

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND

BUILDING PERMIT

This is to certify that JANICE J RAVIV

Located At 60 MABEL ST

Job ID: 2012-08-4716-ALTR

CBL: 180- D-015-001

has permission to install 18 ground mounted solar panels (Two Family Residence).
provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

08/31/2012

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
PENALTY FOR REMOVING THIS CARD

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.


- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**
 1. Footings/Setbacks prior to pouring concrete
 2. Close In: Electrical and Plumbing
 - a. Note: Separate electrical permit required
 3. Final Inspection

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No: 2012-08-4716-ALTR	Date Applied: 8/15/2012	CBL: 180- D-015-001	
Location of Construction: 60 MABEL ST	Owner Name: JANICE & GIL RAVIV	Owner Address: 60 MABEL ST PORTLAND, ME 04103	Phone: 207-253-5353
Business Name:	Contractor Name: Martin Simpson	Contractor Address: 59 Mabel St., Portland, ME 04103	Phone: 207-450-7579
Lessee/Buyer's Name:	Phone:	Permit Type: BLDG - Building	Zone: R-5
Past Use: Two family	Proposed Use: Same – two family- install 18 ground mounted solar panels – area 32.6' x 10' 10.5"	Cost of Work: 14000.00	CEO District:
		Fire Dept: <input type="checkbox"/> Approved <input type="checkbox"/> Denied <input type="checkbox"/> N/A	Inspection: Use Group: R3 Type: U NEC MUGGS Signature: 
Proposed Project Description: Install ground mountes solar panel array		Pedestrian Activities District (P.A.D.)	
Permit Taken By: Gayle		Zoning Approval	

<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building Permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.</p>	Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetlands <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan <input type="checkbox"/> Maj <input type="checkbox"/> Min <input type="checkbox"/> MM Date: <i>Drwl condition 8/15/12</i> <i>AKU</i>	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date:	Historic Preservation <input checked="" type="checkbox"/> Not in Dist or Landmark <input type="checkbox"/> Does not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date: <i>AKU</i>
	CERTIFICATION		

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the appication is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
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RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE	DATE	PHONE
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R.S.

2012 - 08 - 47 16

Gayle



General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: 60 MABEL ST., PORTLAND, ME 04103		
Total Square Footage of Proposed Structure/Area 257	Square Footage of Lot 11,300	Number of Stories 3
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# 180 D 015	Applicant: (must be owner, lessee or buyer) Name GIL RAVIV Address 60 MABEL ST City, State & Zip PORTLAND, ME 04103	Telephone: 207-253-5353
Lessee/DBA RECEIVED AUG 15 2012 Dept. of Building Inspections City of Portland Maine	Owner: (if different from applicant) Name Address City, State & Zip	Cost of Work: \$14,000 C of O Fee: \$ Historic Review: \$ Planning Amin.: \$ Total Fee: \$
Current legal use (i.e. single family) <u>TWO FAMILY</u> Number of Residential Units <u>2</u> If vacant, what was the previous use? Proposed Specific use: Is property part of a subdivision? <u>NO</u> If yes, please name Project description: <u>INSTALL GROUND MOUNTED SOLAR PANEL ARRAY;</u> <u>18 PANELS TOTAL.</u>		
Contractor's name: <u>MARTIN SIMPSON</u>		Email: <u>msimpsondesign@gmail.com</u>
Address: <u>59 MABEL ST. PORTLAND, ME 04103</u>		Telephone: <u>207-450-7579</u>
City, State & Zip: <u>PORTLAND, ME 04103</u>		
Who should we contact when the permit is ready: <u>MARTIN SIMPSON</u>		Telephone:
Mailing address: <u>SAME</u>		

Please submit all of the information outlined on the applicable checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

and I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature: [Signature] Date: 8/15/12

