

PUBLIC WORKS PROJECT OF THE YEAR NOMINATION FORM



SUBMITTAL DEADLINE: August 15 each year

PROJECT INFORMATION

Project Name

*Project Completion Date**

Application Submittal Year

Public Agency

PROJECT CATEGORY (select one):

- Structures
- Transportation
- Environmental (Water, Wastewater, Stormwater)
- Historical Restoration/Preservation
- Disaster or Emergency Construction/Repair

PROJECT DIVISION (select one):

- Less than \$5 million
- \$5 million to less than \$25 million
- \$25 million to \$75 million
- More than \$75 million

*Must be substantially complete and available for public use within two calendar years prior to nomination.

MANAGING AGENCY

Name

Title

Agency/Organization

Address (if post office box, include street address)

City

State

Zip

Email

Phone

Fax

PRIMARY CONTRACTOR

Name

Title

Agency/Organization

Address (if post office box, include street address)

City

State

Zip

Email

Phone

Fax

PRIMARY CONSULTANT

Name

Title

Agency/Organization

Address (if post office box, include street address)

City

State

Zip

Email

Phone

Fax

NOMINATED BY (only managing public agency or APWA Chapters eligible to nominate)

Name

Title

Agency/Organization

Address (if post office box, include street address)

City

State

Zip

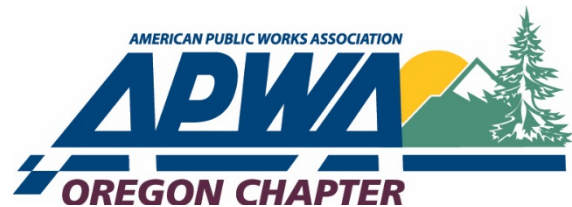
Email

Phone

Fax

SUBMIT APPLICATION PACKET TO:

Public Works Project of the Year • Awards Program
Krey Younger
GeoDesign Inc.
15575 SW Sequoia Parkway, Suite 100
Portland, OR 97224
kyounger@geodesigninc.com
503.726.3104



NOTE: Supporting documentation is **limited to twenty (20) pages**, exclusive of photographs (10 to 20 photos of the project including a few "before" photos if possible) and the nomination form. **This submittal will not be returned.** Please submit your application by the deadline identified at the top of this application by both of the following methods:

- **Email** – Send by email a digital copy of the nomination form and supporting documentation. If possible, include 10 to 20 photographs of the project which can be sent, if necessary, by more than one email.
- **Hard Copy** – Hand deliver or send by US mail (postmarked by due date) or delivery service one "hard" copy of the nomination form and supporting documentation. Include a USB flash drive (or CD) with 10 to 20 photographs of the project along with a digital copy of the nomination form and supporting documentation.

SUBMITTAL GUIDELINES

Public Works Project of the Year

PLEASE ADDRESS EACH OF THE FOLLOWING AREAS IN YOUR SUPPORTING DOCUMENTATION ADHERING TO THE BELOW SEQUENCE WHEN POSSIBLE.

- General description of the project.
- Completion date contained in contract. Any time extensions granted should be addressed in the submittal.
- Construction schedule, management, and control techniques used.
- Safety performance including number of lost-time injuries per 1,000 man hours worked and overall safety program employed during the construction phase.
- Community need – a summary of how the project met the community needs as related to economic challenges, value engineering, creative use of resources, to the measurable benefit to the community.
- Sustainable practices – use of alternative materials, practices, or funding that demonstrates a commitment to sustainability.
- Environmental considerations including special steps taken to preserve and protect the environment, endangered species, etc., during the construction phase.
- Community relations – a summary of the efforts by the agency, consultant and contractor to protect public lives and property, minimize public inconvenience and improve relations.
- Unusual accomplishments under adverse conditions, including but not limited to, adverse weather, soil or site conditions, or other occurrences over which there was no control.
- Additional considerations you would like to bring to the attention of the project review panel such as innovations in technology and/or management applications during the project. Include a description of special aspects of the project.

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8th Street Bridge Replacement

APWA Public Works
Project of the Year 2020

**Submitted by:
The City of Pendleton, Oregon**

General Description

The City of Pendleton, Oregon, is honored to submit the 8th Street Bridge Replacement project in Pendleton, Oregon, for your consideration for Project of the Year for 2020.

