



Freese and Nichols, COWI and CDM Smith are teaming to assist the U.S. Army Corps of Engineers’ multibillion-dollar effort to improve hurricane flood protections along the Gulf Coast.

The **FNI, COWI & CDM Smith Joint Venture (FCC-JV)** is providing design services to support the USACE Galveston District and Jefferson County Drainage District No. 7 on an \$863 million project to improve levees and floodwalls protecting a 65-square-mile area that includes Port Arthur and adjacent communities.

The Port Arthur and Vicinity (PAV) project is a key component of the USACE’s Sabine Pass to Galveston Bay Coastal Storm Risk Management Program, known as S2G. The S2G program covers 120 miles of the upper Texas coast, providing coastal storm risk management (CSRSM) measures to improve the performance and resiliency of the existing hurricane flood protection features at Port Arthur (Jefferson County) and Freeport (Brazoria County). The integrated system to enhance coastal safety includes new hurricane flood protection features at Orange County.

Port Arthur is a nationally important petroleum processing center and deep-water port (ranked #18 among U.S. ports in tonnage) and represents more than 60% of jet fuel production for the U.S. The PAV project includes: Raising of 27.8 miles of earthen levee and floodwall; replacement of 26 closure structures; pump station fronting wall protection; and integrated erosion protection features throughout.

The FCC-JV is assisting USACE with designing the PAV03A segment that includes raising approximately 5.5 miles of levee and floodwall features, pump station fronting wall protection and roadway and railroad closure gate structures. The PAV03A project is on an aggressive 12-month design schedule in support of Bipartisan Budget Act of 2018 (BBA18) high-priority project requirements.

Supporting the FCC-JV are several local and regional subcontractors including GENTERRA Consultants, Inc., Tolunay-Wong Engineers, infraTECH Engineers, GreenPoint, Geospatial Technical Partners JV, Vali Cooper International and Strategic Value Solutions.



## Specialty Team Assists Corps of Engineers to Boost Hurricane Protections for Port Arthur and Refineries

The FNI, COWI & CDM Smith Joint Venture was formed to bring together the capabilities and resources of three firms with complementary corporate visions and core values that have worked together for public clients to support USACE Galveston District’s Civil Works mission. The FCC-JV includes a deep bench of A-E professionals with USACE design experience and 20 small business subcontractors, totaling 19,000 resources ready to deliver multiple concurrent large and complex projects.



Freese and Nichols, Inc. (FNI), was established in 1894 and has been providing planning and engineering services to USACE and its customers since 1950. FNI provides A-E services to the USACE Fort Worth and Galveston local sponsor agencies, including the Texas General Land Office (GLO), Harris County Flood Control District, Fort Bend County, Port Freeport, City of Houston, City of Galveston, City of Corpus Christi and many communities impacted by Hurricane Harvey flood events.



COWI North America, Inc. (COWI), is a leader in bridge, tunnel and marine engineering solutions, built on 80 years of international experience building upon legacy company’s Ben C. Gerwick and Ocean and Coastal Consultants (marine), Buckland & Taylor (bridge) and Jenny Engineering (tunnel). COWI’s network of resources stretches beyond North America, and they are involved in more than 17,000 projects, with over 200 in the marine infrastructure sector at any given time.



CDM Smith, Inc., is one of the nation’s premier engineering and construction (E&C) firms and has supported USACE civil works and water resources programs since the 1950s. As an integrated E&C firm, CDM Smith is a pre-eminent provider of Alternative Project Delivery services for infrastructure. CDM Smith has worked for 20 USACE Districts across the U.S. and overseas and has performed more than 1,700 USACE assignments totaling over \$700 million.

### FCC-JV Team Experience

- More than 19,000 A-E Professionals worldwide and 600 Construction Managers and Inspectors within SWD
- Over 500 stormwater and other pump station designs
- USACE Galveston S2G Port Arthur PAV03A CSRM 5.5-miles of levee, floodwall and closures design

### FNI Experience

- USACE Fort Worth Colorado River Levee & Baughman Slough FRM Design
- Texas GLO Coastal Texas Protection and Restoration Mega-Feasibility Study
- HCFCO regional retention solutions to store floodwater reducing inflow into USACE’s Addicks Reservoir

### COWI Experience

- USACE New Orleans IHNC Lake Borgne Storm Surge barrier DOR for 75%
- USACE guidance docs for prefab design and in-the-wet construction of Folsom and Olmsted Dams.
- COWI and FNI are supporting the USACE Galveston S2G Orange CSRM project

### CDM Smith Experience

- USACE Fort Worth District Central City Trinity River, 1.6 Bypass Channel Design
- USACE Everglades, LA Coastal Ecosystem Restoration, and North and South Atlantic Coastal Studies
- Beach/dune CSRM modeling using G2CRM, Beach-FX, GENESIS and Delft-3D hydrodynamic modeling

For more information on the FCC-JV or the S2G Port Arthur Contract PAV03A task order, please contact Jeffrey L. Scarborough, FCC-JV Program Manager at [Jeff.Scarborough@Freese.com](mailto:Jeff.Scarborough@Freese.com) or 832-456-4765.