# HISTORIC LANDMARK COMMISSION STAFF REPORT

# Gibson Solar Panels
# Minor Alterations
# PLNHLC2014-00605
# 738 South 600 East
# Meeting Date: November 6, 2014

Planning and Zoning Division
Department of Community and Economic Development

**Applicant:** Ken Gardner of Gardner Engineering

**Staff:** Tracy Tran at (801) 535-7645 or tracy.tran@slcgov.com

**Tax ID:** 16-07-231-026

**Current Zone:** RMF-30 (Low Density Multifamily Residential)

**Master Plan Designation:** Low Density Residential (1-15 dwelling units per acre)

**Council District:** District 4 represented by Luke Garrott

**Lot Size:** Approximately 5,227 square feet

**Current Use:** Single Family

**Applicable Land Use Regulations:**
- 21A.34.020
- 21A.40.190

**Notification**
- Notice mailed on October 23, 2014
- Agenda posted on the Planning Division and Utah Public Meeting Notice websites on October 23, 2014
- Sign posted on the property on October 24, 2014.

**Attachments**
A. Proposed Plans
B. Photos

## *Request*

The applicant Ken Gardner, representing the property owner Bryan Gibson, is requesting approval from the City to locate a small solar energy collection system on the roof of the front gable of a single-family residence located in the Central City Historic District.

This type of project must be reviewed as Minor Alteration by the Historic Landmark Commission as is it for a photovoltaic system which may be visible from a public right of way.

## *Staff Recommendation*

Staff recommends that the Historic Landmark Commission review the application, and approve the location of the proposed small solar energy collection system pursuant to the findings, analysis and conditions of approval in this staff report.

## *Potential Motions*

**Consistent with Staff Recommendation:** Based on the analysis and findings listed in this staff report, testimony and the proposal presented, I move that the Commission approve the request for a minor alteration for the installation of a small solar energy collection system on the roof of the front gable and visible from the public right-of-way for the residence at 738 South 600 East. Specifically, the Commission finds that the proposed project complies with the review standards.

-or-

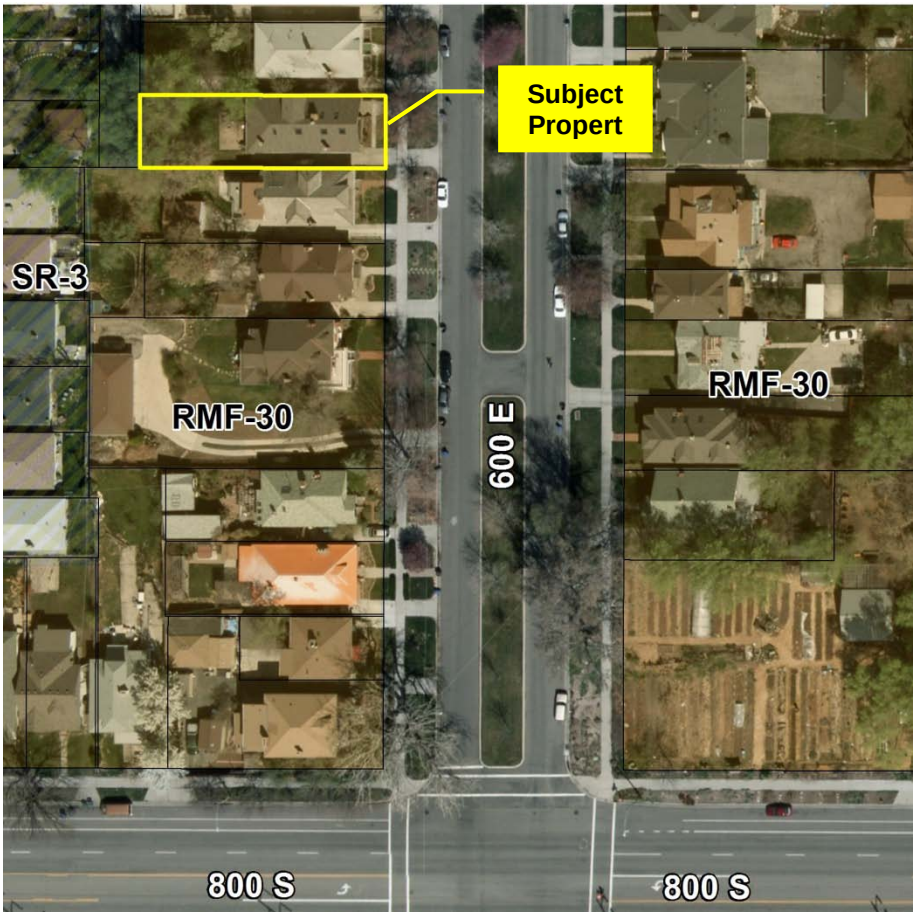
**Not Consistent with Staff Recommendation:** Based on the testimony and the proposal presented, I move that the Commission deny the request for a minor alteration for the installation of a small solar energy collection system on the roof of the front gable and visible from the public right-of-way the residence at738 S 600 East based on the following findings (Commissioner then states findings based on the Standards to support the motion):

