

# How do I...install solar panels?

## Information needed for HDC review (only)

Note: BSEED requirements are not included below

1. Provide pictures of the house and site, where the proposed installation is to occur.  
*Photos here are for illustrative purposes only; digital photos must be provided*



- ❖ The Commission will not consider a roof mounted proposal, unless: it is proposed for a flat roof, and/or proposed for the rear elevation of a gable roof, so long as the panels will not be visible from the public right-of-way. Photographs of the flat and/or gable roof, confirming its location, and visibility to the right-of-way must be submitted. Additionally, only flat-mounted panels (not angle-mount), with minimal height/profile will be considered. The panels and frame must have a matte, dark finish. Installing a lip along the perimeter of the panels to further hide them from view should be considered.



2. Provide information within all the highlighted portions of the building permit application.

**BUILDING PERMIT APPLICATION**  
CITY OF DETROIT  
BUILDINGS, SAFETY ENGINEERING & ENVIRONMENTAL DEPARTMENT  
2 WOODWARD AVENUE, ROOM 409, DETROIT, MICHIGAN 48226

Expedited Plan Review Request (subject to additional fees) Date: \_\_\_\_\_

**Property Information**

Address: \_\_\_\_\_ Floor: \_\_\_\_\_ Suite#: \_\_\_\_\_ Stories: \_\_\_\_\_  
 AKA: \_\_\_\_\_ Lot(s): \_\_\_\_\_ Subdivision: \_\_\_\_\_  
 Parcel ID#(s): \_\_\_\_\_ Total Acres: \_\_\_\_\_ Lot Width: \_\_\_\_\_ Lot Depth: \_\_\_\_\_  
 Current Use of Property: \_\_\_\_\_ Proposed Use of Property: \_\_\_\_\_  
 Are there any existing buildings or structures on this parcel?  Yes  No

**Project Information**

Permit Type  
 New  Alteration  Addition  Demolition  Correct Violations  Foundation Only  Temporary Use  
 Change of Use  Other: \_\_\_\_\_ (original permit has been issued and is active)  
 Revision to Original Permit #: \_\_\_\_\_

**Description of Work** (Describe in detail proposed work and use of property, attach work list)

\_\_\_\_\_

\_\_\_\_\_

**Included Improvements** (Check all applicable; these trade areas require separate permit applications)  
 HVAC/Mechanical  Electrical  Plumbing  Fire Sprinkler System  Fire Alarm

**Structure Type**

New Building  Existing Structure  Tenant Space  Garage/Accessory Building  Other \_\_\_\_\_  
 Size of Structure to be Demolished (LxWxH): \_\_\_\_\_ cubic feet  
 Construction involves changes to the floor plan? (e.g., exterior demolition or constructing new walls)  Yes  No  
 Use Group: \_\_\_\_\_ Type of Construction (per current MI Bldg Code Table 601): \_\_\_\_\_

**Estimated Cost of Construction**

Structure Use  
 Residential-Number of Units: \_\_\_\_\_  Office-Gross Floor Area: \_\_\_\_\_  Industrial-Gross Floor Area: \_\_\_\_\_  
 Commercial-Gross Floor Area: \_\_\_\_\_  Institutional-Gross Floor Area: \_\_\_\_\_  Other-Gross Floor Area: \_\_\_\_\_  
 Proposed no. of employees: \_\_\_\_\_ Lot materials to be stored in the building: \_\_\_\_\_

PLAT PLAN SHALL BE submitted on separate sheets and shall show all easements and measurements (must be correct and in detail).  
 SHOW ALL streets, existing lot, indicate front of lot, show all buildings, existing and proposed distances to lot lines.  
 (Building Permit Application Continues on Next Page)

**FOR BUILDING DEPARTMENT USE ONLY**

**BUILDING PERMIT APPLICATION**  
CITY OF DETROIT BUILDINGS, SAFETY ENGINEERING & ENVIRONMENTAL DEPARTMENT Page 2

**Identification** (All Fields Required)

Property Owner / Homeowner  Property Owner / Homeowner is Permit Applicant  
 Name: \_\_\_\_\_ Company Name: \_\_\_\_\_  
 Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Mobile: \_\_\_\_\_  
 Driver's License#: \_\_\_\_\_ Email: \_\_\_\_\_

