Architectural Testing

April 23, 2013

Samuel Park
Solar Clam-p
516 Lindenhurst Street
Philadelphia, Pennsylvania 19116

RE: Engineering Evaluation of Double Bolt Solar Clam-p

Dear Mr. Park:

At your request I have performed an engineering evaluation of your Double Bolt Solar Clam-p product. The purpose my evaluation was to establish equivalence between this clamp and the single bolt clamp that was the subject of performance testing as documented in Architectural Testing report C1940.01-109-44 (Revision -, 10/03/12).

Whereas both the double bolt model and single bolt model use two identical bolts to secure the panel, the restraint of the panel is equivalent between the models. Whereas the single bolt model transfers load to the base through a single 1/4-20 bolt and the double bolt model transfers load to the base through an integral bottom clamp, the restraint of the panel is improved by the double bolt model. Whereas the anchorage of the base is identical for both models, the restraint of panel is equivalent between models.

The load path for the Double Bolt Solar Clam-p provides restraint that is at least equivalent to the tested single bolt model. Thus, the Double Bolt Solar Clam-p can be validated to the product sizes and performance levels established for the single bolt model documented in report C1940.01-109-44. If higher performance levels or larger product sizes are desired for the Double Bolt Solar Clam-p, additional testing will be necessary.

ARCHITECTURAL TESTING, INC

Joseph A. Reed

Digitally Signed by: Joseph A. Reed

Joseph A. Reed, P.E.
Director – Engineering

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH A. REED
ENGINEER No. PE-044401-E

Joseph A. Reed

Digitally Signed by: Joseph A. Reed

2013.04.23 10:56:14 -04'00'

JAR:jar

cc: C2294.01-122-34

Attachments (pages)
Double Bolt Solar Clam-p Sketches (2 pages)
Drawing D-001.01 (3 pages)

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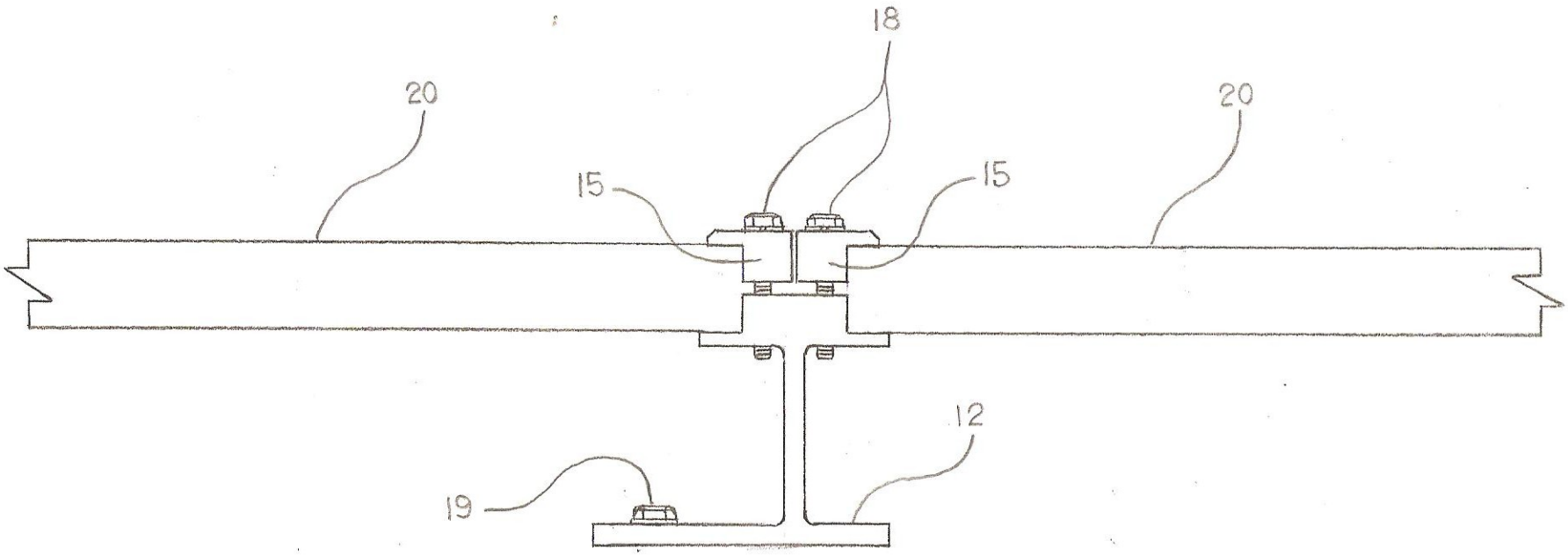


