



Project Profile:

Pearl City Road

Stephenson County, Illinois (owner)
Summer 2006

Challenge

This was an existing 8.5-mile section of narrow (11-foot wide), highly traveled roadway in need of reconstruction and upgrade to accommodate 80,000-pound loading. The roadway had to be kept open to accommodate local and emergency traffic during construction.

Solution

The engineer determined the fastest and most cost effective option was Full Depth Reclamation using Fortress engineered emulsion. There was sufficient material to use a portion of the existing surface as shoulder material and incorporate a portion of the existing aggregate base with the RAP surface to meet the design criteria of the county engineer.

Construction Phasing

Phase 1: Pulverize the existing 6 to 8 inches of existing asphalt surface and spread the material 15 feet wide to accommodate the new 12-foot driving lane and 3-foot bituminous shoulder.

Phase 2: Inject 3 percent Fortress engineered emulsion by using two Wirtgen 2500S stabilizers, working on one lane at a time to a depth of 8 inches.

Phase 3: Grade and compact the stabilized base course to finished grade with a 1.5 percent cross slope.

Phase 4: Overlay the 12-foot stabilized base course and 3-foot rap shoulders with 3.75 inches of HMA. (Overlay placed in two lifts by Civil Constructors, the project's prime contractor).

Phase 5: Place a 3-foot aggregate shoulder.

Results

- Project completed on time and within budget.
- Phases 1, 2, and 3 were completed in six working days and the roadway was opened to traffic ahead of schedule.
- Roadway upgraded to handle 80,000-pound loads.
- Roadway is safer for travelers with additional driving lane width and safety shoulders.

