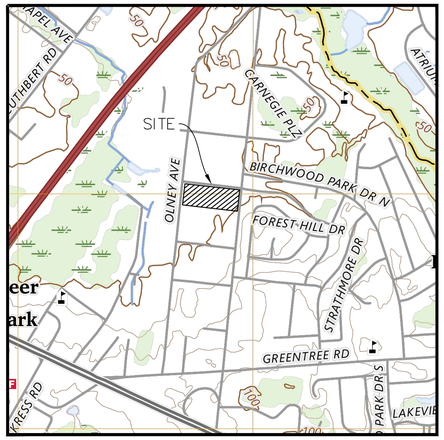
BLOCK 468.05, LOT 1

TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY

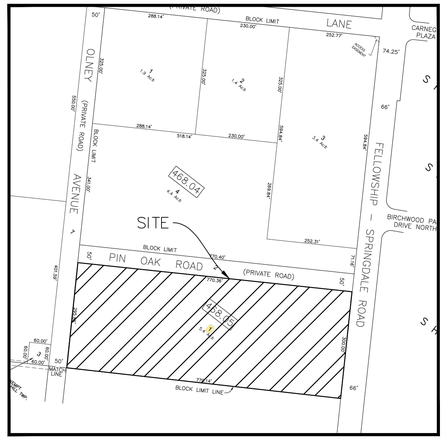
GENERAL NOTES:

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 468.05, LOT 1 AS SHOWN ON THE CURRENT TAX ASSESSMENT MAP OF THE TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY (SHEET 269).
3. EXISTING BOUNDARY AND STRUCTURES INFORMATION SHOWN ON PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY PREPARED FOR: CHERRY UMBRELLA, LLC; 2040 SPRINGDALE ROAD; TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY; BLOCK 468.05, LOT 1", PREPARED BY MILLMAN NATIONAL LAND SERVICES, DATED 04/13/2018.
4. SITE COORDINATES: 562,785' N, 504,446' 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 269
NAD 83
200 100 0 200 400 600
150 50
GRAPHIC SCALE
1 INCH = 200 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 zone (Section §419.D) they are not permitted when not powering the principal building. (Section §432-C.1.a)
- Bulk Variance. The maximum permitted impervious coverage for the lot is 70%. The proposed lot coverage is 78.7%. (Section §419-F.1.)
- Bulk Variance. The minimum required open space for the lot is 25%. The proposed open space for the lot is 21.3%. (Section §419-F.1.)

INDUSTRIAL RESTRICTED (IR) ZONING SCHEDULE
BLOCK 468.05, LOT 1
PROPOSED USE: COMMUNITY SOLAR ENERGY PROJECT[1]

	REQUIRED	EXISTING	PROPOSED	COMPLIES
MIN. LOT AREA	20,000 SF	229,481 SF	NO CHANGE	YES
MIN. LOT FRONTAGE	120 FT	295.9 FT	NO CHANGE	YES
MIN. LOT DEPTH	120 FT	295.9 FT	NO CHANGE	YES
MIN. FRONT YARD SETBACK				
Springdale Road	30 FT	98.7 FT	NO CHANGE	YES
Pin Oak Road	30 FT	64.4 FT	NO CHANGE	YES
Olney Avenue	30 FT	365.6 FT	NO CHANGE	YES
MIN. REAR YARD SETBACK	20 FT	N/A	NO CHANGE	YES
MIN. SIDE YARD SETBACK	10 FT	72.9 FT	NO CHANGE	YES
MAX. BUILDING HEIGHT**	35 FT	17 FT	NO CHANGE***	YES
MAX. LOT COVERAGE	70 %	78.6 %	78.7 %	NO[2]
MIN. OPEN SPACE	25 %	21.4 %	21.3 %	NO[2]
MAX. BUILDING COVERAGE	30 %	21.6 %	NO CHANGE	YES

