Friday, January 6<sup>th</sup>, 2012

### Temporary bridge piers lifted out of river

From ODOT-The last phase of disassembling the temporary bridge over the Willamette River was lifting the piers out of the river. Divers cut the piers flush with the river bottom, so nothing was left to obstruct fish passage or river users.

A large work bridge supported the heavy equipment that lifted the piers. It was also used as the work platform to demolish the piers and separate material for recycling or reuse. In addition, it prevented any debris from falling in the river.

High-capacity cranes on the work bridge held each pier steady as it was cut and then lifted out of the water. Crews drilled 3-inch diameter holes through each pier, inserted a large bolt, and then attached cables from the cranes to the bolt.

The piers weighed 6,500 pounds per foot. Each crane lifted up to 80,000 pounds depending on the length of each segment. Once out of the water, each pier segment was set aside for the demolition activity.

Now that all the piers are removed, bridge demolition over the Willamette River is complete and we are ready to build the new northbound bridge.



These pictures show crews placing a temporary bridge pier from the river onto the work bridge.



Before crews can cut the piers for removal,

they must dive in and torch the steel casings that envelop the piers.
Posted by Suzanneat12:12 PM

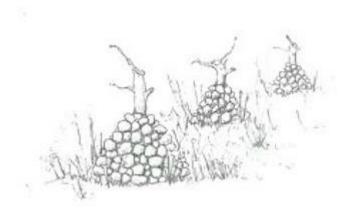
## **ODOT approves design enhancements for north bank natural area** *From ODOT-*

ODOT has approved two design enhancements proposed by Litus LLC for the Whilamut Natural Area near the new Interstate 5 Willamette River bridges.

Blue engraved stones will be installed on the slope south of the Canoe Canal Path under Interstate 5. Fifteen stones will depict the life cycle of the abundant camas, from the bulb's edible underground roots, to its open flowers, to its seeds falling to the ground.

The designs reflect the "Whilamut Passage" theme selected by the community in 2009. When completed in 2014, the installation will enhance local understanding of the Kalapuya culture and the area inhabited by Native Americans.

Teams from the Community Involvement and Long-term Ownership Strategy (CILOS) will participate in the restoration of 3.5 acres of land in the Whilamut Natural Area. They will restore the Willamette Valley upland and prairie habitat by removing non-native vegetation and planting native species. They will add design enhancements consisting of singing perches for birds created by supported tree snags. Some 14 local schools working in groups of 20 - 40 students per school will complete the project over three years. Ongoing education and awareness is an important aspect of this project.



Here's a rendering of the singing perches to be placed in the Whilamut Natural Area.

Over the past few months, a Design Enhancement Steering Committee has worked with the local designers to develop the final recommendation. The Citizen Advisory Group and the Project Development Team reviewed the designs at the end of November and recommended them to ODOT. We have approved the recommendation and will move forward with contracting with Litus for final designs, with installation to be completed by spring 2014.

ODOT appreciates Litus' work and all the volunteers who helped develop these enhancements. They will certainly benefit the area for generations.

Posted by Sonny Chickering, ODOT Area Managerat4:28 PM

## Watch a year of construction in less than 2 ½ minutes

From ODOT-

I'm excited about this amazing time-lapse video posted by one of our lead contractors, Slayden Construction. It shows construction work on the Willamette River Bridge project throughout 2011 in less than 2 ½ minutes.

From cameras looking down over the project, you see crews speedily building and paving the new southbound bridge as cars fly by on the temporary detour bridge.

After traffic switches to the new southbound bridge, you see cranes eating away at the temporary bridge, from the top of the deck down to the piers, one by one.

Finally, you see construction of a reinforcing wall to anchor the new northbound bridge to the bank at the south end of the project. One end of the box beams will rest on this abutment and the other end on the first pier.

The video then brings us up to where we are today with the project.

Thank you to JDP Media of Stayton for producing this video, and to Slayden Construction for commissioning it.

Posted by Jyll Smith, ODOT PIOat2:22 PM

Thursday, January 19<sup>th</sup>, 2012

## **Crossing the Canoe Canal**

From ODOT -

Months before the new northbound Interstate 5 bridge opens to traffic, the new northbound Canoe Canal Bridge will be complete. Located north of the Willamette River, the Canoe Canal Bridge is often referred to as the Patterson Slough Bridge.

All I-5 traffic currently uses the new southbound Canoe Canal Bridge, which was completed in early 2011. Construction is under way on the northbound bridge, which will be a duplicate of the southbound bridge.

We are building the concrete abutments to support the precast bridge deck beams first. In late February, the precast beams will be trucked from Harrisburg to the work site and lifted into place. The bridge's single span design eliminates the need for additional columns, opening up the area under the bridge for safer pedestrian passage.

The picture below shows what remains of the temporary detour bridge, and pile driving on the north bank for the new bridge abutment. The detour bridge will be demolished after the new bridge is complete.



The south bank at Canoe Canal is also being readied. In the photo below, an excavator makes room for the forms and rebar to be placed for the abutment.



Below, a protective cover was built over the Canoe Canal to prevent construction debris from entering the waterway. In addition, it serves as a temporary bridge for workers to move from one side to the other.



Posted by Karl Wieseke, ODOT Construction Project Managerat8:21 AM

### Canoe Canal — what a difference

From ODOT-

The photos below show the dramatic changes to the walls of the Canoe Canal. Slayden Construction, one of the contractors working on the Willamette River Bridge project, is responsible for the recently completed transformation.

Lowering the walls makes the canal more visible and opens up the embankments on both sides. Crews will complete landscaping and design enhancements by early 2014.

We will replace the temporary wooden railing with a standard steel railing. When the work is finished, path users can walk, run or ride alongside the water, as well as stop to enjoy the canal and reminders of the Kalapuya culture.



This picture, taken in April 2011, shows the Canoe Canal looking east where it passes under Interstate 5 and the Canoe Canal Bridge. The concrete walls along the canal appear as originally constructed in 1974.



This picture, taken this month, also shows the Canoe Canal looking east as it passes under I-5. Walls on both sides are lower and the banks extended. The area on the right side will include both a soft and a hard path separated by a landscaped area.

Posted by Jyll Smith, ODOT PIO at 3:43 PM

## Traveling around the Willamette River Bridge project

From ODOT-

With construction of the new northbound Willamette River Bridge underway, detours and flagger-controlled delays will facilitate safe and easy movement through the project.

Here's what to expect as you travel:

#### Ongoing impacts

- The northbound off-ramp from Interstate 5 to Franklin Boulevard is closed until October 2013. To reach Franklin Boulevard, use exit 191 to Glenwood Boulevard. After exiting, turn right on Glenwood Boulevard and travel north to Franklin Boulevard. The detour is clearly marked, with directional signs to businesses along Franklin Boulevard.
- The North Walnut Road path is closed east of I-5 and west through the Whilamut Natural Area of Alton Baker Park.

#### New impacts

- Franklin Boulevard is subject to single lane closures and flagger-controlled delays, as construction of the new bridge columns and bridge falsework occurs near or over the roadway in the next three months.
- The Canoe Canal path under I-5 is open for all east and westbound pedestrian and bike traffic on the north bank. In late February, expect delays of up to 20 minutes when crews lift the new beams for the Canoe Canal Bridge into place.
- The South Bank Path under I-5 is subject to increased flagger-controlled delays daily due to construction activities.

To date the project has resulted in minimal delays. By following all flagger instructions and project signage, you can continue to travel safely and quickly around the construction area.

Thank you for your patience as we move forward on this bridge replacement! Posted by Jyll Smith, ODOT PIO at 4:41 PM

Friday, February 3<sup>rd</sup>, 2012

# We want to see I-5 Willamette River Bridge construction from your perspective

From ODOT-

Here at the I-5 Willamette River Bridge project, the project team, bridge contractors and public involvement staff take lots of photos to document the progress—from before construction started through daily construction.

We have lots of photos featuring the construction side of the project, but there's something

missing: how you, our community partners and project neighbors, see the bridge work.

That's why we're inviting amateur and professional photographers to send us your photos of the I-5 Willamette River Bridge and environs—before or during construction.

We'd love to learn how you view the bridge project from your special vantage point — the park paths, the riverbanks, a drift boat floating the river, pictures from last summer's ceremony, you name it — and what this project means to you.

Please send up to three of your best photos of the Willamette River Bridge to Jyll.E.Smith@odot.state.or.us. Make sure your photos are in JPG format and no larger than 1MB. Once submitted, the photos become the property of ODOT, but we'll be sure to attribute them to you if we use them in any material.

Photo entries are due Feb. 24. We'll post the best entries here on our blog site a week later, on March 2.

Happy shutterbugging!

Posted by Jyll Smith, ODOT PIO at 1:55 PM

Monday, February 6<sup>th</sup>, 2012

New pedestrian path on south bank of the Willamette River



This picture shows the route for the new path on the south side of Franklin Boulevard.

From ODOT- Construction crews are preparing the south bank of the Willamette River under the vicinity of Interstate 5 for a new pedestrian path set to open in spring 2014. ODOT is building the path in cooperation with the cities of Eugene and Springfield.

This direct, safer route for pedestrians and bike riders will start east of the Knickerbocker Bridge and run along the riverbank until it joins a new path constructed by the city of Springfield along Franklin Boulevard.

This will be no ordinary path. Beams saved from the recently demolished temporary I-5 detour bridge over the Willamette River will be supported by concrete columns to create a viaduct that will offer great views of the river and new bridges.

The city of Springfield will continue the new path to the intersection of Franklin Boulevard and Glenwood Boulevard. Traffic signals will make the intersection safer for path users crossing Franklin Boulevard. Eastbound bike riders will share a wide sidewalk with pedestrians, and westbound cyclists will use a path on the south side of Franklin Boulevard.

We are very excited about these improvements!

Posted by Sonny Chickering, ODOT Area Managerat2:23 PM

Wednesday, February 8<sup>th</sup>, 2012

## Supporting the bridge columns, Part 1

From ODOT-

In addition to two graceful arches supporting the bridge, the new northbound Willamette River Bridge will have nine columns, supported by 22 drilled shafts filled with concrete, which create the foundation for the columns.

The team surveyed and staked column locations before clearing and constructing cofferdams at each site. Next, crews built platforms to accommodate a large drill rig near each cofferdam.

The drill rig can drill to a depth of 200 feet, though for this project, the average depth is 35 feet. The bit or auger attached to the drill rig varies in size, but is typically 8 feet in diameter and 6 feet long. Once the drill is positioned, the drilling takes one to two days per shaft.



The drill rig positioned beside the cofferdam is ready to drill one of the two shafts at this site.

Initial drilling is usually through soft material, which is removed from the hole. To prevent soil from falling back into the hole, workers insert a temporary steel casing (below) before pouring the shaft.



Posted by Jyll Smith, ODOT PIO at 11:40 AM

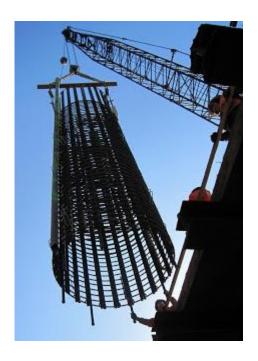
Friday, February 10<sup>th</sup>, 2012 Supporting the bridge columns, Part 2 From ODOT-

In our last post, I told you about using a large drill to create deep shafts for the foundation of

the bridge. Here's what happens next.

Engineers determine how deep to drill each hole based on the strength of the rock required to support the column. The average depth of the shafts for the northbound Willamette River Bridge is 35 feet, but two are as deep as 70 feet.

Once the drill reaches the required depth of the shaft, a steel rebar-reinforcing cage is lowered into the hole. These cages weigh between 13,000 and 28,000 pounds.



Crews lower one of the steel rebar-reinforcing cages into the drilled shaft before filling it with concrete.

With the steel cage installed, concrete is poured into the hole and allowed to cure.



Workers pump concrete into the drilled shaft to form the shaft for the columns that will soon follow.

The process of drilling and pouring the bridge shafts take a little over three months from the time the drill is moved onto the site until all 22 shafts are drilled and poured.

Posted by Jyll Smith, ODOT PIO at 2:04 PM

Wednesday, February 15<sup>th</sup>, 2012

## Launching off the ground and over the river

From ODOT-

These photos show where the new northbound Willamette River Bridge will launch off the ground and be suspended over the river. It will be a virtual twin to the new southbound span.



Above, you can see the top couple of feet of the new bridge piles, which were driven deep into the ground to help support the north end of the new bridge. The piling is enclosed in steel caps and a new retaining wall was built behind them.



Above, crews have surrounded the pile caps with reinforcing steel and are building the wooden falsework to create the bridge abutment. Next, they will pour concrete into the forms to create the foundation for the north end of the new bridge. The white material on the left is the form liner, which is used to create the textured finish on the exterior of the new abutment.



Here is a close-up of the textured form liner.

Posted by Jyll Smith, ODOT PIOat3:11 PM

Friday, February 17<sup>th</sup>, 2012

# **Expect delays of up to 20 minutes on the Canoe Canal Path** *From ODOT-*

Users of the Canoe Canal Path under I-5 in the Whilamut Natural Area will be subject to delays of up to 20 minutes between 7 a.m. and 5 p.m. Tuesday through Thursday (Feb. 21

and 22) for construction work.

The delays will allow contractors to safely install beams for the new northbound I-5 Canoe Canal Bridge. Crews will place the beams over the path using cranes on the old temporary Canoe Canal Bridge.

For your safety, please obey signs and flaggers directing path traffic in the work zone.

Thank you for your patience!

