1642 Carroll Ave
St. Paul, MN 55104
www.allenergysolar.com

City of Saint Paul
15 Kellogg Blvd. West
Saint Paul, MN 55102

RE: Heritage Preservation Commission Decision of File# HPC 18-019

Pursuant to Section 73.06 (h) of the City of Saint Paul's Code of Ordinances, Appellant hereby appeals the final decision of the City of Saint Paul's Heritage Preservation Commission on File# HPC 18-019. Below you will find the Heritage Preservation Commission reasons for denial with All Energy Solar response to each standard not met.

1. On July 23, 1992, the Dayton's Bluff Heritage Preservation District was established under Ordinance No. 17942 (Council File #92-900). The Heritage Preservation Commission shall protect the architectural character of heritage preservation sites through review and approval or denial of applications for city permits for exterior work within designated heritage preservation sites §73.04.(4).

**Response not needed**

2. 662 Conway Street is categorized as contributing to the Dayton's Bluff Heritage Preservation District.

**Response not needed**

3. The Secretary of the Interior (SOI) Standards state that the historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided. There will not be removal of any historic material, thus meeting the standard.

**Response not needed**

4. The SOI Standards state that new additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the

property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment. There will not be removal of any historic material, thus meeting the standard.

**Response not needed**

5. The SOI Standards state that new additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. The installation of the solar panel arrays will maintain the essential form and integrity of the structure if removed, thus meeting the standard.

**Response not needed**

6. The SOI Guidelines on Sustainability for Rehabilitating Historic Buildings recommend considering on-site, solar technology only after implementing all appropriate treatments to improve energy efficiency of the building, which often have greater life-cycle cost benefit than on-site renewable energy. No information was provided outlining other energy efficiency efforts or studies, thus it does not meet the guideline.

**Erik Berger, the home owner, has made several upgrades to his home to maximum the energy efficiency. The whole house is lit by LED lights. A 15 SEER central air system and a high efficiency washing machine were recently added. All other appliances within Mr. Berger's home are Energy-Star compliant. Outside of his home, Mr. Berger drives an electric vehicle. Mr. Berger has done as much as possible to be energy efficient and adding solar panels is next step in his transition to cleaner, more sustainable energy consumption.**

7. The SOI Standards recommend analyzing whether solar technology can be used successfully and will benefit a historic building without compromising its character or the character of the site or the surrounding historic district. An analysis was not provided, thus it does not meet the guideline.

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**Throughout the design process, all areas on Mr. Berger's property were considered. The final design of the solar arrays maximizes the energy output, while best protecting the historical qualities of the building. Appendix 1 is the site plan, building elevation, and racking detail of the solar arrays on Mr. Berger's property.**

8. The SOI Guidelines on Sustainability for Rehabilitating Historic Buildings recommend installing a solar device in a compatible location on the site or on a non-historic building or addition where it will have minimal impact on the historic building and its site. While solar array 2 meets this guideline because it is set back on the roof plane behind the dormer, solar array 1 does not meet this guideline as it impacts the site and is visible from the public right of way, thus it does not meet the guideline.

**The viewshed is a limited area because Mr. Berger's home is located at the end of a dead-end street and few individuals would notice his solar arrays. During the public comment period, no comments were issued by his neighbors in opposition to the project.**

9. The SOI Guidelines on Sustainability for Rehabilitating Historic Buildings recommend installing a solar device on the historic building only after other locations have been investigated and determined infeasible. A study of other locations was not provided, thus it does not meet the guideline.

**The location of Solar Array 1 and Solar Array 2 were selected to maximize the energy output. The north facing side of Mr. Berger's home was not selected because it is industry practice to place solar arrays on the south facing side of buildings to maximize the energy output.**

10. The SOI Guidelines on Sustainability for Rehabilitating Historic Buildings recommend installing a low-profile solar device on the historic building so that it is not visible or only minimally visible from the public right of way: for example, on a flat roof and set back to take advantage of a parapet or other roof feature to screen solar panels from view; or on a secondary slope of a roof, out of view from the public right of way. While solar array 2 meets this guideline because it is set back on the roof plane behind the dormer, solar array 1 does not meet this guideline as it impacts the site and is highly visible from the public right of way, thus it does not meet the guideline.

