



NORTH CAROLINA

Department of Transportation



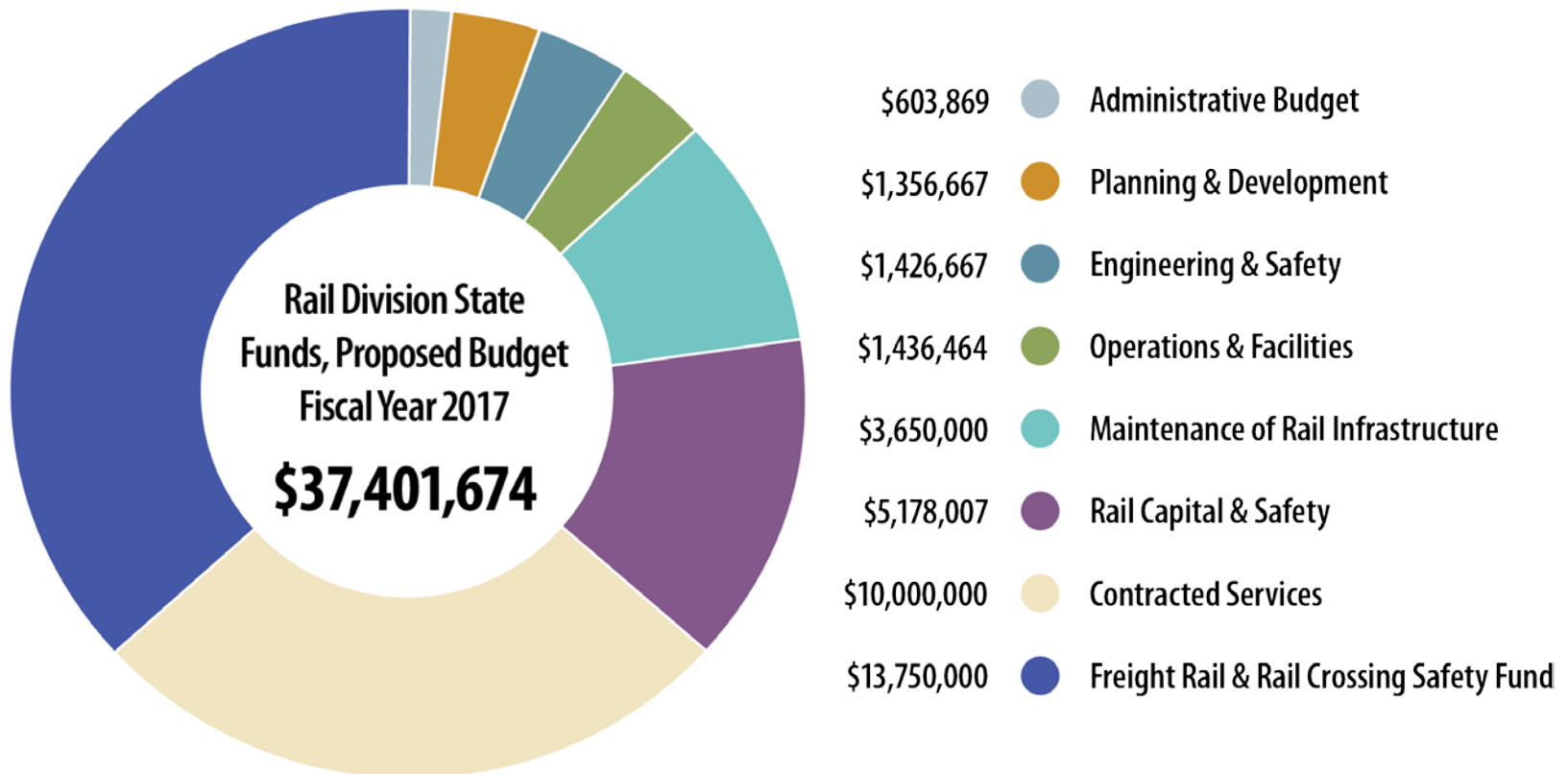
Rail Division

Paul Worley

Rail Division Director

March 22, 2017

Rail Division – 2017 State Funding \$37,401,674



Six Additional Federal Funding Sources

Section 130

Annual allocation, public rail/highway at-grade crossing projects

CMAQ (Congestion Mitigation & Air Quality Improvement)
Improvement projects based on selection

HSIP (Highway Safety Improvement Program)
Crossing Safety Projects based on selection



Relocated Spring Street crossing improves safety in Old Fort

SP&R (State Planning and Research Funds)
Studies, modeling and crossing safety database

TIGER (Transportation Investment Generating Economic Recovery)



Meherrin River Bridge on NCVA will be modernized with TIGER grant

FASTLANE (Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies)
Rail infrastructure improvements, competitive grants

