

PERMATHERM, INC.

STRUCTURAL INSULATED PANELS

PANEL AND CONNECTION DETAILS

PRODUCT APPROVAL EVALUATION REPORT CRITERIA

1. THIS PRODUCT APPROVAL EVALUATION DOCUMENT REPRESENTS A COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM DESIGNED AND TESTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE FLORIDA BUILDING CODE- BUILDING AND RESIDENTIAL VOLUMES.
2. WHEN THE COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM IS UTILIZED IN ACCORDANCE WITH THIS PRODUCT APPROVAL EVALUATION DOCUMENT, IT COMPLIES WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE FLORIDA BUILDING CODE- BUILDING AND RESIDENTIAL VOLUMES.

a. WHEN USED AS A COMPONENT IN A ROOFING ASSEMBLY, IT SHALL MEET THE APPLICABLE REQUIREMENTS OF THE CURRENT EDITION FBC – BUILDING, CHAPTER 15 AND/OR CURRENT EDITION FBC – RESIDENTIAL, CHAPTER 9.

b. WHEN USED AS A COMPONENT IN A WALL ASSEMBLY, IT SHALL MEET THE APPLICABLE REQUIREMENTS OF THE CURRENT EDITION FBC – BUILDING, CHAPTER 14 AND/OR CURRENT EDITION FBC – RESIDENTIAL, CHAPTER 6.
3. THE COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM DESCRIBED IN THIS PRODUCT APPROVAL EVALUATION DOCUMENT HAS NOT BEEN TESTED AS AN IMPACT RESISTANT ASSEMBLY.
4. THIS COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM HAS NOT BEEN TESTED FOR AIR AND WATER INFILTRATION. AIR AND WATER INFILTRATION SHALL BE ADDRESSED IN SITE SPECIFIC APPLICATIONS WITH BUILDING CODE APPROVED FINISHES.

a. WHEN USED AS A COMPONENT IN A ROOFING ASSEMBLY, IT SHALL MEET THE APPLICABLE REQUIREMENTS OF THE CURRENT EDITION FBC – BUILDING, CHAPTER 15 AND/OR CURRENT EDITION – RESIDENTIAL, CHAPTER 9.

b. WHEN USED AS A COMPONENT IN A WALL ASSEMBLY, IT SHALL MEET THE APPLICABLE REQUIREMENTS OF THE CURRENT EDITION FBC – BUILDING, CHAPTER 14 AND/OR CURRENT EDITION – RESIDENTIAL, CHAPTER 6.
5. THIS PRODUCT APPROVAL EVALUATION DOCUMENT COMPLIES WITH CHAPTER 61G20-3 OF THE FLORIDA ADMINISTRATIVE CODE (FAC).
6. ANY MODIFICATIONS OR ADDITIONS TO THIS PRODUCT APPROVAL EVALUATION DOCUMENT WILL VOID THIS PRODUCT APPROVAL EVALUATION DOCUMENT.

DESIGN RESPONSIBILITIES

7. THIS PRODUCT APPROVAL EVALUATION DOCUMENT WAS PREPARED BY THE PRODUCT MANUFACTURER AND IS GENERIC. IT DOES NOT INCLUDE INFORMATION PREPARED FOR OR APPLICABLE TO A SPECIFIC PROJECT OR SITE.
8. THIS PRODUCT APPROVAL EVALUATION DOCUMENT SHALL ONLY BE USED AS FOLLOWS:

a. BY A LICENSED PROFESSIONAL ENGINEER OR AN ARCHITECT, ACTING AS A DELEGATED ENGINEER IN ACCORDANCE WITH THE FAC, CHAPTER 61G15-36.003(3). THE DELEGATED ENGINEER SHALL NOT BE REQUIRED TO SUBMIT DELEGATED ENGINEERING DOCUMENTS TO THE PRODUCT MANUFACTURER AS THE DELEGATED ENGINEER IS WHOLLY RESPONSIBLE FOR THE SPECIFIC USE OF THE COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM. THE DELEGATED ENGINEER SHALL BE THE ENGINEER OF RECORD FOR ANY APPLICATION OF THE COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM.

