

ACEC

AMERICAN COUNCIL OF ENGINEERING
COMPANIES OF TEXAS

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ENGINEERING TEXAS

2025

ENGINEERING EXCELLENCE
★ AWARDS

ACEC TEXAS

2025 ENGINEERING EXCELLENCE AWARDS

The American Council of Engineering Companies of Texas would like to thank the many extraordinary member firms who entered their projects in this year's competition.

We encourage you to be attentive in your daily life to all the things engineers do to bring you enhanced mobility, clean water, protection from floods, enhanced health care, and all the other qualities of modern life.

our sincere
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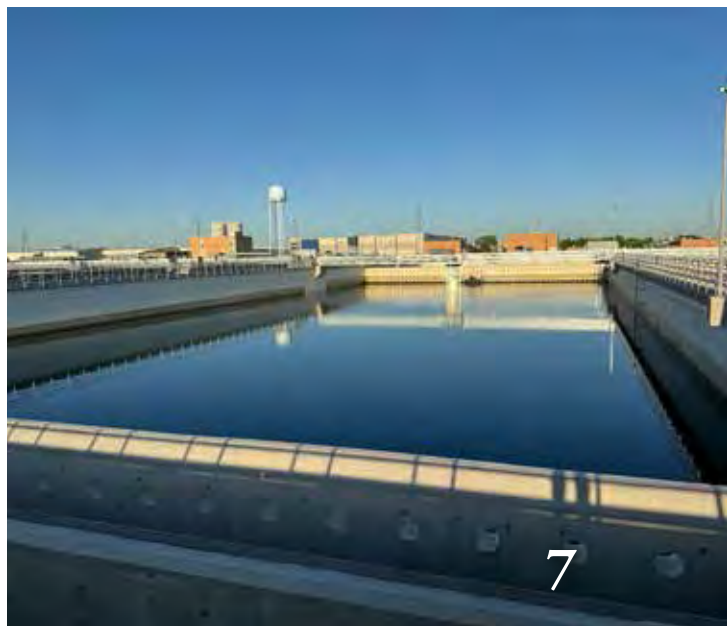
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Photo courtesy of Freese and Nichols.

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FROM THE PUBLISHERS

HONORING INNOVATION

Celebrating the 2025 ACEC Texas Engineering Excellence Award Winners

Every year, the American Council of Engineering Companies of Texas (ACEC Texas) spotlights the most groundbreaking, impactful, and resilient engineering projects across the Lone Star State. The Engineering Excellence Awards (EEA) are more than a recognition—they are a testament to the ingenuity, collaboration, and dedication of the firms and professionals who transform vision into reality.

From life-saving infrastructure to environmentally sustainable designs, the 2025 winners represent the very best of Texas engineering. These projects tackle complex challenges with innovation and integrity, showcasing how engineering continues to elevate communities, strengthen economies, and shape the future of our state.

In the following pages, we are proud to present the award-winning teams and the remarkable projects that earned them this prestigious honor. Whether reimagining transportation, protecting vital resources, or designing with resilience in mind, these engineers exemplify excellence—and inspire the next generation of leaders in the field.

Congratulations to all the winners. Your work doesn't just build—it endures.



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EMINENT CONCEPTOR AWARD

Elevating Houston's Performing Arts Scene

TEXAS ★ GOLD | Special Projects

City of Houston/HoustonFirst, Lynn Wyatt Square (Jones Plaza)

Gradient Group

The Lynn Wyatt Square, a project for the City of Houston in collaboration with Houston First, took top honors in the ACEC Texas Engineering Excellence Awards. The \$25 million redevelopment of the former Jones Plaza truly and literally elevated the Houston performing arts scene.

The existing site was a largely inaccessible and visually opaque plaza with concrete walls that separated pedestrians from the activities within the plaza. Recently renovated Jones Hall, home of Houston Symphony, adjacent to the plaza visually invited upgrades to the 1960's concrete square.

A collaborative and strategic discovery process revealed an exciting opportunity. Lynn Wyatt Square was primed to become a connection point bringing together the district's varied cultural and arts offerings while engaging visitors in a new way.





1: The inviting entrance warmly illuminated at dusk, exudes a cozy and welcoming ambiance. **2:** A captivating bird's-eye view of Lynn Wyatt Square, showcasing its modern design, lush greenery, open spaces, and vibrant community features. **3:** The Lynn Wyatt Square building stands as a modern centerpiece, seamlessly blending architecture with the surrounding urban park. **4:** A picturesque viewpoint nestled within a vibrant, lush landscape. **5:** Community seating arranged thoughtfully in front of the Houston Symphony offers a perfect spot for relaxation and enjoying performances. Photos courtesy of Gradient Group.

Gradient Group transformed Lynn Wyatt Square, a 1.5-acre site in Houston's Theater District, into a resilient and vibrant outdoor space. Improved visibility, ADA accessibility, and climate and resiliency strategies ensure the longevity of the site.