FIG. 4

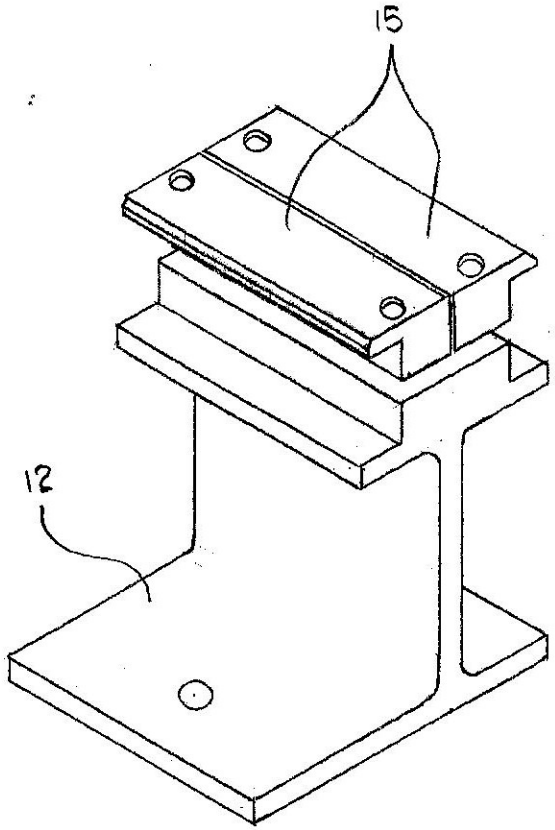
