

## **Crack Mitigation in Production and Repair**

Cracks on large spanning ceilings continue to be an issue for many homebuilders. These cracks are **major dings to homebuyer satisfaction and are costly to repair**. To make matters worse, in some cases the cracks come back after being repaired, which again impacts homebuyer satisfaction.

These issues can be **proactively mitigated with a double layer of drywall and joint finishing products recommended to reduce cracking**. Yes, there is a minimal cost upfront, however the overall profitability for homebuilders will increase by decreasing back end repairs and improving homebuyer satisfaction. Here are the recommended crack mitigation measures:

1. **Double Layer on large spanning ceilings (see DCAN paper attached for details):** When installed properly, we have yet to see a failure, even in homes that have repeatedly cracked. This system works and will become the new industry standard for builders who want to get rid of cracks.

RC or Perimeter Relief Clips have been shown to help reduce cracking, however there are still failures leading to cracks and costly repairs with these products. Rather than investing in RC or Clips, you can remove them from your scope of work and instead, incorporate the double layer on large spanning ceilings. **If you remove the RC channel from your scope of work, and add the double layer, the cost impact is not substantial.**

If you have **no RC and no Clips** called out in your scope of work in large spanning ceiling areas, this means **you are gambling that there will be no movement across your trusses** in these large spanning area – this is a losing bet. When these homes fail, costly repairs are required, and if the repairs are paper tape and joint compound only, they sometimes crack again. The engineer, framer, and drywall subcontractor can do everything correct, and we will still be out looking at cracks with unhappy homeowners, so **it is sensible and good business to proactively take measures to address cracking in large spanning ceilings.**

2. **Tape large spanning ceiling joints with products specifically designed or recommended for crack mitigation.** DCAN has published a paper on crack repair (attached). The products detailed in this paper greatly improve the strength of the tape joint verse standard paper tape and joint compound.

DCAN recommends builders put in their **production scope of work** that **Crack Tape (can be FibaFuse Max or Westpac HD) will be used with Ultrafill and Acrylic Ad Mix to embed tape. This is not in the whole house, just on the large spanning ceiling. This is a minimal cost.** These products provide a stronger joint and assist in mitigating cracks.

3. **Crack Repairs:** 98% of the cost to repair a cracked ceiling is labor, therefore it makes sense to use the best possible products for these repairs. DCAN recommends builders incorporate into their scope of work for crack repair; **Crack Tape (can be FibaFuse Max or Westpac HD), Ultrafill, and Acrylic Ad Mix to embed tape. This is a minimal cost.** If you do nothing else after reading this paper, you should at least do this.

Lastly, per **Nevada State Contractor Board** and **NAHB Residential Construction Performance Guidelines**, as a builder you may be required to **REPAIR** cracks **ONE TIME** within the warranty period. A **REPAIR** does not involve skimming the entire lid. A **REPAIR** can be done in one day and does not require the homeowner to move out. Yes, **you may be able to see the repair area if you look closely at the ceiling, however that is permissible under the guidelines cited above.** We realize you want to make every homeowner happy, but at the same time we all need to communicate what the actual industry standards are, preferably up front, before move-in, and perhaps as part of your closing package.

DCAN is happy to work with you and your subcontractors free of charge, to **get rid of your cracking issues once and for all with double layer ceilings and joint finishing systems designed mitigate cracking.**

Please contact DCAN, or your drywall subcontractor to set up some test houses so you can see the results for yourself. As these procedures are incorporated into builder scopes of work and contracts, they will become competitively bid and will result in less cracking issues leading to increased builder profitability and homebuyer satisfaction.