

INVESTMENTS FOR GROWTH AND PROSPERITY

NORFOLK SOUTHERN IN THE NATIONAL CAPITAL REGION

Metropolitan Washington Council of Governments

National Capital Region Transportation Planning Board

Freight Subcommittee Meeting

September 6, 2018

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Director, Public Projects

Norfolk Southern Corporation

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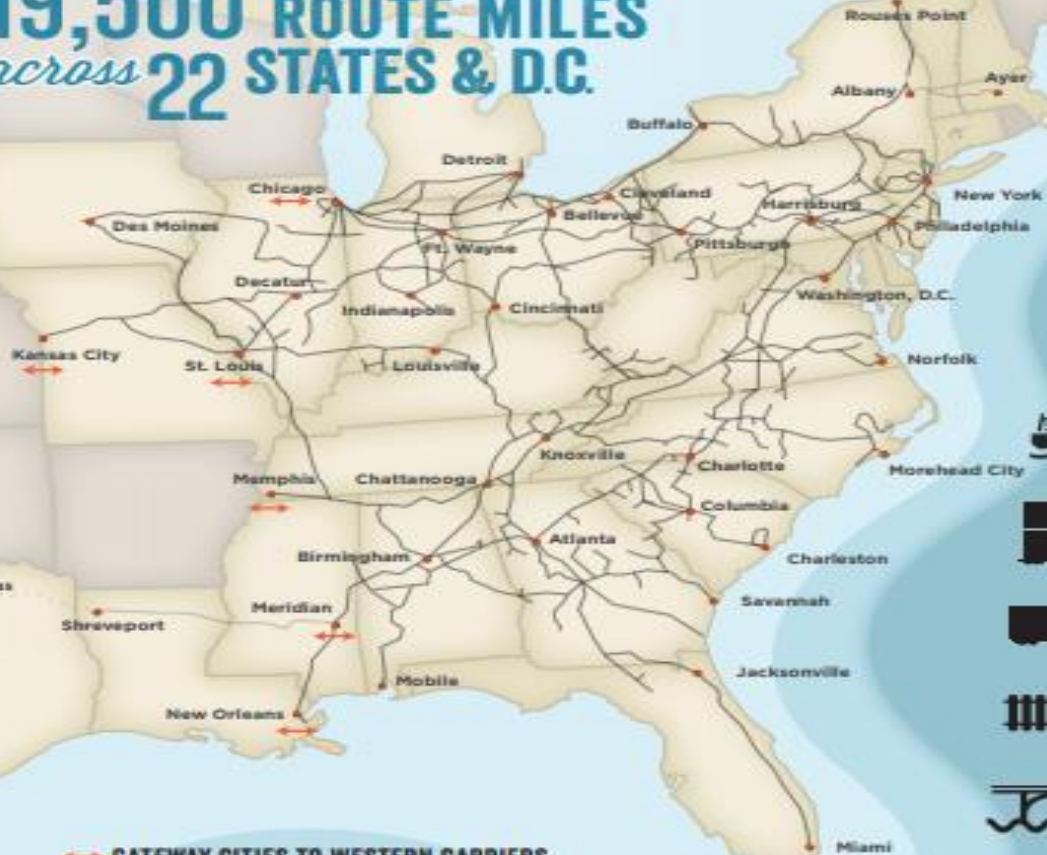
Norfolk Southern Corporation



About NORFOLK SOUTHERN



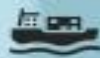
19,500 ROUTE MILES
across **22** STATES & D.C.



↔ GATEWAY CITIES TO WESTERN CARRIERS

MAKING CONNECTIONS

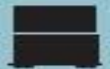
Norfolk Southern (NYSE: NSC) has served the freight transportation needs of America for nearly two centuries, connecting businesses and communities to the marketplaces of the world — creating jobs, supporting economies, and transporting goods on safe, environmentally friendly rail.



