

Quality Control in Ceramic Tile and Stone Specifications

Failures more often than not have something to do with human error. When there is an installation failure, the culprit is likely the installer, yet the value engineering process compounds the problem by generating inadequate products and methods contributing to failure. Ceramic tile and stone installations are no exception to this problem, and the solution is to properly use and enforce the quality assurance and control sections the Construction Specifications Institute (CSI) designed in its master specifications.

Regardless of who is at fault, everyone pays one way or another. What is your risk and liability? What is your time worth? It pays to ensure there are adequate quality control instructions written into your specifications. Unfortunately, most ceramic tile and stone specifications fail to adequately address these important sections.

This is not to say there is an inordinate amount of ceramic tile and stone failures, but definitely more than there should be. These materials have many great attributes when one considers how functional, durable, and aesthetically pleasing they are, not to mention how they add lasting value to a project. A failure diminishes their value and people's confidence in specifying these products.

Rarely do I see a ceramic tile or stone specification that clearly and properly calls out the quality control and assurances needed. This is unfortunate, considering the high replacement costs and liability for ceramic tile and stone, particularly with high-risk projects such as exterior veneers and paving, decks, and swimming pools).

Quality control has long been a part of *MasterFormat*[™] and *SectionFormat*[™], but where is the quality in the quality control sections of Division-04400 for stone and Division-09300 for ceramic tile?

In most cases, it might be something left over from the last specification and incomplete, not up-to-date, and ambiguous, at best. So it is typically

left up to the installer to provide the quality control process. (Consider yourself lucky if the low bid installer turns out to be from a well-managed and conscientious company.)

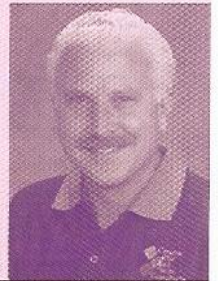
MasterFormat's Division 1—General Requirements, Section 01420 calls for quality assurance in general terms, as does Section 01430, which spells out quality control guidelines. Working in conjunction with them is the Part 1—General section in *SectionFormat* that provides quality assurance for qualifying components of applications, from labor to product. This qualifies and ensures suitability, and sets the stage for a pre-installation meeting.

The meeting is an important process, as it lets all work-related subcontractors coordinate their work and communicate their understanding and intentions in the presence of the other members (which should include the architect, general contractor, and manufacturer's and owner's representatives).

Part 2—Products should not only call out industry standards, but performance qualifications that can be measured and substantiated to ensure the quality of products. When you consider imperfect job site conditions and labor, why would you call out reference standards at the lowest level of acceptable performance?

Part 3—Execution, the most overlooked part, should specify not only installation methods, such as preparatory actions, post-installation protection, and cleaning, but provide a quality control plan specifically stating the process, testing, and inspection to be done during the installation for success.

The lower the performance of the products and methods you specify the higher your risk of liability. The risk is compounded when you do not have adequate quality assurances and controls clearly written in your specifications. Again, when there is a problem, everyone pays in one way or the other—even if only with time and reputation. ♥



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