Posted by Jyll Smith, ODOT PIO at11:16 AM

Friday, February 24<sup>th</sup>, 2012

## Bike barriers installed to enhance walk along the river

From ODOT

Before construction started on the Willamette River Bridge, the local Citizen Planning Committee for the Whilamut Natural Area of Alton Baker Park was working with the Willamalane Park and Recreation District to address pedestrian safety issues on the Riverside Trail. On the north side of the Willamette River, the trail starts near the Aspen Street boat ramp and connects to the Walnut Road Path just before it passes under Interstate 5.

The Riverside Trail is ideal for a leisurely walk, but it is not suitable for biking due to its narrow, winding, bumpy terrain. Park planners hoped that by diverting bike traffic to more direct routes, the riverside path would become a pedestrian-only trail. Unfortunately, bike traffic continued to use the path, even after it was realigned and signage was posted. To resolve the safety issues, the Oregon Department of Transportation agreed to design and install a pair of off-set bike gates that prohibit bike traffic but allow access to people with physical disabilities. These gates, called chicanes, were installed in January 2012. This is just one way ODOT works with the Willamalane Park and Recreation District to enhance the park and mitigate the impacts of replacing the Willamette River Bridge.



New bike diversion gates have been installed at the western end of Riverside Trail in Eastgate Woodlands part of the Whilamut Natural Area.



Signs installed beside the bike diversion gates reinforce the prohibition of bicyclists from using this trail.

Posted by Karl Wieseke, ODOT Construction Project Managerat7:45 AM

Friday, March 2<sup>nd</sup>, 2012

### **Community photos**

From ODOT-

On Feb. 3 we asked you to send us your photos of the bridge and surrounding environs so we could see the project from your vantage point.

Below are some of the photos we have received to date.

We'd like to thank Douglas Beauchamp, arts consultant for the Willamette River Bridge project, who sent us these photos from early 2009, before construction work began on the new bridges.

The first photo shows one of 11 Talking Stones featuring Kalapuya words translated into English. These stones are found throughout the Whilamut Natural Area of Alton Baker Park. I can't wait to see the same vantage point with the new bridges in the background.



KANAA- Talking Stone: Going Across Place, February 2009. Photo: Douglas Beauchamp In the photo below, runners enjoy the North Bank Path with the original and temporary I-5 bridges overhead. Both of those bridges have since been removed.



Making tracks- North Bank Path, February 2009. Photo: Douglas Beauchamp

We'd also like to thank Tom Boyatt, transportation manager for the city of Springfield, for sending the photo below. It shows attendees of the August 18 southbound bridge opening ceremony in the shadow of the new bridge.



Southbound bridge opening event, August 2011. Photo: Tom Boyatt

We love seeing photos like these, so please send us your favorites as the project continues. Please send photos to Jyll.E.Smith@odot.state.or.us, in a JPG format and no larger than 1MB.

Posted by Jyll Smith, ODOT PIOat8:32 AM

Tuesday, March 6<sup>th</sup>, 2012

## **Restoring the Whilamut Natural Area**



From ODOT- Long before it was named the Whilamut Natural Area, the Kalapuya tribe inhabited this 70-acre site on the north bank of the Willamette River west of Interstate 5. The Kalapuya gathered food, traveled on the river and hunted local game. Later the site served as farmland, supplied sand and gravel for the original I-5 bridge and was used as a Lane County landfill from 1964 to 1974.

Transformation of the site continues today. The City of Eugene and volunteers serving on the Citizen Planning Committee oversee efforts to restore the area to its natural state. Removal of non-native plant species such as blackberries, Scotch broom and tall fescue allows native species to survive and thrive. Planting of native grasses and wildflowers creates new upland prairies for wildlife habitat. Western meadowlark, vesper sparrow, woodpeckers, lizards, gopher snakes, frogs and turtles are expected to return and thrive. A new forest canopy of black cottonwood and Oregon ash will protect plants needing shade while providing wildlife habitat and a cool zone along the river for juvenile Chinook salmon.

As the restoration precedes, bicyclists, walkers and runners use the variety of hard and soft paths to travel east, west, north and south. Some stop to enjoy the river or just sit and experience the natural surroundings.

Future generations will appreciate the opportunity to see cycles of nature and flourishing native plants and wildlife.

Posted by Sonny Chickering, ODOT Area Managerat9:31 AM

Friday, March 9<sup>th</sup>, 2012

## Placing beams for northbound Canoe Canal Bridge

From ODOT-

Recently, our contractor placed ten beams to support the deck of the new northbound Interstate 5 Canoe Canal Bridge. Careful timing and teamwork made it a safe and smooth process.

Local subcontractor Knife River manufactured the beams in Harrisburg. Each 180-foot beam weighs approximately 182,000 pounds. Given the size of the beams, only one at a time could be moved to the site.

Once loaded, each beam traveled south on I-5 to the Glenwood exit, crossed over the freeway and then headed back north. The truck exited the freeway on the east side and backed into position to unload the beam.



Workers prepare to unload a giant beam.

Two large cranes on either side of Canoe Canal lifted the beam, as workers on the roadway provided directions. Once all the beams are in place and secured, crews will build forms and pour the deck surface.

The new northbound Canoe Canal Bridge is scheduled for completion in July 2012.



Large cranes carefully move the beam into place.



With the beam in place, workers disconnect the cables used for lifting the beam.

Posted by Jyll Smith, ODOT PIOat12:58 PM

Monday, March 12<sup>th</sup>, 2012

# **Keeping the public and our workers safe while placing beams** *From ODOT-*

Safety comes first on all our construction projects. For the Canoe Canal Bridge project, safety measures allow the public to pass through the work zone on Franklin Boulevard, the railroad or the many pedestrian paths during construction.

When we placed the support beams on the bridge abutments, we protected the equipment operators, the workers on the ground and the pedestrians and bicyclists using the paths in a variety of ways.

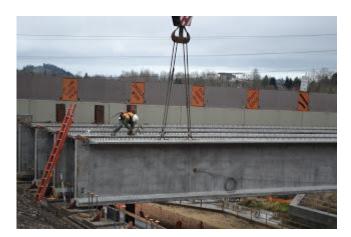
In advance of the work, signs along the path alerted users to the upcoming delays. We placed notices on the project website and blog, and notified local stakeholders through

email messages. As the beams were placed, flaggers delayed path users until it was safe to pass.



Flagger shown in the lower right corner is stopping a bicyclist until the beam is set into place.

At all times workers wear standard hard hats, safety vests and other safety equipment. In addition, workers who need to climb on the beams use safety harnesses and ropes attached to the beams to protect them in case of a fall.



A worker is protected by a safety rope while he is on the beam.

Posted by Jyll Smith, ODOT PIOat1:22 PM

Monday, March 19<sup>th</sup>, 2012

## Fun facts about the Willamette River Bridge project

From ODOT-

What does our work bridge have in common with the John Hancock Tower in Boston, African elephants or a football field? Find the answer to this and other interesting facts at Fast facts: Willamette River Bridge work bridge. This is the latest in an ongoing series by HubDOT, a news website focused on public infrastructure, with a national audience.

HubDOT runs quarterly articles about different aspects of the Willamette River Bridge

project. Past articles focused on the construction manager/general contractor management method, demolition of the original bridge, the project groundbreaking and design enhancements. You can read any of these past articles at HubDOT.net.

Posted by Jyll Smith, ODOT PIOat4:24 PM

Wednesday, March 21<sup>st</sup>, 2012

## Crews dish up a menu of specialized concrete mixes

From ODOT-

The concrete suppliers and specialists at the Willamette River Bridge are mixing up the standard components of concrete to deal with the complexity of the project. They designed 17 mixes to build the recently completed southbound structure. The arches, the drilled shafts, the columns and the deck all needed concrete specific to each function.

The mix for the bridge deck is made of high-performance concrete, which includes a special fiber additive. This fiber helps the concrete resist stresses placed on it, significantly reducing the risk of cracking. The fibers are evenly distributed throughout the concrete to form a secondary matrix of support.

Even though the drilled shafts forming the piers supporting the bridge were surrounded by rock, there was a chance that the concrete could leak into the river before it hardened. To ensure this wouldn't happen, our team created a mix for the piers that includes a special antiwashowouldn'ttive to keep the concrete contained within the rock socket.

The two footings on the banks of the river require a lot of concrete — nearly 500 cubic yards each. The more massive the concrete structure, the more heat is generated while it cures. The more heat, the more the concrete expands and then shrinks as it sets, which can create cracks. So we designed a special mix for the riverbank piers to minimize heating and reduce cracking.

The point where the arches meet in the river and the first 23 feet of the arch ribs themselves required a concrete mix capable of flowing almost like water, then self-consolidating without vibration, filling every nook and cranny within the form.

The special concrete designed, mixed and placed resulted in a strong, beautiful southbound bridge. We'll repeat our success as we build the new northbound bridge.

Posted by Karl Wieseke, ODOT Construction Project Managerat8:33 AM

Tuesday, March 27<sup>th</sup>, 2012

## Scenes of shaft drilling

From ODOT-

The drilling of the shafts is a fascinating activity to watch! Here are some rare close-up scenes.



This worker standing next to the drill bit or auger illustrates just how large it is.



When crews first lower the drill into the target, they have to measure the distance from the auger to the walls of the shaft, ensuring that it is no more than three inches.





While watching the auger come out of the ground, we see the siltstone that is left on the machine that crews will need to clean off.



This shaft, in the center of the river, has been cleared of all earth debris. Posted by Jyll Smith, ODOT PIOat3:15 PM

Thursday, March 29<sup>th</sup>, 2012

## **Bare-root plantings restore natural landscape near new bridges** *From ODOT-*

Enhancing and restoring the natural environment around the Willamette River Bridge project requires attention to detail.

During winter and early spring of this year, our contractors have been installing fencing, irrigation and native bare root plants. The dormant plants can be dug up, stored without any soil around the roots and then planted before the warm weather comes. Advantages to using bare-root plants are that they have up to 200 percent more roots, are easier to move and take less time to plant. Once bare-root plants arrive on site, the contractor works quickly to get them in the ground before their roots dry out, which can happen within a few weeks of shipping.



Crews recently built fencing and planted native bare-root trees in the Eastgate Woodlands of the Whilamut Natural Area.

Native bare-root trees used on this project include vine maple, Bigleaf maple, Oregon ash and Oregon white oak. Shrubs include Oregon grape, mock orange, flowering currant and blue elderberry. Tufted hairgrass, Oregon iris and common rush are used in the wetlands.



Trees, wetland plants and the irrigation system are shown in one of the swales along the Interstate 5 northbound offramp to Franklin Boulevard.

Irrigation systems keep plants watered during the dry summer months. For this project, we are required to water the new plants for at least five years to ensure they are established and will survive over the long term.



Trees offer shelter and protect the new plantings, helping them get well established. Crews planted bare-root shrubs and other native plants in the mounds of soil.

Posted by Jyll Smith, ODOT PIOat10:54 AM

## Miles of steel create strong skeleton for new bridge

From ODOT-

Reinforcing steel, or rebar, is one of the most integral parts of a bridge even though you never see it. Ironworkers from Manske Construction form and tie together miles of rebar cages, creating the strong skeleton for the piers that will support the new northbound I-5 bridge. Then, they install the steel framework into the drilled shafts before the concrete is poured to form piers, creating the part of the bridge that you do see.

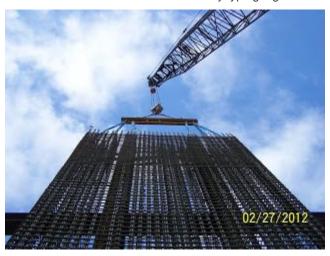
The span of the rebar ranges from as small as 1/2 inch in diameter up to 2.25 inches. For this project, we use the largest diameter rebar available, which weighs 14 pounds a linear foot. The new southbound bridge contains 2.7 million pounds of rebar, the weight of more than 3 fully loaded jumbo jets at takeoff. The northbound bridge will contain a similar amount of reinforcing steel.



Ironworkers tie the steel rebar to form the pier cages in a work area in Alton Baker Park, just north of the Knickerbocker Bridge.



Ironworkers and welders build the steel structures by typing together miles of rebar.



A large crane lowers the tied rebar down into a shaft to form an abutment wall.



Here is how the rebar looks inside of the pier shaft, before the concrete is poured. The bridge pier shafts average about 35 feet deep below the riverbed.

Thursday, April 5<sup>th</sup>, 2012

## It's pile driving time again

From ODOT-

If you live or travel near the Willamette River Bridge project, you may have already heard the pile driving that is under way.

Crews are driving piles as they build bridge bents, which are the supporting structures of vertical concrete columns that hold up the bridge beams and deck.

During construction, we are required to protect fish in the river from loud noise that can impact them or their communication and migratory patterns. April is one of just a few months in which we are allowed to drive piles in the river, because there is less risk to the fish.

Whenever our crews drive piles underwater, they use a device called a bubbleator to muffle the noise. The bubbleator is a custom-made foam oval protected by sheet metal. Aluminum pipes deliver 1,600 cubic feet of air per minute to the bubbleator, frothing the water. The air bubbles create a sound curtain to protect fish from the loud noise of pile driving. You can read more about the bubbleator and how it works in one of our previous blog posts and in an in-depth article on HubDOT.com.

The pile driving will occur intermittently between 7 a.m. and 4 p.m. Monday through Friday, throughout the summer. We appreciate your patience during this noisy time.

Posted by Jyll Smith, ODOT PIOat2:55 PM

Tuesday, April 10<sup>th</sup>, 2012

## The spring newsletter is now available

From ODOT-

Our spring Willamette River Bridge project newsletter is now available.

Take a look to see pictures of recently installed bare-root plantings, plans for path enhancements in Alton Baker Park and a summary of work that has been accomplished over the winter.

The newsletter also features articles about the time lapse video showing an entire year of bridge construction in 2 ½ minutes and how to stay involved in Oregon's largest bridge replacement project.

