

Case Study: Evaluating Flooded Slabs for Flooring Installation



Introduction

Flooded concrete slabs present unique challenges for flooring installations, particularly when dealing with moisture-sensitive materials. Whether caused by natural disasters, plumbing failures, or other water-related issues, flooding introduces both moisture and contaminants into the substrate, which can lead to significant issues for the new flooring. This case study highlights the steps Taylor recommends for evaluating and preparing flooded slabs to ensure successful flooring installations.



Customer's pain points

The company identified several critical pain points:

- **Unreliable Moisture Testing Methods:** Many restoration contractors rely on impedance meters to determine moisture content, which are not recognized by flooring manufacturers as reliable moisture testing tools.
- **Superficial Drying:** Restoration efforts often focus on drying the surface of the slab, neglecting deeper moisture levels that remain trapped within the slab. This can lead to incorrect assumptions about the slab's readiness for flooring installation.
- **Inconsistent Drying Time:** The time required to dry a flooded slab is unpredictable and depends on various factors, including the severity of the flood and the thickness of the slab. This can lead to delays and improper installations if not accurately assessed.
- **Presence of Contaminants:** Floodwaters can introduce harmful contaminants to the slab, such as mold, bacteria, and dirt, which can affect the bond of adhesives and lead to health hazards.



Taylor's solution

To prevent flooring failures and ensure a proper bond, Taylor advocated for the following best practices in evaluating and preparing flooded slabs:

1. Adopting Reliable Moisture Testing

1. Taylor recommends using RH testing per ASTM F2170 as the most reliable method for evaluating the moisture content in flooded slabs. This test provides an accurate reading from 40% into the depth of the slab, ensuring that trapped moisture is properly accounted for.
2. For slabs up to 1,000 sq. ft., a minimum of 3 tests is recommended, with additional tests for larger areas to ensure comprehensive coverage.

2. Proper Drying Protocol

1. While surface drying is common, it's essential to consider the moisture levels deeper within the slab, as they may take months to reach the surface. Taylor encourages allowing sufficient time for the slab to dry fully before flooring installation.
2. Drying times will vary, but it's crucial to follow established curing times—typically 30 days per inch of thickness for new concrete—to ensure the slab is adequately prepared.

3. Thorough Cleaning and Contaminant Removal

1. Taylor recommends that contractors thoroughly clean the slab before installation. This includes using appropriate cleaning agents, sanding the surface, and disinfecting the area to eliminate any contaminants that could hinder the bond or cause health risks.
2. pH testing should also be performed to ensure the slab is within the acceptable range for bonding.



Conclusion

Flooded slabs require special attention and thorough evaluation to ensure a successful flooring installation. By following Taylor's recommended moisture testing and preparation protocols, contractors can minimize the risks associated with flooded slabs, including improper bonding, mold growth, and health hazards. By using proper RH testing, cleaning procedures, and expert judgment, flooring professionals can successfully address the challenges presented by flooded slabs and deliver lasting, high-quality flooring installations.