



# McGill Restoration Adds Waterproofing to Series of Railroad Bridges

Railroad work is a specialized area of construction and restoration, and McGill Restoration has quickly become a preferred partner for waterproofing bridges. Three recent projects highlight the experience and abilities of the company specific to the rail industry. We will focus on the BNSF bridges restored in three different locations.

## THE CHALLENGE

### Planning for Long-Distance Rail Projects

Three BNSF Railway projects involved several rail bridges that required waterproofing to achieve multiple goals. The locations were spread across the country with Sandpoint, Idaho, being the farthest from McGill Restoration's Nebraska headquarters. The closer two projects were located in Coon Rapids, Minnesota, and Preston, Nebraska.

#### SCOPE OF WORK REQUIRED

The scope of each bridge project was similar with either steel or concrete decks that required waterproofing. The jobs were CLAM-based, using the same processes and equipment from DOT projects. A ballast mat was underlaid to dampen sounds and vibrations while supporting the rock load. The all-in-one system is monolithic and as such, it prevents water intrusion to the deck.



#### TRANSPORTING MATERIALS, EQUIPMENT AND CREWS

The Sandpoint job specifically required long-term planning to prepare and transport materials, equipment and crew members. It's a 24-hour drive between the shop and Sandpoint, and with tight deadlines, having everything necessary on-site was imperative.

#### ACTIVE TRACK DELAYS

Working adjacent to active tracks meant the trains would arrive at random and require work to halt. Trains often stop for periods of time without warning and crews were forced to wait until trains cleared the tracks. Without any predictable patterns for delays, the team would need a game plan to optimize work schedules.





#### WEATHER-RESTRICTIVE MATERIAL APPLICATIONS

Working on a ¾-mile bridge over a lake in Sandpoint created weather-based challenges. The dew point, humidity and surface temperature were too close for installation of the materials. The waterproofing material requires specific climate thresholds for successful installation, and high humidity makes it especially difficult to install.

### THE SOLUTION

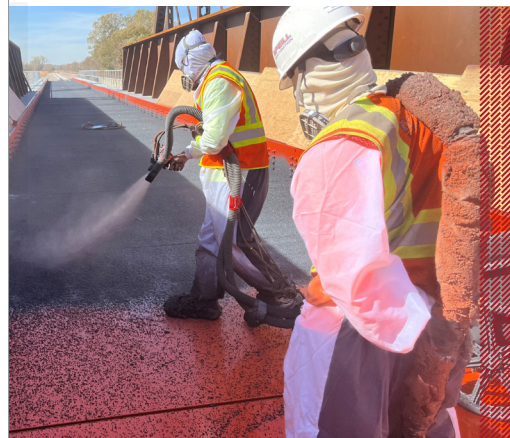
## Plan Ahead and Execute Each Bridge with Precision

Detailed planning and execution with in-the-moment problem-solving led to success on every project. The crew was on-site and ready to pivot against each challenge, seeing the bridge waterproofing projects through to the finish line. The advanced plans paid off as materials and equipment were strategically delivered and ready for operations.

#### SELECTING AND TRAINING CREW

The crew consisted of 10-12 members plus a foreman. Each individual was selected because they had specific skills and experience with the waterproofing materials and installation. They are experts at this type of work and made it possible to meet deadlines with top-quality outcomes.

In addition to scheduling, transporting and housing crew members, each individual was required to obtain a safety certification for rail work. Certification cards were carried on each person as required for surprise safety inspections. The rail has their own internal safety guidelines, and every McGill Restoration member was required to learn and comply with all safety procedures while working on the bridges.



#### SHIPPING MATERIALS AND EQUIPMENT

The jobs had plenty of lead time, and the Sandpoint bridge restoration project was bid and planned out several years in advance. The team utilized this time to plan exact materials, equipment and labor needs while adding extra materials to prevent field shortages. Three truckloads of materials were loaded and transported to the job sites. Equipment for waterproofing concrete and steel decking was also transported.

#### SHIFTING SCHEDULES AGAINST DELAYS

The unpredictable delays for active trains and weather events required flexibility in crew schedules to meet the deadlines. When delays occurred, the crew rested and waited for the tracks to clear or the weather to improve. When the conditions were right, crew members jumped into action and worked hard to complete waterproofing on each bridge.







#### INSTALLING WATERPROOFING ON THE GROUND

At Coon Rapids, the bridge was being replaced. The old bridge was removed, and the new bridge panels were on the ground ahead of installation. The McGill Restoration team applied the waterproofing while the bridge was positioned on the ground rather than in place. By completing the work on the ground, time was saved and delays avoided to expedite the new bridge installation.

## THE RESULT

# Railway Bridge Waterproofing Done Right

McGill Restoration has the unique experience that is required on rail projects. With past successes, the team has learned how to properly bid and plan for every detail involved in rail waterproofing. On the three BNSF Railway projects, the waterproofing was a major success and every deadline was met with top-quality results.



### The McGill Way: What We Accomplished

- ✓ Steel and concrete deck waterproofing.
- ✓ Rubberized ballast mat installed to support rock load and vibrations from locomotives.
- ✓ Met three-week deadline on \$1.1-million Sandpoint, ID, project.
- ✓ Met one-week deadline on \$150k Preston, NE, project.
- ✓ Met one-week deadline on \$65k Coon Rapids, MN, project.

The general contractor who sourced McGill Restoration to complete specialty waterproofing segments of the railroad bridge projects received excellent results without delays to the rail or any element of the project. Working as team players, the jobs were successful and McGill Restoration will continue working on rail projects in the future.

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## Want to Work with McGill Restoration?

Call our team to learn how McGill Restoration can bring your project to life. Get in touch with our experts today.

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