Our project newsletter is distributed electronically. To get a copy sent directly to your inbox, please email Nichole@cawood.com.

If you have a question about the project, a suggestion for a future newsletter article or a

photo of the construction work you'd like to share with us, please contact me at ivll.e.smith@odot.state.or.us.

Thanks and happy reading.

Posted by Jyll Smith, ODOT PIOat1:45 PM

Tuesday, April 10<sup>th</sup>, 2012

### New paths will feature safety improvements.

From ODOT-

ODOT is working closely with the cities of Eugene and Springfield to enhance and improve safety on pedestrian paths along the banks of the Willamette River near the new Interstate 5 bridges. Some changes are already in place but most will be finished in late 2013 or early 2014.

Crews have repaved and striped the Canoe Canal Path and the paved paths on the north and south banks of the river under the bridges. They are also minimizing dangerous corners and intersections and eliminating a large drop in the path on the north end of the Knickerbocker Bridge. Path users will see new landscaping, including native species of trees, shrubs, flowers and prairie grass. A new path on the south bank of the river will link existing routes and provide great views of the river. It will start east of the Knickerbocker Bridge, follow the riverbank under the I-5 bridges and connect to Franklin Boulevard. The city of Springfield plans to extend this new path to the intersection of Glenwood Boulevard and Franklin Boulevard.

We enjoy working with local partners to make these path improvements for the benefit of users for years to come.

Posted by Sonny Chickering, ODOT Area Managerat8:12 PM

Friday, April 13<sup>th</sup>, 2012

#### **ODOT** works with local business to maintain commerce

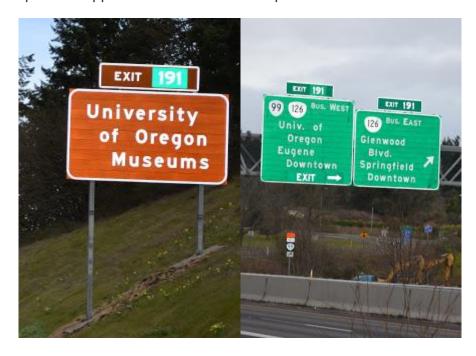
From ODOT-

When the Interstate 5 northbound off-ramp to Franklin Boulevard closed to traffic in October 2011, affected business owners were concerned about the detour signage. Because the detour would be in effect for two years, the business owners believed that it would be better to use signs to mark the new route as though it were the normal route, not a detour.

ODOT construction manager Karl Wieseke sprang into action as soon as he was contacted by the businesses. He convened a meeting with project and business representatives to better understand the issues. Then he arranged a driving tour so all parties could be together to see the situation and discuss solutions.

The group agreed to a plan, engineers designed new signage and the contractor quickly

secured and installed the new signs. ODOT always welcomes feedback, and the local businesses expressed appreciation for ODOT's responsiveness.



ODOT modified the signs along northbound I-5 with the exit number, changing it from 192 to 191. Nothing on the signs indicates a detour, only the appropriate exit.

Once drivers have exited I-5, signs noting the detour and listing businesses along Franklin Boulevard direct traffic north onto Glenwood Boulevard and east or west on Franklin Boulevard to reach the communities of Springfield and Eugene.



Thursday, April 19<sup>th</sup>, 2012

### Safety around the tracks

From ODOT-

The mainline of the Union Pacific Railroad (UPRR) passes under the new Interstate 5 Willamette River bridges. All north-south passenger and freight trains on the west coast mainline travel this route. Multiple times each day, trains roll through our bridge construction zone.

Maintaining worker safety, avoiding interruptions and keeping passenger and freight trains ontime requires close cooperation between the railroad and our bridge construction contractor.

The Federal Railroad Administration, Occupational Safety and Health Administration, and UPRR all have guidelines to follow when working near the railroad. Anyone who works within the 25-foot railroad right of way must receive annual training about personnel safety, use of equipment near the tracks and crossing the tracks. Anytime construction work takes place in the right of way, or may impact the railroad right of way, a UPRR flagger must be present to protect workers and trains.

The UPRR flagger is in direct communication with the railroad and knows when a train is about to pass through. Workers are alerted and any equipment close to the passing train is moved. In addition, if something from the construction project falls on the tracks, the flagger ensures it is removed before the next train passes through.

The flagger is onsite during construction of bridge columns next to the railroad and when falsework for the bridge girders is built over the tracks. Once those activities are complete, the flagger leaves and will not return until the falsework is removed. Only when the flagger is onsite can workers cross the tracks or operate equipment within 25 feet of the railroad. Stairways installed on either side of the tracks and the falsework allow workers to cross the railroad above the tracks and continue to work.



Posted by Karl Wieseke, ODOT Construction Project Managerat12:13 PM

Friday, April 20<sup>th</sup>, 2012

# A variety of columns will support the new northbound bridge From ODOT-

As the new northbound Willamette River Bridge rises from the ground, the columns on the south bank are most visible. When finished, seven of the nine either columns or sets of columns supporting this bridge will be located on the south bank of the river.

This is a stark contrast to the original bridge, which had many more of its columns, five to be exact, in the river instead of on land. The new bridge will touch down in the river only once.

The columns are not all the same. The pictures below show various configurations.



Above, workers prepare to pour the column south of the pedestrian path. It is wide, narrow, centered under the bridge deck and poured in two separate vertical sections.





Round rebar cages from this single column, centered under the bridge deck. Crews will pour the concrete walls as one section.



Shown in the two photos above is one of the three rectangular columns being built south of the railroad, in two stages of construction. The rebar on top will connect the column to the beam that will connect it with an adjacent column. The column south of these is a single column centered under the bridge.

An additional, larger column is located further south of these columns, just before the bridge joins Interstate 5 northbound.

Posted by Jyll Smith, ODOT PIOat10:54 AM

Wednesday, April 25<sup>th</sup>, 2012

## The first shaft for the viaduct path is under construction.

From ODOT- By early 2014, improvements to the park paths near the new Willamette River Bridges will be complete. The most significant change, a new viaduct path on the south

bank of the Willamette River, will replace the current path that connects to the south side of Franklin Boulevard, east of the bridges.

Bridge beams reused from the Interstate 5 detour bridge will provide a structure for the realigned path. The beams will be supported by 14 individual bridge columns spaced along the riverbank. Rebar and concrete will fill drilled shafts to a depth of at least 10 feet into the bedrock.

We've recently taken the first step in constructing the viaduct, by drilling a shaft beneath the new northbound bridge. This had to occur now, because the drilling equipment is too tall to fit under the new northbound bridge once it is built. This may be the only work we do on the viaduct path until this fall.



As you can see, the drill is taller than the new southbound bridge and would not have fit under the soon-to-be-built northbound freeway bridge.



Here, workers line up equipment to place the steel retainer ring, which will prevent dirt and rock from falling back into the drilled shaft.

Posted by Sonny Chickering, ODOT Area Managerat6:03 PM

Thursday, April 26<sup>th</sup>, 2012

### We are ready for the Eugene Marathon

From ODOT-

Sunday morning, thousands of runners will take to the streets and Alton Baker Park for the fifth annual Eugene Marathon.

Runners will not need to worry about path closures due to construction work in Alton Baker Park and the Whilamut Natural Area affecting this year's race.

Before construction began on the Willamette River Bridge project in 2009, we worked with the organizers of the Eugene Marathon to make sure a continuous route for the annual race is always maintained during construction of the new Interstate 5 Willamette River bridges.

While we use portions of Alton Baker Park for construction access and rebuild the paths, we make sure to keep path connections complete throughout the park.

Best of luck to all of participating in this yearly tradition!

Posted by Jyll Smith, ODOT PIOat1:22 PM

Thursday, May 3<sup>rd</sup>, 2012

## How do they pour concrete where a cement truck can't reach?

From ODOT-

At their peak, the tallest columns on the Willamette River Bridge are 43 feet tall. To pipe in the concrete that will become a support for the bridge, an impressive contraption carries the concrete to new heights. It's a pretty impressive thing to see in action.

A pouring hose is attached to the end of a boom that is roughly 138 feet long, allowing a pump to place concrete at a rate of up to 200 cubic yards per hour. Due to the large amount of forms that create the skeleton of the bridge columns, beams and arches limit the production rate of the pump to around 15 cubic yards per hour.



These pictures show the long hose and boom pouring concrete into a column near Franklin Boulevard. You may have seen it has you drove past. There will be more opportunities to see this unusual concrete pouring equipment in action as work on the northbound bridge continues. Posted by Jyll Smith, ODOT PIOat2:56 PM

Monday, May 7<sup>th</sup>, 2012

## **Banks of the Willamette River improved**

From ODOT-

Making the area better than we found it is a primary goal of the Willamette River Bridge project. Restoration of newly created open space, as described below, is just one example of the actions we are taking to achieve this goal.

In 2002, an engineering analysis identified the need to replace the bridge. In 2004, a temporary bridge provided an interim solution, allowing Interstate 5 to be reopened to freight traffic. To build the temporary bridge, ODOT acquired additional right of way to the east of the existing I-5 lanes and bridge and installed embankment material to support the temporary roadway.

The area is adjacent to the Eastgate Woodlands of the Whilamut Natural Area. An agreement between ODOT and Willamalane Park and Recreation District established conditions for the use and the restoration of the area once the project is complete.

Now that the detour bridge is gone, much of the embankment has been hauled away. We will remove the remaining material after the temporary Canoe Canal Bridge is disassembled in June. Restoration and enhancement of the area will complete this part of the project.

We will add native plants and an irrigation system for watering in the dry summer months.

Native trees, shrubs and grasses will replace non-native species, which thrived in the area before construction began.



Most of the embankment material is now gone from this area just east of I-5 looking north.



When the temporary Canoe Canal Bridge is demolished, the remaining embankment material will be removed. The guardrails on the temporary bridge can be seen on the top of the embankment.

Posted by Jyll Smith, ODOT PIOat3:04 PM

Friday, May 11<sup>th</sup>, 2012

# Behind the orange cones: building the foundation

From ODOT-

I am excited to share with you our first video in a series that will highlight the people behind the Willamette River Bridge replacement project who are on the job every day, rain or shine. It was a thrill for me to go on site and see the action up close. This video focuses on drilling the deep shafts that support the columns of the bridge. Shaft drilling is one of the first major tasks in building the bridge and takes place outside of public view, except for the massive drill you may have seen from a distance. The drill bit, or auger, is about 8 feet in diameter and 6 feet long. Standing next to it, I got a new appreciation for the finesse the crew needs to operate this colossal machinery in tight quarters and to exact measurements.

While I was on site, I talked to a manager from DBM Contractors, the company doing the shaft drilling work. He told us about the giant drill, how it works, the different materials it drills through and the special training needed to operate it.

Please watch the video on our YouTube channel and let us know what you think. I hope you enjoy watching it as much as I enjoyed going on site to make it. I'd also love to hear your suggestions for topics you'd like to see covered in future videos!

Posted by Jyll Smith, ODOT PIOat12:22 PM

Monday, May 14<sup>th</sup>, 2012

# **Supporting the New Northbound Bridge Deck**

From ODOT-

When most people think of the new Willamette River Bridge, the attractive arch deck sections spanning the river easily come to mind. But did you know that there are other types of supports for the bridge deck on either end of the arches?

One type of support being used is called a box girder. They are being built at the south end of the new northbound bridge, over Franklin Boulevard and the Union Pacific Railroad.

Driven steels piles on the south end of the project are used to establish the falsework in support of construction of the box girder sections before the concrete sets and post-tensioning occurs. Crews cut and cap the piles with a series of steel beams that form the critical flooring of the box.



New columns taking shape on both sides of the railroad track on the south end of the project will support the box girder and top deck of the new northbound bridge.

To complete the box girders, carpenters build temporary wooden formwork that shape both the inside and outside of the boxes, ironworkers install rebar to provide reinforcement to the concrete, and then the concrete is poured. After the concrete cures and is post-tensioned, the falsework forms are removed, revealing the new boxes. The completed box girders are hollow and can be from 5 to 12 feet high.



Here, wooden and steel falsework takes shape where the new northbound bridge will touch down on the south end of the project.

Smaller, solid concrete beams are used at other locations on the bridge. Some are cast in place, while others are precast off site and transported to the project for installation.

The beam type used depends on the span length and strength needed to support the bridge at various locations.

Farther north, work is in the early stage on the columns and the arches that will support the deck beams where the bridge crosses the river.

We'll take a closer look at the arch construction in a future blog post.

Posted by Karl Wieseke, ODOT Construction Project Managerat6:00 AM

Tuesday, May 15<sup>th</sup>, 2012

# **Supporting the new arches**

From ODOT-

To build the arches of the northbound I-5 Willamette River Bridge, crews will tie massive cages of steel rebar, build formwork mold and pour tons of concrete. But the materials that will ultimately support the entire weight of the bridge won't be able to support themselves until the concrete cures. Until then, they'll be supported by steel towers, which are being

installed over the course of the next two months.

Steel towers that supported construction of the southbound bridge arches were saved for use on the northbound bridge. Reusing the towers saves time and money, and the steel will be recycled or reused for other construction when the arches are complete.

After workers anchor the towers to the work bridge, they will weld steel beams in place over the towers. Large wood beams on top of them will form the work platform for arch construction.



Arches begin to form from the south side of the river. Their falsework is supported by the steel tower on the work bridge. Steel piles driven in the river also support arch construction.



Ironworkers use the wooden platform to install and tie the rebar. They will build wooden forms around the rebar cages to create the frame needed to pour the concrete.



The first steel tower was installed on the work bridge on the north bank of the river. Construction of the falsework shown on the right rises above the work bridge toward the first tower.

Posted by Jyll Smith, ODOT PIOat2:31 PM

Wednesday, May 23<sup>rd</sup>, 2012

## I-5 Canoe Canal Bridges near completion

From ODOT-

Crews with Slayden Construction Group are almost finished with the new northbound Canoe Canal Bridge. Now that the bridge deck is poured, the focus turns to installing railing and finishing the roadway.



