

# Brays Bayou Federal Flood Control Structures



## Background

The Brays Bayou Federal Flood Damage Reduction Project, today known as Project Brays, is a cooperative effort between the Harris County Flood Control District and the U.S. Army Corps of Engineers to plan, design and construct flood damage reduction projects along Brays Bayou. Project Brays consists of more than 70 individual projects throughout the entire 31 miles of Brays Bayou.

## Challenge

While the majority of these projects are part of the federal project and primarily aimed at reducing flood risks, a few are strictly local initiatives with the purpose of enhancing environmental and recreational elements along Brays Bayou.

## Solution

CivilTech, a Woolpert Company, was contracted by HCFCD to design structurally intensive channel improvements such as diversion/control structures, bridges, retaining walls and connectivity to recreational features. The CivilTech team prepared plans, specifications, cost estimates and construction phase services for:

- Eldridge Road Detention Basin, featuring two inline control structures and one side weir with a 120-foot-long clear-span pedestrian bridge
- Old Westheimer Road Detention Basin with one inline control structure
- Arthur Storey Park Detention Basin, featuring one inline control structure, one side weir rehabilitation and one tributary inlet control structure repair

## Outcome

Additional designs are being provided to replace/repair outfall pipes, side weir slope paving and aprons, and erosion control and energy dissipation structures. CivilTech worked with Harris County Precinct 3 to provide pedestrian access (paths and bridge structure) along the channel and basins in compliance with Texas accessibility standards.

## Benefits

Each control structure was designed to fully utilize the available storage capacity at each detention site while providing ADA-compliant pedestrian access across Brays Bayou for trail connectivity in accordance with Harris County's ultimate recreational use plans.

## CLIENT

Harris County Flood Control District (HCFCD)

## LOCATION

Harris County, TX

## CHALLENGE

- Reduce the risk for flood damage along Brays Bayou
- Enhance area environmental and recreational elements

## SOLUTION

- Design channel improvements
- Prepare plans, specifications and cost estimates

## SERVICES

- Civil engineering
- Structural engineering
- Bridge design
- Hydrologic and hydraulic modeling
- Traffic planning
- Construction services
- Surveying
- Geotechnical engineering

## BENEFITS

- Fully utilized storage capacities
- ADA-compliant pedestrian access



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