HISTORIC AND DESIGN REVIEW COMMISSION

April 15, 2015

Agenda Item No: 28

HDRC CASE NO:	**2015-150**
ADDRESS:	112 W MAGNOLIA AVE
LEGAL DESCRIPTION:	NCB 1836 BLK 11 LOT 7
ZONING:	MF33 H
CITY COUNCIL DIST.:	1
DISTRICT:	Monte Vista Historic District
APPLICANT:	Michael Higgins/Green Star Solutions
OWNER:	Paul Pheifer
TYPE OF WORK:	Solar panel installation

REQUEST:

The applicant is requesting a Certificate of Appropriateness for approval to install solar panels on the side and rear facing portions of the roof.

APPLICABLE CITATIONS:

Historic Design Guidelines, Chapter 3, Guidelines for Additions

6. Designing for Energy Efficiency
C. SOLAR COLLECTORS
i. *Location*—Locate solar collectors on side or rear roof pitch of the primary historic structure to the maximum extent feasible to minimize visibility from the public right-of-way while maximizing solar access. Alternatively, locate solar collectors on a garage or outbuilding or consider a ground-mount system where solar access to the primary structure is limited.

ii. *Mounting (sloped roof surfaces)*—Mount solar collectors flush with the surface of a sloped roof. Select collectors that are similar in color to the roof surface to reduce visibility.

FINDINGS:

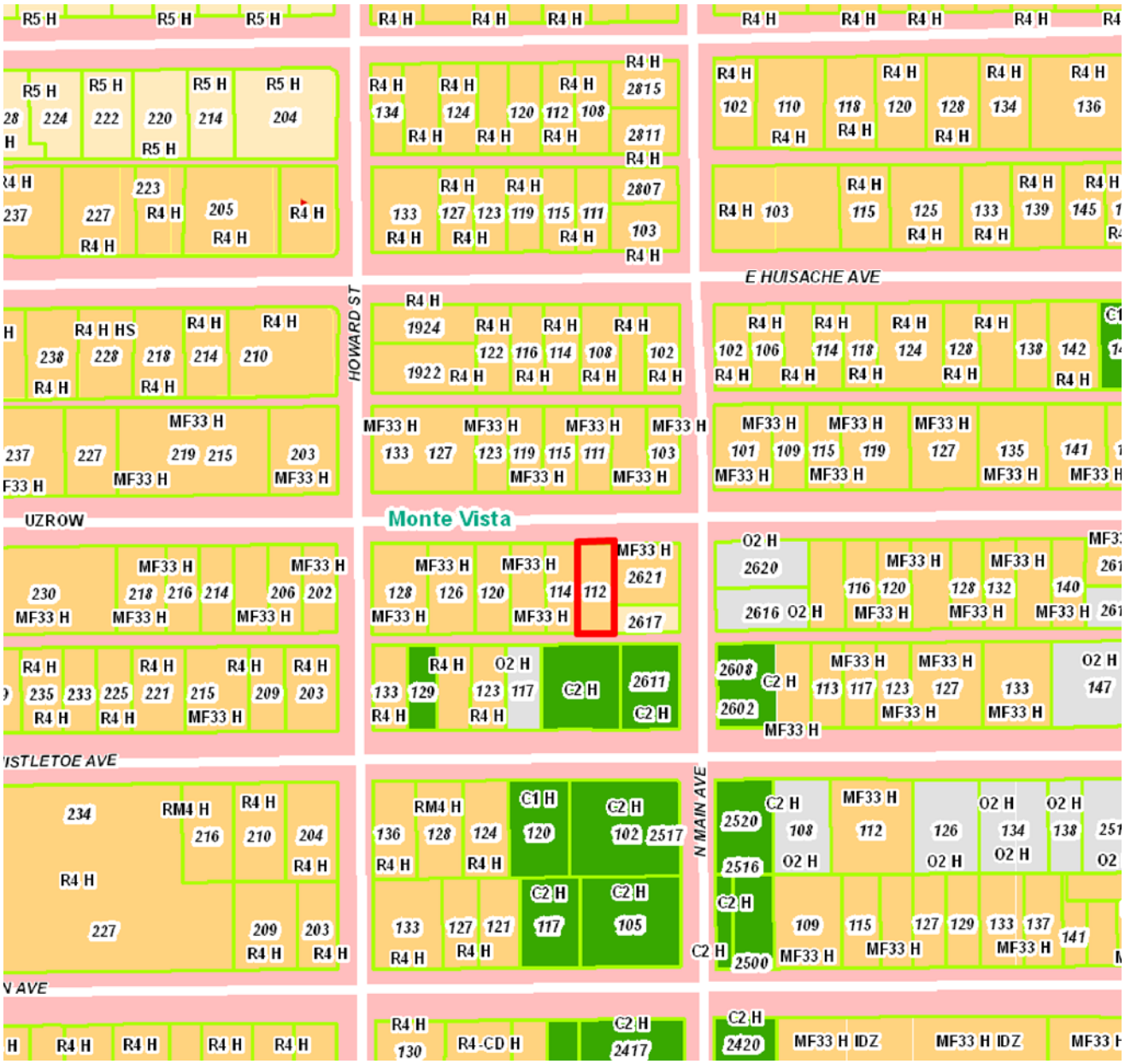
a. According to the Guidelines for Additions, solar collectors should be located on the side or rear roof pitch to minimize visibility from the public right of way. As proposed, the panels on the north east corner of the house will be highly visible from the street which is not consistent with the guidelines.

