CITY OF
HERMOSA BEACH
Community Development
Building & Safety Division

Phone: 310-318-0235
Hours: Mon. – Thur. 7am-6pm
CommunityDevelopment@hermosabeach.gov

RESIDENTIAL ROOFTOP SOLAR PV STREAMLINED PERMIT APPLICATION

This Express Checklist (Checklist) applies to flush rooftop-mounted solar photovoltaic (PV) system ≤ 38.4 kW (Solar PV) installed on the roofs of wood framed one- and two-family dwellings. "Flush rooftop-mounted" means the modules are installed parallel to, and relatively close to, the roof surface. This Checklist is intended to be a simple check to demonstrate reasonable assurance that the design of the Solar PV and/or ESS complies with the electrical, fire and building provisions of the 2022 California Electrical Code (CEC), California Fire Code (CFC), California Residential Code (CRC), California Energy Code (CEnC) and California Mechanical Code (CMC). If a project meets the criteria on this Checklist, then the need for a detailed engineering analysis or formal plan review submittal may be avoided and the issuance of a streamlined permit may be granted.

PROJECT INFORMATION

Please identify the type, location, and quantity of equipment proposed; identify if an electrical panel upgrade is required; and identify the type of mounting for equipment.

PROJECT INFORMATION *(please check box: Y = Yes, N = No)*	
1. Solar PV size, both new and existing combined, will be ≤ 38.4 kilowatt (kW) ***If yes, specify the size of the Solar PV in kW***	☐Y ☐N
Size of Solar PV _____kW	
2. Solar PV is a flush rooftop-mounted array on a one- or two-family dwelling or accessory building/structure	☐Y ☐N
GENERAL REQUIREMENTS *(please check box: Y = Yes, N = No)*	
3. Permit Applications are completed and attached along with this Checklist that include, but not limited to, the following information: ▪ Property address; ▪ Name, address, phone number of the property owner; and ▪ Name, address, phone number and license number of the person responsible for the Solar PV , design and/or installation	☐Y ☐N
4. Construction documents (i.e., plans, specifications, etc.) for the Solar PV, if applicable, is completed, attached and reflects the information contained and acknowledged on this Checklist	☐Y ☐N
5. A licensed and qualified contractor will install the Solar PV, if applicable	☐Y ☐N
6. Solar PV, if applicable, will be installed per the manufacturer's instructions for all installed equipment and have manufacturer's instruction available at the time of inspection	☐Y ☐N
PLANNING REQUIREMENT *(please check box: T = True, F = False)*	
7. Solar PV ancillary equipment, is not located in such a manner to be in public view, and is located a minimum of 2 feet from the property line.	☐T ☐F
ELECTRICAL REQUIREMENTS *(please check box: Y = Yes, N = No, T = True, F = False)*	
8. Solar PV's panels, inverters, rapid shutdown, and racking systems will be listed and labeled in accordance to UL 1703 or with both UL 61730-1 and UL 61730-2, UL 1741 and UL 2703 [CRC R324.3.1]	☐Y ☐N
9. Solar PV's breaker(s) will be connected on the opposite end of the service panel (and subpanel(s) if applicable) that contain loads [CEC 705.12(B)(3)(2)]	☐Y ☐N
10. Installation will not have a line side tap (GMA is acceptable) or will not have a Load-Side Source Connections: Feeders/Taps [CEC 705.12(A) and (B)]	☐T ☐F
11. PV overcurrent devices, where required, will be rated 125% output current calculated in CEC 690.8(A) [CEC 690.9(B)]	☐Y ☐N

Last Name: _____

Property Address: _____

12. Solar PV point of interconnection at panel(s) will be provided based on the following compliance methods (calculation will be provided onto the single-line diagram sheet of the plans for verification by the city inspector): [CEC 705.12(B)(3)] ☐Y ☐N

If yes, please check one applicable box

☐120% Rule not applicable. The sum of 125% of the power source(s) output circuit current and the rating of the overcurrent device protecting the busbar will not exceed the ampacity of the busbar [CEC 705.12(B)(3)(1)]

☐120% Rule. Where two sources, one a primary power source and the other another power source, are located at opposite ends of a busbar that contain loads, the sum of 125% of the power source(s) output circuit current and the rating of the overcurrent device protecting the busbar will not exceed 120% of the ampacity of the busbar [CEC 705.12(B)(3)(2)]

☐120% Rule not applicable. The sum of the ampere ratings of all overcurrent devices on panelboards, both load and supply devices, excluding the rating of the overcurrent device protecting the busbar, shall not exceed the ampacity of the busbar [CEC705.12(B)(3)(3)]