The site design strives to create a space that is all-encompassing of Downtown Houston's future and is inclusive to everyone. Accessible from all sides, the plaza cultivates the surrounding performance arts.

The project addressed flood damage from Hurricane Harvey in 2017 by elevating the site above the 500-year flood level and incorporating geofoam for lightweight drainage solutions atop an underground parking garage. The elevation plan raises the elevation of the site and first floor of the building above the new flood line.

Lynn Wyatt Square's redesign features a green roof with native plants, shaded by mature live oaks, and a water feature to combat extreme heat. Gradient coordinated city infrastructure improvements, permitting, and ADA-compliant pathways, ensuring accessibility.

This colorful, inspired redevelopment revitalized downtown Houston, promoting urban resilience and community engagement.

ACEC
TEXAS



Photo courtesy of Walter P Moore &
Martinez Moore Engineers. ©Aker Imaging

2025

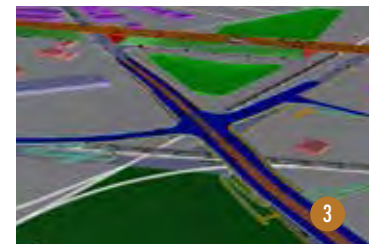
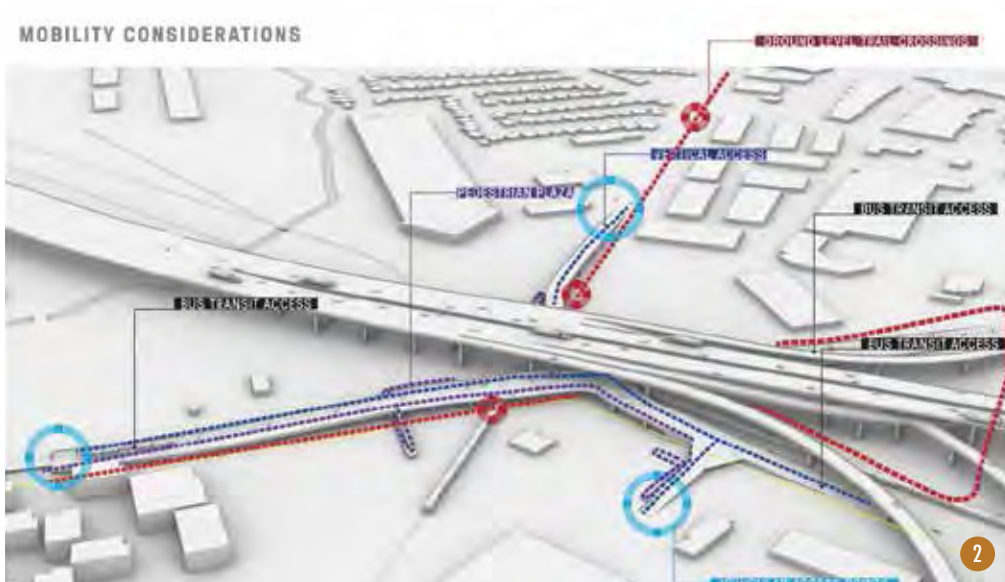
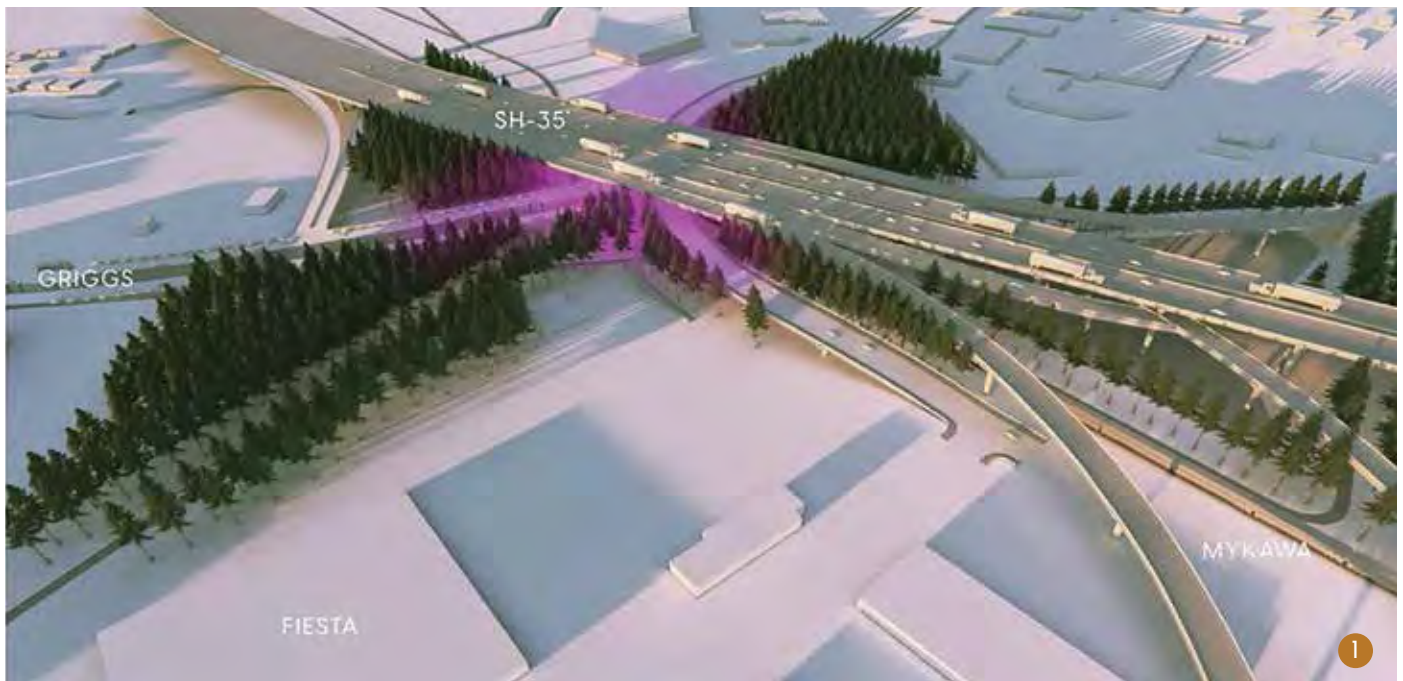
ENGINEERING EXCELLENCE AWARDS ★ GOLD

