

Plainsboro Township
Minor Site Plan
Application P22-12
Memo Date: 2/7/2023
Meeting Date: 2/21/2023

DRC Project Review Memo

Applicant: PPL Safari Holdings, LLC

Property Owner: TGA 600 College Road LLC

Type of Application: Minor Site Plan

Project: Solar Canopy Project at 600 and 650 College Road East

Property Location: 600 and 650 College Road East
Block 701, Lots 10 and 11, respectively

Zone: PMUD, Planned Unit Development Zone District

Present Use of Property: Mixed tenant office buildings

Adjacent Land Uses:

North:	Office Building
South:	Office/Computer Center
East:	Office Buildings
West:	Open Space

PROJECT DESCRIPTION

The applicant, PPL Safari Holdings, LLC, is seeking minor site plan approval to install solar canopy mounted solar arrays at the above two referenced properties. The solar canopy arrays or carport array structures, of which there are eighteen proposed of variable size (see plan sheet CE-1), are located within the parking lot area of the two properties and contain a total of 5,328 solar panels.

According to the applicant's engineering report, the solar canopy system proposed will be constructed using Seraphim Energy Group bi-facial solar modules and SMA American solar technology inverters. The solar canopies will have a 3-degree pitch "tee" design as well as

bi-facial panel design, which enables the panels to collect energy on both sides of the panels.

The design of the support canopy structures is similar to those installed at the Princeton Medical Center approved by the Planning Board in January 2012. The applicant has proposed to design and install the system to fully comply with the Township's design standards for such systems found in §85-33.1 of the site plan regulations (Design Criteria for Solar and Wind Energy Installations). This includes vertical support elements that will utilize a boxed column and horizontal support beams that will all be painted a light color utilizing a powder-coat paint finish.

In total, the solar energy system proposed by the applicant will generate $2.88\pm$ megawatts of electric power; which is greater than the Munich Re installation across the street at 2.49 megawatts.

The canopy structures will have a minimum clearance of approximately $13\frac{1}{2}$ feet and a maximum height of approximately $15\frac{1}{2}$ feet, and will be supported by columns to be located so as to avoid interference with the parking spaces below.

As a result of this project, thirteen existing light poles that are within the area of the proposed canopy structures will be removed and/or relocated. Between existing light poles that will remain, along with the proposed LED lighting on the underside of the proposed canopy structures, it is believed that adequate lighting will be maintained throughout the parking areas effective by this project.

Similar to the way the solar canopies were designed and built at Siemens and those approved for installation at 150 College Road, the proposed solar canopies will be constructed so that the solar panels mounted on the top of the structure will have a narrow gap between them, which will allow rain and melting snow to pass through the canopy structures to the ground below and then flow to the nearby storm sewer inlets, consistent with the current pattern of on-site drainage.

The solar canopies will be connected to inverters that are mounted to the canopy structures (see Exhibit A-5 and site plan sheet G100), and then, via underground conduit, to proposed switch gear electrical equipment to be installed on 48 square foot concrete pads located next to the side and rear of the buildings at 600 and 650 College Road East, respectively.

The proposed project is expected to offer measurable environmental benefits in that the 2.88 mw generated from this project using solar energy is equivalent to an off-set of carbon dioxide emissions of over 90 tons or the planting of over two million trees or removing 16,000 cars from our roads for a year.

STAFF COMMENTS & RECOMMENDATIONS

A. Planning and Zoning:

1. The property is located in the PMUD Zone with roadway frontage on College Road East.
2. The current use of the properties is for office development consistent with the zoning (PMUD) of the property, as well as the property's land use designation (Office/Research) on the PMUD Use Location Map.
3. The applicant has submitted the required Site Plan Review Check List (Form 13) portion of the application and has identified 20 items for which submission waivers are being requested. The applicant has submitted a list of the requested waivers with an explanation and justification for each. Staff has reviewed such information and is of the opinion that the requested waivers are reasonable and recommend they be granted.

B. Site Plan Issues:

1. Parking

- a) Sheets CE-2 and 3 of the applicant's plans (Site Engineering Plan) identify the location of each of the support columns to carry the load of the solar canopy structures in the parking lot. The plan is designed so that each of the columns will be located in a manner that will not diminish the use of any of the parking spaces.
- b) Several of the proposed canopies appear to be near the curbing of some of the existing parking lot islands. The applicant's engineer shall provide construction details that clarify how this condition will be handled.