☐120% Rule for Center Fed Panels. A connection at either end, but not both ends, of a center-fed panelboard in dwellings shall be permitted where the sum of 125% of the power source(s) output circuit current and the rating of the overcurrent device protecting the busbar does not exceed 120% of the current rating of the busbar [CEC 705.12(B)(3)(4)]

provide required information in the blank fields below		***provide additional info if Solar PV is on subpanel(s)***	
Service Panel Rating	_____A	Subpanel Rating	_____A
Service Main Breaker	_____A	Main Breaker	_____A
Total PV Output	_____A	PV Output	_____A

13. All required markings and placards will be permanently etched on plastic or phenolic resin placards; sticker marking will be placed on the DC conduits/junction boxes [CEC 110.21] ☐Y ☐N

14. Access and working space will be provided and maintained about all electrical equipment of the Solar PV and/or ESS, if applicable, to permit ready and safe operation and maintenance of such equipment [CEC 110.26] ☐Y ☐N

15. All electrical equipment and related installation (e.g., panel, ac unit, outlet, telcom or irrigation box, vent or openings such as windows and doors, etc.) will be maintained a minimum distance of 36" to the regulator vent of the gas meter [LB Utility Dept. Diagram A-989] ☐Y ☐N

FIRE SAFETY REQUIREMENTS

(please check box: Y = Yes, N = No)

16. Solar PV installed over open grid framing or noncombustible deck (e.g., roof coverings consisting of ferrous, non-ferrous, copper, aluminum and/or other similar metal sheets or shingles) will have panels tested, listed and labeled with a fire type rating in accordance with UL 1703 or with both UL 61730-1 and UL 61730-2; panels marked "not fire rated" will not be installed on elevated PV support structures; OR is not installed over open grid framing or noncombustible deck [CRC R324.8.1] ☐Y ☐N

17. Solar PV, including elevated PV support structure, will have the same fire classification as the roof assembly [CRC R324.4.2, R324.8.2] ☐Y ☐N

18. Roof penetrations will be flashed and sealed [CRC R324.4.3] ☐Y ☐N

19. Roof slope is 2 units vertical in 12 units horizontal (17% slope) or less OR the Solar PV will be installed over a detached nonhabitable structure (e.g., detached garage, parking shade structure, carport, solar trellis, etc.) [CRC R324.6] ☐Y ☐N

If yes, skip questions 20 through 26. If no, complete questions 20 through 26.

20. Solar PV will provide a min. of two pathways on separate roof planes from lowest roof edge to ridge and will not be < 36" wide [CRC R324.6.1] ☐Y ☐N

Last Name: _____

Property Address: _____

21. Solar PV will provide a min. of one pathway on the street or driveway side of the roof [CRC R324.6.1] ☐Y ☐N

22. Solar PV will provide a pathway of not < 36" wide from the lowest roof edge to ridge at the following locations: [CRC R324.6.1] ☐Y ☐N

If yes, please check one applicable box

☐On the same roof plane as the Solar PV

☐On an adjacent roof plane

☐Straddling the same and adjacent roof plane

23. Pathways will be over areas capable of supporting fire fighters accessing the roof [CRC R324.6.1] ☐Y ☐N

24. Pathways will be in areas with minimal obstructions (e.g., vent pipes, conduit, or mechanical equipment) [CRC R324.6.1] ☐Y ☐N

25. Solar PV will occupy the roof area and provide a clear setback on both sides of the horizontal ridge based on the following options: [CRC R324.6.2] ☐Y ☐N

If yes, please check one applicable box

☐Will occupy ≤ 33% of the total roof area and provide ≥ 18" clear setback on both sides of the ridge

☐Will occupy > 33% of the total roof area and provide ≥ 36" clear setback on both sides of the ridge

26. Panels and modules will not be placed on the portion of the roof that is below an emergency escape and rescue opening(s) (e.g., bedroom windows or doors) AND will provide a pathway ≥ 36" wide to the emergency escape and rescue opening(s) [CRC R324.6.3] ☐Y ☐N

ENERGY STORAGE SYSTEM (ESS) REQUIREMENTS

(please check box: Y = Yes, N = No, T = True, F = False)

Only complete questions 28 through 41 if an ESS system is included and the plan submittal includes the approval from LA County Fire.

