Introduction

Freight transportation is critical to the region’s—and the nation’s—economy. Truck traffic is a significant component, and the highway element of the Kanawha-Putnam 2045 Regional Transportation Plan considers freight needs in the discussion and prioritization of highway recommendations. However, freight is a highly multi-modal sector, with longer and less time-sensitive freight trips made by rail and barge, while the most time-sensitive freight is shipped by air.

Chapter 7 examines the regional freight network in the context of truck, rail, water, and air freight movement. The chapter reviews the West Virginia State Freight Plan, highlights anticipated changes, and concludes with a series of recommendations. While most of the discussion focuses on goods movement, trends in recreation, as well as tourism can affect these transportation modes. As with goods movement, tourism trips are governed in many cases by trends originating outside the Kanawha-Putnam region, but affect transportation needs within the region.

Truck Freight

The FHWA’s Freight Analysis Framework (FAF4) provides estimates for tonnage, value, and domestic-ton miles by region of origin, destination, commodity type, and mode. According to the 2012 FAF4 data (the most recent survey year), the region’s interstates (I-64, I-77, I-79) handled the bulk of truck traffic in Kanawha and Putnam counties. Sections of I-77 have AADT truck percentages that exceed 30%.
The interstates carried approximately 98% of the region’s total truck freight tonnage in 2012. For example, trucks carried approximately 56,800 kilotons of cargo in 2012 on the segment of I-64 between Dunbar and Charleston (MP 54.6 to MP 55.0). This amount is expected to increase by approximately 42% to 81,000 kilotons by 2045.

On the following page, Figure 7-1 illustrates the tonnage of freight shipped along the roadway network in Kanawha and Putnam counties in 2012. Figure 7-2 on page 7-4 shows the year 2045 forecasted tonnage within the same area.
2012 Freight Analysis Framework Tonnage

Figure 7-1

Kiloton/year/section
- Less than 20,000 Kilotons
- 20,001 to 40,000 Kilotons
- Greater than 40,001 Kilotons
2045 Freight Analysis Framework Tonnage

Figure 7-2

Kiloton/year/section
- Less than 20,000 Kilotons
- 20,001 to 40,000 Kilotons
- Greater than 40,001 Kilotons
Rail Freight

Rail also plays an important role in the movement of goods throughout the region and the state. CSX Transportation (CSXT) and Norfolk Southern Corporation (NS), the state’s two Class I railroads, operate over 2,100 miles of West Virginia’s rail infrastructure. CSXT operates a primary route through the region, connecting Charleston to Cincinnati, OH and Richmond, VA. Meanwhile, NS operates a secondary route that connects Charleston, WV to Columbus, OH. These railroads also capitalize on the region’s intermodal facilities. CSXT serves the TRANSFLO facility in South Charleston, while NS serves the Allied Warehousing facility in Nitro.
FHWA projections indicate that West Virginia’s primary routes are operating below capacity, equivalent to a Level of Service of A, B, or C. In addition, routes will continue to operate under capacity in the year 2035. This potentially suggests that West Virginia’s CSXT and NS lines will maintain advantages relative to many other routes.

**Water Freight**

The Kanawha River is essential for the movement and exchange of commercial goods in the region. The Kanawha River is joined at Charleston by the Elk River, at St. Albans by the Coal River, and at Poca by the Pocatalico River.

The U.S. Army Corps of Engineers (USACE) estimates that there are 68 port facilities (docks) located...
throughout the two-county region, 16 of which connect to the region’s rail infrastructure. These ports are primarily responsible for the shipment of bulk commodities such as limestone, sand, gravel, coal, petroleum products, and chemicals. As fuel prices rise, barge traffic could potentially become a more attractive shipping mode, particularly since barges are approximately 29% more fuel-efficient than rail and 31% more fuel-efficient than truck (National Waterways Foundation). Barge transit is best suited for commodities that do not have time-sensitive delivery schedules.

The America’s Marine Highway Program was established by Section 1121 of the Energy Independence and Security Act of 2007 to reduce landside congestion through the designation of Marine Highway Routes. Section 405 of the Coast Guard and Maritime Transportation Act of 2012 further expanded the scope of the program beyond reducing landside congestion to efforts that generate public benefits by increasing the utilization or efficiency of domestic freight or passenger transportation on Marine Highway Routes between U.S. ports. The National Defense Authorization Act for Fiscal Year 2016 added to the definition of short sea shipping to include cargo shipped in discrete units or packages that are handled individually, palletized, or unitized for purposes of transportation, or freight vehicles carried aboard commuter ferry boats.

The America’s Marine Highway Program is a U.S. Department of Transportation-led program to expand the use of our nation’s navigable waterways to relieve landside congestion, reduce air emissions, provide new transportation options, and generate other public benefits by increasing the efficiency of the surface transportation system.

