AGENDA
Study Schedule

2015
- Summer: Existing Literature, Review and Data Collection
- Fall: Freight Industry Outreach
- Winter: Freight Analysis Framework
- Spring: Identify Freight Network

2016
- Summer: Identify Freight Projects
- Fall: Prioritize Freight Projects
- Winter: Develop Planning Framework
- Spring: Project Documentation / Coordination

2017
- Summer: - TAC Meeting
- Fall: - TAC Meeting
- Winter: - TAC Meeting
Goals

- 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
Performance Metrics

- **Safety**
  - Reductions in crashes, fatalities, & injuries

- **Accessibility / Mobility**
  - Connectivity to freight facilities
  - Proximity to other modes/freight facilities
  - Increase multimodal access

- **Operations**
  - AADT
  - Truck percent

- **Economic Competitiveness**
  - Freight demand

- **Environmental Stewardship**
  - Access to energy production facilities
STUDY OVERVIEW

FREIGHT NETWORK

FREIGHT ISSUES/NEEDS

PRIORITIZATION FRAMEWORK

WEST VIRGINIA STATE FREIGHT PLAN
Federal Update

- Established NHFN
- Proposed Multimodal Freight Network
- Drafted National Strategic Freight Plan
- FAF Network and Flows
- CRFC/CUFC
  - Requirements
  - Limitations
- New Freight Performance on the Interstate System Measure (NHFP)
  - Truck Travel Time Reliability (TTTR) Index
Freight Funding - FAST Act

- $305 billion for five years from 2016 through 2020
- Established new National Highway Freight Program (NHFP)
  - Avg. $1.2 B annually
  - Distributed to states by formula
    - Formula based on the number of Primary Highway Freight System (PHFS) miles in that State relative to all PHFS miles
- Created the Nationally Significant Freight and Highway Projects (NSFHP)
  - Avg. $900 M annually
  - Repeals the Federal match (90-95%) for freight projects
  - Federal share may not exceed 60%, 80% if other federal funding sources used
  - Grants must be at least $25 million, made to state or local government agencies
  - 25 percent of eligible funding will be set aside for projects in rural areas
- In 2012
  - Rail is still the dominant mode by tonnage
  - Pipeline flows have tripled in both tonnage and value since 2007
  - Trucks move almost 50% of the value of all goods transported in WV
To qualify for network consideration:

1. Principal arterial roadway or above
2. At least 25 percent trucks (PCEs)
3. Access to energy exploration or production areas
4. Connection to multimodal national freight network designated by USDOT
1. Primary arterial roadway
   - 1,266 miles of primary arterials in WV
2. 25 percent trucks (PCE’s)
3. Access to energy exploration or production areas
4. Connection to Multimodal Freight Network
Identify Freight Network - Highway

- Developing the Highway Freight Network
  - Tally of each of the 4 metrics
- Total miles on network = 2,139

- Domestic Trade
  - 65.6 M tons exported
  - 68.3 M tons imported
  - 47.5 M tons within

- International Trade
  - 13.6 M tons exported
  - 272 K tons imported
Identify Freight Network - Highway

- Critical Rural Freight Network (CRFC)
  - WV limited to 150 miles
- WV CRFC
  - Network not in urban areas = 1,867 miles
  - ~1,300 miles not already on National Network
- Must meet one of seven elements
- Consider first or last-mile connector routes to freight facilities
Identify Freight Network - Highway

- Critical Urban Freight Network (CUFC)
  - Floating Network
  - Qualifies for Funding
  - WV limited to 75 miles

- WV CUFC
  - Network located inside MPO’s = 271 miles
  - Network located inside MPO’s but not on the NHFN = 165 miles

- Must meet one or more of four elements

- Consider first or last-mile connector routes to freight facilities
Identify Freight Network - Railroad

- **2,485 miles**
  - Approx. ¾ owned by Class 1 RR’s

- **13 operators**
  - 2 Class I
  - 1 Class II (Regional)
  - 10 Class III (Short Line)

- **Domestic Trade**
  - 72.9 M tons **exported**
  - 7.6 M tons **imported**
  - 3.3 M tons **within**

- **International Trade**
  - 79.7 M tons **exported**
  - 775 K tons **imported**
Identify Freight Network - Waterway

- Down Flow River Tonnage
  - 274 miles of waterways
  - 1 major port facility at Huntington

- Domestic Trade
  - 8.6 M tons **exported**
  - 13.2 M tons **imported**
  - 1.6 M tons **within**

- International Trade
  - 12.7 K tons **exported**
Identify Freight Network - Pipeline

- 2,310 total miles
- 54,920 producing gas wells
- 9th largest producer of natural gas
- 17th among all states for crude oil production
- Domestic Trade
  - 37.5 M tons exported
  - 34.6 M tons imported
  - 13.6 M tons within
Identify Freight Network - Airports

