



FACT SHEET

What it is:

A public-private partnership among Norfolk Southern and federal and state agencies to increase vertical clearances in 28 tunnels and remove 24 overhead obstructions to allow passage of double-stacked container trains between the Port of Virginia and Columbus, Ohio

Historical significance:

The most ambitious railroad engineering project in the past century

Methods used to increase tunnel clearances:

- Excavate roof and replace liner (15 tunnels)
- Carve notches into arch roof to allow corners of containers to pass (7 tunnels)
- Lower or realign track (6 tunnels)

Why it is needed:

Insufficient vertical clearances were forcing double-stacked container trains to take circuitous routes.

Who benefits:

- Norfolk Southern, by increasing corridor capacity and making more efficient use of assets
- Rail customers, by cutting transit time between Norfolk and Chicago from four days to three and improving reliability of service
- Ocean carriers, by more efficient access to the nation's heartland
- The Port of Virginia, by making the port more attractive to ocean carriers
- Inland regions served by new intermodal terminals, by generating economic development
- The public, by taking trucks off congested highways and reducing fuel consumption and greenhouse emissions

Who the partners are:

- Norfolk Southern
- State of West Virginia
- State of Ohio
- Commonwealth of Virginia
- Federal government

What it cost:

- \$191 million for tunnel and overhead obstruction clearances
- \$70 million for new Rickenbacker Intermodal Facility in Columbus, Ohio
- \$60 million for relocation of Commonwealth Railway serving new APM Terminal in Portsmouth, Va. (non-NS project)

Funding sources:

- Federal government:
 - ◆ \$83.3 million for tunnel clearances
 - ◆ \$27.7 million for Rickenbacker Intermodal Facility
- Commonwealth of Virginia: \$9 million for tunnel clearances in Virginia
- State of Ohio: \$836,355 for overhead obstruction clearances
- Norfolk Southern:
 - ◆ \$97.8 million for tunnel clearances
 - ◆ \$42.3 million for Rickenbacker Intermodal Facility

Construction started: October 2007

Construction completed: September 2010

Total miles of tunnel modified: 5.7

Tons of concrete sprayed: 30,000

Tons of grout pumped behind walls: 80,000

Miles of rock bolt installed: 110 (includes cable bolts)

Construction design: Hatch Mott McDonald

Project management: STV/Ralph Whitehead Assoc.

Contractors:

- Johnson Western Gunitite Inc.
- LRL Construction
- R. J. Corman Railroad Construction



