



TEST REPORT

Report No.: E5985.02-901-44

Rendered to:

PHOENIX METALWORKS, LLC
D/B/A PHOENIX PANELS
Lynden, Washington

PRODUCT TYPE: Wall Cladding System
SERIES/MODEL: Phoenix Rise

Title	Summary of Results
Design Pressure	±2160 Pa (45.11 psf)
Uniform Load Structural Test Pressure	±3240 Pa (67.67 psf)

Reference must be made to Report No. E5985.02-901-44, dated 04/10/15, for complete test specimen description and detailed test results.

1.0 Report Issued To: Phoenix Metalworks, LLC
D/B/A Phoenix Panels
8650 Line Road
Lynden, WA 98264

2.0 Test Laboratory: Architectural Testing, Inc.
an Intertek Company (Intertek-ATI)
22155 68th Ave. South
Kent, Washington 98032
253-395-5656

3.0 Project Summary:

3.1 Product Type: Wall Cladding System

3.2 Series/Model: Phoenix Rise

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). Test specimen description and results are reported herein.

3.4 Test Date: 3/24/15

3.5 Test Record Retention End Date: All test records for this report will be retained until 3/24/19.

3.6 Test Location: Intertek-ATI facility located in Kent, Washington.

3.7 Test Sample Source: The test specimen was provided by the client.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Intertek-ATI and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek-ATI per the drawings located in the appropriate Appendix. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

<u>Name</u>	<u>Company</u>
Brian Rasmussen	Intertek-ATI

4.0 Test Method(s):

ASTM E 330-02, *Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 5.9 m ² (64.0 ft ²)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	2438	96	2438	96
Panel size (4)	1205	47-7/16	1197	47-1/8

5.2 Panel Construction: The test specimen was constructed of four 4 mm (0.15") thick Phoenix Panel Systems composite panels. The bottom of each panel utilized 4.8 mm (3/16") diameter weeps, two per panel.

5.3 Test Wall Construction: The 96" wide by 96" high test wall was constructed of 2 x 6 Douglas-fir wood studs. The studs were spaced 16" on center inside a 2 x 8 wood buck. The stud wall was covered with 3/16" thick clear polycarbonate and sealed and secured to the exterior of the wall. The wall panel system was then installed onto the clear polycarbonate in a manner consistent with normal construction procedures for the system. The polycarbonate was penetrated with thirty 64 mm (2-1/2") holes, allowing an even pressure drop across the back of the cladding system. A flexible silicone boot was sealed over the exterior joints of the specimen to facilitate the application of the required pressure differential.

5.4 Reinforcement: One extruded aluminum tube stiffener 25 mm x 25 mm (1" x 1") was adhered to the center of each panel with adhesive sealant.

5.5 Installation: Installation of the tested product was performed by the client.

The panels were installed in a bottom-to-top and left-to-right order. The perimeter of the panel system utilized metal flashing and extruded aluminum clips, secured to the perimeter with #8 x 1-1/2" long screws and spaced approx. 16" on center.

The panels were secured to each stud at the interior horizontal edge with extruded aluminum clips. The clips were secured to each stud with one #8 by 1-1/2" screw.

Three extruded aluminum clips were evenly spaced along each panel edge at the vertical joint and secured to the center stud with one #8 by 1-1/2" screw each.

6.0 Test Results: The temperature during testing was 20°C (68°F). The results are tabulated as follows:

Pressure	Results	Note
Taken at stud +2160 Pa (45.11 psf) -2160 Pa (45.11 psf)	4.0 mm (0.16") 12.0 mm (0.47")	1
Taken at corner panel – between anchors at bottom of upper panel +2160 Pa (45.11 psf) -2160 Pa (45.11 psf)	<0.3 mm (<0.01") 0.5 mm (0.02")	1
Taken at panel center +2160 Pa (45.11 psf) -2160 Pa (45.11 psf)	7.8 mm (0.31") 6.5 mm (0.26")	1

Pressure	Results	Note
Taken at stud +3240 Pa (67.67 psf) -3240 Pa (67.67 psf)	0.3 mm (0.01") 1.3 mm (0.05")	1
Taken at corner panel – between anchors at bottom of upper panel +3240 Pa (67.67 psf) -3240 Pa (67.67 psf)	<0.3 mm (<0.01") <0.3 mm (<0.01")	1
Taken at panel center +3240 Pa (67.67 psf) -3240 Pa (67.67 psf)	<0.25 mm (<0.01") <0.25 mm (<0.01")	1

General Note: All testing was performed in accordance with the referenced standard(s).