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**As mentioned above, this home is located at the end of a dead-end road and no public comments were issued against this project by his neighbors. Dead-end roads are not high traffic areas and limited individuals would see this project.**

11. The SOI Guidelines on Sustainability for Rehabilitating Historic Buildings recommend installing a solar device on the historic building in a manner that does not damage historic roofing material or negatively impact the building's historic character and is reversible. The installation method does not damage historic material and is reversible, thus it meets the guideline.

**Response not needed**

12. The SOI Guidelines on Sustainability for Rehabilitating Historic Buildings recommend installing solar roof panels horizontally—flat or parallel to the roof—to reduce visibility. The solar panels will be parallel to the roof plane, thus it meets the guideline.

**Response not needed**

13. The SOI Guidelines on Sustainability for Rehabilitating Historic Buildings recommend investigating off-site, renewable energy options when installing on-site solar devices would negatively impact the historic character of the building or site. A study was not provided, thus it does not meet the guideline.

**Mr. Berger made a personal decision to install solar arrays on his home because it best aligned with his financial standing and his desire to limit his dependence on the grid.**

14. Sec. 74.87(4) New additions or alterations to structures should be constructed in such a manner that if such additions or alterations were to be removed in the future, the form and integrity of the original structure would be unimpaired. The installation of the solar panel arrays will maintain the essential form and integrity of the structure if removed, thus it meets the guideline.

**Response not needed**

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15. Sec. 74.87 (5) The impact of alterations or additions on individual buildings as well as on the surrounding streetscape will be considered; major alterations to buildings which occupy a corner lot or are otherwise prominently sited should be avoided. Solar Array 1 will have a visual impact on the surrounding streetscape as it is highly visible from the public right of way, thus it does not meet the guideline.

**As previously mentioned, the solar arrays were selected to maximize energy output and to have limited effects on the viewshed.**

16. Sec. 74.90(d)(1) Roof hardware such as skylights, vents and metal pipe chimneys should not be placed on the front roof plane. Solar Array 1 is proposed on the front half of the roof plane, thus it does not meet the guideline.

**Mr. Berger home is located at the end of a dead-end street and few individuals would notice his solar arrays.**

17. The proposed solar panel array installation at 662 Conway Street will adversely impact the Program for the Preservation and architectural control for the Dayton's Bluff Heritage Preservation District (Leg. Code §73.06 (e)); and