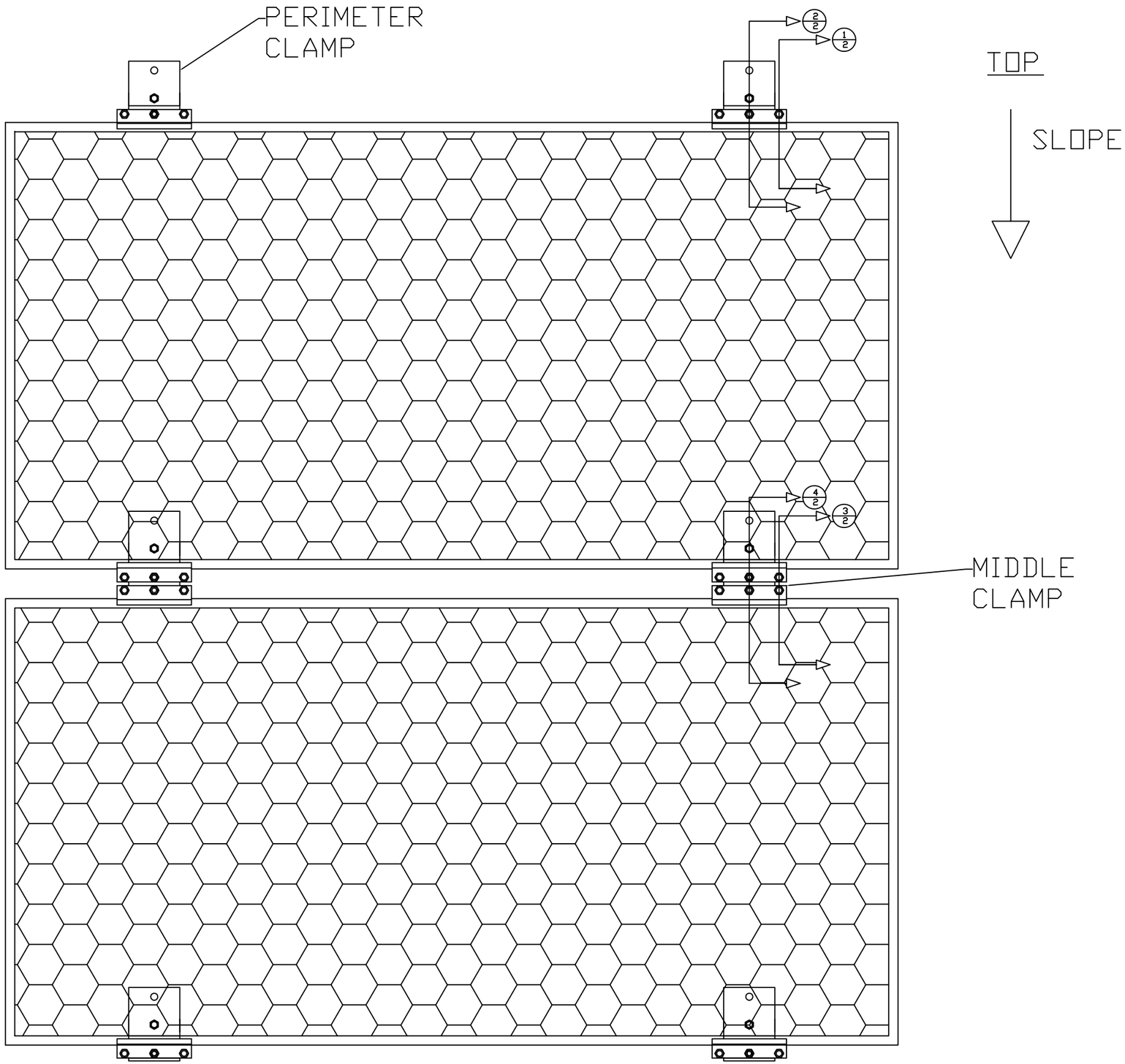


