



Expanded Shale, Clay and Slate Institute
Rotary Kiln Structural Lightweight Aggregate

I-84 Bridge Rehabilitation at Taggart (Morgan County, Utah)



OWNER

UDOT

GENERAL CONTRACTOR

Granite Construction
North Salt Lake City, UT

STRUCTURAL ENGINEER

McNeil Group, Inc.

LIGHTWEIGHT SUPPLIER

Utelite Corporation
Coalville, UT

READY MIX SUPPLIER

Alta View Concrete
Ogden, UT

PRECASTER

Hanson Eagle Precast
West Valley, UT

PROJECT LOCATION

Morgan County, UT

COMPLETION DATE

June 30, 2011

The Utah Department of Transportation (UDOT) replaced the roadway decks of the I-84 bridges over the Union Pacific Railroad at Taggart, Morgan County, Utah with 14,945 sq. ft. of lightweight prefabricated precast bridge deck panels (www.youtube.com/watch?v=6xPjgDqv_C8) to preserve the existing bridge structure and to minimize cost. This stretch of I-84 is located in a very narrow canyon, which runs parallel to the Union Pacific Railroad's transcontinental Overland Route which routinely handles 18-22 trains per day.

Project Timetable: Work started at the end of April 2011 and was completed on June 30, 2011. Crews worked Monday through Saturday, with some occasional night work *without a full closure of the interstate.*

Project Impacts: The project repaired and replaced the twin bridge decks just east of the Taggart interchange (Exit 108) with lightweight precast concrete deck panels. Work primarily took place during the day, with one travel lane in each direction being maintained. The Taggart interchange remained open throughout the project to accommodate patrons of the local restaurant and recreation groups using the Weber River.



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PROJECT REQUIREMENTS

- ✧ 5000 psi Structural Lightweight Concrete Precast Deck Panels
- ✧ 109 to 115 lbs. +/- 3 lbs. @ 28 days
- ✧ 6% +/- 1.5 Air Entrainment
- ✧ 4000 PSI Structural Lightweight Concrete – approach slabs
- ✧ .45 W/C Ratio, 20% Fly Ash Replacement