2. Landscaping

- a) The proposed project necessarily results in the need to remove 71 trees (existing trees located in parking lot landscape islands beneath the proposed solar canopy structures). The applicant's plan includes a tree removal and relocation schedule and landscape plan (Sheet LS-1). The applicant proposes to remove 71 trees of variable size and replace them with 144 trees, including Tulip, Sycamore, and Red American Linden trees. However, since the subject property can only reasonably accommodate 77 trees,

the balance (67) will be satisfied through an in-lieu payment to the Township's Forrest Restoration Trust Fund.

- b) The landscaped islands in the existing parking lots impacted by the applicant's plan currently include grassed and mulched areas with tree plantings. The applicant's plan needs to be amended to include details on how such islands will be treated under the proposed plan (e.g., hardscape). Since the current islands are eight feet or less in width dimension, they cannot be converted to conforming parking spaces which require a minimum width of nine feet.
- c) As noted above, the applicant has proposed to install switch gear electrical equipment to serve the proposed solar canopy installations. Plan sheets CE-2 and 3 identify the location of the switch gear equipment and proposed plantings to help screen views of the equipment. Staff recommends that a plan detail be provided that identifies the size of the concrete pad on which the switch gear units will be mounted, along with details on the size of the actual switch gear units (length, width, and height), as well as their color. If possible, it is recommended that such equipment shall be painted to minimize the visibility of such equipment.

3. Stormwater Management

- a) An Engineering Report was submitted by Van Note Harvey Associates (VNH), dated September 9, 2022, that indicates an aggregate increase of 224.7 square feet of impervious area. Since a quarter-acre (10,890 sq. ft.) is the minimum threshold for compliance with the stormwater management regulations, no modification to the existing stormwater management system is required as a result of this increase.

4. Construction

- a) The applicant has agreed that the box vertical support columns and the box horizontal support beams will have a white powder coat paint finish similar to the solar canopy installation at the hospital and Munich Re.
- b) The following notes have been added to the plans:
 - i. "Prior to the commencement of any site work, including initial tree removal and grading, a hauling plan shall be submitted to

the Township for review and approval for the movement of any construction materials or demolition debris on roadways leading from the Township borders and vice versa." The applicant shall revise the last sentence to state: "The applicant shall also provide a narrative to complement the hauling plan."

- ii. Prior to construction, a detailed sequence of construction and contractor's staging plan shall be provided to separate and manage construction traffic from other traffic. This will further establish contractor's work and staging areas for the project, and shall include but not be limited to items related to the placement of construction office and/or storage trailers, outdoor equipment and materials storage, safety and security fencing, vehicular and pedestrian circulation, installation of underground utilities, portable rest facilities, and construction related signage.

The above hauling and staging plans shall be reviewed and approved by the Planning Board Engineer's office. Given existing site conditions, the staging plan shall also be reviewed and approved by the Township Fire Official.

5. Miscellaneous

- a) A detail has been provided for gravel access path on Sheet CE-10; however, it has not been indicated on the plans. The location of the path should be shown on the plans.
- b) The existing curb island modification detail should be revised to reference concrete curb instead of Belgian Block Curb to eliminate confusion.

C. Other Agency Approval Issues:

- 1. The applicant shall discuss required approvals by outside agencies, including the following:
 - a) Freehold Soil Conservation District
 - b) Middlesex County Planning Board
 - c) Delaware and Raritan Canal Commission
 - d) Princeton University/PFC Real Estate Office
- 2. Copies of applications and approval, certifications, waivers or letters of no concern as may be required by all agencies having jurisdiction, shall be

provided as a condition of final approval and prior to the site disturbance and/or construction.

3. Township offices and staff that have review jurisdiction involving this application or improvements related thereto, include:

- Planning and Zoning Department: Contact Ron Yake, Planner and Zoning Officer at 799-0909, ext. 1503.
- Planning Board Engineer's Office: Contact Louis Ploskonka, CME Associates at 732-727-8000.
- Code Enforcement/Building Division: Contact Brian Miller, Construction Official at 799-0909, ext. 2545; Keith Thedinga, Fire Official at 799-0909, ext. 1208.

Any approval shall be conditioned upon the submission of revised plans in accordance with the above comments; proof of approval or waivers from all other agencies having jurisdiction; the construction of offsite improvements, if deemed necessary by the Township Committee; the payment of any outstanding escrow fees; compliance with all applicable state and local affordable housing requirements; and the applicant's engineer providing an estimate for the cost of improvements to the Township in order that performance guarantees and inspection fees can be calculated.

MLUL Clock:	Application Completeness:	February 10, 2023
	Planning Board Action:	March 27, 2023