1. A property shall be used for its historic purpose or be used for a purpose that requires minimal change to the defining characteristics of the building and its site and environment;

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided;

| | |
|---|---|
| | 3. All sites, structures and objects shall be recognized as products of their own time. Alterations that have no historical basis and which seek to create a false sense of history or architecture are not allowed;<br><br>4. Alterations or additions that have acquired historic significance in their own right shall be retained and preserved;<br><br>5. Distinctive features, finishes and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved;<br><br>6. Deteriorated architectural features shall be repaired rather than replaced wherever feasible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, texture and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historic, physical or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other structures or objects;<br><br>7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible;<br><br>8. Contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant cultural, historical, architectural or archaeological material, and such design is compatible with the size, scale, color, material and character of the property, neighborhood or environment;<br><br>9. Additions or alterations to structures and objects shall be done in such a manner that if such additions or alterations were to be removed in the future, the essential form and integrity of the structure would be unimpaired. The new work shall be differentiated from the old and shall be compatible in massing, size, scale and architectural features to protect the historic integrity of the property and its environment;<br><br>10. Certain building materials are prohibited including the following:<br>a. Aluminum, asbestos, or vinyl cladding when applied directly to an original or historic material.<br><br>11. Any new sign and any change in the appearance of any existing sign located on a landmark site or within the H historic preservation overlay district, which is visible from any public way or open space shall be consistent with the historic character of the landmark site or H historic preservation overlay district and shall comply with the standards outlined in chapter 21A.46 of this title. |

## *Vicinity Map*




## *Background and Project Description*

The subject property located at 738 South 600 East is considered a contributing historic property in the Central City Historic District. The residence is classified in the most recent survey as a Bungalow/Craftsman that was built in 1918. The house has a large gable at the front and is covered with asphalt shingles. This large gable at the front is the location where the small solar

energy collection system is proposed to be located. The proposed solar panels will be located on the south side of the gable, near the front of the home. They will also be located three feet back from the face of the gable roof feature. The southern gable of the roof also contains two existing chimneys and four skylights. The chimneys and the skylights will all remain and will not be moved. The applicant has considered these elements and the solar panels will be placed around these elements.

The applicant is requesting to place a total of 18 solar panels on the roof. The total area of all 18 solar panels is approximately 326 square feet. Each panel has an area of approximately 18.1 square feet. The panels will all be mounted in the same direction and be as symmetrical as possible along the roof. The panels themselves are only about 1½ inches thick, but will project above the roof approximately 4½ inches with the mounting bracket. The panels will be black in color and the color of the roofing material is gray.

This southern facing location near the eastern portion of the roof was chosen as it receives optimal sun exposure for the small solar energy collection system. This location will maximize the amount of sun from the south and the west. Staff discussed moving the solar array towards the rear of the same roof gable so they are a little less visible from the street, but the applicant stated that because of shade from the trees to the west and the south, this was the most effective area for the small solar energy collection system.

## *Public Comments*

As of the date this staff report was published, staff has received 1 phone call in support of the proposed project.

Any additional comments received prior to the meeting will be forwarded to the members of the Historic Landmark Commission.

## *Zoning Ordinance Standards and Priorities*

**21A.40.190.A – Small Solar Energy Collection Systems Standards**

1. Setbacks, Location, and Height:
    a. A small solar energy collection system shall be located a minimum of six feet from all property lines and other structures, except the structure on which it is mounted.

        **Analysis:** The proposed small solar energy collection system is proposed to be located on the roof of the existing residence. The residence itself is located approximately eight feet from the property line. The location of the system will not overhang the roof and will not encroach into any front, side or rear lot area. As long as the system is mounted on the main structure, it is allowed to be less than six feet from the property if it is determined by the Historic Landmark Commission to meet all other standards of the ordinance.