[1]*D 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 8.5 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
468.04	3 & 4		CHERRY UMBRELLA LLC	4 RADNOR CORP CTR STE 105	RADNOR	PA	19087
469.04	1		BERTRAND TYRONE & MASIKA	1901 BIRCHWOOD PARK DR	CHERRY HILL	NJ	08003
469.04	2		GEISLER, MARK & BARTUS, JENNIFER	1903 BIRCHWOOD PK DR N	CHERRY HILL	NJ	08003
469.04	36		HOTER AVRAHAM	28 FOREST HILL DRIVE	CHERRY HILL	NJ	08003
469.04	37		SCHILGI AMIT & LEVY NAAMA	26 FOREST HILL DRIVE	CHERRY HILL	NJ	08003
469.04	38		GRECO,JOSEPH & ANNETTE	24 FOREST HILL DR	CHERRY HILL	NJ	08003
469.04	39		SPERRY, MICHAEL A & MARRONE, L	22 FOREST HILL DR	CHERRY HILL	NJ	08003
469.04	40		GROSS KYLE J & JESSICA D	20 FOREST HILL DRIVE	CHERRY HILL	NJ	08003
469.04	41		WHITMAN LISA A	18 FOREST HILL DRIVE	CHERRY HILL	NJ	08003
473.01	2		TASK ASSOCIATES LLC	1930 RT 70 E - BLDG Q	CHERRY HILL	NJ	08003
473.01	3		TWP OF CHERRY HILL	820 MERCER STREET	CHERRY HILL	NJ	08002
473.01	4	C0001	BESTWORK INDUSTRIES FOR THE BLIND	1940 OLNEY AVE STE200	CHERRY HILL	NJ	08003
473.01	4	C0002	CHERRY UMBRELLA LLC	4 RADNOR CORP CTR STE 105	RADNOR	PA	19087
479.01	1		LYNK COMPUTER LLC	1868 GREENTREE ROAD	CHERRY HILL	NJ	08003
490.01	1		GWL 1938 OLNEY LLC	1399 FRANKLIN AVE STE 100	GARDEN CITY	NY	11530
490.01	2		FIRST INDUSTRIAL LP	PO BOX 600	PINE BROOK	NJ	07058
495.01	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

