# HELIOCOL COLLECTOR GENERAL NOTES:

1. APPLICABLE CODE: 2023 FLORIDA RESIDENTIAL CODE (8TH EDITION) & ASCE-7-22 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.
2. BOLT DIAMETER AND EMBEDMENT LENGTHS ARE DESIGNED PER 2023 FLORIDA BUILDING CODE (8TH EDITION) REQUIREMENTS. ALL BOLT CAPACITIES ARE BASED ON A SOUTHERN YELLOW PINE (SYP) RESIDENTIAL WOOD ROOF TRUSS AS EMBEDMENT MATERIAL.
3. WIND DESIGN CRITERIA AND PARAMETERS ARE FOR HIP AND GABLE RESIDENTIAL ROOFS, CONSIDERING FROM A 7° TO A MAXIMUM 27 ° (2/12 TO A MAXIMUM 6/12 PITCH) ROOF WITH A MEAN ROOF HEIGHT NOT EXCEEDING 30 FT AND RISK CATEGORY II. SEE WIND PRESSURE TABLE BELOW.
4. WIND TUNNEL TEST DATA FOR THIS COLLECTOR MAY BE REQUESTED THROUGH MAGEN ECO ENERGY AND HAS BEEN COMPILED BY PRI CONSTRUCTION AND MATERIAL TESTING, INC.
5. ROOF SEALANTS SHALL CONFORM TO ASTM C920 AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PILOT FILL ALL HOLES PRIOR TO INSTALLATION OF BOLTS.
6. THE CONTRACTOR SHALL REFER TO THE HELIOCOL INSTALLATION MANUAL OR AUTHORIZED HELIOCOL REPRESENTATIVE FOR ALL INSTALLATION INSTRUCTIONS FOR THE HELIOCOL COLLECTOR.
7. LAG SCREW SHALL BE ASTM A276 TYPE 304 STAINLESS STEEL UNLESS OTHERWISE NOTED AND CONTRACTOR SHALL EMBED LAG SCREW 2.5" OF THREADED EMBEDMENT INTO THE TRUSS.
8. ALL HELIOCOL COLLECTOR MODELS MAY BE INSTALLED PER THIS STRUCTURAL CONNECTION DRAWING.
9. CONTRACTOR SHALL ENSURE ALL ROOF PENETRATIONS TO BE WATERTIGHT AND SEALED PER 2023 FLORIDA BUILDING CODE (8TH EDITION) OR LOCAL GOVERNING CODE.
10. THE ADDITION OF THE HELIOCOL COLLECTOR SYSTEM ADDS APPROXIMATELY 1 PSF TO THE ROOF STRUCTURE AND WILL NOT ADVERSELY AFFECT THE STRUCTURAL INTEGRITY OF THE BUILDING.

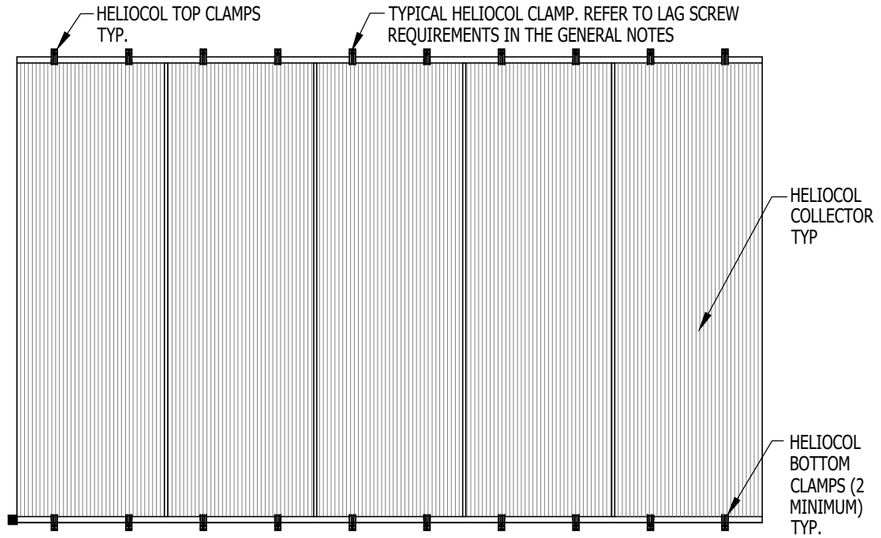
**EXPOSURE C - $p_{net30}$ Pressures - Gable Roof > 7 to 27 Degrees - 10 ft² Tributary Area**

| Vult (MPH) | ROOF PITCH | GROUP 1 Wind Zone 1 | | GROUP 2 Wind Zone 2 | | GROUP 3 Wind Zone 3 | |
|---|---|---|---|---|---|---|---|
| 140 | 7-20° | 22.4 | -54.7 | 22.4 | -79.9 | 22.4 | -94.9 |
| | 20-27° | 22.4 | -42.2 | 22.4 | -67.2 | 22.4 | -86.7 |

