

Home for BNSF Shuttles

WHEATON-DUMONT ADDS A RAIL TERMINAL WITH LOOP TRACK ON SECOND RAILROAD

Wheaton-Dumont Coop Elevator
Wheaton, MN • 320-563-8152

Founded: 1905
Storage capacity: 22 million bushels at 10 locations
Annual volume: 42 million bushels
Annual revenues: \$400 million
Number of members: 1,200
Number of employees: 130
Crops handled: Corn, soybeans, hard red spring wheat, barley, sunflowers
Services: Grain handling and merchandising, agronomy, aerial application

Key personnel at Graceville:

- Philip Deal, general manager
- Eric Duffield, plant manager
- Doug Wilson, grain division mgr.
- Duane Steen, grain buyer
- Mari Grafsgaard, office manager
- Dwight Nelson, safety director

Supplier List

- Aeration fans..** Brock Grain Systems
- Belt conveyors.....**Schlagel Inc.
- Bin sweeps** Brock Grain Systems
- Bucket elevators.....**SM Enterprises
- Bulk weigh scale**Intersystems
- Bulkweigher automation ...** Cultura Technologies Inc.
- Catwalks**Warrior Mfg. LLC
- Cleaners**Majik Kleener Sales Inc., Intersystems
- Contractor/millwright**Gateway Building Systems Inc.
- Control system.....**Control Stuff Inc
- Conveyors (belt).....**Schlagel Inc.
- Conveyors (drag)** SM Howell
- Distributor.....**Schlagel Inc.
- Dust collection system ..**CAMCORP
- Elevator buckets**Maxi-Lift Inc.
- Fall protection**Fall Protection Systems Corp.
- Gates.....**Andco Actuators
- Grain dryers...** Brock Grain Systems
- Grain temp system....**Tri-States Grain Conditioning Inc.
- Level controls.....** BinMaster Level Controls
- Motion sensors....**Electro-Sensors Inc.
- Rail construction**R & R Contracting
- Steel storage...** Brock Grain Systems
- Temporary storage**Union Iron
- Tower support system...**Warrior Mfg.
- Truck probe** Intersystems
- Truck scale.....**Mettler Toledo, LLC
- Truck scale automation.....** Cultura



Aerial view of Wheaton-Dumont Cooperative Elevator's new 7.8-million-bushel rail terminal east of Graceville, MN, with an 8,300-foot loop track. Aerial photo by JH Photography, Spencer, IA.

Wheaton-Dumont Cooperative Elevator has been able to load shuttle trains on the Canadian Pacific since the 1990s at its rail terminal in Tenney, MN. But until this year, it hasn't been able to take advantage of shuttle programs on the Burlington Northern Santa Fe (BNSF).



a mile east of Graceville, MN (320-748-7289), says the new facility can accommodate 120 covered hopper cars on an 8,300-foot loop track off of a BNSF rail line running parallel to State Highway 28. Duffield came to Wheaton-Dumont in 2012 from a CHS lake terminal in Superior, WI.

Eric Duffield, plant manager at the new \$25 million, 7.8-million-bushel terminal

two other elevators on the BNSF, but those



View of the Graceville terminal from the northeast showing all of the 5 million bushels worth of upright steel storage. Ground level photos by Ed Zdrojewski.



Plant Manager Eric Duffield (left) and General Manager Philip Deal.

are limited to 54 cars each and do not receive the railroad's discount for load-ing unit trains.

"This site made the most sense," adds Philip Deal, who has been the coop's general manager since 2006. "It's near the center of our service area and near the intersection of two major highways."

The new facility combines 5 million bushels worth of upright steel storage and a 2.8-million-bushel temporary storage pile. It's intended to handle corn, soybeans, and spring wheat.

The coop took bids on the project early in 2012 and awarded the contract to Gateway Building Systems Inc., West Fargo, ND (800-747-4499). Deal notes that Gateway had done outstanding work for Wheaton-Dumont in the past and maintains a satellite office nearby in Elbow Lake, MN (218-685-4420).

Groundbreaking took place in April 2012, but thanks to unfavorable weather, the project was not completed until August 2013. ►

"We had a difficult winter, with a lot of blowing snow and very cold temperatures, followed by a very wet spring," says Duffield.

