



SOLAR PHOTOVOLTAIC SYSTEMS GENERAL INFORMATION

Solar photovoltaic systems are becoming increasingly popular as the use of alternative energy resources become more readily available to the general public.

The purpose of this guide is not to prohibit the rights of property owners and individuals, but to illustrate the regulations applicable to such installations in order to assure the health and safety of the public by ensuring the proper installation of such a system. This guide will also protect historic structures, scenic vistas, special districts, adjoining properties and cultural resources within the Town of Clifton Park.

A. Application Procedure:

A Building Permit is required for installation of all solar photovoltaic systems (SPVS).

Any owner or owners' representative may apply for this permit at the Building and Development Department if the SPVS is roof mounted in a residential zone.

If the SPVS is to be ground mounted in a residential zone the application must be submitted to the Planning Board for approval of a special use permit (SUP). If ground mounting or roof mounting is proposed in a commercial zone, submission to the Planning Board for site plan approval is required. The application must be accompanied by the proper documentation and submissions as described below.

- (1) **Building Permit Application** – shall include owners name, contractor or vendor name, address of proposed installation, age of structure on property, estimated cost of installation, type of SPVS installation, owner or owners representative signature.
- (2) **Proof of Insurance** – Must provide proof of valid insurance coverage to be submitted with the Building Permit Application described above. The Insurance Coverage is required from;
 - a. **Homeowner** – If the homeowner is the applicant and solely responsible for the installation of the SPVS, the homeowner/applicant must provide a waiver of insurance by filling out and signing such waiver in the presence of an official at the Town Clerk's office. This waiver serves as an affidavit that the homeowner possesses current homeowners insurance coverage for the property outlined in the Building Permit application.
 - b. **Contractor** – If the contractor is the applicant for the installation of the SPVS, the contractor must provide and submit current and valid proof of insurance for his/hers business consisting of:
 - [1] **Liability Insurance** – Naming the Town of Clifton Park as Certificate Holder only.
 - [2] **Workers Compensation Insurance** – Naming the Town of Clifton Park as

the Certificate Holder only.

(3) Plot Plan – shall consist of a drawing showing existing structures on the property and outlining the location of the proposed SPVS.

- a. Roof Installation** – The side of roof for the proposed installation shall be shown or outlined on the house part of the Plot Plan. Residential roof installations shall comply with the following new section R324.7 from the NYS Residential Building Code Supplement of March 2016:

2015 IRC Section R324 (Solar energy systems).

Section R324 of the 2015 IRC shall be deemed to be amended by the addition of a new Section 324.7 to read as follows:

R324.7 Access and pathways. Roof access, pathways and spacing requirements for solar photovoltaic systems shall be provided in accordance with Sections R324.7. 1 through R324.7.6.

Exceptions:

- 1. Roof access, pathways and spacing requirements need not be provided where an alternative ventilation method has been provided, or where vertical ventilation techniques will not be employed.*
- 2. Detached garages and accessory structures.*

R324.7.1 Size of solar photovoltaic array. Each photovoltaic array shall not exceed 150 feet (45 720 nml) in any direction.

R324.7.2 Roof access points. Roof access points shall be located:

- 1. In areas that establish access pathways which are independent of each other and as remote from each other as practicable so as to provide escape routes from all points along the roof;*
- 2. In areas that do not require the placement of ground ladders over openings such as windows or doors or areas that may cause congestion or create other hazards;*
- 3. At strong points of building construction, such as corners, pilasters, hips, and valleys, and other areas capable of supporting the live load from emergency responders;*
- 4. Where the roof access point does not conflict with overhead obstructions such as tree limbs, wires or signs;*
- 5. Where the roof access point does not conflict with ground obstructions such as decks, fences, or landscaping; and*
- 6. In areas that minimize roof tripping hazards such as vents, skylights, satellite dishes, antennas, or conduit runs.*

R324.7.3 Ground access areas. Ground access areas shall be located directly beneath access roofs and roof access points. The minimum width of the ground access area shall be the full width of the access roof or roof access point, measured at the eave. The minimum depth shall allow for the safe placement of ground ladders for gaining entry to the access roof

R324.7.4 Single ridge roofs. Panels, modules, or arrays installed on roofs with a single ridge shall be located in a manner that provides two, 36 inches wide (914 mm) access pathways extending from the roof access point to the ridge. Access pathways on opposing roof slopes shall not be located along the same plane as the truss, rafter, or other such framing system that supports the pathway.

