Development Services

From Concept to Construction

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APPEAL SUMMARY

Status: Decision Rendered - Reconsideration of ID 18867

Appeal ID: 20246	**Project Address:** 2510 SE 21st Ave
Hearing Date: 4/17/19	**Appellant Name:** Bob Schatz
Case No.: B-004	**Appellant Phone:** 5032358585
Appeal Type: Building	**Plans Examiner/Inspector:** Gail Knoll
Project Type: commercial	**Stories:** 3 **Occupancy:** R2, A-2 **Construction Type:** V-A
Building/Business Name:	**Fire Sprinklers:** Yes - NFPA 13
Appeal Involves: Reconsideration of appeal	**LUR or Permit Application No.:** 18-173879-CO
Plan Submitted Option: pdf [File 1]	**Proposed use:** APARTMENTS

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	OSSC 1203.2
Requires	Original and reconsideration text is the same: Attic Spaces. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof framing members shall have cross ventilation for each separate space by ventilation openings protected against the entrance of rain and snow.
Proposed Design	Note to appeal team: This design was only slightly changed. The sleepers have been removed from the originally approved appeal design and the roof membrane was changed from a TPO roof to a 3-Ply roof. The R-Value was reduced by only.09. 3rd Reconsideration Text: The proposed design does not include an attic but utilizes an unvented low slope roof system where the ceiling is applied directly to the underside of roof framing members.?R-33.4 continuous rigid insulation is installed directly above the roof sheathing to maintain the roof sheathing at a temperature adequate to keep the dew point within the rigid insulation and prevent mold growth. Inside the roof cavity an additional Batt insulation is provided to R-11. The total provided roof insulation is R-46.44.?The following notes have been added to the plans:?ROOF SHEATHING TO BE COMPLETELY AIR SEALED WITH ZIP SYSTEM TAPE, TYP.?RIGID INSULATION TO BE INSTALLED IN MULTIPLE LAYERS TO LIMIT INSULATION BY- PASS FROM GAPPING OF INSULATION.?ALL FIXTURES INSTALLED IN THE CEILING SHALL BE SEALED WITH LOW EXPANSION SPRAY FOAM SEALANT.?THE MOISTURE CONTENT OF IN THE ROOF STRUCTURE MUST BE LESS THAN 18% PRIOR TO COVERING. RIGID INSULATION MUST BE KEPT DRY.? PERFORM ELECTRIC FIELD VECTOR MAPPING ENSURE LEAK FREE INSTALLATION OF ROOF MEMBRANE 2nd Reconsideration Text:?The proposed design does not include an attic but utilizes an unvented low slope roof system where the ceiling is applied directly to the underside of roof framing

members.?R-33.4 continuous rigid insulation is installed directly above the roof sheathing to maintain the roof sheathing at a temperature adequate to keep the dew point within the rigid insulation and prevent mold growth. Inside the roof cavity an additional Batt insulation is provided to R-11. The total provided roof insulation is R-46.53.?The following notes have been added to the plans:?ROOF SHEATHING TO BE COMPLETELY AIR SEALED WITH ZIP SYSTEM TAPE, TYP.?RIGID INSULATION TO BE INSTALLED IN MULTIPLE LAYERS TO LIMIT INSULATION BY- PASS FROM GAPPING OF INSULATION.?ALL FIXTURES INSTALLED IN THE CEILING SHALL BE SEALED WITH LOW EXPANSION SPRAY FOAM SEALANT.?THE MOISTURE CONTENT OF IN THE ROOF STRUCTURE MUST BE LESS THAN 18% PRIOR TO COVERING. RIGID INSULATION MUST BE KEPT DRY.?PERFORM A FULL FLOOD TEST TO ENSURE LEAK FREE INSTALLATION OF ROOF MEMBRANE.

Original Text:?The proposed design does not include an attic but utilizes an unvented low slope roof system where the ceiling is applied directly to the underside of roof framing members. R-21 continuous rigid insulation is installed directly above the roof sheathing to maintain the roof sheathing at a temperature adequate to keep the dew point within the rigid insulation and prevent mold growth. Inside the roof cavity an additional Batt insulation is provided to R-21. The total provided roof insulation is R-42.

The following notes have been added to the plans:?ROOF SHEATHING TO BE COMPLETELY AIR SEALED WITH ZIP SYSTEM TAPE, TYP. RIGID INSULATION TO BE INSTALLED IN MULTIPLE LAYERS TO LIMIT INSULATION BY- PASS FROM GAPPING OF INSULATION.?ALL FIXTURES INSTALLED IN THE CEILING SHALL BE SEALED WITH LOW EXPANSION SPRAY FOAM SEALANT.?THE MOISTURE CONTENT OF IN THE ROOF STRUCTURE MUST BE LESS THAN 18% PRIOR TO COVERING. RIGID INSULATION MUST BE KEPT DRY.?PERFORM A FULL FLOOD TEST TO ENSURE LEAK FREE INSTALLATION OF ROOF MEMBRANE.

Reason for alternative

3rd Reconsideration Text: The alternate is required because continuous exterior insulation is preferable over providing ventilation openings into (and therefore all of the insulation within) the structural cavity. The slope on the roof will be obtained through tapered insulation instead of sleepers. This new roof assembly design is very close to the previously approved appeal.