The project in eastern Oregon replaced a 110-year-old historic bridge with a new structure that meets current design standards while honoring the historic nature of the site and its surrounding area. It maintains critical connections for neighbors on either side of the Umatilla River and, because it more readily accommodates the flow of commercial and residential traffic, it provides the City of Pendleton with opportunities to further develop areas on the north side of the river.

This project, which at first glance seems like a straightforward bridge replacement, was actually more complex than it appears and included significant outreach and coordination with the public to ensure its success.

Some of the key elements of this project include:

- Replacement of a historic steel truss with a new weathering steel truss that meets current design and safety standards while honoring the previous structure
- A constrained project site adjacent to critical residential areas
- A significant and comprehensive public outreach program during design and construction to engage the community throughout project development
- Challenging seasonal weather that limited the team's options for scheduling construction activities

▼ Final constructed bridge





▲ TOP: Final constructed bridge as seen from the west.



▼ BOTTOM: The project included extensive elements to integrate with the neighborhood to the south of the bridge

Completion Date

Original completion date: July 31, 2019.
Actual completion date: November 27, 2019.

The project was completed later than originally scheduled because additional work was added to the contract and because severe winter weather delayed construction.

Construction Schedule, Management, and Control Techniques Used

The project experienced a few delays that were outside of the team's control, including significant rain and historic snowfall, which created challenges when scheduling construction activities.

Furthermore, a major subcontractor left the team partway through the project, which also impacted the schedule. The project team worked to proactively schedule work to minimize delays.

▼ Crews pouring the concrete deck



Safety Performance & Overall Safety Program

There were no lost-time injuries on this project.

Legacy Consulting, Inc., the general contractor on the project, employed the following safety program, which has resulted in a worker's compensation MOD rating of .64, which is very low for the industry:

- Weekly safety meetings
 - Includes pre-task safety discussions
 - Includes post-task safety discussions (what works well, what safety applications are cumbersome and can be improved upon)
 - What equipment may be needed
- Daily Safety Crane Inspections
- Daily Crane Man Basket Safety Crane Inspections
- We use our general liability insurance safety consultants to do job site inspections
- Use of Occupational Safety and Health Administration (OSHA) Consultation Service
 - Allow OSHA to walk project while crew works
 - Shut down project and allow entire crew to meet with OSHA inspector
 - Ask questions regarding OSHA inspector comments and related OSHA rules
 - Walk project with OSHA inspector
 - Correct deficiencies after meeting and prior to starting back to work
 - This creates good safety habits and helps the employee realize they can fix these deficiencies in the future and discuss at jobsite safety meetings

▼ Construction of the new weathering steel truss



Community Need

There were plenty of reasons why the 8th Street Bridge needed to be replaced, as detailed below.

Structural Integrity

Originally built in 1909, the existing bridge was load restricted for more than a decade prior to its replacement. When the project design began in 2015 the bridge substructure and overall condition were rated “poor” and the bridge has a sufficiency rating of 32.9 out of 100 indicating it was functionally obsolete and structurally deficient.

Traffic Impacts

Additionally, the existing bridge was too narrow to accommodate two-way traffic, and the truss had vertical clearance limitations that restricted the types of vehicles that could cross the bridge. The surrounding area includes significant farmland, and during harvest season, empty vehicles could pass through, but loaded vehicles were forced to use a lengthy detour that resulted in additional costs to their businesses.

Multi-Modal Considerations

The existing structure also lacked sufficient accommodations for cyclists and pedestrians. Non-vehicular traffic had to share the narrow roadway with vehicular traffic, creating significant safety issues, and the sidewalks and pathway to the south of the bridge did not sufficiently separate multi-modal traffic from vehicular traffic.

▼ The existing bridge prior to construction



UPDATING A CLASSIC FOR A GROWING COMMUNITY

Pendleton is a thriving and vibrant community, and it was important that the new bridge not only correct the shortcomings of the existing structure, but to do so while fitting into the City's vision for Pendleton and accounting for the needs of the surrounding neighbors and businesses.