27. This system does not include an ESS System, or this system does have an ESS System that has already been submitted and approved by LA County Fire. ☐Y ☐N

If an ESS System is included and previously approved by LA County Fire, the plan set submittal must include the LA County Fire approval. Please specify the size of the ESS in kWh and complete 28-41.

Size of ESS _____kWh

28. ESS will be listed and labeled per UL 9540; marked and labeled per CEC 110.21(B) and provided with a permanent plaque or directory denoting all electrical power sources on or in the premises and system disconnecting means at each service equipment location and at locations of all electric power production sources capable of being interconnected [CRC R328.2, CEC 706.21] ☐Y ☐N

29. An ESS overcurrent device, where required, will be rated125% output current calculated in CEC 706.30(A) [CEC 706.31(B)] ☐Y ☐N

30. ESS will be installed per manufacturer's instruction and the CEC; and where more than one unit, will be separated from each other by a min. 36" [CRC R328.3] ☐Y ☐N

31. ESS will only be installed in the following locations and provided with a mechanical ventilation per the CMC: [CRC R328.4, CRC R328.9]

If yes, please check one applicable box.

☐Detached garage or detached accessory building/structure ☐Y ☐N

☐Attached garage separated from the dwelling unit living space per CRC R302.6

☐Outdoor or exterior side of exterior wall not located a min. 36" from doors and windows of dwelling unit; mechanical ventilation is not required

☐Enclosed utility closet, basement, storage or utility space within dwelling unit with finished (Type X gypsum board) or noncombustible walls and ceilings [CRC R328.4]

Last Name: _____

Property Address: _____

32. ESS will not be installed in a sleeping room (e.g., bedroom), or closet or space opening directly into a sleeping room or habitable spaces (e.g., living room, family room, den room, etc.) of the dwelling unit [CRC R328.4] ☐T ☐F

33. ESS will be installed at the following location(s) with a max. aggregate energy rating as noted below: [CRC R328.5] ☐Y ☐N

If yes, please check one or more applicable box(es)

☐within utility closet, basement and storage or utility space (max. 20 kWh for one ESS, max. 38.4 kWh for more than one ESS)

☐in attached or detached garage and detached accessory building/structure (max. 20 kWh for one ESS, max. 38.4 kWh for more than one ESS)

☐on exterior wall (max. 20 kWh for one ESS, max. 38.4 kWh for more than one ESS)

☐outdoor on the ground (max. 20 kWh for one ESS, max. 38.4 kWh for more than one ESS)

34. ESS will be installed per the CEC, will have inverters listed and labeled per UL 1741 (or provided as part of UL 9540 listing); and where ESS will be connected to the utility grid, will only use inverters listed for utility interaction [CRC R328.6, CEC 706.4, CEC 706.5] ☐Y ☐N

35. Fire detection will be provided in the vicinity of the ESS or is exempted under the following options: [CRC R328.7] ☐Y ☐N

If yes, please check one applicable box

☐A listed smoke alarm will be installed per CRC R314

☐A listed heat alarm interconnected to the smoke alarm will be install (only where a smoke alarm cannot be installed based on its listing)

☐Fire detection is not required as the installation is to a detached garage, on the exterior wall or is in an outdoor location

36. ESS will be provided with vehicle impact protection based on the following methods: [CRC R328.8, CRC Figure R328.8.1, CRC R328.8.3] ☐Y ☐N

If yes, please check one applicable box

☐ESS will NOT be installed in a location subject to vehicle damage or in the normal driving path of vehicle travel

☐Bollard will be a min. 48” in height x 3” in diameter Schedule 80 steel pipe embedded in a concrete pier ≥ 12” deep x 6” in diameter with a min. of 36” of pipe exposed, filled with concrete, spaced ≤ 60”, and located a min. 6” from the ESS

☐Bollard will be a min. 36” in height x 3” in diameter Schedule 80 steel pipe fully welded to a min. 8” square x 1/4” thick steel plate and bolted to the concrete floor by means of four 1/2” concrete anchors with 3” min. embedment, spaced ≤ 60”, and located a min. 6” from the ESS

☐Bollard will be pre-manufactured steel pipe filled with concrete and anchored per manufacturer’s installation instruction, spaced ≤ 60”, and located a min. 6” from the ESS

☐Wheel barrier will be a min. 4” in height x 5” in width x 70” in length made of concrete or polymer, anchored to the concrete floor ≥ every 36” and located ≥ 54” from the ESS, will use a min. three 1/2” diameter concrete anchors with a min. 3” embedment into concrete floor, and spaced a max. 36” between barrier

