Well Graded Concrete Aggregate

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Over the years, I have wondered why the ASTM specifications for concrete aggregate have a gap in the aggregate grading between the ⅜" size to the 7 mesh. Back in April 2012, I was visiting with Richard Szecsy about becoming a member of the Texas Aggregate and Concrete Association. Richard has a PHD in Civil Engineering and has worked extensively in concrete design and performance. I ask him about the gap grading of concrete between the ⅜" size and a typical sand, which is minus #7 mesh. Richard told me that the concrete would actually perform better if it was well graded from its top size. (usually 1 ½" or 1 ¼") to the 200 mesh.

After talking to Dr. Szecsy, we worked with one of our local ready mix customers and began to add about 30% of ⅜" to 7 mesh aggregate to our 1 ½" and 1 ¼" concrete aggregate. The new products are well graded - TCS # 563, 1 ½" to 7 mesh and well graded - TCS # 564, 1 ¼" to 7 mesh. The products have caught on rapidly.

2012 Sales of the Well Graded Concrete Aggregate	
May 2012	8,378 tons
June 2012	73,488 tons
July 2012	49,552 tons
August 2012	97,431 tons
September 2012	63,926 tons
October 2012	121,459 tons

As of 1 November 2012

The new grading has increased our output of concrete aggregate. This increased production has allowed us to offer these well graded products at a lower price than the 1 ½" and 1 ¼" aggregate that meet the ASTM grading.

We are getting good reports from the field on these new products. The new aggregates are reported to have improved pump ability, flow easier between the rebar, and achieve better strength when mixed with same amount of cement. Enclosed is a quote for our current concrete aggregate products.

We appreciate Richard Szecys's help in this matter and have since joined the Texas Aggregate and Concrete Association.