

## PROJECT PROFILE

# Plaza Uses Decorative Concrete to Talk About Water

## East Bay Public Plaza, Olympia, Wash.

by Joe Maty

**A** SMALL slice of the rugged Puget Sound coastline has appeared in the heart of Olympia, Wash.

Located in the East Bay District of Olympia — Washington's capital city — the East Bay Public Plaza celebrates a theme of water stewardship with interactive water features that re-create natural shoreline, streambed and wetland areas.

The rocky stream and sandy beach come alive thanks to the vision and design of Robert W. Droll Landscape Architect, Lacey, Wash., and the craftsmanship of Belarde Co. Inc., an architectural concrete contractor based in Snohomish, Wash.

It's all about water — a local wastewater treatment agency, the LOTT Clean Water Alliance, wants folks to know about the significance of water reclamation and reuse. The stream is itself reclaimed water.

"They wanted a plaza telling how reclaimed water goes through the

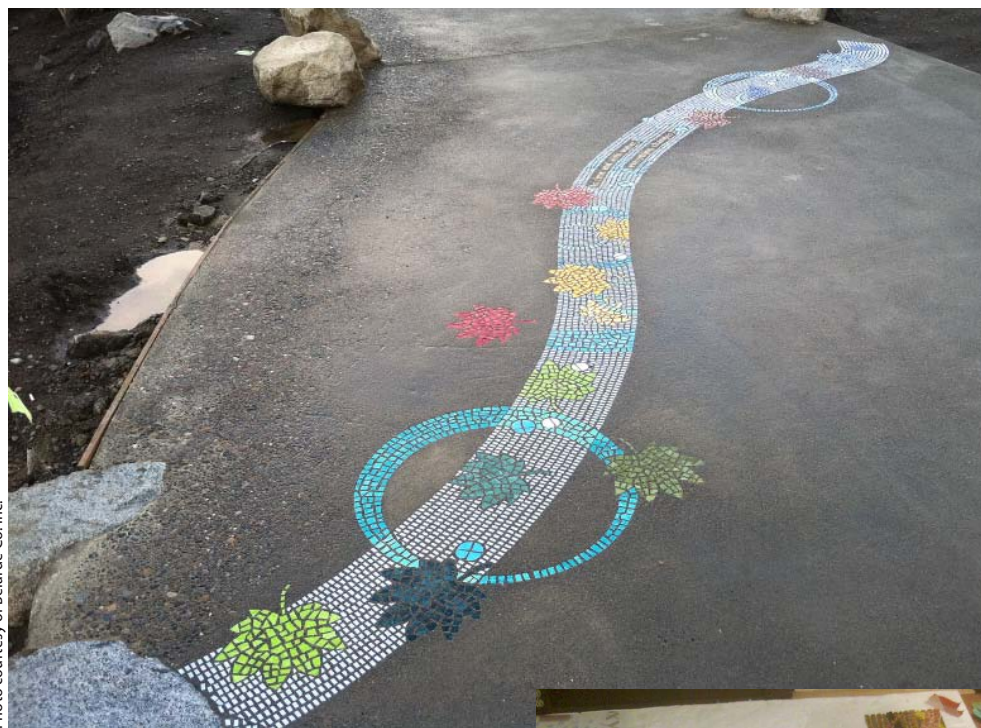


Photo courtesy of Belarde Co. Inc.

### Project at a Glance

**Client:** LOTT Clean Water Alliance (Lacey, Olympia, Tumwater and Thurston County, Wash.)

**Decorative concrete contractor:** Belarde Co., Snohomish, Wash.; John Belarde, owner

**General contractor:** Berschauer Phillips Construction Co., Tumwater, Wash.

**Landscape architect/designer:** Robert W. Droll, ASLA, Robert W. Droll Landscape Architect P.S., Lacey, Wash.

**On-site landscape architect:** Eric Williams, ASLA, Robert W. Droll Landscape Architect P.S.

**Project description:** Installation of decorative concrete elements of East Bay Public Plaza, Olympia, Wash., using integrally colored concrete, stains, mosaic tiles and other features

**Mix design:** Miles Sand and Gravel, Puyallup, Wash.

**Products used:** Lithocrete LithoMosaic; L. M. Scofield Co. Chromix Admixtures (integral color) in Limestone, Sombrero Buff, Coachella Sand and Shadow Slate; L. M. Scofield Co. Lithochrome Chemstain Classic stain in Weathered Bronze

**Challenges:** Construction of decorative concrete elements, installation of mosaics, alignment of seep holes with plumbing

environment," says Robert Droll, the landscape architect and designer for the project. "It's a series of features, with a streambed and pavement that looks like beaches, using coarse aggregate to fine-grained sand."

