

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: INDEPENDENT THIRD PARTY ROOFING INSPECTION		
Approved: Scott V. Prisco, AIA, Building Official		
Number: ADMIN 130.2B	Effective Date: August 19, 2008 Revised Date: January 24, 2017	Page: 1 of 2

Reference: Admin 130.2

Scope. This policy establishes the requirements for using independent third-party roofing inspections to verify code-compliant installation of new roofing for Type-Approved projects. Independent third-party roofing inspections may also be used for the inspection of re-roofing of existing one- and two-family dwellings and their accessory structures. This optional inspection path is currently and will remain available indefinitely.

Policy. An owner has the option to use the traditional inspection process, where a Building Inspection section, Construction Inspector performs the roofing inspections, or, the owner may choose to use an independent third-party inspector consistent with this policy. An owner must select the independent third-party inspector from our list of approved third-party roof inspectors, found at the end of this policy. The independent third-party inspections cannot be performed by an employee of the building owner or contractor that completed the roofing construction work being inspected.

Inspector qualifications. To be an independent third-party inspector, the individual must meet one of the following requirements:

1. Be a Colorado registered design professional that has experience and expertise in the installation and inspection of roofing systems of the type being installed,
2. Hold a current Registered Roof Consultant (RRC) certification and have five years' experience in the type of roofing being inspected,
3. Hold a current Building or Combination Inspector certification issued by the International Code Council or other inspector certification subject to the approval of the Building Official,
4. Been previously employed by a building department or other recognized inspection services company to perform roofing inspections on the type of roofing system being installed, or
5. Be an authorized representative of the roofing system manufacturer that inspects the installation and is responsible for issuance of the manufacturer's warranty certificate.

Inspection company. An independent third-party inspection company shall provide to the owner documentation of its experience and expertise to perform inspections on roofing systems of the type being installed. The inspection company shall demonstrate that it has provided adequate training for its inspector(s) and has a supervisory and quality control process in place to oversee the work being performed by their inspection personnel. Inspections performed by persons not individually qualifying as inspectors shall be supervised by a qualified inspector as noted in the above inspector qualifications.

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COMMUNITY PLANNING & DEVELOPMENT
BUILDING PERMIT POLICY**

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Owner responsibilities. The owner electing to use the independent third-party inspection alternative shall secure a Roofing permit, obtained by a contractor licensed in the City & County of Denver, and submit inspection reports to the Chief Trades Inspector – Construction Section within seven days of the final inspection. The independent third-party inspector or company shall be employed by the owner.

Inspection reports. The independent third-party inspector / inspection company shall submit a written inspection report to the Building Inspection section, Construction Inspector after the inspections are completed, noted deficiencies have been rectified, installation has been completed, and approved by the inspecting company. A separate inspection report shall be submitted for each roofing permit, containing the following information:

1. Address of the building,
2. Permit number and date of issue of the roofing permit,
3. Date that the inspections were completed and approved,
4. Name and contact information for the inspectors and the independent third-party inspector / inspection company performing the inspections,
5. Printed / typed name and signature of the owner or authorized representative,
6. Name(s) and signature(s) of the independent third-party inspector and the inspection supervisor, and
7. Copy of the signed manufacturer's warranty shall be attached to the report.
8. Verification that the roof has been installed in accordance with all code requirements. Refer to attached sample checklist (format may vary, but all items must be verified at a minimum) and roof guidelines which shall be incorporated into the report.

Note: The Third-Party Roof Inspection Form and sample roofing checklist (if used) are located at the end of this policy and must be submitted to the Chief Trades Inspector-Construction Section within seven days of the final inspection.

END OF DOCUMENT

- Encl. #1 Third-Party Roof Inspection Form
#2 Roofing Guidelines
#3 Roofing Checklist
#4 Approved Third-Party Roof Inspectors



City and County of Denver

Third-Party Roof Inspection Form

Property Address			
Permit Number			
Permit Issued Date			
Owner Information		Roof Information*	
Property Owner Name		Main Roofing Type	
		Number of Roofing Squares	
Property Owner Address		Roofing Manufacturer	
		Secondary Roofing Type	
		Secondary Roofing Squares	
		Secondary Manufacturer	

