SOLAR PANEL PERMIT APPLICATION

Permit Number: _____

Value of Construction:_$_____Fee:$_____

Plan Check Fee: $_____ ½ of the of the permit fee.

Permit Fee: $_____

Electrical Fee:$_____

Roof Permit: $_____ if applicable.

Processed by:_____ Date:_____

_____ Single-Family Residential _____Multi-Family _____Commercial

Job Site Address:_____

Photovoltaic (PV) System description:_____

PROJECT VALUE:_____

SOALR APPLICATION SUBMITTAL REQUIREMENTS:

1. PERMIT CONTACT INFORMATION FORM , complete and signed, is required to accompany this application.
2. PV System will require a separate Electrical Permit.
3. TWO sets of plans and specifications for review must be submitted.
4. Plan Review Fee must be submitted with application.
5. TDI WPI-1 Certification for the roof mounted solar panels.
6. Roof Assessment must be 10 years or newer.

I certify the information provided on this application is true and correct.

Owner/ Agent:_____Print Name

Owner / Agent:_____Signature

Date:_____

PERMIT CONTACT INFORMATION FORM

Project Name/Buisness Name (if applicable): _____

Subject Property Adress: _____

Parcel Number: _____

Applicant: _____

Mailing Address: _____

Phone: _____

Email: _____

Property Owner: _____

Property Owner Mailing Address: _____

Property Owner Email: _____

Contractor: _____

Mailing Address: _____

Phone: _____

Email: _____

State License #: _____ Expires: _____ City Business License #: _____ Epires: _____

Contact Person: _____

Mailing Address: _____

Design Professional: _____

Mailing Address: _____

Phone: _____ Email: _____

PHOTOVOLTAIC (PV) SYSTEM DATA CHECKLIST

PV System is designed and proposed for a detached one-or two-family dwelling or townhouse not more than three stories above grade or detached accessory structure that is code compliant to setbacks or height, or code allows expansion of nonconformity for solar modules. [IRC 101.2] YES_____NO_____

Modules on pitched roofs do not exceed the highest point of the roof unless approved by the local jurisdiction. YES_____NO_____

Rooftop is made from the lightweight material such as single layer of composition shingles, metal roofing, lightweight masonry, or cedar shingles. YES____NO_____

The installation shall comply with the manufacturer's instructions [IRC M2302.2]

YES_____NO_____

The installation shall meet the requirements of NFPA 70 National Electric Code, and all required electrical permit(s) must be obtained from the Authority Having Jurisdiction to administer the electrical code. [IRC M2302.0 YES_____NO_____

The installation shall me the requirements of the International Fire Code as mended by TX State. [IRC M2302.2]

The PV system is designed for the wind speed for the local area, and will be installed per manufacture's specifications. [IRC M2302.2] YES_____NO_____

The ground snow load does not exceed 70 pounds per square foot [IRC M2302.2.1(3)] YES_____NO_____

Attachment to the roof is specified by the mounting system manufacture.

YES_____NO_____

Total dead loads of modules, supports, mountings, raceways and all other appurtenances weigh no more than four pounds per square foot. [IRC M2302.2.1(3)] YES_____NO_____

Enter the dead load of system. (1bs/ft2):_____

To address uplift, modules are mounted no higher the 18" above the surface of the rooving to which they are affixed [IRC M23022.1(4)] YES_____NO_____

Supports for solar modules are installed to spread the dead load across as many roof-framing members as needed to ensure that no point load exceeds fifty (50) pounds. [IRC M2302.2.1 (5)] YES_____NO_____

The photovoltaic modules are supporting structure shall be constructed of noncombustible materials or fire-retardant treated wood equivalent to the required for roof construction [IRC M2302.2.1] YES_____NO_____

Roof and wall penetrations shall be flashed and sealed to prevent entry of water, rodents, and insects. [IRD M2302.2.2] YES_____NO_____

PV modules are listed and labeled with fire classification in UL 1703. [IRC M2302.2.3 YES_____NO_____

APPLICATION CHECKLIST

RESIDENTIAL- SOLAR PANEL INSTALLATION

USE THIS CHECKLIST TO ENSURE THAT NECESSARY INFORMATION IS PROVIDED FOR REVIEW OF YOUR PROJECT.