Greater Southeast Management District, Griggs Road Mykawa Road Rail Safety Improvements S

Bridgefarmer & Associates

An at-grade rail intersection was one of FRA's top 15 most dangerous rail crossings due to a high crash incidence. Trains regularly blocked the intersection for up to 30 minutes accessing a rail yard just to the north. Pedestrians also dangerously crossed through trains stopped in the intersection. Complexity is added to the intersection due to the Texas Department of

Transportation's (TxDOT) plans for State Highway 35 which will cross over-top the intersection. Furthermore, Houston METRO has plans to carry light rail (the Purple Line) southeast across the intersection using Long Drive. The solution was to grade separate the intersection.



1, 2: In the concept considerations/analysis phase, initial constraints included: the SH 35 freeway that will be built over the top of the intersection; the future METRO Purple Line corridor extension; the historic Sears building (NHRP); a heavy utility corridor; rail crossings, a rail yard and track features; and a grocery store preventing the area from being a food desert. **3:** Final project rendering (not showing SH 35).

Harris County, Precinct 3, Old Town Spring

Gradient Group

Old Town Spring, a historic community with over 100 businesses, faced challenges in traffic flow, pedestrian safety, and accessibility while preserving its charm. From November 2022 to June 2023, Gradient Group conducted a Traffic and Pedestrian Study initiated by Harris County Precinct 3 Commissioner Tom Ramsey. The study analyzed traffic, parking, and ADA

compliance, using data from events and surveys with business owners. Two improvement alternatives were proposed: one-way streets with enhanced parking, ADA-compliant sidewalks, bulb-outs, and crossings, or maintaining two-way streets with parking on one side. Both plans prioritize safety, accessibility, and preserving the area's historical essence.



1: Recommended adjustments enhance walkability and safety in Old Town Spring with crosswalks, better lighting, and wider sidewalks. 2: Detailed signage and specifications to roadways and crosswalks creating more pedestrian-friendly features. 3: The entrance sign to Old Town Spring warmly welcomes visitors to the vintage town, exuding charm and a sense of history. 4: A charming view of Downtown Old Town Spring captures its nostalgic ambiance and rich character through historic buildings, cobblestone streets, and timeless architecture. 5: An enlarged view of an intersection from the study showcases its layout.

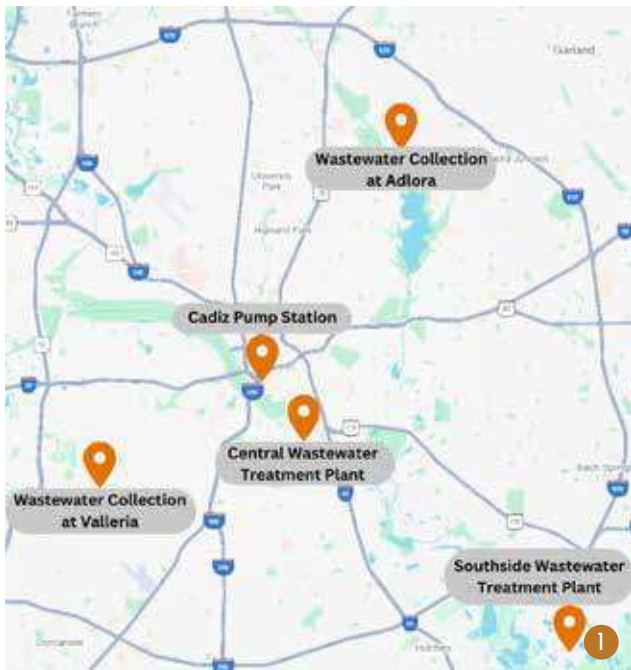


City of Dallas Water Utilities, DWU Wastewater Facilities Safety and Security Improvements