Among the other major participants in the project, Heyer Engineering, Fargo, ND (701-280-0949), did the structural engineering; Potter Electric, Montevideo, MN (320-269-6613), was the electrical contractor; Control Stuff Inc., Cologne, MN (952-466-2175), supplied the automation systems; Fridgen Excavating, Dumont, MN (320-808-7019), did the ground work; and R & R Contracting, Grand Forks, ND (701-772-7667), built the loop track.

Storage Facilities

Upright storage at Graceville consists of six Brock 105-foot-diameter tanks holding 730,000 bushels each and two



Key pieces of grain handling equipment include two Brock 4,700-bph dryers at right and left and three 20,000-bph Howell receiving legs at center, with Warrior towers and catwalks.

60-foot-diameter wet tanks holding 230,000 bushels each.

The six big tanks stand 91 feet tall at the eaves and 119 feet tall at the peak. These flat-bottom tanks are outfitted with outside stiffeners, sidedraw spouts, 16-inch Brock zero-entry sweep augers, 24-cable TSGC grain temperature monitoring systems, and BinMaster level controls. A set of four 25-hp Brock centrifugal fans provide 1/10 cfm per bushel of aeration.

The smaller wet tanks stand 98 feet tall at the eaves and 114 feet tall at the peak. They are outfitted similarly to the large tanks but have no grain temperature monitoring systems, since they are holding grain only until it is dried. A pair of 25-hp Brock centrifugal fans provide 1/10 cfm per bushel through a full-floor system.

Union Iron Works supplied a Temp-Stor 360-foot-diameter temporary storage pile, which is located inside of the loop track, and Warrior Mfg. supplied its center support tower and catwalk. The pile is equipped with a packed ag lime floor, 9-foot perforated steel sidewalls, and 24 axial fans rated at 7-1/2 hp. A 40,000-bph Howell drag conveyor running to a 40,000-bph Schlagel enclosed belt conveyor carries grain out to the pile from a Warrior loadout tower situated adjacent to the loop track.

Incoming Grain

Incoming trucks are sampled with an Intersystems truck probe and weighed on an 80-foot METTLER TOLEDO pitless scale. A card reader provides owner and truck operator data to the one Weigh scale automation system from Cultura Technologies.

Trucks then are directed to one of three enclosed 1,400-bushel mechanical receiving pits. The pits feed three 20,000-bph Howell legs, which are enclosed by a 16-foot-x-24-foot Warrior tower. The legs are outfitted with a single row of Maxi-Lift 20x8 HD-MAX buckets mounted on 22-inch Goodyear Pathfinder belts.

The legs empty grain into a 5-hole Schlagel electronic triple distributor, with the option of sending grain through one of three 20,000-bph Majik Kleener screeners first. The distributor sends grain via 20,000-bph Howell drag conveyors to storage or to one of two Brock 4,700-bph tower dryers.

The Brock dryers, which had not yet been used as of this writing, are fired by propane and empty dried grain into 7,500-bph Howell dry legs. The legs are equipped with 12x7 Maxi-Lift HD-MAX buckets mounted on 14-inch Goodyear belts. The legs empty onto the drag conveyor system.

Rail Loading

As of mid-August, no trains had



Receiving legs feed into a five-hole Schlagel electronic triple distributor.

been loaded yet at Graceville, but the system was ready to go. The big storage tanks empty onto a series of 40,000-bph Schlagel enclosed belt conveyors in below-ground tunnels. These, in turn, feed another below-ground conveyor running beneath the BNSF line and

on to a jump leg.

This leg feeds directly into an Intersystems 80,000-bph bulk weigh loadout scale operated with one Weigh software from Cultura Technologies. The operator has the option of running grain through one of two 40,000-bph Intersystems screeners mounted above the bulkweigher.

Workers on top of railcars are protected by a Fall Protection Systems trolley unit running the length of nine covered hopper cars.

Ed Zdrojewski, editor



Intersystems screener and bulk weigh scale are housed in a separate Warrior support tower directly over the loop track and are fed from a below-ground Schlagel enclosed belt conveyor and jump leg.