**Finding:** This standard will be met if the proposed small solar energy collection system is found to comply with other applicable sections of the Zoning Ordinance.

b. A small solar energy collection system may be located on an accessory structure including legal accessory structures located less than six feet from a property line.

**Analysis:** The proposed small solar energy collection is located on the primary structure. The subject property does not have any accessory structures located on it where the small solar energy collection system could be located.

**Finding:** This standard is not applicable.

c. A small solar energy collection system shall not exceed by more than three feet the maximum building height (based on the type of building – principal or accessory - the system is located on) permitted in the zoning district in which it is located or shall not extend more than 12 feet above the roofline of the structure upon which it is mounted, whichever is less.

**Analysis:** The proposed small solar energy collection system is proposed to be mounted as flush with the roof as possible, parallel to the roof plane, below the ridge of the roofline, and will be placed around the existing chimneys and skylights. The solar panels themselves will project approximately four and a half inches above the roof, but not above the roof ridge. In addition, the existing one and a half story residence is well below the maximum height of 30 feet for the zoning district.

**Finding:** This standard is met.

d. A development proposed to have a small solar energy collection system located on the roof or attached to a structure, or an application to establish a system on an existing structure, shall provide a structural certification as part of the building permit application.

**Analysis:** The applicant will need to submit all necessary documentation for the installation and structural details for the proposed small solar energy collection system.

**Finding:** This standard will need to be met should the request be approved and a building permit is applied for.

2. Coverage: A small solar energy collection system mounted to the roof of a building shall not exceed 90% of the total roof area of the building upon which it is installed. A system constructed as a separate accessory structure on the ground shall count toward the total building and yard coverage limits for the lot on which it is located.

**Analysis:** The proposed small solar energy collection system is proposed to be mounted on the main residence and not on an accessory building. The proposed size of the small solar energy collection system is approximately 326 square feet. The total area of the roof where it will be placed is approximately 1,800 square feet. This means that the proposed small solar energy collection system will only be about 18% of the roof area.

**Finding:** This standard has been met.

3. Code Compliance: Small solar energy collection systems shall comply with all applicable building and electrical codes contained in the international building code adopted by Salt Lake City.

**Analysis:** Should the proposed small solar energy collection system be approved, it will need to comply with all applicable codes adopted by Salt Lake City.

**Finding:** This standard will need to be met should the request be approved and a building permit is applied for.

4. Solar Easements: A property owner who has installed or intends to install a small solar energy collection system shall be responsible for negotiating with other property owners in the vicinity for any desired solar easement to protect solar access for the system and shall record the easement with the Salt Lake County Recorder.

**Analysis:** The applicant will be responsible for negotiating with other property owners for any desired solar easements.

**Finding:** This standard is not applicable to the approval of this project.

5. Off Street Parking and Loading Requirements: Small solar energy collection systems shall not remove or encroach upon required parking or loading areas for other uses on the site or access to such parking or loading areas.

**Analysis:** The proposed small solar energy collection system is located on the main residence and is not located upon any required parking area.

**Finding:** This standard has been met.

**21A.40.190.B.3 – Small Solar Collection Systems and Historic Preservation Overlay Districts or Landmark Sites: Small Solar Collection System Location Priorities**

3. Small Solar Collection System Location Priorities: In approving appropriate locations and manner of installation, consideration shall include the following locations in the priority order they are set forth below. The method of installation approved shall be the least visible from a public right of way, not including alleys, and most compatible with the character defining features of the historic building, structure, or site. Systems

proposed for locations in subsections B.3.a through B.3.d of this section, which are not readily visible from a public right of way may be reviewed administratively as set forth in subsection 21A.34.020.F,1, "Administrative Decision", of this title. Systems proposed for locations in subsections B.3.e and B.3.f of this section, which may be visible from a public right of way shall be reviewed by the Historic Landmark Commission in accordance with the procedures set forth in subsection 21A.34.020.F.2, "Historic Landmark Commission", of this title.

a. Rear yard in a location not readily visible from a public right of way.
b. On accessory buildings or structures in a location not readily visible from a public right of way.
c. In a side yard in a location not readily visible from a public right of way.
d. On the principal building in a location not readily visible from a public right of way.
e. On the principal building in a location that may be visible from a public right of way, but not on the structure's front facade.