Exceptions:

- 1. Roofs with slopes of 2 units vertical in 12 units horizontal (16.6 percent) and less.**
- 2. Structures where an access roof fronts a street, driveway, or other area readily accessible to emergency responders. –**
- 3. One access pathway shall be required when a roof slope containing panels, modules or arrays is located not more than 24 inches (610 mm) vertically from an adjoining roof which contains an access roof.**

R324.7.5 Hip roofs. Panels, modules, and arrays installed on dwellings with hip roofs shall be located in a manner that provides a clear access pathway not less than 36 inches wide (914 mm), extending from the roof access point to the ridge or peak, on each roof slope where panels, modules, or arrays are located.

Exceptions:

- 1. Roofs with slopes of 2 units vertical in 12 units horizontal (16.6 percent) and less.**
- 2. Structures where an access roof fronts a street, driveway, or other area readily accessible to emergency responders.**

R324.7.6 Roofs with valleys. Panels and modules shall not be located less than 18 inches (457 mm) from a valley.

Exception: Roofs with slopes of 2 units vertical in 12 units horizontal (16,6 percent) and less. -

R324.7.7 Allowance for smoke ventilation- operations. Panels and modules shall not be located less than 18 inches (457 mm) from a ridge or peak.

Exceptions:

- 1. Where an alternative ventilation method has been provided or where vertical ventilation methods will not be employed between the upper most portion of the solar photovoltaic system and the roof ridge or peak.**
- 2. Detached garages and accessory structures.**

See Section **D.**, for the restrictions of SPVS installations on roofs of historic structures or in Historic Districts.

- b. Ground Installation –** If the proposed installation is pole mounted, on a structural frame or otherwise on the ground, such location must be shown on the Plot Plan with setback dimensions to front, side and rear property lines. (See Section **D.**, for Ground Installations of SPVS in the Historic Districts).

(4) Specifications – Must provide Manufacturer’s Specifications showing size, weight, electrical drawings (single line) including house connection, disconnects and installation method. If roof mounted, the applicant must submit a certified letter from a NYS Design Professional, stating that the new or existing roof will support the weight of proposed solar panels and that the installation method complies with the current version of the New York State Residential or Building Code.

B. Application Review – After all of the above documentation is submitted, if the proposed installation is to be roof mounted, the Building and Development Department shall review the application for compliance.

If the proposed SPVS is to be ground mounted the Building Department will forward the application onto the Planning Board for consideration and the appropriate review (SUP or site plan).

If the application to install a SPVS is for a historic structure or in historic district, the applicant must acquire a **Certificate of Appropriateness**, as outlined in Section **208-78E(4)(a)**, from the Historic Preservation Commission and the Planning Board of the Town of Clifton Park.

If the SPVS project involves any Federal or State financial re-imbusement and the project is for either roof or ground installation on a historic structure or in a historic district, than the applicant must acquire approval from New York State Office of Parks, Recreation and Historic Preservation using “Project Review Cover Form” for submittal. (See attached)

C. Solar Photovoltaic System Installation Requirements

(1) General

Applicable to all types of SPVS installed on residential properties including historic structures or buildings in historic districts.

a. Roof mounted panels

1. Obtain SUP from planning if required. (and other requirements from Sections B & D if a historic structure or in historic zone)
2. Provide all required documentation. (See attached examples)
3. Setbacks of panels on the roof from all edges shall be a minimum of 36 inches and a minimum of 18” from the peak. (See attached examples)
4. Obtain all required inspections from Section E

b. Ground Installation – Freestanding, pole mounted, structural frame mounting or ground surface installation will require an SUP from Planning Department prior to permit approval as per Chapter § 208-79.

D. SPVS Installations – Historic Structures & Historic Districts – All types of SPVS installed on property consisting of historic buildings, structures or objects or ground installation, shall require Site Plan review and an SUP from Planning Department.

(1) Conformance – SPVS installations must conform to:

a. Secretary of Interior’s Standards for Rehabilitation.

Applicable Standards are:

1. **Standard Two:** The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

2. Standard Nine: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

b. Additional Considerations – The following additional requirements shall apply to historic properties:

1. Freestanding or detached on-site SPVS shall be installed in locations that minimize visibility from the public right-of-way. These systems must be screened from the public right-of-way with materials common to the community such as fencing or vegetation of suitable scale for the area and setting.
2. Placement and design should not detract from the historic character of the site or destroy historic landscape materials.
3. SPVS should be integrated into the initial design of new construction or infill projects, when possible, to assure cohesion of design within a historic context.
4. SPVS should be installed on rear slopes or other locations not highly visible from the public right-of-way whenever possible. Panels should be installed flat and not alter the slope of the roof.
5. Flat roof structures should have SPVS set back from the roof edge to minimize visibility. Pitch and elevation should be adjusted to reduce visibility from the public right-of-way.
6. Use SPVS and mounting systems that are compatible in color to established roof materials. Mechanical equipment associated with the SPVS system should be sited to be as unobtrusive as possible.
7. Use of SPVS in windows or on walls, siding, or shutters should be installed with limited visibility from the public right-of-way.
8. SPVS installations should be positioned behind existing architectural features such as parapets, dormers, and existing chimneys to limit their visibility.
9. Removal of historic roofing materials during the installation of SPVS is strictly prohibited.
10. Removing or otherwise altering historic roof configuration – dormers, chimneys, or other features – to add SPVS is strictly prohibited.
11. Any other installation procedure that will cause irreversible changes to historic features or materials is strictly prohibited.
12. In a case of proposed SPVS installation in a historic district or on historic structure, the applicant must obtain a Certificate of Appropriateness from the Historic Preservation Commission and the Planning Board.

E. Inspections – The following inspections will be required for SPVS installations by the Building and Development Department.

(1). Footings – For ground mounted SPVS installations only.

Inspections required prior to pouring of concrete for proposed footings for pole or frame mounted SPVS.

Backfill –

Inspection required for proper placement of conduit prior to backfill of trench.

(2). Electrical – For ground and/or roof SPVS installations.

Third party inspection required by a Town of Clifton Park approved agency, certifying that all electrical work and wiring complies and meets the requirements of the currently accepted version of the National Electrical Code for both rough-in and final.

(3). Installation – For ground and/or roof SPVS installations.

Inspection required by a NYS qualified/NABCEP certified installer. Inspection shall ensure that the installation complies with manufacturers specifications for installation, electrical work and requirements, site location, and the currently accepted version of the New York State Building Code and the National Electric Code. (NEC Section 690 for systems under 600V and additionally Section 490 for systems over 600V)

- a.** Prior to final inspection all signage shall comply with all the requirements of NFPA70 (NEC), Article 690.

(4). Final – For ground and/or roof SPVS installations.

Final inspection by the Town of Clifton Park Building Department is required for and prior to issuance of Certificate of Compliance.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
 Peebles Island Resource Center, PO Box 189, Waterford, NY 12188-0189 (Mail)
 Delaware Avenue, Cohoes 12047 (Delivery) (518) 237-8643

PROJECT REVIEW COVER FORM Rev. 5-05

*Please complete this form and attach it to the top of any and all information submitted to this office for review.
 Accurate and complete forms will assist this office in the timely processing and response to your request.*

This information relates to a previously submitted project.

PROJECT NUMBER _____ **PR** _____

COUNTY _____

If you have checked this box and noted the previous Project Review (PR) number assigned by this office you do not need to continue unless any of the required information below has changed.

2. This is a new project.

If you have checked this box you will need to complete ALL of the following information.

Project Name _____

Location _____
 You MUST include street number, street name and/or County, State or Interstate route number if applicable

City/Town/Village _____
 List the correct municipality in which your project is being undertaken. If in a hamlet you must also provide the name of the town.

County _____
 If your undertaking* covers multiple communities/counties please attach a list defining all municipalities/counties included.

TYPE OF REVIEW REQUIRED/REQUESTED (Please answer both questions)

A. Does this action involve a permit approval or funding, now or ultimately from any other governmental agency?

No Yes

If Yes, list agency name(s) and permit(s)/approval(s)

Agency involved	Type of permit/approval	State	Federal
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>

B. Have you consulted the NYSHPO web site at http://nysparks.state.ny.us to determine the preliminary presence or absence of previously identified cultural resources within or adjacent to the project area? If yes:**

Yes No

Was the project site wholly or partially included within an identified archeologically sensitive area?

Yes No

Does the project site involve or is it substantially contiguous to a property listed or recommended for listing in the NY State or National Registers of Historic Places?

Yes No

CONTACT PERSON FOR PROJECT

Name _____ **Title** _____

Firm/Agency _____

Address _____ **City** _____ **STATE** _____ **Zip** _____

Phone (____) _____ **Fax** (____) _____ **E-Mail** _____

****<http://nysparks.state.ny.us> then select HISTORIC PRESERVATION then select On Line Resources**

The Historic Preservation Review Process in New York State

In order to insure that historic preservation is carefully considered in publicly-funded or permitted undertakings*, there are laws at each level of government that require projects to be reviewed for their potential impact/effect on historic properties. At the federal level, Section 106 of the National Historic Preservation Act of 1966 (NHPA) directs the review of federally funded, licensed or permitted projects. At the state level, Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law of 1980 performs a comparable function. Local environmental review for municipalities is carried out under the State Environmental Quality Review Act (SEQRA) of 1978.

