

8.0 Ohio Freight Rail System Evaluation

8.1 The Impact of Ohio's Rail Freight System on its Economy and Citizens

For over two centuries Ohio's rail system has supported the transportation needs of the state's industries. The state's rail system is also well positioned to address the transportation needs of the new global economy. Ohio's rail system carried over 311 million tons, or 4.16 million rail carloads, approximately 28 percent of all freight inbound, outbound, and through the state in 2007. Ohio's 36 railroads and over 6,500 miles of rail line reach every corner of the state.

Ohio's rail system was created to meet the needs of its manufacturing industries. It continues to serve the core industries such as steel, agriculture, and coal on which the rail system was founded. In 2007, 39 percent of rail traffic originating and 78 percent of rail traffic terminating in Ohio was comprised of bulk commodities such as coal, minerals, ores, stone, agricultural commodities, and chemicals. The disparity between inbound and outbound rail traffic is attributed to the state's manufacturing base where bulk raw materials are imported into the state and turned into higher value, lower-weight products. Railroads also deliver 43 million tons of coal annually to the state's coal-fired electric utility plants.

Despite the consolidation of the rail industry over the past three decades, both in terms of the number of major railroads and rail mileage, Ohio has maintained a well-balanced rail network. The state's Class I railroads maintain over 4,000 miles of track, much of which is in the form of mainlines. These mainlines, in both the north-south and east-west directions, connect Ohio to the country's major rail gateways, intermodal facilities such as ports, and consuming markets around the country. Class I railroads also operate selected short-haul movements when cost-effective. For example, as previously noted NS moves coal about 16 miles from mines at Powhatan Point where it is loaded onto barges.

In addition to its major mainline network, the state also enjoys rail competition between CSX and NS in many of its markets. This combination of access and competition results in lower transportation costs, which is a major advantage to industries dependent on rail due to the bulk nature of their traffic, and in attracting new development, such as auto manufacturers, to the state.

Ohio also has an extensive rail short line system. Many of these short line railroads were former Class I railroad mainlines or branch lines which were saved from abandonment for the purpose of preserving rail service for local shippers. In addition to these railroads' primary role of delivering rail traffic to local shippers from their interchange point with major railroads, many have also developed specialized, short-haul rail services which provide cost-efficient movements for their customers. These short-haul movements, which would normally involve the use of heavy trucks over the highway system, are primarily intrastate movements between shippers and suppliers, between shippers' facilities (e.g. between manufacturing plants and warehouses), or involve new rail access to existing industries. It is estimated these rail short line initiatives remove over 900,000 truck trips from the Ohio highway system annually.⁸