**Analysis:** The rear yard (west) and accessory building are not feasible locations for the small solar energy collection system because the vegetation in those areas would not provide adequate sun exposure for the solar panels.

The side yard south of the principal building is not an option since that area is used as the driveway and the amount of sun exposure in that area is also limited. The side yard setback on the north side of the principal structure is very minimal and directly next to the driveway of the property to the north; therefore, that space is also not a possibility for solar panels.

Based on the shape of the roof, there is no other location where the panels could be located to meet the sun exposure requirements and not be visible from the public right-of-way. The vegetation to the west (rear) limits the amount of sun exposure for the rear portion of the roof. The remaining options for the solar panels are along either the southern or northern roof gables. The northern gable would not be as optimal as the southern gable in terms of sun exposure.

**Finding:** This application cannot be administratively approved as the preferred locational priorities are not suitable based on the orientation, size and site features of this property as described above.

f. On the front facade of the principal building in a location most compatible with the character defining features of the structure.

**Analysis:** The location of the proposed small solar collection system on the front gable roof which essentially faces the side of the property. The proposed small solar collection system is not located on the front façade of the principal building.

**Finding:** This standard is not applicable.

**21A.40.190.B.2 – Small Solar Collection Systems and Historic Preservation Overlay Districts or Landmark Sites**

1. General: In addition to meeting the standards set forth in this section, all applications to install a small solar collection system within the historic preservation overlay district shall obtain a Certificate of Appropriateness prior to installation. Small solar collection systems shall be allowed in accordance with the location priorities detailed in subsection B.3 of this section. If there is any conflict between the provisions of this subsection B, and any other requirements of this section, the provisions of this subsection B shall take precedence.

   **Analysis:** As noted above in the analysis of the locational priorities, there are some preferred locations for installation of the proposed small solar energy collection system that will not work on this particular property. Staff has noted each of the priority locations and determined the feasibility of each based on location and sun exposure.

   **Finding:** The proposed location, while it is not one of the priority locations, is the best possible location for the proposed small solar energy collection system, in terms of solar access, on the site. Should the application be approved by the Historic Landmark Commission, a Certificate of Appropriateness will be issued.

2. Installation Standards: The small solar energy collection system shall be installed in a location and manner on the building or lot that is least visible and obtrusive and in such a way that causes the least impact to the historic integrity and character of the historic building, structure, site or district while maintaining efficient operation of the solar device. The system must be installed in such a manner that it can be removed and not damage the historic building, structure, or site it is associated with.

   **Analysis:** The proposed location for the small solar energy collection system has been chosen as it is the least visible or obtrusive on the property that will also provide adequate solar access and maintain the efficient operation of the solar panels. While the proposed system is located at the front of the residence, this is the most suitable location for sun exposure for the system. The proposed solar panels will be readily visible from the street particularly if standing towards the southern front corner of the property. However, there are many

big trees located in the public right of ways that may make it less visible for cars driving northward. In addition, the proposed system will be placed on the roof and will not damage the main components of the historic structure. The proposed system could be removed in the future with some damage to the roofing material, but the asphalt shingles are not original to the residence. The shape or character of the gable on which it will be placed will not be affected.

**Finding:** The proposed location of the small solar energy collection system will be the least obtrusive to the historic nature of the residence and property and can be easily removed in the future with minimal impact to the roof, and no impact to the roof structure. This location has also been chosen as it has the best solar access for the system to operate.

**21A.34.020.G – H Historic Preservation Overlay District – Standards for Certificate of Appropriateness for Altering of a Landmark Site or Contributing Structure**

In considering an application for a Certificate of Appropriateness for alteration of a landmark site or contributing structure, the Historic Landmark Commission shall find that the project substantially complies with all of the general standards that pertain to the application and that the decision is in the best interest of the City.

**Standard 1:** A property shall be used for its historic purpose or be used for a purpose that requires minimal change to the defining characteristics of the building and its site and environment;

**Analysis:** The building was constructed in 1918 as a single family home. No change of use is proposed and very little, if any, impact will be made to the characteristics of the home. In the event the proposed small solar collection system damages the roof, it would most likely only damage the roofing material which is not original.