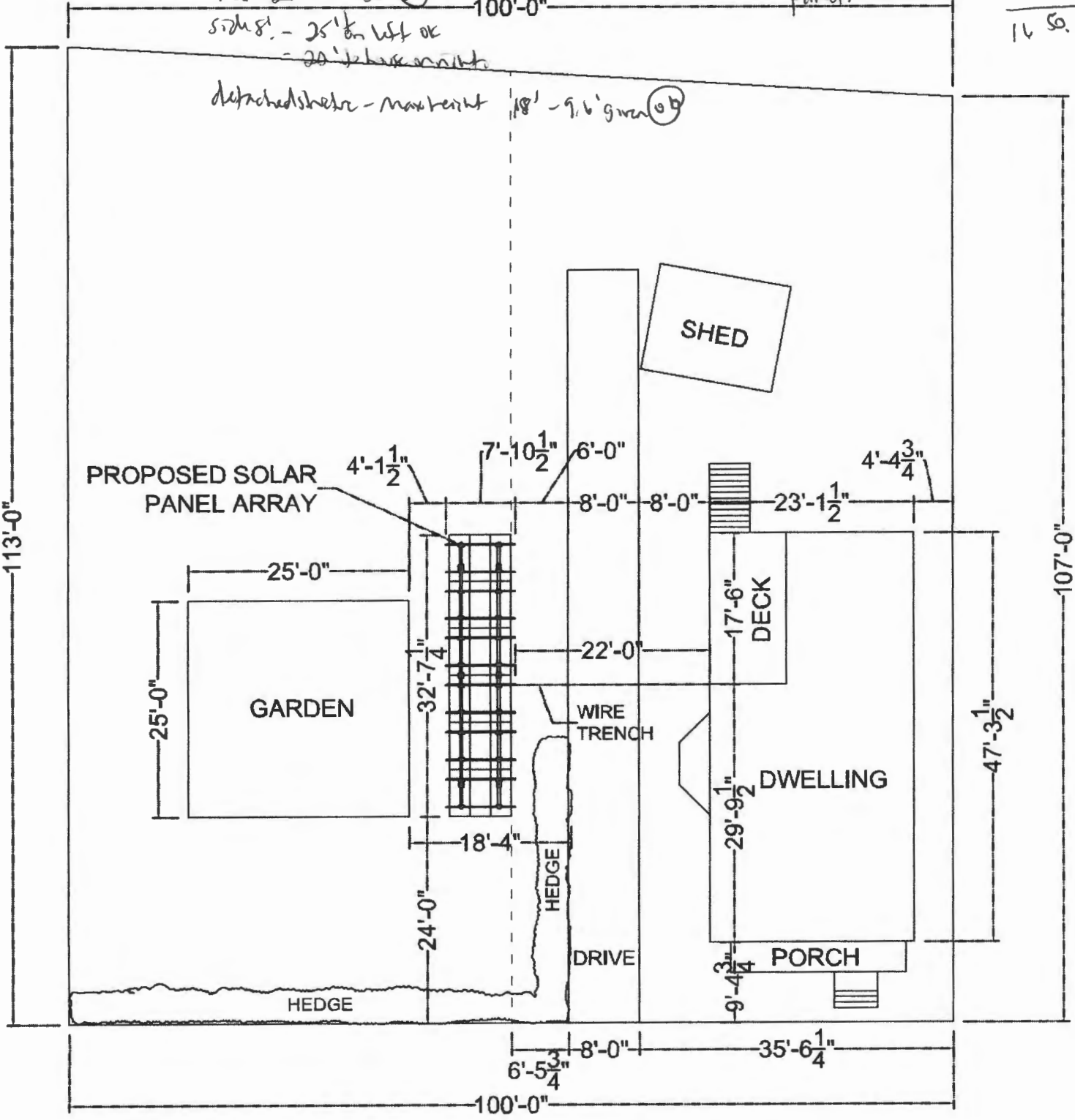
This is not a permit; you may not commence ANY work until the permit is issued

