

## Holly Frontier Refinery

Tulsa, Oklahoma

Cyntech delivers helical piles solutions for an interconnecting pipeline, maximizing production at Tulsa refineries.



### The project

After acquiring the once competing Sinclair & Sunoco refineries in Tulsa, OK, Holly Frontier wanted to maximize its production by constructing an interconnecting pipeline, combining the two resources.

## The challenge

Under a strict schedule to get the two sites working in unison, an efficient solution was needed. Due to high disposal costs, potential spoils from drilling were also of concern to the client.

## The solution

Eliminating the potential of spoils, helical piles were chosen as an optimum and expedient solution. The project required helical pile designs for sleeper beams, T-supports, and pipe bridges. After completing ASTM compressive and lateral pile load tests in both the East and West refinery, Cyntech's Engineering team recommended and designed 5.5 in, 7.00 in, and 10.75-in helical piles. To maximize pile installation productivity while maintaining installation tolerance for the steel-to-steel bolted connections, Cyntech implemented a shop-welded cap plate and installation brace, increasing the pile per day installation rate while achieving precise elevations and orientation tolerances.

## Project facts

### Owner(s)

Holly Frontier Refinery

### Keller business unit(s)

Cyntech Group

### Main contractor(s)

Cyntech Group

### Engineer(s)

Cyntech Group

### Applications

Helical pile foundations

### Markets

Oil, gas and chemical

### Techniques

Helical piles

### Email address

[info@cyntechgroup.com](mailto:info@cyntechgroup.com)

### Phone number

936-206-7810