b. BY A LICENSED PROFESSIONAL ENGINEER OR AN ARCHITECT ELECTING TO UTILIZE THIS SYSTEM AS A COMPONENT IN HIS (HER) CAPACITY AS ENGINEER OF RECORD, THEN HIS (HER) ROLE IN SPECIFYING THIS SYSTEM SHALL HAVE THE SAME RESPONSIBILITY AS A DELEGATED ENGINEER IN ACCORDANCE WITH FAC, CHAPTER 61G15-31.001.

c. BY A CERTIFIED CONTRACTOR (FLORIDA STATUTE, CHAPTER 489.113(1)) ELECTING TO UTILIZE THIS SYSTEM AS A COMPONENT IN A MANNER CONSISTANT WITH THE REQUIREMENTS OF FLORIDA STATUTE, CHAPTER 489.113(9) WHICH INCLUDES BUT IS NOT LIMITED TO THE USE OF A “MASTER DESIGN MANUAL”.
9. INSTALLATION DETAILS DESCRIBED WITHIN THIS PRODUCT APPROVAL EVALUATION DOCUMENT ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. THEY ARE BASED ON SPECIMEN TESTING AND REPRESENT A SMALL SUBSET OF POSSIBLE CONNECTIONS THAT COULD BE USED. CONNECTION DETAILS FALLING OUTSIDE THE SCOPE OF THOSE DEPICTED MUST BE ENGINEERED FOR A SPECIFIC CAPACITY OR BE PART OF AN APPROVED MASTER FILING SYSTEM FOR STRUCTURAL INSULATED PANELS MEETING THE REQUIREMENTS OF THE FLORIDA STATUTE, CHAPTER 489.113(9) AND ACCEPTABLE TO THE LOCAL AUTHORITY HAVING JURISDICTION.
10. PRODUCT ANCHORS SHALL BE AS DESIGNATED AND LOCATED AS SHOWN ON THESE INSTALLATION DETAILS. ANCHOR EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES INCLUDING, BUT NOT LIMITED TO, STUCCO, FOAM, BRICK VENEER, SHEATHING AND SIDING.
11. THE ENGINEER OF RECORD IS RESPONSIBLE FOR SPECIFYING ALL LOAD CRITERIA, INCLUDING ALL DEAD LOADS, LIVE LOADS, WIND LOADS AND ANY OTHER LOAD CRITERIA APPLICABLE TO THE PROJECT AND THE COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM.
12. THE DESIGN OF CONNECTIONS OF THE COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM TO SUPPORTING ELEMENTS SHALL BE THE RESPONSIBILITY OF THE DELEGATED ENGINEER OR THE CONTRACTOR AS ALLOWED IN NOTE 8.C.

COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM DESIGN CRITERIA

13. THE COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM IS DESIGNED TO BE INSTALLED AS AN EXTERIOR LOAD BEARING WALL, AN INTERIOR LOAD BEARING WALL, A NON-LOAD BEARING WALL, A LOAD BEARING FLOOR OR A LOAD BEARING ROOF.

d. THE COMPOSITE STRUCTURAL INSULATED WALL PANEL SYSTEM IS DESIGNED TO SPAN VERTICALLY AS A SIMPLE SPAN BETWEEN Laterally supported elements at the top and the bottom of the wall system.

e. THE COMPOSITE STRUCTURAL INSULATED ROOF AND FLOOR PANEL SYSTEM IS DESIGNED TO SPAN HORIZONTALLY AS A SIMPLE SPAN BETWEEN Laterally supported elements.