Note #1: Loads were held for 10 seconds.

Intertek-ATI will service this report for the entire test record retention period. Test records that are retained, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained by Intertek-ATI for the entire test record retention period.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For Intertek-ATI:

Brian L. Rasmussen
Technician

Jeffrey L. Dideon
Director – Regional Operations

BLR:pac

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Photographs (1)

Appendix-B: Drawings (3)

Appendix A
Photographs



Test Wall Interior



Test Wall Exterior

Appendix B

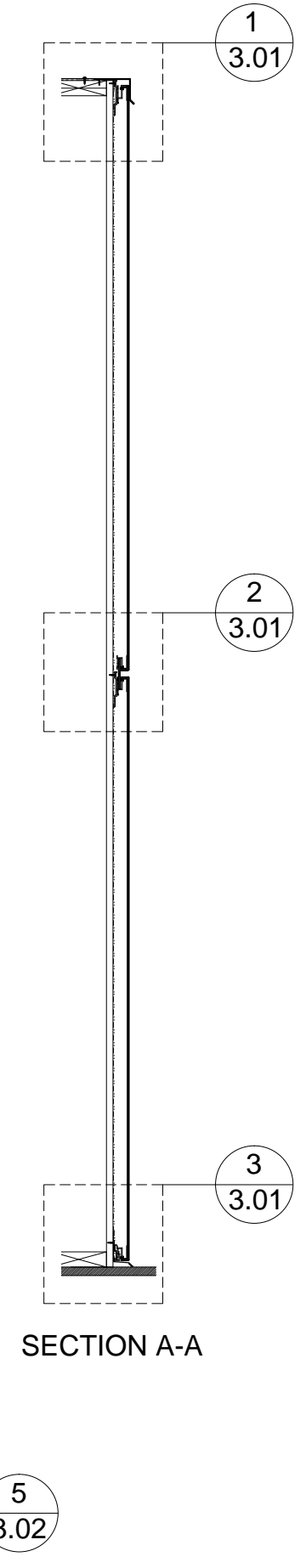
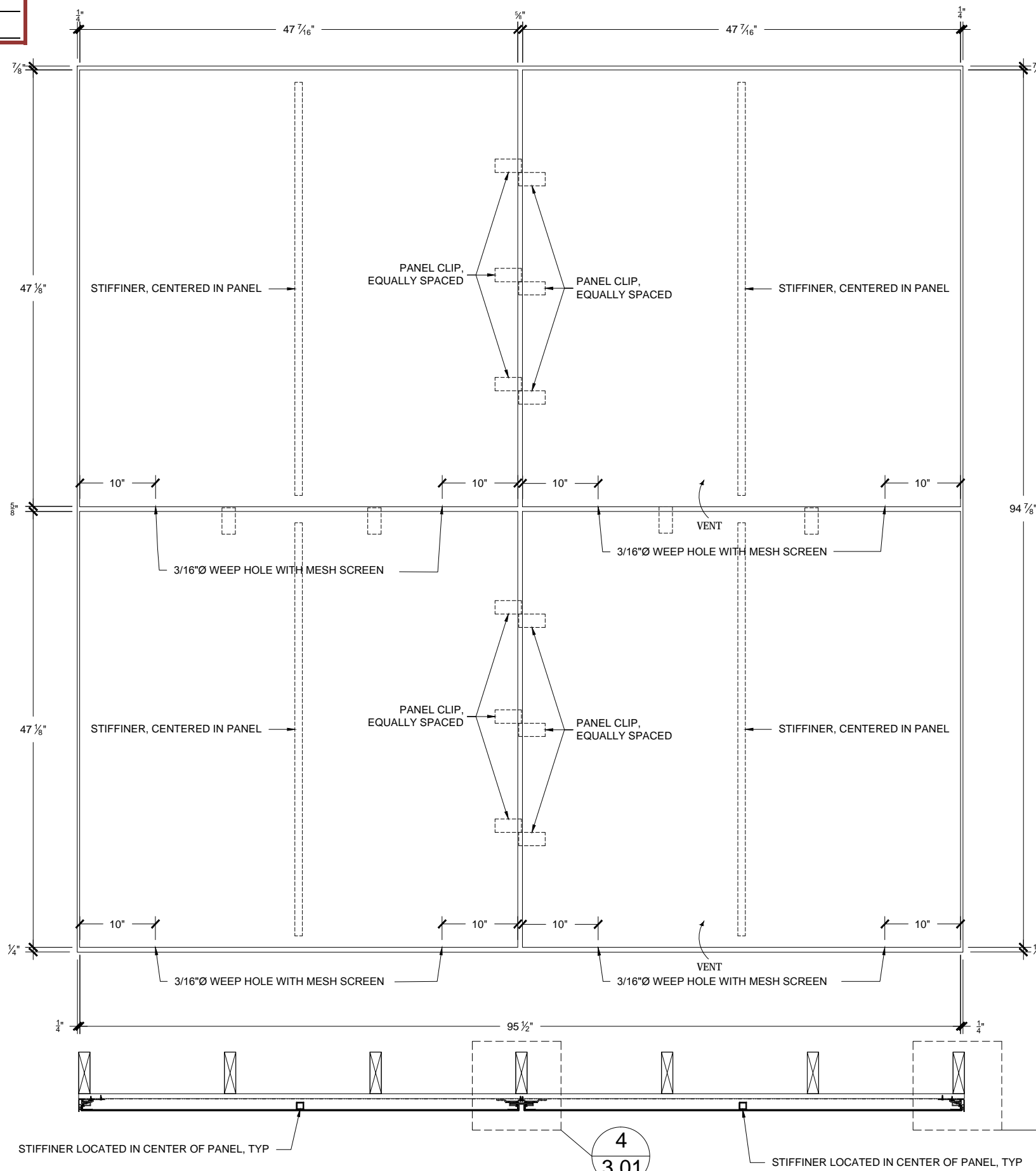
Drawings