R-5 zone

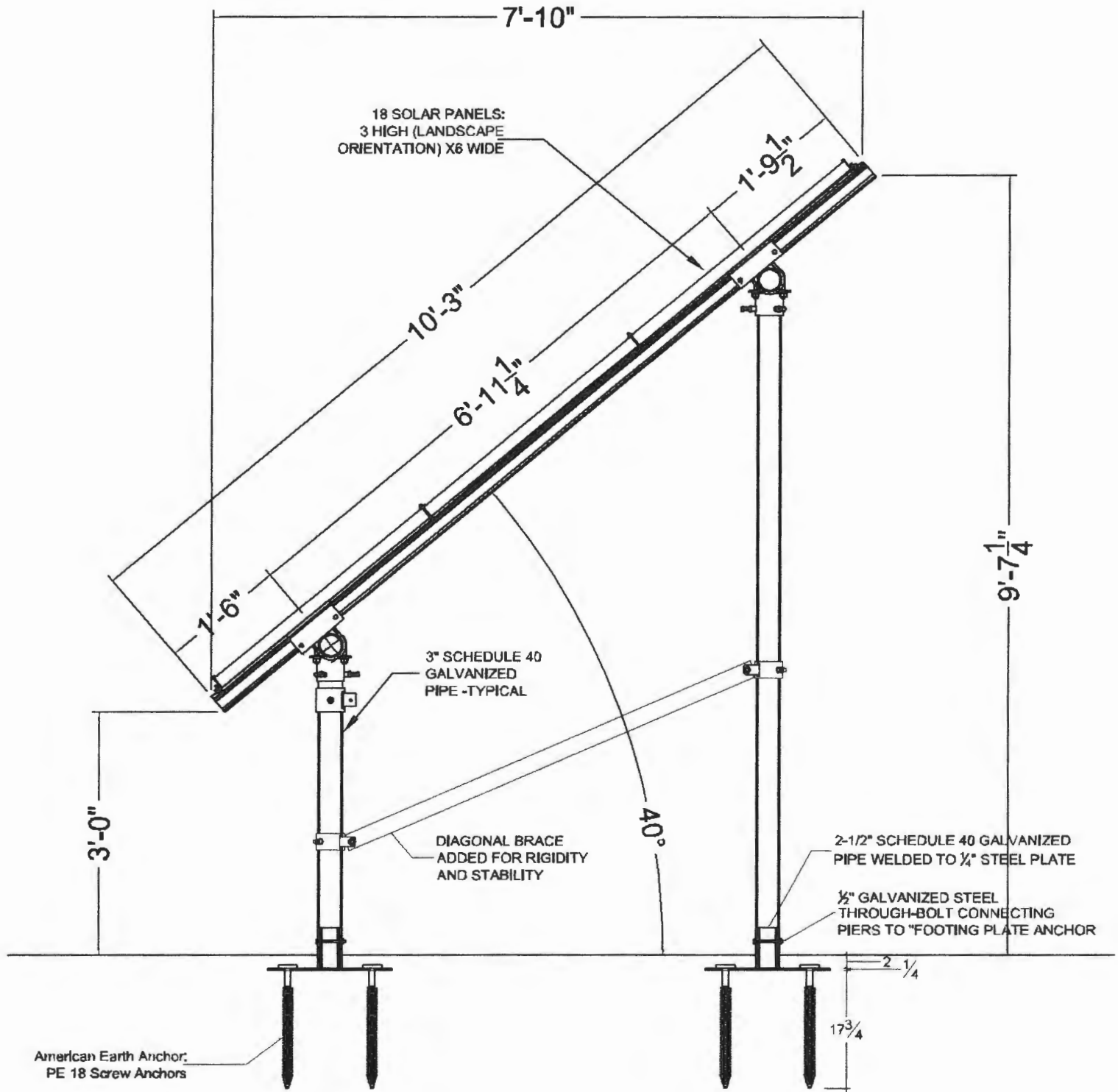
lot coverage - 40% = 4,386.4

lot size 10966
front 20' rear - 24' given