Railroads Operate in 86 NC Counties

**2**

Class I
Railroads
2323 miles

20

Short Line
Railroads
956 miles

14

State-owned
Corridors
109 miles

6

Daily
NCDOT
Trains

8

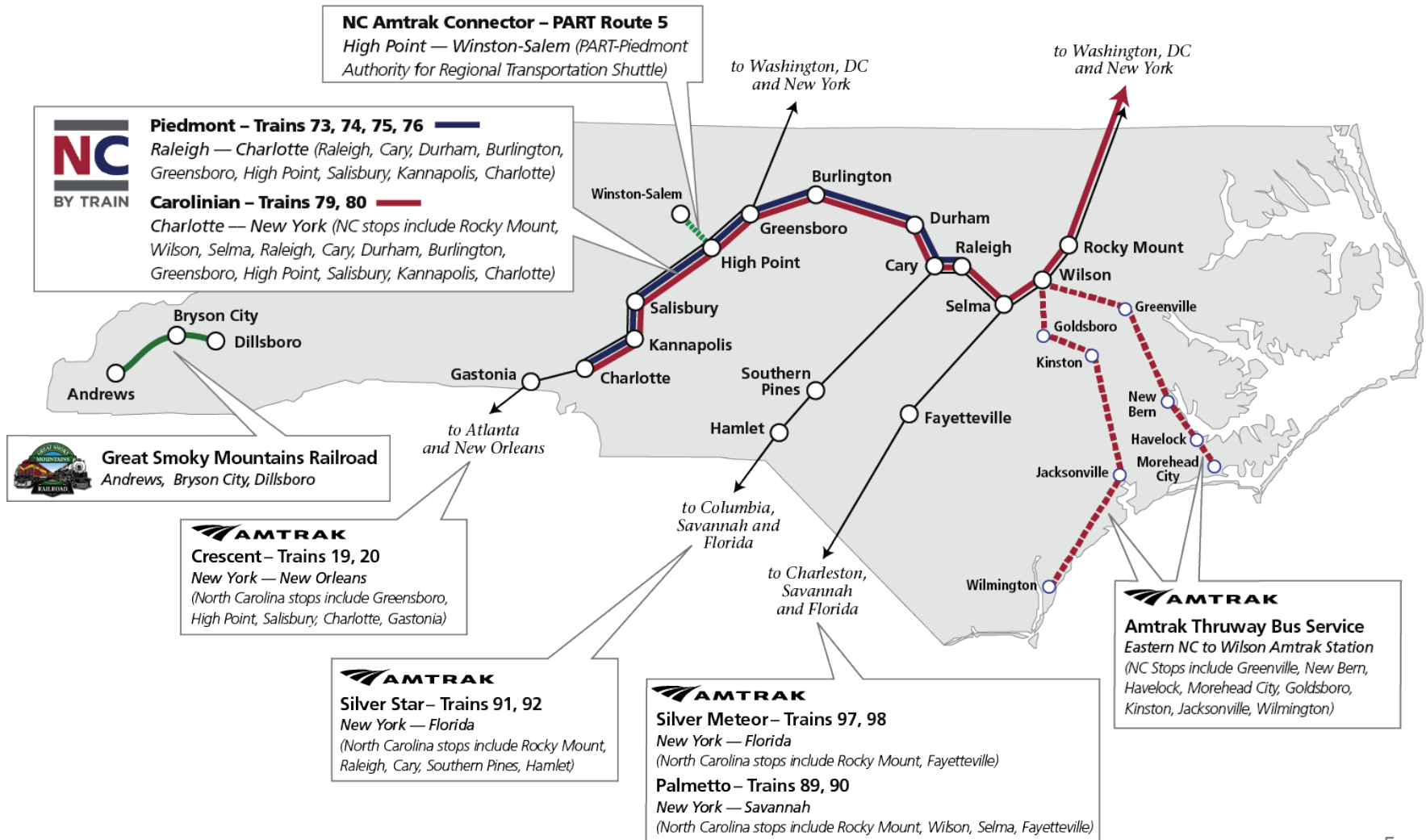
Daily
Amtrak
Thru-
Trains

Direct Economic Impacts for Freight and Passenger Rail in North Carolina – \$1,875M