**Finding:** This standard is met.

**Standard 2:** The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided;

*A Preservation Handbook for Historic Residential Properties & Districts in Salt Lake City*
**Design Objective 7.6**
The visual impact of skylights and other rooftop devices should be minimized.

- Skylights or solar panels should be installed to reflect the plane of the historic roof.
- They should be lower than the ridgeline, when possible.
- Flat skylights and solar panels that are parallel with the roof plane may be appropriate on the rear and sides of the roof.
- Avoid locating a skylight or solar panel on a front roof plane wherever possible.

**Analysis:** No historic materials or features are proposed to be altered as part of this request. The proposed small solar collection system will be mounted on the southern roof gable and can easily be removed in the future with little to no impact on the structural integrity of the property. The panels will be located nearly 4 feet from the ridgeline and they will be placed parallel to the roof or approximately 4½ inches off the roof surface. The panels will be approximately 7 ½ inches from the front edge of the gable. The panels are designed to be as flush with the roof as possible. Even though all the panels will be visible from the street on the south sides of the front gable, the options for where to place the panels are limited as previously discussed in order to efficiently produce energy.

**Finding:** Although the proposed placement of solar panels along the south side of the gable roof will be visible from the street, staff finds that the visual impact of the solar panels will be minimized and the historic integrity of the property will not be compromised. The solar panels will be placed parallel to the roof, and no portion of the roof will be altered. Options for other locations are limited due to size or location relative to the sun. This standard is met.

**Standard 3:** All sites, structure and objects shall be recognized as products of their own time. Alterations that have no historical basis and which seek to create a false sense of history or architecture are not allowed.

**Analysis:** The small solar energy collection system is a utility feature and is not being installed in a manner to create a false sense of history or architecture.

**Finding:** This standard is met.

**Standard 4:** Alterations or additions that have acquired historic significance in their own right shall be retained and preserved.

**Analysis:** No significant historic features will be lost.

**Finding:** This standard is met.

**Standard 5:** Distinctive features, finishes and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.

**Analysis:** No significant historic features will be lost as the proposed small solar collection system will be located on the roof and will have very little impact to the roof structure or the character of the property. The property and the structure will continue to remain a historic property that can have the solar panels removed with little to no impact to the property or residence. The proposed small solar collection system will be flush mounted to the roof and will be required to be structurally safe per the building code requirements.

**Finding:** This standard is met.

**Standard 6:** Deteriorated architectural features shall be repaired rather than replaced wherever feasible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, texture and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historic, physical or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other structures or objects.

**Analysis:** The subject proposal does not include repair or replacement of deteriorated architectural features.

**Finding:** This standard is not applicable.

**Standard 7:** Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

**Analysis:** The proposed work does not include any treatments of historic materials.

**Finding:** This standard is not applicable.

**Standard 8:** Contemporary designs for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant cultural, historical, architectural or archaeological material, and such design is compatible with the size, scale, color, material and character of the property, neighborhood or environment.

**Analysis:** Although a minor feature will be added to the roof of the residence, the roof form itself will not be modified or altered. The proposed small solar energy collection system is designed to be flush mounted to have the least amount of visual and structural impact.

In addition, the color of the roof is gray and the panels of the proposed small solar collection system are black. It is entirely possible that the panels will be more visible due to the existing roof color and the color of the panels. However, solar panels typically are a dark color and this is the best location for the system based on maximum sun exposure.

**Finding:** This standard has been met.

**Standard 9:** Additions or alterations to structures and objects shall be done in such a manner that if such additions or alteration were to be removed in the future, the essential form and integrity of the structure would be unimpaired. The new work shall be differentiate from the old and shall be compatible in massing, size, scale and architectural features to protect the historic integrity of the property and its environment.

**Analysis:** The proposed small solar energy collection system can be easily removed without impairing any form and integrity of the structure other than possible damage to the asphalt shingle roofing material.

**Finding:** This standard is met.

**Standard 10:** Certain building materials are prohibited including the following: vinyl, asbestos, or aluminum cladding when applied directly to an original or historic material.

**Analysis:** Small solar energy collection systems are considered an accessory to the building and no original material will be affected.

