

Industrial Park Anchor

SOUTH DAKOTA JOINT VENTURE BUILDS A RAIL TERMINAL IN A UNIQUE SPOT



Dakota Plains Ag Center LLC's new 4.7-million-bushel rail terminal at Napa Junction, SD, northwest of Yankton, SD. Drone photo courtesy of Dakota Plains Ag Center LLC.

Dakota Plains Ag Center LLC
Parkston, SD • 605-935-6791



Founded: 2000
Storage capacity: 14.2 million bushels at five locations
Annual volume: Current: 25 million bushels, projected: 45 million bushels
Annual sales: Current: \$150 million, projected: \$250 million
Number of employees: 27
Crops handled: Corn, soybeans, hard red winter wheat
Services: Grain handling and merchandising

Key personnel at Napa Junction:

- Matt Winsand, CEO/general manager
- Denise Gorrell, CFO
- Tyronne Bialas, vice president-grain
- Lyle Hoelsing, terminal manager
- Nicole Myers, office manager
- Kevin Murtha, operations manager/safety director
- Brooklyn Cole, scale operator
- Bo Moysis, elevator operations

Dakota Plains Ag Center LLC's new rail terminal at Napa Junction, SD (605-665-6272), a whistle stop just northwest of Yankton, SD, is just 55 miles south-east of the company's first rail-loading facility near Parkston, SD (built in 2000). But unique aspects of the 192-acre site made Napa Junction ideal for Dakota Plains' second loop

Supplier List

Aeration fans	Rolfes@Boone	Grain dryer	Zimmerman Grain Dryers
Aeration system	AIRLANCO	Leg belting	Continental Pathfinder
Automation	Control Stuff Inc	Level indicators	BinMaster Level Controls
Bearing sensors	CMC Industrial Electronics	Millwright ..	Hogenson Construction Co.
Bucket elevators	InterSystems	Manlift	Sidney Manufacturing Co.
Bulk weigh scale	InterSystems	Motion sensors	CMC Industrial Electronics
Catwalks	Warrior Mfg. LLC	Office building	Pretz Corp.
Contractor ...	Hogenson Construction Co.	Scalpers	Ferrell-Ross
Conveyors (belt) ...	Hi Roller Conveyors	Screeners	InterSystems
Conveyors (drag)	InterSystems	Temporary storage ..	Warrior Mfg. LLC
Dust collection	AIRLANCO	Tower support system ..	Warrior Mfg. LLC
Electrical contractor	Muth Electric	Track construction	MGA Railroad
Elevator buckets	Maxi-Lift Inc.	Truck probe	InterSystems
Engineering	VAA LLC, Stockwell Engineers Inc.	Truck scales	Rice Lake Weighing Systems
Excavation	Rachel Construction		
Fall protection	Hogenson Construction Co.		

SOUTH DAKOTA

Napa Junction



CEO Matt Winsand (left) and Terminal Manager Lyle Hoelsing. Decor in the office building's reception area is inspired by corrugated steel grain tanks.

track facility.

"The State of South Dakota owns the Napa-to-Platte short-line," says CEO and General Manager Matt Winsand, who came to Dakota Plains five years ago after working as an independent financier, "which gives other Class I railroads access to the loop track that is also directly connected to the BNSF main line ... through reciprocal agreements the state has with BNSF."

By contrast, the Parkston terminal is accessed exclusively by the BNSF Railway.

Napa Junction is such a unique site, Winsand adds, that he hopes the \$35 million, 4.7-million-bushel facility will serve as an anchor for a new industrial park serviced by a 9,000-foot loop track.

"We'd love to see the industrial park attract additional agribusiness," he says, "anything from a fertilizer plant to a transloading facility for commodity byproducts."

Area governments have shared that dream strongly enough to make significant investments. Dakota Plains partnered with the state and Yankton County to construct a 3-1/2-mile paved



Warrior temporary storage pile with center fill tower holds 3.5 million bushels under tarp. Ground level photos by Ed Zdrojewski.

two-lane highway out to the site from State Highway 50.

Terminal Project

Construction of the Napa Junction terminal began in April 2016, and it went into operation late in September 2017. At the time of *Grain Journal's* visit three weeks later, no trains had been loaded. However, that wasn't because the facility was unfinished, says Terminal Manager Lyle Hoelsing, who joined Dakota Plains two years ago after operating his own private elevator at Tabor, SD. The basis has been telling producers and handlers to hold grain for now.

Dakota Plains took bids for the project and awarded the contract to Hogenson Construction Co., West Fargo, ND (701-281-1742).

"Hogenson won the contract by being able to build exactly what we wanted to build," says Winsand.

Other major contractors taking part in the project:

- VAA, LLC, Plymouth, MN (763-559-9100), provided structural engi-

neering, site development, and loop track layout design, while Stockwell Engineers Inc., Sioux Falls, SD (605-338-6668), did onsite survey work.

- Muth Electric, Mitchell, SD (605-996-3983), served as electrical contractor.