43 PORTS SERVED



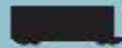
61 AUTOMOTIVE FACILITIES SERVED



55 INTERMODAL TERMINALS



154 TUNNELS



62,700 FREIGHT CARS



250 SHORT LINE CONNECTIONS
Adds 20,000+ miles to NS network



CONNECTS
with Western rail carriers



4,155 LOCOMOTIVES



9,706 BRIDGES



41 RAIL-TRUCK TRANSFER FACILITIES

DELIVERING FOR AMERICAN INDUSTRY AND CONSUMERS

NS trains transport auto parts and finished vehicles, lumber to build homes, coal to generate electricity and manufacture steel, food on grocery store shelves, grain for poultry and livestock farmers, and a host of other products essential to households, businesses, and industries.

METALS &
CONSTRUCTION
10%

AGRICULTURE
8%

CHEMICALS
6%

PAPER, CLAY
& FOREST
4%

COAL
15%

INTERMODAL
52%

AUTOMOTIVE
5%

7.6 MILLION
TOTAL CARLOADS



SUPPORTING ECONOMIES & COMMUNITIES

Economic Impact



27,100 EMPLOYEES

\$2.2 BILLION
PAYROLL



\$121,000
ANNUAL AVERAGE EMPLOYEE
WAGE & BENEFITS

\$5.2 BILLION
PURCHASES & PAYMENTS



\$930 MILLION
LOCAL, STATE & FEDERAL
TAXES PAID

\$1.7 BILLION

NS-FUNDED CAPITAL INVESTMENTS
(locomotives, freight cars, tracks
and bridges)

Business Magnet

ATTRACTING ECONOMIC GROWTH

75 INDUSTRIES
NS HELPED
LOCATE & EXPAND

\$1 BILLION
IN CUSTOMER
INVESTMENTS

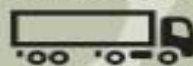
2,000 JOBS
CREATED

Extensive Network Reaches Over

50% OF U.S. Population,
MANUFACTURING & ENERGY CONSUMPTION

Greener for the Globe

RAIL'S ENVIRONMENTAL ADVANTAGES



1 TRAIN = 280 TRUCKS

NS TRAINS GET 410 MPG PER TON

Safety is our No. 1 Priority

COMMUNITY EDUCATION & OUTREACH



8,100 FIRST RESPONDERS
TRAINED

WHEN YOU SEE TRACKS, THINK TRAIN!

EXPECT A TRAIN ON
ANY TRACK AT ANY TIME.