rear 20' - ~ 50' given

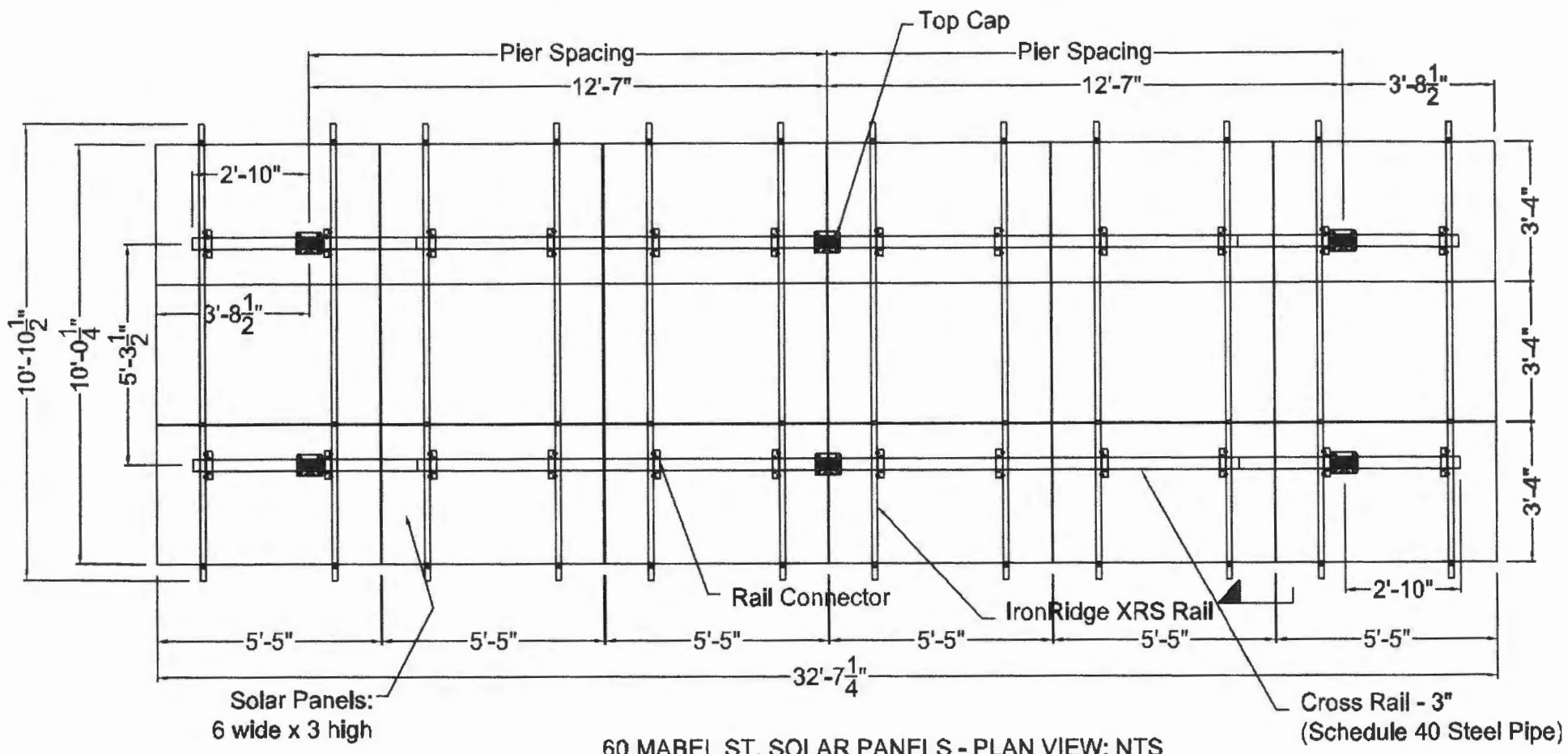
have 1072 sq ft
shed - 224 sq ft
panels - 32.6' x 10.875' = 354.5
14 sq. ft.