**Response not needed.**

Respectfully Submitted,

Isaac Lindstrom
All Energy Solar, Permitting Liaison

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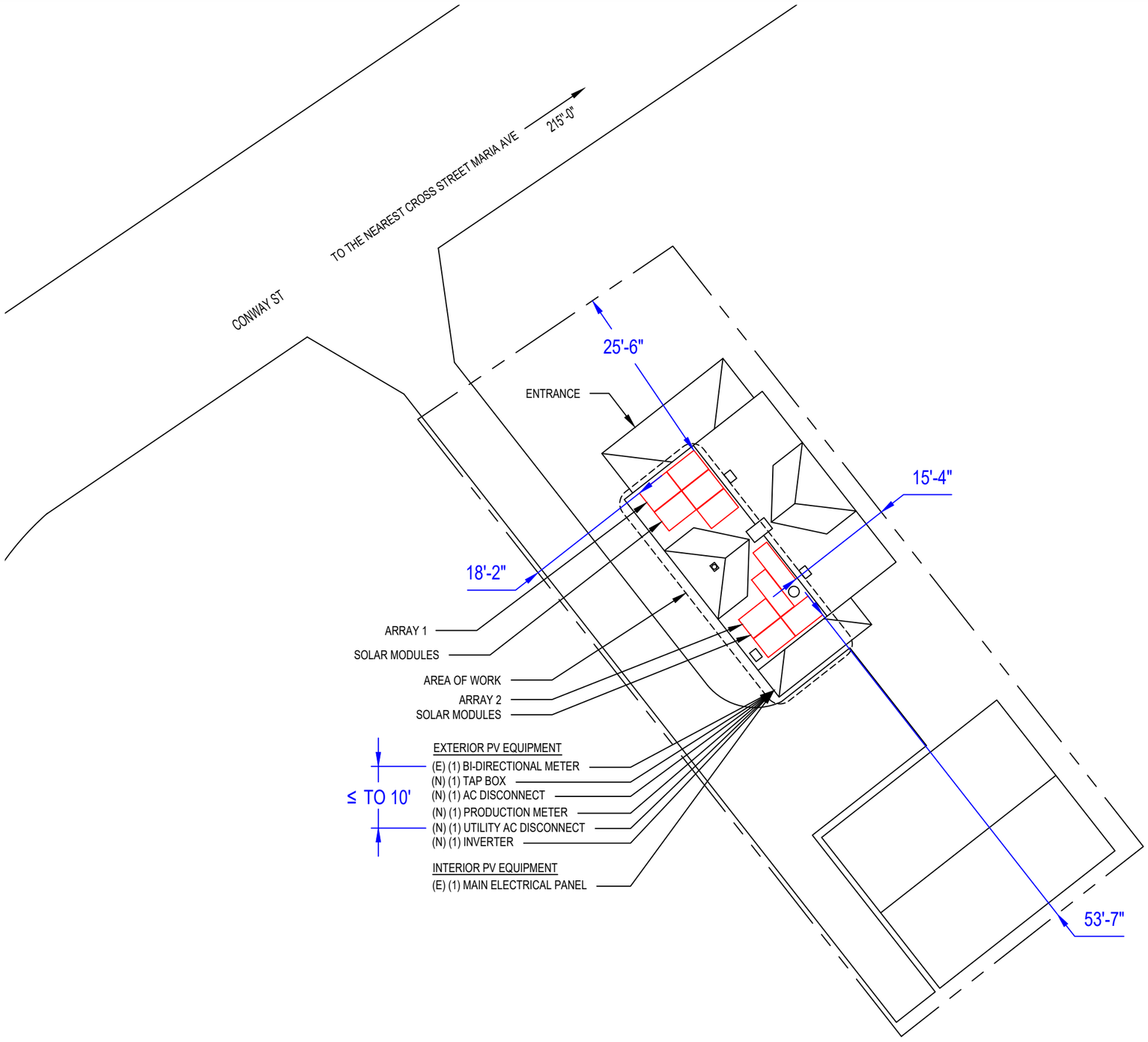
Appendix 1




01 **SITE PLAN**

1/16" = 1'-0"

0 8' 16'

N W E S

## GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS
2. ITEMS BELOW MAY NOT BE ON THIS PAGE
3. NO SPECIAL ACCESS INSTRUCTIONS
4. THERE ARE NO CLEARANCE ISSUES DUE TO OVERHEAD POWERLINES
5. UTILITY AC DISCONNECT AND PV PRODUCTION METER ARE LOCATED TOGETHER IN A READILY ACCESSIBLE LOCATION WITHIN 10' OF THE MAIN SERVICE METER
6. 24/7 UNESCORTED KEYLESS ACCESS SHALL BE PROVIDED FOR THE UTILITY METERS AND AC DISCONNECT

**DISTANCES**

PV SOLAR PANELS - OPTIMIZERS: 2' MAX
OPTIMIZERS - INVERTER: 50' MAX
INVERTER - UTILITY AC DISCONNECT: 2'
UTILITY AC DISCONNECT - PRODUCTION METER: 2'
PRODUCTION METER - BI-DIRECTIONAL METER: 2'