f. THE ELEMENTS PROVIDING SUPPORT FOR THE COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM SHALL BE OF APPROPRIATE MATERIALS AND SHALL BE DESIGNED BY THE ENGINEER OF RECORD, THE DELEGATED ENGINEER OR THE CONTRACTOR AS ALLOWED IN NOTE 8.C, AS APPROPRIATE, IN ACCORDANCE WITH THE CURRENT EDITION OF THE FLORIDA BUILDING CODE - BUILDING AND RESIDENTIAL VOLUMES.
14. THE FOLLOWING PRODUCT APPROVAL EVALUATION DOCUMENTS PROVIDE SPECIFIC STRUCTURAL PROPERTIES FOR USE BY AN ENGINEER OF RECORD, DELEGATED ENGINEER OR THE CONTRACTOR AS ALLOWED IN NOTE 8.C. WHERE STRUCTURAL PROPERTIES ARE NOT ADDRESSED, THE DELEGATED ENGINEER SHALL DESIGN THE ELEMENTS IN ACCORDANCE WITH THE FBC. WHERE COMBINATIONS OF STRUCTURAL PROPERTIES ARE REQUIRED, THE DESIGN PROFESSIONAL SHALL DETERMINE THE APPROPRIATE INTERACTION EQUATIONS FOR THE DESIGN VALUES PRESENTED HEREIN.

g. AS A COMPOSITE STRUCTURAL INSULATED WALL PANEL SYSTEM, REFER TO PTC PRODUCT DESIGN GROUP, LLC REPORT NO. 1551, E.P.S. CORE/GALVANIZED STEEL SKIN STRUCTURAL INSULATED PANELS (SIPS), STRUCTURAL WALL.

h. AS A COMPOSITE STRUCTURAL INSULATED ROOF AND FLOOR PANEL SYSTEM, REFER TO PTC PRODUCT DESIGN GROUP, LLC REPORT NO. 1550, E.P.S. CORE/GALVANIZED STEEL SKIN STRUCTURAL INSULATED PANELS (SIPS), ROOF.
15. THE PRODUCT DETAILS CONTAINED IN THE PRODUCT APPROVAL EVALUATION DOCUMENTS ARE BASED UPON SIGNED AND SEALED TEST REPORTS (A) ARCHITECTURAL TESTING INC. REPORT NO. 87559.02-119-16, REV. 1, DATED 7/10/09 WITH ASSOCIATED LABORATORY DRAWINGS AND (B) FARABAUGH ENGINEERING AND TESTING, INC. REPORT NO. T153-07, DATED 3/26/07 WITH ASSOCIATED LABORATORY DRAWINGS.

COMPOSITE STRUCTURAL INSULATED WALL, ROOF OR FLOOR PANEL SYSTEM MATERIALS

16. THE STRUCTURAL INSULATED PANEL SYSTEM (SIPS) ARE MANUFACTURED USING EXPANDED POLYSTYRENE (EPS) FOAM INSULATION (TYPE I) AS THE CORE MATERIAL AND WHITE AZ-50 ZINCALUME OR G-60 GALVANIZED STEEL 26 GAUGE THICKNESS AS THE SKIN MATERIAL. THE EPS PHYSICAL PROPERTIES MUST MEET ASTM C 578 (WHICH INCLUDES A MINIMUM DENSITY OF 1 POUND PER CUBIC FOOT). THE 26 GAUGE METAL MUST HAVE A MINIMUM THICKNESS OF 0.018 IN.
17. STRUCTURAL INSULATED PANEL SYSTEM (SIPS) SKIN MATERIAL SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

a. YIELD STRENGTH OF 48,750 PSI, AND

b. ULTIMATE TENSILE STRENGTH OF 53,454 PSI

	SHEET	REV.	SHEET DESCRIPTION
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	3	1	CONNECTION DETAILS

PROJECT NO. 418-0505

Permatherm, Inc.
269 Industrial Park Rd.
Monticello, GA 31064

STRUCTURAL INSULATED PANELS
GENERAL NOTES & LIMITATIONS OF USE

DATE: 6/26/18

DRAWING NO: PERM0001

SHEET: 1 OF 3

DRAWN BY: RJA

SCALE: N.T.S.