Crews install wood forms between the bridge beams. The ironworkers use the rebar embedded in the beams (shown in the foreground) to secure interwoven rebar which will be surrounded by concrete when the deck is poured.

To pour the deck, the contractor installs steel rails on either side of the roadway to guide the concrete spreading machine. In addition, string lines control the paver direction and surface elevation. As concrete is delivered to the site, the paving machine spreads and vibrates the concrete evenly across the surface. Workers follow with hand tools to finish the deck surface.



Steel railing supports and guides the concrete paver along with an electric eye that follows the string line.

The deck then cures for up to two weeks to achieve the required hardness. When the railing and roadways are complete, the bridge will be ready for freeway traffic.



The finished deck awaits striping and other finishing touches.

Posted by Jyll Smith, ODOT PIOat10:57 AM

Wednesday, May 30<sup>th</sup>, 2012

# **Protecting the river and its users**

From ODOT-

With warmer weather and sunshine ahead, we expect to see more of you boating or floating down the Willamette River and through the work zone.

As you enjoy the river, please remember that you are in an active construction zone when passing

through our project and that means paying more attention to safe navigation.

If you enter the river east of Interstate 5 and float under the bridge construction project, signs in the river will direct you to the correct channel and where to cross under the work bridge. Keep to the north bank, or the right side of the river, to pass safely under the work bridge at the designated spot.

From the river, it might seem like you can pass under the work bridge in other locations. However, the combination of the strong current, construction pilings and trapped or floating debris in the river create additional hazards. Also, the old dam structure upstream of the bridge makes it hard to find your way to the correct channel, so move to the north bank early so you can maneuver under the safest part of the work bridge.

Please remember to watch for signs that point river users to the correct channel to safely pass under the bridge construction. It's also a good idea to check with local boating organizations or the Oregon State Marine Board about changing conditions before heading out on the river for a day of fun.

Here are some photos that show you what to expect to see when you approach the I-5 Willamette River Bridge project.



Upstream of the I-5 bridge construction work, a sign at the old dam structure directs river traffic to the safe channel on the right.



These signs show boaters where to pass safely under the workbridge.

Posted by Jyll Smith, ODOT PIOat8:11 AM

Friday, June 1<sup>st</sup>, 2012

**Watch for Canoe Canal Path delays** 

### From ODOT-

If you use the Canoe Canal Path under Interstate 5 in the Whilamut Natural Area, expect delays of up to 20 minutes between 7 a.m. and 5 p.m. weekdays from June 4 through June 22 for construction work. The path will be open on weekends.

The delays will allow contractors to safely remove the remaining Canoe Canal temporary detour bridge.

For your safety, please obey signs and flaggers directing path traffic in the work zone. Posted by Suzanneat2:04 PM

Monday, June 4<sup>th</sup>, 2012

## Breaking ground on a new sound wall

From ODOT-

Contractors are building a new sound wall along the east side of Interstate 5, north of the new Willamette River Bridge. You will start to see it rise later this summer.

Here are some quick facts about the new sound wall:

- The new sound wall will be 724 feet long and vary from 16 to 17 feet high.
- The highway-facing side of the sound wall is designed to match the rolling, pixilated representation of a sound wave seen on the sound wall south of the bridge, but without the stone columns.
- The area between the sound wall and the roadway will feature native landscape plantings in front of the wall.
- Noise impact specialists took sound measurements in the adjacent neighborhood and determined the length, height and design of the wall to achieve a level of noise reduction that meets ODOT standards.
- In our effort to be a good neighbor, we designed the sound wall to help reduce noise impacts from projected traffic increases on I-5 over the next 20 years.

If you have questions about the sound wall or any other aspect of the Willamette River Bridge project, please let me know by adding a comment below. I look forward to hearing from you.

Posted by Jyll Smith, ODOT PIOat11:25 AM

Friday, June 8<sup>th</sup>, 2012

Few cofferdams remain

### From ODOT-

In order to construct the new Willamette River Bridge, crews need to reach the riverbed to build the bridge foundations. It would be impossible to work safely to drill shafts and install the bridges piers fighting the river's current. But by building cofferdams, temporary steel or wooden enclosures that keep water and soil out of the work area, the crews can safely and quickly complete their work – all with the water whizzing by.

On the WRB, crews built nine cofferdams for column construction. Once the columns are complete, crews remove the cofferdams, letting rock and dirt fill in around the base of the columns.



Workers build a column inside a cofferdam on the Willamette River's north bank.

Now that the foundations are complete and the arches are taking shape, we're approaching another milestone: by the end of summer, crews will remove all but one the project's cofferdams.

The cofferdam located in the center of the river at the base of the two arches will remain until the bridge is complete.



This cofferdam protects workers as they install rebar for bridge arches in the center of the river.

Posted by Jyll Smith, ODOT PIOat12:34 PM

Wednesday, June 13<sup>th</sup>, 2012

### **Preparing for the best**

From ODOT-

More than 1,000 of America's top track and field athletes and over 350,000 spectators will converge on historic Hayward Field on the University of Oregon campus June 21 through July 1 for the 2012 U.S. Olympic trials.

ODOT is working with local businesses to ensure that construction of the Willamette River Bridge does not affect travelers going to this important event.

For our most significant impact, the two-year closure of the off-ramp from Interstate 5 northbound to Franklin Boulevard, we installed numerous directional signs that make it easy for travelers to follow an alternate route. The signs avoid using the word detour, so visitors see it as the obvious route.



A full house at Hayward Field during the 2008 Olympic trials. Photo courtesy of eugenecascadescoast.org. Other than seeing the bridge under construction, visitors can reach Hayward Field and other destinations without being delayed by our project. This is because contractors will avoid lane restrictions and other impacts to Franklin Boulevard traffic during the trials.

The Olympic trials take place at Hayward Field on the University of Oregon campus. Hayward Field was originally constructed as a football stadium in 1919 and is now recognized as a world-class track and field facility. The university has hosted five U.S. Olympic trials.

For more information, visit http://www.tracktown12.gotracktownusa.com/.

Posted by Jyll Smith, ODOT PIOat1:42 PM

Monday, June 18<sup>th</sup>, 2012

All the original bridges are gone From ODOT-

We look forward to celebrating major milestones on the Interstate 5 Willamette River Bridge project. Our most recent accomplishment was removing the last remnants of the old bridges.

Demolition began in 2009 when we removed the original Interstate 5 Bridge. We separated the material, recycled the steel rebar and crushed and reused the concrete for fill to raise the ground level, form an embankment and groom other empty spaces in preparation for building the new arch bridges.

When we demolished the temporary detour bridge last winter, we saved its beams for other projects throughout Oregon. We're reusing some of those beams to build the new viaduct path on the south bank near the new Willamette River bridges.

The last remnant we removed was a section of the Canoe Canal detour bridge, which we left in place until now to help us install the beams for the new northbound Canoe Canal Bridge.



The remaining portion of the Canoe Canal detour bridge just east of the new bridge (at left) was the last section of the old bridges to be removed.

To remove the last of the old bridges, crews first separated the remaining 21 beams from the support columns and hauled them to a storage yard, where they remain until they are needed on another project. Staton Construction demolished the remaining bridge columns and removed the last fill material. We will eventually plant native vegetation, restoring the area to a better condition than when the project started.

Now that the original and detour bridge are both gone, it's time to focus on finishing the remaining structure being built across the river.

Posted by Karl Wieseke, ODOT Construction Project Managerat12:23 PM

### **Voices From a Distant Past**

From ODOT- Fourteen large stones engraved with words from the Kalapuya language lie along paths in the Whilamut Natural Area of Alton Baker Park, a greenway on the north bank of the Willamette River in Eugene and Springfield. Quarried from a basalt deposit in historic Kalapuya territory, the "talking stones", 11 of which were installed in 2002, serve as educational and cultural reference points as well as beautiful art objects.

As part of the restoration work for the Interstate 5 Willamette River Bridge replacement project, ODOT contributed four more talking stones to the park in 2009. Three have already been placed, with the fourth to be added at the end of the project.

The original talking stones were the result of discussions between Kalapuya Elder Esther Stutzman of the Kommema Cultural Protection Association and members of the Citizen Planning Committee for the Whilamut Natural Area of Alton Baker Park.

Before the arrival of Euro-Americans, Kalapuyans were the largest Native American group in what is now western Oregon. As many as 15,000 Kalapuya lived in their traditional territory, which extended from near Roseburg to Oregon City. In 2003, an estimated 300 to 400 Kalapuyans remained. For thousands of years, every object in the local landscape had a Kalapuya name. Today, only 140 words remain.

The talking stones continue an important tradition of commemorating those who have gone before us and preserving their language.



Employees from subcontractor Dirt and Aggregate Interchange moved the new talking stones to their permanent locations in the Whilamut Natural Area of Alton Baker Park. Posted by Sonny Chickering, ODOT Area Managerat10:19 AM

Friday, June 22<sup>nd</sup>, 2012

North Bank Path to close Monday, re-open July 3

### From ODOT-

On Monday, ODOT crews will close the North Bank Path in Alton Baker Park west of the Knickerbocker Bridge. As part of the Interstate 5 Willamette River Bridge project the team will begin building a new path connecting North Walnut Road and the North Bank Path. Signs will direct path users to North Walnut Road until the path re-opens on July 3. Runners on Pre's Trail will also use North Walnut Road as a connector to head either east or west.

Path users should expect occasional delays and detour changes during construction. We will notify you of these impacts.

Please obey signs and flaggers directing path traffic in the work zone. They are there for your safety.

Posted by Jyll Smith, ODOT PIOat9:47 AM

Monday, June 25<sup>th</sup>, 2012

### Off-ramp work progressing

From ODOT-

Last fall, we closed the northbound off-ramp from Interstate 5 to Franklin Boulevard. The closure is necessary for construction of the new bridge overhead and for rebuilding the ramp itself.

When the ramp reopens in October 2012, you'll notice some major changes. These include:

- A higher elevation of I-5 south of the Willamette River to align it with the new arch bridges, which are taller and stronger than the old bridges they replaced.
- A new Franklin Boulevard off-ramp raised 5 to 8 feet to align it with the higher northbound freeway lanes.
- Several new retaining walls on either side of the Franklin Boulevard off-ramp that support the fill material needed to raise the ramp and the freeway lanes.

Here is a sneak preview of the two types of retaining walls you will see.



Soldier pile retaining walls are built with steel H-piles driven into the ground and precast concrete panels set in the pile flanges. This wall is on the north side of the Franklin Boulevard off-ramp, underneath the two new I-5 bridges.



This soldier pile retaining wall along the eastern side of the ramp near I-5 on the south end is topped by a concrete cap and metal fence.



This mechanically stabilized earth retaining wall stands on the west side of the northbound I-5 off-ramp to Franklin Boulevard. It supports the fill material that forms the bed of the roadway. This type of wall is a series of interlocking precast concrete panels held in place with steel rods connecting back into the fill material placed behind the wall.

With the new retaining walls nearing completion, crews are now placing fill material to raise the northbound freeway and Franklin Boulevard off-ramp to the correct height. They will finish the off-ramp with paving, striping and drainage catch areas for stormwater runoff. The runoff will be

treated in nearby bioswales that use native plants to filter the water before it enters the local watershed.

The new northbound I-5 off-ramp to Franklin Boulevard will reopen to traffic by October 2013.

Posted by Jyll Smith, ODOT PIOat4:36 PM

Friday, June 29<sup>th</sup>, 2012

## Park kiosks get annual summer facelift

From ODOT-

If you've used the paths between Eugene and Springfield in Alton Baker Park, you're probably familiar with construction delays and path detours in the I-5 Willamette River Bridge work zone.

We've placed eight kiosks throughout the park area displaying a large map of the park and the latest path detours. The kiosks also show the construction schedule and how the project will improve the surrounding land to conditions better than when we started the bridge work.

We update the park kiosks every summer to keep the information current. This year's update features a close-up photo of the new southbound I-5 bridge, and highlights the accomplishments made on the project so far.

Take a look at the new kiosks along the park paths the next time you are in the Whilamut Natural Area and let us know what you think.



One side of each kiosk displays path detour information.



The opposite side of each kiosk shows the construction schedule and project accomplishments.

Posted by Jyll Smith, ODOT PIOat8:07 AM

Monday, July 2<sup>nd</sup>, 2012

# Reusable bridge beams live on in projects across Oregon From ODOT-

In past blog posts, we've told you how the beams from the Willamette River Bridge detour structure were set aside for reuse. Although the detour bridge was designed as a temporary structure and permitted for only 10 years, the materials used to build it — particularly the steel and concrete beams — can be reused to safely serve motorists for decades to come. Here's an update on where some of those beams have gone.

Four beams replaced the original truss bridge connecting Dearborn Island, just outside Eugene in the middle of the McKenzie River, to Oregon 126. For more than two years, no vehicles heavier than residents' cars have been allowed to travel to and from the island. The new bridge to Dearborn Island is a single span, 115 feet long. In fact, the design team shortened the original 125-foot bridge design so that the 115-foot beams from the Willamette River Bridge's temporary structure would fit perfectly.

Six of the temporary bridge's steel beams will get a second life in an ODOT bridge near Silverton, Ore. The original Butte Creek Bridge, built in 1931, is being replaced because of load restrictions.

Willamette River Bridge crews will soon use fifty of the beams to build the new viaduct path on the south bank of the river.

Because we are reusing the majority of the beams from the Willamette River temporary

bridge, tons of debris will be kept out of landfills and tons of raw materials are not being mined or forged to create new beams. Reusing the beams also saves the new projects thousands of dollars. New beams cost \$14,500 more than a reused beam; the 224 beams being reused on other projects will save their owners a combined \$3.25 million.