PROPERTY LINE

(E) EXISTING

(N) NEW

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**CONTRACTOR**

ALL ENERGY SOLAR

**PHONE:** 8006203370
**ADDRESS:** 1642 CARROLL AVE
ST PAUL, MN 55104



NEW PV SYSTEM: 3.950 kWp

# ERIK BERGER - 20586

662 CONWAY ST
ST PAUL, MN 55106
APN: 322922410076

**ENGINEER OF RECORD**

ACCOUNT#: ERIK BERGER
PREMISE #: 302818102
METER #: 90808037
OID #: 3284705

PAPER SIZE: 11" x 17" (ANSI B)

SITE PLAN

**DATE:** 2.6.2018

**DESIGN BY:** O.K.

**CHECKED BY:** M.M.

REVISIONS

A-101.00

(SHEET 3)

# GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS
2. ITEMS BELOW MAY NOT BE ON THIS PAGE
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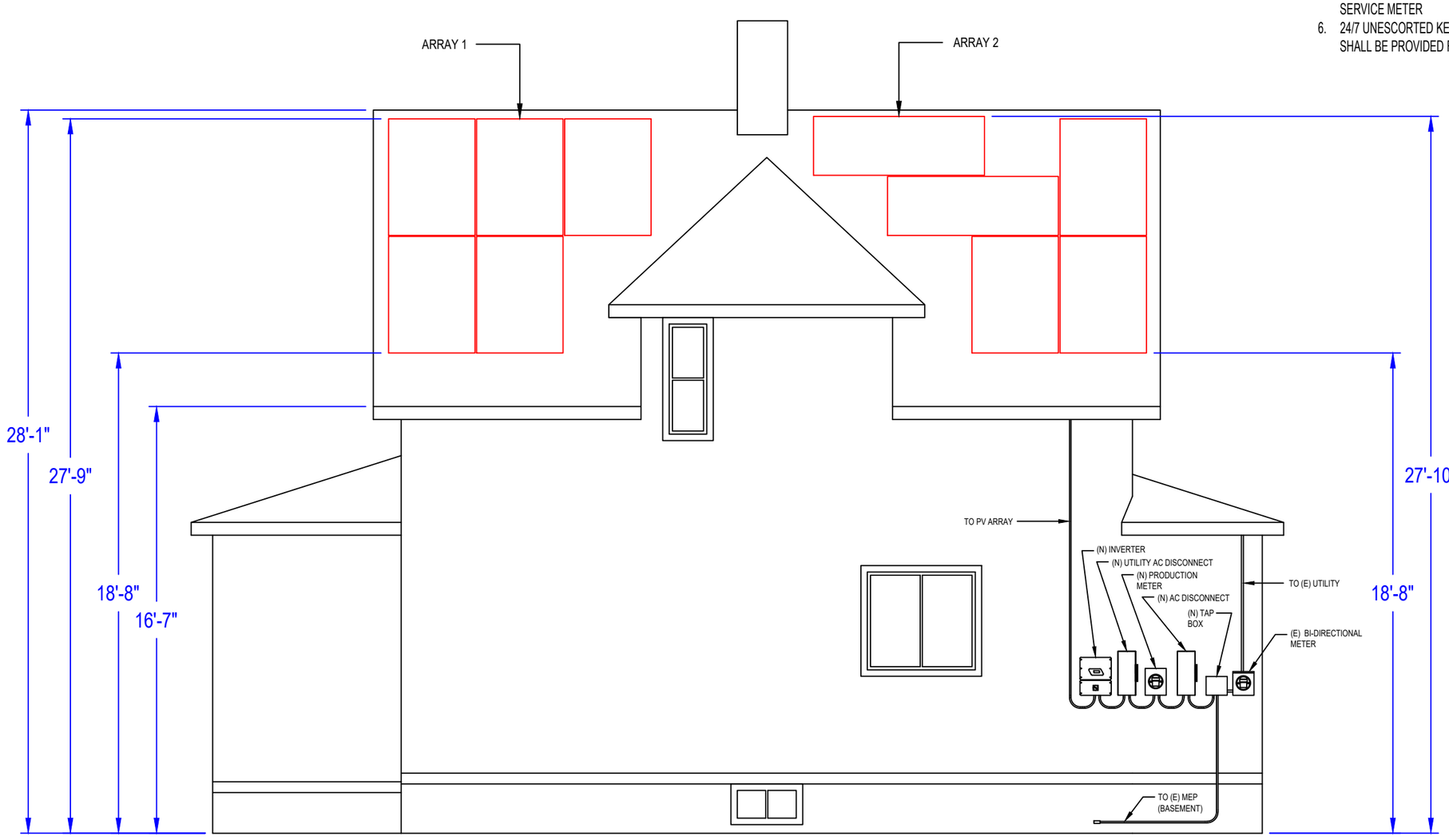
6. 24/7 UNESCORTED KEYLESS ACCESS SHALL BE PROVIDED FOR THE UTILITY