Mbroh Engineering

The Dallas Water Utilities (DWU) Wastewater Facilities Safety and Security Improvements Project included physical security improvements at five DWU wastewater locations for a total of 336 security assets. Serving as prime consultant and design engineer, Mbroh Engineering provided improvements to security cameras, card readers, access controllers, servers, workstations,

and networking. Additionally, a security risk assessment addressed security improvements in the areas of perimeter fence protection, railroad track conditions for delivery of chlorine, and physical site security. This project successfully coordinated design requirements to meet City of Dallas and National Institute of Standards and Technology (NIST) security standards.



1: The extent and reach of wastewater sites and operations included in this project are the foundation for future security improvements across DWU's organization. For five total project sites encompassing 336 total security assets, the Mbroh team addressed critical infrastructure and improvements to security cameras, card readers, access controllers, servers, workstations, networking, perimeter fence protection, railroad track conditions for delivery of chlorine, and physical site security. **2:** DWU's Central WWTP, one of the five sites included in this project, covered improvements at 46 buildings across 495 acres. **3:** Implementation of Open Network Video Interface Forum (ONVIF) Communication Protocol with access to the latest technology and additional security features such as left object and AI. Security design improvements complied with DWU's existing standards and the National Institute of Standards and Technology (NIST) and advanced DWU's camera technology. **4:** At Central WWTP, nearly 70% of the site's 3-mile-long fence required replacement to maintain security along with design improvements to a BNSF rail line to facilitate safe delivery of chemicals. **5:** Design improvements encompassed developing video and access control workstation interfaces with both site maps and building plan views, allowing for intuitive navigation, links to live and historical camera video, and local and future city-wide alarm notifications.

Texas Medical Center, TMC³ Collaborative Building

Walter P Moore & Martinez Moore Engineers

The TMC³ Collaborative Building, opened in October 2023 in Houston's Texas Medical Center, is a cornerstone of Helix Park, a \$5.4 billion research initiative by MD Anderson Cancer Center, Texas A&M University Health Science Center, UT Health Science Center at Houston, and TMC. This 250,000-sf facility features a 43,000-sf open environment joint lab with cutting-

edge digital platforms for collaborative research. Its 7,000-sf central atrium fosters connection and hosts events, lectures, and programming. Designed during the pandemic by Walter P Moore, the building was delivered ahead of schedule and within budget. Helix Park aims to transform medical research and patient care while significantly boosting the regional economy.



1: The stepped façade, enabled by a system of transfer girders, provides a beautiful and welcoming entrance for both staff and visitors. ©Aker Imaging **2:** The engineer used deep wide flange girders with punctured webs to frame the overhead skylight, economically creating visual interest and infusing sunlight into the atrium. **3:** The TMC³ Collaborative Building is the keystone component of Helix Park, a synergistic research initiative that will help revolutionize medical research. The structure creates an interactive main atrium space. ©Aker Imaging **4:** The dual structural system of reinforced concrete and composite structural steel provided economy, construction speed, and needed performance for research activities. **5:** Dynamic spaces enhance collaborative learning. ©Elkus Manfredi Architects **6:** The joint space provides a co-working lab and office, facilitating idea exchange among research and development teams of the four institutions. ©Elkus Manfredi Architects

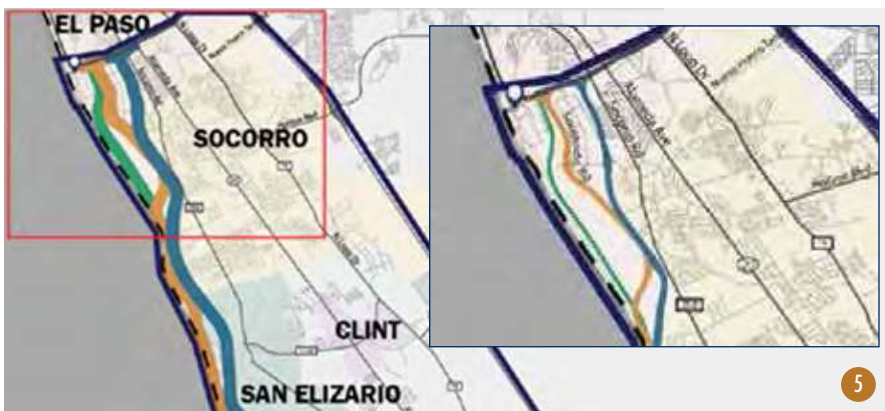
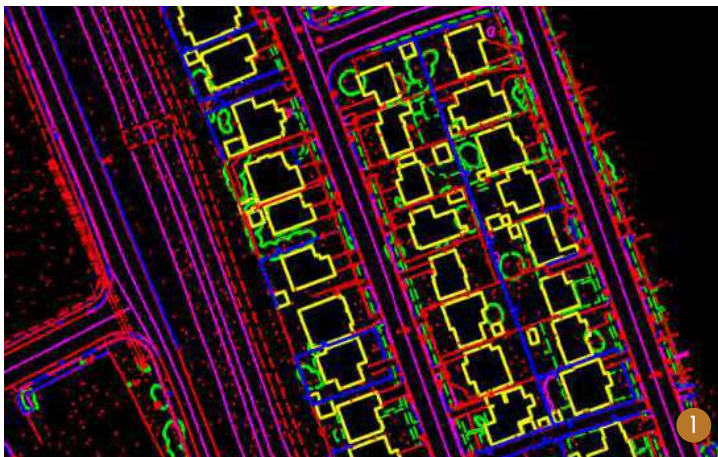