**To add any additional information, please use overflow space on back.*

Inspector Information	
Inspection Company	
Company Address	
Inspector Name	
Inspector Contact Info.	
Inspector Qualifications	<input type="checkbox"/> Colorado Registered Design Professional with required roofing expertise <input type="checkbox"/> Current Registered Roof Consultant (RRC) <input type="checkbox"/> Current ICC Building or Combination Inspector Certification <input type="checkbox"/> Previous authority having jurisdiction (AJ) roofing inspector <input type="checkbox"/> Previous recognized inspection services inspector <input type="checkbox"/> NRCA Roof Inspector <input type="checkbox"/> InterNACHI Roofing 101 Certificate with at least 5 years of roofing experience <input type="checkbox"/> Installed roofing manufacturer's Warranty Certificate Authorized Representative <input type="checkbox"/> Other (explain here) _____

Inspector Statement of Acknowledgement	
"I hereby acknowledge the roofing system for the referenced building has been inspected and found to be in general compliance with the minimum requirements of the Denver Building Code and in general conformity with the manufacturer's recommendations and specifications."	
Inspector:	Date:

Property Owner Statement of Acknowledgement	
"I hereby acknowledge that I am the owner of the building referenced above and I give my consent for the listed third-party inspection company to perform my roof inspection in lieu of the City and County of Denver inspection."	
Property Owner/Agent:	Date:

This original document, as well as the roofing checklist, must be submitted to the Chief Trades Inspector – Construction Section within seven days of the final inspection.

Drop-off in Person
 Inspections Counter, 3rd floor of the Webb Building
 201 W. Colfax Ave., Denver, CO 80202
 7 a.m. - 3:30 p.m., M-F

Submit via Email
Building.inspection@denvergov.org



City and County of Denver

Third-Party Roof Inspection Form

Overflow Space or Notes

NOTE: For all permits issued after September 12, 2016, the effective code is 2016 DBCA/2015 IBC/2015 IRC.

1. Permits and Scope of Work

- A. If repairs are more than 10% of the roof square footage or two roof squares (whichever is smaller), then the repair needs a roofing permit.
- B. All new roof penetrations require a permit (e.g., skylight, rooftop units, pipes, solar, etc.).
- C. Partial roofs that end at a natural edge may be replaced under a permit, but not partial slopes.
- D. Roof coatings do not require a permit.

Abbreviations
IBC = International Building Code
IRC = International Residential Code
IECC = International Energy Conservation Code
DBCA = Denver Building Code Amendments
IPC = International Plumbing Code

2. Underlayment

- A. Ice and Water Shield Requirements
 - i. Self-adhering bitumen installed at the eaves and rakes to two feet inside the exterior wall is NOT required per 2016 DBCA (see highlighted column in Table R301.2(1) below).
- B. For specific underlayment requirements, see Tables R905.1.1(1), R905.1.1(2), R905.1.1(3) governing underlayment types, applications, and attachments in the 2015 IRC or request a copy of these tables from Building Inspections.

**Table R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

Ground Snow Load (psf)	Wind Design				Seismic Design Category	Subject to Damage From			Winter Design Temp (degrees)	Ice Barrier Under- layment Required	Flood Hazard	Air Freezing Index	Mean Annual Temp (degrees)
	Speed (MPH)	Topo-graphic Effects	Special Wind Region	Wind-borne Debris Zone		Weathering	Frost	Termite					
35	115/125/140	No	Yes	No	B	Severe	36"	Slight/Mod	1° C	No	1978	712	40-45° F

3. Roof Decking

- A. Existing roofs must be removed to deck and replaced where two or more layers of any roof covering exist.
- B. No continuous opening between boards can be greater than 1/2" regardless of manufacturer's recommendations. If manufacturer requires a smaller gap, then the manufacturer's requirement prevails.
- C. Asphalt Shingles
 - i. For maximum gap definition on 1X decking sheathed roofs, consult the manufacturer's installation instructions for the product being installed, with the caveat that no opening can be greater than 6 square inches regardless of manufacturer's recommendation. Openings smaller than this dimension can be covered with 26-gauge metal.

4. Low-slope Roofs

- A. Membrane roofs must be installed by a D-Roof Covering/Waterproofing licensed contractor.
- B. If membrane is less than 10% of the entire roof or two roof squares (whichever is smaller), it can be installed by a D-Roof Shingles licensed contractor on shingle projects that have some low-slope areas (porches and patios, for example).