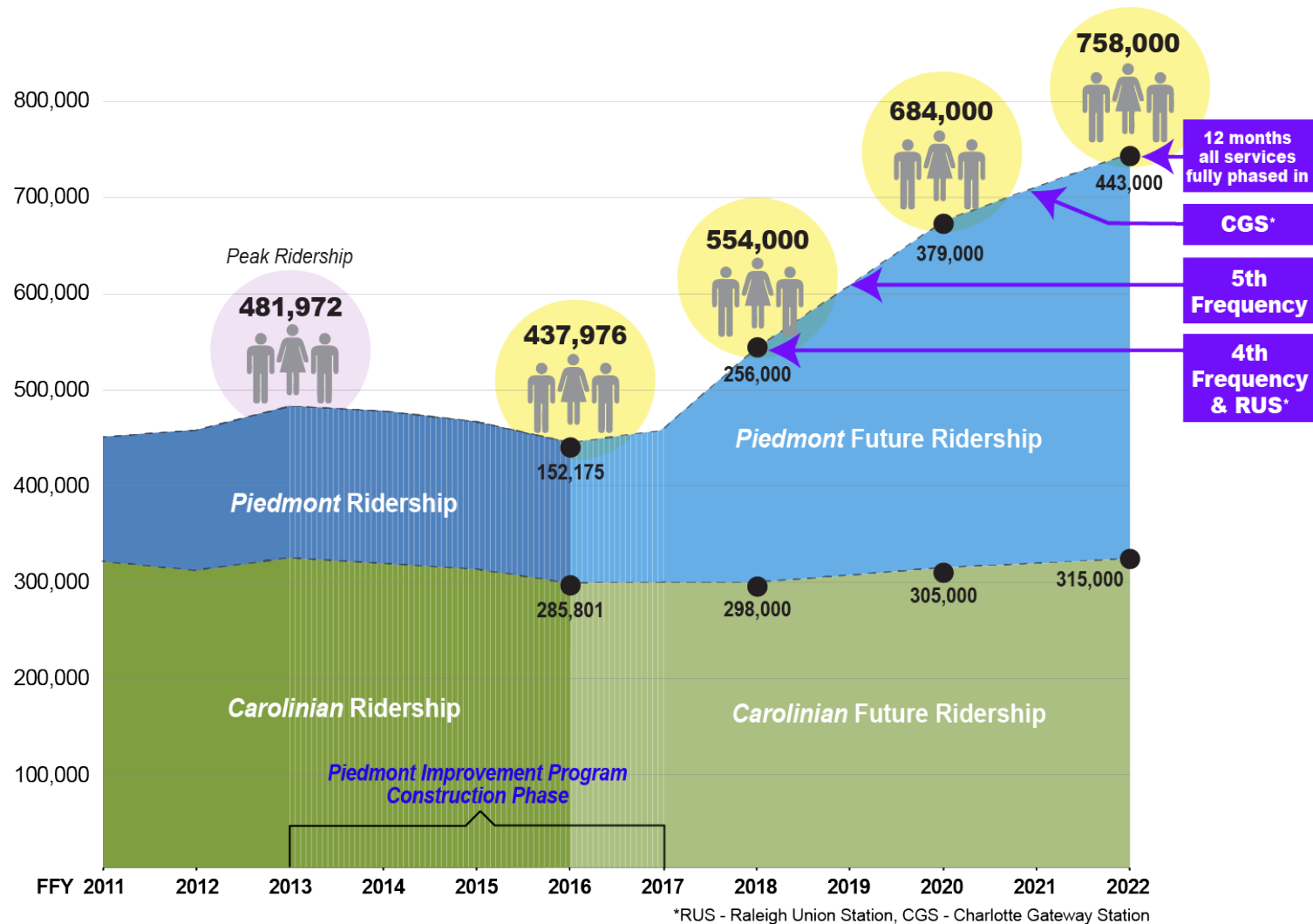
Freight – \$1,754M, Passenger – \$121M

Source: North Carolina Comprehensive State Rail Plan, 2015

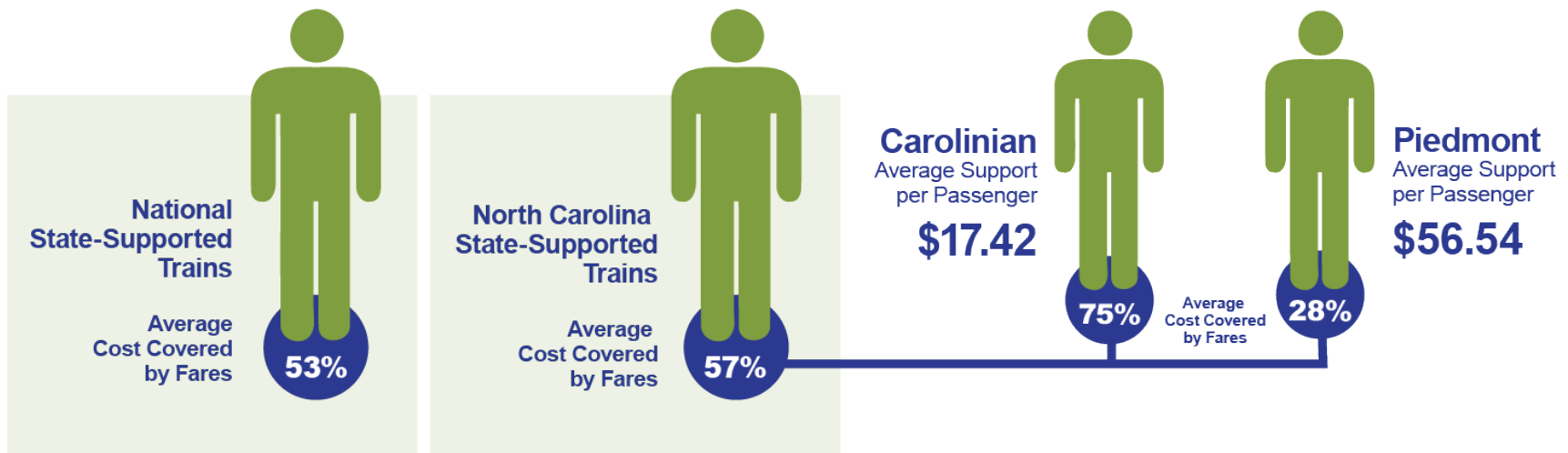
Passenger Train Service in NC



Piedmont and Carolinian Annual Ridership FFY 2011-2022



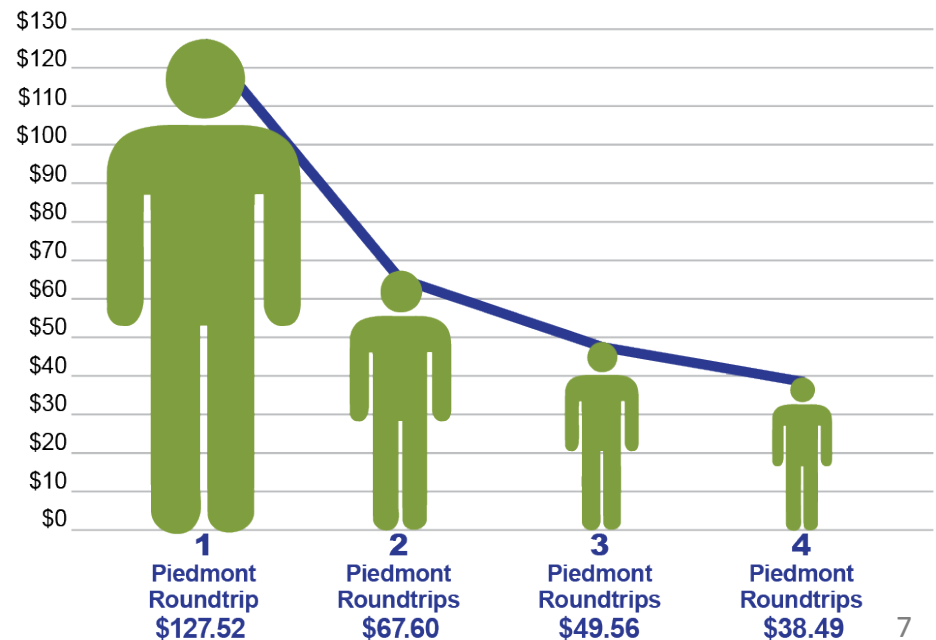
FFY 2016 Farebox Recovery



Looking Ahead to FFY 2020:

Impact of Frequencies on Per Passenger Cost Support

- Charlotte Gateway Station not yet open
- Includes passengers regained after PIP-related delays and annulments no longer an issue



Passenger Train Operation Costs – Current Service*

	SFY 2016 Expenditures	SFY 2017 Projected Expenditures	SFY 2018 Projected Expenditures**
Carolinian Costs	\$5,073,153	\$4,423,959	\$4,132,468
Piedmont Costs	\$10,681,850	\$11,075,801	\$11,358,303
Shared Costs	\$1,511,831	\$1,460,827	\$1,479,351
Subtotal: Actual State Operations Expenditure	\$17,266,834	\$16,960,587	\$16,970,122
Operations Contingency	\$0	\$432,431	\$532,990
Total	\$17,266,834	\$17,393,018	\$17,503,112

Cost Drivers

- New §209 forecast baseline (vs. 2014)
- Revenue declines (PIP & fuel prices)
- Insurance coverage mandate (\$295M vs. \$200M)

*Table includes estimates of cost savings on next page:

- CLT Yard Crew
- Station Optimization
- Carolinian contract estimate corrections


* SFY 2018 Numbers do not include RUS lease payment

Amtrak Contract Challenges – Cost Saving Measures

Cost Reduction	Description	FFY	Expected Savings	Status
Amtrak Yard Crew CLT Optimized	Eliminated one Amtrak crew by using Cab Units	2016	(\$135,000)	Completed
Staffing Optimization	Elimination of nine Amtrak positions at NC stations	2017	(\$561,000)	Completed
Carolinian Contract Estimate	Amtrak adjustments in estimating \$209 costs for <i>Carolinian</i>	2017	(\$672,000)	Completed
Subtotal			(\$1,419,000)	
Carolinian as NST	Extend 79/80 to New Haven, CT; add to National System. eliminate \$209 allocated costs; additional revenue	2018	(\$4,166,051)	Under evaluation
System Safety	System Safety Plan and responsibility required by FRA	2018	Unknown	Under evaluation

- Amtrak contract – Based on projected costs, not actual
- Biennial Budget – Historically have negotiated down to current costs

