

Vector™

Norcure® Chloride Extraction

Project History

Chloride Extraction of Omaha Substructure

- Structure:** 29 Hammerhead Piers
I-480 Substructure
- Location:** Omaha, Nebraska, USA
- Client:** Nebraska Department of Roads
- Area Treated:** Phase 1: 29,740 ft² (2,763m²)
- Duration:** Phase 1: 5 months
Phase 2: 5 months
- Contractor:** Vector Construction Inc.



Project Description:

During the summers of 1998 and 1999, the Nebraska Department of Roads had undertaken a large rehabilitation project on Interstate Route 480 in downtown Omaha. The project consisted of re-decking approximately 0.6 miles or 1 kilometer of the eastbound and westbound elevated expressway, along with rehabilitation of the substructure. During the summer of 1997, Vector Construction Inc. conducted the original investigation of the supporting piers and presented several different repair options to the Nebraska DOR. The NE DOR considered options from cathodic protection systems to removal and replacement of the contaminated concrete. Finally the option of Norcure Electrochemical Chloride Extraction proved to be the more feasible option.

Prior to the installation of the Norcure ECE System, conventional chip and patch repairs were performed

on the delaminated areas of the “hammerhead” piers. Both phases 1 and 2 required approximately 9 weeks to install the Norcure ECE System. The installations were longer than anticipated due to delays in the concrete repairs being performed by a separate contractor.

During phase 1, the ECE treatment was specified for a minimum of 60 days. Upon completion and review of the phase 1 report, NE DOR chose to reduce the Phase 2 ECE treatment duration to 45 days. This decision was made due to the great success in removing the majority of the chloride ions during the first few weeks of treatment.

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