5. Wind Speed Requirements

- A. Wind Resistance of Asphalt Shingles (per the 2015 IRC - Section R905.2.4.1)
 - i. All shingles shall be tested and labeled to comply with the requirements of ASTM D 7158.
 - ii. If the brand of shingles is not included in the scope of ASTM D 7158, then the shingles must be tested and labeled to comply with ASTM D 3161.
- B. Wind Speed Zones for Denver (per the 2015 IBC Section 1609)
 - i. Areas east of Federal Blvd. – 115 mph min. rating
 - ii. Federal Blvd. to Sheridan Blvd. – 125 mph min. rating
 - iii. Sheridan Blvd. to Kipling St. – 140 mph min. rating

6. Attic Venting

- A. New Construction (per the 2015 IRC Section R806 Roof Ventilation)
 - i. Unvented attic assemblies require air-impermeable insulation (minimum of R-20, per IRC R.806.4). The total insulation R-value must meet 2015 IECC.
- B. Re-roofing Existing Construction
 - i. Venting is not inspected on re-roof projects, if the venting meets the building code in effect at the time of original construction.
 - ii. *Optional:* Venting can be added to meet manufacturer’s warranty requirements, as per manufacturer’s installation instructions.

7. Energy Code Requirements

- A. New roofs must comply with the 2015 IECC.
- B. Existing roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above (R-30ci) or below (R-38 Flat/R-49 Attic) the sheathing.

8. **Asbestos:** Must follow the Colorado Department of Public Health and Environment’s (CDPHE) requirements for a certified asbestos inspection and removal, and may be required to show proof of the inspection.

9. Inspections Required for Roofing and Siding Permits

Use the “205,” “206,” or “201” inspection code when requesting an inspection by phone at 720-865-2501.

3-Digit Inspection Code and Type of Roof System	205 – Pre-Inspection Commercial (New or Re-roof)	206 – Other (Mid-roof, Roof Insulation, Meeting)	201 – Roof (Final)
One- and Two-Family Asphalt Shingles	No	If Needed*	Yes
Townhomes	Yes	If Needed*	Yes
Commercial Asphalt Shingles	Yes	If Needed*	Yes
Low-slope Roofs	Yes	If Needed*	Yes
Tile	No	Yes	Yes

* A mid-roof inspection may be required when the pre-inspection identifies items that need to be completed, but will not be visible for inspection at the final.

#	P A S S	2015 IRC/IBC 2016 DBCA	Chapter Section	Building Code	F A I L
General Roof and Re-roof Requirements					
1		R908.2 1511.2	Structural and construction loads	Structural roof components shall support the roof covering system and the materials and equipment loads encountered during installation.	
2		R908.3.1.1(3) 1511.3.1.1	Roof replacement	Existing roof covering must be removed down to deck unless re-covering a single layer.	
3		R903.2 15.03.2	Flashing	Flashing shall be installed to prevent moisture from entering the roof and wall.	
4			Pitch pans	Required if multiple penetrations are intended to be flashed together, or for equipment support legs.	
5			Duct and pipe jacks	Pipe and duct penetrations shall be flashed using roof flashing (jacks) intended for the specified roof system.	
6			Flues/ducts	B-vent pipes must have a metal boot of the same gauge of the pipe and have a storm collar installed to protect the metal boot to pipe connection. Vent caps shall be in good shape and fitted for proper venting.	
7		R903.2.1 150.3.2.1	Locations	Flashing shall be installed at wall and roof intersections, change in roof slopes, and roof openings.	
8		R903.2.2 1503.2.2	Crickets and saddles	All vertical projections on sloped roofs greater than 30" require a cricket or saddle made of sheet metal or of the same material as the roof covering.	
9		DBCA R903.2.3	Flashing Single-ply	Flashing for single-ply roof systems shall be installed per manufacturer's current recommendations.	
10		R908.5	Reinstallation of materials	Existing flashings shall be replaced where rusted, damaged, or deteriorated.	
11		R903.3 1503.3	Coping	Parapet walls shall be properly coped with non-combustible, weatherproof materials of a width not less than the thickness of the wall and be sealed at every joint with an overlap of no less than 2".	
12		R903.4	Roof drainage	Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point on the roof.	
13		R903.4.1 1503.4.1	Secondary drains or scuppers	Where roof drains are required, secondary (overflow) drains and scuppers are required where parapets are present and entrapped water cannot drain when primary drains back-up. Overflows shall be the same size and installed 2" above the main drain. The installation and sizing of the drains shall comply with the IPC. Overflow drains cannot connect to the primary drain.	
14		1503.4.2	Scuppers	Emergency overflow scuppers shall be sized and located to prevent the depth of ponding water from exceeding the designed roof load. Scuppers shall have a minimum 4" opening.	
15		R908.1(2) 1511.1(2)		For roofs that provide positive drainage, re-covering or replacing an existing roof covering shall not require the secondary (emergency overflow) drains or scuppers of Section R903.4.1 to be added to an existing roof.	
16		DBCA R903.4.2	Equipment on roof	Equipment on the roof shall be installed on 8" legs bearing on decking or be installed on an 8" curb bearing on decking which can be flashing in properly. Placing the equipment on resonator pads or slip sheets is not allowed.	
17		R905.1.1	Underlayment	Must meet the specifications in Tables R905.1.1(1), (2), and (3) regarding underlayment types, application, and attachment.	

