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The Value of Construction Mockups

Hixson's construction specifications typically include items or assemblies that require the contractor to provide mockups for Hixson (as the Architect/Engineer) and the facility's Owner to approve prior to the installation of the finished product. These mockups are called out for scopes of work which we have found to be challenging for contractors to get correct on the first or even the second try. Thus, the mockups serve as a tool to work through constructability issues and provide a base standard of quality and functionality that will be accepted for that scope of work.

Mockups are usually focused on critical points in the project where failure in execution could lead to poor performance of a detail, creating a condition in which bacteria could begin to grow and potentially leading to product recalls or facility shutdowns. One example of a mockup that Hixson typically requests is for Concrete Curbs and Insulated Metal Panels (IMPs). (See "Experience in Brief.") Using mockups in this situation, contractors can determine the correct method of securing vertical pipes to walls. The design intent is to make all surfaces cleanable and visible for inspections, and that all water can flow from the ceiling, down the wall, over the curb, across the floor, and safely to the drainage system without harborage. Over the years, some of the

issues with concrete curbs that we've seen include:

- Not getting a smooth, uniform finish on the concrete.
- Applying a concrete patch or slurry in lieu of troweling the concrete while it is still "green."
- Not finishing correctly around columns, pipes and drains.
- Not detailing the intersection with the IMPs correctly.

For IMPs, issues include not applying caulk correctly or at the correct locations, missing vapor barriers, incorrect installation and sealing of trim, to name a few.

The following photos show a mockup and some of the good curb work that came from working through the mockups ("Correct Approach"), as well as examples of

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EXPERIENCE IN BRIEF

While Hixson doesn't require concrete curb and IMP mockups to be combined, we have found it has proven to be an extremely valuable way to show numerous conditions, including how different scopes of work interact with each other, and how different systems are mounted to, and penetrate, both the curb and the IMP.

curbs where the Owner decided not to have mockups done ("Incorrect Approach"). Unfortunately, what little cost savings the Owner realized up-front by not having mockups performed will not compensate for the extra labor spent on corrective work, on removing and replacing sections of curb, and on the long-term quality and longevity issues that may result.

Correct Approach



Incorrect Approach



This is just one example of a mockup typically requested by Hixson on our projects. All have the potential to be of significant value, helping to mitigate or eliminate potential problems early on, providing a clear standard of expectations, and ultimately, leading to more successful project outcomes.

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