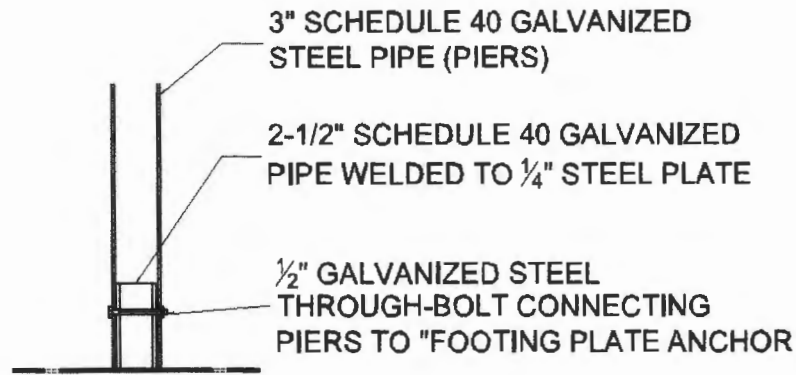


60 MABEL STREET - PLOT PLAN OF PROPOSED GROUND MOUNTED SOLAR ARRAY - NTS

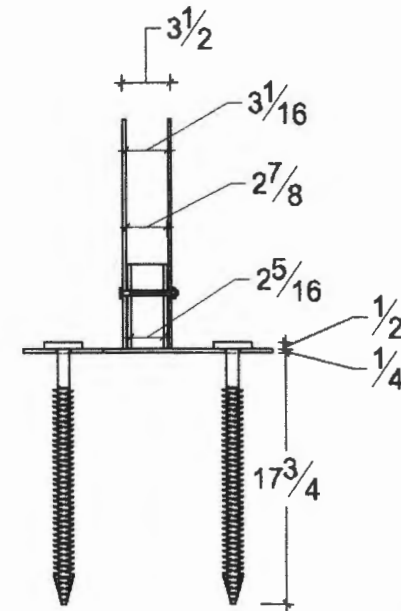


**SECTION SHOWING STEEL FOOTING PLATE ANCHOR
AND "PE 18 SCREW ANCHORS" - NTS**

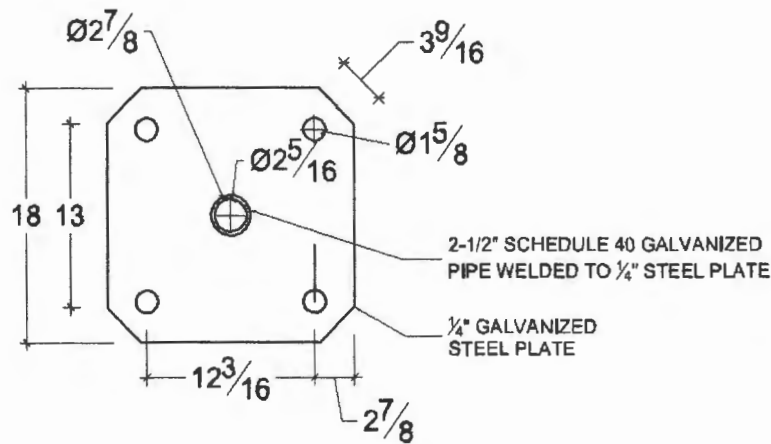




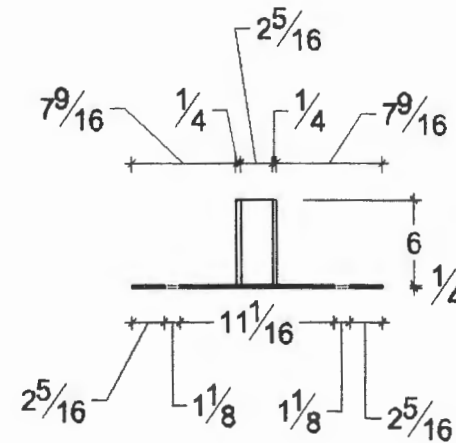
DETAIL OF PIER THROUGH-BOLTED TO "FOOTING PLATE ANCHOR- NTS



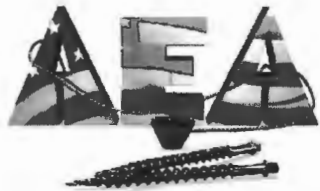
DETAIL OF PIER THROUGH-BOLTED TO "FOOTING PLATE ANCHOR- NTS



FOOTING PLATE ANCHOR: PLAN VIEW - NTS



FOOTING PLATE ANCHOR: SECTION - NTS



Penetrator Screw Anchors

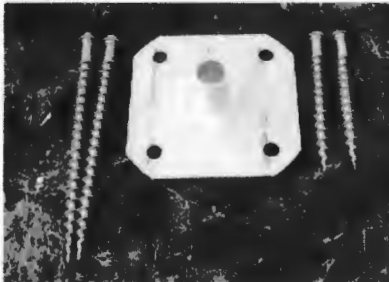
Replace Concrete Footings

Footing Plate Anchor 18" square aluminum plate with a 3" schedule 40 aluminum pipe welded in the middle to receive the structure's leg and is predrilled with holes to accommodate two to four PE18's or PE 26's. Just insert the post in the pipe, match-drill a hole in the post through the pre-drilled hole in the pipe and secure the structure with a bolt. This assembly can be hidden by installing below grade.

Tested In Class 2 Soil

2X) PE18 anchors held 1,200 lbs

4X) PE18's held 2,300 lbs



18" square aluminum plate with PE26 or PE18 Penetrators



Penetrators Installed With An Impact Wrench or T-Handle.