Visitors to the plaza will also encounter 29 "water lines" — quotes that relate to the theme of water stewardship — written out with mosaic tiles in the pavement along the stream. Installation of Lithocrete's LithoMosaic compositions are a specialty craft of Belarde Co., employing a structural concrete process that allows mosaic compositions to be set into place as an integral part of monolithic concrete.

In the case of the East Bay Plaza project, the 29 mosaic "water lines" were placed on a mesh backing that is used as part of the LithoMosaic system. Here, mosaic artisan Amanda Klemaske Conahan, of San Luis Obispo, Calif., was retained by Belarde Co., and worked closely with Droll in his

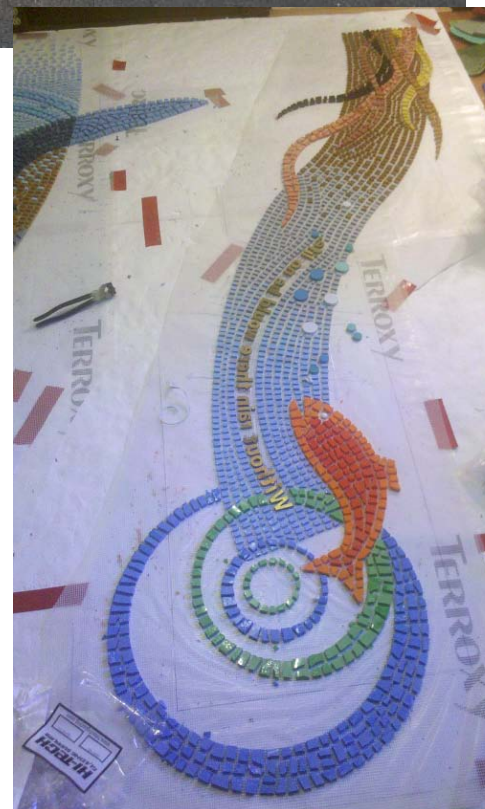


Photo courtesy of Amanda Klemaske Conahan

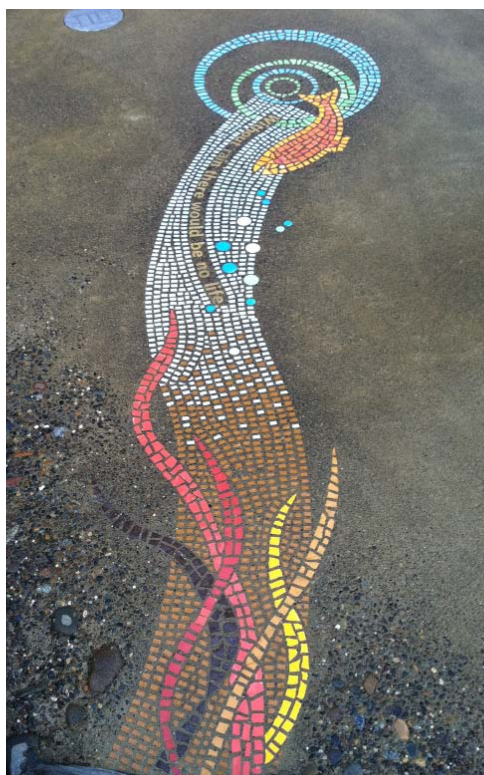




Photos courtesy of Belarde Co.

concepts for the mosaics into the finished compositions. These were then put in place during the concrete installation process handled by Belarde Co.

The wording of each quote relates to water in some way — for example, “In time and with water, everything changes,” and



“Without rain there would be no life.”

Lithocrete’s process offers enhanced visuals and long-term performance, as the mosaics are an integral part of the concrete structure, the contractor says.

“We wanted the color (concrete) admixture to flow between the tiles,” Droll says of the effect achieved with the process. “That’s what LithoMosaic allows you to do.”

The results have received national attention. Belarde Co. captured awards from the American Society of Concrete Contractors (ASCC) Decorative Concrete Council earlier this year for its work on the project, in the categories of Cast-in-Place, Special Finishes, Over 5,000 Square Feet and Multiple Applications Over 5,000 Square Feet.

### The making of a masterpiece

John Belarde says Droll, the designer, came to his company with a concept, but needed to utilize the company’s architectural concrete expertise to translate it into the intended result.

In its submission for the DCC award program, Belarde Co. cited three prominent concrete hardscape features: the Lithocrete Sedimentary cutbank wall and stream, the LithoMosaic waterlines and the wave-gradation concrete paving. The streambed, beach and wetland elements incorporated several tons of locally harvested rocks and pebbles.



The sedimentary cutbank wall is dotted with seeps that facilitate a slow water trickle. The design also encompasses strategically placed rocks and bronze wildlife, bird and leaf imprints, and artesian springs in the stream’s bed. And, of course, the entire project is radiant in a variety of colors and shades.

