



# Farabaugh Engineering and Testing Inc.

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Project No. T308-20A

Report Date: August 26, 2020

No. of Pages: 8 (inclusive)

Revision Date: November 28, 2020

PERFORMANCE TEST REPORT  
**ASTM E283, E331, AND AAMA 501.1**

ON

SENTRIGARD AWS PANEL  
(16" WIDE X 24 GA.)

FOR

NB HANDY COMPANY  
SENTRIGARD METAL ROOF SYSTEMS  
65 10<sup>TH</sup> STREET  
LYNCHBURG, VA.24504

Prepared by:

Paul G. Farabaugh

Approved by:

Daniel G. Farabaugh



DADE COUNTY  
ACCREDITED  
LABORATORY



AAMA  
ACCREDITED  
LABORATORY



TEXAS  
ACCREDITED  
LABORATORY



FLORIDA  
ACCREDITED  
LABORATORY  
& QC ENTITY

## **PERFORMANCE TEST REPORT**

### **Test Specimen**

*Manufacturer:* NB HANDY COMPANY  
Sentrigard Metal Roof Systems  
65 10<sup>th</sup>. Street  
Lynchburg, VA. 24504

*Panel*            The test panels were Sentrigard AWS Panel, 16” wide x 24 ga.

*Accessories*    ½” Dens Glass, Block-Aide Commercial VB underlayment

*Supports:*        C8 x 16 ga. steel channel supports

### **Test Date Completion:**

8/14/20

### **Installation**

The test specimen mock-up consisted of Sentrigard Metal Roof System that measured as 8’-3” wide x 8’-1” high. The mock-up support framing consisted of 16 ga. steel vertical studs spaced at 1’-4” o.c. attached to a top and bottom 16 ga. track. On top of the stud supports was a layer of 1/2” thick DensGlass that was attached to the metal studs with #6 x 1-1/4” long, #2 self drill pt. drywall screws with a spacing of 8” o.c. around the perimeter and 8” o.c. along each stud support. A vapor barrier was attached to the top of the DensGlass. The panel was then attached thru the DensGlass and into the 16 ga. vertical supports with (1) #14-13 x 1-1/2 long, DP-1 Concealor fasteners at each support. Note: A starter strip and a top closure was used at the bottom and top of the mock-up. Silicone sealant was along the sides and top of the mock-up for testing purposes only. The vapor barrier wrapped around the edges of the buck for testing purposes only. See attached drawing for dimensions details and installation of panels. The mock-up was tested in a vertical position.

### **Test Procedure**

The tests were conducted in accordance with the following test methods:

1. ASTM E 283-04 (2012) “Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen”
2. ASTM E 331-00(2016) “Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference”
3. AAMA 501.1-05 “Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure”

The tests were conducted using the test procedures per the referenced test standards. Tests were performed at the given test pressures and test data was recorded as shown on the attached data sheets.

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## TEST RESULTS

### ASTM E283 AIR LEAKAGE TEST

Date: 8/12/20

Ambient Temp. = 82.9 deg.F

Barometric Pressure = 30.4" Hg

#### POSITIVE PRESSURE

STATIC PRESSURE DIFFERENTIAL (PSF)	AIR LEAKAGE RATE INFILTRATION (CFM/SF)
+ 6.24	0.003
+ 20.0	0.005

**Results:**

As a result of the test pressures, the test specimen exhibited air leakage rates as shown on the above table.

### ASTM E-331 WATER PENETRATION TEST

#### POSITIVE PRESSURE

STATIC PRESSURE DIFFERENTIAL (PSF)	WATER SPRAY RATE (GAL/HR/SF)	TEST DURATION (MIN)	WATER INFILTRATION
+6.24	5	15	None
+25.0	5	15	None

**Results:**

As a result of the test pressures, the test specimen exhibited no water penetration as shown on the above table.