Original text & first reconsideration: The alternate is required because continuous exterior insulation is preferable over providing ventilation openings into (and therefore all of the insulation within) the structural cavity.?We consulted information provided by Hammer and Hand, a reputable contractor in the area who has lots of experience installing this type of roofing system. Per their recommendations and the dew point calculations, more than 50% of the roof insulation provided is above the sheathing. The notes (listed above) that they recommended have been added to the set.

A .pdf is attached to this appeal from the Hammer and Hand best practices manual, this can also be found online at the following address: https://hammerandhand.com/best-practices/manual/6-roofs/6-2-vented-and-unvented-roof-assemblies/?Several appeals of this nature have been approved. An example is Appeal ID: 16521.

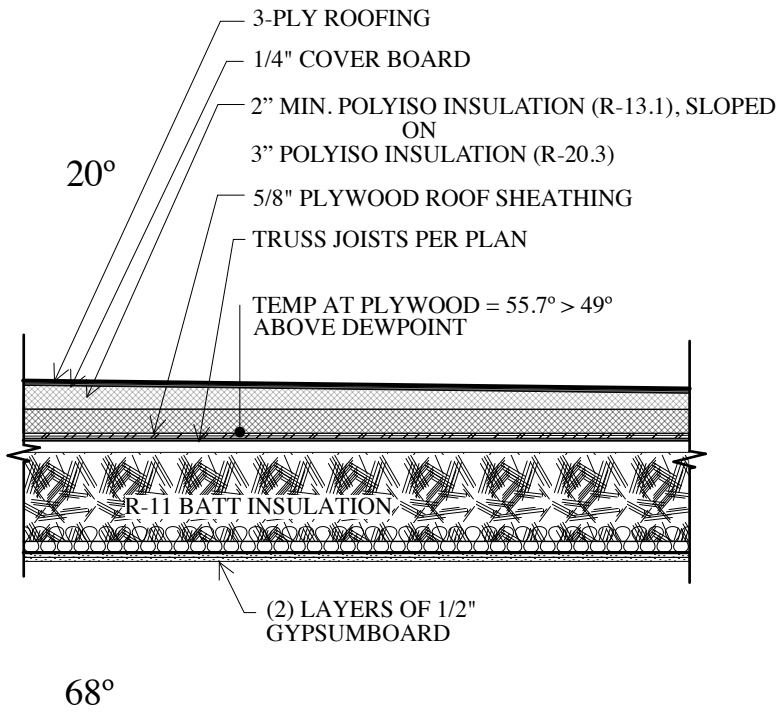
An unvented roof assembly with rigid insulation on the top of the roof sheathing has been approved in the past previously without an appeal as well: 16-265211-000-00-CO.

APPEAL DECISION

Unvented attic space: Granted as proposed.

The Administrative Appeal Board finds that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 180 calendar days of the date this decision is published. For information on the appeals process and costs, including forms, appeal fee, payment methods and fee waivers, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.



TYPICAL ROOF ASSEMBLY

ΔT=	48 DEGREES (68°-20°)

Related Formula: (Cumulative R / Total R) x Δ T

MATERIAL	R-Value	Cumulative R-Value	ΔT to reference point	Temp. at reference point
Extreme outdoor temp				20.00 °
3-ply roof	0.24	0.24	0.248	20.25 °
1/4" gypsum Cover board	0.28	0.52	0.537	20.54 °
2" Polylsocyanurate	13.1	13.62	14.078	34.08 °
3" Polylsocyanurate	20.3	33.92	35.059	55.06 °
PLYWOOD	0.62	34.54	35.700	55.70 °
3.5" BATT INSUATION	11	45.54	47.070	67.07 °
1/2" GYPSUMBOARD	0.45	45.99	47.535	67.53 °
1/2" GYPSUMBOARD	0.45	46.44	48.000	68.00 °
Indoor Temp				68.00 °
	Total R-Value	46.44		

PSYCHROMETRIC CHART RESEARCH			
Relative Humidity at 68°	30%	40%	**50%**
Dew Point Temperature	36°	42.5°	**49°**
			Worst Case Scenerio

GENERAL PLAN NOTES

1. ROOF SHEATHING TO BE COMPLETELY AIR SEALED WITH ZIP SYSTEM TAPE, TYP.
2. RIGID INSULATION TO BE INSTALLED IN MULTIPLE LAYERS TO LIMIT INSULATION BY-PASS FROM GAPPING OF INSULATION.
3. ALL FIXTURES INSTALLED IN THE CEILING SHALL BE SEALED WITH LOW EXPANSION SPRAY FOAM SEALANT.
4. THE MOISTURE CONTENT OF IN THE ROOF STRUCTURE MUST BE LESS THAN 18% PRIOR TO COVERING. RIGID INSULATION MUST BE KEPT DRY.
5. PERFORM ELECTRIC FIELD VECTOR MAPPING ENSURE LEAK FREE INSTALLATION OF ROOF MEMBRANE.

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APPLICATION # 18-173879-000-00-CO