OPERATION
LIFESAVER®
Look, Listen & Live



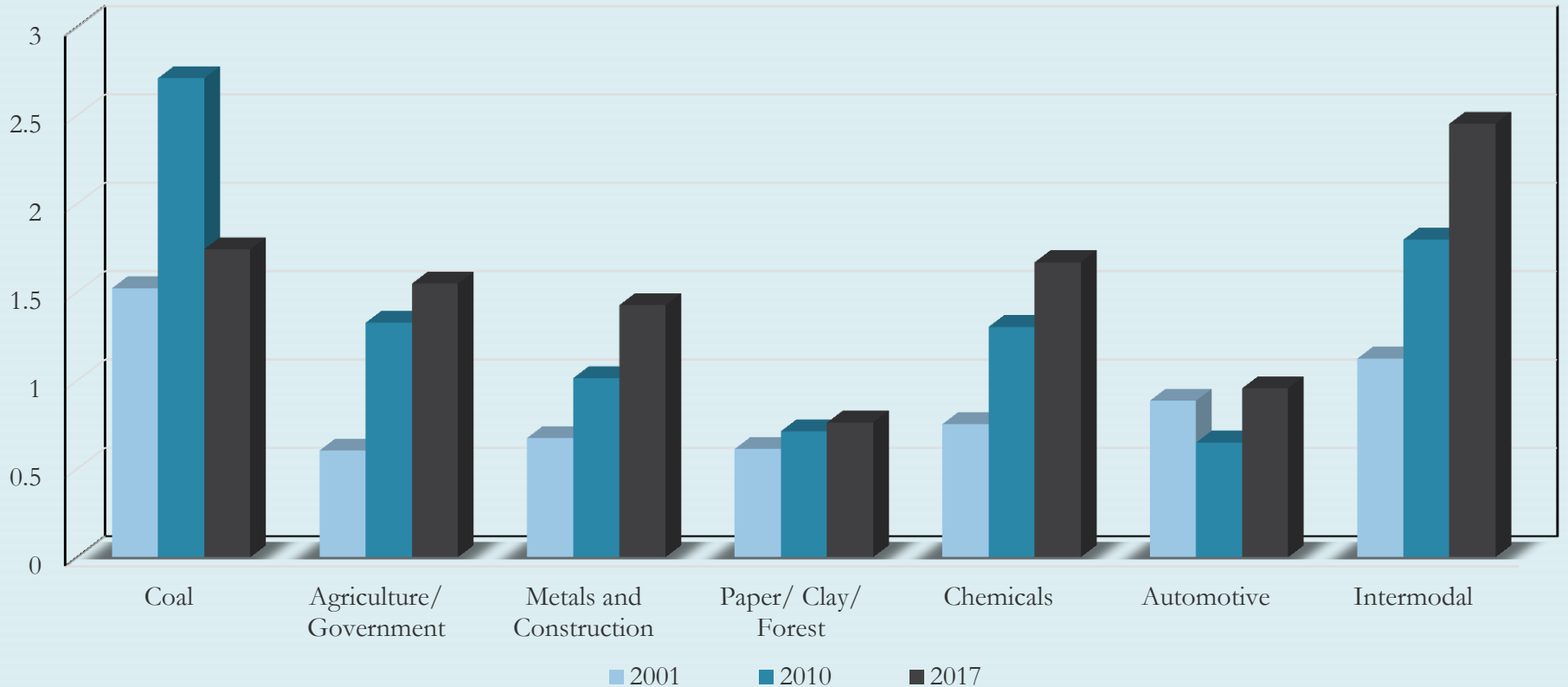
Charitable Giving

NS FOUNDATION | 2013-2017



2017 DATA

NS REVENUE BY COMMODITY





9135

NS

09-40CW

2017 Investments

ROADWAY
*track maintenance,
repairs, replacements*

\$885
MILLION



PLUS

\$57
MILLION

INFRASTRUCTURE
*expansions, upgrades,
capacity improvements*

**FACILITIES &
TERMINALS**
*volume growth,
renovations*

\$130
MILLION



\$49
MILLION

FREIGHT CARS
replacements, growth