FIG. 3A



Notes:

1. Location and number of clamps to be established after project-specific design review.

Contents:

Solar Clam-p
516 Lindenhurst St. Philadelphia, PA 19116 215-892-5600

Solar Clam-p
Cover / Layout

SIZE	PROJ. NO.	DWG NO.	REV
B	C2294.01	D-001.01	–
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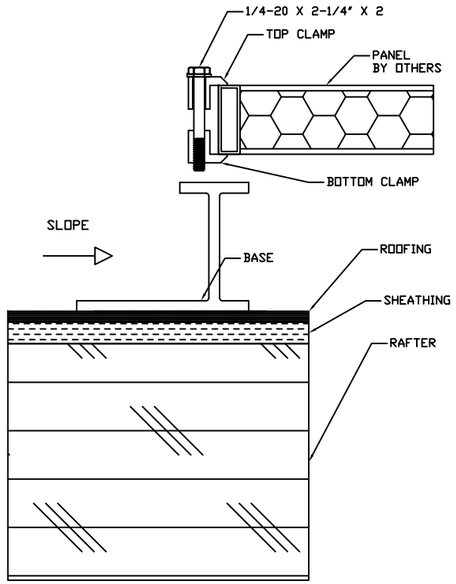
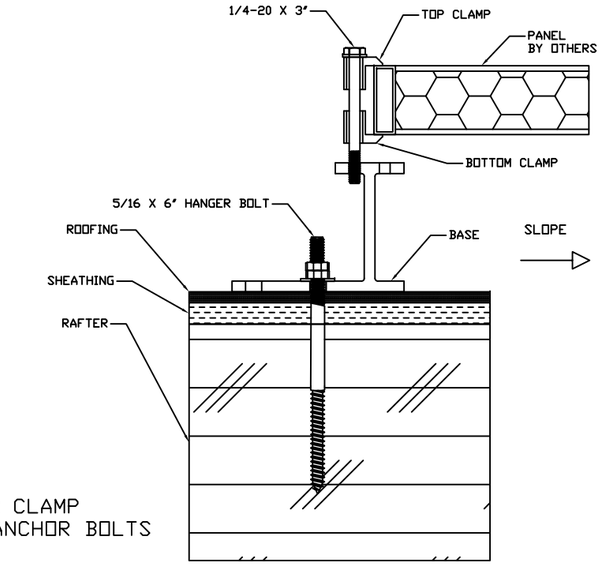
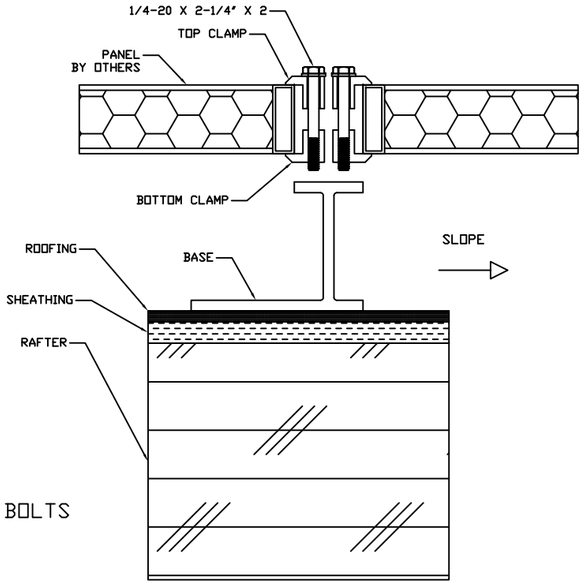


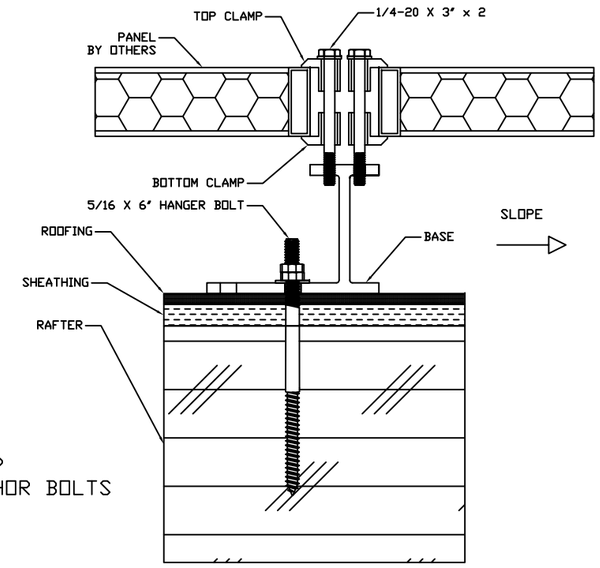
1/2 PERIMETER CLAMP
THROUGH CLAMP BOLTS



2/2 PERIMETER CLAMP
THROUGH ANCHOR BOLTS



3/2 CENTER CLAMP
THROUGH CLAMP BOLTS



4/2 CENTER CLAMP
THROUGH ANCHOR BOLTS

Notes:

1. Anchor type, quantity and location to be established after project-specific design review

2. Long leg of base shall always be to up side of slope.

Solar Clam-p
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Solar Clam-p
Sections and Details