PE18's With 1" Hex and 1/2" Square Drive Shown



18" Footing Plate Installed With 2" Schedule 40 Galvanized Post



Footing plate Installed 3" Below Ground

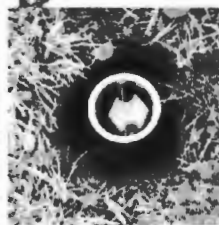
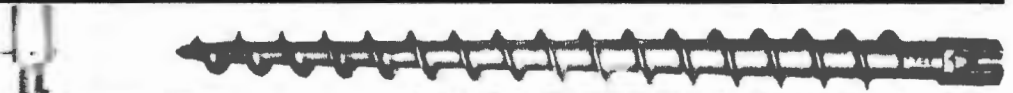
Loose Fit Of Sleeve Helps With Minor Alignment Adjustments In The Field

PE46- Pole Anchor

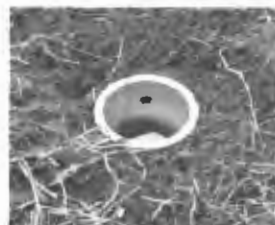


PE46 Installation With 2" Socket AEA 12V Hydraulic Installer Or

Use PTO Tractor, Bobcat ETC



PE46-Guy Installed With Aluminum Sleeve Bolted Through Anchor Cable Slot



Match-Drill A Hole In The Post Through The Pre-Drilled Hole In The Sleeve And Secure With A Bolt



- Pull Tested Over 4,000 Lbs In Class 2 Soil
- The Anchor Will Support The Same As Pull Test
- Different Sleeves Available
- Loose Fit Of Sleeve Helps With Minor Alignment Adjustments

AMERICAN EARTH ANCHORS INC

Office: 866-520-8511 508-520-8511

Sales@americanea.com www.americanea.com

20 Grove Street #6 Franklin, MA 02038

MATERIAL SAFETY & DATA SHEET

PRODUCT AND COMPANY IDENTIFICATION

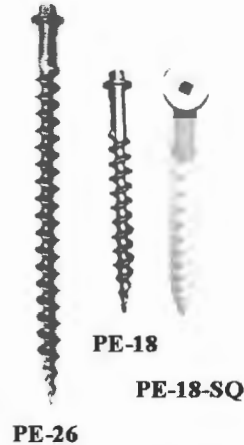
PRODUCT NAME: Penetrator Screw Anchor
PRODUCT CODES: PE18, PE18-SQ, PE26
MANUFACTURER: American Earth Anchors, Inc
ADDRESS: 20 Grove Street #6, Franklin, MA 02038
EMERGENCY PHONE: (866) 520-8511 or (508) 520-8511
FAX PHONE: (508) 520-1252
PRODUCT USE: Screw Anchor - Earth Anchoring



COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: 356 Aluminum - Heat Treated T6
 356 aluminum is the industry standard and is considered aircraft quality.
NOTES: ** There are no coatings on the aluminum anchors
 *** Source the Aluminum data book Reynolds Metals Co.

Tension	Ultimate Strength (2) psi	33,000
Tension	Yield Strength (set 0.2%)psi	24,000
Tension	Elongation in 2"	3.5
Compression	Yield (3) Strength (set 0.2%)psi	25,000
Hardness	Brinell(2)500kg load 10-mm Ball	70
Shear	Shearing strength psi	26,000
Fatigue	Endurance(1) limit psi	8500



"Ultimate shear strength of the anchor shaft is 20,000-lb. Note: This is a property of the anchor itself. The resistance to a shear load of the installed anchor is a function of the soil, site conditions and anchor installation."

When it is intended to load a PE18 or PE26 Penetrator in a manner other than vertically then the anchor should be installed so that it is aligned with the load at a maximum of 30-degrees

Plate Thickness	1/4"	1/2"	3/4"
Drill Hole	1-1/2"	1-5/8"	1-5/8"

Plate Installation Hole Size

Anchor Size	Minimum Vertical Depth - Feet	Pullout Resistance In Pounds				
		Hard Pan Soil	Class 1 Soil Dense Sand & Gravel	Class 2 Soil Medium Sandy Gravel	Class 3 Soil Loose Medium To Fine Sand	Class 4 Soil Loose Fine Uncompacted Sand
26" Penetrator	26"	4,500	3,100	1,100	630	360
18" Penetrator	18"	2,500	1,700	600	350	200