Amenities to Boost Ridership and Revenue

Service	Starts	Offering
Premium Wi-Fi	10/16	Higher bandwidth options for extra fee 
Last Mile Connections	3/18/17 TBD Ongoing Ongoing	<ul style="list-style-type: none"> • Pass to transfer to public transportation, no cost to passenger, leverages existing resources • Zip Car rental trials at Cary and Durham Stations • Uber & Lyft service at stations being negotiated • Bicycle & pedestrian enhancements at all stations 
Onboard Services – in negotiations with vendor	TBD	<ul style="list-style-type: none"> • Enhanced Food & Drink – NC Beers, Wine, Specialty Coffees, Snacks • Bike Share Program • Special Events – Concerts, Museums, Sporting Events
Partnerships – NC Military & Veterans Affairs	Ongoing	<ul style="list-style-type: none"> • Four VA Hospitals – Salisbury, Durham, Charlotte, Winston-Salem • 10% discount for active military
Travel Packages available	Ongoing	NC destinations along route
New Stations: Harrisburg, Lexington, Hillsborough	TBD	Additional riders and connections

Marketing Focus

- Pre 4th Frequency – Millennials and Seniors
- Post 4th Frequency – Business Travelers and Families

Piedmont Improvement Program wraps up this year



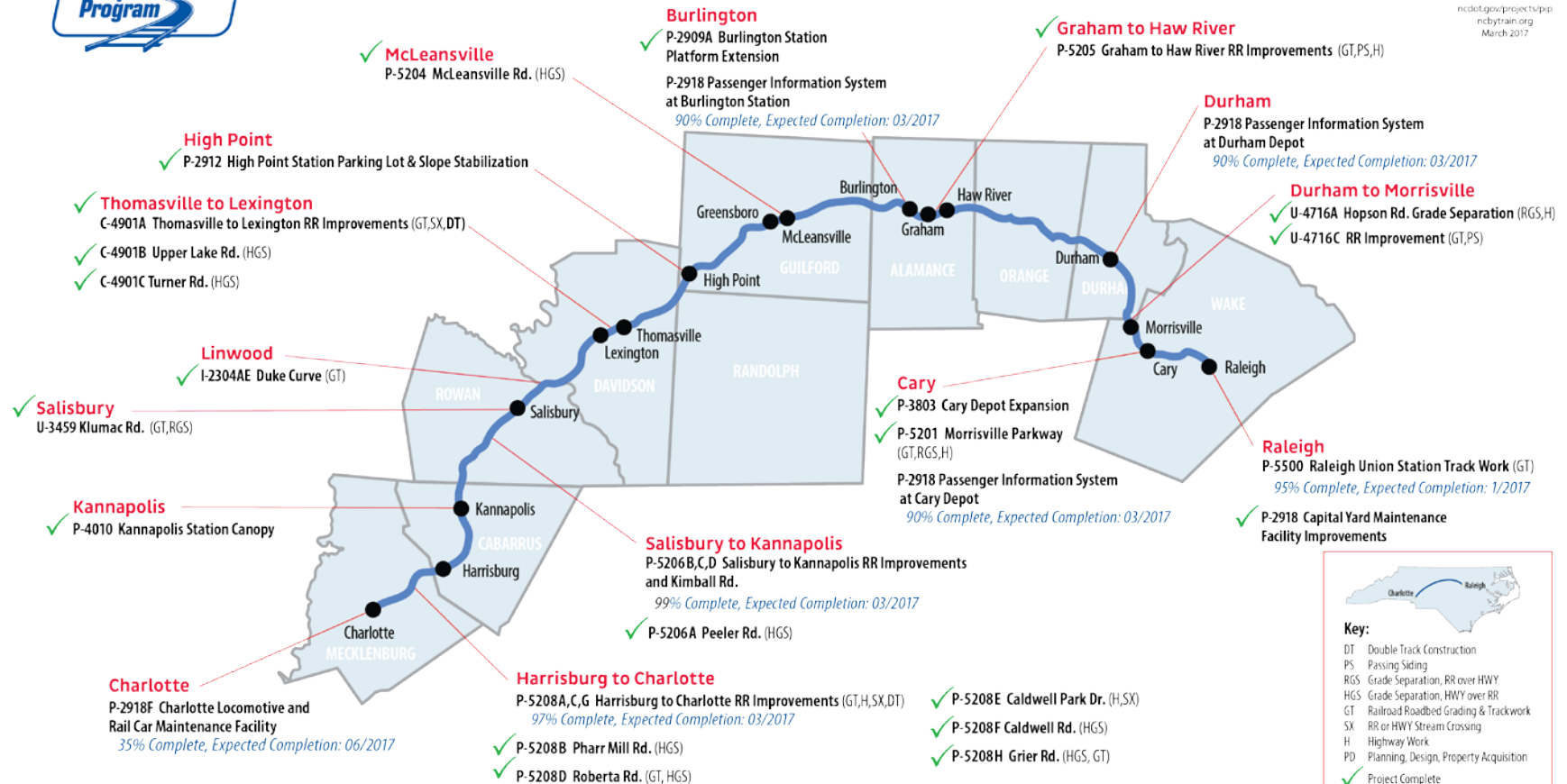
- One of the largest single improvements to NC rail infrastructure in modern times
- Results – safe, high capacity corridor connecting the key population centers in NC for freight and passenger service
- \$520 million ARRA grant from FRA
- Funds must be expended by September 30, 2017
- NCDOT Ongoing Responsibilities:
 - Operate second and third *Piedmont*
 - Maintain equipment, facilities and track



ncdot.gov/projects/pp
ncbytrain.org
March 2017



Piedmont Improvement Program



Note: % is NCDOT Contract Completion percentage



NC By Train – Piedmont Equipment ✓ 5 Locomotives ✓ 2 Cab Control Units ✓ 12 Railcars

2 Additional Cab Control Units from non ARRA funding*

PIP Projects Status

\$468.9M of \$520M Spent

Completed Projects

- ✓ **Track & Structures**
 - 16 miles of second main track
 - 5 miles of passing sidings
 - 12 new roadway grade separations
 - 39 at-grade crossings closed
 - 5 new double crossover control points
 - Curve improvements
- ✓ **Piedmont Equipment**
 - 5 locomotives, 2 cab control units
 - 12 rail cars
- ✓ **Stations**
 - Improvements at Cary, Burlington, High Point, Kannapolis
- ✓ **Facilities**
 - Capital Yard Maintenance Facility Expansion

All Work is Under COFinal Projects Nearing Completion*

- Last 11 miles of second main track
- Passenger Information Display Systems (PIDS) at Cary, Durham, Burlington stations (Amtrak will activate at later date)
- Phase I of Charlotte Locomotive and Railcar Maintenance Facility
- Track work for Raleigh Union Station

* All work is under contract. When these projects are finished, all ARRA-funded Piedmont Improvement Program projects will be complete.