Contractor is Permit Applicant  
 Representative Name: \_\_\_\_\_ Company Name: \_\_\_\_\_  
 Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Mobile: \_\_\_\_\_ Email: \_\_\_\_\_  
 City of Detroit License#: \_\_\_\_\_

Tenant is Permit Applicant  
 Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Architect/Engineer/Consultant  Architect/Engineer/Consultant is Permit Applicant  
 Name: \_\_\_\_\_ State Registration#: \_\_\_\_\_ Expiration Date: \_\_\_\_\_  
 Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Mobile: \_\_\_\_\_ Email: \_\_\_\_\_

**Homeowner Affidavit** (Only required for residential permits obtained by homeowner.)  
 I hereby certify that I am the legal owner and occupant of the subject property and the work described on this permit application shall be completed by me. I am familiar with the applicable codes and requirements of the City of Detroit and take full responsibility for all code compliance, fees and inspections related to the installation/work herein described. I shall neither hire nor sub-contract to any other person, firm or corporation any portion of the work covered by this building permit.

Print Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ A.D. \_\_\_\_\_ County, Michigan



## How do I...install solar panels? (continued)

### 3. Provide full scope of work:

- Narrative to explain what is being installed and why
- Catalog cuts detailing the panels, frame, installation method, materials, color, finish, etc.
- List any and all other related work to be completed:
  - If a roof mount, include: a roof plan showing proposed panel location (with dimensions from edges of roof noted) and finish height
  - If a ground mount, include: a site plan showing proposed panel location with setbacks from property lines and adjacent buildings on property (i.e., garage, rear of house); an elevation confirming all dimensions, including overall height and distance between grade and the bottom of the panels, material and finish specification for panel frame/pergola.

### ADDITIONAL INFORMATION:

The National Park Service's website goes into detail on solar installations in historic districts:

<https://www.nps.gov/tps/sustainability/new-technology/solar-on-historic.htm>

The National Park Service, Dept. of the Interior, Technical Preservation Services published the document entitled, *"Incorporating Solar Panels in a Rehabilitation Project"* (ITS Number 52). A copy is attached to this informational sheet.





**ITS**  
NUMBER 52

# Interpreting The Secretary of the Interior's Standards for Rehabilitation

## Subject: Incorporating Solar Panels in a Rehabilitation Project

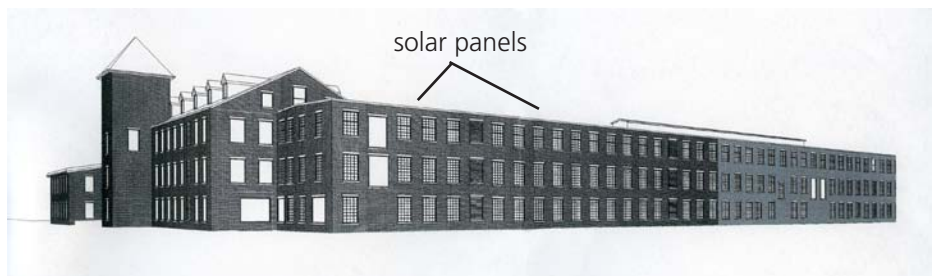
- Applicable Standards: 2. Retention of Historic Character  
9. Compatible Additions/Exterior Alterations

**Issue:** Enhancing the energy efficiency of a historic building is important. To that end, it is often possible to install features such as solar panels and photovoltaic cells provided they are installed in a sensitive manner. Because these elements must be positioned to take advantage of unobstructed sunlight, the roof of a historic structure is an obvious location. The roofline of a historic building is often a distinctive feature. Therefore, the installation of solar panels should conform to guidance regarding rooftop additions, i.e. that they be minimally visible, to avoid altering the historic character of the building. Historic buildings with a flat roof or parapet can usually accommodate solar panels because the panels will be hidden, while properties with a hipped or gabled roof are generally not good candidates for a rooftop solar installation. Solar panels on historic buildings should not be visible from the public right of way such as nearby streets, sidewalks or other public spaces.