☐Wheel barrier will be pre-manufactured and installed per manufacturer’s installation instructions

Last Name: _____

Property Address: _____

37. ESS will have a label placed on it containing the contact information for the qualified maintenance and service provided; and a copy of the manufacturer's installation, operation, maintenance and decommissioning instructions will be provided to the owner or placed in a conspicuous location near the ESS ☐Y ☐N

38. ESS will not have the potential to release toxic or highly toxic gas during charging, discharging and normal use conditions [CRC R328.12] ☐Y ☐N

39. ESS disconnecting means will be readily accessible, located within sight of the ESS will be lockable open per CEC 110.25, plainly indicate whether it is in the open (off) or closed (on) position and will be permanently marked "ENERGY STORAGE SYSTEM DISCONNECT" [CEC 706.15(A) and (C)] ☐Y ☐N

40. ESS will be provided with dedicated raceways, designated branch circuits, and isolation devices per CE_nC 150.0(s); panelboard will be provided with a min. busbar rating of 225A [CEC 706.10] ☐Y ☐N

41. ESS will not exceed 100 volts dc between conductors or to ground [CEC 706.20(B)] ☐Y ☐N

STRUCTURAL REQUIREMENTS

(please check box, Y = Yes or True, N = No or False)

Only complete questions 42 through 53 if Solar PV is proposed.

42. A registered design professional (e.g., registered architect, licensed civil or structural engineer) will be responsible for the structural analysis, design and detailing of the roof to support the Solar PV; structural calculations and stamped structural plans are provided ☐Y ☐N

If yes, skip questions 43 through 53. If no, complete questions 43 through 53 and leave no blank fields.

GENERAL

43. Solar PV will not be installed on dwelling unit or accessory building/structure that is more than 3-stories in height; and will not be installed on attached or detached carport, patio, or non-permanent structure ☐Y ☐N

44. Solar PV will not be installed over wood shake or wood shingle roofing ☐Y ☐N

45. Solar PV and related hardware will weigh ≤ 4 psf ☐Y ☐N

ROOF CHECKS

46. Visual Review/Contractor's Site Audit of Existing Conditions:

a. Roof is a single roof without a reroof overlay ☐Y ☐N

b. Roof structure appear structurally sound, without signs of alterations or significant structural deterioration or sagging (see Figure 1*) ☐Y ☐N

47. Roof Structure Data:

a. Measured roof slope (e.g., 6:12): _____:12

b. Type of roof framing (rafter or manufactured truss): ☐rafter ☐truss

c. Measured rafter or truss spacing (center-to-center): _____inch

d. Measured rafter size in inches (e.g., 1-3/4" x 3-3/4"): Feet - x ___inch

e. Measured rafter horizontal span in feet and/or inches (see Figure 4*): Feet - x - ___inch

f. Horizontal rafter span in feet and/or inches per Table 2*: Feet - x - ___inch

g. Measured horizontal rafter span is less than span in Table 2* ☐Y ☐N

SOLAR ARRAY CHECKS

48. Flush-Mounted System:

a. Plane of the modules (panels) is parallel to the plane of the roof ☐Y ☐N

b. Modules do not overhang any roof edges (ridges, hips, gable ends, eaves) ☐Y ☐N

49. PV array covers no more than half of the total roof area (all roof planes) ☐Y ☐N

Last Name: _____

Property Address: _____

50. Solar PV support component from manufacturer's project-specific worksheets/tables are completed ☐Y ☐N

51. Roof plan of the module and anchor layout are attached (see Figure 2*) ☐Y ☐N

52. Downward Load Check (Anchor Layout Check):

a. Proposed anchor horizontal spacing (see Figure 2*):_____feet

b. Horizontal anchor spacing per Table 1*:_____feet

c. Proposed anchor horizontal spacing is equal to or less than Table 1* spacing: ☐Y ☐N

53. Wind Uplift Check (Anchor Fastener Check):

a. Anchor fastener data (see Figure 3*):

(1). Diameter of lag screw, hanger bolt or self-drilling screw: inch

(2). Embedment depth of rafter: inch

(3). Number of screws per anchor (typically one):

(4). 5/16" diameter lag screws with 2.5" embedment into the rafter are used OR the anchor fasteners meet the manufacturer's guidelines. ☐Y ☐N

A complete submittal must include this completed Checklist, Permit Application, Plot/Site Plan, and complete plans.