Requirements for Submittal

_____ Completed Building Permit and Electrical Permit

_____ Solar Panel Layout

_____ Engineer Report for Windstorm (BRAZORIA, TX)

_____ Solar System Specs

_____ Electrical Lines Diagram

_____ Label Requirements Per NEC 2020

_____ Sqft of Solar Array

_____ Roof Age Verification (TDI WPI-1 CERDTIFICATE)

_____ Solar plans stamped by Texas Engineer.

PLEASE NOTE:

Incomplete applications and deferred submittals may delay review and issuance of permit.

ROOF MOUNTED PHOTO-VOLTAIC SOLAR PANELS

ONE-AND-TWO FAMILY DWELLINGS

2018 IRC

2020 NEC

PURPOSE

To assist and encourage private generation of electricity through usage of solar power, while assuring that such generation does not create electrical, structure, fire or life safety hazards.

DEFINITIONS

_ PV means Photo-Voltaic

NEC means National Electrical Code

PERMIT AND INSTALLATION REQUIREMENTS

___ PV panel installations that require a building permit and a electrical permit.

Total dead load of panels, supports, mountings, raceways and all other appurtenances weigh no more than four pounds per square foot,

Panels are to be mounted no higher than 18" above the surface of the roofing to which they are affixed.

Except for flat roofs, no portion of the system may exceed the highest point of the roof. Panels on flat roof can't not exceed the maximum height allowed for the building unless approved by the local jurisdiction.

Supports for the solar panels are to be installed to spread the dead load across as many roof-framing members as needed to ensure that no point loads in excess of fifty pounds are created.

Attachment to the roof will be as specified by the mounting system manufacture.

All signage and markings required by NEC 690 shall be a phenolic or metallic plate or the other similar material engraved in block letters at least ¼ " high and suitable for the environments and application. The letters and the background shall be in contrasting colors. Screws or rivets shall be used to affix an identification plate to the equipment or enclosure.

The installation must still comply with all land use and other applicable codes.

ADDITIONAL SIGNAGE AND MARKETING REQUIREMENTS

In addition to the signage and markings required in NEC 690 an Identification Plate is needed to provide emergency responders with appropriate warning regarding the solar electric system and must comply with the following:

- Identification Plate text: "WARNING: PHOTOVOLTAIC POWER SOURCE"
- Red Background, white lettering
- Minimum 3/8" letter height, all capital letters
- Arial or similar font, non-bold
- Reflective, weather resistant material.
- The marking should be placed on the exterior of structure adjacent to the meter and within the main service disconnect. If the main service disconnect is operable with the service panel closed, than the marking should be placed on the outside cover.

RESIDENTIAL SOLAR BUILDING PERMIT SUMITTAL REQUIERMENTS

REQUIREMENTS FOR A SOLAR/ PHOTOVOLTAIC SYSTEM

1. A Building Permit is required for the installation or replacement of solar/photovoltaic (PV) systems, including rooftop arrays, ground-mounted arrays and PV water heaters. Please submit the materials.
    a. Permit Application
    b. Site Plan- show location of the house and the array/equipment on lot, with setback dimensions to property lines.
    c. Roof Plan- show the array and setback from the edge of the roof.
    d. Manufacturer specifications for the PV panels and mounting hardware. Include the weight of the equipment (attached details to roof system.)
    e. For rooftop system not conforming to all the criteria in the attached checklist, provide a roof framing plan.
        i. Structure calculations by TX State licensed engineer or other competent person showing the adequacy of the existing roof structure to support the additional load, or
        ii. Documentation showing that the roof structure was substantially overbuilt compared to prescriptive code requirements.
    f. For ground mounted systems- provide structural calculations by TX State licensed engineer or other competent person showing how the structure meets wind designed requirements for the structure and footings. Note that ground mounted equipment greater than 36" in height must adhere to minimum required property line setbacks of the applicable zoning district.
    g. Electrical plans to include load analysis.