8.2 Existing and Projected Rail Capacity Constraints on Ohio Mainlines

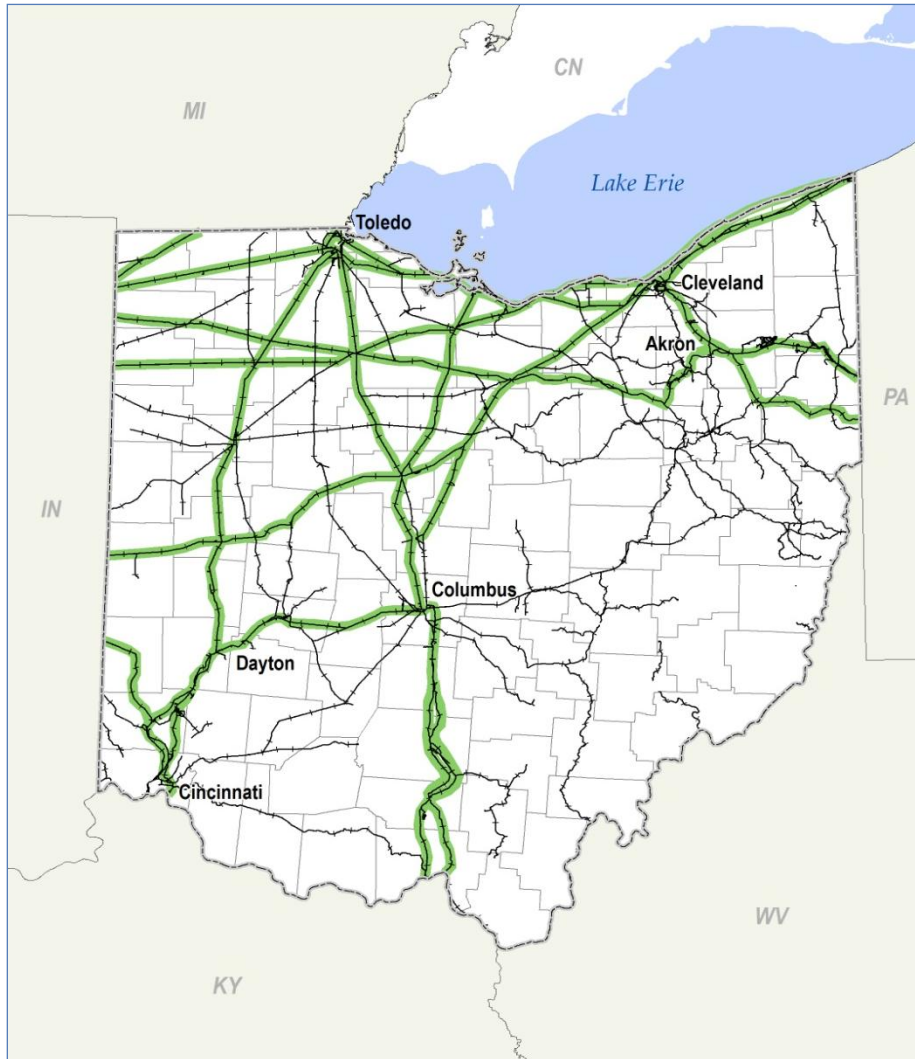
With the projected increases in rail demand, the rail industry has worked together to identify rail lines and line segments which they estimate will see the greatest increase in volume and where existing and projected capacity constraints will affect the fluidity and reliability required for the rail network to remain competitive. To determine rail mainline system capacity needs for the country, the "National Rail Freight Infrastructure Capacity and Investment Study," published by the Association of American Railroads in September 2007 was developed.

⁸ Access Ohio 2004-2030, November 2004

The Class I railroads designated Primary Rail Corridors and these corridors were evaluated on the basis of both current rail volumes compared to current capacity and future (2035) volumes compared to current capacity. From this, current and future levels of service from Level A to Level F, similar to that used for the highway system, were assigned to each of the corridors.

Of the total 52,340 miles of rail line designated as primary rail corridors, over 1,800 miles are located within Ohio. **Exhibit 8-1** shows those rail lines designated as Primary Rail Corridors within Ohio.

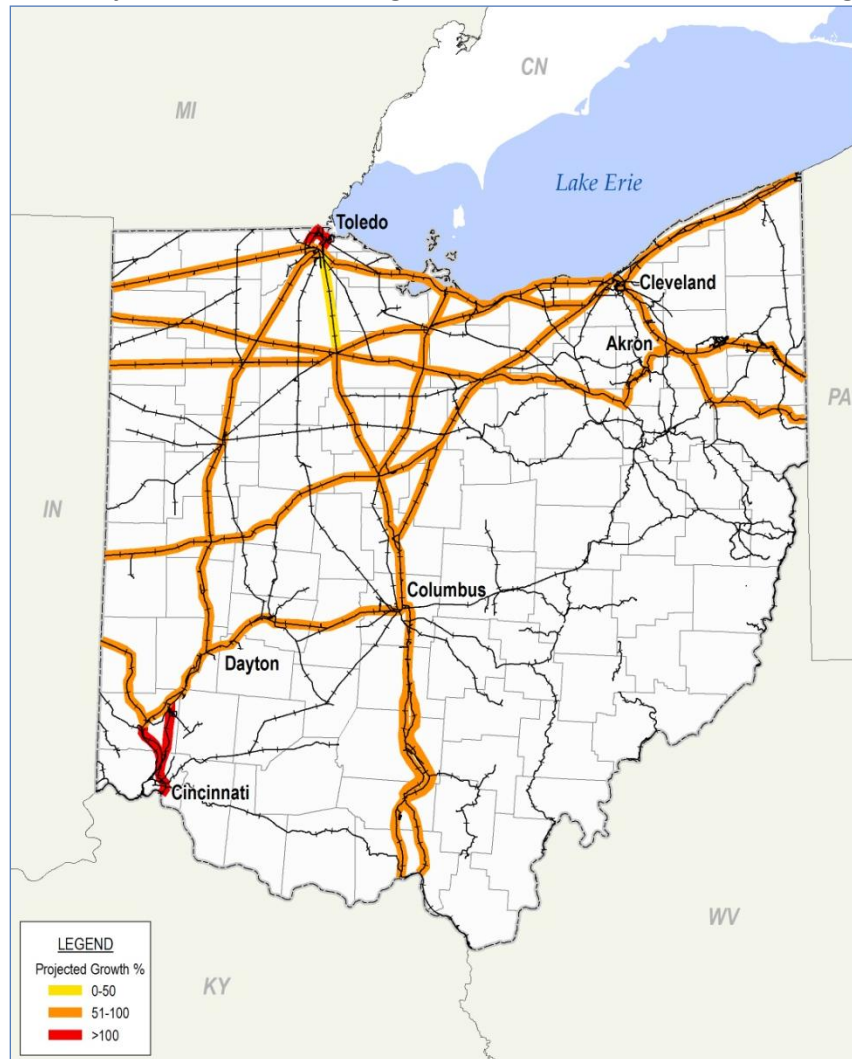
Exhibit 8-1 Primary Class I Rail Corridors



