

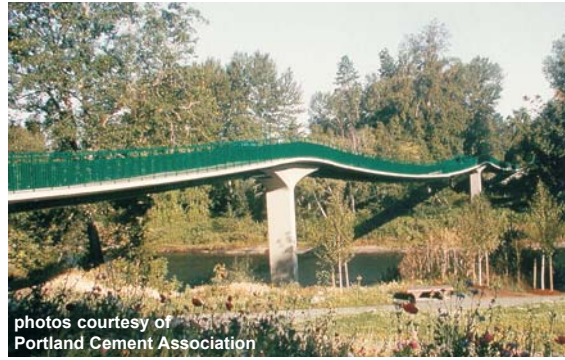
## Lehigh Supplies Cement for Oregon Bridge, Winner of PCA National Award

Lehigh Southwest EBU supplied the cement for an award-winning pedestrian bridge over the Rouge River in Grants Pass, Oregon. The bridge gives people an easy and scenic connection between Tussey Park on the south side of the river and the Grants Pass All Sports Park on the north side of the river.

The Portland Cement Association (PCA) recognizes excellence in design and construction of concrete bridges in the United States every two years. Eight winners of the 2002 Biennial Bridge Awards Competition received an Award of Excellence at the American Concrete Institute Awards Program held in March 2003 in Vancouver, BC. A jury of three prominent bridge professionals selected winners from a field of 55, based on creativity, functionality, and economy.

Lehigh worked closely with the concrete supplier, Riverside Ready Mix, to meet the specifications for this unusual bridge. The City of Grants Pass wanted a clear-span for the main channel of the river, because recreational boaters use the river year-round. Keeping construction activity out of the main channel was crucial, as the river provides critical habitat for threatened and endangered fish species.

The 200.6 m long pedestrian bridge with spans of 73.1 m, 84.7 m, and 42.7 m, is the first multi-span "stress-ribbon" bridge in the United States. To erect a stress-ribbon bridge, the builders slide precast concrete deck panels along bearing cable ribbons. These ribbons are strung from and anchored at the abutments on each side of the river.



After overlaying the panels with cast-in-place concrete, the crew then adds tension to the strands. The result: an extremely stiff yet slender concrete structure with a main span depth of only 356 mm.

The challenging deck pour required several trial batches to determine the precise mix that retarded the concrete set time. The timing was critical to allow the contractor to tighten the bridge cables while the concrete for the entire bridge deck was still fresh.

Master Builder's hydration stabilizer, Delvo, was used to retard the initial set of the concrete for 8 hours.

### Greg Juell, Sr. Sales

Representative- Lehigh Southwest, explained, "This technology lets us build graceful, but strong bridges, where we must minimize disturbance to the environment. I am pleased that Lehigh helped Riverside Ready Mix get an award for this innovative, beautiful and environmentally sensitive bridge."

Dr. Jiri Strasky, Consulting Engineer, architect and engineer, and OBEC Consulting Engineers, engineers, served as key contributors on the project.



**TOP and ABOVE: The versatility and strength of concrete enables the pedestrian bridge over the Rouge River in Grants Pass, Oregon to have long, graceful spans and intrude minimally upon the landscape.**