REV: —

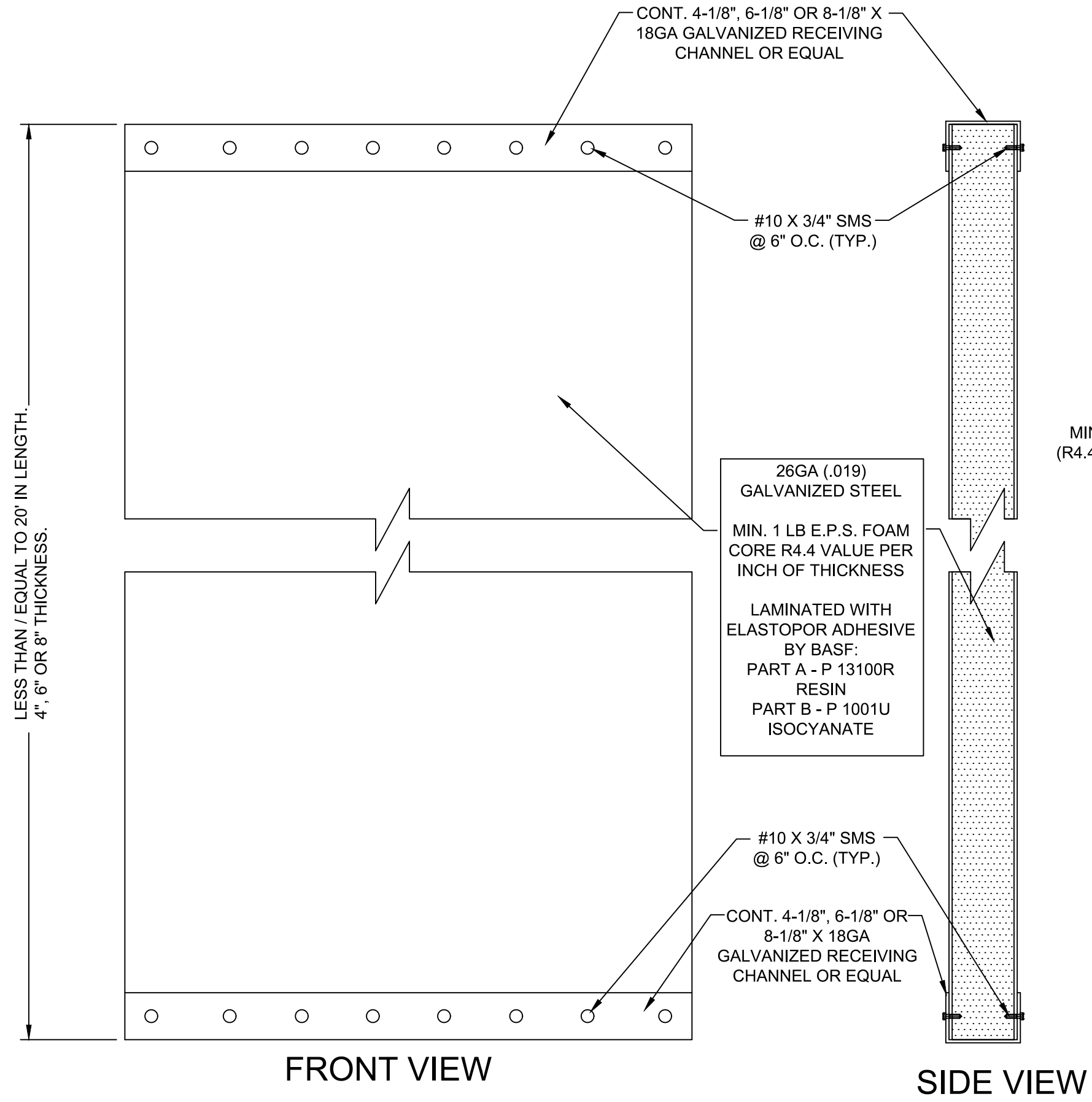
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Robert J. Amoruso
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Date: 2019.02.06 13:25:24 -05'00'