**EXPOSURE C - $p_{net30}$ Pressures - Hip Roof > 7 to 27 Degrees - 10 ft² Tributary Area**

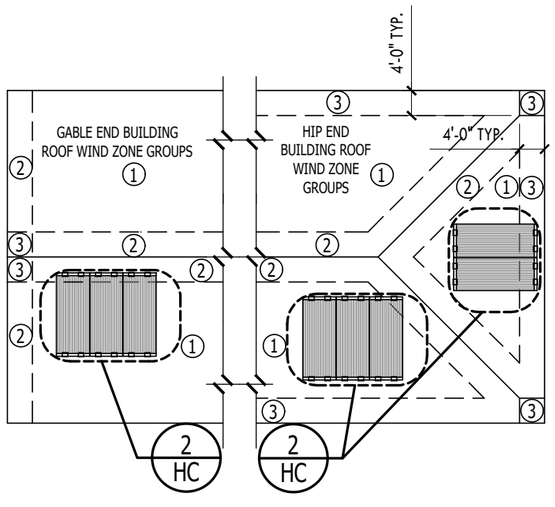
| Vult (MPH) | ROOF PITCH | GROUP 1 Wind Zone 1 | | GROUP 2 Wind Zone 2 | | GROUP 3 Wind Zone 3 | |
|---|---|---|---|---|---|---|---|
| 140 | 7-20° | 22.4 | -49.7 | 22.4 | -64.8 | 22.4 | -69.8 |
| | 20-27° | 22.4 | -39.7 | 22.4 | -54.7 | 22.4 | -54.7 |

TABLE ABOVE REFLECTS COMPONENTS AND CLADDING (ASD) PRESSURES FROM SECTION 30 OF THE ASCE 7-22 AS REQUIRED BY THE 2023 FLORIDA RESIDENTIAL CODE (8TH EDITION) SECTION R324.2, M2301.2.2.1 AND R905.1 (SOLAR THERMAL SYSTEMS).
NOTE: THIS IS **NOT** A SOLAR PHOTOVOLTAIC SYSTEM




## TYPICAL MULTIPLE COLLECTOR ARRAY PLAN

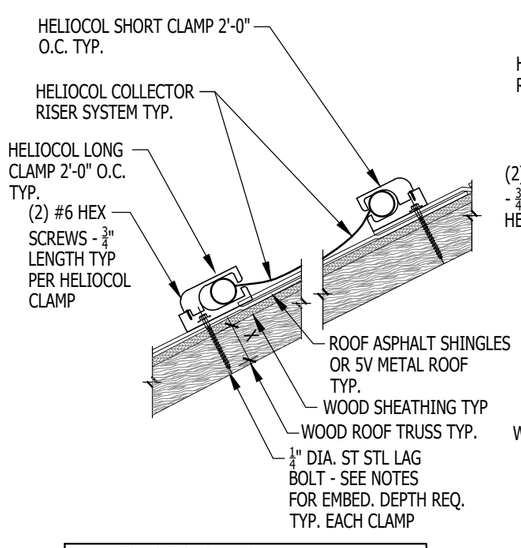
SCALE: N.T.S.




## TYPICAL COLLECTOR PITCHED ROOF LAYOUT - WIND ZONES - SCHEDULE - PLAN

SCALE: NONE

1 HC

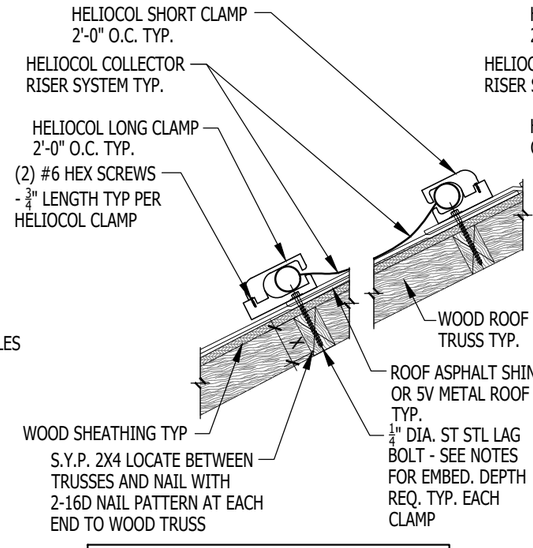



REFER TO NOTES FOR REQUIRED EMBEDMENT DEPTH LABELED "X" IN THIS DETAIL

## TYP TOP - BOTTOM ASPHALT - METAL SHINGLE CONNECTION DETAIL

SCALE: 1"=1'-0"

4 HC-2

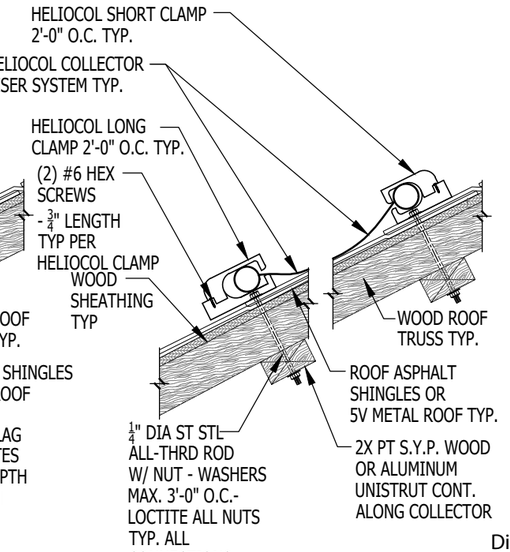



REFER TO NOTES FOR REQUIRED EMBEDMENT DEPTH LABELED "X" IN THIS DETAIL

## OPTIONAL WOOD SPANNER OPTION CONNECTION DETAIL

SCALE: 1"=1'-0"

5 HC-2




LIMITED SPACE OPTION FOR UNALIGNED TRUSS

## OPTIONAL ALL THREAD CONNECTION DETAIL

SCALE: 1"=1'-0"

6 HC-2

JAMES BRYANT RESIDENCE
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SOLAR POOL SYSTEM IMPROVEMENT CONSTRUCTION DOCUMENT



APPROVED

| REVISIONS | DESCRIPTION | DATE |
|---|---|---|

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ENGINEER OF RECORD

Date: 02/26/2024

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