Source: Wilbur Smith Associates using Association of American Railroads Report, "National Rail Freight Infrastructure Capacity and Investment Study," 2007

Future growth rates in terms of trains per day for most primary rail corridors in Ohio are relatively moderate with projected increases of 0-30 percent through 2035. Rail corridors across the northern tier of the state, and between Sandusky and Columbus, however, are projected to increase between 30-80 percent. **Exhibit 8-2** shows the projected growth rates on Ohio's primary rail corridors.

Exhibit 8-2 Projected Ohio Class I Freight Rail Corridor Growth Rates Through 2035



Source: Wilbur Smith Associates using Association of American Railroads Report, "National Rail Freight Infrastructure Capacity and Investment Study," 2007

As noted, the National Rail Freight Infrastructure Capacity and Investment Study assessed current corridor capacity to determine congestion levels. This was done by calculating a volume-to-capacity ratio expressed as a level of service grade.

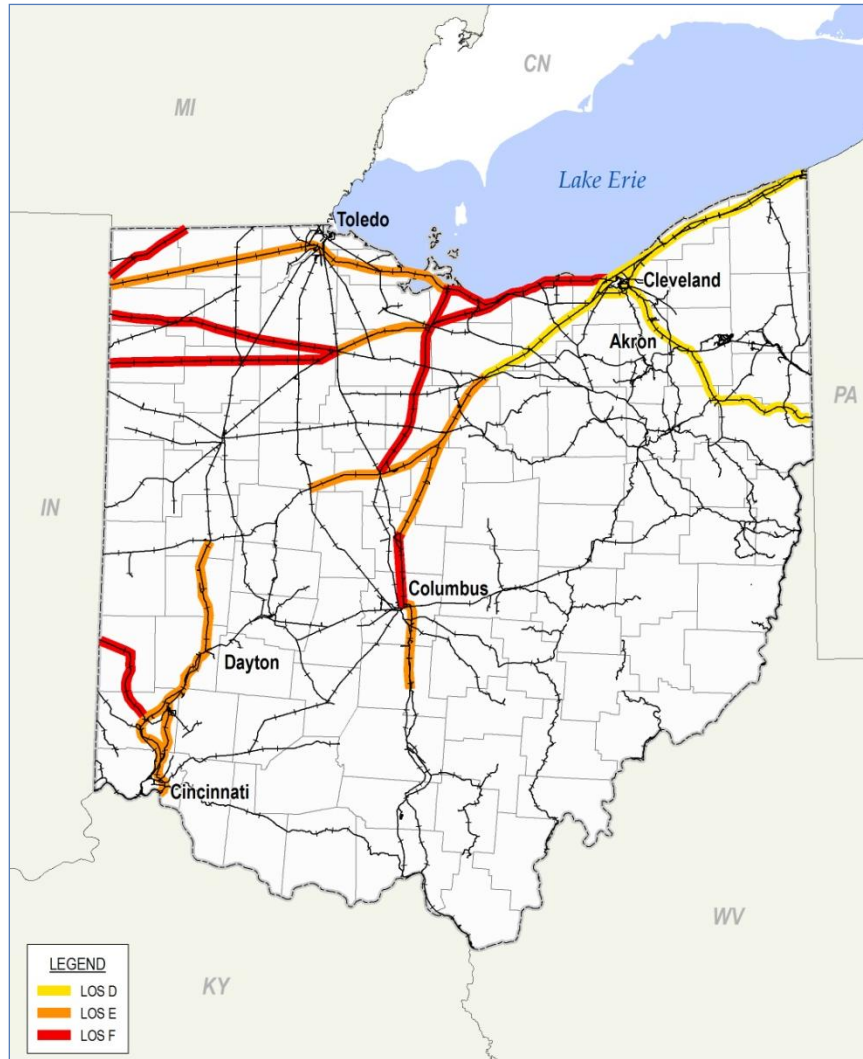
LOS grades were generally described as follows:

- LOS Grades A, B, C - Rail volumes are generally below current capacity. Train flows are low to moderate with capacity to accommodate maintenance and recover from accidents.
- LOS Grade D – Rail volumes are near capacity. Train flows are heavy with moderate capacity to accommodate maintenance and recover from accidents.
- LOS Grade E – Rail volumes are at capacity. Train flows are very heavy with very limited capacity to accommodate maintenance and recover from accidents.
- LOS Grade F – Rail volumes are above capacity. Train flows are unstable and service breakdown conditions exist.

Ohio’s primary rail corridors all currently operate within LOS Grades A, B, or C, or below available capacity levels. However, future Ohio rail corridor levels of service are projected to worsen. Most major rail corridors in the state are projected to deteriorate to Levels of Service D, E, or F without a significant level of investment in investments such as adding track, building or lengthening passing sidings, improving signal systems, and upgrading track to support increased traffic and heavier loads.

Exhibit 8-3 shows the projected levels of service on Ohio rail lines in 2035 without significant investment.

Exhibit 8-3 Projected 2035 Freight Service Levels – Major Corridors



Source: Wilbur Smith Associates using Association of American Railroads Report, “National Rail Freight Infrastructure Capacity and Investment Study,” 2007

8.3 Ohio Freight Rail Bottlenecks

Ohio recognizes the importance of a fluid rail network and has conducted studies to identify and prioritize points or segments of the state's network where trains routinely experience recurring congestion delays. From the state's perspective, relieving these rail chokepoints and improving the capacity and efficiency of the rail system will ensure continued economic growth, mitigate highway congestion and maintenance costs, and add to the safety, security and energy/environmental conditions related to the state's transportation system. The state's industries also benefit through lower logistics costs, reduced delays, and increased business expansion opportunities.

For example, in 2007, Ohio conducted the "Ohio Freight Rail Choke Point Study" to identify, locate, and quantify the 30 most severe rail choke points in Ohio⁹. Bottleneck points were defined as a specific physical location on the rail system recurring congestion and train delays were currently being experienced or were anticipated over the near term. Each freight railroad operating in the state, as well as metropolitan planning organizations and other experts, were provided an opportunity to submit a list of choke points. Numerous changes in conditions have taken place since this study was completed and its findings are out-of-date and therefore not included in this Plan.

Rail freight bottlenecks are being identified through public outreach and stakeholder interviews. Those identified are included in Appendix A of this State Rail Plan. Freight improvements to address the bottlenecks will be evaluated.

8.4 Summary

Ohio's existing rail system continues to contribute to both its citizens and industries by reducing highway congestion and maintenance, enhancing economic growth, and improving safety and the environment. The state's rail network is also well positioned to take advantage of the changing transportation logistics brought upon by the global economy.

⁹ Ohio Freight Rail Choke Point Study, Cambridge Systematics, August 2007