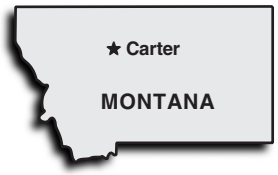
Doubling Rail Capacity

MONTANA TERMINAL ADDS A LOOP TRACK AND ADDITIONAL HANDLING EQUIPMENT



Columbia Grain International
Portland, OR • 503-286-9681

Founded: 1978
Storage capacity: 40 million+ bushels at 41 locations
Number of employees: 190
Crops handled: Hard red winter and spring wheat, soft and hard white wheat, club wheat, durum wheat, corn, soybeans, feed and malting barley, flax, canola, dried peas, lentils
Services: Grain handling and merchandising

Key personnel at Carter:
- Greg Smith, location manager
- Kate Mogstad, grain accountant
- Max McGrann, scale clerk
- Wally Long, pit operator
- Dave Martin, locomotive engineer

Supplier List

Belting ..... Goodyear Conveyor Belting
Bin sweeps ..... The GSI Group
Bucket elevator ..... Schlagel Inc.
Bulk weigh scale .... Intersystems
Catwalk ..... Warrior Mfg. LLC
Contractor ..... The Haskins Co.
Control system ..... Applied Solutions
Conveyors (belt) ..... Hi Roller Conveyors
Conveyors (drag) .... Intersystems
Elevator buckets ..... Tapco Inc.
Engineering ..... Daniel Wambeke P.E.
Level indicators ..... BinMaster Level Controls
Sampler ..... Intersystems
Steel storage ..... The GSI Group
Tower support system .. Warrior Mfg. LLC
Truck probe ..... Intersystems

Nearly 400,000-bushel addition with 50,000-bph bulk weigh loadout scale at Columbia Grain International elevator in Carter, MT, to allow facility to load 110-car shuttle trains on the BNSF Railway. Photos by Bruce Selyem.

Columbia Grain International had been operating a former General Mills rail-loading terminal on the BNSF Railway in the central Montana town of Carter since 2002, but it was already too small as of 2007.

"We had the capacity to load 52 railcars and four 84,000-bushel steel tanks," says Greg Smith, who has worked for Columbia Grain since 1983 but only moved to Carter after the latest expansion was completed in May 2008.

Greg Smith

"We're located in one of the biggest wheat-producing counties in the state, and shuttle trains are the future for moving that grain."

In addition, rival CHS already was operating a 110-car shuttle loading facility at Collins, MT, less than 50 miles to the northwest of Carter, so expanding the Carter elevator would make the Columbia Grain facility more competitive.

In order to accomplish that, in late 2007 and early 2008, Columbia Grain added a 9,000-foot loop track, in order to accommodate 110-car BNSF shuttles, in a single pass beneath the loadout spout. Loop tracks have become more common in the grain industry over the past decade as a way to meet the loading deadline for avoiding penalty demurrage charges, which for BNSF is 15 hours from the time a train is dropped off.

In addition, the company added three 130,000-bushel corrugated steel tanks – sufficient to hold a complete shuttle train load – and a 50,000-bph bulk weigh loadout system.

To build the project, Columbia Grain hired The Haskins Co., Spokane, WA (509-535-2978) as general contractor and millwright on the project. "They've done a lot of work for us previously," Smith says.

Rail Loading Annex

The three new GSI corrugated steel tanks that make up the additional storage for the project stand 60 feet in diameter and 50 feet 10 inches at the eaves.

The flat-bottom tanks are outfitted with 12-inch GSI sweep augers but do not have grain temperature monitoring systems or aeration.

"We don't have any drying capacity here,

Portion of a loop track allowing an entire 110-car train to be loaded in a single pass without breaking it up for a conventional railyard.

Series of 25,000-bph Intersystems drag conveyors carrying grain out to three new 130,000-bushel GSI corrugated steel tanks.

so we don't accept any wet grain," says Regional Operations Manager Russ Luoma. "Wet grain is really not an issue in Montana."

A series of 25,000-bph overhead Intersystems drag conveyors carry grain out to the new storage tanks from existing legs.

The tanks, in turn, deposit grain onto 40,000-bph Hi Roller enclosed belt conveyors, which are housed in a below-ground tunnel. The Hi Rollers are outfitted with 42-inch Scandura belting.

The belt conveyors, in turn, deposit grain into a 50,000-bph Schlagel loadout leg, which is outfitted with three rows of Tapco 20x8 CC-HD heavy-duty low-profile buckets mounted on a 64-inch Goodyear belt. The leg is encased in a Warrior support tower that is outfitted with a 12-foot-x-14-foot-x-110-foot-high switchback stair tower.

At the top of the leg, the elevator operator utilizes a two-way diverter valve to send the grain either back to existing storage or down a gravity spout to a 50,000-bph Intersystems bulk weigh loadout scale.

The bulkweigher is under the control of an Intersystems electronic MasterWeigh Millenium control system.

"We're located in one of the biggest wheat-producing counties in the state, and shuttle trains are the future for moving that grain."

-Greg Smith, Columbia Grain International

During loadout operations, workers make use of a Haskins-built trolley-type fall protection system utilizing components from DBI/Sala and spanning at least three jumbo covered hopper cars.

Overall, Smith is pleased with the performance of the new storage and equipment at Carter. "It's taking us 10 hours to load a shuttle train pretty consistently," he says.

Ed Zdrojewski, editor

New 50,000-bph Intersystems bulk weigh loadout scale (top) is under the control of an InterSystems Masterweigh Millenium electronic weighing system (bottom).