- Rachel Construction, St. Michael, MN (763-424-1500), performed excavation and site preparation work.

- MGA Railroad Construction Inc., Aurora, SD (605-690-1030), built the loop track.

- Control Stuff Inc, Cologne, MN (952-466-2175), supplied automation systems.

Storage Systems

The Napa Junction terminal has 1.2 million bushels of upright storage, the majority in a six-pack of 170,000-bushel, slipform concrete tanks, with four interstices.

The six tanks stand 44 feet in diameter and 140 feet tall. They are equipped with BinMaster BinBob level indicators and AIRLANCO AIRAUGER air-assisted aeration/unloading floors. No grain temperature monitoring system was included due to fast turnaround times, but the tanks were designed so cables could be added later, if desired.

Each tank is equipped with a single AIRLANCO 60-hp centrifugal fan that delivers 1/11 cfm per bushel on corn or 1/16 cfm per bushel on wheat.

In addition to the upright storage, the facility also includes a Warrior 3.5-mil-

Three enclosed, mechanical, 1,600-bushel receiving pits can take in grain at a combined 80,000 bph.





One 60-hp AIRLANCO centrifugal fan per tank powers AIRAUGER floors for aeration and air-assisted unloading.

lion-bushel temporary storage system with a center fill tower equipped with four Rolfes@Boone 60-hp centrifugal fans. Winsand comments that this is a new product for Warrior Mfg., the third center fill ring the supplier has built in the United States.

The tarp-covered pile is 435 feet in diameter with a packed dirt floor and no sidewalls. Aeration is supplied by three 60-hp AIRLANCO centrifugal fans plus a fourth fan with variable speed rated at 40- to 60-hp for holding the tarp in place under varying weather conditions.

The pile is filled by an overhead 40,000-bph Hi Roller enclosed belt conveyor and empties onto another 40,000-bph Hi Roller conveyor in a 9-foot-x-7-foot below-ground tunnel running back to the receiving pits.

Grain Handling

Incoming grain trucks are guided through the Napa Junction property by a CompuWeigh Smart Truck system with SmartView digital message boards.

After being sampled with an InterSystems truck probe, drivers continue onto a Rice Lake 120-foot pit-type truck scale for weighing.

The SmartView system directs drivers to one of three 1,600-bushel enclosed mechanical receiving pits. Two of the pits feed InterSystems 20,000-bph legs equipped with two rows of Maxi-Lift 12x8 Tiger-Tuff orange buckets mounted on a 25-inch Continental Pathfinder belt. The third pit feeds a 40,000-bph

receiving leg with two rows of 16x8 Maxi-Lift Tiger Tuff orange buckets on a 34-inch belt. The pits are serviced by an AIRLANCO reverse air filter system driven by a 125-hp centrifugal fan.

The elevator does not have a distributor. Instead, a series of two-way valves route grain to InterSystems overhead drag conveyors out to storage. Grain may be routed to either an InterSystems 20,000-bph or an InterSystems 40,000-bph gravity screener, matched in capacity to each receiving leg, and/or a set of 20,000-bph Ferrell-Ross scalpers ahead of storage or loadout.

Grain also may be routed to a 10,000-bph propane-fired Zimmerman tower dryer. As of mid-October, the dryer had been test-fired but not yet used for actual grain drying, according to Hoelsing.

Shipping Operations

Storage tanks empty onto a 40,000-bph Hi Roller enclosed belt conveyor in below-ground 10-foot-x-8-foot tunnels.

The receiving legs double as shipping legs, either one at a time or in any combination. They feed an InterSystems bulk weigh loadout scale located inside a slipform concrete structure and operated by a control system combining elements from InterSystems and Control Stuff. The bulkweigher is rated at up to 100,000 bph.

The scale is set up with a 12,000-bushel surge bin on top, the actual scale below that, and then a pair of 4,400-bushel tanks feeding a trolley-mounted spout. This setup allows for a railcar to be load-

Venture History

Dakota Plains Ag Center LLC originally was founded in 2000 as a joint venture between Tripp Farmers Cooperative in Tripp, SD and Cargill Inc., to build the venture's first rail terminal near Parkston, SD.

The cooperative in 2013 sold its interest in the venture to Agrex Inc. Today, Cargill and Agrex are 50-50 partners in Dakota Plains.

ed while the bulkweigher is measuring out the next load. Dust is kept under control during loadout operations by an AIRLANCO reverse air filter system driven by a 40-hp centrifugal fan.

Workers atop railcars are protected by a trolley-type fall protection unit running seven car-lengths and custom-built by Hogenson.

Hoelsing comments that no train loadings are anticipated before Jan. 1 due to market conditions, but once they commence, he estimates that loading a 110-car train will take about 4-1/2 hours once crews get up to speed.

Ed Zdrojewski, editor



Grain handling equipment, from left, includes a slipform concrete loadout tower; three InterSystems receiving legs, two rated at 20,000 bph and one at 40,000 bph, in a Warrior tower; and 10,000-bph Zimmerman grain dryer.