PIP Service Outcomes

Improvement	Responsible Party	Agreed Upon Obligations	Benefit
<i>Piedmont</i> 3 rd and 4 th Frequency; Capacity for 5 th	NCDOT	Fund <i>Piedmont</i> 3 rd & 4 th Frequencies Operations	Additional <i>Piedmont</i> riders/statewide mobility
Locomotives & Cars	NCDOT	Maintain in state of good repair for 20 years	New equipment for additional train service
Stations, Platforms & Facilities	Varies	Maintain facilities in state of good repair for 20 years	Stations support existing riders and attract new riders
Track & Signals	NS (Owned by NCRR)	Maintain to FRA Class IV (79 MPH)	Capacity and safety improvements
Capacity & Reliability	NS	Better than 80% on-time performance, allow up to five state-supported trains Raleigh to Charlotte	More reliable and car competitive service

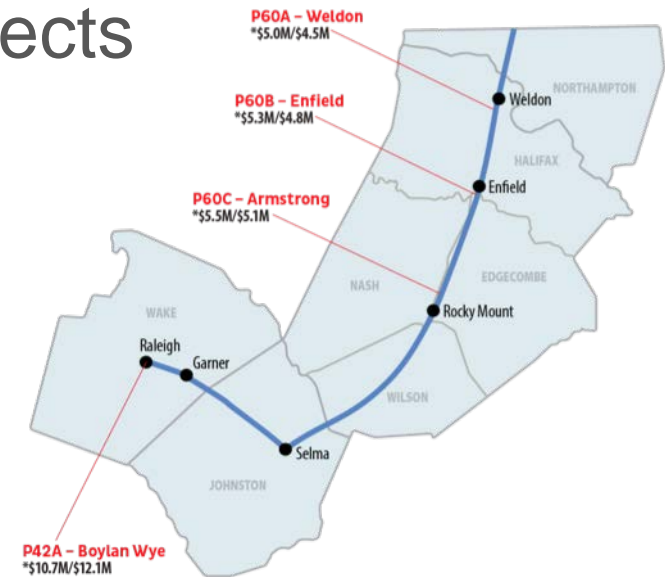




PIP-Related Projects

A-Line Crossovers, Rocky Mount – Weldon, *completed*

- \$26.5M Congestion Mitigation grant (ARRA)
- Improves traffic flow on CSX A-line – faster trains to move around slower trains



Sugar Creek Road Grade Separation, Charlotte, *under construction*

- Constructing highway bridge over NCRR main line tracks and CATS Blue Line Extension
- One of the busiest crossings on the NCRR Corridor



Raleigh Union Station Update

- NCDOT and City of Raleigh aligned needs, plans and funding
- Will accommodate current and future demand for intercity passenger rail, commuter rail, buses, taxis, bicycles
- Construction began January 2016, scheduled to open February 2018



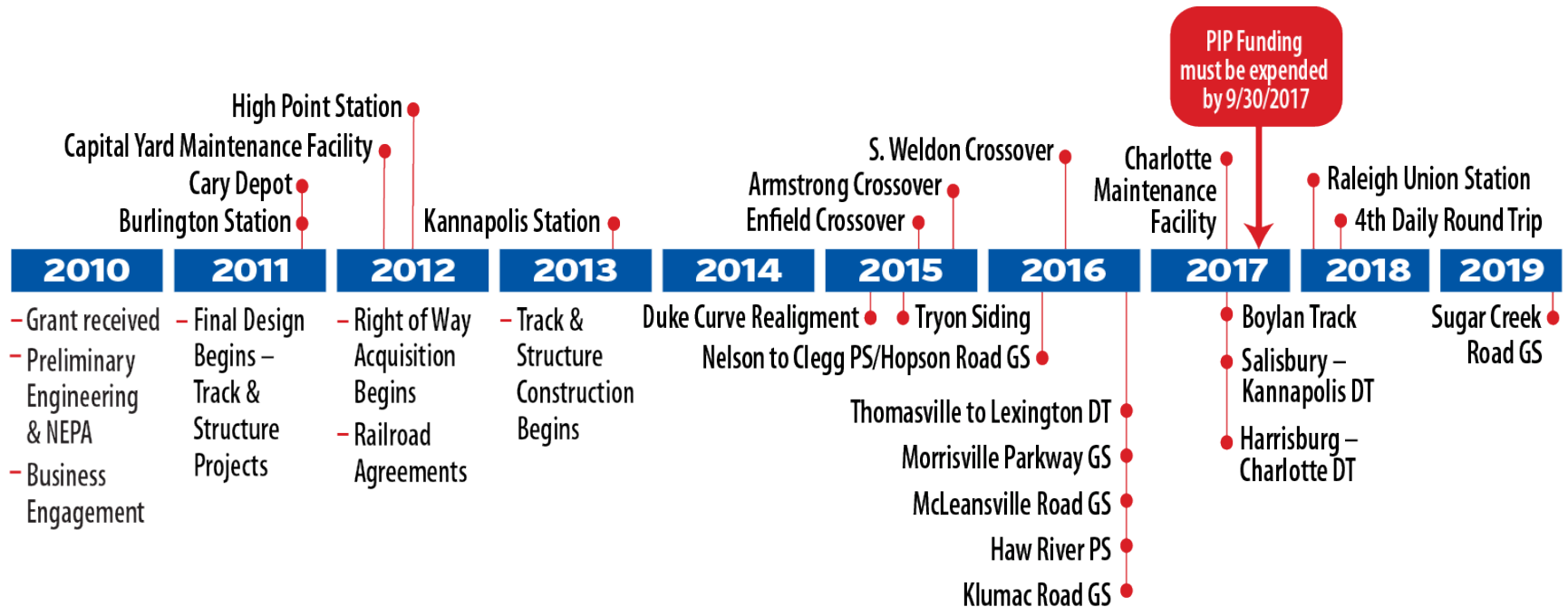
Charlotte Gateway Station Update

- Partnership – NCDOT, the City of Charlotte and USDOT
- Station track and structures funding:
 - \$25M Federal TIGER grant to City of Charlotte (2015)
 - \$27M State STI funding, more local funding being sought
- City pursuing phased approach to advance the project and relocate Amtrak service to downtown ASAP
- City will launch a P3 procurement, seeking private development partners to design and construct permanent passenger/multi-modal station