Report #: E5985-901-44

Date: 03/31/15

Verified by: *[Signature]*



SECTION A-A

SECTION B-B

GENERAL NOTES:

FIRM NAME & ADDRESS:



"RISE SYSTEM"

204 Hawley Street
Lynden, WA 98264
p. 360-354-3155
shane@phoenix-mw.net

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PROJECT:

PHOENIX PANEL SYSTEM
TYPICAL DETAILS

DATE:
3/5/15

SCALE:

REVISION:
A

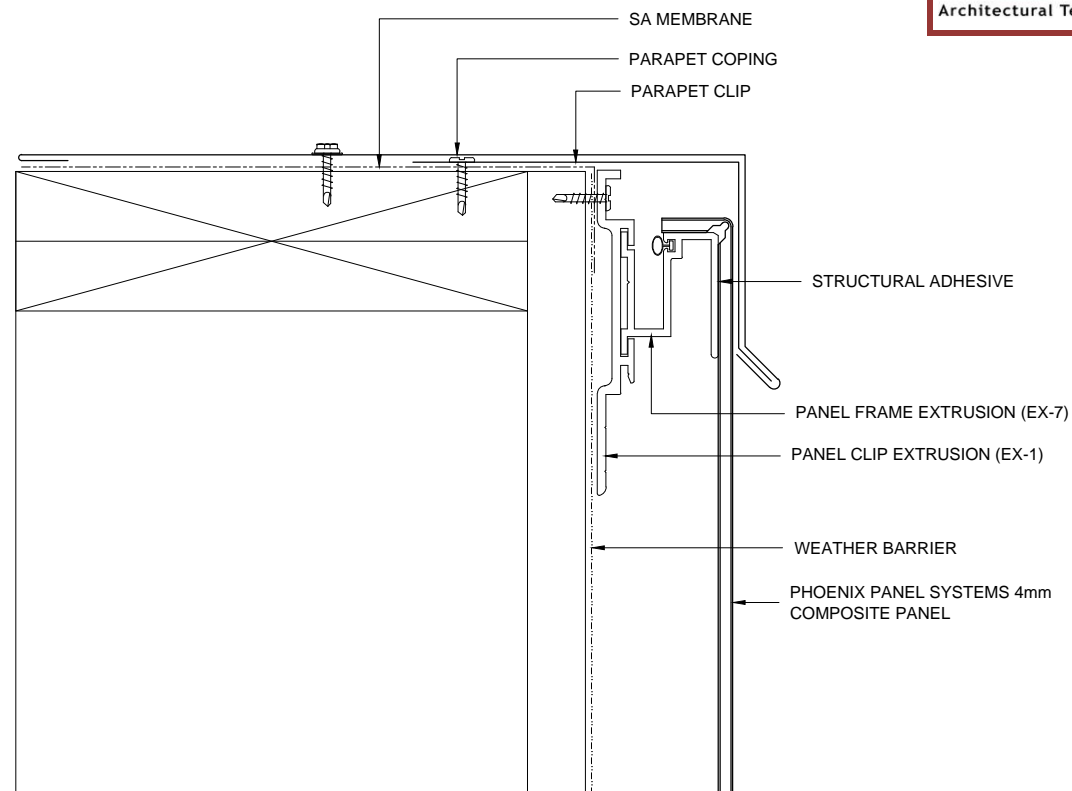
SHEET:

DRAWN BY:
B.ZIMA

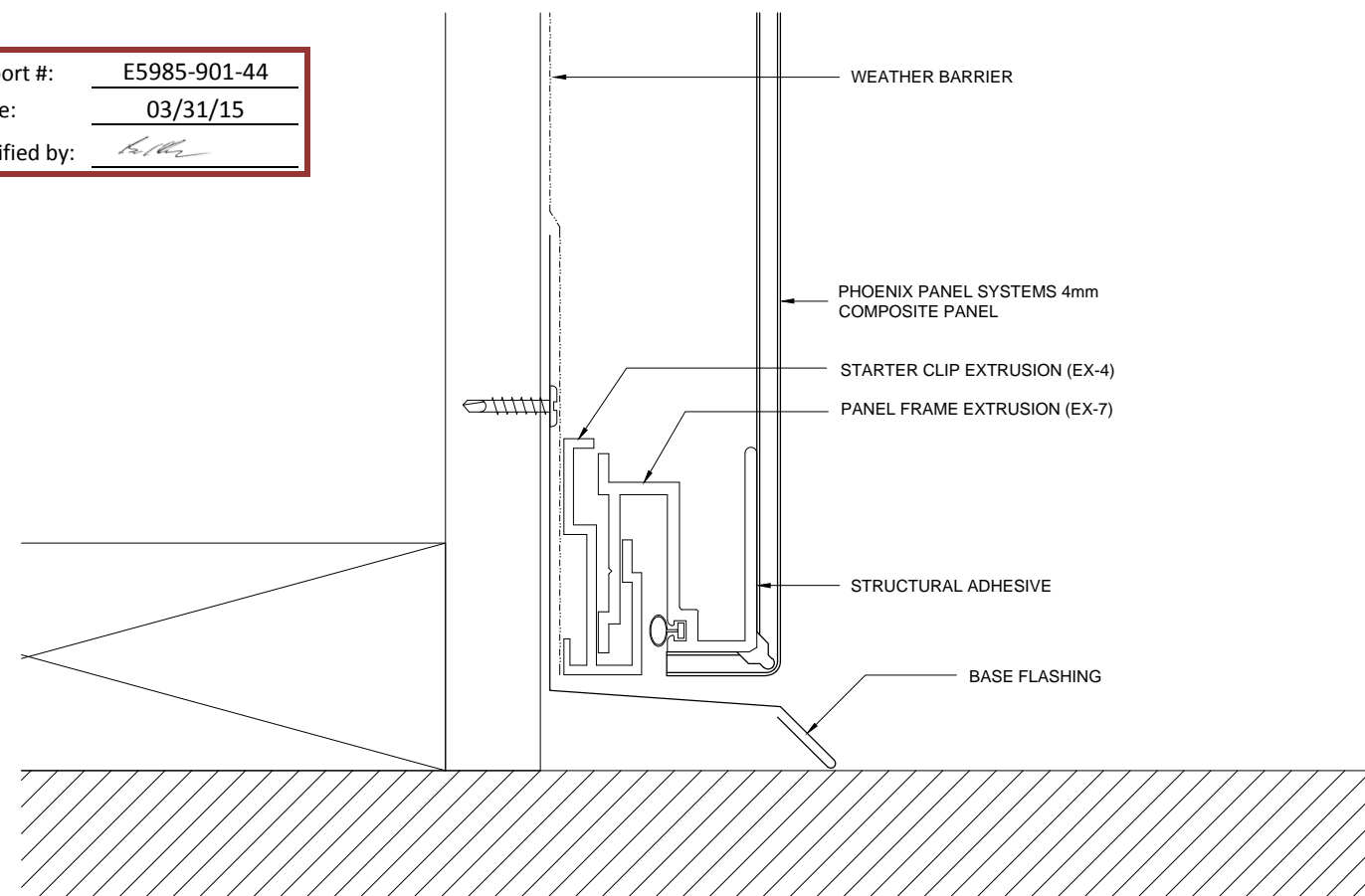
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Report #: E5985-901-44
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 Architectural Testing Verified by: *[Signature]*