The M-70 Marine Highway Corridor (one of 24 national marine highway corridors) includes the Ohio, Mississippi, and Missouri Rivers—as well as connecting commercial navigation channels, ports, and harbors—from Pittsburgh to Kansas City. Additional investments along the Ohio River, located 20 miles from the Putnam County line, could also increase throughput tonnage along the Kanawha River.

**Air Transport**

Yeager Airport in Kanawha County currently serves four commercial airlines (American, Delta, Spirit, and United) and provides direct flights to Charlotte, Philadelphia, Washington, D.C.,
Atlanta, Myrtle Beach, Fort Lauderdale, Chicago, and Houston.

Meanwhile, air cargo service, although available through several parcel companies, remains extremely limited in the region. The Federal Aviation Administration (FAA) did not publish 2016 cargo data for Yeager Airport, likely due to limited activity.

**West Virginia State Freight Plan**

The West Virginia State Freight Plan is currently under development and is anticipated to be complete in late 2017. The plan will identify a comprehensive freight route network and a future freight planning framework for West Virginia.

The plan began with a review of existing literature and freight industry outreach in summer 2015. This was followed by identifying the freight network and potential freight projects throughout 2016. Prioritization of freight projects followed in late 2016 and early 2017. The goals of the plan are to:

- Provide a safe and secure transportation network
- Increase the accessibility and mobility of freight
- Enhance the integration and connectivity of the transportation system, across and between modes, for freight
- Support the economic vitality of the state, especially by enabling global competitiveness, productivity, and efficiency
- Emphasize the preservation and efficient management of the existing transportation system while protecting and enhancing the environment

The West Virginia State Freight Plan will evaluate the existing transportation systems and how they are used by different industry sectors in and through West Virginia; better position West Virginia for federal funding; and strengthen relationships with the freight industry through outreach activities.
Recommendations

Several of the Kanawha-Putnam 2045 Regional Transportation Plan’s recommended financially constrained project recommendations address current and anticipated freight needs. In determining objective scores for projects, the prioritization process incorporated several freight elements, including current truck traffic, forecasted truck traffic, and proximity of projects to prominent industrial shipping/receiving centers. Based on this analysis, the projects shown below in Table 7-1 potentially provide the greatest impact to the regional freight network. Committed projects along I-64 and WV 601 (Jefferson Road) are also anticipated to have a beneficial impact on regional freight movement.

The existing conditions and current forecasts for rail, water, and air transportation modes do not call for additional or distinct transportation improvements now. As noted in the discussions above, demand for these modes may be affected by economic trends in commodities (particularly the energy sector) or tourism. These trends should be monitored to determine if distinct future needs arise for rail, water, or air transportation improvements.

Table 7-1 Freight Recommendations – Roadway Projects that Provide Benefit to Key Freight Corridors

<table>
<thead>
<tr>
<th>PROJECT ID</th>
<th>ROADWAY NAME</th>
<th>PROJECT DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>KC-4</td>
<td>US 119 (Corridor G)</td>
<td>Widen US 119 northbound from Cantley Drive to MacCorkle Avenue to improve operations and add capacity</td>
</tr>
<tr>
<td>KC-5</td>
<td>US 119 (Corridor G)</td>
<td>• Widen US 119 northbound and southbound from Lawndale Lane to MacCorkle Avenue to improve operations and add capacity&lt;br&gt;• Add a lane to the I-65 Connector&lt;br&gt;• Install the new Cantley Flyover&lt;br&gt;• Grade separate Lucado Road and Oakwood Road</td>
</tr>
<tr>
<td>KC-6</td>
<td>US 119 (Corridor G)</td>
<td>Widen US 119 northbound from Jefferson Road (WV 601) to Emerald Road</td>
</tr>
<tr>
<td>KC-7</td>
<td>Lens Creek Rd (WV 94)</td>
<td>Widen Lens Creek Road (WV 94) to 3 lanes on steep grades to provide truck passing lanes</td>
</tr>
<tr>
<td>KC-8A</td>
<td>Dupont Avenue (US 60)</td>
<td>Widen Dupont Avenue to a 4-lane divided facility</td>
</tr>
<tr>
<td>KC-8B</td>
<td>Dupont Avenue (US 60)</td>
<td>Implement spot improvements to include center and right turn lanes where needed</td>
</tr>
<tr>
<td>PC-1 (E+C)</td>
<td>New US 35</td>
<td>Currently underway</td>
</tr>
<tr>
<td>PC-3</td>
<td>Interstate 64</td>
<td>Widen I-64 to 6-lanes between Cow Creek Road and WV 34</td>
</tr>
<tr>
<td>PC-U1</td>
<td>Interstate 64</td>
<td>Widen I-64 to 6-lanes between Cow Creek Road and Cabell County Line</td>
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</tbody>
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