(4) PE18 or PE26 Tower Guying



US Cellular



Flood Barrier

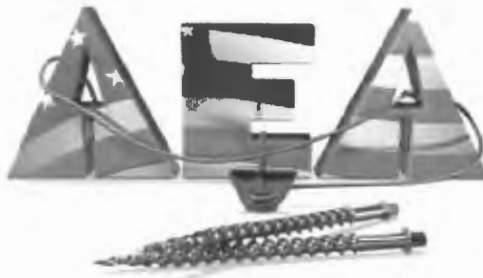


2" Pipe / PVC Bracket



Z - Bracket

American Earth Anchors Inc

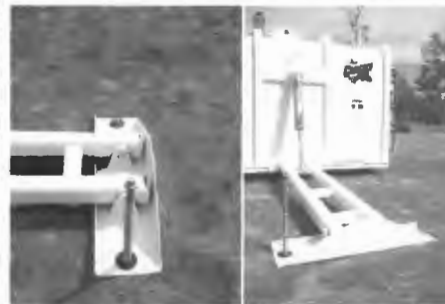


THE PE18 & PE26 PENETRATOR RE-USABLE SCREW ANCHOR

- Developed Specifically For The US Army
- Re-Usable Screw Earth Anchor
- High Quality , Lightweight, Heat Treated Aluminum
- PE18 - 18" Long Holds Up To 2,500 lbs - Comes With 1" Hex Head or 1/2" Square Drive Flat Head
- PE26 - 26" Long Holds Up To 4,500 lbs - Comes With 1" Hex Head
- 2" Wide Cast In Lip And Tie Off Cable Makes Guying Or Tying Off Exceptionally Easy
- All Are Easy To Install With Either An Impact Wrench Or Ratcheting T-Handle
- The Heads Are Tested Up To 450 FT LBS Of Torque



Impact Wrench



T-Handle

APPLICATIONS

OUR CUSTOMERS HAVE USED THE PENETRATORS FOR SECURING:

Solar Panels - Enclosures - Shelters - Portable Buildings - Sheds - Towers - Winches
Antennas - Canopies - Carports - Sports Goals - Inflatable Play Structures - Fencing -
Playground Equipment - Air Conditioners - Portable Shelters - Construction Equipment
MUCH MORE!