### AAMA 501.1 DYNAMIC WATER TEST

Date: 8/14/20

Ambient Temperature = 85 deg. F

Barometric Pressure = 29.8"Hg

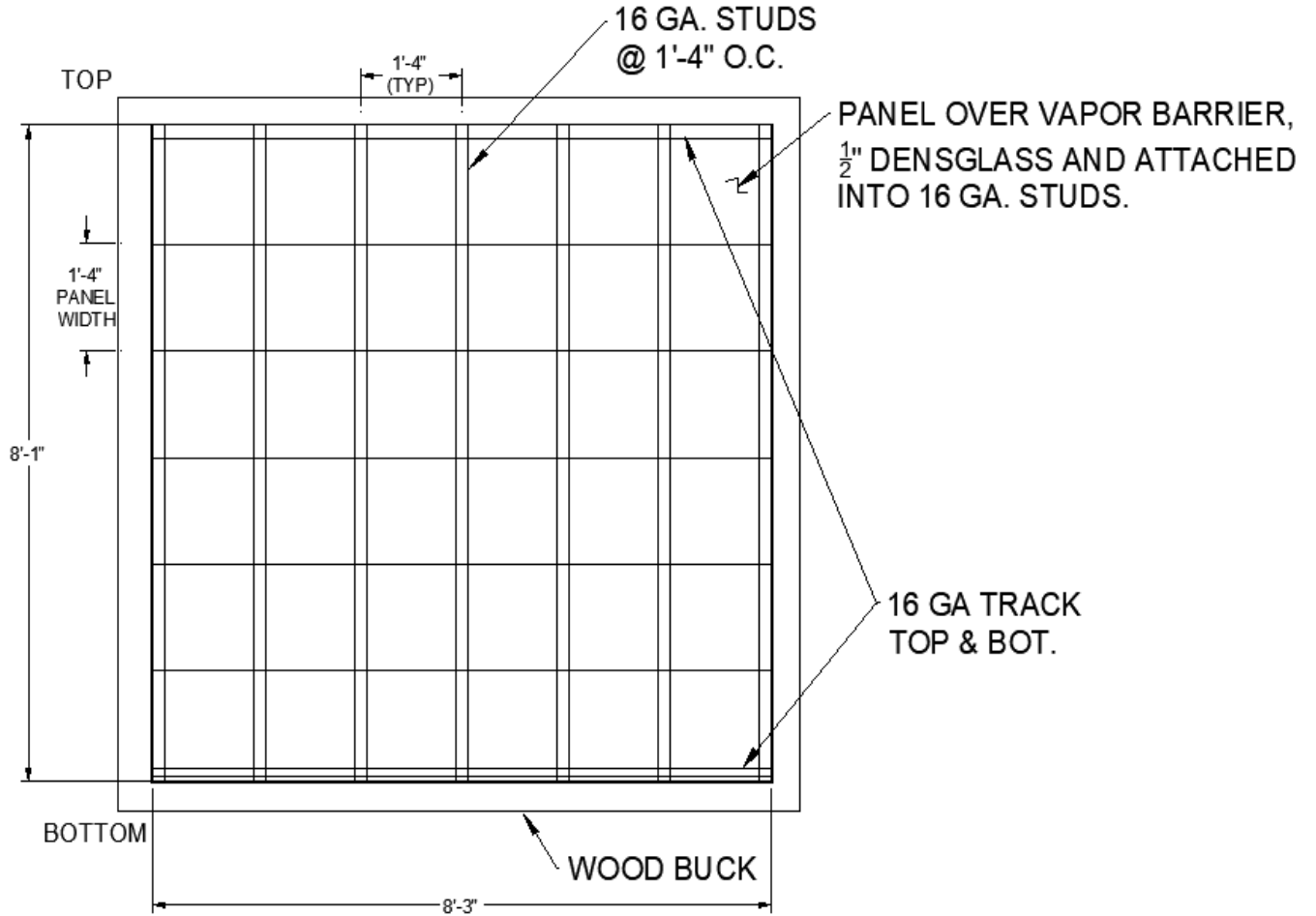
#### POSITIVE PRESSURE (INFILTRATION)

Test Pressure (psf)	Water Spray Rate (gal/sf/hr)	Time Duration (min)	Comments
15	5	15	No Leakage

**Results:**

As a result of the test pressure and water spray for the specified time duration, there was no water leakage on the interior side of the specimen assembly.