LOCOMOTIVES
rebuilt/upgrades

\$303
MILLION



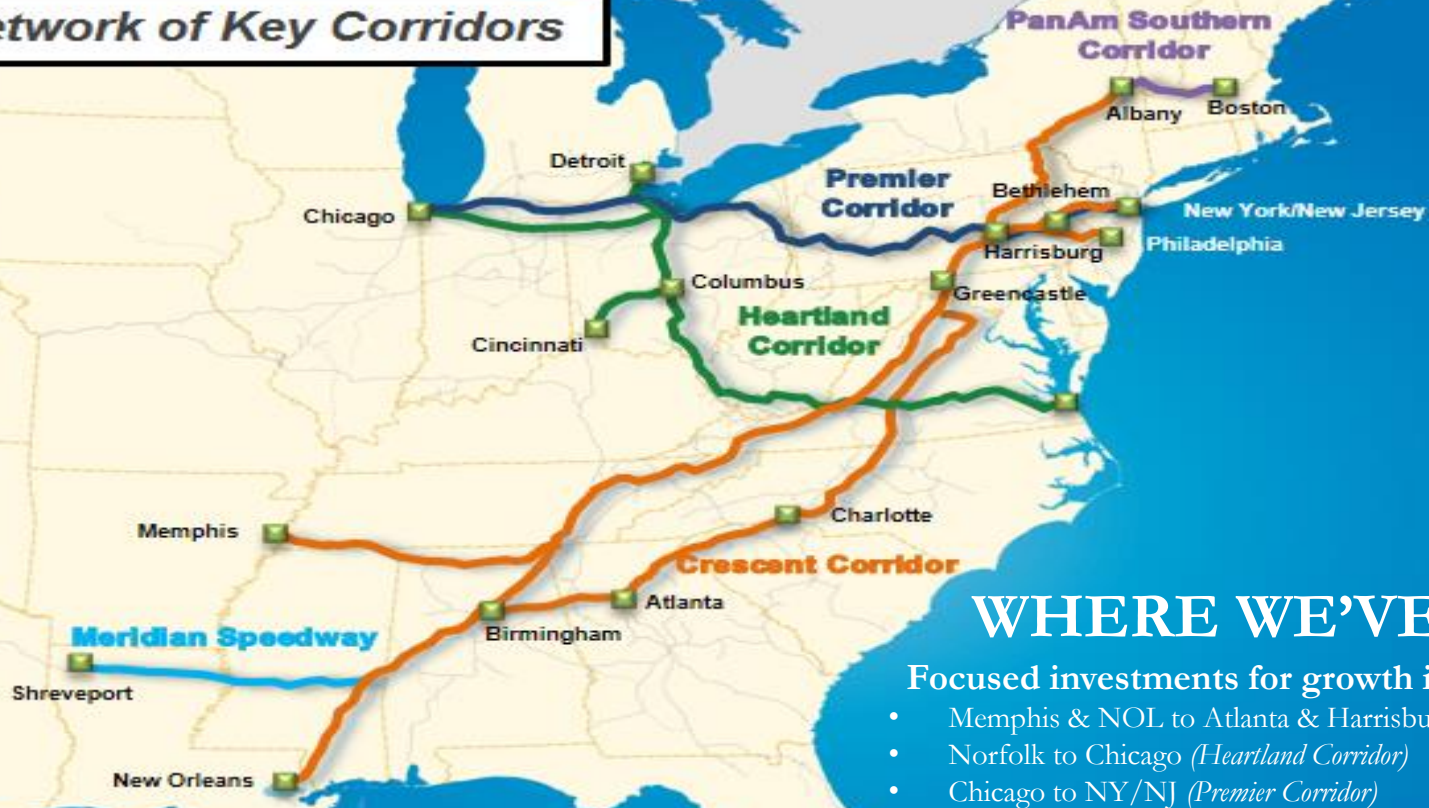
\$342
MILLION

TECHNOLOGY & OTHER
*Positive Train Control (PTC),
software, equipment upgrades,
installation*

INVESTMENTS ARE NOT MADE IN A VACUUM



A Network of Key Corridors



WHERE WE'VE BEEN

Focused investments for growth in our core routes:

- Memphis & NOL to Atlanta & Harrisburg, PA (*Crescent Corridor*)
- Norfolk to Chicago (*Heartland Corridor*)
- Chicago to NY/NJ (*Premier Corridor*)