TxDOT – El Paso District, TxDOT Border Highway East Study: El Paso District

SAM

SAM partnered with TxDOT to support the Border Highway East Study, a critical transportation initiative in El Paso, TX. Using advanced aerial LiDAR technology, SAM efficiently mapped 125 square miles, delivering precise topographic data to aid in developing preliminary roadway alternatives. Our innovative approach integrated multiple sensors, enhancing data accuracy

and project efficiency. By providing comprehensive geospatial insights, SAM empowered engineers to make informed decisions that improve regional mobility and economic growth. This project exemplifies our commitment to delivering high-quality, data-driven solutions that shape the future of transportation infrastructure.



1: Topographic mapping of 3D/2D planimetric and 3D DTM (Digital Terrain Model) with an updated triangular irregular network (TIN) of the proposed corridor sections, as well as high-resolution ortho imagery supports the study. **2:** SAM acquired aerial LiDAR data for the Study Area using fixed-wing aircraft equipped with multiple sensor payloads. **3:** As our remote sensing technologies collect more precise elevation data and detailed visual imagery, SAM's data extraction capabilities have also grown to provide valuable information for engineers. In addition, accurate ground control was established to support aerial LiDAR data calibration and QA/QC process. **4:** SAM's LiDAR systems are GPS/GNSS capable and include tightly coupled GNSS-IMU technology. **5:** TxDOT Border Highway East Study: El Paso District is shown in detail.

City of Weatherford, Northwest Downtown Street Rehabilitation

Kimley-Horn

The Northwest Downtown Street Rehabilitation project in Weatherford, Texas, revitalized Dallas Avenue, York Avenue, and Spring Street, addressing deteriorated roadways, water, sewer, and sidewalks. The Kimley-Horn team emphasized sustainability and community by incorporating thoughtful placemaking design choices like native landscaping, ADA accessible paths, water and electric service pedestals, proper

drainage, accessible sidewalks, additional parking, and safety features like decorative streetlights and bollards. Completed under budget and ahead of schedule, the project supported local businesses during construction and prepared the area for the community's annual Peach Festival. This successful project significantly enhanced community gatherings while maintaining the historical downtown area.



- 1: The Weatherford community celebrates the success in appreciation of the project after months of involvement.
- 2: A public art mural was added along the corridor—an element which involved the community in the project.
- 3: The project presented a challenging design to accommodate historical-building finished floor elevations.
- 4: Sustainable placemaking design included native plants and large potted plants.
- 5: The Kimley-Horn team implemented a specialized pedestrian and access management plan.
- 6: Unique construction methods were specified in the design to accomplish the goals of the project.

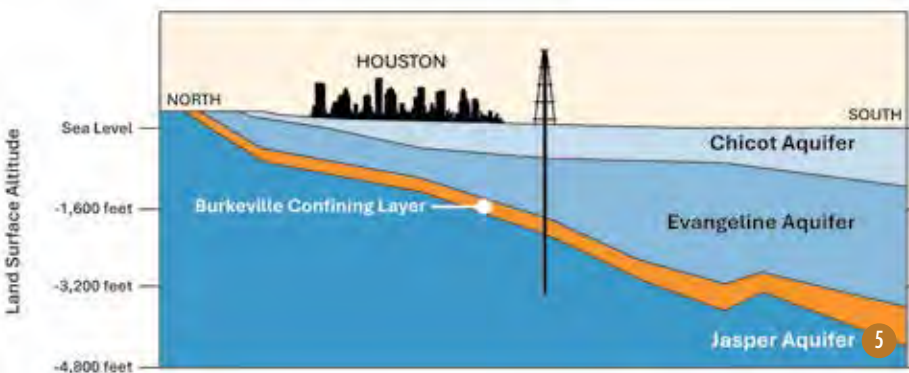


Cinco Municipal Utility District 1, Comprehensive Water Management Solution

BGE

As water scarcity intensifies, communities must adopt sustainable solutions. Cinco Municipal Utility District No. 1 (Cinco MUD 1) in Katy, Texas, faced critical water challenges due to over-reliance on groundwater, leading to land subsidence, flooding risks, and regulatory mandates to reduce usage by 60% by 2025. Partnering with BGE, Inc., Cinco MUD 1 implemented a forward-thinking water management strategy, integrating

conservation, reclaimed water, and a brackish groundwater desalination facility. This initiative saves billions of gallons of water, reduces costs, ensures regulatory compliance, and secures a reliable water supply for 32,000 residents—serving as a scalable model for sustainable water management.