Economic Vision

The City of Pendleton has plans to increase development on the north side of the bridge, which currently provides access to an RV park, multiple single-family houses, an electrical substation, and farmland.

With an expected increase in traffic in this area, it was important that the 8th Street Bridge accommodate these vehicles without diverting them to the nearest river crossings at Main Street or Highway OR11.

By upgrading the crossing from one lane to two full vehicular lanes, the iconic truss bridge has been brought into the 21st century and can now safely and effectively accommodate current and future traffic needs.

Community Vision

The 8th Street Bridge is adjacent to a historic neighborhood and just blocks from Pendleton's busy downtown area, making it a critical link for the community.

The multi-use path on the south side of the bridge also provides ample non-vehicular transportation opportunities for residents, so it was important to account for these users when designing a replacement.

The new structure included numerous considerations for non-vehicular traffic to ensure that it meets the needs of all users:

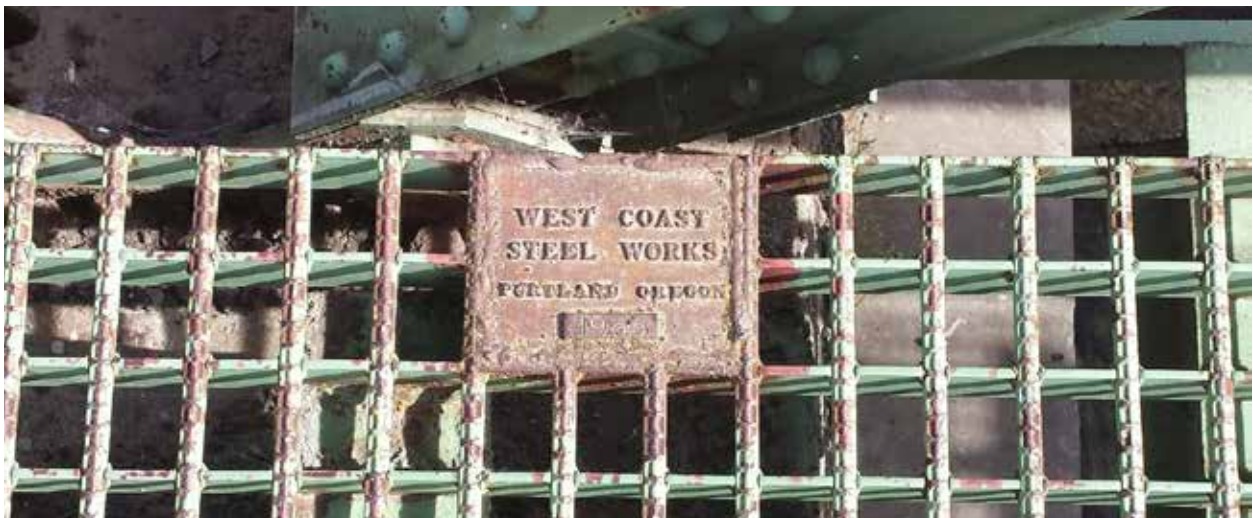
- New bike lanes on the bridge to separate cyclists from both vehicular traffic and pedestrians.
- A pedestrian walkway on the west side of the bridge, including benches for users who wish to rest or enjoy a view of the Umatilla River while crossing the bridge.
- A new grade-separated "shoo-fly" path that crosses under the bridge so multi-use path users can safely travel through the area unimpeded by road crossings.
- New sidewalks and walkways to the south of the bridge to seamlessly integrate the new bridge into the existing neighborhood.

Sustainable Practices

As mentioned in the "Environmental Considerations" section on the following page, construction crews removed the old historic steel truss in pieces so it could potentially be reused in the future. Each piece was numbered and marked for easy reference. The bridge is currently stored in the City's maintenance yard for future use. Other steel that was not part of the truss was recycled at a steel processing plant in Portland.

▼ TOP: Demolition of the existing truss

▼ BOTTOM: Metal that was not saved for future reuse was recycled at a steel processing plant in Portland



Environmental Considerations

HISTORIC CONSIDERATIONS

The 8th Street Bridge project, due to the historic nature of both the bridge and the adjacent neighborhood, as well as the “adverse effect” that a full replacement would create, had to comply with Section 106 of the National Historic Preservation Act.

