



# Minidoka Irrigation District

## Project Spotlight

### B2 Check Structure Rebuild

**Project Overview:** As part of ongoing efforts to improve water conservation and delivery service, Minidoka Irrigation District (MID) identified the need to reconstruct the B2 Check and Diversion Structure. The structure, original to the District and last improved in the 1980s, had begun showing significant deterioration, with failure becoming a concern.

The B2 Check is capable of handling up to 500 cubic feet per second, though it typically operates at around 350 cfs. If the structure failed, water would continue down the B Canal, potentially overtopping or breaching the system and causing damage to surrounding lands and infrastructure.

To address these risks, MID reconstructed the structure in place using improved materials while maintaining the existing design. The project was funded in part through the Idaho Water Resource Board's Aging Infrastructure Grant Program, supporting improved reliability and long-term performance.

#### PROJECT HIGHLIGHTS

**Location:** Rupert, Idaho

**Total Project Cost:**  
\$317,560

**IWRB AIG:** \$89,431

**MID:** \$228,431

**Start:** November 2024

**Finish:** February 2025



*MID crews install new gates on the B2 Check Structure*

**Challenges Faced:** Prior to reconstruction, the iron and concrete components of the B2 Check Structure were showing significant deterioration due to long-term exposure to water and environmental conditions, with failure becoming increasingly likely. If the structure failed, water would continue down the B Canal, potentially overtopping or breaching the system.

Located just outside of Rupert, Idaho, a failure would have posed serious risks to surrounding agricultural lands, as well as nearby homes, businesses, and rail infrastructure. The potential for widespread damage made timely reconstruction essential.



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**The Solution:** The plan for reconstruction included rebuilding essentially the same structure in place, utilizing improved materials to enhance structural integrity and extend the lifespan of the facility. The B2 Check Structure has operated effectively for over 100 years, and its original design continues to meet the operational needs of the District.

As part of the upgrades, the existing ratchet gates were replaced with screw gates to improve functionality and reduce employee strain and risk of injury during operation. Automated water-measurement devices were also installed to increase accuracy and efficiency, allowing water levels to be maintained more consistently and improving overall system performance.

**Construction:** In the fall of 2024, once the MID system was dewatered, demolition and removal of the existing structure began. All construction work was completed in-house by MID crews. Initial efforts focused on site preparation, including excavation, scraping, and leveling to ensure proper alignment and placement of the new structure.

Phase 2 included the primary construction work, with crews forming the structure, pouring concrete, and installing the new gates. Care was taken throughout this phase to ensure accuracy and long-term durability.

In Phase 3, MID installed automated water measurement devices along with the necessary electrical components, completing the modernization of the structure and improving overall operational efficiency.



*The new gates at the B2 Check Structure.  
The gates are 6' tall*

**Project Benefits:** The construction and installation of the new, improved B2 Check Structure and headgate will benefit the District in several ways, with the most visible being increased water efficiency. At a time when water conservation is critical, reducing loss and improving control ensures that more water is put to beneficial use.

The addition of automated water-measurement devices further enhances the efficiency of the structure, allowing water levels to be maintained at a near constant level. This reduces fluctuation, minimizes waste, and improves overall system performance and reliability.