



ASSEMBLY LETTER

Roofing Systems

717 17th St. Denver, CO 80202 (800) 922-5922

August 29, 2016

Kirberg Roofing Inc.
1400 S Third Street
Saint Louis, MO 63104

Johns Manville
James Nunns
Technical Services Rep
Roofing Systems Group
10100 W Ute Ave
Littleton, CO 80127
800-922-5922 Option 3
nunnsj@jm.com

RE: Webster ISB

To Whom It May Concern:

I have reviewed head detail 1 on sheet SK-04 for this project. The detail shows a silicone boot in contact with JM EPDM membrane at the outside edge under the coping. JM does not have compatibility testing with the specific boot and our membrane, however silicone in general does not adversely affect the EPDM membrane and we do not anticipate any issues where these products come in contact. This application will not affect the terms and conditions of our guarantee we intend to issue on this project.

The detail also shows the EPDM membrane being fastened with the coping cleat. JM does require the membrane to be independently fastened to the wood nailer on the outside face.

Thank you for your interest in our roofing products and services. Please contact Johns Manville if any information is incomplete or incorrect so that appropriate modifications can be made. If you have any questions, please do not hesitate to contact our technical department at 1-800-922-5922 Option 3.

Regards,

A handwritten signature in dark ink, appearing to read 'James Nunns', written over a light blue horizontal line.

James Nunns
Technical Services Rep
Johns Manville Roofing Systems



ASSEMBLY LETTER

Roofing Systems

717 17th St. Denver, CO 80202 (800) 922-5922

September 12, 2016

Kirberg Roofing Inc.
1400 S Third Street
Saint Louis, MO 63104

Johns Manville
James Nunns
Technical Services Rep
Roofing Systems Group
10100 W Ute Ave
Littleton, CO 80127
800-922-5922 Option 3
nunnsj@jm.com

RE: Webster ISB – Carlisle's Barritech NP

To Whom It May Concern:

I have reviewed the shop drawing submittal comments for submittal number 072726-001 dated April 22, 2016 regarding Carlisle fluid applied membrane air barrier Barritech NP. The use of the product is acceptable to Johns Manville. The use of this product will not affect the terms and conditions of our guarantee we intend to issue on this project.

Thank you for your interest in our roofing products and services. Please contact Johns Manville if any information is incomplete or incorrect so that appropriate modifications can be made. If you have any questions, please do not hesitate to contact our technical department at 1-800-922-5922 Option 3.

Regards,

A handwritten signature in blue ink, appearing to read 'J. Nunns', written over a light blue horizontal line.

James Nunns
Technical Services Rep
Johns Manville Roofing Systems

SUBMITTAL IDENTIFICATION SHEET

To be completed by Contractor/CM

WEBSTER UNIVERSITY ISB	
PROJECT NAME	
8274 BIG BEND BLVD	
ADDRESS	
NUMBER	
WEBSTER UNIVERSITY	
OWNER	
CANNON DESIGN	
ARCHITECT / ENGINEER	
DEVIN D GATES	
SUBMITTED BY	
075323-001	
CONTRACTOR / CM SUBMITTAL NO.	CANNON DESIGN SUBMITTAL NO.
	075323
DRAWING / DETAIL REFERENCE	SPECIFICATION SECTION / PARAGRAPH
MANUFACTURER / SUPPLIER	ITEM / PRODUCT ID
REQUIRED DATE	PRIORITY
	CRITICAL

ITEM BEING SUBMITTED (check only one)

- | | | |
|---|--|--|
| ☐ Shop Drawings | ☐ Certification / Qualifications | ☐ Coordination Drawing |
| ☐ Samples (____ copies) | ☐ Record Documents | ☐ Calculations |
| ☐ LEED Submittal | ☐ Product Data | ☐ Schedules |
| ☐ Other _____ | ☐ O&M Manuals | |

ITEM BEING SUBMITTED FOR (check only one)

- ☐ Action ☐ Information Only ☐ Record

REMARKS OR DEVIATIONS

Email correspondence with KWA provided clarifications for requested information and warranty letter attached.

CONTRACTOR / CM CERTIFICATION (SUBMITTALS NOT CERTIFIED WILL BE RETURNED WITHOUT REVIEW)



PARIC CORPORATION
SUBMITTAL STAMP

THIS SHOP DRAWING HAS BEEN REVIEWED BY PARIC CORPORATION

Subcontractor remains responsible for dimensions, quantities, coordination with other trades and compliance with contract documents.

