

NOTICE OF
OPPORTUNITY FOR PUBLIC COMMENT RELATED TO
PASSENGER FACILITY CHARGES

PROJECT 02-003 – Terminal Facilities Utilities Improvements (Enabling Utilities Landside)

Description:

This project includes the design and construction of public water system production, distribution, pumping and storage improvements to alleviate low water pressure and volume issues within the IAH Central Terminal Area (CTA) as well as additional equipment for processing aircraft sanitary sewer waste. The project includes:

- Two 1,200,000-gallon capacity above ground pre-stressed concrete water storage tanks and new pumping facilities connected to the existing City of Houston public water distribution system. The systems will also include a break tank, water tank fill pumps, water supply pumps, valves, supply and distribution piping, electrical supply with backup generator, disinfection system and water quality monitoring facilities.
- Ground water wells with pumps and appurtenances
- Appropriately sized water main to extending through the CTA and connected into the terminal facilities along North Terminal Road.
- Utility buildings to house water pumps and ancillary equipment constructed of insulated pre-cast concrete sandwich panels with insulated overhead coiling doors, hollow metal man doors, and aluminum windows with insulated glazing. The site areas will include connections to utilities and roadways, infrastructure including electrical and telecommunications, fencing and parking areas.
- New East Triturator (wastewater grinder pump station), in the CTA. This will include concrete sumps, pumps, electric power, instrumentation, and supporting ancillary equipment, utility connections and fencing.
- CTA Waterline Improvements to replace the existing public water distribution lines in the CTA with new waterlines of sufficient capacity for all current and future loads and to reconnect all service points in the CTA to the new lines. This includes the demolition and reconstruction of Terminal Loop road pavements affected by the replacement of the waterlines.

Justification:

This project is necessary to alleviate low water pressure and volume shortage issues within the CTA and to provide adequate capacity for future planned development at IAH. Water pressures at the Airport have been reported well below 35psi. This is a problem for both fire protection and domestic water systems that require adequate flow and pressure to meet code requirements.

The purpose of the ground water wells and utility building is to increase the volume of ground-water available to maintain the water levels in the tanks serving the airport area. The current volume of water storage is 2-500,000 gallon tanks. The new storage provided by this project will add 2,400,000 gallons and associated/necessary pipelines. Based on the water system engineering modelling results performed for this project, the primary problem is a water pressure

drop in the CTA caused by the pumps at HIA#1 (the closest water plant to the CTA) having to shut down temporarily when the two tanks at HIA#1 are emptied halfway in order to preserve fire-fighting volumes. The tanks empty during high demand situations because there are not enough wells near the airport to maintain the tank levels during high demand situations (summer, hot days). This project will provide new well capacity, water tanks and pumping a delivery pipelines to solve this issue. An additional problem is some of the pipelines are undersized for the future demand. The existing system water pressure usually stands around 50-60 psi. In high-demand scenarios the pressure can drop to a minimum of 35 psi. In extreme events, the pressure can drop to 20 psi which is when the terminals notice issues with toilets flushing.

The system was originally placed in service in 1965. The wells and pumping stations were constructed when the airport first went in service, with some upgrades and maintenance performed throughout the years. The oldest water pipes in the system being updated by this project were constructed in 1965 and are beyond their service life. Many other waterline sections were constructed as the airport expanded, so their ages vary. This project included a study of the pipe ages and is replacing pipes that exceed their service life.

These improvements will primarily serve the IAH Terminals and other buildings (FIS, ARFF, service, etc.) in the CTA in that, due to the airports elevation the water system in the CTA, is at a higher water pressure-plane than the surrounding area.

In September 2014, the Airport completed a Utilities Master Plan study to examine the needs and provide recommendations to the airport's utility infrastructure to meet the needs of the future terminal upgrade program which includes the MLIT and FIS projects previously described.

Estimated Project Implementation Date: May 2020

Estimated Project Completion Date: July 2021

Project Eligibility

The estimated capital cost of this project is \$60,751,000. PFC eligibility for this project has been estimated based on the PFC eligibility of the terminal facilities primarily benefitting from the increase capacity and water pressure derived from this project. The estimated cost of the triturator has been programmed with local airport funds.

The estimated total capital cost of this project is approximately \$60,751,000 with funding anticipated follows:

PFC Funds – Pay-Go	\$1,679,000
PFC Funds – Bond Capital	\$31,905,000
Other/Local Funds	\$27,167,000
Total Estimated Capital Costs	\$60,751,000
PFC Funds – F&I	\$24,382,000
Total PFCs Requested	\$57,966,000