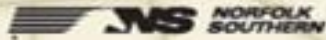
NS INTERMODAL NETWORK GROWTH

Majority of growth has occurred over corridors

THE HEARTLAND CORRIDOR



HEARTLAND CORRIDOR

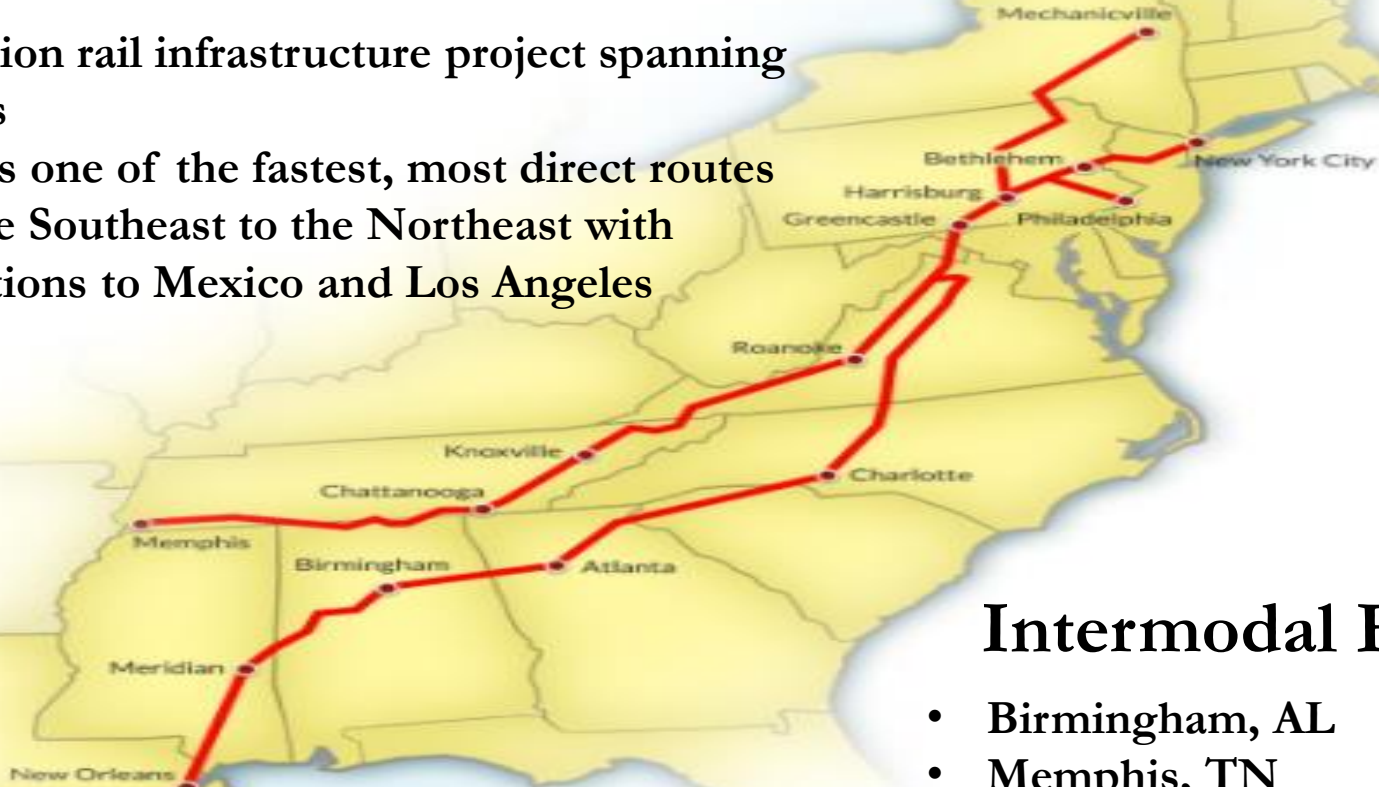


- Eliminates over 200 miles of travel
- Eliminates approximately 24 hours of travel time between the East Coast and Chicago
- Removed 24 overhead obstructions and raised vertical clearances in 28 tunnels
- Three year engineering effort

The nation's first multi-state intermodal rail corridor public-private partnership between FHWA's Eastern Federal Lands Highway Division, USDOT, Virginia, West Virginia, Ohio, and Norfolk Southern

THE CRESCENT CORRIDOR

- \$2.5 billion rail infrastructure project spanning 11 states
- Provides one of the fastest, most direct routes from the Southeast to the Northeast with connections to Mexico and Los Angeles