By:

Devin D. Gates

DEVIN D GATES	10/11/16
REVIEWED BY	DATE

To be completed by Reviewer

07 5323-001 REV002
CANNON DESIGN SUBMITTAL NUMBER
10/11/16
RECEIVED DATE

- ☐ A. No Exceptions Taken
No further review of submittal is required.
- ☒ B. Make Corrections Noted
Incorporate corrections in work; resubmission is not required.
- ☐ C. Revise and Resubmit
Revise as noted, and resubmit for review.
- ☐ D. Rejected
Submittal is not in compliance with Contract Documents; provide new submittal.
- ☐ E. For Record / Information Only
Submittal was reviewed for Record / Information purposes only.
- ☐ F. Not Required for Review
Submittal is not required by Contract Documents and has not been reviewed.

Review is for conformance with the design concept of this project and for general compliance with contract documents. Contractor is responsible for quantities, dimensions and compliance with contract documents and for information that pertains to fabrication processes, construction techniques and coordination of this work with all trades which will be af
This review is null and void if submittal deviates from contra
and does not indicate or note deviations.

A/E COMMENTS

☐ See attached sheet(s) for additional comments

Final warranty must meet specification section 1.10. 2. requirements: wind speed coverage of that indicated on structural drawings (90 mph minimum), hail coverage for up to 2 inch diameter, and accidental puncture coverage of 16 man hours per year of warranty.
see comments below

Kathy Williams	10/11/16
REVIEWED BY	DATE

Gates, Devin

From: Scott Klingsick <scott@kwastl.com>
Sent: Friday, October 07, 2016 7:00 AM
To: Gates, Devin
Cc: kpatel@cannondesign.com
Subject: RE: Clarifications on returned EPDM shop drawings

Follow Up Flag: Follow up
Flag Status: Flagged

Yes this will be acceptable. We need the rest of the information revised and it to be resubmitted so we can approve submittal 075323-001. Thanks

Scott Klingsick, LEED Green Associate

Project Manager
9721 Litzsinger Rd.
St. Louis, MO 63124
(p) 314.962.2560 (f) 314.962.4057
scott@kwastl.com



KWA Architects

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From: Gates, Devin [mailto:ddgates@paric.com]
Sent: Thursday, October 06, 2016 4:59 PM
To: Scott Klingsick
Cc: kpatel@cannondesign.com
Subject: RE: Clarifications on returned EPDM shop drawings

Kelvin/Scott,

Were you able to take a look at this and does this resolve the impact resistance needs? I can resubmit formally as needed but with the back and forth I wanted to ensure we are all on the same page.

Thanks,

DEVIN GATES
SENIOR PROJECT ENGINEER

Cell: 314-348-8828
Main: 636-561-9500

- - - - -
77 Westport Plaza, Suite 250
St. Louis, MO 63146



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From: Aaron Hammerstone [<mailto:aaron.hammerstone@kirberg.com>]
Sent: Tuesday, October 04, 2016 7:10 AM
To: Gates, Devin; scott@kwastl.com
Cc: kpatel@cannondesign.com
Subject: FW: Clarifications on returned EPDM shop drawings

All,

Please see the two attachments, as well as the information in the below email in regards to the ASTM testing on JM EPDM membrane.

Thanks

Aaron Hammerstone | Project Manager

314.333.4710 Direct | aaron.hammerstone@kirberg.com

314.792.3777 Mobile

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From: Mark Tucker [<mailto:Mark@D7Reps.com>]
Sent: Monday, October 03, 2016 4:12 PM
To: Aaron Hammerstone

Cc: James Nunns; zac.stallings@jm.com; Jim Schriefer
Subject: RE: Clarifications on returned EPDM shop drawings

Aaron,

This JM EPDM 90NR data sheet shows we meet ASTM 4637 for EPDM. It's the same testing All EPDM is to meet, requiring minimum test results for numerous categories. There are three major manufacturers of EPDM: Johns Manville, Firestone, and Carlisle. NOTE: of the three, the latter two, have private label products, targeting a different market segment of contractors. The 3 major manufacturers are also, the only three members of the EPDM Roofing Association (ERA): <http://www.epdmroofs.org/about-era/members> . The goal of this organization is collectively establish current and accurate data documenting of EPDM.
<http://www.epdmroofs.org/about-era/who-we-are> .

