

FIRST UNITED ETHANOL PLANT



Owner

First United Ethanol, LLC

Size/Capacity

1,000,000 bushel in
workhouse
1,500,000 bushel in
long-term storage

Completion Time

16 months

Younglove's Services

- Conceptual design
- Structural engineering
- General construction
- Construction management
- Slipform concrete construction
- Equipment installation



YOUNGLOVE

*Builders of value...
Builders of trust*

Pelham, Georgia

This new unit train receiving facility consists of two 74-foot by 150-foot-tall silos for the workhouse storage and three 74-foot by 150-foot-tall silos for the long-term storage. Grain receiving will be through a combination rail/truck receiving building with two drive-ways for truck receiving, one rail line with scale for rail receiving, and one rail line for rail loadout of distillers dried grain (DDG) product. Grain is transferred with two 30,000-bushel-per-hour Schlagel drag conveyors to two 30,000-bushel-per-hour InterSystems receiving bucket elevators. Distribution to the silos is via a 60,000-bushel-per-hour drag or belt conveyor to the silos. Grain is reclaimed through a 6,000-bushel-per-hour drag or belt conveyor and then reclaimed to a 35-foot by 150-foot-tall workhouse silo to be cleaned with two 3,000-bushel-per-hour Hayes & Stolz rotary screen scalpers.

The clean grain then fills a bin above four 1,500-bushel-per-hour Champion hammermills to be ground and then conveyed to the ethanol plant for processing into ethanol. DDG product (the byproduct of ethanol mash from corn) is elevated and conveyed to a 125-foot by 175-foot metal building for storage. The DDG product is then transferred to two 55-foot by 124-foot-tall silos to prepare the DDG product for rail/truck loadout. The DDG product is unloaded from the silos with a Laidig unloader, transferred to a bulk scale for weighing, and then transferred to the loadout building to be shipped out by rail or truck.

Heat detection, a continuous readout system, and a 1/10 cfm flush-floor aeration system have been installed in the three long-term silos; and a Brock bin sweep has been installed for final clean-out in each of the five 74-foot-diameter silos.



Leaders in the design and construction of bulk materials handling facilities