ACEC

American Council of Engineering Companies
of Oregon

2020 Engineering Excellence Awards

Best in Category: Transportation

I-205: JOHNSON CREEK - GLEN JACKSON BRIDGE PHASE 2

Submitting Firm: David Evans and Associates Inc.

Location: Portland, Oregon

Client/Owner: Oregon Dept. of Transportation

Other Consultants/Key Participants: 3D Infusion (structure drafting), Casso Consulting (erosion control), DKS Associates (traffic engineering), Emerio Design (roadway design), GRI (geotechnical engineering), JLA Public Involvement (public involvement), Kerr Contractors Oregon (contractor), Northwest Geotechnical Consultants (hazardous materials), Schneider Consulting (scheduling/constructability), Tammy J. Taggart CAD Services (roadway drafting)

Trigger Project

Successful completion of I-205 work will 'Keep Oregon Moving'

Deliver a highly complex project on time or lose billions in future highway funds. No pressure, right? No problem for David Evans and Associates and its project team.

The Oregon Department of Transportation contracted with DEA as the prime consultant for the I-205: Johnson Creek-Glenn Jackson Bridge Phase 2 project. Part of the Keep Oregon Moving House Bill 2017, the Oregon Legislature designated this project be built by Dec. 1, 2019. Known as the "trigger project," completion was required to trigger the 2020 gas tax increase, part of generating $5.3 billion in transportation funding over 10 years. To ensure that happened, ODOT set a date for substantial completion of Oct. 31, 2019.

The $30 million safety operations and preservation project involved building two northbound auxiliary lanes between Powell/Division and I-84, rebuilding the Washington Street exit to a two-lane exit, four miles of pavement preservation, and construction of 20 overhead sign structures. DEA led a project design team that completed 100 percent bid documents in 10 months. During the accelerated design phase, DEA and its team aligned the project scope and budget, developed preliminary and final design, stepped through five major milestone review submittals, secured permits, supported the environmental approval process, resolved utility connection and conflict issues, produced a 400-sheet plan set, and provided all deliverables to go to bid. The team met all deadlines, including bidding the project on the exact date specified more than a year before.

Full teams met weekly and ODOT was a partner throughout the project, prioritizing and expediting decisions, reviews and approvals during each submittal. The team – which included 3D Infusion, Casso Consulting, DKS Associates, Emerio Design, Geotechnical Resources Inc., JLA Public Involvement, Kerr Contractors, Northwest Geotechnical Consultants, Schneider Consulting and Tammy J. Taggart CAD Services – implemented several innovative methods to address major risks that could delay the critical path during construction. Those innovations included

advance procurement of Active Transportation Management System signs and sign structures, advance utility service connections, multiple interim completion dates, and a weekend closure of I-205 northbound. To the team's knowledge, none of the methods had been used on prior ODOT projects on a project of this scale and importance, and certainly not at the same time.

To lighten the mood during a busy and stressful construction time, and in recognition of the era when I-205 was built, the team named each overhead site sign after an '80s rock band. Those included: Site L – Led Zeppelin, Site N – Nirvana, Site H – Huey Lewis, Site S – Styx, Site T – Talking Heads, Site P – Pink Floyd, Site R – REM, Site V – Van Halen, Site A – AC/DC, Site E – Eagles, Site O – Ozzy and Site Q – Queen.

"The partnership between ODOT, DEA, and their sub-consultants was a major contributor to the success of the project," wrote Tova Peltz, ODOT Region 1 project delivery manager, in support of the project for an ACEC Oregon Engineering Excellence Award. "On behalf of the transportation industry and all motorists in Oregon, we are sincerely thankful for their notable contributions."

Grand Award

BETHLEHEM INN REDEVELOPMENT

Submitting Firm: RH2 Engineering Inc.

Location: Bend, Oregon

Client/Owner: Bethlehem Inn

Other Consultants/Key Participants: Ascent Architecture (architectural design, permitting), H.A. McCoy Engineering & Surveying (survey, dry well inspection, testing), Shamrock NW Construction (sitework, utilities), SunWest Builders (building construction), Wallace Group (geotechnical engineering)

Commitment to community comes in many forms. For RH2 Engineering, that commitment involved donating all planning, design, and construction engineering services to redevelop non-profit homeless shelter Bethlehem Inn.