**Finding:** This standard is not applicable.

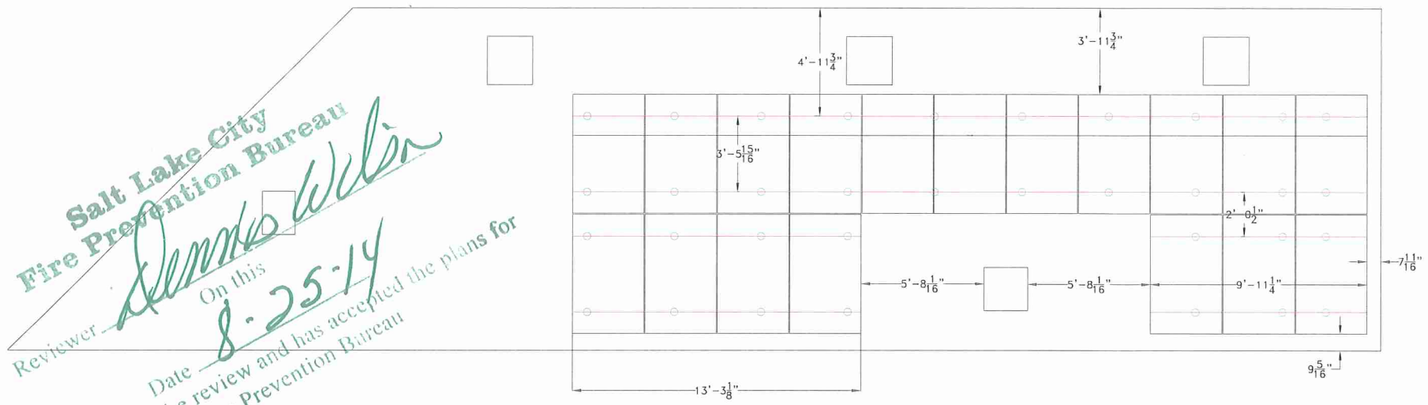
**Standard 11:** Any new sign and any change in the appearance of any existing sign located on a landmark site or within the H historic preservation overlay district, which is visible from any public way or open space shall be consistent with the historic character of the landmark site or H historic preservation overlay district and shall comply with the standards outlined in part IV, Chapter 21A.46 of this title;

**Analysis:** No signs are proposed.

**Finding:** This standard is not applicable.

# Attachment A

Proposed Plans




18 - "SOLARWORLD" 270 WATT SOLAR MODULES
18 -250 WATT "ENPHASE" MICRO-INVERTERS
(UNGROUND MICRO-INVERTERS)

STRUCTURAL CALCULATIONS

120 MPH WIND - 30 PSF PRESSURE
18 MODULE X 18.1 SF PER PANEL = 326 SF
326 X 30 PSF = 9,780 POUNDS OF FORCE

5/16" LAG BOLT RESISTANCE = 235 POUNDS PER INCH DEPTH
( FACTOR OF SAFETY OF 1.6)
ASSUME 2" LAG BOLT PENETRATION
LAG BOLT FORCE = 2 X 235 = 470 POUNDS PER BOLT

LAG BOLT COMBINED RESISTIVE FORCE
34 X 470 = 15,980 POUNDS RESISTIVE FORCE

LAG BOLTS PROVIDE OVER 1.63 TIMES RESISTING FORCE
3.3 PSF ROOF LOADING LESS THAN 5 PSF OK!

