

Roller Compacted Concrete

Toyota Motors Manufacturing Indiana—Container Yard
Princeton, Indiana

Project Overview

For Toyota's first ever Roller Compacted Concrete (RCC) lot in the United States, the standards were very exacting. After exploring alternatives, Toyota Motors Manufacturing Indiana (TMMI) evaluated but rejected the first two RCC bids. The owner then accepted E&B Paving's third bid to be the General Contractor for a new container lot.

Basic Construction Factors

- This 43,000 SY project was completed in three phases.
- With RCC paving set for June, the contractor worked with producer IMI Concrete to run RCC paving operations during the early morning hours to avoid paving during extreme heat conditions.

- E&B Paving crews began at 3:00 a.m. daily, and typically completed paving before noon.
- The contractor achieved production levels of over 1,000 CY of RCC paving per day.
- The RCC pavement was saw cut with soft-cut saws at

at 25 ft intervals to control cracking.

Material Factors

- IMI and E&B Paving used an optimized gradation mixture, a proprietary blend the two companies developed for use in RCC pavements.



Fast Facts

Owner

Toyota Motors
Manufacturing Indiana

Contractor

E&B Paving, Inc.

Facility

Industrial facility

Project Type

8 in. RCC container lot

Paving Value

\$1.10 million

Construction Time Frame

June 2014-June 2014

- Sub-base was 4 inches of compacted #53 dense graded stone on 16 inches of cement stabilized earth.
- Because of the hot weather, a low alkali cement with fly ash was used to retard concrete set times. In more extreme weather, a hydration stabilizer was used to retard set times.
- Minimum strength required was 4,500 psi, but the contractor achieved an average 5,201 psi.

Exemplary Project

- The level of quality exhibited on this project has captured the attention of industrial and logistics facility developers in southwest Indiana, many who are now considering RCC for their respective installations.



Photo depicts night paving at TMMI.



Photo shows paving of the container lot.

Presented by the

Indiana Chapter-ACPA

One North Capitol Avenue
 Suite 480
 Indianapolis, IN 46204
 Phone: 317.634.8989
 Fax: 317.634.8988
www.indianaconcretepavement.com

Mike Byers
 Executive Director
mbyers@pavement.com

Patrick Long
 Director of Marketing & Government
 Affairs



RCC-4-2015