01 BUILDING ELEVATION (SW SIDE VIEW)

NOT TO SCALE

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**CONTRACTOR**


ALL ENERGY SOLAR

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**ENGINEER OF RECORD**

PAPER SIZE: 11" x 17" (ANSI B)

ELEVATION PLAN

**DATE:** 2.6.2018

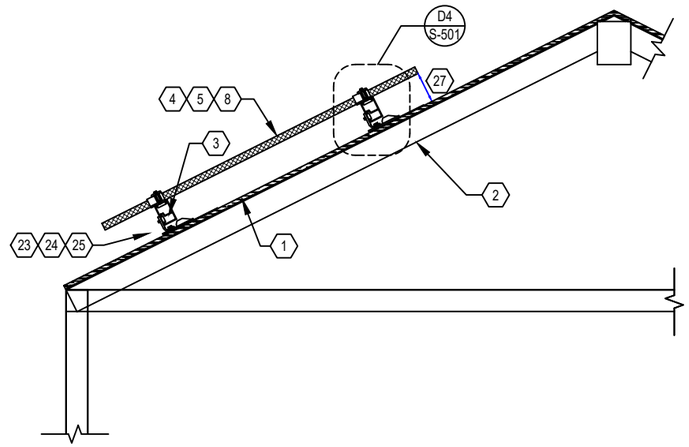
**DESIGN BY:** O.K.

**CHECKED BY:** M.M.

REVISIONS

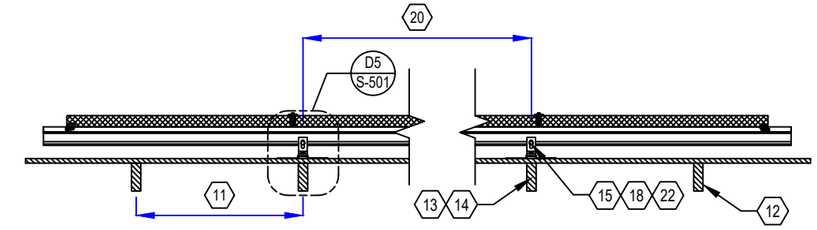
A-104.00

(SHEET 6)