Intermodal Facilities

- Birmingham, AL
- Memphis, TN
- Charlotte, NC
- Harrisburg, PA

CREATE

SIX MAJOR FREIGHT RAILROADS

\$3.2 Billion Public-Private Partnership



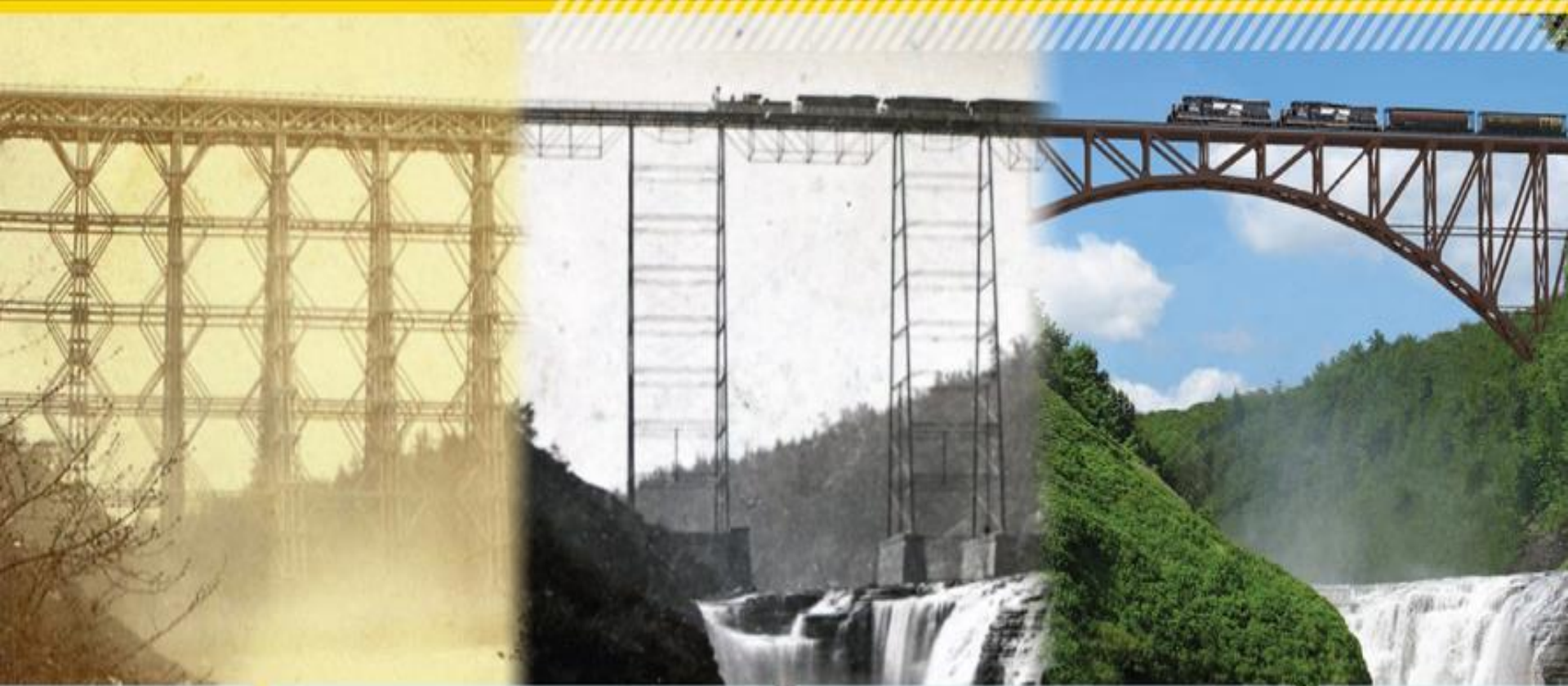
CREATE

CHICAGO REGIONAL ENVIRONMENT AND TRANSPORTATION EFFICIENCY PROJECT

Program Goals:

- Improve passenger rail service
- Reduce freight rail congestion to boost regional and national economic competitiveness
- Reduce motorist delay due to rail conflict at grade crossings
- Enhance public safety
- Promote economic development
- Create and retain jobs
- Improve air quality
- Reduce noise from idling or slow-moving trains





1864

(WOOD)