TOWNSHIP ENGINEER DATE

DATE	REVISIONS	BY

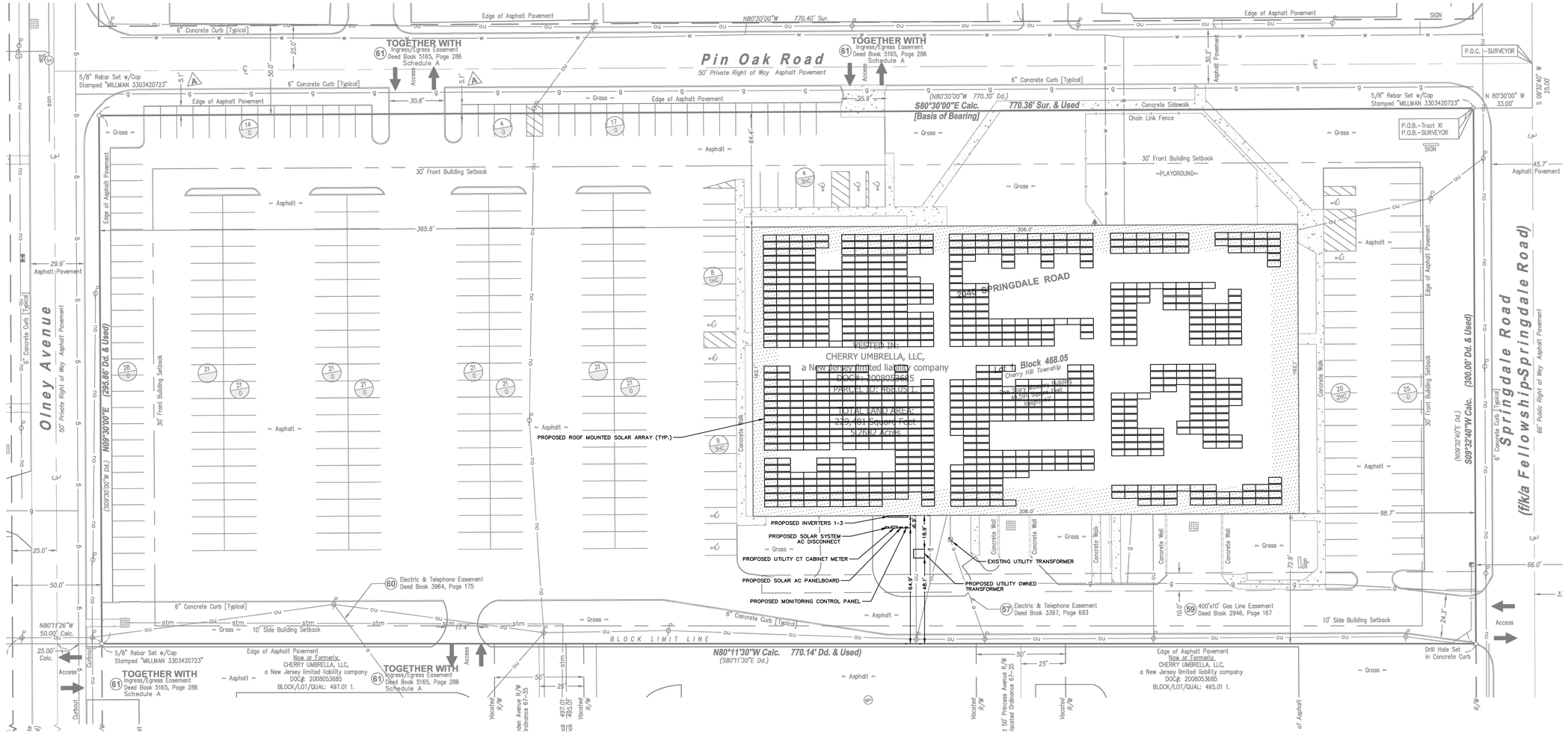
SHORE POINT ENGINEERING
Certificate of Authorization No. 24GA28317800
Kevin E. Shelly P.E. PE No. GE05031300
PO Box 257, Manasquan, NJ 08736
T: 732-924-8100 | F: 732-924-8110
www.shorepointengineering.com

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

SITE PLAN WAIVER
COMMUNITY SOLAR
SOLAR ROOFTOP SYSTEM - 2040 SPRINGDALE ROAD
BLOCK 468.05, LOT 1
SITUATED IN
TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY

TITLE SHEET

SCALE: AS SHOWN	PROJECT No.: SLA-2416
RELEASED BY: KES	DATE: 02/21/25
CHECKED BY: RZH	Sheet Number 1 OF 3
DRAWN BY: MJW	



INDUSTRIAL RESTRICTED (IR) ZONING SCHEDULE				
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LAYOUT NOTES

1. APPLICANT: SOLAR LANDSCAPE, LLC
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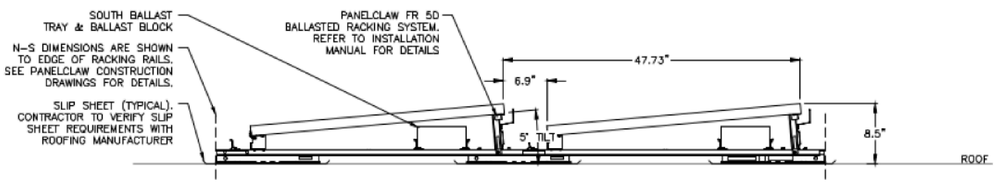

2 RACKING DETAIL
SCALE: NONE

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
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Date
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SITE PLAN WAIVER COMMUNITY SOLAR

SOLAR ROOFTOP SYSTEM - 2040 SPRINGDALE ROAD
BLOCK 468.05, LOT 1
SITUATED IN
TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY

SITE PLAN

SCALE: 1"=30'	PROJECT No.: SLA-2416
RELEASED BY: KES	DATE: 02/21/25
CHECKED BY: RZH	Sheet Number 2 OF 3
DRAWN BY: MJW	

File Name: C:\Users\MichaelWaske\OneDrive - Shore Point Engineering\Clients\Solar Landscape\Jobs\SLA-2416 - 2040 Springdale Road - Cherry Hill\DWG\Site Plan.dwg
Plot time: Feb 21, 2025 - 9:38am

SOLARMOUNT

UNIRAC

SOLARMOUNT is the professionals' choice for residential PV mounting applications. Every aspect of the system is designed for an easier, faster installation experience. SOLARMOUNT is a complete solution with revolutionary universal clamps, FLASHKIT PRO, full system UL 2703 certification and 25-year warranty. Not only is SOLARMOUNT easy to install, but best-in-class aesthetics make it the most attractive on any block!

New & Improved:
THE PROFESSIONALS' CHOICE
With Superior Aesthetics

NOW FEATURING FLASHKIT PRO
The Complete Roof Attachment Solution
featuring EcoFasten Solar® technology

NOW WITH UNIVERSAL MIDCLAMPS
Accommodates 30mm-51mm module frames
One-tool, one-person install's are fune!

REVOLUTIONARY NEW ENDCLAMPS
Concealed design and included End Caps

THE PROFESSIONALS' CHOICE FOR RESIDENTIAL RACKING

BEST INSTALLATION EXPERIENCE • CURB APPEAL • COMPLETE SOLUTION • UNIRAC SUPPORT

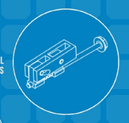
SOLARMOUNT

UNIRAC

BETTER DESIGNS

TRUST THE INDUSTRY'S BEST DESIGN TOOL
Start the design process for every project in our U-Builder on-line design tool. It's a great way to save time and money.

CONCEALED UNIVERSAL ENDCLAMPS



BETTER SYSTEMS

ONE SYSTEM - MANY APPLICATIONS
Quickly set modules flush to the roof on steep pitched roofs. Orient a large variety of modules in Portrait or Landscape. Tilt the system up on flat or low slow roofs. Components available in mill, clear, and dark finishes to optimize your design financials and aesthetics.

END CAPS INCLUDED WITH EVERY ENDCLAMP

UNIVERSAL SELF STANDING MIDCLAMPS

BETTER RESULTS

MAXIMIZE PROFITABILITY ON EVERY JOB
Trust Unirac to help you minimize both system and labor costs from the time the job is quoted to the time your teams get off the roof. Faster installs. Less Waste. More Profits.

BETTER SUPPORT

WORK WITH THE INDUSTRIES MOST EXPERIENCED TEAM
Professional support for professional installers and designers. You have access to our technical support and training groups. Whatever your support needs, we've got you covered. Visit Unirac.com/solarmount for more information.

U-BUILDER ONLINE DESIGN TOOL SAVES TIME & MONEY
Visit design.unirac.com

LISTED **UL2703** BONDING & GROUNDING MECHANICAL LOADING SYSTEM FIRE CLASSIFICATION

UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT

UNMATCHED EXPERIENCE | CERTIFIED QUALITY | ENGINEERING EXCELLENCE | BANKABLE WARRANTY | DESIGN TOOLS | PERMIT DOCUMENTATION

TECHNICAL SUPPORT
Unirac's technical support team is dedicated to answering questions & addressing issues in real time. An online library of documents including engineering reports, stamped letters and technical data sheets greatly simplifies your permitting and project planning process.

CERTIFIED QUALITY PROVIDER
Unirac is the only PV mounting vendor with ISO certifications for 9001:2008, 14001:2004 and OHSAS 18001:2007, which means we deliver the highest standards for fit, form, and function. These certifications demonstrate our excellence and commitment to first class business practices.