*Charlotte Gateway Station Visualization
One Possible Option*



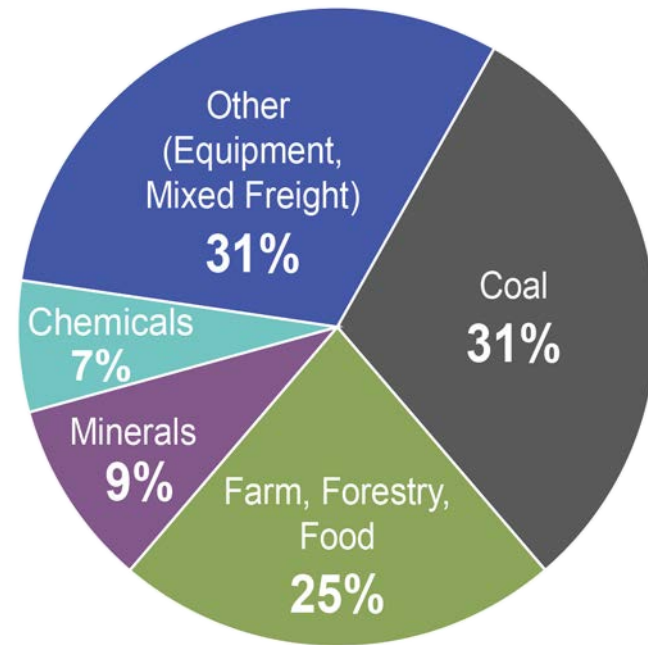
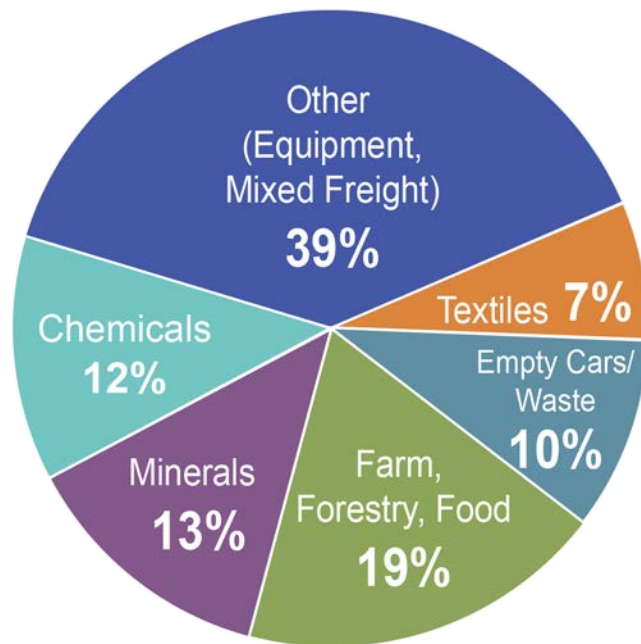
Delivering PIP & Related Projects



Freight Rail Traffic – 2014

3% increase from 2013-2014 in total carloads originating in NC

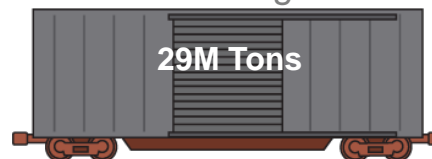
4% increase from 2013 in total carloads terminating in NC



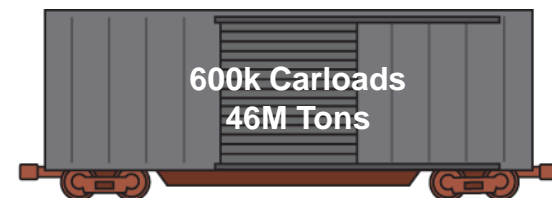
Originated in NC



Traffic through NC

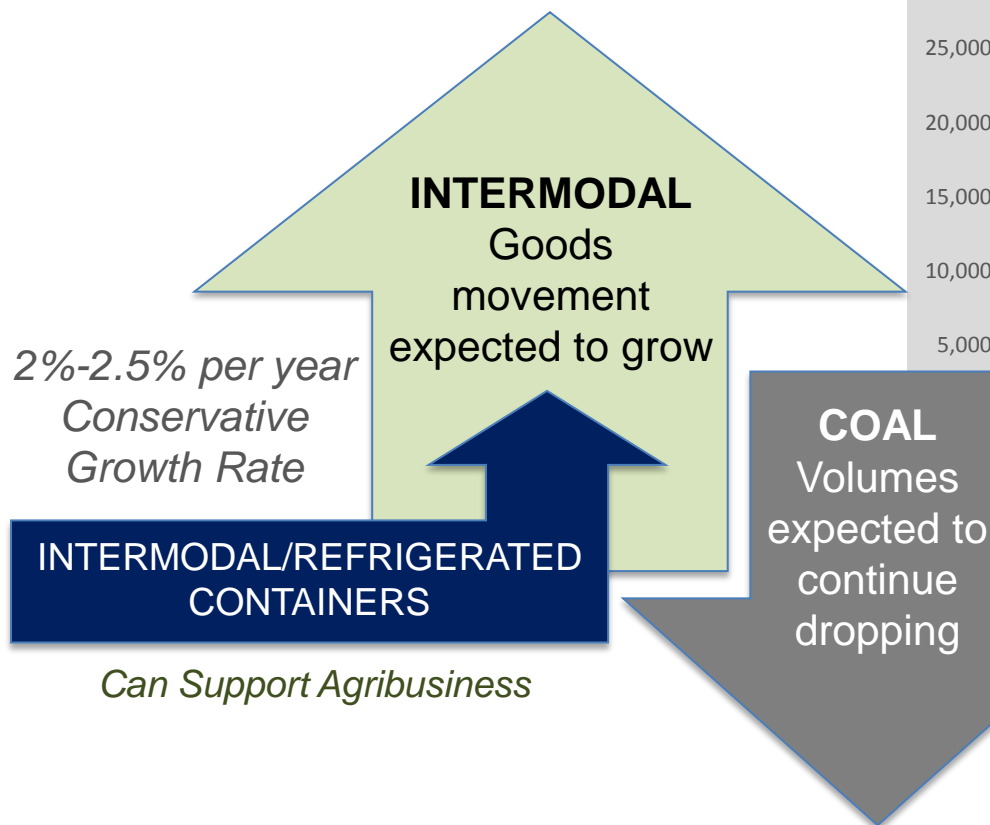


Terminated in NC

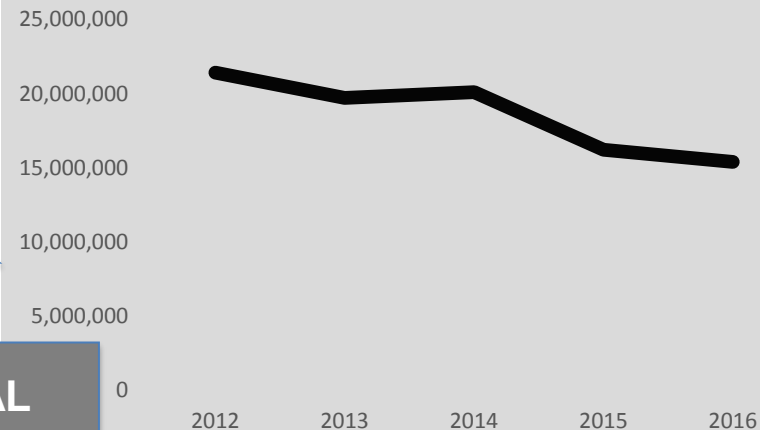


Rail Traffic Trends

- Class I railroads continue to see declining traffic volumes, even in current economic expansion, which is an anomaly
- Considering these conditions, the industry is still maintaining revenues