ACKNOWLEDGMENT STATEMENT

I/We, the undersigned contractor(s)/installer(s) responsible for the design and installation of the Solar, understand that the permit will be issued based upon the checked "Y" and completing the required information to all the above questions. I/We understand that if any questions are checked "N" or incomplete information to all the above questions, I/We will revise the design to fit the criteria of this Checklist; otherwise, the permit application may be required to go through the standard plan review process. I/We acknowledge that the construction documents, which are neither reviewed nor approved by the City, reflect the criteria of this Checklist. I/We assume all risk/responsibility if the installation of the work deviates from this Checklist and will strictly adhere to all code requirements and make the necessary changes to the installation. I/We understand that this permit conveys no vested rights in the event a conflict with any codes, local ordinances, and state laws are later identified as part of the inspection process. We further understand that any correction, removal or change of any portion of the installation will be done at the sole expense/liability of the contractor(s)/installer(s). I/We certify that the Electrical Plans are completed, stamped, and signed by a California Licensed Electrical Engineer or a C-10 Electrical Contractor.

Job Address:_____

License # & Class:_____

Signature:_____Date:_____

Phone #:_____

CITY OF
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BUILDING PERMIT APPLICATION

STAFF USE ONLY	
Plan Check/Permit #	

PROPERTY & JOB INFORMATION	
Job Address:	, Hermosa Beach, CA
Description of the work being performed:	
Assessor's Parcel Number:	
Number of Stories:	Number of Units:
Valuation of job (including labor and material):	$

PROPERTY OWNER	
Full Name	Phone #:
Email:	
Address:	

APPLICANT – THIS IS THE PRIMARY POINT OF CONTACT	
Full Name	Phone #:
Email Address (this will be the primary means of contact):	
Mailing Address:	

CONTRACTOR	
Full Name	Phone #:
Email:	CSL License #:
Address:	
City Business License #:	CSLB Class Type:

DESIGN PROFESSIONAL – ENGINEER/ARCHITECT	
Full Name	Phone #:
Email:	License #
Address:	

SQUARE FOOTAGE	
EXISTING SQ. FOOTAGE	NEW SQ. FOOTAGE
Habitable	Habitable
Garage	Garage
Deck	Deck
ADU	ADU

PLEASE CONTINUE ON PAGE 2

Last Name: _____

Property Address: _____

GRADING PERMIT ONLY:		
Grading	Cubic Yard Cut:	Cubic Yard Fill:

RE ROOF ONLY:						
Roof Pitch:	Squares (1 square = 100 sq. ft.)				# of Existing Layers:	
EXISTING	Asphalt	Wood	Metal	Cement/Tile	Membrane	Other
PROPOSED	Asphalt	Wood	Metal	Cement/Tile	Membrane	Other
Solar: Does the existing roof have solar panels installed?						

APPLICANT AFFIDAVIT

(I/We) am/are aware that the following requirements may apply to this permit application:

(1) If located within the Coastal Zone, the applicant may need to acquire a Coastal Development Permit, or Exemption. The approval must be provided to the City (by the applicant), prior to the permit being issued.
(2) Depending on the scope of work, Hermosa Beach may require geotechnical reports, and Recording of Documents may be required prior to closing any associated permits.
(3) Additional reviews and submittals may be required for LA County Fire, Public Works, Waste Reduction Plan, & Standard Urban Storm Water Mitigation Plan.
(4) All permits may require that the following be provided: Pedestrian & Adjacent Property Protection, Best Management Practices, Air Quality Requirements, Hazardous Materials Requirements, and Waste Reduction Requirements
(5) I am aware that if this project includes the installation or replacement of roof coverings that the roofing material being installed under this permit application meets a minimum Class A fire retardant rating, unless the roof covering is less than 50% of the existing roof area of the entire structure.
(6) The applicant will be the sole and primary point of contact for this application. The listed applicant is the primary contact for all communications with City Staff. The applicant will be responsible for communicating status updates to all parties involved with this application.

(I/We) the undersigned declare, under penalty of perjury under the laws of the State of California, that (I am/we are) the owner(s) or authorized representative(s) of the property in this application; that the information on all plans, drawings, and sketches attached hereto and all the statements and answers contained herein are, in all respects, true and correct.

Signature **Date:**

Printed Name:

CITY OF
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Community Development
Building & Safety Division

Phone: 310-318-0235
Hours: Mon. – Thur. 7am-6pm
CommunityDevelopment@hermosabeach.gov

SITE/PLOT PLAN

PROPERTY & APPLICANT INFORMATION	
Job Address:	, Hermosa Beach, CA
Job Description:	
Applicant Name:	

SITE/PLOT PLAN