BANKABLE WARRANTY
Don't leave your project to chance. Unirac has the financial strength to back our products and reduce your risk. Have peace of mind knowing you are providing products of exceptional quality. SOLARMOUNT is covered by a 25 year limited product warranty and a 5 year limited finish warranty.

ENHANCE YOUR REPUTATION WITH QUALITY RACKING SOLUTIONS BACKED BY ENGINEERING EXCELLENCE AND A SUPERIOR SUPPLY CHAIN

PLEASE RECYCLE. PRINTED IN USA

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 humicity 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 3-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

Exclusive 3-in-1 design

Significant savings in cost and space… plus quicker installation. Three individual components combined into a single unit.

Contemporary electrical distribution systems are required to do more in less space, while at the same time being cost-effective.

Eaton provides a solution to these requirements with the proven mini-power center. It occupies considerably less space and can save up to 31 percent of the installation costs normally required when individual components are used.

The solution is possible because a mini-power center combines three individual components into one NEMA® enclosure, rated either 3R or 4X for harsh environments (corrosion, dust, hose-directed water): a main breaker, an encapsulated single-phase or three-phase dry-type transformer, and a secondary distribution loadcenter with main breaker. Interconnecting wiring is completed at the factory.

A mini-power center is delivered ready for installation. It's also suitable for use as service entrance equipment.

NEMA enclosure

Compare the space savings… 30 inches instead of 72 inches! Specify the mini–power center

Compare the installation cost savings—31 percent less

Because we knew that putting three components in one enclosure dramatically cuts installation time, we asked an electrical contractor to estimate the job two ways:

- Using a separate breaker, transformer and loadcenter, including the connecting cable and hardware
- Using a mini-power center

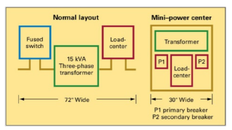
Here are the estimates:

Installation	15 kVA		25 kVA	
	Three-component system Hours ❶	Mini–power center	Three-component system	Mini–power center
Switch and fuse layout	4	0	4	0
Switch and fuse mount	1	0	1	0
Transformer layout, remove knockout, etc.	16	16	24	24
Transformer fastened to wall	4	0	4	0
Loadcenter layout, mount and connect source	4	4	6	4
Total hours	29	20	38	28
% time saved with Eaton's mini-power center	31% savings		26% savings	

❶ Time estimates are typical and will vary by geographical area.

Optional primary main circuit breakers for plug-in chassis

Primary main breaker	480 V kAIC	600 V kAIC
EHD/FDB	14/18	—/14
FD	25	18
HFD	65	25
FDC	100	35



Note: Comparison made on a typical 15 kVA three-phase MPC Type 3R.

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

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Features

- Uses thermally protected metal oxide varistor (MOV) technology
- 20 kA nominal discharge current (In) rating (maximum rating assigned by UL)
- 80 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.

EATON
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	kA 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 (4W + G) 220Y = 127/220 wye (4W + G) 400Y = 230/400 wye (4W + G) 480Y = 277/480 wye (4W + G) 600Y = 347/600 wye (4W + G) 240D = 240 delta (3W + G) 480D = 480 delta (3W + G) 600D = 600 delta (3W + G) 240H = 240 delta high leg (4W + 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 = Meter 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 (4W + G) applications with high leg on "C" phase.
❷ Units used 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.

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

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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 - 2040 SPRINGDALE ROAD
BLOCK 468.05, LOT 1
SITUATED IN
TOWNSHIP OF CHERRY HILL, CAMDEN COUNTY, NEW JERSEY

CONSTRUCTION DETAILS

SCALE: AS SHOWN	PROJECT No.: SLA-2416
RELEASED BY: KES	DATE: 02/21/25
CHECKED BY: RZH	Sheet Number 3 OF 3
DRAWN BY: MJW	

File Name: C:\Users\MichaelWaske\OneDrive - Shore Point Engineering\Clients\Solar Landscape\Jobs\SLA-2416 - 2040 Springdale Road - Cherry Hill\DWG\Site Plan.dwg
Plot time: Feb 19, 2025 - 11:17am