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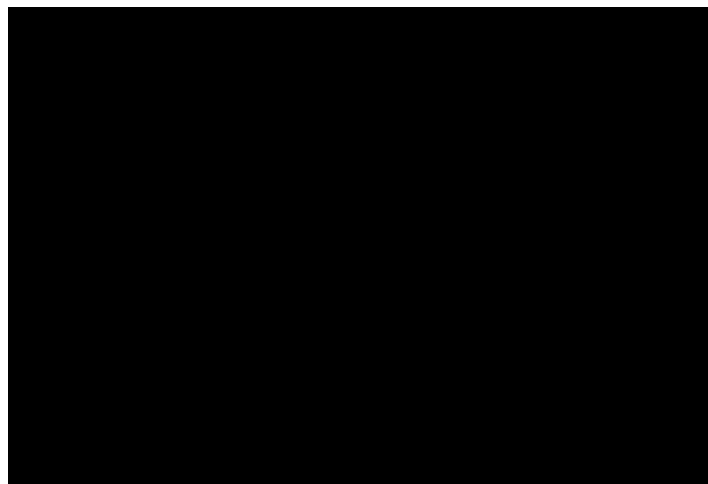
JWayside Systems Manager Jeff Root explains that the concrete grade-crossing panels—replacing the asphalt surface and wood headers installed when the Blue Line was built—will make servicing the rail crossing faster. *Photos by Ned Racine*

Wayside Systems Team Races the Clock in Rebuilding Blue Line Crossings

By Ned Racine, Editor

(Oct. 8, 2008) When Jeff Root and his team rebuilt the Metro Blue Line crossing near 41st Street and Alameda Street, there was no giant clock hanging over their heads, but there might well have been. Root and his crew are all about efficiency and quick turnaround time.

On Sept. 20, a bright and clear Saturday, Root and crew were continuing work they had begun the night before—removing asphalt-and-wood sections of the Blue Line railway, servicing the rail and installing concrete grade-crossing panels.



The concrete panels—each weighing as

Video: Wayside on Location | [Click play arrow to view](#)
Sept.20, 2008 - Wayside Systems team rebuilds 41st Street

crossing just north of the Metro Blue Line Vernon Station.

much as a small car—will bring the wayside service team a big advantage. Unlike the asphalt-and-wood sections placed when the Blue Line was built in 1989, which need to be dug out before the rail can be serviced, Root and crew will be able to snap out the concrete panels, service the rail, and snap the panels back in place, as if they were giant Lego pieces.

“We put [them] together just like a toy train set, one in front of the other,” said Root, wayside systems manager, who joined Metro in 1990, while the Blue Line was being constructed.



Concrete panels, weighing approximately 7,000 pounds per pair, will be placed over the black rubber mats.

The new panels mean less time servicing Blue Line rail. The advantage for the passengers is less downtime for the popular rail line. Root doesn't like downtime.

“Our goal is to get as much work done during the non-revenue hours,” said Root. “That time-frame is shrinking all the time, because we're increasing our service all the time. “My window of opportunity to get out there and do any work is shrinking.”

The previous night, Friday night, the team broke out the old asphalt-and-wood sections on the west track, removed wood ties and dug out the ballast rocks used to provide drainage and protect the area under the rails from mud.

Root calls the old rocks “contaminated ballast” because they now contain dirt and asphalt. Contaminated ballast, he pointed out, doesn't hold the rail alignment as well.

Once the rail was exposed, the team cut out sections of the rail and replaced them with “shortsticks,” temporary rail approximately 20 feet long that have been attached to new concrete ties.

On Saturday morning, after the permanent rail was reinstalled, the tamper-regulator ran over the rail, using its laser to ensure the rail met the computer's measurements. (If the rail is not aligned, the tamper feet nudge the rail into place.)

Workers then “hand dressed” the ballast to ensure its proper placement. Rubber “crossing pads” were placed on the concrete ties to prevent concrete-to-concrete friction (and protect against dirt).

Then the concrete grade-crossing panels were lowered and tweaked into place. The rail was welded together and reconnected to the Blue Line's electronic monitoring system.

Finally, the temporary shortsticks were returned to storage for use another weekend. The ballast will be cleaned and reused. The team has upgraded another crossing to the standards of the Gold Line and its new Eastside Extension.



Tamper-regulator unit passes over the rails to ensure their alignment is correct.

All this is accomplished while Blue Line trains pass by on single-track service and the back-up beepers on trucks add their noise, as do honking cars on nearby Long Beach Avenue, because although 41st Street is closed for Root's work, other nearby streets remain open.

As Root well knows, the cities want their streets opened as quickly as possible, "And that's the name of the game for us."

Although Root and company have done all the Blue Line crossings north of the 41st Street and Alameda Street crossing, he saw the Sept. 20 work as practice for the upcoming rehabilitation of the larger Blue Line intersections: Compton, Florence and Wilmington boulevards.

To accomplish that work, the wayside systems team will soon receive higher-capacity equipment to replace their 10-year-old standby vehicles, including a self-diagnosing \$1.2 million tamper-regulator. This will allow Root to reduce his—guess what—turnaround time.

Before Root and his team complete the 25 crossings in the Metro Blue Line Rehabilitation Project, they have 15 more locations to upgrade, basically requiring the same work they completed on that sunny weekend in September. Because his team is now so practiced and efficient, however, they can finish both tracks in a crossing in a single weekend, a big improvement.

"This is a pretty major thing that we do," Root explained, adding his workers have extensive experience in rail construction and maintenance.

"All of us come from rail backgrounds," he added. "We knew what we could do, and we knew how fast we could do it."