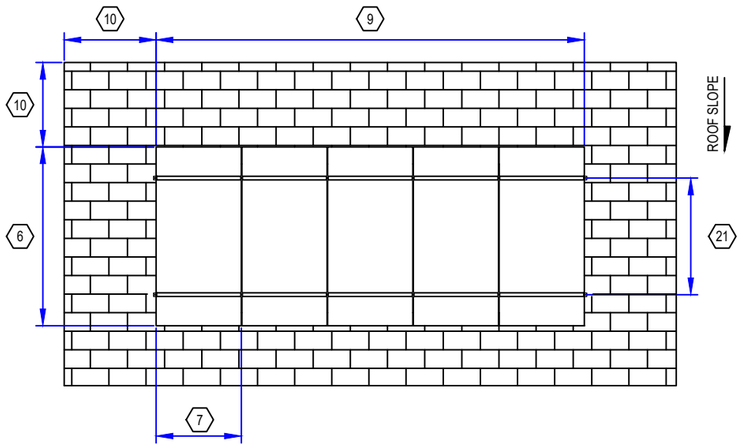

## D1 RACKING DETAIL (TRANSVERSE)

NOT TO SCALE



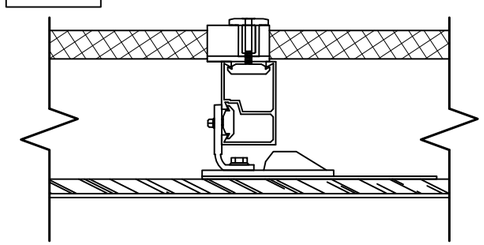

## D2 RACKING DETAIL (LONGITUDINAL)

NOT TO SCALE



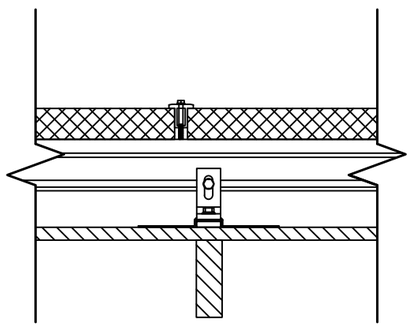

## D3 RACKING DETAIL (TOP)

NOT TO SCALE



## D4 DETAIL (TRANSVERSE)

NOT TO SCALE



## D5 DETAIL (LONGITUDINAL)

NOT TO SCALE

## GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS

## SHEET KEYNOTES

1. ROOF MATERIAL: ASPHALT SHINGLE
2. ROOF STRUCTURE: SINGLE SPAN RAFTER
3. ATTACHMENT TYPE: SNAP N RACK FLASHED L-FOOT
4. MODULE MANUFACTURER: LG ELECTRONICS
5. MODULE MODEL: LG395N2W-A5
6. MODULE LENGTH: 79.69 IN.
7. MODULE WIDTH: 40.31 IN.
8. MODULE WEIGHT: 47.84 LBS.
9. SEE SHEET A-103 FOR DIMENSION(S)
10. MIN. FIRE OFFSET: NO FIRE CODE ENFORCED
11. RAFTER SPACING: 16 IN. O.C.
12. RAFTER SIZE: 2x4 NOMINAL
13. LAG BOLT DIAMETER: 5/16 IN.
14. LAG BOLT EMBEDMENT: 2 IN.
15. TOTAL # OF ATTACHMENTS: 37
16. TOTAL AREA: 223.08 SQ. FT.
17. TOTAL WEIGHT: 555.63 LBS.
18. WEIGHT PER ATTACHMENT: 15.02 LBS.
19. DISTRIBUTED LOAD: 2.49 PSF.
20. MAX. HORIZONTAL STANDOFF: 48 IN.
21. MAX. VERTICAL STANDOFF: LANDSCAPE: 26 IN., PORTRAIT: 33 IN.
22. STANDOFF STAGGERING: YES
23. RAIL MANUFACTURER (OR EQUIV.): SNAP N RACK
24. RAIL MODEL (OR EQUIVALENT): SERIES 100
25. RAIL WEIGHT: 0.75 PLF.
26. MAX. RAFTER SPAN: 9 FT.
27. MODULE CLEARANCE: 3 IN. MIN., 6 IN. MAX.

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**CONTRACTOR**

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APN: 322922410076

**ENGINEER OF RECORD**

PAPER SIZE: 11" x 17" (ANSI B)

ASSEMBLY DETAILS

**DATE:** 2.6.2018
**DESIGN BY:** O.K.
**CHECKED BY:** M.M.

REVISIONS

# S-501.00

(SHEET 11)