2. **An Electrical Permit is required.**

Electrical Permit and Inspections:

Electrical Permits and inspection are required for all (PV) installation that connect to the building's electrical system. A plan review mat be necessary. If a plan review is not required, the following information must be provided to the electrical inspector at the time of the electrical inspection. Minor alterations or repair to existing system may not require plan review.

- A wiring diagram showing all photovoltaic equipment, devises, wire type and size, over-current protection and grounding.
- Electrical calculations used to determine voltage and current within the photovoltaic system.
- Information/ specifications for all equipment (array, inverter, modules including operating and maximum voltage/current/power, ect)

FIREFIGHTER ACCESS

PV systems are a serious concern for the fire service in that they limit access for the roof operation and, even when disconnected from the building electrical system, remain energized during daylight hours. The following recommendations are made to help mitigate these concerns.

ACCESS

- A pathway should be constructed along the roof edges, peaks, and valleys for firefighter access.
- The pathway should not be less than 36" wide measured from the edge of the solar array.
- When solar arrays are installed on roofs, there should be a minimum of 36" of clearance at the ridgeline to allow for smoke ventilation.
- This guideline does not apply to non-habitable structure without concealed attic/roof spaced.
- Examples of non-habitable structures include, but are not limited to, parking shade structures, carports, solar trellises, ect.

City of Brazoria

Receipt # _____ 1

BUILDING PERMIT

OWNER | JOB ADDRESS

Applicant to complete numbered spaces only

JOB ADDRESS

1 LEGAL DESCR. | LOT NO. | BLK | TRACT | (☐ SEE ATTACHED SHEET)

2 OWNER | MAIL ADDRESS | ZIP | PHONE

3 CONTRACTOR | MAIL ADDRESS | PHONE | REGISTRATION NO.

4 ARCHITECT OR DESIGNER | MAIL ADDRESS | PHONE | REGISTRATION NO.

5 ENGINEER | MAIL ADDRESS | PHONE | REGISTRATION NO.

6 LENDER | MAIL ADDRESS | BRANCH

7 USE OF BUILDING

8 Class of work: ☐ NEW ☐ ADDITION ☐ ALTERATION ☐ REPAIR ☐ MOVE ☐ REMOVE

9 Describe work:

10 Valuation of work: $

SPECIAL CONDITIONS

APPLICATION ACCEPTED BY	PLANS CHECKED BY	APPROVED FOR ISSUANCE BY

PLAN CHECK FEE		PERMIT FEE
Type of Const.	Occupancy Group	Division
Size of Bldg. (Total) Sq. Ft.	No. of Stories	Max. Occ. Load
Fire Zone	Use Zone	Fire Sprinklers Required ☐ Yes ☐ No
No. of Dwelling Units	OFFSTREET PARKING SPACES: Covered	Uncovered

NOTICE

SEPARATE PERMITS ARE REQUIRED FOR ELECTRICAL, PLUMBING, HEATING, VENTILATING OR AIR CONDITIONING. THIS PERMIT BECOMES NULL AND VOID IF WORK OR CONSTRUCTION AUTHORIZED IS NOT COMMENCED WITHIN 6 MONTHS, OR IF CONSTRUCTION OR WORK IS SUSPENDED OR ABANDONED FOR A PERIOD OF 6 MONTHS AT ANY TIME AFTER WORK IS COMMENCED.

I HEREBY CERTIFY THAT I HAVE READ AND EXAMINED THIS APPLICATION AND KNOW THE SAME TO BE TRUE AND CORRECT. ALL PROVISIONS OF LAWS AND ORDINANCES GOVERNING THIS TYPE OF WORK WILL BE COMPLIED WITH WHETHER SPECIFIED HEREIN OR NOT. THE GRANTING OF A PERMIT DOES NOT PRESUME TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF ANY OTHER STATE OR LOCAL LAW REGULATING CONSTRUCTION OR THE PERFORMANCE OF CONSTRUCTION.