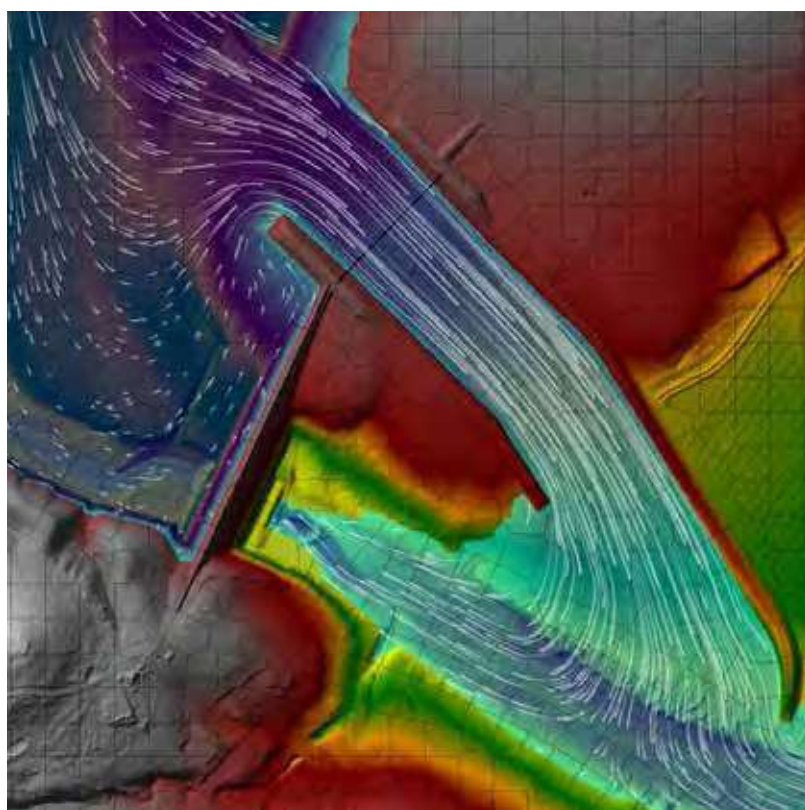
- 1: Cinco MUD 1 provides water, wastewater and storm drainage facilities to the approximate 246 acres of land within its boundaries.
- 2: Reverse osmosis membranes reside inside of Cinco MUD 1's brackish desalination facility.
- 3: Cinco MUD 1's completed brackish well in operation.
- 4: The Cinco central wastewater treatment plant and reclaimed water facilities are viewed from an aerial perspective.
- 5: The representation shows the required drilling depth and correlating geological formations to access Houston's brackish water source. Drill not to scale.

Texas Water Development Board, Statewide Base Level Engineering

Halff Associates

The Statewide Base Level Engineering project represents a groundbreaking initiative by the Texas Water Development Board (TWDB), collaborating with Halff, AECOM, AtkinsRéalis, Freese and Nichols, and Stantec. BLE addresses flood risk maps using LiDAR elevation data, replacing outdated data. It provides flood risk assessments, enabling communities and authorities to make more informed decisions. Coordination with the TWDB,

FEMA and the U.S. Geological Survey, and a robust QA/QC process delivered high-quality mapping data, showcasing each vendor's commitment to excellence. BLE streamlines flood risk management, cutting time and costs while providing critical data to strengthen resilience, development and emergency response across Texas.



- 1: Flooding has a devastating impact on structures, such as these inundated homes in the Central Texas region.
- 2: HEC-RAS 2D training courses teach people (including public officials and regulating authorities) how to observe, modify and review BLE models.
- 3: In addition to floodplain extents, 2D BLE produced depth grids which offer a better understanding of flood risk. People generally find it easier to comprehend the depth of water relative to the ground, compared to the method of showing floodplains as elevations above sea level or shaded areas on a map.

City of Round Rock, RM 620 Railroad Overpass and Roundabout

Halff Associates

The RM 620 Railroad Overpass and Roundabout project in Round Rock addressed decades of traffic congestion caused by an at-grade railroad crossing near the Chisholm Trail Road intersection. Using community feedback, multiagency collaboration and creativity, the final design is a unique solution consisting of an at-grade roundabout, bisected by railroad tracks,

with a bridge overpass handling 90% of the traffic. Through careful planning and collaboration, the project protected water quality and endangered species in the environmentally sensitive Edwards Aquifer, minimized displacements of nearby homes and businesses, significantly improved mobility, reduced travel delays, and enhanced safety for both drivers and pedestrians.