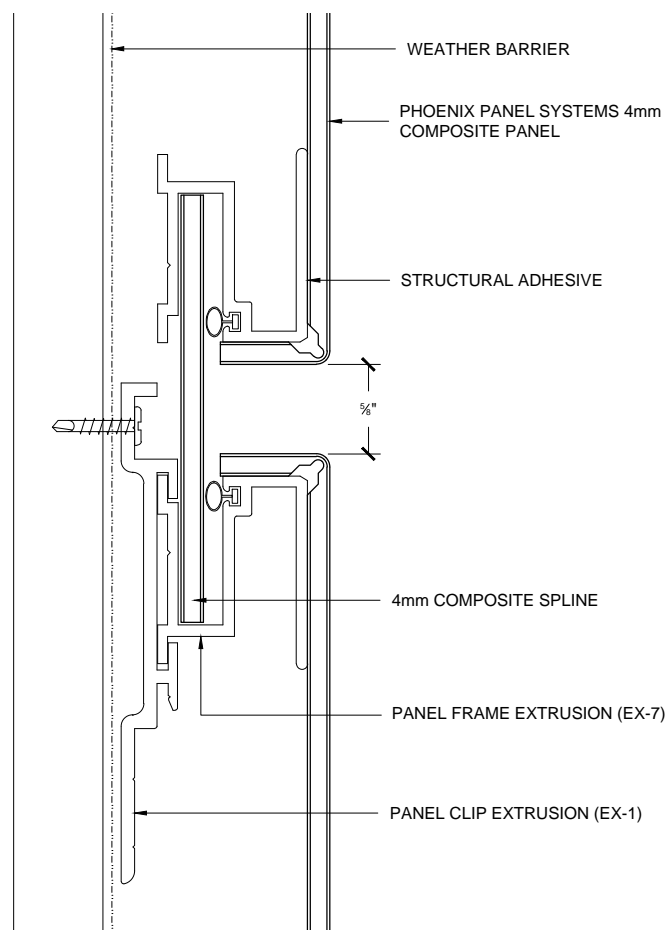
GENERAL NOTES:



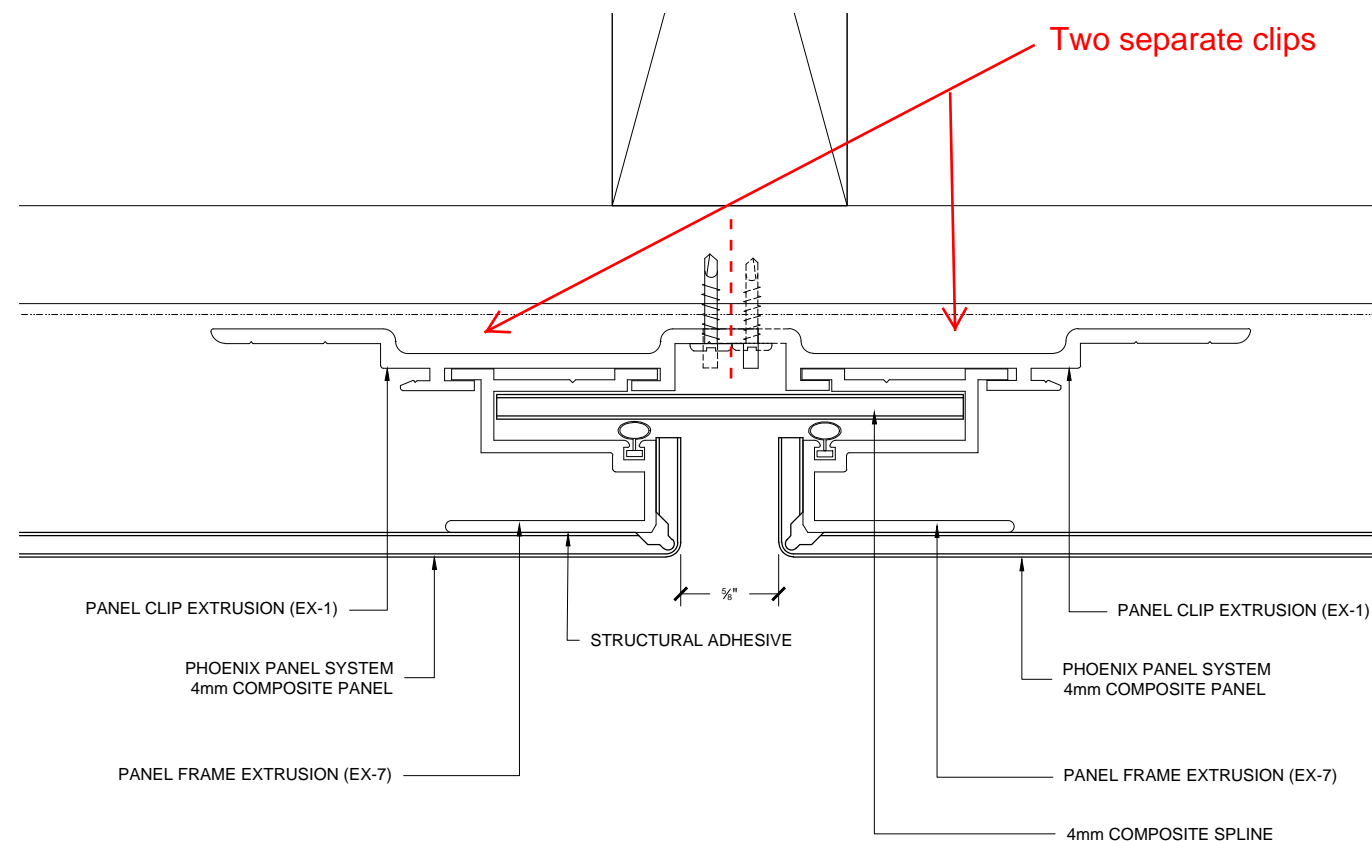
1 PARAPET COPING DETAIL



3 BASE DETAIL



2 HORIZONTAL JOINT DETAIL



4 VERTICAL JOINT DETAIL

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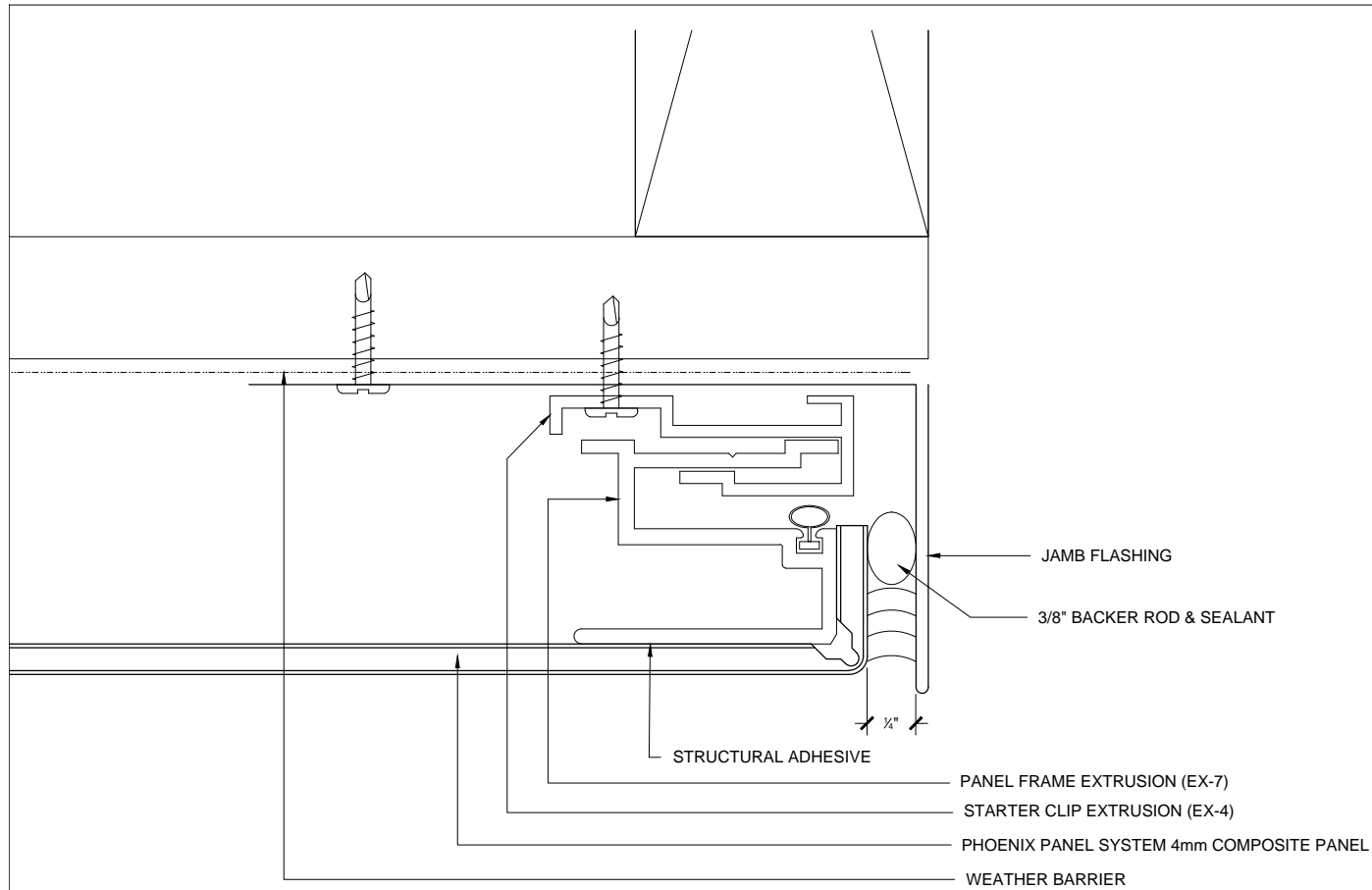
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SHEET:

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B. ZIMA

3.01




5 JAMB DETAIL


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DATE: 3/5/15	SCALE:
REVISION: A	SHEET:
DRAWN BY: B. ZIMA	3.02