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July 19, 2022

Re: O Dowel – Tubular Dowel Bar and Dowel Bar Basket Assemblies

The following is my firm's testimonial based on our experience installing the O Dowel Tubular dowel bars and dowel bar basket assemblies on various State DOT and Municipal DOT projects in Washington State. Our evaluation focuses exclusively on the Corrosion Resistant (CR) O Dowels that are required by the various DOT's we serve.

In evaluating any dowel bar product Salinas Construction, Inc. (Salinas) focuses on the following elements as part of our evaluation:

1. Cost
2. Productivity of installation
3. Handling procedures specifically freight, picking ability and strength of supporting structure such as pallet choice
4. Anchoring requirements
5. User fatigue based on pallet size and weight of product
6. Basket rigidity and weld strength

Cost:

Regarding cost, Salinas has moved to exclusively using O Dowel tubular dowels. When buying from an O Dowel distributor, my firm has seen a raw cost savings of approximately 30% as compared to other approved CR options. That cost savings with the O Dowel increases significantly to over 100% when compared to purchasing at retail from our local construction supply houses in the Seattle, WA area. The local suppliers in the Seattle area use competing CR products.

Productivity, Handling Procedures and User Fatigue:

Salinas incorporated in 1979 and began placing doweled roadway and airfields in 1982. In the time Salinas has been installing roadway and airfield concrete, we have used nearly every available option across a wide variety of specifications including DOT, FAA, and USACE/NAVFAC. With O Dowel, we have found them to be extremely light in comparison to other Corrosion Resistant Dowel Bars such as MMFX and ArmourCoat that we have also used. We have been extremely impressed with the reduced delivery truck load counts and the size (number of baskets) per pallet. It is clear O Dowels allow more baskets per pallet due to the reduced weight, which allows us as the installer to have fewer picks per LF of basket. By having fewer picks per basket, the end user drastically reduces waste, due to bending or warping of baskets, which has a direct impact on costs. The shipping pallets were sufficient to support these loads, unlike other suppliers which are consistently on the verge of fatigue.

The most impressive thing from an installer standpoint is the reduction in weight per basket as our labor placing and staging these dowel baskets is far less fatigued leading to far fewer lifting related injuries and greater install production each leading to a reduction in installation costs. A single man can lift and move a basket safely whereas other products,

simply due to weight, always require two people. Our historical production of lifting, moving into place, and anchoring prior to O Dowel was 21.43 LF per Manhour (MH), when using the O Dowel we are seeing that productivity increase to 26.78 LF per MH, which is a 25% increase in productivity.

#### Anchoring Requirements:

Since the O Dowel is significantly lighter as compared to other CR options, we had to perform some test to assess our anchoring techniques for when we use a slipform paver. The dowel basket assembly is very light making the specific gravities between concrete mix designs and the dowel basket assembly very similar. In the opinion of Salinas this similarity requires additional anchoring procedures to properly anchor the basket to the grade. Salinas uses #4 rebar in typically 6 locations per 11-bar baskets to anchor baskets. Salinas moved to using 8-10 pieces of #4 rebar for the 11-bar basket assembly when using O Dowel. Now there is a cost for providing these additional bars, however in our analysis these costs are offset by the reduction in waste and reduced safety and fatigue of our workers.

#### Basket Rigidity and Weld Strength

Basket rigidity and weld strength are essential to consistent results, reduction in waste and reduced risk of rolling baskets or floating dowels. O Dowel has provided dowel baskets utilizing sufficient .362" wire girth and excellent welds on all dowel bars. To date we have seen no weld failures on any of the dowels or baskets, which is a significant improvement to other standard assemblies provided by other suppliers.

In summary, I can state that in our experience installing the O Dowel bars and dowel bar basket assemblies these provide an excellent solution that has very advantageous features for safety, reduced waste, excellent price advantages and productivity gains to the end user and are overall preferable to us as installers.

Sincerely,



John Salinas II  
Salinas Construction Inc.  
President