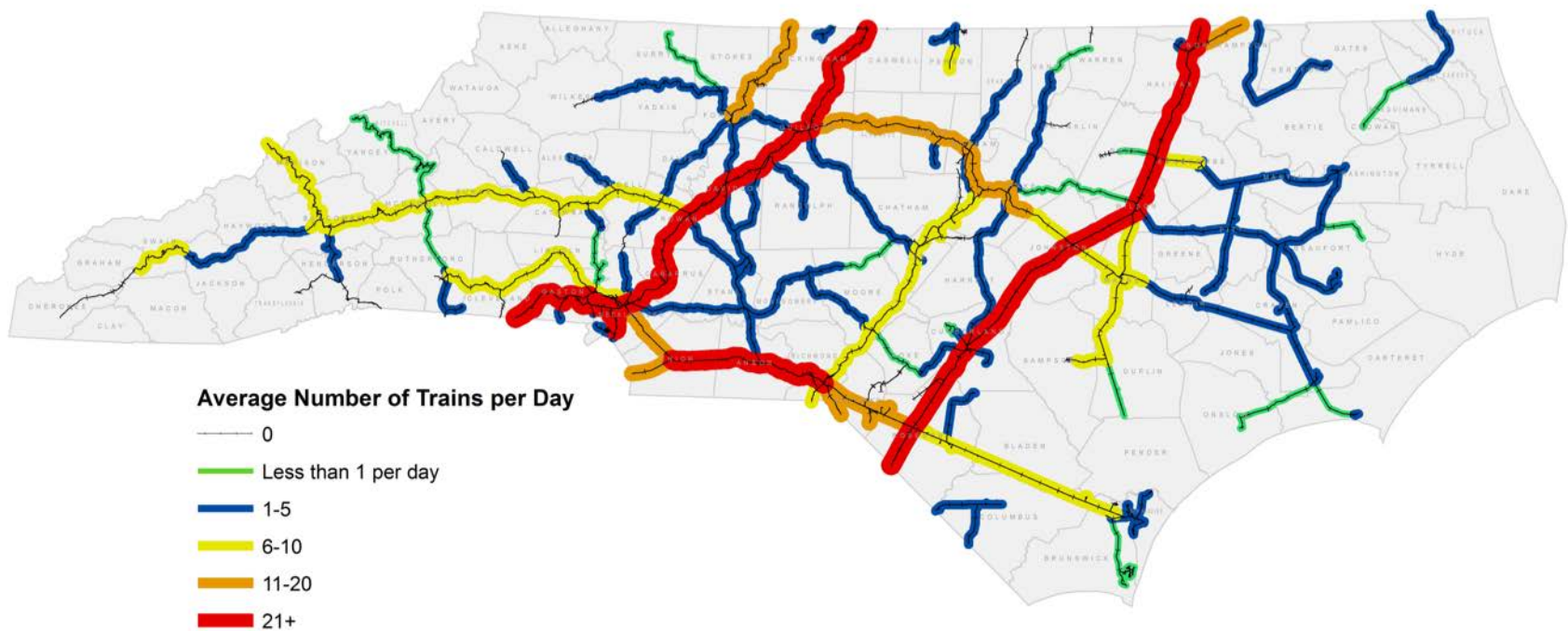


Coal Consumption (Tons)



2016 Train Volumes in North Carolina

- Dominant freight volumes move north and south on Class I Railroads
- Class I branch lines and short lines provide NC east-west access to the Class I systems





Freight Rail & Rail Crossing Safety Improvement Fund (FRRCSI)

\$40.45M Allocated since 2014

NCGS § 124-5.1

- \$3.75 M funded annually by North Carolina Railroad (NCRR) cash dividends
- \$15.45M – SFY 2014 (NCRR-additional allocation)
- \$10M – SFY 2017 (General Assembly)

Program Goals:

- Improve safety
- Modernize infrastructure
- Increase freight capacity
- Support economic development
- Divert freight to rail





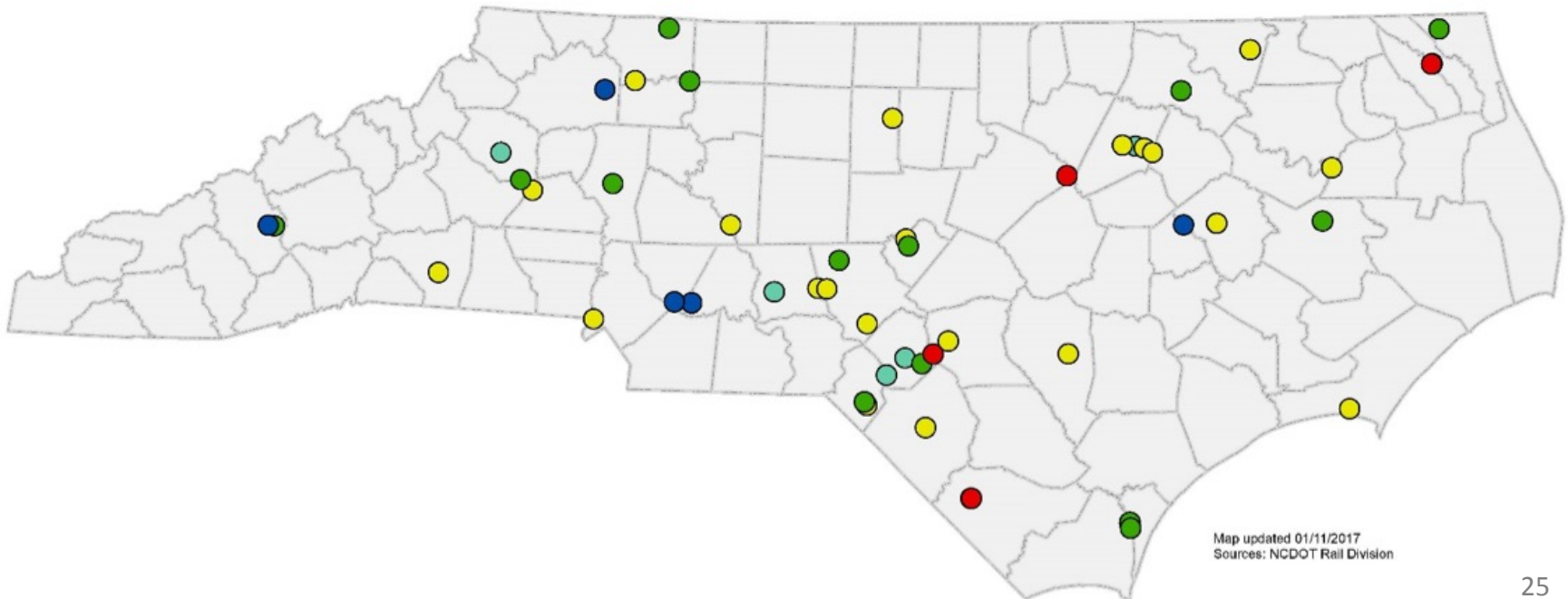
Modernizing Track Supports Economic Development