- 0 cargo airports in the top 150 nationally

- Domestic Trade
  - 2.3 K tons exported
  - 10.5 K tons imported
  - 0 tons within

- International Trade
  - 4.9 K tons exported
  - 4.4 K tons imported
### National Freight Network - Highway

#### Primary Highway Freight System Routes

<table>
<thead>
<tr>
<th>Route Number</th>
<th>Start Point</th>
<th>End Point</th>
<th>Length (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I64</td>
<td>KY/WV State Line</td>
<td>I77</td>
<td>119.17</td>
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<tr>
<td>I70</td>
<td>OH/WV State Line</td>
<td>WV/PA State Line</td>
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<td>I77</td>
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<tr>
<td>I77</td>
<td>I64</td>
<td>WV/OH State Line</td>
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<td>I81</td>
<td>VA/WV State Line</td>
<td>WV/MD State Line</td>
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<td><strong>Subtotal</strong></td>
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<td></td>
<td><strong>285.73</strong></td>
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#### Primary Highway Freight System Intermodal Connectors

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<thead>
<tr>
<th>Facility ID</th>
<th>Start Point</th>
<th>End Point</th>
<th>Length (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WV6P</td>
<td>Cluster of Downtown Huntington Ports</td>
<td>Bridge to Ohio, US 60 EB, WV 527, WV 527NB, WV 152</td>
<td>7.88</td>
</tr>
<tr>
<td>WV8P</td>
<td>Cluster of Ports E of Huntington on Ohio</td>
<td>From I-64 (ex 15) W and N 3.6 mi on US 60, E 6 mi on WV 2 to port</td>
<td>8.98</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
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<td><strong>16.86</strong></td>
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#### Primary Highway Freight System Total Miles

**302.59**

#### Interstate Non-PHFS Total

<table>
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<th>End Point</th>
<th>Length (miles)</th>
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<tr>
<td>I68</td>
<td>I79</td>
<td>WV/MD State Line</td>
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<tr>
<td>I79</td>
<td>I77</td>
<td>WV/PA State Line</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>258.23</strong></td>
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## WV Freight Network Summary

### NHS Intermodal Connector Routes

<table>
<thead>
<tr>
<th>Facility ID</th>
<th>Facility Name</th>
<th>Facility Description</th>
<th>Length (Miles)</th>
</tr>
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<tbody>
<tr>
<td>WV6P</td>
<td>Cluster of Downtown Huntington Ports</td>
<td>From I-64 (ex 15) to US 60 to US 60 WB (one way pair) to a cluster of Riverports along the Ohio River in Huntington, WV; return to I-64 on WV 10 and US 60</td>
<td>7.90</td>
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<tr>
<td>WV5A</td>
<td>Tri-State Airport, Huntington</td>
<td>From U.S. 52/WV 75: SE 1.3 mi on Wayne CR 3/2, S 0.7 mi on Wayne SR3/1 to airport entrance</td>
<td>1.75</td>
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<tr>
<td>WV8P</td>
<td>Cluster of Ports E of Huntington on Ohio</td>
<td>From I-64 (ex 18) to WV 193 to WV 2 to a cluster of Riverports along the Ohio River in Huntington, WV</td>
<td>8.93</td>
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<tr>
<td>WV1A</td>
<td>Yeager Airport, Charleston</td>
<td>From I-77 (ex 99): NE 1.5 mi on SR 114, N 1.1 mi on CR 114/1 to airport entrance</td>
<td>2.48</td>
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<td>Connector Total</td>
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### Highway Network Routes

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<thead>
<tr>
<th>Route Number</th>
<th>Start Point</th>
<th>End Point</th>
<th>Length (Miles)</th>
<th>Begin Milepost</th>
<th>End Milepost</th>
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<tbody>
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<td>31.79</td>
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<td>Mall Rd</td>
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<td>0.00</td>
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<td>I79</td>
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<td>U340</td>
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<td>Interstate, US Route and State Route Total</td>
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<td>535.46</td>
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<td>n/a</td>
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### Urban Street Routes

<table>
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<tr>
<th>Route Number</th>
<th>Start Point</th>
<th>End Point</th>
<th>Length (Miles)</th>
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<tbody>
<tr>
<td>Mall Rd</td>
<td>-</td>
<td>-</td>
<td>0.08</td>
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</tbody>
</table>

**Total Urban Streets and Miscellaneous Ramps Total** 0.08

**Total Freight Network Routes** 535.54

### Rail Network Routes

**Route Miles** 2,485

### Top Ports

<table>
<thead>
<tr>
<th>Port Name</th>
<th>Domestic Tonnage</th>
<th>Foreign Tonnage Import</th>
<th>Foreign Tonnage Export</th>
<th>Total Tonnage</th>
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</thead>
<tbody>
<tr>
<td>Huntington Tristate, WV</td>
<td>46,831,097</td>
<td>0</td>
<td>0</td>
<td>46,831,097</td>
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### Domestic Waterway Routes