regulations on line at:

<http://nysparks.state.ny.us> then select **HISTORIC PRESERVATION** then select **Environmental Review**

Project review is conducted in two stages. First, the Field Services Bureau assesses affected properties to determine whether or not they are listed or eligible for listing in the New York State or National Registers of Historic Places. If so, it is deemed "historic" and worthy of protection and the second stage of review is undertaken. The project is reviewed to evaluate its impact on the properties significant materials and character. Where adverse effects are identified, alternatives are explored to avoid, or reduce project impacts; where this is unsuccessful, mitigation measures are developed and formal agreement documents are prepared stipulating these measures.

ALL PROJECTS SUBMITTED FOR REVIEW SHOULD INCLUDE THE FOLLOWING MATERIAL(S).

Project Description

Attach a full description of the nature and extent of the work to be undertaken as part of this project. Relevant portions of the project applications or environmental statements may be submitted.

Maps Locating Project

Include a map locating the project in the community. The map must clearly show street and road names surrounding the project area as well as the location of all portions of the project. Appropriate maps include tax maps, Sanborn Insurance maps, and/or USGS quadrangle maps.

Photographs

Photographs may be black and white prints, color prints, or color laser/photo copies; standard (black and white) photocopies are NOT acceptable.

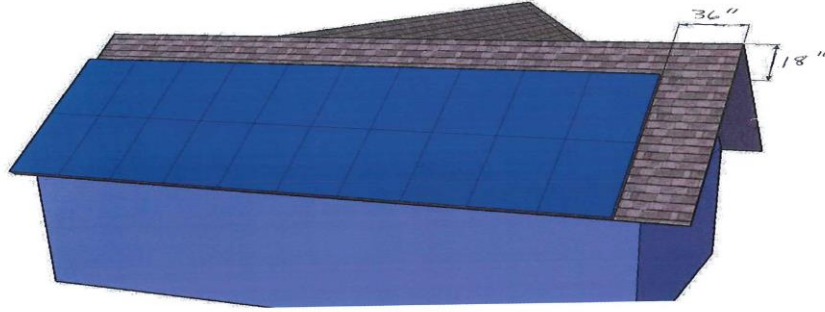
-If the project involves rehabilitation, include photographs of the building(s) involved. Label each exterior view to a site map and label all interior views.

-If the project involves new construction, include photographs of the surrounding area looking out from the project site. Include photographs of any buildings (more than 50 years old) that are located on the project property or on adjoining property.

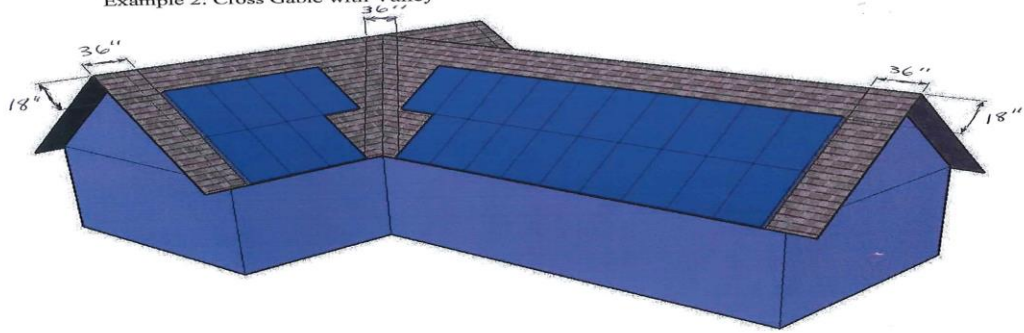
NOTE: Projects submissions will not be accepted via facsimile or e-mail.

***Undertaking** is defined as an agency's purchase, lease or sale of a property, assistance through grants, loans or guarantees, issuing of licenses, permits or approvals, and work performed pursuant to delegation or mandate.