1: The completed RM 620 railroad overpass and roundabout in Round Rock relieves congestion and increases safety. **2:** Computer-generated rendering of the proposed overpass at Chisholm Trail Road. A full video was produced to educate the public on how to travel safely through the new and innovative intersection. **3:** A view of the North Lake Creek Drive bridge overpass shows how the “right-sized” project preserves existing businesses thereby gaining public, political, and financial support. **4:** The finished project improved accessibility by meeting current-day ADA requirements and increased pedestrian safety. **5:** The ribbon-cutting celebration included music by Round Rock High School band members and featured public officials from the City of Round Rock, Williams County and TxDOT.

Houston Public Works, Northeast Transmission Line

Lockwood, Andrews & Newnam

The Northeast Transmission Line (NETL) is Houston's largest water transmission main completed to date, with 16.5 miles of mostly 108-inch diameter pipeline successfully installed and placed in service. The \$350 million project is a major step in achieving the City's increased sustainability goals and ensuring a safe future water supply. By 2025, more than 60% of Houston's

drinking water supply will come from surface water, preventing further subsidence in the region. This groundbreaking project established new design protocols and set a new benchmark for sustainable water infrastructure in Houston.



1: The NETL demonstrates how innovative solutions and collaboration can tackle complex challenges, enhance system resiliency, and support future generations. **2:** The 16-mile water line, ranging from 42- to 120-inches in diameter, is the largest by length and diameter in the Greater Houston area. **3:** The NETL provides potable drinking water to more than 4 million people. **4:** A major challenge was the 1,150-foot tunnel crossing under an elevated portion of US-59, which passed beneath 15 main lanes and eight frontage roads. **5:** The NETL includes 17,000+ LF of tunnels, crossing residential areas, major highways, and environmentally sensitive locations. **6:** The NETL also supports the State Water Plan by supplying essential water resources to a growing population, promoting sustainable development and long-term regional stability.



Texas Parks & Wildlife Department, Brazos Bend State Park Drainage Improvement

Halff Associates

Brazos Bend State Park in Needville, Texas, spans 5,000 acres and attracts over 250,000 visitors annually. Flooding in 2016 and 2017 led the Texas Parks and Wildlife Department to partner with Halff on a Master Drainage Plan. Repairs at 16 locations improved the park's resilience through water control structures, erosion repair and trail relocations. Using innovative, cost-

effective solutions like a 2D hydraulic model and Longitudinal Stone Toe, the project enhanced resilience, restored habitats and reopened closed sections. Collaboration with the US Army Corps and Texas Historical Commission ensured permitting and preservation. The improvements strengthened resilience and performed well in major storms.



1: Brazos Bend State Park (BBSP) contains seven small lakes, many of which are former oxbows of Big Creek: Pilot Lake, 40-Acre Lake, Elm Lake, Old Horseshoe Lake, New Horseshoe Lake, Creekfield Lake and Hale Lake. **2:** The water level control structure at New Horseshoe Lake improves the park's resilience. **3:** The natural grade flowline control structure directs drainage. **4:** Longitudinal Stone Toe at Big Creek is pictured during construction. **5:** New trail realignment benefits park visitors. **6:** An aerial view of Longitudinal Stone Toe at Big Creek shows the project 1.5 years post construction.

TEXAS ★ GOLD

Industrial and Manufacturing Processes

Intuitive Machines, Lunar Production and Operations Center

Burns & McDonnell

Burns & McDonnell partnered with Intuitive Machines, a leading space exploration, infrastructure, and services company, to provide the program room needed for personnel from multiple previous sites to build, command and communicate with lunar vehicles and other technology in space. The first-of-its-kind concept incorporates state-of-the-art features that elevate

operational efficiency and seamlessly integrated workspaces, production laboratories and testing facilities, establishing an environment to foster collaboration and accelerate research and development processes.



1: Located at the Houston Spaceport in Houston, the Intuitive Machines Lunar Production and Operations Center is a new 105,572-square-foot facility now ready to support each of Intuitive Machines' three NASA-awarded missions. **2:** The Intuitive Machines lobby welcomes you and provides a connection to past and future lunar missions. **3:** One of the most popular rooms in the whole building—the Luna Café serves as an amenity for both Intuitive Machines and its partners. **4:** The headquarters includes a multi-functional lounge and entertainment area showcasing a mockup of IM's lunar lander. **5:** A unique structure consisting of a 3,800-square-foot reinforced chamber surrounded by 25-foot-high, 16-inch concrete walls make up the flame range facility located just 200 yards from manufacturing center. **6:** Next to the headquarters, the flame range (propulsion testing facility) allows Intuitive Machines to make adjustments quickly, utilizing all its manufacturing capabilities.