<table>
<thead>
<tr>
<th>River Name</th>
<th>Length (Miles)</th>
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<tbody>
<tr>
<td>OHIO RIVER</td>
<td>274</td>
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</table>
STUDY OVERVIEW

FREIGHT NETWORK

FREIGHT ISSUES/NEEDS

PRIORITIZATION FRAMEWORK
Freight Needs - Survey

- Developed from surveys
  - 38% response rate
  - Safety, economic development, and congestion were the highest priorities
- Previous Statewide Plans
- MPO Plans
Project Eligibility - FAST Act

- Potential Projects Include:
  - Construction, reconstruction, rehabilitation, and land acquisition
  - Intelligent Transportation Systems (ITS), including freight ITS
  - ITS and other technologies for intermodal facilities
  - Ramp metering
  - Real-time information systems
  - Electronic screening and credentialing
  - Shoulder widening
  - Rail-highway grade separation
  - Geometric design improvements
  - Truck-only lanes
  - Runaway and truck climbing lanes
  - Truck parking facilities
  - Traffic signals
  - Work zone management
  - Project development activities
  - Environmental mitigation related to freight impact
Freight Needs - Performance Data

- **Freight Reliability**
  - Truck Travel Time Index (TTTI)
  - Planning Time Index (PTI)
  - Congested Hours
  - Truck Travel Speeds
Freight Needs - Projects

- Highway
- Railroad
- Waterway
- Pipeline
- Air

Legend:
- Freight Projects
- Freight Network
- National Freight Network - Highway
- Major Roads
STUDY OVERVIEW

FREIGHT NETWORK

FREIGHT ISSUES/NEEDS

PRIORITIZATION FRAMEWORK
Project Prioritization

- Prioritize Projects
- Excel based ranking tool
- Tailored to WV
- Utilizing weighting schemes and priorities
- Assumptions
  - Highway centric
  - Quantitative vs. qualitative

<table>
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<th>No.</th>
<th>Themes - Tier 1</th>
<th>Measures - Tier 2</th>
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<tr>
<td>1</td>
<td>Operations</td>
<td>AADT</td>
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<td>Truck %</td>
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<tr>
<td></td>
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<td>TTI</td>
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<tr>
<td></td>
<td></td>
<td>PTI</td>
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<tr>
<td>2</td>
<td>Modal Options</td>
<td>Connectivity to National Freight network</td>
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<tr>
<td></td>
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<td>Connectivity to Other Modes</td>
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<tr>
<td></td>
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<td>Connectivity to Freight Facilities</td>
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<td>3</td>
<td>Environmental Stewardship</td>
<td>Coal Mines</td>
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<td></td>
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<td>Turbine Farms</td>
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<tr>
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<td>Power Plants</td>
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<td>4</td>
<td>Safety</td>
<td>Total no. of Crashes</td>
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<tr>
<td></td>
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<td>No. of trucks involved</td>
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<td>5</td>
<td>Economic development</td>
<td>Freight demand (FAF)</td>
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<td>6</td>
<td>Financial</td>
<td>Benefits</td>
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### Project Prioritization

#### Economic Vitality

<table>
<thead>
<tr>
<th>Rank</th>
<th>Project</th>
<th>ID</th>
<th>Type</th>
<th>Funding Request ($)</th>
<th>Cumulative Funding Request ($)</th>
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<tr>
<td>1</td>
<td>Project E</td>
<td>5</td>
<td>Multimodal</td>
<td>$10,000,000</td>
<td>$10,000,000</td>
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<td>2</td>
<td>Project J</td>
<td>10</td>
<td>Roadway</td>
<td>$20,628,000</td>
<td>$30,628,000</td>
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<td>Project A</td>
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<td>Roadway</td>
<td>$378,900</td>
<td>$31,006,900</td>
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<td>4</td>
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<td>9</td>
<td>Roadway</td>
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<td>6</td>
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<td>9</td>
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<tr>
<td>10</td>
<td>Project F</td>
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</table>

#### Ranking by Scenario

<table>
<thead>
<tr>
<th>ID</th>
<th>Project</th>
<th>Project Type</th>
<th>Funding Request ($)</th>
<th>Rank By Scenario</th>
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<tbody>
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<td>Roadway</td>
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<td>2</td>
<td>Project B</td>
<td>Roadway</td>
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<td>9, 9, 9, 8</td>
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<td>7, 7, 6, 5</td>
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<td>Project H</td>
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<td>Project J</td>
<td>Roadway</td>
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Next Steps

- Freight Plan under review
- Finalize Freight Plan by December 4th
- Finalize Project Prioritization
- Finalize freight project list/Freight Investment Plan
- Develop Planning Framework
West Virginia State Freight Plan

http://www.transportation.wv.gov/highways/programplanning/Pages/default.aspx