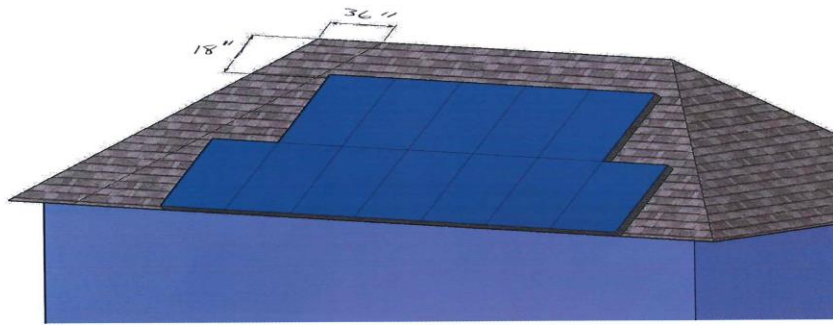
Example 1: Cross Gable Roof



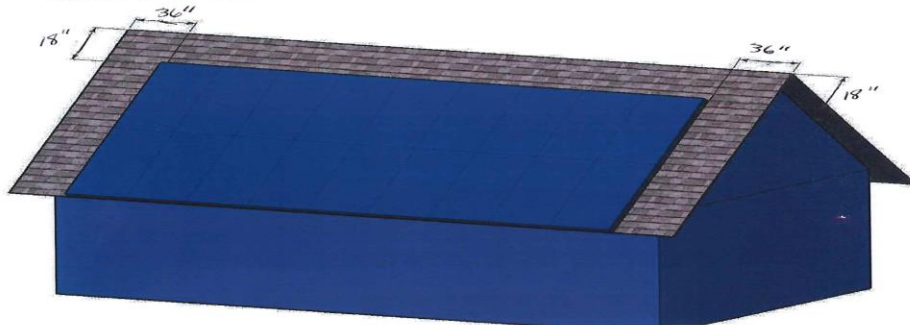
Example 2: Cross Gable with Valley



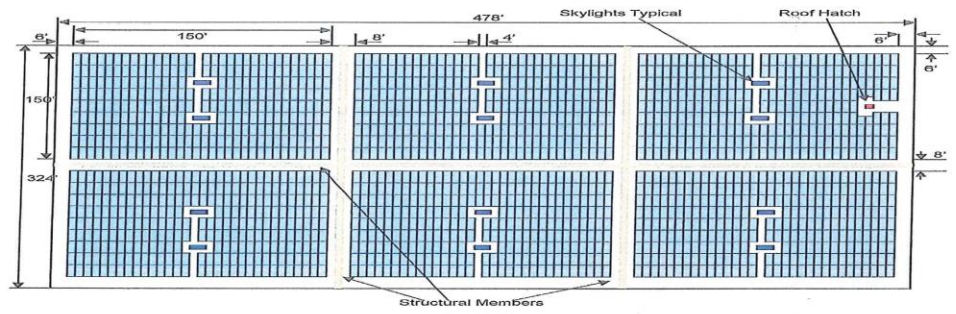
Example 3: Full Hip



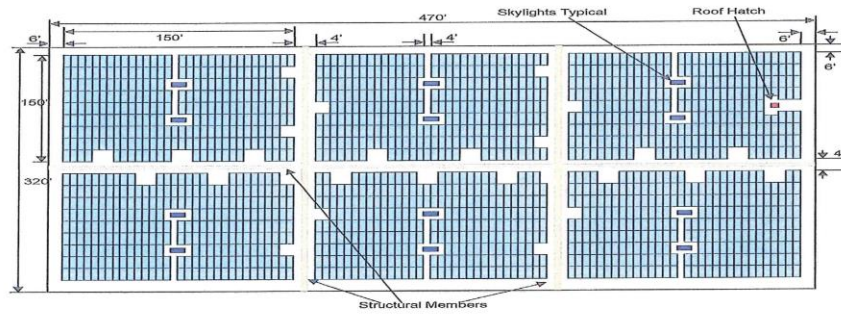
Example 4: Full Gable



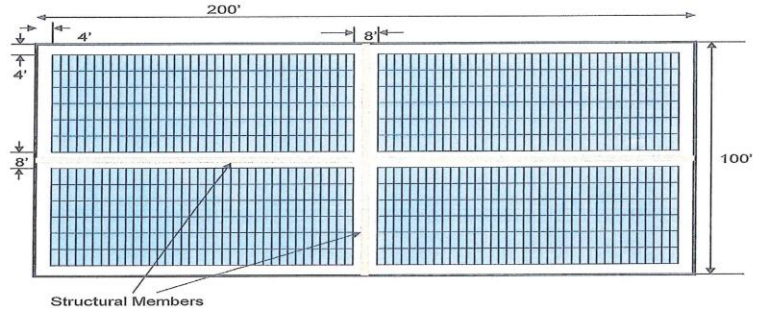
EXAMPLE 5: Large Commercial (Axis > 250')
8' Walkways



EXAMPLE 6: Large Commercial (Axis > 250') 4' Walkways
With 8' x 4' Venting Opportunities Every 20'



Example 7: Small Commercial (Axis < 250') 8' Walkways



Example 8: Small Commercial (Axis < 250') - 4' Walkways Venting Opportunities Every 20' Along Walkway

