



# PLANNING AND DEVELOPMENT SERVICES

BOISE CITY HALL: 150 N. CAPITOL BLVD | MAIL: PO BOX 500, BOISE ID 83701-0500  
CITYOFBOISE.ORG/PDS | P: 208-608-7100 | F: 208-384-3753 | TTY/TTD: 800-377-3529

<b>PDS</b>	Document Number
	<b>#520</b>

## Commercial Photovoltaic and Solar Thermal Systems Submittal Checklist.

Case #: \_\_\_\_\_

Date: \_\_\_\_\_ Project Name: \_\_\_\_\_

Site Address: \_\_\_\_\_

### Application Submittal

Building permit applications and plans can be submitted to the City by two methods. *This checklist must be completed no matter which method is used.*

#### 1. Electronic Submittal

Our PDS Online | ePlanReview system lets you submit documents and plans electronically for review. Go to [www.cityofboise.org/pds](http://www.cityofboise.org/pds) for more information.

#### 2. Paper Submittal

Paper plans must be reviewed at a plan intake meeting where staff will verify that the project submittals are complete. The meeting is not a "plan review" for code compliance. The applicant is responsible for contacting staff members if additional consultation is required.

Intake meetings can occur any time between 8:00 am – 3:30 pm Monday through Friday. Please check in at the Permit Counter and a staff member will conduct the intake meeting with you. All zoning approvals must be completed prior to your meeting time.

### Application Acceptance

- Incomplete submittals will not be accepted. Applicants with incomplete submittals must upload additional documents (electronic submission) or schedule another plan intake meeting with the same staff member (paper submission).
- Plans must be accepted as complete and all review fees must be paid before review can begin.

### Instructions

- Checklist must be completed by the project's Idaho-licensed design professional of record (or applicant if design professional not required) and submitted with the application (paper), or uploaded with the plans and documents (ePlanReview).
- The checklist is not complete unless all information is filled out, all appropriate boxes are checked and all plan page numbers are listed.

**Note:** If using ePlanReview to submit electronic files, only one (1) copy of each document is required. Paper submittals require additional copies as noted.

## Documents Provided

Yes N/A

- Application #520- Major Tenant Improvement Application** (2 paper copies)- All Pages.
- Form #304-Registered Design Professional Form (i.e. Architect or Engineer)** (2 paper copies)
- Building Plans** (2 complete paper sets) Drawn to scale on 18"x24" minimum size plan sheets. Any civil, structural, electrical, mechanical & plumbing plans to be stamped and signed by Idaho licensed engineers. Electrical engineer required for pieced out component system. **Note:** Electrical Engineer not required if the entire PV system is listed, labeled and tested as a complete unit or where under 100 kW. **Note:** If the system is not permitted separately and is included as part of an overall project that requires an Idaho licensed architect, architectural plans are then required.
- Planning & Zoning letter(s) of Approval** (2 paper copies) – i.e. Conditional Use Permit (CUP), Design Review Permit (DRH) and/or other approval documents. If project is in an historic district, provide a copy of the "Certificate of Appropriateness" issued by the Planning Division with the permit application.
- Erosion and Sediment Control (ESC) Letter** (2 paper copies)– Such as ground installations. Plan Waiver Request Letter in lieu of an Erosion & Sediment Control plan if applicable. See form #707 – ESC Requirements for Tenant Improvements.
- Floodplain Elevation Certificate or Letter of Map Revision (LOMR)** (1 paper copy for both ePlan and paper submittals) Elevation certificate stamped and signed by licensed surveyor. If LOMR to be submitted, complete FEMA approved document to be submitted.

## Building Code Requirements

Yes N/A

- ICC Evaluation Services (ES) Report** (2 paper copies) For mounting brackets used to attach the panels to the roof structure.
- ICC Evaluation Services (ES) Report** (2 paper copies) If the photovoltaic system is used as the roof covering. The report will show how the system complies as a photovoltaic system/roof covering.
- Structural Calculations** (2 paper copies) Stamped and signed by an Idaho licensed engineer to include:
  - Structural design showing connections and that the system complies with IBC Chapter 16 for wind resistance.
  - Structural design showing that the existing roof structure can support the additional gravity/dead load. If adding the new system increases the design gravity load more than 5% structurally, provide engineered plans and calculations for new elements that will strengthen, supplement, or replace existing load-carrying members as needed.
- Structural plans and Details** [Page(s) \_\_\_\_\_]
- Manufacturer Installation Instructions** (2 paper copies)
- Manufacturer Specification Documents** (2 paper copies) Showing panels and modules as listed and labeled in accordance with UL 1703, racks, combiner boxes, DC disconnects, inverters and any other associated PV equipment.
- Manufacturer Specification Documents** (2 paper copies) Showing the system complies with the fire classification of the roof system it will be installed on. (Meets class A, B or C roof covering classification)
- Roof Plan** (roof mounts) with dimensioned array layout indicating firefighter rooftop access points, access pathways, distances of arrays from roof ridge and perimeter edges, and any smoke ventilation. (In accordance with the *International Fire Code*) [Page(s)\_\_\_\_\_]