Rail Industrial Access Program (RIAP)

- 6 projects, 1,800 jobs created since 2014
- \$1.13M leveraged by \$11.1M in private rail spur investments

Short Line Infrastructure Assistance Program (SIAP)

- 32 projects, 42 counties since 2014
- \$11.81M in matching funds for safety and reliability





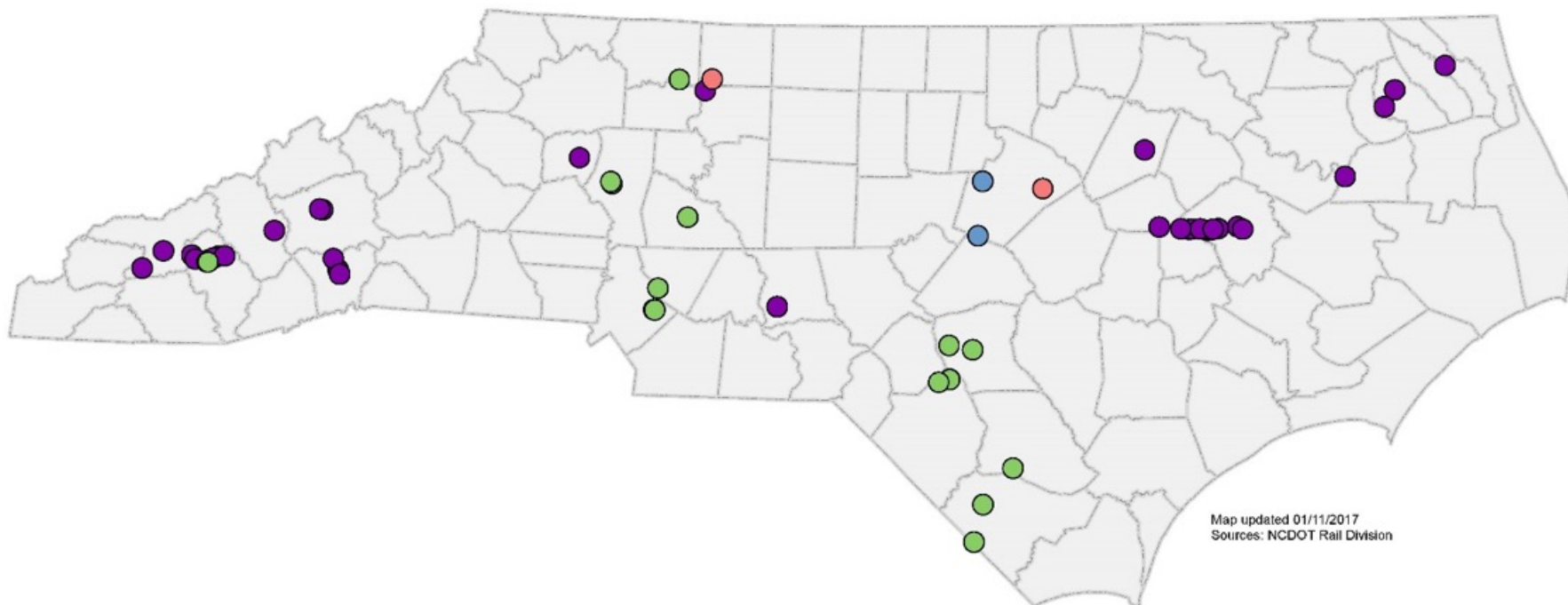
Making Railroad Crossings Safer

Crossing Consolidation & Assistance

- 27 projects – \$11.124M

Crossing Surfaces

- 62 projects – \$2.524M





FY 2017 FRRCSI Funding Update

40 projects approved by NCDOT Board of Transportation

- Freight Projects – rehabilitate bridges for 286K carloads
- Economic Development Projects – add carloads to NC's rail network (diverting from highways) and develop industrial infrastructure
- Safety Projects – consolidate and improve crossings, eliminate rail-highway hazards





Supporting Rail Capacity at Ports

- Additional track capacity for new service between Port of Wilmington and Charlotte CSX Intermodal Facility in Charlotte – construction begins spring 2017
- Enviva wood pellet exporting facility in Wilmington – completed, 140% growth in wood pellets industry between 2010-2015; serving European power generation



Port of Morehead City – New high-capacity transloading equipment at Morehead City will improve efficiency of loading agricultural products



Port of Wilmington – Improvements to the track layout within port improve efficiency

Projects Supporting Connectivity

- **Queen City Express** – Port of Wilmington to CSX Charlotte Intermodal Terminal
 - C-5600B Siding Extension in Laurinburg, Scotland County
Funded by FHWA CMAQ Funds
 - Near Term NCDOT and NC Ports investigating immediate infrastructure needs to build initial trains
 - Mid Term NCDOT preparing a study to look at rail needs for Port of Wilmington – Due mid 2017
- **Pembroke Connector Track** – Robeson County, construction underway
 - 2.4-mile railroad connection between CSX's main north-south line and line serving Wilmington industries and the port
 - Provides direct moves for trains between north and east
- **Additional projects may come out of the CCX Regional Freight Master Plan** – to be completed April 2017; final report July 2017

Carolina Connector Intermodal Terminal (CCX)

- **\$270M** state-of-art terminal and freight rail infrastructure – will pull together various NC transportation systems and serve as a global logistics resource
- Improves access to domestic and international markets
- Scheduled to open September 2019

149

Terminal Jobs

8,000 to 20,000

Induced Jobs in Region

Up to **1,500** Jobs

Directly Related to Terminal



Visualization of future CCX facility in Rocky Mount, NC

Carolina Connector Intermodal Terminal (CCX)

Project demonstrates NC's commitment to move freight and goods

- CSXT will invest \$150M
- State will invest \$100M through STI P4.0 award
- State Intermodal Tax Credit - \$7.8M over 10 years
- Pavement maintenance, shipping, congestion, emissions, accident savings – takes 19M truck miles off roads over next 30 years:
 - \$310M in North Carolina
 - Almost \$1.8B Nationally



Team Effort:



