

Diamond Match ◀ ▶ My Opinion

Have a technical question? Check MIA's Dimension Stone Design Manual 7.2 first. If you can't find the answer there, contact MIA's Technical Director, Chuck Muehlbauer, at technical@marble-institute.com. This FREE service is for MIA members only! (Non-member charge: \$85/hour) As a courtesy to other members, please limit phone conversations to ten minutes per call. All opinions and advice provided by Chuck Muehlbauer or anyone else from MIA are provided as general information only. MIA assumes no responsibility and shall not be liable for any damages resulting from your use of this information. Any information provided by the MIA is the exclusive property of MIA and shall not be disseminated, republished, or reproduced in any manner without the prior written consent of MIA.

Q: In the Marble Institute's *Dimension Stone Design Manual*, there is mention of mockups in the chapter on stone selection. But it doesn't clarify if the mockups should be independent, or part of the finished project. Isn't it preferred to have it part of the finished project for economy?

A: It can be done either way, but my personal preference is to have the mockup be independent of the project. Yes, you are correct, in that the mockup then becomes an unrecoverable expense, but it has been my experience that it becomes a more effective demonstration tool if it is not to become part of the project.

The primary purpose of a stone mockup is to demonstrate the range of color and character of the stone to be supplied. If properly done, this makes the mockup look worse than any similarly sized portion of the project will look. If one is building a mockup of a couple hundred square feet, and trying to demonstrate all of the variation that will occur in a project of 10's of thousands of square feet, the effect of the range will be extremely accentuated. Yet that is the role of the mockup, to show the range, and this needs to be clearly communicated to the architect and owner that this is to be expected. The actual project will look better, because it's not likely that all extremes of the material will show within one small region of the project.

If one is to build a mockup in place to become part of the finished project, then the mockup portion will be forever the worst looking region of the project. I get called into countless disputes regarding material not conforming to the approval samples or

mockup. I've seen mockups that show almost no color variation, as if all of the slabs used were consecutive slabs from the same block. That's a sure way for the supplier to get in trouble, since once that mockup is approved, it becomes a part of a binding agreement, and the architect and owner have a right to expect the project to look just like the mockup.

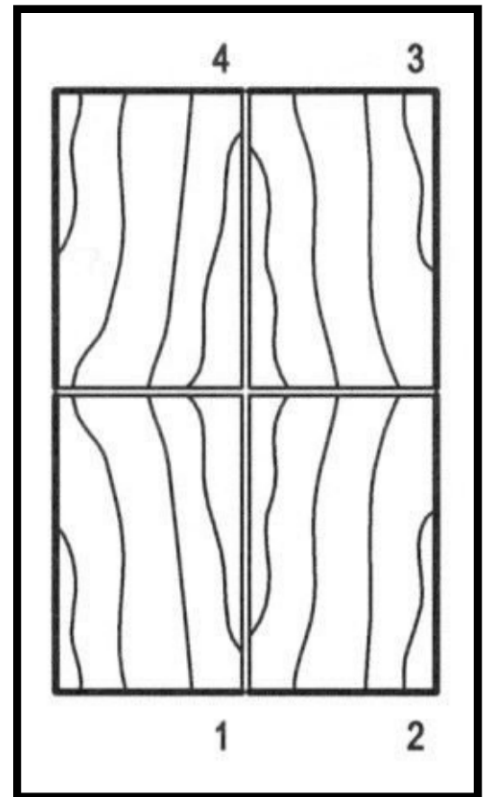
Q: We're supplying an interior wall project with book matched veins. The architect is rejecting our material because the book matches are not perfect mirror images of each other. But that is normal when book matching slabs. Is there something that explains that this should be expected?

A: Yes, in the *Dimension Stone Design Manual*, page 7-D-3, this is discussed. If we could take a dimensionless cut through the block, we could unfold it and have a perfect, mirror image bookmatch. But the sawing of the block in to slabs requires a kerf of a given dimension, anywhere from about 6 to 12 mm depending on the slabbing equipment used.

In addition to that dimension, a few millimeters are abraded away during the polishing process. So the resultant faces of the bookmatched panels were not in contact with each other in the quarry deposit – they are actually two planes that when in their in situ position were 10 to 15 mm apart. And the veins move omnidirectionally, so in that space the veins will be in a slightly different location, thus preventing a perfect mirror image book match. Depend-

ing on the material and the primary direction of the veining, this might be undetectable, slightly noticeable, or obvious when looking at the finished wall.

In addition to the text discussion, some of the graphics that we use have been intentionally altered so as to suggest this imperfection.



Graphic of Diamond Match shown in MIA DSDM. Note Intentional Offset Error shown in Vein Alignment.