For more detail about how we saved money by reusing the beams, visit Karl Wieseke's recent article at HubDot.com. You can also read more about it, and see some remarkable pictures of workers next to enormous beams, on The Register-Guard's website.

Posted by Jyll Smith, ODOT PIOat11:49 AM

Thursday, July 5<sup>th</sup>, 2012

## **EWEB will close Knickerbocker Bicycle Bridge July 9**

From ODOT-

Today we have a guest blogger, my former colleague Joe Harwood who is now with the Eugene Water & Electric Board. EWEB will be closing the Knickerbocker Bicycle Bridge on July 9 and I asked Joe to tell us a bit about the work that will be done.

From Joe Harwood, external communications coordinator for EWEB:

The Eugene Water & Electric Board will close the Knickerbocker Bicycle Bridge on July 9 to insert access panels into the deck and make repairs to a 45-inch diameter water distribution pipe attached to the underside of the bridge structure. The utility expects the bridge closure last until July 20.

During the closure, bicycle and pedestrian traffic will be detoured to the Dave and Lynn Frohnmayer Pedestrian and Bicycle Bridge (formerly known as the Autzen Footbridge) downstream and west of the Knickerbocker. A new connector path between North Walnut Road and the North Bank Path will be open for use during the detour.

The Oregon Department of Transportation, which is in the midst of replacing the Interstate 5 Willamette River bridges, will take advantage of the 11-day closure to improve the north end Knickerbocker connection to Walnut Road. ODOT originally planned to close the bike bridge in 2014 to complete the upgrades. However, ODOT and EWEB decided to partner and accomplish their projects at the same time in order to avoid closing the bridge in 2014.

The EWEB project entails cutting 5-foot by 7-foot rectangular access panels into the north and south ends of the bridge deck so the utility can make repairs to the water pipe couplings and conduct future inspections.

ODOT plans to re-grade and improve the area between the bridge and North Walnut Road. That work will include removing the awkward asphalt curves at the north end of the bridge and replacing that portion of the path with a "T" intersection at North Walnut Road. The work will also include re-grading the North Bank approach ramp so it is less steep.

Springfield-based Hamilton Construction, the general contractor for the I-5 bridge project, was the low-bidder on the EWEB work, and won the contract.

Temporary signs will direct cyclists and pedestrians to the detour routes, and flaggers will be on hand to control access.

If you have any questions about the Knickerbocker Bridge closure, please contact Joe at (541) 685-7471 or Joe.Harwood@EWEB.org

Posted by Jyll Smith, ODOT PIOat11:14 AM

Monday, July 9<sup>th</sup>, 2012

### Behind the orange cones: ties to the economy

From ODOT-

We've just completed our second video in an ongoing series that highlights the people behind the Interstate 5 Willamette River Bridge replacement project.

Because it's the largest bridge replacement in ODOT's history, this project affects a lot of people who live in and travel through Eugene and Springfield on I-5. This video shows how important the new bridges are to the local economy. I spoke with David Hauser, president of the Eugene Area Chamber of Commerce, to get his perspective on the project's importance to local business community. It was gratifying to hear that businesses are benefiting from the project because of the local jobs it has created and the extra money being spent by the crew members in the community.

We also show that by using the simple and well-marked detour, businesses on Franklin Boulevard are easily accessible during the two-year closure of the I-5 northbound off-ramp.

I drove it several times to capture the footage so you can see just how easy it is to reach the businesses.

Please watch the video on our YouTube channel and remember to support your local businesses during construction.

Posted by Jyll Smith, ODOT PIOat10:41 AM

Monday, July 16<sup>th</sup>, 2012

### Arch construction - a closer look

From ODOT-

This fall, we will complete the arches for the new Interstate 5 northbound bridge, following the same construction process used to build the southbound bridge arches.

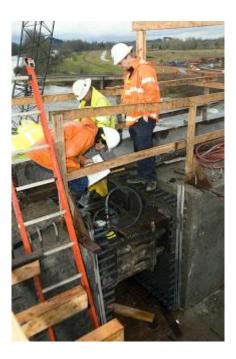
One of the final steps is to raise each arch section about two to three inches off the falsework by pushing the arches apart with four large 965-ton hydraulic jacks. The jacks are positioned in the gap at the top of the arch and simultaneously separate and lift each so crews can pour the concrete closure that completes each arch and allows them to stand on their own.

Similar to a jack you would use to lift your car, a single hydraulic pump applies pressure to each of the four jack rams, which separate the arches. Each ram has its own pressure gauge. Close calibration ensures that the rams and the gauges provide uniform and accurate information so equal pressure is applied and the arches aren't damaged.

The calibration process pressurizes the rams up to 95 percent of their maximum capacity while individual gauge readings are recorded. Once the calibration is complete, crews must set up the system identically when moving the arch sections, using the same gauge and ram combinations they used during testing.

Only a few facilities on the West Coast can test such large hydraulic rams. The University of Washington, in conjunction with the subcontractor team from Precision Hydraulic, will calibrate the jacks over a two-week period this month.

The university provides written certification of the calibration along with a copy of the data collected during the tests to help ensure accuracy during this critical process.



Posted by Karl Wieseke, ODOT Construction Project Managerat8:57 AM

Wednesday, July 18<sup>th</sup>, 2012

# New path connector opens

From ODOT-

Surrounding parks, protected open space and pedestrian paths make construction of the new Willamette River Bridges somewhat unique. They provide us with much more complexity than a simple bridge would, and they give us the opportunity to leave the area better than it was before. As

the bridge project moves forward with construction of the northbound bridge, ODOT contractors are improving nearby paths and open spaces.

The new connector path between North Walnut Road and the North Bank Path eliminates a congested and confusing intersection located near the Knickerbocker Bridge.



Sharp turns and confusing connections marked the previous intersection at the North Bank Path, North Walnut Road and the Knickerbocker Bridge.



The new connector, located west of the old intersection, has two well-separated connection points to North Walnut Road. Contractors used concrete rather than asphalt because it is easier to maintain and lasts longer.

Path users will find the new connection easier and safer going either east or west. In addition, the new connection is far enough from any other intersection to minimize congestion or confusion.



The route of the old North Bank Path shown in this picture, adjacent to the new path, will be returned to a natural state when crews place native plants in the area.

As an added bonus, concrete in the newly formed path includes recycled material from the Interstate 5 detour bridge. After crews crunched and cleaned the rubble it was ready to be reused, saving money on buying new aggregate to form the bed for the path.

Posted by Jyll Smith, ODOT PIOat12:47 PM

Friday, July 20<sup>th</sup>, 2012

### The next set of arches takes shape.

From ODOT-

We hear many positive comments about the graceful arches that support the new Interstate 5 Bridge over the Willamette River. Currently, all I-5 traffic crosses the river on the new southbound bridge, supported by four arches.

Now our contractor is focused on building the four arches for the new northbound bridge. The first pair of arches stretches from the center of the river to the north. The arches will take about a year to construct. Then, crews will build the bridge roadway deck on top of them.



Looking north toward the riverbank, you can see the arch falsework that will form the arches for the

new northbound bridge and the concrete columns that will soon help support the bridge deck. The matching southbound bridge is in the background.

To build the arches, concrete, poured in a series, fills in the falsework form around the rebar framework, and then is allowed to cure before the next pour higher up the arch. It will take many pours to reach the top of the arches. The smallest pour is the first 28 feet of the arch beginning at the bottom. The largest pour is 103 feet long, reaching to the top of the arch.



The wooden arch falsework supports the rebar skeleton of the arch for the second concrete pour.

Workers will follow the same process to build the arches from the center of the river to the south bank. After all the concrete is poured and cured, the arches will be ready for the final step of jacking them apart and filling in the remaining space with concrete. Then work on the deck will start.

Posted by Jyll Smith, ODOT PIOat2:18 PM

Tuesday, July 24<sup>th</sup>, 2012

# More than a bridge: building diversity

From ODOT-

On each project, ODOT employs strategies to provide opportunities for small contractors and to attract, develop and retain a skilled and diverse workforce.

For the Willamette River Bridge project, targeted 10 percent participation by disadvantaged business enterprises and 10 percent by minority-owned, women-owned and emerging small businesses, for a total of 20 percent DMWESB participation.

In addition, ODOT set aspirational targets for the project's workforce at 14 percent for both minorities and women. Through March 2012, we've surpassed our goals in each area, achieving 15.1 percent participation by minorities and 15 percent by women.

Using the construction manager/general contractor delivery method for the project makes it easier for us to apply the principles of ODOT's Workforce Development Program. The program is designed to expand diversity in employment and increase training resources and opportunities for highway construction jobs throughout the state.

ODOT chose the CM/GC approach in part because the project's complexity requires numerous experienced subcontractors and a highly skilled workforce. This has been a primary reason for the exceptional diversity achievements we've seen to date.

CM/GC and its ability to maximize DMWESB participation offers a number of benefits. DMWESB contractors generally have a more diverse workforce, giving an even greater number of women and minorities the opportunity to gain experience on a large bridge construction project.

Read more about how we're able to achieve this important success in an article on HubDOT.com authored by Jim Cox, ODOT's major projects branch assistant manager.

Posted by Suzanneat4:22 PM

Monday, July 30<sup>th</sup>, 2012

# Knickerbocker footbridge reopens to improved, safer park path connections

From ODOT-

Path users who cross the Knickerbocker Bridge will notice differences on the bridge, as well as on the path connecting the bridge to the north bank.

The Eugene Water and Electric Board closed the bridge to repair the water pipe suspended under the bridge. While the bridge was closed, contractor Hamilton Construction provided access by cutting holes in the bridge deck. The holes are now covered with concrete lids that EWEB crews can lift when they need to service the water pipe, shortening the length of future bridge closures.



A new concrete lid on the north end of the Knickerbocker Bridge allows EWEB to more easily reach the water pipe

below.

Our crews took advantage of the bride closure to complete a new path connecting the Knickerbocker Bridge with North Walnut Road. This connection had been very steep, with sharp turns. The new path is much safer because it is wider, has a gentler slope and connects to North Walnut Road with a T-intersection farther from other path connections.



The new connection with North Walnut Road allows path users to easily go east or west.

You will see more path improvements in the Whilamut Natural Area, as the new Interstate 5 Willamette River bridges are completed.

Posted by Jyll Smith, ODOT PIOat1:43 PM

Thursday, August 2<sup>nd</sup>, 2012

# **Update: lane closure on Franklin Boulevard delayed until Monday** *From ODOT-*

We will now restrict traffic on eastbound Franklin Boulevard under Interstate 5 to one lane starting Monday, Aug. 6.

The lane closure will occur between 6 a.m. and 5 p.m. only on weekdays through Friday, Aug. 10. Westbound traffic will not be affected.

The single-lane closure will allow workers to install overhead falsework needed to build portions of the new northbound I-5 bridge over Franklin Boulevard.

Posted by Jyll Smith, ODOT PIOat8:29 AM

Tuesday, August 7<sup>th</sup>, 2012

# Paving freeway lanes in black and white

From ODOT-

Building new freeway lanes is a sequential process, as shown by work on Interstate 5 between the new northbound Willamette River Bridge and the Canoe Canal Bridge.

ODOT subcontractor Knife River recently finished the first layer of paving for the reconstructed lanes. The black asphalt shown below is one of two layers needed before the lanes are ready for traffic. Crews spread and graded rock to form a base for the paving earlier this month.



Workers installed a first layer of asphalt, for the northbound lanes over a new rock base. Next, crews will install rebar on top of the asphalt before pouring the white concrete that will complete the roadway in early September. The roadway will look like the photo below.



Here, rebar is shown on top of black asphalt in preparation for pouring a white concrete road surface for the southbound bridge.

To pour the concrete driving surface, workers will use a machine that moves along a track on either side of the new lane. The machine spreads and smooths the concrete as it is poured.

After the concrete cures, the highway shoulders and roadside barriers can be completed.

These lanes and the new northbound Willamette River Bridge will open to traffic in fall 2013. Posted by Jyll Smith, ODOT PIOat4:35 PM

Saturday, August 11<sup>th</sup>, 2012

Highway sound walls make ODOT a better neighbor.

From ODOT- Sound walls constructed as part of highway improvement projects are built to reduce traffic noise into neighborhoods. That's why you see sound walls along parts of Interstate 5, I-105 and the Randy Pape' Beltline Highway in the Eugene-Springfield area.

Our sound wall contractor for the I-5 Willamette River Bridge replacement, Victory Builders, just completed the project's second sound wall. Its location, northeast of the new northbound bridge under construction, was established by the project Environmental Assessment back in 2007. Noise impact specialists took sound readings in adjacent neighborhoods to determine the exact size and type of sound wall needed to meet ODOT standards for noise reduction.



Like its southern counterpart, the new sound wall located northeast of the bridges uses colored concrete blocks designed to represent a sound wave as it travels from the foothills to the valley floor.

Late spring and early summer was the ideal time to build the wall because of good weather and minimal roadwork near the site. The new sound wall is 724 feet long and 16 feet tall. The sound wall is made of concrete masonry block mortared on a concrete foundation. The blocks are all the same size, but consist of different colors to create a pattern blending with the surrounding area.



Native plants installed east of the sound wall will help it blend better into the roadside landscape within a few years.

Posted by Sonny Chickering, ODOT Area Managerat12:50 PM

Tuesday, August 14<sup>th</sup>, 2012

# Changes coming for the south bank path

From ODOT-

You've read about a lot of changes to the paths in park recently, and we have one more to report to you, this time on the south bank. This change brings us one step closer to the beautiful new viaduct path.

We've built another detour path, about 100 yards long, to accommodate east-west commuters while we build the new viaduct path. We'll remove a portion of the existing path for this work, which clears the way for restoration work on the stream flowing from Glenwood and the Laurel Hill Valley.