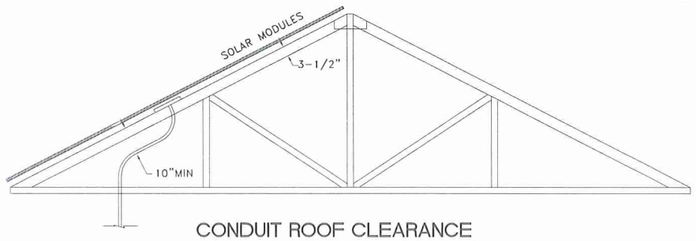

PROJECT LOCATION
738 SOUTH 600 EAST
SALT LAKE CITY, UTAH



FLASHING DETAIL

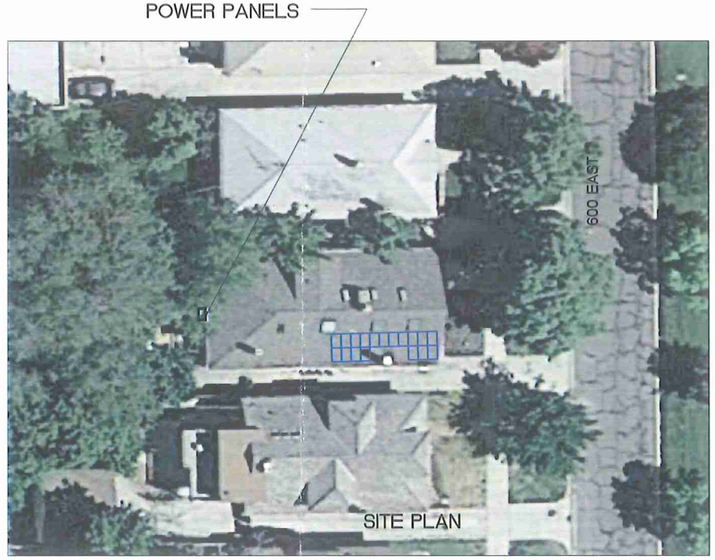
"L" FOOT DETAIL

RACK WIRING DETAIL




CONDUIT ROOF CLEARANCE

POWER PANELS




SITE PLAN

KEN GARDNER, P.E., L.S.
GARDNER ENGINEERING ALTERNATIVE ENERGY SERVICES
5875 S. ADAMS AVE. PARKWAY

PROFESSIONAL CIVIL ENGINEER - UTAH 154270-2202
PROFESSIONAL STRUCTURAL ENGINEER - UTAH 154270-2203
PROFESSIONAL LAND SURVEYOR - UTAH 154270-2201
LICENSED ELEC/SOLAR CONTRACTOR - UTAH 6399860-5501
MASTER ELECTRICIAN - UTAH 154270-5502
NABCEP CERTIFICATE NUMBER R031806-17
IREC CERTIFIED AFFILIATED INSTRUCTOR US-0133
(801)689-2618 EX. 201 OFFICE
(801) 589-0447 CELL

SCALE: N.T.S
DATE: AUG_2014
DESIGN: K.E.G
DRAWN: K.E.G
CHECKED:
DWG: Q:\ALTERNATIVE_ENERGY\GIBSON.DWG

REVISIONS
DATE | DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
No. 154270
KEN F. GARDNER
STATE OF UTAH

BRYAN GIBSON RESIDENCE
4.86 KW GRID-TIE PHOTOVOLTAIC SYSTEM
RACKING DETAILS
738 SOUTH 600 EAST, SALT LAKE CITY, UTAH

Alternative Energy Services
Gardner Engineering
5875 S. Adams Ave. Parkway
Suite 201, Ogden, Utah 84405
(801) 689-2618

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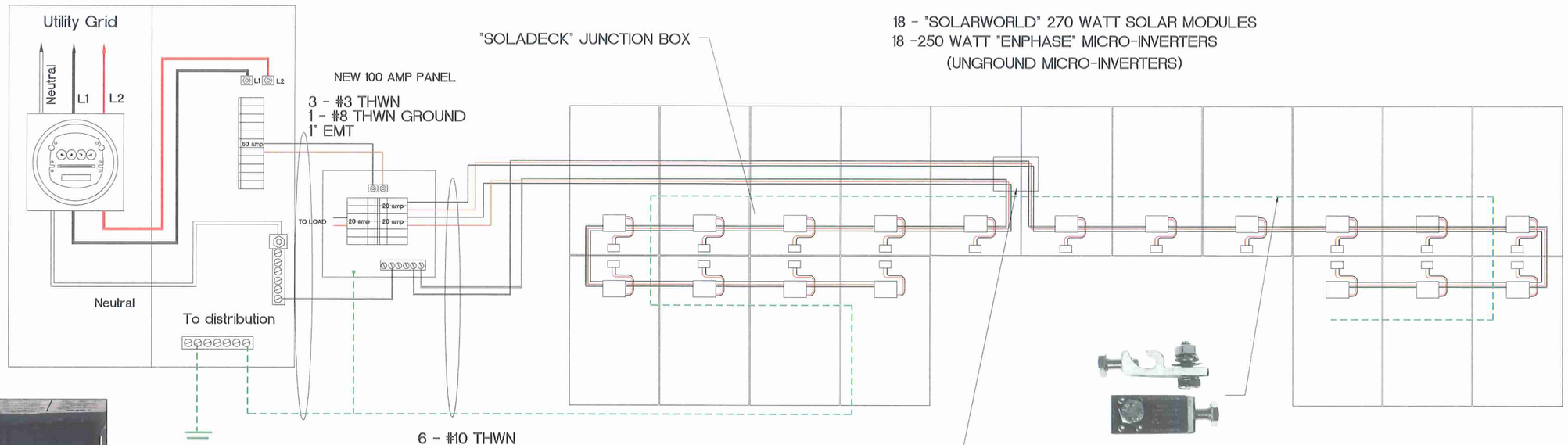
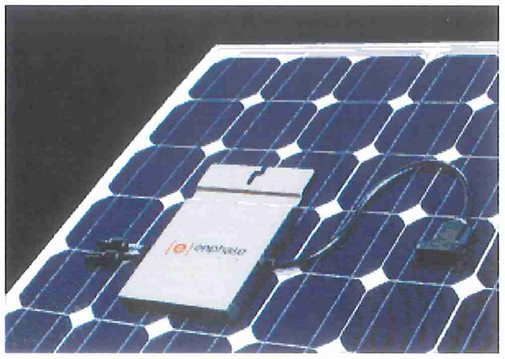
2

SQUARE "D"
EXISTING 125 AMP SERVICE




REMOVE BREAKER
ADD 60 AMP BREAKER
RECONNECT LOAD

SQUARE "D"
EXISTING 125 AMP SERVICE



"ENPHASE" 250 WATT MICRO-INVERTER

"SOLARWORLD" 270 WATT SOLAR MODULE

"SOLADECK" JUNCTION BOX

Plaque wording

WARNING ROOFTOP
PHOTOVOLTAIC (SOLAR) SYSTEM
ADDITIONAL POWER SOURCE

INDIVIDUAL MICRO INVERTERS MOUNTED
BEHIND EACH SOLAR MODULE
EACH INVERTER OPERATES AT 240 VOLTS

TOTAL COMBINED AC INVERTER
OUTPUT AMPS = 18.8 AMPS

18 - 250 WATT MICRO-INVERTERS
18 - 270 WATT SOLAR MODULES

SOLAR MODULE DATA

1) RATED MPP CURRENT = 8.81 AMPS DC
2) RATED VOLTAGE =30.9 VOLTS DC
3) MAX SYSTEM VOLTAGE = 45.5 VOLTS DC
4) MAX CIRCUIT CURRENT = 11.8 AMPS DC

SCALE: N.T.S
DATE: AUG. 2014
DESIGN: K.E.G
DRAWN: K.E.G
CHECKED:
DWG: Q:\ALTERNATIVE_ENERGY\GIBSON.DWG

REVISIONS
DATE | DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
No. 154270
KEN F. GARDNER
STATE OF UTAH

BRYAN GIBSON RESIDENCE

4.86 KW GRID-TIE PHOTOVOLTAIC SYSTEM
ELECTRICAL DETAILS

738 SOUTH 600 EAST, SALT LAKE CITY, UTAH


Alternative Energy Services
Gardner Engineering
5875 S. Adams Ave. Parkway
Suite 200
Ogden, Utah 84405
(801) 689-2618

KEN GARDNER, P.E., L.S.
GARDNER ENGINEERING ALTERNATIVE ENERGY SERVICES
5875 S. ADAMS AVE. PARKWAY

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PROFESSIONAL STRUCTURAL ENGINEER - UTAH 154270-2203
PROFESSIONAL LAND SURVEYOR - UTAH 154270-2201
LICENSED ELEC/SOLAR CONTRACTOR - UTAH 6399860-5501
MASTER ELECTRICIAN - UTAH 154270-5502
NABCEP CERTIFICATE NUMBER R031806-17
IREC CERTIFIED AFFILIATED INSTRUCTOR US-0133
(801) 689-2618 EX. 201 OFFICE
(801) 589-0447 CELL


NORTH AMERICAN BOARD OF CERTIFIED ENERGY PRACTITIONERS
CERTIFIED Solar PV Installer

2
2

| | |
|---|---|
| **From:** | Ken Gardner |
| **To:** | Tran, Tracy |
| **Subject:** | Gibson Historical review - solar modules |
| **Date:** | Wednesday, October 15, 2014 5:17:47 PM |

Tracy,

The solar modules on the subject property are proposed on the east end of the south facing roof due to shading from western trees. The solar modules will appear black and gray without any white colored features. The modules will sit 4 ½" above and parallel with the roof. The front of the modules are covered with non-glare glass.

Sincerely,
Ken Gardner

Alternative Energy Services
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# Attachment B

Photos