In circumstances where solar collectors are not placed on rooftops, they should only be positioned in limited or no-visibility locations in secondary areas of the property. Vegetation or a compatible screen may also be an option to further reduce the impact of these features on a historic property. For some historic buildings, it may not be possible to incorporate solar panels and meet the Secretary of the Interior's Standards for Rehabilitation.

### Application 1 (Compatible treatment):

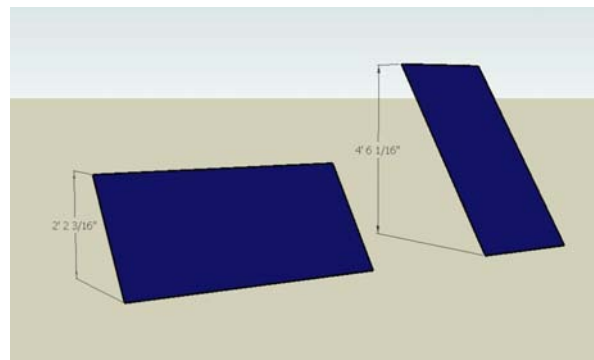
The rehabilitation of this mid-nineteenth century mill incorporated a large, roof-mounted photovoltaic installation. Although the historic building does not have a parapet wall at the roofline, the height of the building and the arrangement of the panels render the entire installation invisible from the ground. It is important to note that the panels are placed horizontally. Had the panels been installed with a vertical tilt, the angle required to maximize efficiency would have caused the panels to extend significantly higher above the roof. Simply changing the direction in which the panels are tilted can affect their visibility and reduce their impact on the character of the historic property.



*Because of the size of this historic mill, a large array of solar panels could be installed on the flat roof without being seen from the ground.*



*Solar panels installed on the flat roof.*



*By placing the panels horizontally, the overall height of the installation and its visibility is reduced.*



**Application 2 (*Incompatible treatment*):** During the rehabilitation of this late-nineteenth century commercial building, a conspicuous rooftop monitor with prominent solar panels and skylights was constructed on the one-story structure. The size and finish of this rooftop addition are incompatible with the historic character of the building. However, the building could have accommodated both skylights and solar panels if they had been installed differently. An alternative design that could have met the Standards would have included low-profile skylights and solar panels concealed behind the parapet wall.



*The addition of a large rooftop monitor featuring skylights on the front slope and solar panels on the rear slope is not compatible with the historic character of this small, one-story commercial building.*

**Application 3 (*Compatible treatment*):** The rehabilitation of this historic post office incorporated solar panels as dual-function features: generation of electricity and shading for south-facing windows. In this instance, the southern elevation of the building is also a secondary elevation with limited visibility from the public right of way. Additionally, because this area of the building is immediately next to the post office’s loading dock, it has a more utilitarian character than the primary facades and, therefore, can better accommodate solar panels. Because the panels are in a suitable location at the rear of the property and are appropriately sized to serve as awnings, they do not affect the overall historic character of the property. Additionally, a screen of tall plantings shields the solar panels from view from the front of the building, further limiting their visibility.



*Above: Shown from the rear of the property, these solar panels serve a secondary function as awnings to shade south-facing windows. Because of their location at the back of the building immediately adjacent to a loading dock, the installation of these panels does not affect the historic character of the property.*



Tall plantings shield solar panels from view from the front of the building.

*Left: The solar panels are not visible from the front of the building. Additionally, even if the vegetation were removed, the installation would only be minimally visible along an alley at the rear of a secondary side elevation.*

Jenny Parker, Technical Preservation Services, National Park Service

These bulletins are issued to explain preservation project decisions made by the U.S. Department of the Interior. The resulting determinations, based on the [Secretary of the Interior's Standards for Rehabilitation](#), are not necessarily applicable beyond the unique facts and circumstances of each particular case.

August 2009, ITS Number 52