The project team mitigated this “adverse effect” by working with a local group to find a new use for the old truss, which was unusable in the new structure. The plan involved erecting individual leaves of the truss in a local park as an artistic display honoring the historic structure and the role it played in the community for more than 100 years. Unfortunately, due to logistical issues, including funding, the dismantled bridge has not yet been repurposed.

PERMITTING

The location of the bridge required a significant and coordinated environmental documentation and permitting effort in addition to the historic bridge coordination previously mentioned.

Critical project permits and approvals included:

SECTION 408 APPROVAL

The presence of a U.S. Army Corps of Engineers (USACE) levee on the south bank of the Umatilla River and directly beneath the bridge abutment triggered a USACE Section 408 approval. Section 408 approvals are required to ensure that proposed alterations to a federal “project” (in this case the levee system) comply with USACE standards. DOWL coordinated with USACE 408 staff from the early design stages through construction to ensure compliance with USACE levee design standards and NEPA requirements. The Section 408 review took more than 14 months to complete.

▼ Existing one-lane bridge prior to construction



REMOVAL/FILL PERMITS

The Umatilla River is a jurisdictional waterway to both USACE and the Oregon Department of State Lands (DSL). Any action involving the removal or fill of materials within the river requires permits from both agencies as well as water quality certification from the Oregon Department of Environmental Quality (DEQ).

DOWL environmental staff completed all coordination as well as preparation of a Joint Permit Application for submittal to all three agencies. DOWL also provided timely construction support to gain approval of an alternate temporary foundation system proposed by the contractor immediately prior to the project's in-water work window.

ENDANGERED SPECIES ACT COMPLIANCE

The Umatilla River is designated as critical habitat for ESA-listed steelhead and bull trout and is also considered Essential Fish Habitat for Chinook. DOWL environmental staff completed project documentation to demonstrate compliance with FHWA's Federal Aid Highway Program programmatic biological opinion (FAHP). This included coordination with the National Marine Fisheries Service (NMFS) to gain approval for several components of the project that did not meet FAHP conditions outright due to site constraints.

ADDITIONAL PERMITS AND ENVIRONMENTAL DOCUMENTATION

- Programmatic Section 4(f) Evaluation for impacts to the historic bridge
- Stormwater Management Plan demonstrating compliance with post-construction stormwater regulations
- No Effect Memorandum for terrestrial species

Community Relations

As previously mentioned, this project included a robust and extensive public outreach effort during design and construction to keep the community informed and involved throughout project development.

There were many stakeholders, including properties located just feet away from the bridge itself. Stakeholders included:

- **Pendleton Knights of Pythias**, whose driveway and parking lot are adjacent to the bridge site
- **Five residents on SE 8th Street** who would be impacted by construction activities
- **Residents of Brook RV Park**, whose main route into town would be inaccessible during portions of construction
- **Farmers who use the 8th Street Bridge** as their primary route from their farmland to the main highways in and out of Pendleton
- **City public utilities** because an upgraded waterline and a new sanitary sewer line were incorporated into the project design

DESIGN PHASE

Public relations during the design phase of the project was a significant focus for the City because of a desire to make sure the community was very well informed in order to maximize public support well before the project moved into construction.

The cornerstone of this public outreach effort was a series of three open houses in the first nine months of design and one more during the transition to construction. These in-person meetings were open to anyone who was interested in learning more about the project, and the City advertised locally and conducted one-on-one outreach to inform the community of upcoming meetings.