RECOMMENDATION:

Staff does not recommend approval as submitted based on finding a. Staff recommends that the location of the panels is revised to minimize view from the street.

CASE MANAGER:

Adriana Ziga



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112 W Magnolia

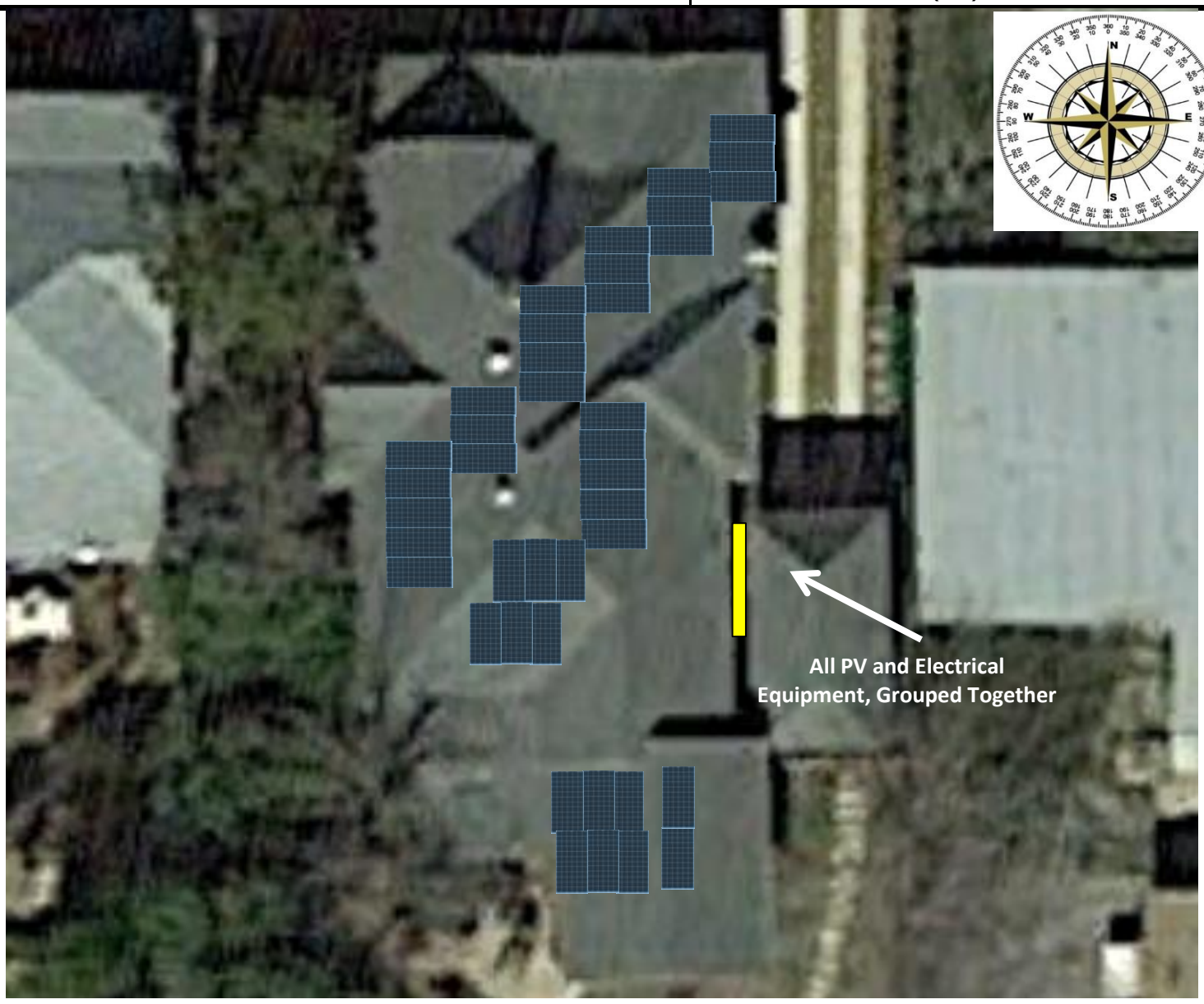
