

CONSTRUCTION & DEMOLITION RECYCLING®

HIGHWAY RECYCLING UPDATE



CONCRETE

COLLABORATION

Oregon Department of Transportation contractors recycle 30,000 cubic yards of material from Interstate 5 bridge demolitions.

It's no small thing to close down a section of Interstate 5. At about 10 p.m. on June 6, just north of Cottage Grove, Ore., with traffic whizzing by, Oregon Department of Transportation (ODOT) contractor crews started to close the northbound lanes of the freeway and detour traffic in preparation for demolishing the River Drive overpass.

By 10:30 p.m., tractors were spreading sand under the overpass to absorb the shock of falling concrete and to protect the freeway. Excavators armed with hydraulic-powered jaws were moving into place, preparing to crush the concrete and rebar that made up the overpass.

By 4:30 a.m., the northbound section of the overpass was history, and its remnants, along with the 3 feet of shock-absorbing sand, were cleared.

On June 7, the process began again, this time with the southbound section of the overpass slated for elimination. By 2 a.m., most of the overpass was lying in shambles in the southbound lanes of I-5.

In highway maintenance and bridge replacement, this scene of thousands of cubic yards of construction rubble is typical. But this time, the aftermath was different.

COMMON GOALS

On the bridge program, a \$1.3 billion investment to

repair or replace nearly 300 bridges across the state in 10 years, ODOT's approach is to choose long-term solutions that take into account the needs of the economy, the community and the environment. With this in mind, the contractor, Holm II Inc., and subcontractor, Goodfellow Bros. Inc., on the Clarks Branch to Tunnel Mill Race project got together with the contractor on a nearby project to save time and money, while also treading lightly on the environment.

Only a short distance from the Clarks Branch to Tunnel Mill Race project, ODOT will replace two I-5 bridges over Hill Creek and two bridges on the Springfield-Creswell Highway outside of Creswell, Ore., as part of the \$9 million Oregon Avenue I-5 Overcrossing project.

Ross Bros. & Co., the Salem-based contractor managing the Oregon Avenue I-5 Overcrossing project, needed nearly 40,000 cubic yards of embankment materials to use beneath the four bridges and in widening the Springfield-Creswell Highway and I-5 interchange.

Working together, the three independent contractors agreed to exchange the aggregate free of charge. Goodfellow Bros. avoided disposal costs, and Ross Bros. avoided purchasing fill.

When the dust settled, the rubble totaled roughly 30,000 cubic yards of material, but it's what the contractors

did with the debris that makes this project unique.

On a tightly packed construction schedule, collaboration between projects has kept everyone on time and within budget.

Through the design-build contracting process, ODOT has committed to giving contractors more responsibility and freedom, which made the exchange between Goodfellow Bros. and Ross Bros. possible.

“Being able to work on design-build projects is a treat,” says Satarri Tofte, Goodfellow Bros.’ bridge program project manager. “With design-build, there’s more incentive to save money, which all contractors like, and to make creative arrangements like this one with Ross Bros.”

If the companies hadn’t arranged to exchange materials, the debris would have been transported to a paving or rock-crushing facility for processing, where a third party would strip the rebar and crush the concrete to be resold as aggregate. Goodfellow Bros. avoided nearly all of the cost of this process, typically \$9 per cubic yard including transportation.

“To conserve resources is one benefit of recycling,” Tofte says. “But the largest benefit for us is that it’s cost effective. Keeping materials out of landfills or alternate disposal sites is just a big bonus.”

EXCHANGE RATE

Goodfellow Bros. went beyond reusing the rubble as aggregate. Oregon-based Schnitzer Steel Industries, a large recycler of ferrous metal, provided drop boxes at the demolition site for Goodfellow Bros. to fill with rebar. When the clean-up process was complete, Schnitzer Steel paid Goodfellow Bros. for the metal.

In addition to avoiding land-filling, Goodfellow Bros. and Ross Bros. also saved money on transportation costs because the two work sites are less than two miles apart.

“We encourage all of our contractors to find ways of working more efficiently,” says Brent Pierson, resident construction manager with Oregon Bridge Delivery Partners, the company hired to help manage the bridge program. “Recycling the waste material from one project for use on another is a great example of quick thinking and cooperation to save time and money.” **CGDR**

This article was submitted on behalf of the Oregon Bridge Delivery Partners and Oregon Dept. of Transportation.



An excavator helps demolish an old bridge.