The company used formwork and hand-placed concrete to build the cutbank wall, finishing it with troweling and texture mats, with stains applied for additional color variation. Four integral colors from L.M. Scofield Co.’s Chromix Admixture line were used for the project: Limestone, Sombrero Buff, Coachella Sand and Shadow Slate. Three of the colors were layered in the cutbank wall, which required switching concrete trucks during each layered pour.

The Limestone color was also used in the paving that functions as the beach and streambed elements of the plaza. Varying concentrations of Scofield’s Lithochrome Chemstain Classic stain, in the color Weathered Bronze, were used on the cutbank wall and streambed.

Each LithoMosaic “water line” includes a bronze water-theme educational phrase surrounded by thousands of hand-selected, hand-cut and hand-placed glass tiles assembled by artist Klemaske Conahan. The tile artwork was glued to a mesh backing by the artist and then aligned and placed into the concrete by Belarde Co.





The sandy beach was installed in a wave gradation pattern using coarse to fine aggregate. Rocks were hand-placed to show the variety of sizes and stones found on a marine shoreline.

Belarde Co. workers also hand-seeded aggregates, using pebbles and cobbles ranging from 1/4 inch to 4 inches in size and concrete forming and tooling to fashion the plaza features. They added shell-type materials resembling broken oysters and other aquatic species. Oak leaves were collected on-site to make impressions in the paving surface, and a taxidermist supplied duck feet for tracks in the surface, at Droll's request.

"We worked very closely with the architects on-site. If they saw something they wanted highlighted or a shade variation, we did what was needed," says John Belarde. "It was painstaking, bits at a time."

Playing a key "hands-on" role in design execution on-site was Droll Landscape Architect's Eric Williams, "answering any questions, adding extra touches here and there, and helping our crews as much as he could," says Johnna Belarde, Belarde Co. contract administrator. "It helped a lot."

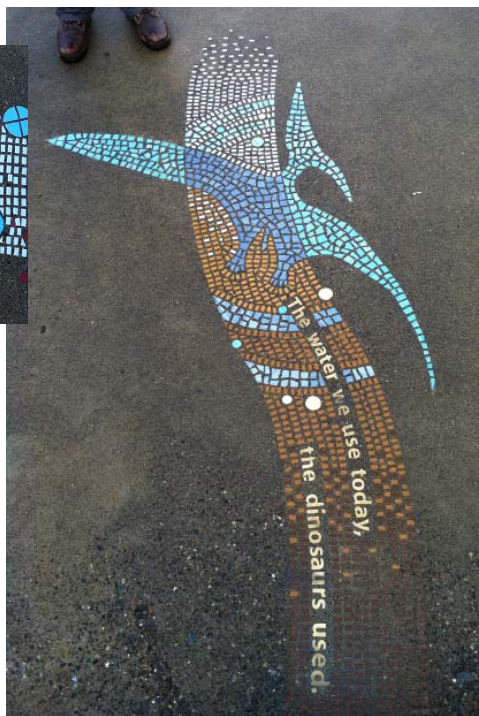
In an adjacent section of the plaza, Belarde Co. installed colored concrete for a wetland-pond element. Mosaics were placed there too.

### Crafted on sound foundation

In its submission for the ASCC Decorative Concrete Council award program, Belarde Co. stated, "Although we encountered several challenges, major precautions were taken on the installation of the cutbank wall and the LithoMosaics."

A key technical challenge was ensuring that the seeps were aligned properly with the plumbing to allow for only a trickle of water.

"The massive size and weight of the tiled LithoMosaic artwork sheets, some more than 20 feet long, required a deliberate and deft touch," the company said. "Making sure the tiles were secure to the mesh during



transportation and installation was our main concern."

Weather conditions also added a complicating factor, and the company used tents on-site daily to keep the project on schedule.

Artistry and craftsmanship figures prominently in the visuals, but John Belarde says solid concrete construction methods provided a crucial foundation for the success of the project.

"The challenge of the bigger flatwork areas is, it's still concrete, and it still has to have control joints and reinforcing," he says. Concrete was placed in grids, typically 12 feet by 12 feet. Steel dowels were used to transfer load from one panel to the next. Finishing and artisan expertise produce the monolithic, authentic impression of a natural landscape.

"The whole thing starts with good concrete practices. Then you elaborate with the artwork around that," he says.

Besides its ASCC DCC awards, the project has recently won accolades from the Washington Aggregates & Concrete Association (Excellence in Concrete Construction 2013: Special Application/Artistic Merit) and Associated General Contractors (AGC) of Washington (2013 Build Washington Construction Award: Public Building Under \$10 Million).

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