Inside of **ASTM D 4637**, are individual tests for certain criteria. As a whole, make up ASTM D 4637.
Of which include the following:

ASTM D 5635 – Dynamic Puncture Resistance, 5J, Type 1 – Passes

ASTM D 5602 Static Puncture Resistance, 44.1 lbf, Type 1 – Passes

There are only two hail tests for the Single Ply Membranes (according to Jim D. Koontz- Crenshaw and Koontz).
Of which, the one most recognized, is FM's test, for approved Roof Nav assemblies per FM 4470.
For this project, we supplied the following two FM Nav #'s:

Assembly Properties

Assembly #:	392147-0-0	Slope:	1.0000
Roof System:	Single-Ply System	Wind Uplift*:	90
Application:	New Roof	Internal Fire:	1
Cover		Exterior Fire:	A
Securement:	Adhered		
Deck Type:	Steel	Hail:	SH
	For Use With Non-Combustible Walls:		No

AND

Assembly #:	374588-0-0	Slope:	1.0000
Roof System:	Single-Ply System	Wind Uplift*:	270
Application:	New Roof	Internal Fire:	NC
Cover		Exterior Fire:	A
Securement:	Adhered		
Deck Type:	Structural Concrete	Hail:	SH
	For Use With Non-Combustible Walls:		No

The roofing specification for this project, states in Part 1, paragraph 1.5, line 3, That the manufacturer must meet "Tested and listed by FM for class specified in "Performance Requirements" Article in Part 2 of this Section". In Part 2, **we met** Part 2, paragraph 2.2, A1. As noted, A2 criteria is for Modified Roofing. As such, A2 should be eliminated from requirements of the submittal, as **Part 2, 2.2, D.2** requires a Hail Resistance: SH. Of which, is met with both of the approved JOHNS MANVILLE Roof Nav Assembly numbers provided.

As for UL 2818, again is not a test used in the Single Ply industry. It is used primarily in the residential steep slope roofing market (shingles, tile, slate, metal roofs). The test requirement for this, is to test roof slopes at 6" in 12" or greater. This test was realized in 1996, by Major Property Insurers, the Institute of

Business and Home Safety (IBHS), and with United Laboratory. They developed ASMT 2218, to set a national standard, for roof impact resistance, for the residential steep slope market.

-
- A scope/ description, for the use of ASTM 2218, from the UL ASTM 2218 web page: <http://www.comm-2000.com/ProductDetail.aspx?UniqueKey=20884> click on "scope".
- 1 Scope

1.1 This test method provides impact resistance data for the evaluation of prepared roof covering materials. For purposes of this Standard prepared roof covering materials are considered to be small units, sheets or panels designed for installation with multiple layers of such materials installed in **overlapping rows normally on inclines exceeding 25 percent**.

We did a quick research of other manufacturers web sites, and on hand manufacturers data. Not one in the Single Ply manufacturing business, list or utilize the UL 2218 test. In fact, all manufacturers use the same testing, as it relates to the ASTM (see above for Static and Dynamic Puncturing) for that membrane. In this project instance, is EPDM (ASTM D 4637).

It appears to us, that there seems to be a mix of an EPDM specification, and a Modified/ Residential specification.

If this information does not satisfy the needs of the BID Documents, please let me know.

Mark

From: Aaron Hammerstone [<mailto:aaron.hammerstone@kirberg.com>]
Sent: Friday, September 30, 2016 2:25 PM
To: Mark Tucker <Mark@D7Reps.com>
Subject: Fwd: Clarifications on returned EPDM shop drawings

Thanks,

Aaron Hammerstone

Project Manager
Kirberg Company
(314)792-3777

Begin forwarded message:

From: Scott Klingsick <scott@kwastl.com>
Date: September 30, 2016 at 2:24:29 PM CDT
To: Aaron Hammerstone <aaron.hammerstone@kirberg.com>, "Gates, Devin" <ddgates@paric.com>
Cc: "Szachnieski, Jason" <JRSzachnieski@paric.com>, Kathy Williams <kathy@kwastl.com>
Subject: RE: Clarifications on returned EPDM shop drawings

Aaron,

Sorry for the confusion. The wrong ASTM number listed in the specification. It should have been ASTM D 4637-08 "Specification for EPDM Sheet Used in Single-ply Roof Membrane" and/or UL 2218 Standard for Impact Resistance of Prepared Roof Covering Materials. We need testing and product data to show compliance with the requirements impact resistance for the hail requirements on this project.