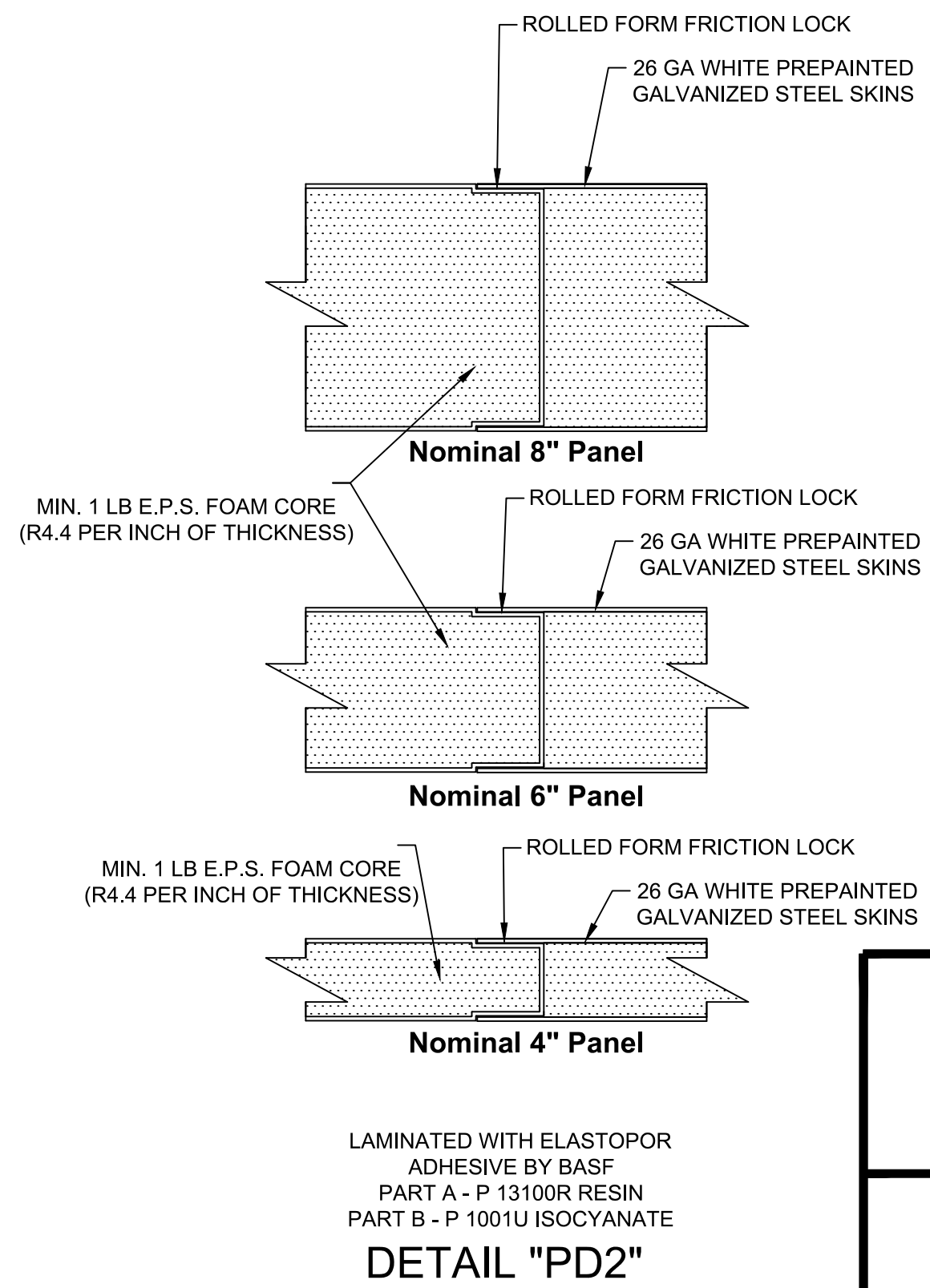
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FRONT VIEW

SIDE VIEW

DETAIL "PD1"



Nominal 8" Panel

Nominal 6" Panel

Nominal 4" Panel

DETAIL "PD2"

PROJECT NO. 418-0505				BY
				DATE
				REV

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269 Industrial Park Rd.
Monticello, GA 31064

STRUCTURAL INSULATED PANELS
PANEL DETAILS

DATE: 6/26/18

DRAWN BY: RJA

SCALE: N.T.S.