- Site Plan** (ground mounts) with dimensioned array layout, access pathways, structures on site.  
[Page(s) \_\_\_\_\_]

## Electrical Plan Requirements

Yes N/A

- Photovoltaic System Type** – Specify one (Stand-alone, Grid-tied, Hybrid System, or other specify type)  
[Page(s) \_\_\_\_\_]
- Site Plan** - show location of existing meter, existing grounding system, existing site transformer  
[Page(s) \_\_\_\_\_]
- Main Electrical System** show location of  
[Page(s) \_\_\_\_\_]
- Disconnects** - show location of [Page(s) \_\_\_\_\_]
- Rapid Shutdown** - show location of [Page(s) \_\_\_\_\_]
- Arrays/Modules** – show location of [Page(s) \_\_\_\_\_]
- Batteries** if stored - show location of [Page(s) \_\_\_\_\_]
- Inverters** – show location of [Page(s) \_\_\_\_\_]
- Combiner Junction Box** (type and size) - show location of  
[Page(s) \_\_\_\_\_]
- Grounding Electrode Conductors** – show location and connection of  
[Page(s) \_\_\_\_\_]
- Clearances** around all new and existing equipment. [Page(s) \_\_\_\_\_]
- Dimensions** between equipment and structures  
[Page(s) \_\_\_\_\_]
- One-Line Diagram** that is specific to the project and includes the following Information:
  - Conductor sizes (AC and DC).
  - Conductor insulation types, (AC and DC) rated 90C, listed for use on PV arrays.
  - Conductor material (copper/aluminum) (AC and DC).
  - Conduit sizes.
  - Conduit material (non-metallic, EMT, etc.).
  - Over current device ratings.
  - Existing and new panel amperage ratings.
  - Series and parallel configuration of the module connections.
  - Wiring diagram including wire size and type showing the connection of the supply from the solar array to the point of connection.
  - Listed rapid shutdown function of PV system on buildings.
  - Calculations demonstrating that the existing bus capacity and main disconnect will not be overloaded by the additional solar photovoltaic supply. [Page(s)\_\_\_\_\_]
- Identify Wiring** whether run on interior or exterior of building. [Pages(s)\_\_\_\_\_]
- Number of Arrays** [Page(s) \_\_\_\_\_]
- Number of Modules** [Page(s) \_\_\_\_\_]
- Wattage of Modules** [Page(s) \_\_\_\_\_]
- Module Series Fuse Ratings** [Page(s) \_\_\_\_\_]
- Inverter Output Circuit Current Rating** [Page(s) \_\_\_\_\_]
- Method of Grounding and Bonding of Modules and Arrays** per manufacturer's specifications.  
[Page(s) \_\_\_\_\_]

**Ground Fault Protection Devices** [Page(s) \_\_\_\_\_]

## Solar Thermal Water Heating Plan Requirements

Yes N/A

**Mechanical Engineered Piping Diagram & Design** [Page(s) \_\_\_\_\_]

**System Description** [Page(s) \_\_\_\_\_]

**Over Temperature Device** [Page(s) \_\_\_\_\_]

**Over Pressure Device** [Page(s) \_\_\_\_\_]

**Cross Connection Protection** [Page(s) \_\_\_\_\_]

**Freeze Protection Method** [Page(s) \_\_\_\_\_]

**Manufacturer Specification Documents for Panels** (2 paper copies)

**Manufacturer Specification Documents for Heat Exchanger** (2 paper copies)

### Signature of Applicant

*I, the undersigned, have completed the above checklist noting all pages and supporting documents for the project.*

\_\_\_\_\_  
Signature of Applicant or  
Submitting Design Professional of Record

\_\_\_\_\_  
Date

---

### For Staff Use

Accepted  
 Not Accepted \_\_\_\_\_ by \_\_\_\_\_  
Date Staff Member Conducting the Intake

Accepted  
 Not Accepted \_\_\_\_\_ by \_\_\_\_\_  
Date Staff Member Conducting the Intake