Powered by ArcGIS Server

Printed:Apr 06, 2015

MAIN ELECTRIC SERVICE (EAST SIDE)

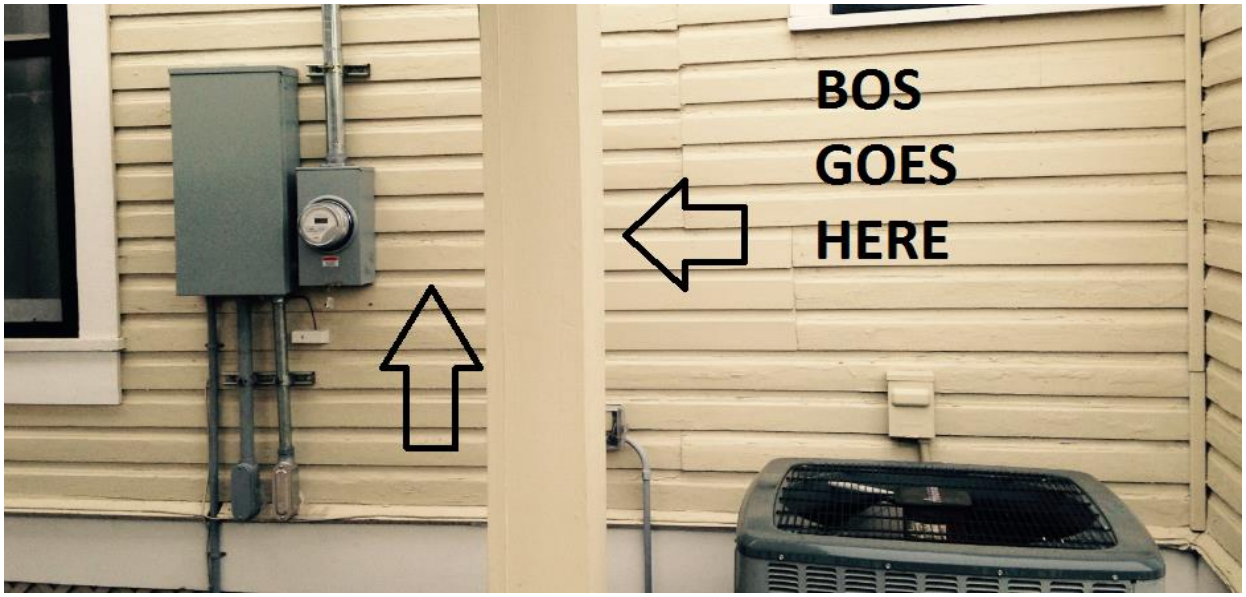

Location of proposed panels

Array	Quantity	Tilt	Azimuth	Pfiefer
1	20	40	96	112 w. Magnolia Ave
2	6	37	186	San Antonio, TX 78212
3	14	40	276	(40) Stion STO 150W
				SE5000A-US (20)SOLAR EDGE