SIGNATURE OF CONTRACTOR OR AUTHORIZED AGENT (DATE)

SIGNATURE OF OWNER (IF OWNER BUILDER) (DATE)

Special Approvals	Required	Received	Not Required
ZONING			
HEALTH DEPT.			
FIRE DEPT.			
SOIL REPORT			
OTHER (Specify)			

WHEN PROPERLY VALIDATED (IN THIS SPACE) THIS IS YOUR PERMIT

PLAN CHECK VALIDATION CK. M.O. CASH PERMIT VALIDATION CK. M.O. CASH

City of Brazoria

Receipt # _____ 3

ELECTRICAL PERMIT

OWNER | JOB ADDRESS

Applicant to complete numbered spaces only

JOB ADDRESS

1 LEGAL DESCR. | LOT NO. | BLK | TRACT | (☐ SEE ATTACHED SHEET)

2 OWNER | MAIL ADDRESS | ZIP | PHONE

3 CONTRACTOR | MAIL ADDRESS | PHONE | REGISTRATION NO.

4 ARCHITECT OR DESIGNER | MAIL ADDRESS | PHONE | REGISTRATION NO.

5 ENGINEER | MAIL ADDRESS | PHONE | REGISTRATION NO.

6 LENDER | MAIL ADDRESS | BRANCH

7 USE OF BUILDING

8 Class of work: ☐ NEW ☐ ADDITION ☐ ALTERATION ☐ REPAIR

9 Describe work:

SPECIAL CONDITIONS

APPLICATION ACCEPTED BY	PLANS CHECKED BY	APPROVED FOR ISSUANCE BY

NOTICE

THIS PERMIT BECOMES NULL AND VOID IF WORK OR CONSTRUCTION AUTHORIZED IS NOT COMMENCED WITHIN 6 MONTHS, OR IF CONSTRUCTION OR WORK IS SUSPENDED OR ABANDONED FOR A PERIOD OF 6 MONTHS AT ANY TIME AFTER WORK IS COMMENCED.

I HEREBY CERTIFY THAT I HAVE READ AND EXAMINED THIS APPLICATION AND KNOW THE SAME TO BE TRUE AND CORRECT. ALL PROVISIONS OF LAWS AND ORDINANCES GOVERNING THIS TYPE OF WORK WILL BE COMPLIED WITH WHETHER SPECIFIED HEREIN OR NOT. THE GRANTING OF A PERMIT DOES NOT PRESUME TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF ANY OTHER STATE OR LOCAL LAW REGULATING CONSTRUCTION OR THE PERFORMANCE OF CONSTRUCTION.

SIGNATURE OF CONTRACTOR OR AUTHORIZED AGENT (DATE)

SIGNATURE OF OWNER (IF OWNER BUILDER) (DATE)

PERMIT FEES

		No.	Each	Fee
RECEPTACLE / LIGHT / SWITCH	Total Outlets			
LIGHTING FIXTURES	Total Fixtures			
RANGES CLO. DRYER WTR. HTR.				
GARBAGE DISP. STA. COOK TOP				
DISH WASH. CLOTHES WASH.				
SPACE HTR. STA. APPL. 1/2 H.P. MAX.				
MOTORS:	H.P.			
SIGNS	NO TRANS.			
	NO LAMPS			
TEMP. POWER ☐ POLE ☐ UNDGD.				
SERVICE ☐ NEW ☐ CHANGE	0-200A			
	201-400A			
	401-600A			
	OVER 600A			
PERMIT ISSUING FEE			$	
TOTAL FEE				$

WHEN PROPERLY VALIDATED (IN THIS SPACE) THIS IS YOUR PERMIT

PLAN CHECK VALIDATION CK. M.O. CASH

PERMIT VALIDATION CK. M.O. CASH