

## Texas Water Development Board - Clean Water State Revolving Fund Wastewater Treatment Plant Rehabilitation - City of Winnsboro, Texas

Project ID: 73700



The original plant design contained two clarifiers that have been in continual service since their installation in 1980. The existing equipment had deteriorated to the point of structural failure due to the many years of service. The TWDB CWSRF project that was completed in 2017 replaced the existing painted steel clarifier equipment with new hot dip galvanized equipment inside of the existing concrete structures. The clarifier rehabilitation also included upgrading the partial radius surface skimmers to full radius surface skimmers, replaced the existing, deteriorated, fiberglass weirs and baffles plates with all new stainless steel weirs and baffles.

Another major component of the project was to rehabilitate the overhead hoist system supports on the two Orbal units. This required the support and removal of the deteriorated lower 30" portion of each existing I-beam base and replacing with a new base section, connecting to the existing I-beam structure and to the top of the concrete walls, and installing a protective epoxy coating that will reduce the corrosion of the steel from the splashing Orbal discs.

The project also included the replacement of the suction and discharge piping for one of the master lift station pumps. A portion of the existing piping was a custom welded "sweep" that helped the piping to be lined up when the piping was originally installed. Hayter Engineering was able to provide a solution to remove the custom piping and replace with standard off the shelf fittings and valves.

The remainder of the project was to replace the original, non-operational, valves within the plant site to allow the city to isolate their rehabilitated clarifier units and be able to better manipulate the flow of wastewater through the wastewater treatment plant. There were a couple of valves replaced at their original chlorine contact chamber (CCC) to be able to manipulate flow between the original CCC and the most recently installed CCC from the 2004 plant upgrade.

The existing wastewater treatment plant remained operational during construction. Services provided by Hayter Engineering are listed at right.

This project was completed in 2017.

### CLIENT

City of Winnsboro

### CONTACTS

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### CONSTRUCTION COST

\$870,766.11

### SERVICES PERFORMED:

Preliminary Engineering Report

Design Surveys

Design

Bid & Award

Construction Review

Warranty Review

Materials Testing

Record Drawing

Hayter Engineering, Inc. is a civil and environmental infrastructure firm serving the public and private sectors through a commitment to long-term client partnerships for over 60 years.