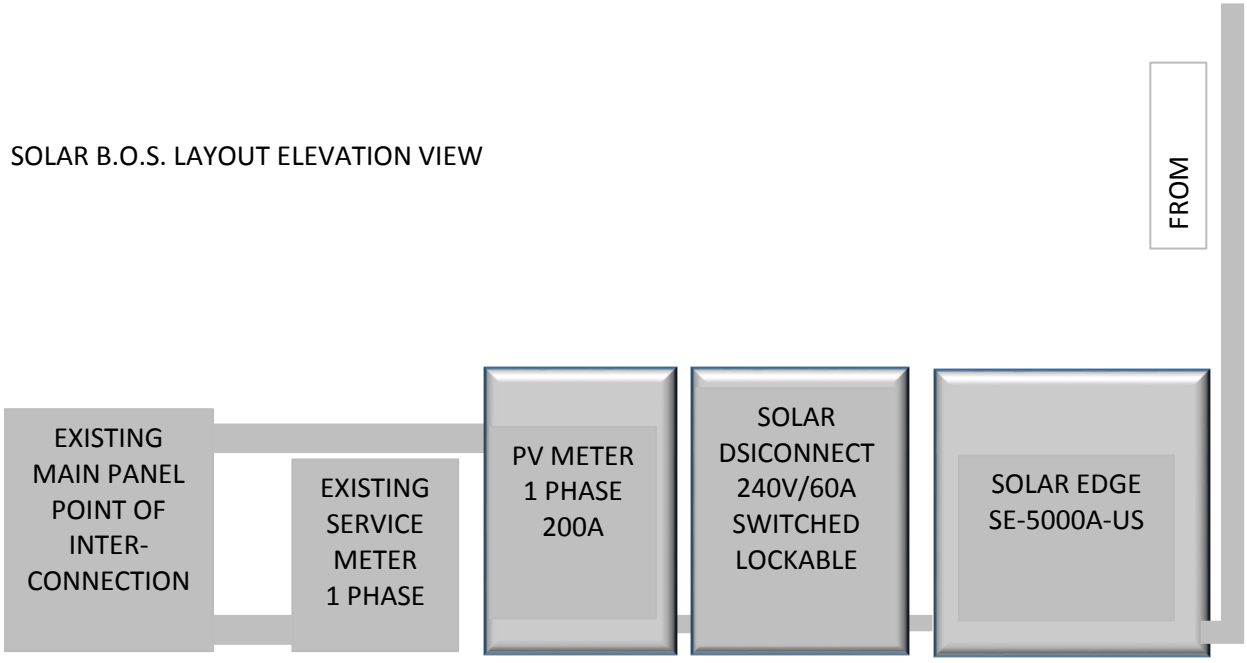


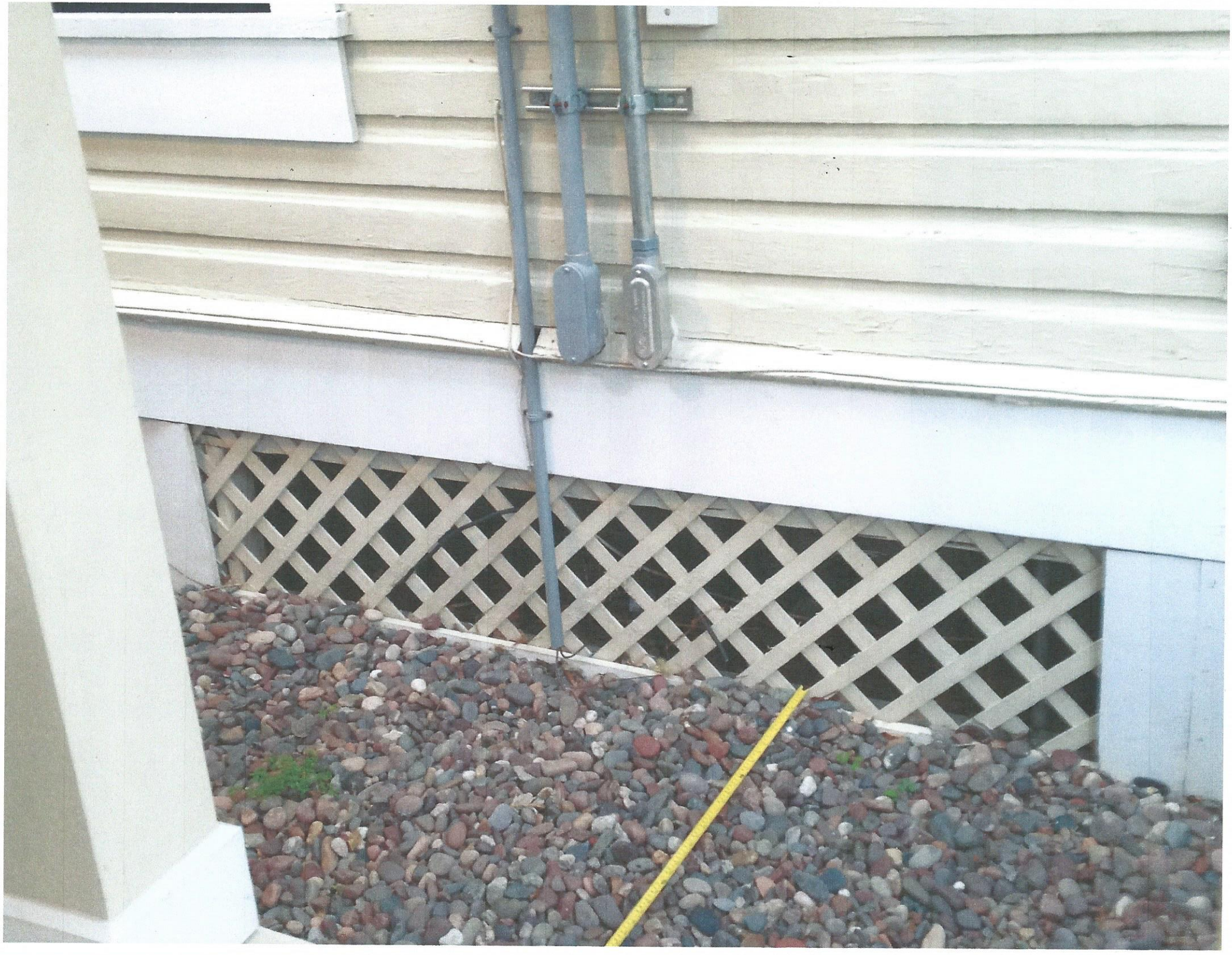
BOS
LOCATED
HERE

SITE ELEVATION VIEW
Pfiefer
112 w Magnolia Dr
San Antonio, TX 78212



SOLAR B.O.S. LAYOUT ELEVATION VIEW





RESIDENTIAL SOLAR SYSTEM DESCRIPTION- 6 KW D/C
(40) STION ELEVATION 150W
(1) SE5000A-US
(20) P405

NOTES:
Notes:
-All Penetrations are flashed and sealed with mastic
-3.5 PSF max deadload contributed from solar panel
-Sol attach system designed to be sufficient to resist wind loads determined in accordance with ASCE-7-10 Minimum Design loads for building and other structures.