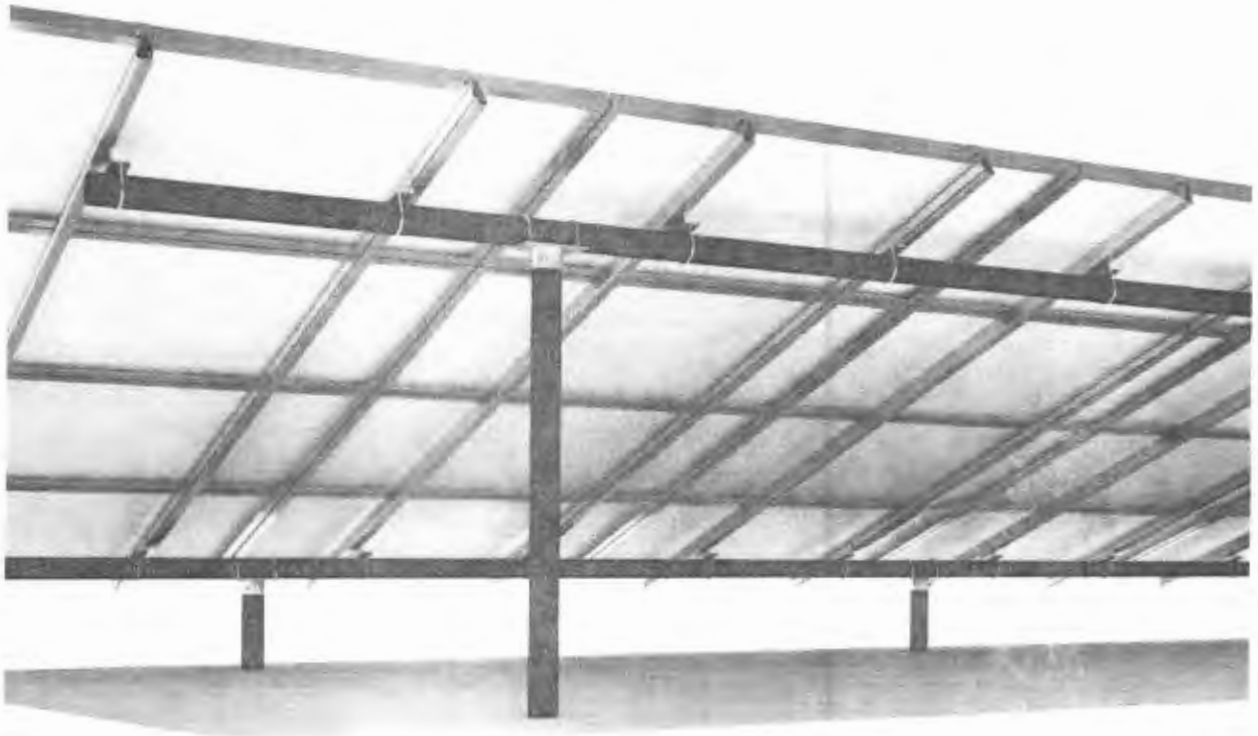
American Earth Anchors Inc

Phone: 508-520-8511 Toll Free: 866-520-8511 Fax: 508-520-1252 E-mail: Info@americanea.com www.americanea.com

American Earth Anchors is a producer of high quality innovative anchoring products and accessories for the military, commercial, government and residential markets.

IRONRIDGE Ground Mounts

Engineering Design Guide



Project Report



Project Details

Name Martin Simpson
Module Siliken: SLK60P6L 255
Dimensions 39.0" x 64.6" x 1.6"
Tilt 40°

Date 2012-08-08
Total Modules 18
Total Watts 4,590

Load Assumptions

Wind Exposure B
Wind Speed 90 mph
Snow Load 60 psf

Foundation Requirements

Type Concrete
Hole Diameter 12"
Min. Hole Depth 84"

SubArray Requirements

Pipe Size 3"
Diagonal Bracing Yes

Foundation Loads

Shear 1,865
Moment 0
Uplift -1,528

Project Layout

Subarray	Repeats	Configuration	Piers	SubArray Size	EW Pier Spacing	NS Pier Spacing	Edge Clearance	South Pier AGL / Length	North Pier AGL / Length
1	1	3x6	6	9' 9" x 32' 3"	12' 7"	7' 6"	2' 5"	2' 6" / 7' 2"	8' 10" / 13' 6"

3rd Party Substructure Materials

Subarray	Repeats	Piers	South Piers	North Piers	Cross Rails	Total
1	1	6	3 x 7' 2" (21' 6")	3 x 13' 6" (40' 5")	2 x 32' 3" (64' 7") Total Pipe	126' 5" 126' 5"

Bill of Materials

Part No.	Description	Spares Qty.	MSRP Ea	Price
51-7000-168A	Rail, XRS at 168" (14 Feet), Clear	0Edit 12	\$100.80	\$1,209.60
70-0300-CBR	SGA 3" Brace Assembly	0Edit 3	\$240.00	\$720.00
29-7001-000	SGA Rail Connector at 3"	0Edit 24	\$20.00	\$480.00
70-0300-SGA	SGA Top Cap at 3"	0Edit 6	\$70.00	\$420.00
29-4000-002	WEEB Grounding Lug (WEEB-LUG-6.7)	0Edit 12	\$10.00	\$120.00
29-7000-157	4-pack, End Clamp (C) 1.57", Mill	0Edit 6	\$14.00	\$84.00
29-70TB-101	Kit, 4pcs, Mid Clamp C, 2.25", Mill (Tbolt)	0Edit 6	\$11.00	\$66.00
29-4000-001	WEEB Compression Clip (WEEB-DMC)	0Edit 24	\$2.10	\$50.40
29-4000-099	End Cap, XRS Rail, Molded PVC Black, Polybag 20	0Edit 2	\$17.00	\$34.00
29-4000-077	Wire Clips, Molded PVC Black, Polybag 20	0Edit 2	\$14.00	\$28.00
			Total Price Ext	\$3,212.00
			Price/ Watt	\$0.70
			Total Weight	309 lbs

US prices only

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PORTLAND MAINE

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Receipts Details:

Tender Information: Check , BusinessName: Gilead Raviv, Check Number: 491

Tender Amount: 160.00

Receipt Header:

Cashier Id: gguertin

Receipt Date: 8/15/2012

Receipt Number: 47139

Receipt Details:

Referance ID:	7651	Fee Type:	BP-Constr
Receipt Number:	0	Payment Date:	
Transaction Amount:	160.00	Charge Amount:	160.00
Job ID: Job ID: 2012-08-4716-ALTR - Install ground mountes solar panel array			
Additional Comments: 60 Mabel St. Giulead Raviv			

Thank You for your Payment!