SIZE	PROJ. NO.	DWG NO.	REV
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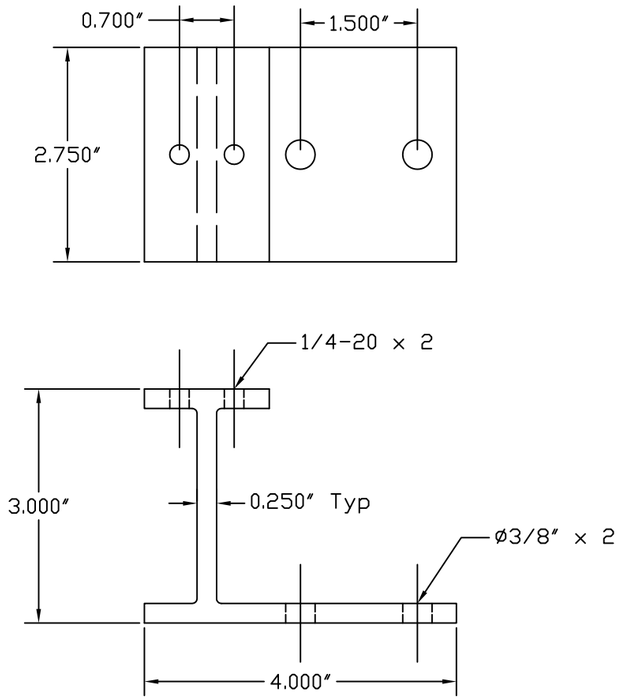
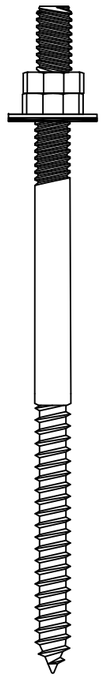
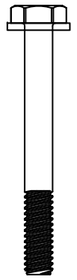


Base



5/16 x 6″ hanger bolt with lock nuts and gasketed washer

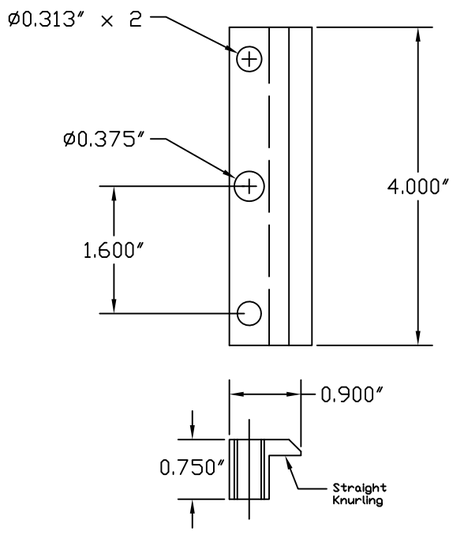
1/4-20 x 3″ bolt with lock washer



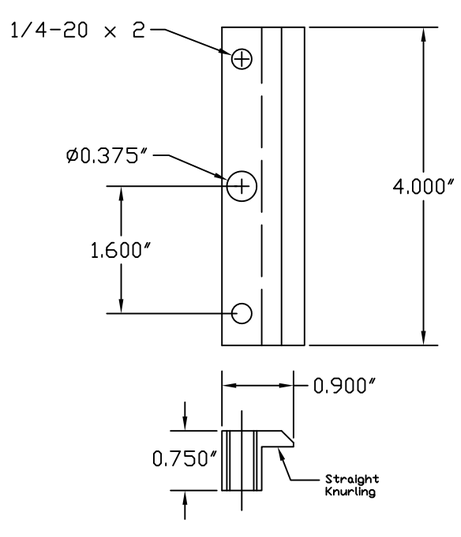
1/4-20 x 2-1/4″ bolt with lock washer

Bill of Materials

Item	Material	Quantity
1/4-20 x 3″ Bolt	304 SS	1
1/4-20 x 2-1/4″ Bolt	304 SS	2
5/16 x 6″ Hanger Bolt	304 SS	1
Base	6061-T6	1
Top Clamp	6061-T6	1
Bottom Clamp	6061-T6	1
1/4″ Lock Washer	304 SS	3
5/16-18 Hex Nuts	304 SS	2
5/16″ Sealing Washer	304 SS / Rubber	1



Top Clamp



Bottom Clamp

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Solar Clam-p Components

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