ELECTRICAL ONE LINE FOR:
Pfiefer
112 w Magnolia
San Antonio, TX 787212

PV Array # 1: PV Array # 1

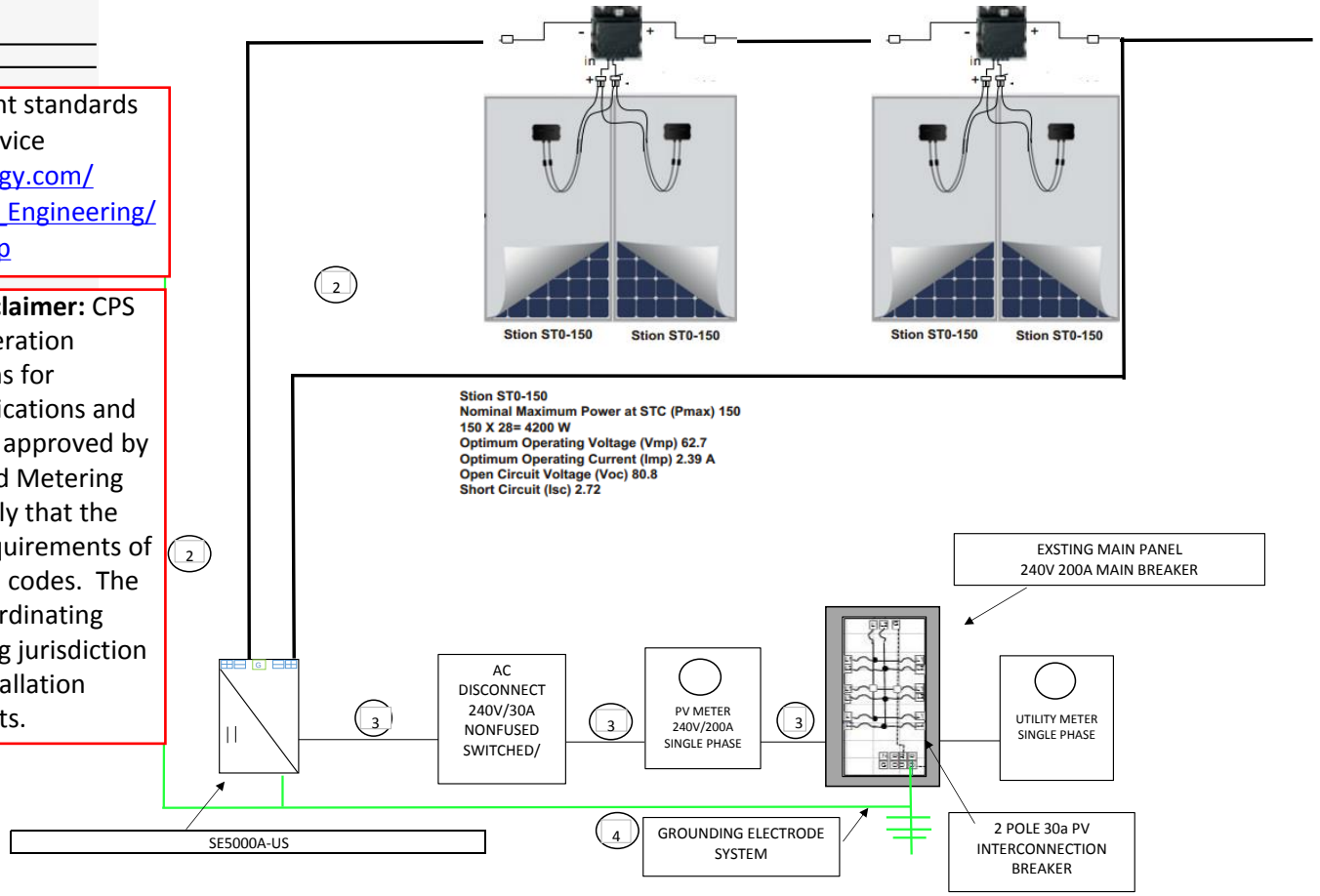
Tilt	Azimuth	Mounting
40°	96°	Co-planar with roof

Stion, STO-150, 150.00 W

Installation must meet all current standards outlined in the 2012 Electric Service Standards. http://www.cpsenergy.com/Developers_Builders/Customer_Engineering/Elec_Serv_Standards_review.asp

CPS Energy's ESMS Review Disclaimer: CPS Energy reviews distributed generation designs including PV installations for adherence to CPS Energy specifications and standards. A drawing or design approved by CPS Energy's Electric Service and Metering Standards Section does not imply that the installation meets minimum requirements of the NEC and or other applicable codes. The Customer is responsible for coordinating with the proper authority having jurisdiction (AHJ) to make sure that the installation meets all minimum requirements.

Max. AC Power Output	5600 @ 208V 6000 @240V
AC Output Voltage Min.-Nom.-Max.* 183 - 208 - 229 Vac	✓
AC Output Voltage Min.-Nom.-Max.* 211 - 240 - 264 Vac	✓
AC Frequency Min.-Nom.-Max.*	9.3 - 60 - 60.5 (w
Max. Continuous Output Current	25 @ 208V 23 @ 240V



LABELS FOR JUNCTION BOXES, COMBINER BOXES, SOLAR LOAD CENTERS, AND DISCONNECTS:
LABEL FOR A SERICEABLE PANELS:"WARNING: ELECTRICAL SHOCK HAZARD. DO NOT TOUCH THE TERMINALS. TERMINALS ON BOTH THE LINE & LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION"
LABEL FOR SOLAR AC DISCONNECT:
"SOLAR AC DISCONNECT"
LABEL FOR SOLAR BREAKER:

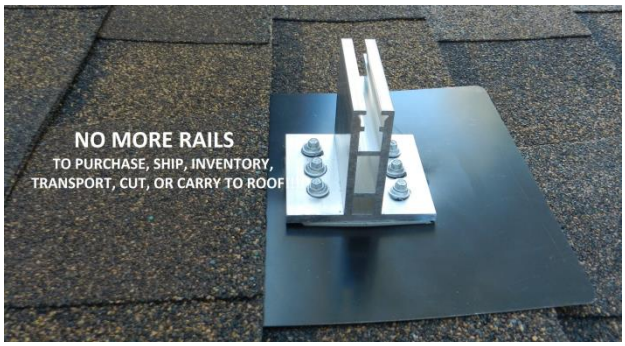
LABEL FOR LOAD BOX "SECOND SOURCES IS A PHOTOVOLTAIC SYSTEM"
LABEL FOR LOAD BOX:"OPERATING VOLTAGE:240V
MAXIMUM SYSTEM DC VOLTAGE:562V
NOMINAL SYSTEM AC VOLTAGE:240V
MAXIMUM SYSTEM DC CURRENT:13.6A
MAXIMUM SYSTEM OUTPUT CURRENT:22A
LABEL FOR SERVICE METER:THIS SERVICE METER IS ALSO SERVICED BY A PHOTOVOLTAIC SYSTEM

1- #6 EQUIPMENT GROUND, #10 USE-2 OPEN AIR, (4)#10-THWN-2 3/4"
2- #10 THWN-2 in 3/4" EMT (2 POS., 2 NEG, 1), GROUND #6
3- (1) #8 THWN-2, (2) #8THWN-2, #6 GROUND, in 3/4" EMT
4-#6 GROUNDING ELECTRODE CONDUCTOR

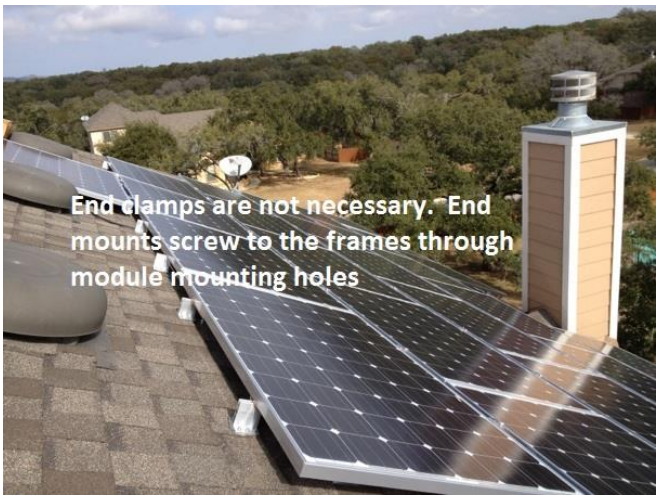
Sol Attach, LLC
Patent Pending

The Sol Attach tilted roof mounting system is the most efficient mounting system in the solar industry. With only one piece to purchase, transport, inventory, and install, you will save time and money. The sleek design will ensure an aesthetically pleasing solar installation. These mounts use 85% less aluminum than conventional rail systems, reducing impact on the environment.

Composition Roof



- **Mounts to decking, not rafters.**
- **PE Stamped certifications available for all fifty states, including coastal regions up to 200 mph.**
- **LOWER COST: Save up to 50% over conventional rail systems.**
- **No more rails to purchase, ship, inventory, deliver, cut, or haul to roof.**
- **Fast: installs in HALF the time of conventional rail systems reducing installation costs.**
- **Available in 3 finishes: mill (standard); anodized (extra corrosion-resistant), and Marine-grade black (best corrosion-resistance).**



- **Uses conventional mid-clamps.**
- **No need for end-clamps.**
- **Top down bolt eliminates unsightly bolt ends sticking up above clamps**
- **Provides optimum air space under the module for more efficient production**
- **LIGHTWEIGHT: Mount only weighs 0.65 lbs.**
- **Better load distribution, fewer obstructions, and less weight make it safer for the roof.**

Sol Attach, LLC

Composition roof mounting foot

Extrusions made of 6061-T6 alloy

Patent Pending

2009 IRC, IBC, and ASCE 7-10 compliant