

News Alert Press Contact: Christine Byrne +1 203 805 0432 <u>Christine.Byrne@bentley.com</u> Follow us on Twitter: @BentleySystems

Infrastructure Projects in the United States Named as Finalists in Bentley Systems' 2022 *Going Digital Awards in Infrastructure*

Winners to Be Selected and Announced on Nov. 15 as Part of Bentley's Year in Infrastructure and Going Digital Awards

EXTON, Pa. – Oct. 17, 2022 – Bentley Systems, Incorporated, the *infrastructure engineering software* company, has announced several projects from the United States as finalists in Bentley's 2022 *Going Digital Awards in Infrastructure*. The annual awards program honors the extraordinary work of Bentley software users advancing infrastructure design, construction, and operations throughout the world. Eleven independent jury panels selected 36 finalists from over 300 nominations submitted by more than 180 organizations from 47 countries encompassing 12 categories.

The *Going Digital Awards in Infrastructure* finalist project presentations will be available for viewing using <u>this link</u> on **Nov. 7**. Visit the site to hear from the people behind these extraordinary infrastructure projects as they tell their stories of leveraging digital advancements to achieve unprecedented outcomes.

The U.S. projects named as finalists for the 2022 Going Digital Awards are:

Bridges and Tunnels IH35 Nex Central Section Ferrovial Construction and Alamo Nex Construction, San Antonio, Texas

Ferrovial chose ProjectWise and the Bentley iTwin platform to improve information exchange and develop a digital twin of the I-35 Northeast Expansion corridor. Using Bentley's applications and the model, they performed clash detection to eliminate 3,530 collisions, identified and resolved visibility issues, and provided the construction team with precise material information, saving significant time and costs.



<u>High Res Image of IH35 Nex Central Section</u> *Image courtesy of Ferrovial Construction and Alamo* Nex Construction

Construction

RMR 20 Massachusetts Ave., NW Repositioning DPR Construction, Washington, D.C.

DPR Construction selected SYNCHRO 4D and SYNCHRO Control to link the construction schedule for a building renovation and expansion to 3D models, enabling the team to visualize and communicate the plan in a digitally immersive environment. Bentley's technology solution ensured the prefabricated works could be delivered and installed without any obstacles, while aligning to the overall construction schedule. Working in a collaborative, visual 4D environment reduced the construction schedule by two months. By reappropriating the existing 20 Massachusetts Ave. structure, they were able to eliminate 6,905 metric tons of CO2 emissions.



High Res Image of RMR 20 Massachusetts Ave., NW Repositioning Image courtesy of DPR Construction

Enterprise Engineering

Digital As-built Proof of Concept WSB, Elk River, Minn.

To support highway lifecycle management and maintenance, WSB wanted to share complex 3D model information between design, construction, and asset management teams. Leveraging OpenRoads and iTwin, they imported data from the Minnesota Department of Transportation and other asset management systems into the design models and integrated them with the construction process data. Bentley applications reduced costs and resource hours while delivering the as-built model. The proof of concept demonstrates the value of a digital twin, providing real-time insight on the performance of 12 MnDOT asset classes for easier lifecycle maintenance and saving millions on project scoping assignments by identifying asset needs.



High Res Image of Digital As-built Proof of Concept Image courtesy of WSB

Process and Power Generation

Deepwater Project Delivery Digital Platform Shell Projects and Technology, Gulf of Mexico, Texas

Leveraging PlantSight and AssetWise ALIM among other applications, Shell developed a digital platform that provides a single source of truth from project conception through delivery of a digital twin for operations and beyond. Working in an integrated digital environment optimizes data access, visualization, and remote collaboration, improving efficiencies, reducing time for project teams to find information by 50%, and eliminating work duplication. By digitizing workflow orchestration and supporting end-to-end project delivery, Shell expects to see significant productivity gains and cost savings. The PlantSight digital twin solution can be scaled as projects expand or new ones arise.



High Res Image of Deepwater Project Delivery Digital Platform Image courtesy of Shell Projects and Technology

Roads and Highways

City of Perry Innovates with Foth Creating a Digitally Mapped City Using Digital Twins Foth Infrastructure & Environment, LLC, Perry, Iowa

Leveraging Bentley's open modeling applications, Foth developed an optimal plan to deliver a digital twin to support the city of Perry's capital improvement plan, saving significant time and potential rework. The 500-gigabyte 3D city model contains approximately USD 598 million worth of asset data. The digital twin provides potential investors with a portfolio of data about historical structures, making them more inclined to invest in Perry and helping increase private investor engagement by 50% over the next five years. Having a digital twin enables Perry to gain support and enact its CIP 60% faster, increasing its ability to secure city funding by 75%.



<u>High Res Image of City of Perry Digital Map</u> Image courtesy of Foth Infrastructure & Environment, LLC

Surveying and Monitoring

Murray Dam Condition Assessment HDR, San Diego County, Calif.

HDR selected ContextCapture to process drone-captured images and terrestrial LiDAR point clouds into a 3D reality model with an accuracy of 3 millimeters. Importing the model into MicroStation and integrating artificial intelligence, they generated a digital twin to perform inspections and predict future problems. Bentley's applications reduced the need for dangerous on-site inspections and saved approximately 75% of costs compared to traditional inspection processes. The digital twin will continue to enhance quality, safety, and sustainability of inspection work at the dam.



High Res Image of Murray Dam Image courtesy of HDR

To view the full list of awards finalists, visit https://yii.bentley.com/award-finalists.

Winners will be announced on Nov. 15, 2022.

If you would like to request a media interview with a *Going Digital Awards* finalist or Bentley colleague, click <u>here</u>. If you have any other media-related questions please contact your Bentley PR contact or Christine Byrne at <u>Christine.Byrne@bentley.com</u> (U.S., U.K.), or Michaela Romero at <u>Michaela.Romero@bentley.com</u> (EMEA, Asia, LA).

The 2022 *Year in Infrastructure and Going Digital Awards* Virtual Press Kit offers access to event registration, *Going Digital Awards* finalists' sessions, access to press announcements, images, awards winners and finalists' information, media interview request form, and more. Check out the Virtual Press Kit at <u>http://yii.bentley.com/press.</u>

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About Bentley Systems

Bentley Systems (Nasdaq: BSY) is the *infrastructure engineering software* company. We provide innovative software to advance the world's infrastructure – sustaining both the global economy and environment. Our industry-leading software solutions are used by professionals, and organizations of every size, for the design, construction, and operations of roads and bridges, rail and transit, water and wastewater, public works and utilities, buildings and campuses, mining, and industrial facilities. Our offerings include *MicroStation*-based applications for modeling and simulation, *ProjectWise* for project delivery, *AssetWise* for asset and network performance, Seequent's leading geoprofessional

software portfolio, and the *iTwin* platform for infrastructure digital twins. Bentley Systems employs more than 4,500 colleagues and generates annual revenues of approximately \$1 billion in 186 countries.

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