## TEST SETUP



### ELEVATION VIEW



DRAWING INDEX	
CS	COVER SHEET
1	AIR & WATER TABLE PLAN
2	AIR & WATER ASSEMBLY
3	AIR & WATER DETAILS

# AWS AIR & WATER TESTING

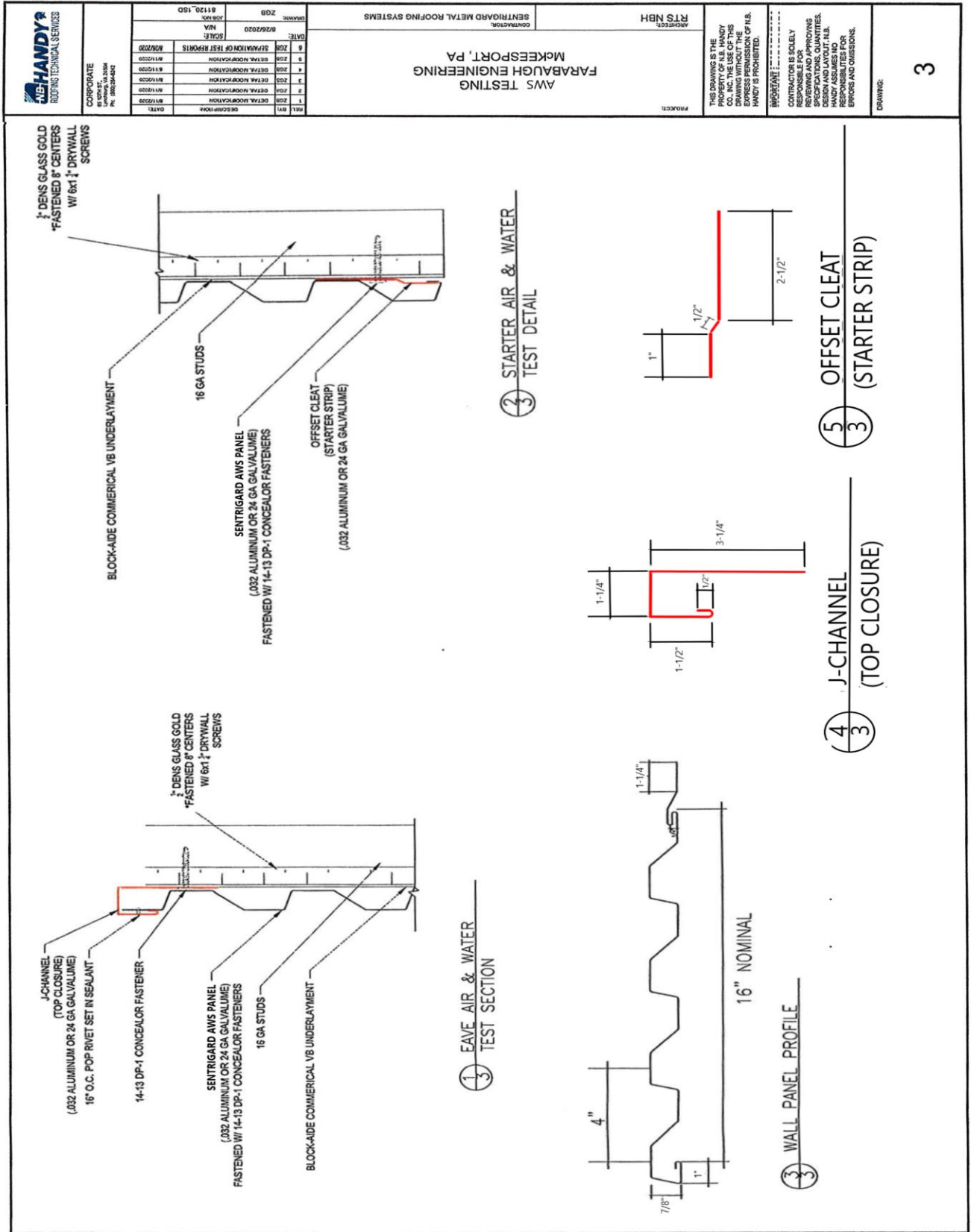
FARABAUGH ENGINEERING  
McKEESPORT, PA

**NB HANDY COMPANY**  
SENTRIGARD METAL ROOFING SYSTEMS  
65 10TH ST. LYNCHBURG, VA 24504  
800-284-6642

		CORPORATE 6510 WOODBURN RD LYNCHBURG, VA 24504 PH: 800-284-6642	
DATE: 8/20/2020 SCALE: N/A DRAWN BY: ZOB CHECKED BY: 81129, 180	DATE: 8/20/2020 SCALE: N/A DRAWN BY: ZOB CHECKED BY: 81129, 180	PROJECT: FARABAUGH ENGINEERING LOCATION: McKEESPORT, PA CONTRACTOR: SENTRIGARD METAL ROOFING SYSTEMS	
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**NET HANDY**  
ROOFING TECHNICAL SERVICES

CORPORATE  
8500 W. 15th St.  
P.O. BOX 2482  
DENVER, CO 80202

DATE	DESCRIPTION
08/20/20	REVISED
08/20/20	ISSUED

ARCHITECT: **RTS NBH**

CONTRACTOR: **SENTRIGARD METAL ROOFING SYSTEMS**

PROJECT: **AWES TESTING FARABAUGH ENGINEERING MCKEESPORT, PA**

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