

Technical Bulletin: 2021 Common Rough Inspection Issues

Residential New Construction Program

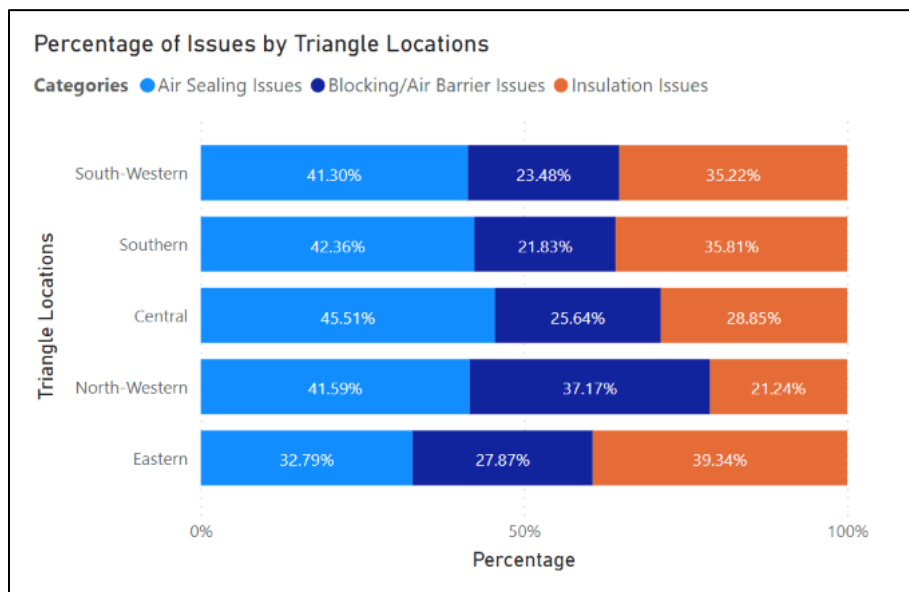


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The RNC Program regularly performs QAQC inspections behind raters on participating builders' homes. Throughout the year, the RNC Program compiled data from inspections and summarized the most commonly found issues. Each issue category is broken down into the top issues seen followed by photographic examples.

Below is a breakdown of the most common issues in the program followed by a graph highlighting the percentage of issues in various locations around the triangle area.

Issue Category	Percentage for 2021	Compared to last year
Air Sealing Issues	42.2%	↑23%
Blocking/Air Barrier Issues	24.9%	↑1.1%
Insulation Issues	32.9%	↓6.9%



Percentage of issues by Triangle Location

Air Sealing Issues

- Chases – Chases are often not fully sealed at the top due to penetrations or an improperly sized air barrier. Air barriers should be picture framed. If a gap is larger than 1”, remember recommend adding more blocking followed by air sealing.
- Drywall to top plate air sealing – This aspect of air sealing is one of the largest factors to infiltration results and needs a quality install. On spray foam products, the bead should be

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approximately 1/4". On seal sill, it should have a staple spacing equal to the stud width without rounded corners.

Air Sealing Issues Continued

- Kneewalls – T-ply should be installed with manufacturers specifications. Follow this link to see our technical bulletin on [Thermoply Installation](#).
- Common walls – Townhome core walls should be fully sealed around the entire perimeter. Remember to walk all core walls of a townhome to verify the corners, top plates, bottom plates, and rim joists are fully sealed.



An unsealed chase.



An unsealed kneewall.



An unsealed common wall.



The framing of a dropped ceiling isn't sealed to top plates

Blocking/ Air Barrier Issues

- Dropped ceilings or soffits – Often, air barriers are missed in dropped ceiling due to complexity. Ensure any rim joist over dropped ceiling has blocking connecting the rim joist to drywall.
- Rim joists – Rim joists for kneewalls and garage floors always need air barriers that fully block the interstitial space between floors.
- Chases – Chases need a complete air barrier on exterior walls and tops.



A knee wall rim joist in a dropped ceiling missing an air barrier.



A kneewall rim joist missing blocking.



A garage floor rim joist missing blocking.



A chase on a wall backing unconditioned space missing a barrier.

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Insulation Issues

- Insulation is not split around obstructions – All obstructions in walls have potential to compress insulation, resulting in poor performance. Remember to pull back insulation and check for obstructions. Insulators often try to hide imperfections during installation.
- Insulation has compression greater than $\frac{3}{4}$ " – General insulation compression due to improper sizing of batts is another common issue. Check the tops and bottoms of walls as insulation is often rolled into the cavity.
- Other insulation issues – While checking for advanced framed corners and intersections, take note of any that are missing insulation. These are missed or overlooked often.



Insulation not split around wires and purlins.



Insulation with compression greater than $\frac{3}{4}$ ".



Insulation cut long and rolled at the bottom.



Ceiling insulation not making full contact with drywall.