Photo courtesy of BGE

2025

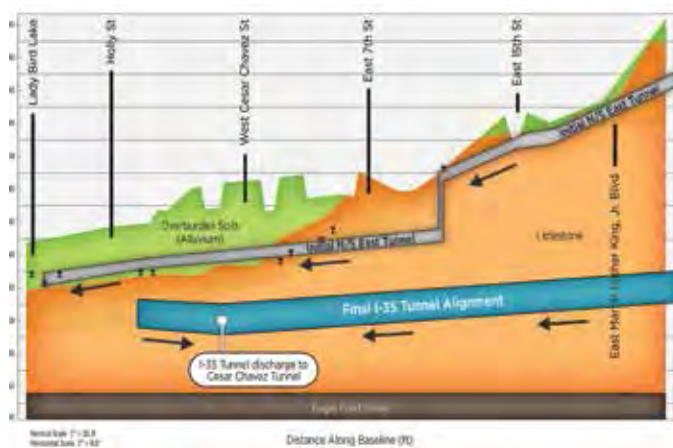
ENGINEERING EXCELLENCE
AWARDS ★ SILVER

TEXAS ★ SILVER

Studies, Research and Consulting Engineering Services TxDOT, Capital Express (CapEx) Central Project

BGE

The Capital Express (CapEx) Central reconstruction of I-35 in Austin, Texas, presented a challenge: managing stormwater efficiently while minimizing surface disruptions and long-term maintenance risks. The original design proposed shallow tunnels and multiple small pump stations, introducing potential constructability and sustainability issues around easing urban congestion and widening the roadway. BGE developed a resilient and cost-effective solution by designing a deep, 6-mile, 22-foot-diameter drainage tunnel within the Austin Chalk formation. This tunnel allowed for gravity flow and minimized reliance on pumps. This innovative approach enhanced flood protection and saved over \$200 million, setting a new standard for resilient infrastructure.



Water and Wastewater

San Antonio Water System (SAWS), W-6 Upper Segment Highway 90 to SW Military Drive

Kimley-Horn

San Antonio has faced increased pressure on wastewater infrastructure due to sustained growth for decades. Under a 2013 Consent Decree, the San Antonio Water System (SAWS) aimed to rehabilitate critical areas. The existing 54-inch gravity sewer was in poor condition, over capacity, and experiencing periodic sanitary sewer overflows. SAWS and the U.S. Environmental Protection Agency (EPA) agreed to constructing a new pipeline, resulting in over six miles of gravity sewer, 104-inch carrier pipe inside a 142-inch tunnel, and 11 construction shafts. This project successfully overcame major risks and was meticulously designed and constructed to last for more than 100 years.



Water Resources

San Antonio River Authority, Nueva Street Gate 5 Replacement

Freese and Nichols

The historic River Walk area in San Antonio faced flood risks after the 2021 failure of Nueva Street Gate 5, a key flow-control structure. With both gates compromised, it was difficult for the San Antonio River Authority (SARA) to manage high river flows, threatening the area's safety and ecosystem. A comprehensive analysis led to the decision to replace the outdated gates. The new design integrates modern technology, improving flow control, safeguarding the River Walk's economic vitality and enhancing environmental protection. Emergency repairs enabled temporary functionality, while the long-term replacement solution boosts flood resilience and supports sustainable river management.



Transportation

City of San Antonio, Harry Wurzbach and Austin Highway

KCI Technologies



In 2016, the City of San Antonio contracted KCI to address congestion at the intersections of Austin Highway and Eisenhower Road along Harry Wurzbach Road. Initial plans for a traditional interchange would have increased delays, prompting KCI to propose a single-point urban interchange (SPUI) design at Austin Highway. This innovative solution streamlines traffic movements by allowing all ramps to converge at a single point and facilitates efficient left turns without conflicts. The project marks San Antonio's first SPUI, greatly improving safety and efficiency for drivers, pedestrians, and cyclists, and setting a precedent for future transportation developments in the area.

Special Projects

Austin Community College, St. John's Encampment Commons Park

WGI



St. John Encampment Commons at ACC Highland Campus represents a transformative effort to repurpose a former parking lot into a vibrant public park, serving both Austin Community College (ACC) and the surrounding community. The project is a critical component of the redevelopment of ACC's Highland Campus, which has turned a defunct shopping mall into a thriving mixed-use educational and residential hub. This 2.4-acre park is not only a green oasis in an urban environment but also a symbol of the site's rich history and its future-focused commitment to sustainability and community engagement.

Small Projects

City of Dallas Water Utilities, Water Treatment Facilities Construction Management

Freese and Nichols



The City of Dallas Water Utilities successfully completed a five-year program to enhance water infrastructure and ensure reliable service for 2.3 million people. The program involved over 24 projects, including improvements to water treatment, storage and pumping facilities. Key innovations included the implementation of e-Builder for project coordination, the development of a comprehensive Construction Management Manual and organization-wide training to improve long-term resiliency. By fostering collaboration among departments and optimizing processes, the program achieved approximately 5% cost savings while enhancing operational performance across facilities.



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