Originally a 1960s motel, Bethlehem Inn offers temporary housing, meals, case management, access to transportation and work experience for its residents. Operators found they needed more space and needed a complete overhaul of the facilities. The mission and vision, Transforming Lives with Shelter and Hope, was to increase its reach two-fold, provide expanded services and be an ADA-compliant facility.

RH2, with its project team – Ascent Architecture, H.A. McCoy Engineering & Surveying, Shamrock NW Construction, SunWest Builders and Wallace Group – phased the project so the Inn remained fully operational during construction. First phase improvements included clearing and grading, demolition of existing buildings, temporary erosion and sedimentation control, and temporary water and sewer connections. Additional phases involved constructing new buildings, installing new stormwater facilities, final grading, and permanent water and sewer pipelines and connections. The size of the site posed challenges. Utility coordination between the phases left little room for new utility extensions and required that the parking lot stormwater system and the majority of the paving was the last project element constructed.

With the redeveloped facility, Bethlehem Inn now is able to serve twice as many individuals and families, and offers full food service with a new commercial kitchen.

KEMMER ROAD INTERSECTION

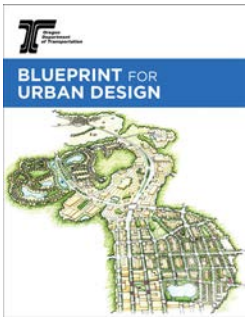
Submitting Firm: Parametrix

Location: Washington County, Oregon

Client/Owner: Washington County

Other Consultants/Key Participants: Dave Mills Consulting Inc. (land survey), DKS Associates (traffic analysis, illumination, signage and striping design), GeoDesign Inc. (geotechnical engineer), Kerr Contractors (general contractor)

Noteworthy: The new roundabout improves mobility and safety in a rapidly growing area. Increased traffic associated with a new high school and several residential developments now travels smoothly through the intersection, reducing pollution associated with idling cars that had waited in long lines at a stop-controlled intersection. New pedestrian and bike facilities will connect to regional trails.



ODOT BLUEPRINT FOR URBAN DESIGN

Submitting Firm: Kittelson & Associates Inc.

Location: Portland, Oregon

Client/Owner: Oregon Department of Transportation

Other Consultants/Key Participants: Jacobs

Noteworthy: The blueprint provides statewide urban design guidance based on a performance-based design framework. It emphasizes the need to identify appropriate design dimensions and multimodal treatments based on the urban land use contexts and functional classifications.

SW 124TH AVENUE IMPROVEMENTS

Submitting Firm: David Evans and Associates Inc.

Location: Washington County, Oregon

Client/Owner: Washington County

Other Consultants/Key Participants: Casso Inc., city of Hillsboro, DKS Associates, Flux, GeoDesign Inc., HDR Inc., Kerr Contractors, Stantec, Tualatin Valley Water District

Noteworthy: Local agencies came together with a common vision and shared funding strategy to increase employment opportunities, improve transportation safety, establish water supply resiliency, and reduce congestion along the corridor. The new corridor is helping keep the economy growing, people moving, and water flowing.

US 101 @ OR 6 (TILLAMOOK)

Submitting Firm: Quincy Engineering

Location: Tillamook, Oregon

Client/Owner: Oregon Department of Transportation, City of Tillamook

Other Consultants/Key Participants: DKS Associates (traffic signals/lighting design), Mason, Bruce & Girard Inc. (environmental permitting), HDR Inc. (right-of-way), Otak (landscape architect, hydraulics/stormwater design, structure design), Shannon & Wilson (geotechnical)

Noteworthy: This project revitalized the city of Tillamook and brought an economic boost to the community. With a focus on urban renewal, the city was able to not only free up traffic along a busy bridge entering downtown, but also improve access to historic buildings and business. The addition of a festival street will allow years of future events to take place.