REV: —

DATE: 6/26/18

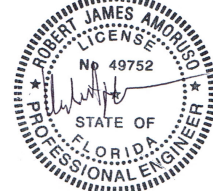
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SHEET: 2 OF 3

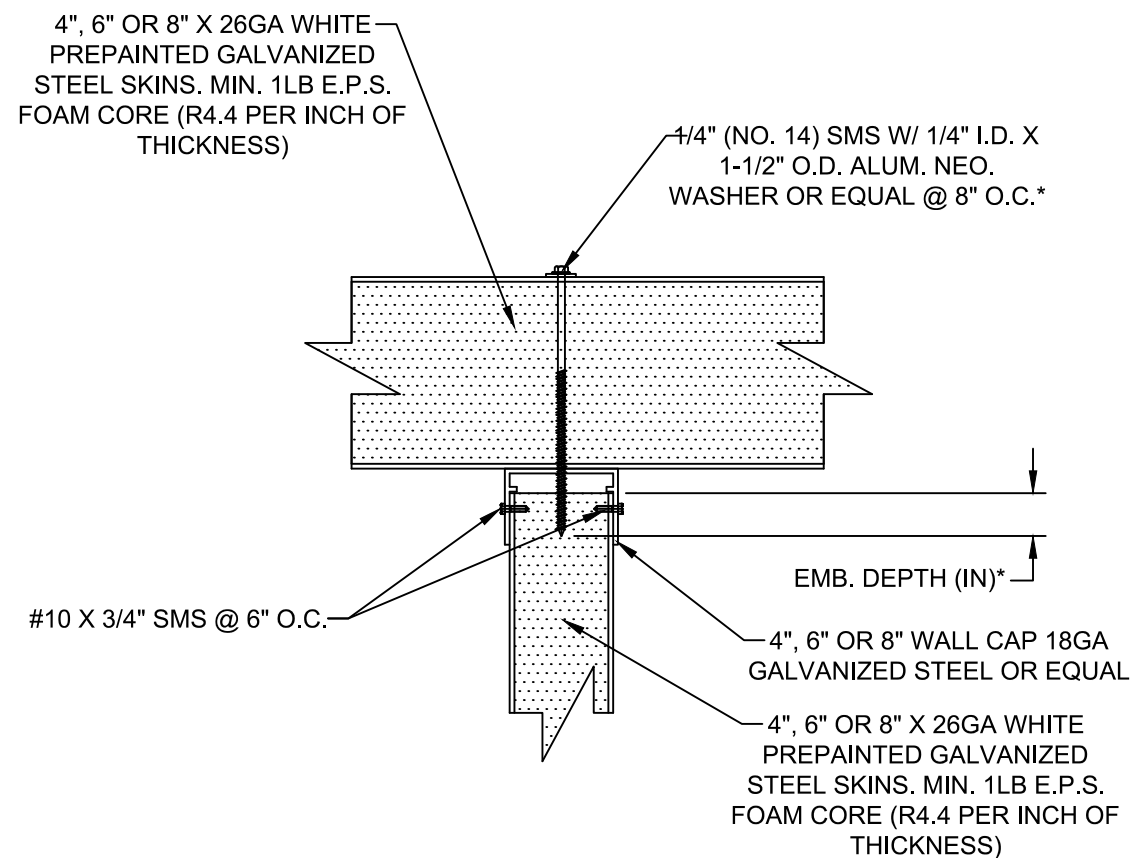
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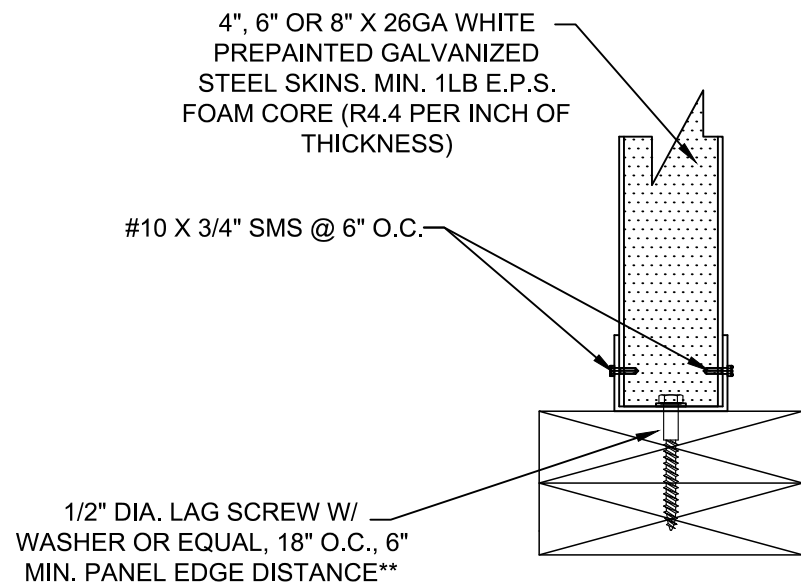
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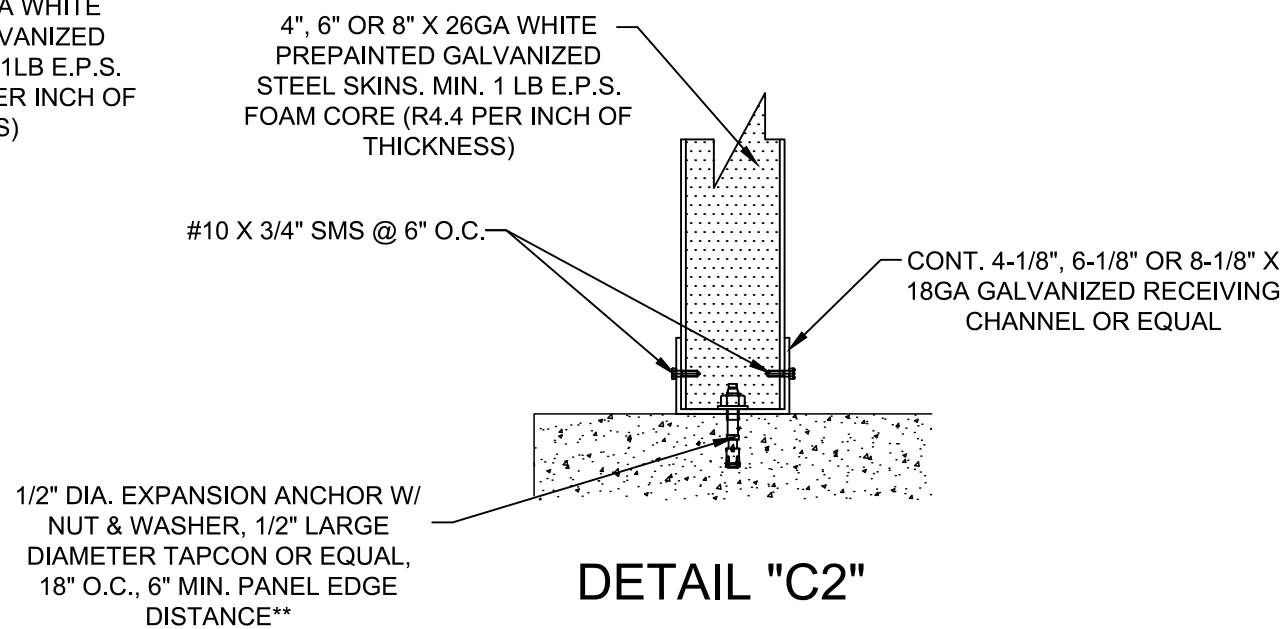
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Robert J. Amoruso, P.E.
Date: 2019.02.06
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DETAIL "C1"



DETAIL "C3"



DETAIL "C2"

*LENGTH OF 1/4" (NO. 14) ROOF TO WALL FASTENER SHALL BE SUCH THAT EMBEDMENT DEPTH IS A MINIMUM OF THREE SCREW THREADS. A SCREW 1-1/2" PLUS PANEL NOMINAL THICKNESS WILL EXCEED THIS REQUIREMENT. DIAMETER SHOWN IS MINIMUM BASED ON TESTING.

**SCREW / ANCHOR LENGTH MUST BE DETERMINED FOR SPECIFIC USE CONDITIONS. DIAMETER SHOWN IS MINIMUM BASED ON TESTING.

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Monticello, GA 31064

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CONNECTION DETAILS

DATE: 6/26/18

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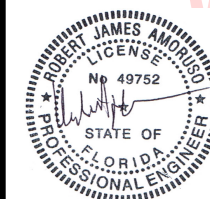
SCALE: N.T.S.

SHEET: 3 OF 3

REV: —

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