During construction, the new path to the right will route bicyclists and pedestrians to the south so crews will have space to construct the new viaduct path.

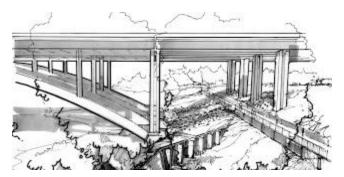


We will remove a portion of the existing path to allow us to elevate and replace the path over the stream. Work on the stream restoration can be seen on the left side.



Starting in September, we will build columns for the new viaduct path along this embankment on the north side of Franklin Boulevard and east of the construction work bridge. The finished path will be elevated above the river. By early 2014, the pedestrian paths on the south bank of the Willamette River under the new

Interstate 5 bridges will look much different.



This rendering by Cameron McCathy Landscape Architecture and Planning depicts the completed viaduct path under the new Willamette River Bridges.

Tuesday, August 21st, 2012

### South bank stream restoration takes advantage of the dry season

From ODOT-

During the summer, the waterways on the south bank of the Willamette River near the bridge construction zone are barely visible.

That makes summer the perfect time to restore and enhance the stream located between the south bank pedestrian path and the river. The improved stream will better collect and cleanse runoff flowing into the river during the rainy months. It will enhance fish habitat and migration, too.



Workers are clearing out overgrowth and creating a new stream channel along the south bank of the Willamette River.

The stream has been flowing through concrete pipes and an overgrown open channel. Fish were having a tough time using the stream, so we installed a temporary fish ladder earlier this year to help fish migrate from the river to Laurel Hill Valley and other points to the south. When stream restoration is complete, the temporary fish ladder will be removed because it will no longer be needed.

We're clearing brush and other material to create an open channel. Large boulders are being installed along the banks and in the streambed to protect the new drainage and create habitat for stream life. We'll soon install native plants to help protect the banks from erosion during the winter and provide cooling shade in the summer.



Workers are installing large boulders and rocks in the streambed and making other enhancements to improve riparian habitat.



The new, improved streambed contrasts sharply with the old culvert pipes upstream. The pipes will be removed to improve flow of runoff and restore the drainage to a more natural state.

We'll continue the restoration and enhancement work farther south to restore wetlands and the upland stream system, resulting in a more natural setting that can better support fish and wildlife habitat.

All the work on the south bank will be finished in early 2014. Just in time for the wettest winter months.

Posted by Jyll Smith, ODOT PIOat1:58 PM

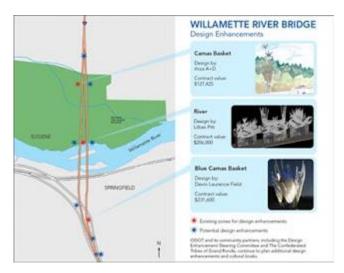
Wednesday, August 29<sup>th</sup>, 2012

# Above-deck design enhancements move forward

Three Oregon artists will soon begin work on design enhancements for the Interstate 5 Willamette River Bridge. I'm excited to announce that we have signed contracts and will be starting work on three sculptures to be located adjacent to I-5, north and south of the new

Willamette River bridges.

Installation of the enhancements — "River" by the Lillian Pitt team, "Camas Basket" by rhiza A + D and "Blue Camas Basket" by Devin Laurence Field — will be complete by summer 2014.



This map shows where the three approved design enhancements, as well as future improvements, will be located. Part of the funding for the I-5 Willamette River Bridge project comes from a federal package called SAFETEA-LU, which stands for Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users. It requires ODOT to build a bridge that is both functional and visually pleasing.

From the beginning of the design process in 2005, community members said the location and size of the bridges deserved special attention and asked that ODOT include design enhancements.

In December 2009, local citizens had their first opportunity to comment on design concepts. In April 2011, we held a second open house to gather input on proposed enhancements for above the bridge deck. For both events, our project website included a virtual open house that displayed the proposed designs and allowed viewers to complete an online survey with their comments. The comments we received weighed into the ultimate selection of these designs.

We continue to work with local stakeholders to ensure the new Willamette River Bridge and its surroundings reflect community values, the natural beauty of the Willamette Valley and the river, while recognizing the cultural significance of this area to the Kalapuya tribe that first lived here. Watch for more news about additional enhancements in the project area in the coming months.

Posted by Jyll Smith, ODOT PIOat11:07 AM

# Franklin Boulevard under I-5 reduced to two lanes until February From ODOT-

We are making significant progress building the new northbound Willamette River Bridge and have reached a crucial section – the bridge crossing over Franklin Boulevard in Eugene-Springfield.

On Sept. 4, our contractor will close the westbound lanes of Franklin Boulevard under Interstate 5 and shift all westbound traffic to one of the eastbound lanes. This "crossover" traffic pattern will restrict travel on Franklin Boulevard under I-5 to one lane in each direction until early February.

The speed limit on Franklin Boulevard also will be reduced from the current 45 mph to 35 mph while the crossover is in place. Drivers on Franklin Boulevard between Eugene and Springfield should expect minor travel delays during peak traffic times.

The lane changes and speed reduction will allow contractors to safely build structural elements of the new northbound Willamette River Bridge over Franklin Boulevard. We will also build a portion of the new viaduct pedestrian path north of Franklin Boulevard.

You did not see the same traffic impacts for the southbound bridge because it does not cross over Franklin Boulevard at the same angle.

Drivers should expect some additional traffic delays when construction equipment enters and leaves the roadway and construction takes place overhead. Please obey the construction zone signs and flaggers at all times.

Posted by Jyll Smith, ODOT PIOat4:48 PM

Thursday, September 6<sup>th</sup>, 2012

# Visit newly updated interpretive signs on the Knickerbocker Bridge From ODOT-

If you've recently crossed the Knickerbocker Bridge, located west of the Willamette River Bridge project, you may have noticed that we've updated the interpretive signs that guide you through multiple parts of the project.

The Knickerbocker Bridge is the perfect vantage point for watching construction. The new interpretive signs give visitors an even better idea of how the bridges are built and how the surrounding area will look when the project is complete.

The signs show a rendering of the completed bridges and restored Whilamut Natural Area. They also show elements of bridge construction, improvements we have already made to the surrounding area and locations for future enhancements.

Next time you cross the Knickerbocker Bridge, take a look at the new display and see what features you can identify on the project site.



Towards the top of this photo, you can see the Knickerbocker Bridge and how it provides a clear view of the project. Posted by Jyll Smith, ODOT PIOat1:32 PM

Tuesday, September 11<sup>th</sup>, 2012

# **Use extreme caution on Franklin Boulevard under Interstate 5** *From ODOT-*

We recently told you about the lane restrictions in place on Franklin Boulevard until February. Here are some pictures of this temporary configuration to help you anticipate this change and navigate it successfully.



Franklin Boulevard is restricted to one lane in each direction under Interstate 5. The speed limit is reduced to 35 mph through the construction zone.

Flaggers will slow traffic as work proceeds on either side of the road. In addition, expect up to 20-minute delays when crews install beams or falsework over the travel lanes. Please slow down, obey all warning signs and flagger directions.



A flagger directs westbound traffic during pile driving and falsework construction.



Westbound traffic returns to regular westbound lanes after passing under I-5.



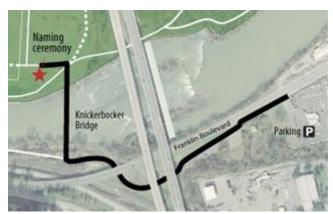
Cars form one line westbound while a bicyclist attempts to travel westbound on Franklin Blvd. That's him in the red shirt, next to the orange safety barrels on the right side of the photo.

# **Whilamut Passage Bridge Naming Ceremony – you're invited!** *From ODOT-*

I'm inviting everyone to join the ODOT project team, the Confederated Tribes of Grand Ronde and community volunteers to officially name the new Interstate 5 Willamette River Bridge.

The ceremony will be at 11 a.m., Saturday, Sept. 29, at the Whilamut Natural Area, northwest of the Knickerbocker Bridge in Alton Baker Park. It will include brief remarks, traditional tribal presentations and an unveiling of the new Whilamut Passage Bridge highway sign.

Our citizen volunteers have worked with tribal leaders and ODOT since 2009 to officially name the Whilamut Passage Bridge. At this long-anticipated event, we will celebrate their effort and that of the tribal representatives who have been instrumental in ensuring that the area's first people, the Kalapuya, are honored in the name and design of the new bridge and surrounding area.



**How to get there:** on the south side of the river, park your vehicle at the University of Oregon Motor Pool, 3233 Franklin Blvd. (see map above). Please allow 20 minutes to walk to the ceremony. Follow the signs that point the way from the parking lot. A courtesy shuttle will be available upon request.

I also encourage you to ride your bike there. The park has many nice paths for you to ride to the event and we will have a place designated for bicycle parking.

Keep your fingers crossed for sunny fall weather and I hope to see you there!

Posted by Jyll Smith, ODOT PIOat2:29 PM

Friday, September 14<sup>th</sup>, 2012

Behind the orange cones: the skeleton of the bridge

### From ODOT-

In our latest video, crews tie together miles of rebar to form the intricate web of steel reinforcing bars that is the unseen skeleton of the entire bridge. The rebar ranges from as small as one-half inch in diameter up to 2 1/4 inches across.

For this project, we use the largest diameter rebar available, which weighs 14 pounds per linear foot. These big steel bars are so heavy that it takes several steelworkers to move them into place and tie them into the reinforcing framework that supports the bridge piers and arches.

It's fascinating to see up-close the cages that will become the concrete columns supporting the bridge. I interviewed ODOT Quality/Quantity Coordinator Thor Alvarado about the training and experience needed to work with this heavy and intricate material.

Thor's job is to inspect bridges under construction throughout the state. His experience is valuable on a complicated project like ours because he makes sure bridges are built properly, safely and within budget.

According to Thor, the biggest challenges of working with rebar are harsh weather and lifting the long and heavy steel bars into place. He says teamwork is important because it's dangerous work.

Do you know what happens to the rebar if steelworkers try to bend it with a torch? Watch the video to find out!

And feel free to post your comments and questions. Your feedback is important to us.

Posted by Jyll Smith, ODOT PIOat1:50 PM

Tuesday, September 18<sup>th</sup>, 2012

# The last of the bridge columns are finished

From ODOT-

As we build the northbound Interstate 5 Willamette River Bridge, we celebrate many project milestones. The most recent is completing the final set of bridge columns on the northbound bridge.



The final columns-- on the north side of Franklin Boulevard-- rise above the roadway along the south bank of the Willamette River.



The columns shown from the riverside stand alongside steel structures built to support the bridge falsework. The exposed rebar on top will connect the columns to the bridge deck when it is poured.

All that remains is to remove the sheet pilings that protected the construction work from surrounding soil and rock. Once the piling is removed, crews will place additional soil around the base of each column to fill in the area excavated for construction.

Bridge construction will now focus on finishing the arches and building the falsework overhead to create the bridge beams and deck.

Posted by Jyll Smith, ODOT PIOat1:28 PM

Friday, September 21<sup>st</sup>, 2012

# Pulling weeds helps establish native vegetation in the Whilamut Natural Area

From ODOT-

The Whilamut Natural Area surrounds the Willamette River Bridge project on the river's north bank. ODOT is helping the city of Eugene and its Citizens Planning Committee to restore the area to its natural state as an upland prairie.

Since we began the bridge project, our contractors have removed more than two acres of weeds, which keeps construction traffic from spreading them to other parts of the natural area. Some cleared areas are being landscaped with native plants while others are being seeded. In all cases, weeding will continue until the new native plants are established and can "shade out" undesired vegetation.



Here's an area where weed removal is complete and maintenance continues while native plantings become established in their new homes.

When the landscaping is complete in 2014, the Whilamut Natural Area around the bridges will be greatly improved through the efforts of ODOT and its local partners.

Posted by Karl Wieseke, ODOT Construction Project Managerat11:43 AM

Monday, September 24<sup>th</sup>, 2012

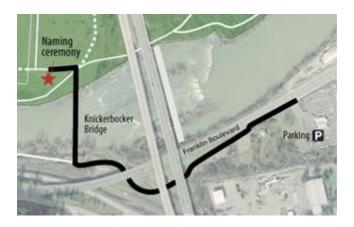
# Please join our Whilamut Passage Bridge naming ceremony From ODOT-

I hope that you can join us, the Confederated Tribes of Grand Ronde and community volunteers to officially name the new Interstate 5 Willamette River Bridge.

The ceremony will be this Saturday at 11 a.m. in the Whilamut Natural Area, northwest of the Knickerbocker Bridge in Alton Baker Park.

The Whilamut Passage theme, developed by our Community Advisory Group, incorporates words, phrases and images that encompass the variety of users of the bridge and its surroundings — past, present and future — as well as the area's geography. The theme continues to guide design enhancements that will be built alongside I-5 as well as in the natural area.

How to get there: On the south side of the river, park your vehicle at the University of Oregon Motor Pool, 3233 Franklin Blvd. (see map below). Please allow 20 minutes to walk to the ceremony. Follow the signs that point the way from the parking lot. A courtesy shuttle will be available upon request.



Consider arriving on bicycle. The park has many nice paths for you to ride to the event, and we will have a place designated for bicycle parking. Afterward, you can continue exploring the paths.

I look forward to seeing you there!

Posted by Jyll Smith, ODOT PIOat1:46 PM

Thursday, September 27<sup>th</sup>, 2012

# A guest post by the Confederated Tribes of Grand Ronde From ODOT-

As we prepare for the naming ceremony this Saturday, I'm pleased to present a guest post by Reyn Leno, Chairman of the Confederated Tribes of Grand Ronde, about the significance of the name Whilamut Passage to the tribe.

We have appreciated working closely with the tribal government and its members to plan this meaningful ceremony and to shape future design enhancements that will help tell their story for generations to come.

The word "whilamut" is attributed to a Kalapuya pronunciation of the word Willamette. The Kalapuyas were one of the original tribes and bands in the Willamette Valley that make up today's Confederated Tribes of Grand Ronde. Many of our people are descendants of the Kalapuyas and they are recognized in our Willamette Valley Treaty of 1855. Willamette comes out the Chinuk Wawa language and describes the way the river riffles in some areas. Essentially it means "place where the water riffles."

Using the world "whilamut" for this new bridge acknowledges its current use of the area as a transportation crossover and thoroughfare for modern society while honoring the historic use of the area by the Kalapuya people as a village, and trade location for native peoples traveling the river. This location is a transportation passage for all humans from throughout our histories.

The Grand Ronde people who've inhabited the Willamette Valley since time immemorial are pleased to honor the memory of our ancestors with this special name.

- Reyn Leno, Chairman

Confederated Tribes of Grand Ronde

Posted by Jyll Smith, ODOT PIOat11:25 AM

Tuesday, October 2<sup>nd</sup>, 2012

#### Highlights from the naming ceremony

From ODOT-

It was a magical, sunny morning when about 75 people gathered in the Whilamut Natural Area to celebrate the official naming of the Whilamut Passage Bridge (pronounced *WILL-a-mut*). Below are just a few of the highlights from the ceremony held on Saturday.



The first speaker was tribal member Kevin Simmons (second from right), who expressed gratitude and led a drum song with others, including Tribal Councilman Jon George (third from right).



Kalapuya Elder Esther Stutzman (far right) also spoke, saying her peoples' spirits will not be forgotten and that it is important to remember them publicly.

Sonny Chickering, ODOT Region 2 manager, signed the naming proclamation with a

ceremonial pen created by the tribe specifically for this event. After the signing, a red-tailed hawk flew overhead, as if validating this special moment.



Finally, tribal members and community volunteers unveiled the new Whilamut Passage Bridge sign, which will soon mark the northbound Interstate 5 Bridge over the Willamette River.

Posted by Suzanneat3:06 PM

Wednesday, October 10<sup>th</sup>, 2012

### **Close Coordination with Utilities is Required**

From ODOT- The need for close coordination with the local utilities is not often noticed or discussed on major construction projects, yet it is important to prevent impacts to service to local residents. On the Willamette River Bridge project, water, sewer, natural gas, electrical and major fiber optics cables are all found in the construction zone. Crews need to relocate many lines and carefully mark and avoid others as the work proceeds.





The pictures above show the future path of the new multi-use viaduct path on the north side of Franklin Boulevard before and after crews removed utility poles in preparation for construction.

Removal of the guardrails will provide an open area for large equipment to drill shafts and begin path construction.



As work begins you can clearly see why the utility poles and guardrail were removed.

A great deal of planning is required before any poles, lines or pipes are moved. Our contractors meet with the appropriate service providers to outline the impacts, options and timing for any changes. Close coordination ensures that the utility can schedule its work to occur before our construction activities begin. ODOT appreciates this close cooperation as we work together to complete this project.

Posted by Sonny Chickering, ODOT Area Managerat7:39 AM

Friday, October 12<sup>th</sup>, 2012

### **Crossing Franklin Boulevard to build a bridge**

From ODOT-

With fall in full swing, crews worked on a crisp morning to place steel beams over Franklin Boulevard for the new Willamette River Bridge. The beams will be welded together to create a temporary base for the forms that will shape the new northbound bridge.



Construction crews place steel to support falsework over Franklin Boulevard.

Next, carpenters will build wooden falsework around the rebar supports to create forms. Crews will pour a special concrete mixture into the forms to create cast-in-place box beams that span this major thoroughfare. Traffic on Franklin Boulevard will be subject to delays at times as wood is lifted into place.



Flaggers stop traffic on Franklin Boulevard while crews move materials into place.

In the spring of 2013, crews will remove the temporary steel structure, returning Franklin Boulevard to the regular traffic pattern of two lanes in each direction and signaling the final stages of the bridge construction. For your safety, continue to observe all warning signs, reduce your speed and follow the flagger's instructions as you travel on Franklin Boulevard. Posted by Jyll Smith, ODOT PIOat3:48 PM

Monday, October 15<sup>th</sup>, 2012

# **Crews pave final section of northbound lanes** *From ODOT-*

We recently told you how crews built a new rock base as the foundation of the approach between the Canoe Canal Bridge and the northbound bridge and paved them with black asphalt. Since then, crews completed the lanes by pouring a layer of concrete "white" paving, and then grading and paving the road shoulders.



The black asphalt paving in the

foreground, right, is sandwiched between the graded rock base and the final layer of concrete paving, being smoothed by a worker at left. The concrete is gray when it's poured but dries white when it is ready for traffic.



As the paving machine distributes

the "white" concrete, workers use pneumatic vibratos to remove trapped air pockets, then level and smooth the surface.

It may seem odd to finish the highway approaches before the bridge is done, but working from the outside in allows crews to ensure that the bridge deck aligns perfectly with the roadway. Plus, the completed approaches give contractors access to areas of the project site that are critical as work progresses.

Posted by Jyll Smith, ODOT PIOat3:36 PM

Thursday, October 18<sup>th</sup>, 2012

Crews form and pour first concrete deck for northbound bridge From ODOT-

In late 2011, work began on the new northbound bridge spans on both banks of the river. The shorter of the spans, located on the north bank, is nearly complete with the recent deck pour. Here's a step-by-step look at how the span and deck were created.



During early construction of the new bridge, temporary piles were driven into the riverbank. The piles support wood and steel falsework needed for construction in preparation for work on the bridge support columns for the north bank span. The new southbound bridge in the background shows how the columns and deck will look when completed.



With the columns complete, the falsework was built and rebar installed to create the box girder beams that support the bridge deck and connect it to the arch span over the river.



Once the beams were complete, wooden forms were built to create the deck. Above, workers install and tie steel rebar in preparation to pour the bridge deck.



Here, the newly poured deck is curing under a cover. The new deck has to cure for about two weeks to reach full strength. Before the new span will be ready for traffic, the crossbeams supporting the deck are post-tensioned using internal cables that make them even stronger.

We hope you like our behind-the-scenes photo stories. Please take a moment to ask a question, make a comment or suggest another part of our construction project you'd like to know more about.

Posted by Jyll Smith, ODOT PIOat9:39 AM

Thursday, October 25<sup>th</sup>, 2012

# Construction under way on new south riverbank path From ODOT-

Work is under way on the new pedestrian path viaduct on the south bank of the Willamette River

along Franklin Boulevard, east of the Interstate 5 Bridge.

The new path will run from Glenwood Boulevard on the east side of I-5 to Knickerbocker Bridge on the west. The path work, begun in September, is scheduled to be complete in early 2014.



This view is looking west from upstream of the new I-5 bridge.

Part of the new path is being constructed above the riverbank on a viaduct that uses beams salvaged from the old temporary Willamette River Bridge.



Crews first drove temporary steel piles along the riverbank to support work platforms used to drill the shafts and construct the columns for the path viaduct. Franklin Boulevard is at the left.



Here is one of 12 work platforms built on the riverbank to support heavy equipment.



On the left, a crane places a rebar cage into a completed shaft in preparation for pouring concrete for the first viaduct pier. On the right, a drill rig is readied to drill the next shaft.

The new path begins east of Knickerbocker Bridge near where the old south bank path was previously located. A temporary path detour allowed construction crews to complete a streambed enhancement project and build the new pathway.



Straight ahead is the route of the new path east of Knickerbocker Bridge. The temporary path on the right diverted users away from ongoing construction work.

Posted by Jyll Smith, ODOT PIOat1:09 PM

Thursday, October 25<sup>th</sup>, 2012

### Scenes from the bridge site

From ODOT-

One of things I like most about this blog is the opportunity to share one-of-a-kind views with you. Here are a few recent photos that show you scenes from our work site from unique vantage points.



Crews begin work early. From the project site, they often get a great view of the sunrise.



From the top of the arches that are under construction, you can see the falsework and rebar cages that will hold the concrete once it is poured.



Workers standing on the falsework give you a sense of the arches' size.



On the south side of the project, the viaduct for the new multi-use path along Franklin Boulevard is coming along nicely. The new bridge is downstream, in the background.

Posted by Jyll Smith, ODOT PlOat3:51 PM

Wednesday, October 31<sup>st</sup>, 2012

**Protecting the river and its users** 

#### From ODOT-

Our work bridge protects the Willamette River from construction debris. It also provides another vital service: it provides river users with a safe passage by protecting them from the construction activities above.

But there are other hazards people should know about. When the Willamette River rises during the rainy season, which is now upon us, it decreases clearance under the bridge for boaters. Natural debris, such as tree branches, creates another boating hazard when it becomes trapped against the work bridge.

Our contractor removes debris buildup as the river levels drop. They can lift some of it from the bridge deck, but most is removed by workers using a motorboat. Crews cut it loose from the bridge supports and allow it to float down the river. This woody debris naturally improves fish habitat when it lodges along the riverbanks downstream of our project or builds up elsewhere in the river.

Thanks to the skill of the workers who maneuver the boat under the work bridge to dislodge branches, the contractor is keeping the river passable so everyone can enjoy it safely.

Posted by Jyll Smith, ODOT PlOat2:13 PM

Friday, November 2<sup>nd</sup>, 2012

### Responding to the fall rain

From ODOT-

Fall rains can lead to erosion on any construction site. For the Willamette River Bridge project, we take several steps to minimize the effects of rain throughout the construction area.



To limit erosion on bare soil like this recently completed embankment east of Interstate 5, crews applied grass seed and mulch, hastening grass growth.



On this embankment west of I-5, established grass is filtering runoff from the road and preventing erosion.

Rainwater and runoff filter through the vegetation on the embankments, and then flow into a series of bioswales that provide additional filtration before moving into local waterways.



This bioswale collects and filters water from recent rains.

In addition, rainwater that falls on the project's work bridge must be filtered before it enters the river or local stream.



Plastic sheeting under the work bridge's wood deck captures the rainwater. Once captured, the water is piped to a nearby filtration system to remove any pollutants.



The large filtering tank processes water from the work bridge before it enters a settling pond. Then the water is discharged into the river.

These measures ensure that construction can proceed throughout the winter, because the rainfall will have minimal impact on the project site and on local waterways.

Posted by Jyll Smith, ODOT PIOat9:34 AM

Monday, November 5<sup>th</sup>, 2012

#### The latest newsletter is now available

From ODOT-

Our Willamette River Bridge project fall newsletter is now available.

Take a look to see pictures of the new arches under construction and get a rare glance at the inside of a bridge span before the top deck is paved. You can also see the newly enhanced stream bed on the south bank of the river.

The newsletter also features articles about the Whilamut Passage Bridge naming ceremony and design enhancement updates.

Our project newsletter is distributed electronically. To get a copy sent directly to your inbox, please email Nichole@cawood.com.

If you have a question about the project, a suggestion for a future newsletter article or a photo of the construction work you'd like to share with us, please contact me at jyll.e.smith@odot.state.or.us.

Thank you and happy reading!

Posted by Jyll Smith, ODOT PlOat10:01 AM

Friday, November 9<sup>th</sup>, 2012

# Get the scoop on park improvements in the latest Behind the Orange Cones video

From ODOT-

The parkland surrounding the Interstate 5: Willamette River Bridge project is much beloved by athletes, commuters and reflective outdoor enthusiasts. These same park paths and natural areas also play a very important role in our construction story.

To film our latest online video, I relished the opportunity to spend part of my day capturing how we've worked to protect, enhance and improve this beautiful area, including its many paths and waterways.

In this video, you will learn that while construction has led to temporary impacts to Alton Baker Park and the Whilamut Natural Area; it will lead to valuable improvements when the bridge work is done.

We highlight the importance of the parkland around the bridge and show what construction crews are doing now and will accomplish in the future. These improvements include stream restoration and a temporary fish ladder, informative kiosks and visual enhancements along the Canoe Canal path and waterway.

Please enjoy watching and feel free to post your comments and questions.

Posted by Jyll Smith, ODOT PlOat11:14 AM

Monday, November 19<sup>th</sup>, 2012

# From Riverbanks to Park Paths, Design Enhancements go from Concept to Design Phase

From ODOT- The Citizen Advisory Committee and the Project Development Team have recommended final steps to complete design enhancements on the north and the south banks of the Willamette River.

Oregon Department of Transportation project managers approved the recommendations and authorized the Design Enhancement Steering Committee to work with the artists and designers on final designs.



A Kalapuya canoe rendering is proposed on the north bank of the Canoe Canal under Interstate 5.

Selected artists and designers will receive a request for proposals seeking concepts for the canoe rendering on the north bank of the Canoe Canal (above). The DESC will evaluate each proposal and select the winner by early 2013. Once selected, the winner will complete the design and install the drawings.



Design enhancements inviting path users to stop and enjoy the view of the river and the bridge will be considered for the south bank. Photo courtesy of Joe Valasek.

The DESC is also working with landscape architect Cameron McCarthy to develop additional design concepts for the areas located between the paths under the Canoe Canal Bridge, on the north bank under the Whilamut Passage Bridge, and on the south bank.

Posted by Sonny Chickering, ODOT Area Managerat8:47 AM

Monday, November 9<sup>th</sup>, 2012

The planning behind the construction From ODOT-

If you pass by the project site regularly, you've seen the two graceful bridges take shape across the Willamette River. What you don't see is the coordination that makes it possible.