At the end of each meeting, the City, consultant team, and ODOT staff met with the adjoining affected property owners for a Q&A session to work through design considerations and assure they were addressing property owners' concerns, within reason. There were two primary outcomes from these meetings:

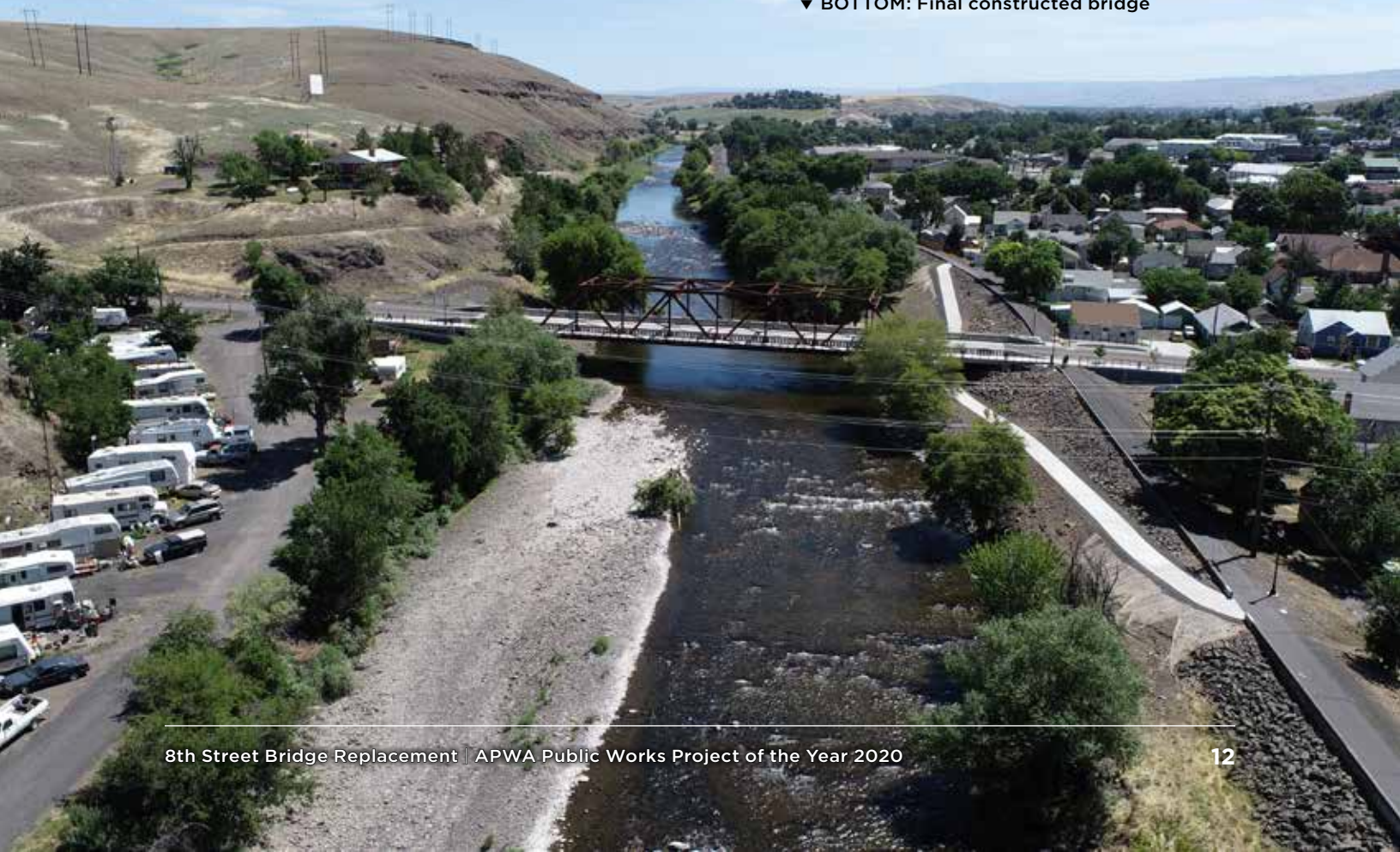
1. Providing a pedestrian footbridge during construction and;
2. Providing an alternate detour route for traffic on the north side of the river that was across private property and about an eighth of the distance for the legal alternative route using right-of-way (ROW).

The City funded 100% of the costs to initiate the shorter bypass route, along with construction of a new water main, to serve the affected northside neighborhood. This work was completed prior to the contractor starting construction to eliminate the need for a temporary water main service across the construction pedestrian bridge. The new water line also provided a loop for the north side customers once the new bridge and 12-inch water main were constructed.



▲ TOP: 3D rendering developed during design

▼ BOTTOM: Final constructed bridge





▲ The temporary work bridge included a pedestrian walkway to maintain residents' ability to cross the river during construction.

Public meetings were held at the Knights of Pythias lodge, an adjoining affected property owner. The City and KoP provided a steak feed for each of the public meetings at a cost to the City of about \$400 each meeting. This greatly enhanced attendance and helped the neighborhood get to know the project and design considerations, the project team, and each other.

During the open houses, key members of the design team presented design information specifically related to property impacts, design features, aesthetics, and environmental considerations.

Another key element of the design team's public information program was a series of simulated renderings that helped community members visualize the final structure and approach roadway, and how it would fit into the surrounding area. This included an aerial photo combined with a detailed and photorealistic 3D model to illustrate the overall project (see rendering on previous page), as well as various ground-level renderings that provided closer looks at specific design elements such as driveways and sidewalks. These renderings were updated as the design progressed so that community members always had up-to-date information on various design elements.

CONSTRUCTION PHASE

This pattern of robust public outreach continued during the construction phase. As the bridge took shape and construction began to impact residents, the City shifted its outreach accordingly.

The City continued hosting steak feeds to update the public about the project, and the City provided special construction notifications through AlertSense, an emergency notification system that City of Pendleton Public Works has used for utility notifications. The City created a special group notification for interested parties specific to the project. Alerts also were sent to the affected neighborhood whenever a construction activity would impact the neighborhood.

The project also included structural elements to lessen the burden on impacted residents during bridge closures, which would last for about a year and would adversely affect residents on the north side of the bridge. Because the 8th Street Bridge was their primary route into town, the design team required that the contractor include a pedestrian walkway on the work bridge so that residents could still safely cross the river on foot or bicycle during construction, thereby reducing neighbors' reliance on a detour route.

Additional efforts by the City included assistance to neighbors on the south side of the bridge who were most impacted by the project. While the project implemented sidewalk and driveway improvements as well as limited planting and yard restoration, the City chose to go above and beyond after construction was complete and provided additional landscaping assistance in order to foster additional goodwill from these neighbors.

▼ Survey work during construction



Tribal Engagement

Part of the community outreach during the construction phase was coordinating with the Tribal Employment Rights Office (TERO) to give qualified local tribal members the first right to work on the project. The TERO hiring goal on this project was 25%, and at least four Confederated Tribes of the Umatilla Indian Reservation members worked on the project.

IN-HOUSE COORDINATION

All of these public information efforts were accomplished without the use of a public involvement subconsultant on the project; the design team worked direction with the City of Pendleton, who took a very active role in planning for and coordinating all public relations activities. This saved the City money over the course of the project and contributed to a public information program that was organic, intimate, and successful.

In particular, neighbors on the south side of the project had significant concerns about the impacts of the final structure, but by the end of the design phase, most of these concerns were alleviated.

Unusual Accomplishments Under Adverse Conditions

The biggest challenge in delivering this project was dealing with the often unpredictable weather, especially when it impacted the scheduling of essential construction activities.

▼ Construction activities had to contend with winter weather, including snow, ice, and record rainfall.



Additional Considerations

While most modern bridge projects favor straightforward concrete designs for structures of this size, the 8th Street Bridge Replacement project stands out because of its use of a weathering steel truss.

This decision was driven by a few factors, including the historic nature of the existing bridge. It was important to the community that the replacement bridge honor the historical nature of the old bridge, so it made sense to use a similar structure type for the new bridge.

Coincidentally, this structure type also allowed for a shallower structure depth than a typical concrete box beam structure. This approach provided two benefits:

1. This reduced the impacts to neighbors on the south side of 8th Street because it allowed the new road profile to remain closer to the existing ground, thus requiring fewer modifications to driveways and sidewalks to the south of the bridge. Other bridge types would have placed the structure at a higher elevation and would have required significantly more engineering to fit the structure and approach roadways within the constrained site.
2. The shallower depth also provided better alignment with the top of the existing levee on the south side of the bridge, which greatly reduced issues related to pedestrians and maintenance in the future, which in turn reduced the overall project cost.

▼ Preparing to pour the new concrete deck