#	P A S S	2015 IRC/IBC 2016 DBCA	Chapter Section	Building Code	F A I L
18		DBCA R903.2.6 1507.10.5	Stucco	Exterior wall finishes must terminate a min. of 8" above the finished roof of a low-slope roof or a min. of 2" above a shingle, shake, or tile roof.	
Asphalt Shingle Roof Requirements					
19		R905.2.1	Sheathing	Roof decking shall be solidly sheathed (new construction only).	
20		R905.2.2 1507.2.2	Slope	Asphalt shingles shall be used only on roof slopes of 2:12 or greater. For slopes 2:12 up to 4:12, double underlayment is required. (See underlayment tables: Tables R905.1.1(1), R905.1.1(2), R905.1.1(3) in the 2015 IRC.)	
21		R905.2.4.1	Wind resistance	Asphalt shingle classification shall be ASTM D 7158 D, G or H depending on wind zone.	
22		R905.2.6	Attachment	As required by manufacturer or minimum of four nails per shingle for all roof slopes up to 21:12.	
23		R905.2.8.2	Valleys	All materials must comply with the ASTM's listed in R905.2.8.2.	
24		1507.2.9.2	(1) Open metal	Open valleys lined with metal shall be a minimum of 24" wide and corrosion-resistant.	
25			(2) Open roll	Open valleys lined with two plies of rolled roofing shall be permitted where the bottom layer is at least 18" wide and the top layer is at least 36" wide.	
26			(3) Closed roll	Closed valleys shall be a minimum of 36" wide of either 1) one ply of smooth roll roofing or 2) self-adhering modified bitumen.	
27		DBCA R905.2.8.2	(3) Closed metal	Metal is not allowed in a closed valley.	
28		R905.2.8.3	Sidewall flashing: Headwall	Continuous flashing shall be a minimum of 4" x 4" and all flashing shall be counter flashed with metal or exterior finish and properly sealed.	
29			Step	Step flashing shall be a minimum of 4" x 4" piece per shingle, and all flashing shall be counter flashed with metal or exterior finish and properly sealed.	
30			Kick-outs	Kick-outs at the end of the sidewall step flashing shall be turned out in a manner that directs water away from the wall onto the roof or into a gutter.	
31		R905.2.8.4	Other flashing	Flashing against a vertical wall, soil stack, vent pipe and chimney.	
32		R905.2.8.5 1507.2.9.3	Drip edge	Drip edge shall be provided at eaves and rake edges: <ul style="list-style-type: none"> • Installed with a minimum of 2" overlap for segments, extend a minimum of ¼" below roof sheathing and a minimum of 2" onto roof deck; • Mechanically fastened at a minimum of 12" o.c.; and • Underlayment shall be installed over drip edge along eaves and under drip edge along rakes. 	
Low-slope Roof Requirements					
33		DBCA 140.7	Other inspections	All commercial roofs require a "205 - Pre-Inspection Commercial" inspection.	
34		DBCA R905.5.2	Deck slope	90 lb. roll roofing shall not be applied to roof slopes less than 2:12. Exception: Detached garages, patios and carports open on three sides may have a slope of 1:12.	
35		R905.11-13.1 1507.11-13.1	Slope	Modified Bitumen, Thermoset (EPDM), and Thermoplastic (TPO/PVC) shall have a minimum design slope of ¼:12 for drainage.	
36		R905.11.3 1507.11.3	Application	Modified Bitumen shall be installed in accordance with the manufacturer's instructions.	

#	P A S S	2015 IRC/IBC 2016 DBCA	Chapter Section	Building Code	F A I L
37			Torch Down Peel-n-Stick	Modified Bitumen shall be installed: <ul style="list-style-type: none"> Overlap all edges a minimum of 2"; Edge metal flashings shall be a minimum of 2" x 4" and be fully primed; Wall flashings to be independent of field sheet and properly terminated; Cant Strip (if required by manufacturer). 	
38		R908.1 1511.1	General exception (1)	Re-roofing shall not be required to meet the minimum design slope of ¼:12 for roofs that provide positive drainage.	
Metal Roof Shingles Requirements					
39		R905.4.2 1507.4.2	Slope	Metal roof shingles shall not be installed on roof slopes below 3:12.	
40		R905.5.6 1507.5.7	Flashing	Valley flashing shall: <ul style="list-style-type: none"> Be of the same material as the roof covering; Extend a min. of 8" from the centerline with a min. ¾" high splash diverter rib built-in at the flow line with sections overlapping a min. of 4"; and Min. 36" Type I underlayment for slopes greater than 3:12. 	
Tile Roof Requirements					
41		R907.5 1511.5	Reinstallation of materials	Existing slate, clay or cement tile can be reinstalled if not damaged, broken or deteriorated. Existing flashing shall be replaced when deteriorated, rusted or damaged.	
42		R905.3.2 1507.3.2	Slope	Clay and concrete tile shall have a minimum 2½:12 slope. For slopes 2½:12 up to 4:12, double underlayment is required.	
43		R905.3.8 1507.3.8	Flashings	Valley flashing shall: <ul style="list-style-type: none"> Extend a minimum of 11" from the centerline with a minimum 1" high splash diverter rib built-in at the flow line with sections overlapping a minimum of 4"; and Minimum of 36" Type I underlayment for slopes greater than 3:12. 	
44		DBCA R905.3.9	Inspection of tile roof	A mid-roof inspection shall be made to inspect underlayment, battens and flashings. No more than 30% of the tile system may be completed before requesting the inspection.	

For Denver Building Department Use Only	
#	Corrections required of failed item numbers:
Re-inspection required. When corrections are made, please request a new inspection.	
Re-inspection fee required: \$100.00.	
Inspector: _____	Date: _____



4/7/20

DEVELOPMENT SERVICES MEMO:

Due to the high volume of requests for roofing permits and inspections, caused by the severe hail storms over the past year, Denver Development Services is giving customers the option to avoid potential delays by hiring third-party inspectors. Additional costs apply and may vary depending on which third-party inspector you hire.

See list below to contact an approved third-party inspector.

Visit www.DenverGov.org/buildingcode to read the complete adopted policy on independent third-party roofing inspections.

Approved Third-Party Roof Inspectors

Name	Company	Contact Information
Jim Pepper	James R. Pepper, LLC	(719) 494-7768 15790 Candle Creek Dr. Monument, CO 80132 jim.pepper2013@gmail.com
Alan Wittren	Burgess Construction Consultants, Inc.	(303) 300-4527 9033 East Easter Pl. Suite 200 Centennial, CO 80112 awittren@burgess-inc.com
Josiah Flamm	Clearview Design	(720) 560-7066 4199 Timber Hollow Loop Castle Rock, CO 80109 clearviewsd@yahoo.com

Kraig Stanforth Travis Stanforth (must be signed by both)	Certified Building Consultants (CBC)	(720) 940-1180 11177 Cambridge Ct. Parker, CO 80138 kstanforthcbc@gmail.com tstanforthcbc@gmail.com
Alex Knuth	EVstudio	(303) 670-7242 Ext. 60 5335 W 48 th Ave Denver, CO 80212 alex@evstudio.com
Donald Hamilton	Mae' – Lae' LLC	(760) 660-9517 12305 Viewpoint Dr. Suite B Lakewood, CO 80401 donhamilton3@hotmail.com
Also Approved for Tile Roofs		
Gary Manlove	JBA Consulting	(720) 443-8280 PO Box 283 Larkspur, CO 80116 gary@jbaconsulting.net
Kraig Stanforth Travis Stanforth (must be signed by both)	Certified Building Consultants (CBC)	(720) 940-1180 11177 Cambridge Ct. Parker, CO 80138 kstanforthcbc@gmail.com tstanforthcbc@gmail.com
Jim Pepper	James R. Pepper, LLC	(719) 494-7768 15790 Candle Creek Dr. Monument, CO 80132 jim.pepper2013@gmail.com