Communication is critical in such a dynamic project. Every Wednesday, Hamilton Construction Manager Con O'Connor and I meet with the superintendents, safety manager, project engineers and the traffic control manager. At this weekly meeting, the team orchestrates upcoming tasks, identifies potential issues and solves problems. Whatever the issue – coordinating timing of material deliveries, ensuring ample manpower for tying rebar grids, or evaluating erosion-control measures, for example – a cohesive, coordinated planning team makes sure it all gets done.

The primary outcome of each Wednesday's meeting is a projected three-week schedule that we review each Thursday in our weekly construction meeting with representatives from the main construction partners, Hamilton and Slayden, as well as members of our engineering, inspection, safety and public involvement teams. Here we make sure everyone's on the same page about upcoming activities, whether related to demolition, bridge work or roadway work. Then we are able to identify where extra efforts are needed to ensure staffing is available and the public is kept safe and informed.



In a construction project, tasks are bound to change due to scheduling conflicts or uncontrollable factors such as the weather. As a team, the Willamette River Bridge staff uses the most current information available and communicates often with all involved parties to ensure that everything runs smoothly as possible.

Posted by Karl Wieseke, ODOT Construction Project Managerat11:17 AM

Wednesday, November 21st, 2012

# A heartfelt thank you to one and all From ODOT-

As we take time off this week to give thanks, I will be thinking about all of the people involved in making this project such a success, and that includes YOU.

The Willamette River Bridge project is the largest bridge replacement yet in Oregon. I am grateful that it has gone so smoothly and that we've received so much praise from our neighbors as they've watched the beautiful, new arched bridges and other structures take shape.

Our construction team, led by Hamilton Construction, has done a marvelous job coordinating a whole symphony of builders and specialty subcontractors responsible for all the moving parts of this complex undertaking.

Away from the construction site, several groups of residents have tirelessly volunteered their time to ensure that the final product respects the community and the area's history. I've enjoyed continued partnerships with the Community Advisory Group, Design Enhancement Steering Committee and the Bridge Naming Committee.

And finally, I want to thank you, our readers. We've been writing the Willamette River Bridge blog for nearly two and a half years and I greatly appreciate that you take time out of your busy lives to follow our posts. We wouldn't be here without you. Nothing makes me happier than reading comments from our readers thanking us for our posts and telling us how they enjoy the information we are covering.

I look forward to continuing this journey with you. Please remember to tell us what you'd like to see more of in future blog posts.

#### Happy Thanksgiving!

Posted by Jyll Smith, ODOT PIOat12:44 PM

Tuesday, November 27<sup>th</sup>, 2012

### South Bank Path: Planning for the Future

From ODOT- The south bank viaduct path is an investment in the community's infrastructure. City officials and ODOT recognize that it's a vital part of the bicycle and pedestrian network. Together, we are working hard to improve it.

Some of you have requested more information about the long-term plans for the south bank viaduct path. I'm happy to describe these and to clarify what is included as part of the Willamette River Bridge project and what will occur independent of it.

#### Adjusting the south bank path route

The new, permanent viaduct path will follow a different route than it does today. It will begin

east of the Knickerbocker Bridge and run along the north side of Franklin Boulevard, rather than the south side.

ODOT built a temporary detour for the path to accommodate construction of the new Whilamut Passage Bridge, allow space for stream restoration between the path and the river, and divert path users from ongoing construction hazards. This detour is necessary for project safety.

#### **Extending the path**

ODOT is also extending the path to just west of the Oldham Crane Service property as part of the Willamette River Bridge project. We are coordinating with the cities of Eugene and Springfield to establish appropriate connections to the new viaduct path, but those will be a separate project. The city of Springfield plans to extend the new path east, allowing users to cross Franklin Boulevard at the intersection with Glenwood Boulevard. Traffic signals there will make crossing the busy lanes safer for all.

OBEC Consulting Engineers, the design team leading the Willamette River Bridge project, is also working with the City of Springfield on the path extension. They are currently in the design phase and expect the extension to open with the rest of the viaduct path in 2014. The existing south bank connector path will remain open until this connection is finished.

Posted by Sonny Chickering, ODOT Area Managerat9:30 AM

Wednesday, November 28<sup>th</sup>, 2012

### Barrier installation: halfway mark for off-ramp closure

From ODOT-

We are more than halfway through the closure of the Interstate 5 northbound off-ramp to Franklin Boulevard. Crews have made significant progress toward building a new ramp.

The closure began early in October 2011 and gave us a chance to rebuild the off-ramp and raise it to align with the new northbound bridge.

Workers recently installed permanent barriers along the northbound lanes of I-5 and along the new northbound off-ramp to Franklin Boulevard. These barriers were precast, meaning they are formed and poured off-site and brought in from Salem for installation.



The construction team places one of the barriers on to the ramp, while others on the track await placement.

Crash tested and designed for impact, the barriers are hinged with a rod to form a durable chain, increasing the force the barrier can withstand. Carefully lined up with stormwater runoff grates, the walls also play a critical role in guiding water from the roadway into the drains below – a safety measure we all know is necessary here in rainy Oregon.



This portion of the roadway may open before shoulder paving is complete, so the construction team used singleslope barriers that do not need to be moved during paving.

With less than a year left for the ramp closure, crews are making steady progress and plan to remove the off-ramp falsework in February or March and will be ready to pave in the spring.

Posted by Jyll Smith, ODOT PIOat3:34 PM

Monday, December 3<sup>rd</sup>, 2012

# **Crews make last substantial pours on new northbound bridge arches** *From ODOT-*

Our team recently poured the top sections of the southernmost arch for the new northbound Whilamut Passage Bridge. These top portions are called crown arch rib sections and they will soon be joined together to complete the graceful arch that will support the deck to carry freeway traffic.



Crews poured approximately 100-foot segments on each side of the arch apex, starting at the peak and working down each side of the curved arch ribs to the previously-poured lower sections. As we've described before, the rebar framework of the bridge arches is surrounded by wooden falsework and formwork, creating a form that allows fresh concrete to cure in the desired shape and size.



Poured in a series, you can see the result of a previous arch pour in this photo. Notice that lower portions of the formwork were removed, but the crown arch rib section formwork remains intact.

What's next? The construction team will jack apart the arch sections located on the north bank next week, using large hydraulic ram jacks. Just after the New Year, crews will repeat the jacking process on the recently poured arch sections of the southernmost arch. Each arch will require a closure pour after being jacked apart completing the final arch shape. Our goal is to complete the first closure pour

on the northernmost arch before Christmas.

Other than the minimal but critical closure pours, these crown arch rib sections are the last arch pours on this project the new northbound bridge is definitely taking shape.

Posted by Jyll Smith, ODOT PIOat12:37 PM

Wednesday, December 5<sup>th</sup>, 2012

#### Preparation to jack the arch ribs apart

From ODOT-

The construction team is completing necessary preparations to jack the arch ribs apart, which lifts them off their falsework and forces each rib to support its own weight.

As part of the preparation, crews meticulously calibrate the equipment using a process that we described earlier this year. Additionally, crews removed the formwork from the spandrel columns, which extend from the arches to the deck, and installed cradles cast into the arch ribs to hold the hydraulic cylinder that powers the jack.



On the left, you can see a couple of spandrel columns that crews exposed by removing the formwork. One column still has the formwork in place.

Finally, using a crane, workers will hoist the large hydraulic ram jacks and place them into the cradles.

Once the jacking starts next week, crews will survey and mark the columns at each stage to evaluate how the movement is affecting the columns and abutments. On day one, crews will jack the arch to an 80 percent threshold and then engineers will determine if there was any pressure shift in an up-close inspection. The next day, crews will jack the arch ribs to 100 percent threshold, and will check them again.

Once the arch ribs are separated and lifted, crews can pour the concrete closure that completes each arch and allows them to stand on their own.

Posted by Jyll Smith, ODOT PIOat11:31 AM

Wednesday, December 12<sup>th</sup>, 2012

### **Exciting changes for the project team**

From ODOT-

I like change because of the opportunity it brings. We're happy that two of our very own have the chance to take on new roles and assignments within ODOT.

I'd like to thank Sonny Chickering for his hard work on the Willamette River Bridge project as the Area Manager. Sonny, now the ODOT Northwest (Region 2) Manager, oversees Clatsop, Tillamook, Columbia, western Washington, Lincoln, Coos, Yamhill, Polk, Marion, Benton, Linn and Lane counties.

With Sonny's new position, we welcome Frannie Brindle to the Willamette River Bridge project team. Previously ODOT's Geo-Environmental Natural Resource Manager, Frannie will assume the role of ODOT Area 5 Manager here in Springfield. She'll focus on stakeholder involvement and work closely with the Design Enhancement Steering Committee, Citizen Advisory Group, Project Development Team and local government bodies. Frannie will also be our newest team blogger.

Congratulations to you both and welcome, Frannie!

Posted by Jyll Smith, ODOT PlOat10:28 AM

Thursday, December 13<sup>th</sup>, 2012

# Watch naming ceremony highlights in the latest online video From ODOT-

Our latest Behind the Orange Cones video is especially moving. It contains highlights of the Sept. 29 Whilamut Passage naming ceremony. We've captured photos of the special day along with speeches by the Confederated Tribes of Grand Ronde and other community members who played a significant role in naming the bridge.

If you were there, this video will be a wonderful reminder of the day – as it was for me. If not, you will get to see and hear the touching moments.

Posted by Jyll Smith, ODOT PIOat11:05 AM

Wednesday, December 19<sup>th</sup>, 2012

**Progress continues on the new multi-use path viaduct** *From ODOT-*

Crews have been hard at work on the new multi-use path viaduct on the south bank of the Willamette River. The public can now see the latest components rising from the ground: precast and cast in place hammerheads (crossbeams) that will support the path.

Workers constructed these supports by drilling column shafts, placing rebar cages topped with anchor bolt clusters inside each, and then placing concrete. The top-shaft concrete cure for a week before the precast hammerheads are secured to each column with the tightened anchor bolt assemblies.



Two precast hammerheads are installed on the shaft columns, while one shaft on the right awaits anchor bolt clusters.



Workers carefully place a hammerhead atop a shaft.

Crews will soon start building a block retaining wall on the east end of the path to keep the embankment contained.

Next month, they will place box beams, salvaged from the temporary I-5 bridge, that will rest on the hammerheads and act as a base for two inches of asphalt paving to create the final pathway.

Motorists will see increased activity along the north side of Franklin Boulevard just east of the Whilamut Passage Bridge as the box beams are delivered. Trucks will enter and exit the work zone, allowing cranes to offload and install the heavy beams. Please pay close attention to flaggers and expect brief traffic delays.

Posted by Karl Wieseke, ODOT Construction Project Managerat6:37 AM

Thursday, December 20<sup>th</sup>, 2012

#### Park representatives collaborate with project team

I'm excited about writing my first post for the Willamette River Bridge project blog. When I was part of ODOT's Geo-Environmental Natural Resources Unit, I watched how the project has benefited by collaboration.

One example of this is at the parks coordination meetings, where local jurisdictions, parks and community members meet with ODOT Project Manager Karl Wieseke and me on the first Friday of each month to focus on how the project impacts the surrounding area. Attendees represent local natural areas and parks, including:

- City of Eugene Parks and Open Space Division.
- City of Eugene Public Works Transportation Department.
- Willamalane Park & Recreation District.
- Citizen Planning Committee for the Whilamut Natural Area.
- Fairmount Neighbors Association.

These representatives point out maintenance concerns, provide information on existing area charters and collaborate with us to find solutions that work for everybody. The meetings also give the project team an opportunity to update the parks agencies and our neighbors on construction activity. Design enhancements and park improvements are the most common topics of discussion.

Some results of our close collaboration include protective fencing for wetlands and reconfiguration of a frog pond in the Whilamut Natural Area. Both efforts will help restore the area to better-than-original conditions. We also use the parks coordination meetings to agree on a long-term maintenance plan to ensure continuity of care for areas surrounding the project.

I look forward to continued collaboration with this knowledgeable and motivated group as the project moves forward.

Posted by Frannie Brindleat4:41 PM

Friday, December 28<sup>th</sup>, 2012

# Dark, wet days of winter call for extra care traveling through work zone From ODOT-

The gray and drizzly days of a typical Oregon winter are upon us.

The shortest days are still ahead, and as visibility decreases and roadways and paths collect water, the Willamette River Bridge project's safety team reminds you to be alert as you travel through our work zone.

Construction work will increase next month on Franklin Boulevard as box beams are delivered to the site. Cranes will then place the beams to create the new multi-use path viaduct on the south bank of the Willamette River parallel to Franklin Boulevard.

Work on the new viaduct and construction traffic entering the work zone just east of the Whilamut Passage Bridge create even more activity on this highly traveled road.

"Entering and exiting the work site is a major concern," said Haily Griffith, of PCA Health and Safety Consultants. "Our crews will do all they can to avoid impacting traffic on Franklin Boulevard. We also need motorists and cyclists to slow down, pay attention to flaggers and be ready to stop briefly if needed for construction traffic."



Path entrance near the contractor's office on a rainy day.

To stay safe on slippery roads and paths, Haily suggests you:

- Avoid stopping along a path or roadway to watch construction work. Choose a safer location away from the immediate work area. The Knickerbocker Bridge is a wonderful viewpoint.
- If you're driving or biking through the work zone, lower your speed and be ready to stop quickly.
- Be aware of your surroundings and stay alert.
- Pay close attention to flaggers and signs near the project site.
- Like motorists, cyclists are required by law to obey construction speed limits, signs and flaggers who are there for your safety.
- Cyclists should also wear high-visibility outerwear and use front and rear bike lights.



The crossing under the Whilamut Passage Bridge on the existing south bank path has limited clearance. Please slow down, watch for hazards and always obey the flaggers.

We have an excellent safety record on the Willamette River Bridge project. With your help and extra attention, we can keep it that way.

Posted by Jyll Smith, ODOT PIOat12:46 PM