Scott Klingsick, LEED Green Associate

Project Manager
9721 Litzsinger Rd.
St. Louis, MO 63124
(p) 314.962.2560 (f) 314.962.4057
scott@kwastl.com



KWA Architects

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From: Aaron Hammerstone [<mailto:aaron.hammerstone@kirberg.com>]

Sent: Friday, September 30, 2016 12:13 PM

To: Gates, Devin; Scott Klingsick

Cc: Szachnieski, Jason

Subject: Re: Clarifications on returned EPDM shop drawings

ASTM D 3746 is for bituminous roofing. ASTM D 4272 is for plastic films.

This is an EPDM roof system. I think I'm missing something here.

Thanks,

Aaron Hammerstone

Project Manager
Kirberg Company
(314)792-3777

On Sep 30, 2016, at 11:26 AM, Gates, Devin <ddgates@paric.com> wrote:

Aaron,

See convo below regarding the shop drawing markups.

DEVIN GATES
SENIOR PROJECT ENGINEER

Direct: [636-561-9592](tel:636-561-9592)

Main: [636-561-9500](tel:636-561-9500)

Cell: [314-348-8828](tel:314-348-8828)

[77 Westport Plaza, Suite 250](#)
[St. Louis, MO 63146](#)

Sent from my iPhone

Begin forwarded message:

From: "Patel, Kelvin" <kpatel@CANNONDESIGN.COM>
Date: September 30, 2016 at 11:21:32 AM CDT
To: "Gates, Devin" <ddgates@paric.com>, "Szachnieski, Jason" <JRSzachnieski@paric.com>
Cc: "Grossman, Lynn" <lgrossman@CANNONDESIGN.COM>
Subject: FW: Clarifications on returned EPDM shop drawings

Devin,

See clarification from KWA below.

Thanks,

Kelvin Patel, CDT, LEED AP BD+C
Associate



T 314.425.8756

From: Scott Klingsick [<mailto:scott@kwastl.com>]
Sent: Friday, September 30, 2016 11:13 AM
To: Patel, Kelvin <kpatel@CANNONDESIGN.COM>; Kathy Williams <kathy@kwastl.com>
Cc: Grossman, Lynn <lgrossman@CANNONDESIGN.COM>
Subject: RE: Clarifications on returned EPDM shop drawings

Kelvin,

It is fine to show the building taller than 60' information.
We do need submittal for the 2.2 A.2. Impact
Resistance: Test reports and product data showing
compliance with ASTM D 3746 or ASTM D 4272. Thanks

Scott Klingsick, LEED Green Associate
Project Manager
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St. Louis, MO 63124
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scott@kwastl.com



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From: Patel, Kelvin [<mailto:kpatel@CANNONDESIGN.COM>]
Sent: Thursday, September 29, 2016 1:14 PM
To: Scott Klingsick; Kathy Williams
Cc: Grossman, Lynn
Subject: FW: Clarifications on returned EPDM shop drawings

Kathy / Scott,

Please review Paric's questions and provide comments.

Thanks,

Kelvin Patel, CDT, LEED AP BD+C

Associate



T 314.425.8756

From: Gates, Devin [<mailto:ddgates@paric.com>]
Sent: Thursday, September 29, 2016 1:04 PM
To: Patel, Kelvin <kpatel@CANNONDESIGN.COM>
Cc: Szachnieski, Jason <JRSzachnieski@paric.com>
Subject: Clarifications on returned EPDM shop drawings

Kelvin,

I have a couple of clarifications on two items from the attached rejected submittal.

1. On page 3 the perimeter and corner dimensions are crossed out for buildings taller than 60' however this building is higher than 60' in locations, is this note correct?
2. Can you please be more specific on what is being requested in the note "submit information for A2"? Johns Mansville did not feel like any of this section applies to the EPDM roof.

Thank you,

DEVIN GATES
SENIOR PROJECT ENGINEER

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Main: 636-561-9500

77 Westport Plaza, Suite 250
St. Louis, MO 63146

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