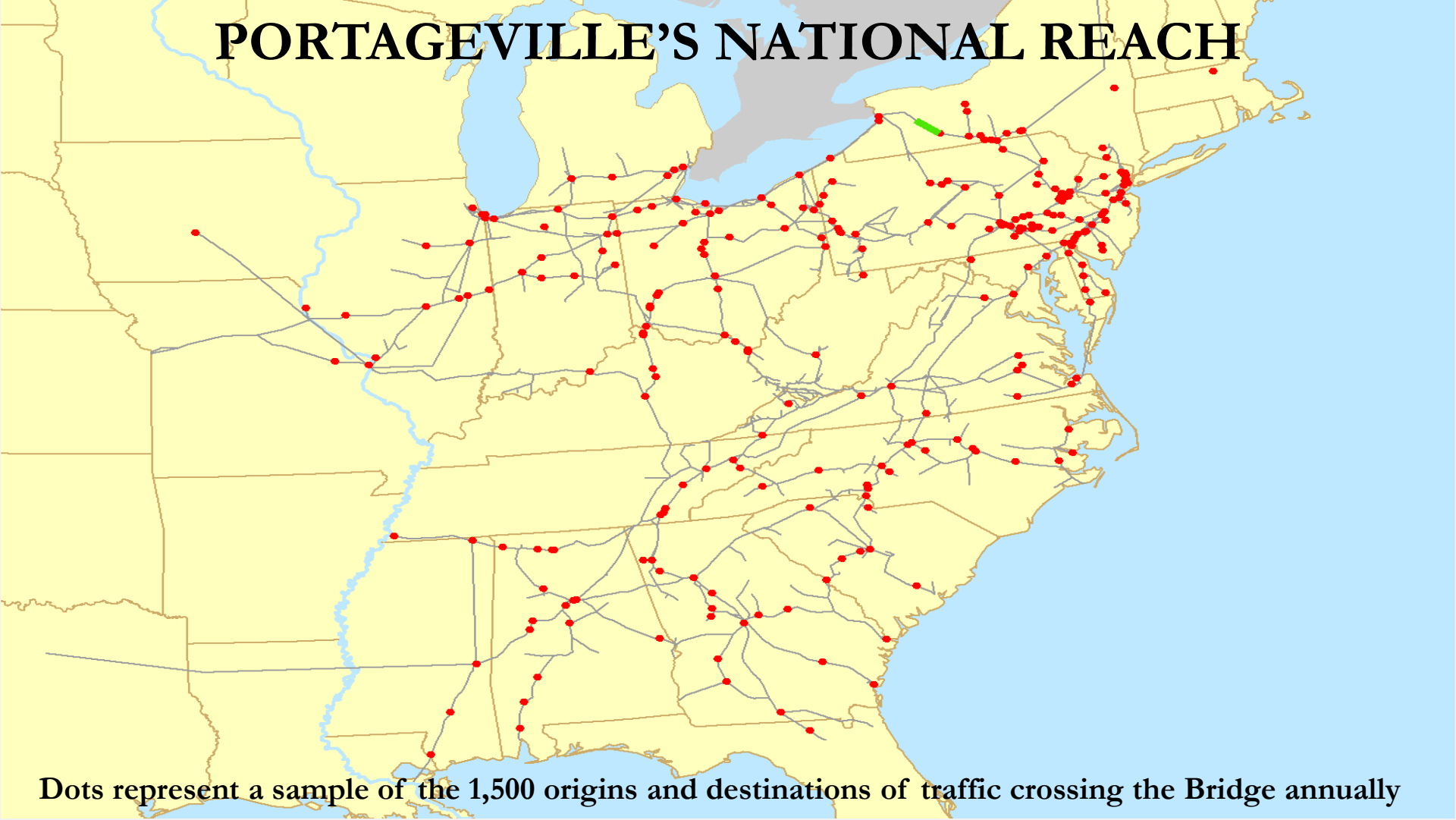
1875

(WROUGHT IRON)

2017

(MODERN GR50 STEEL)

PORTAGEVILLE'S NATIONAL REACH



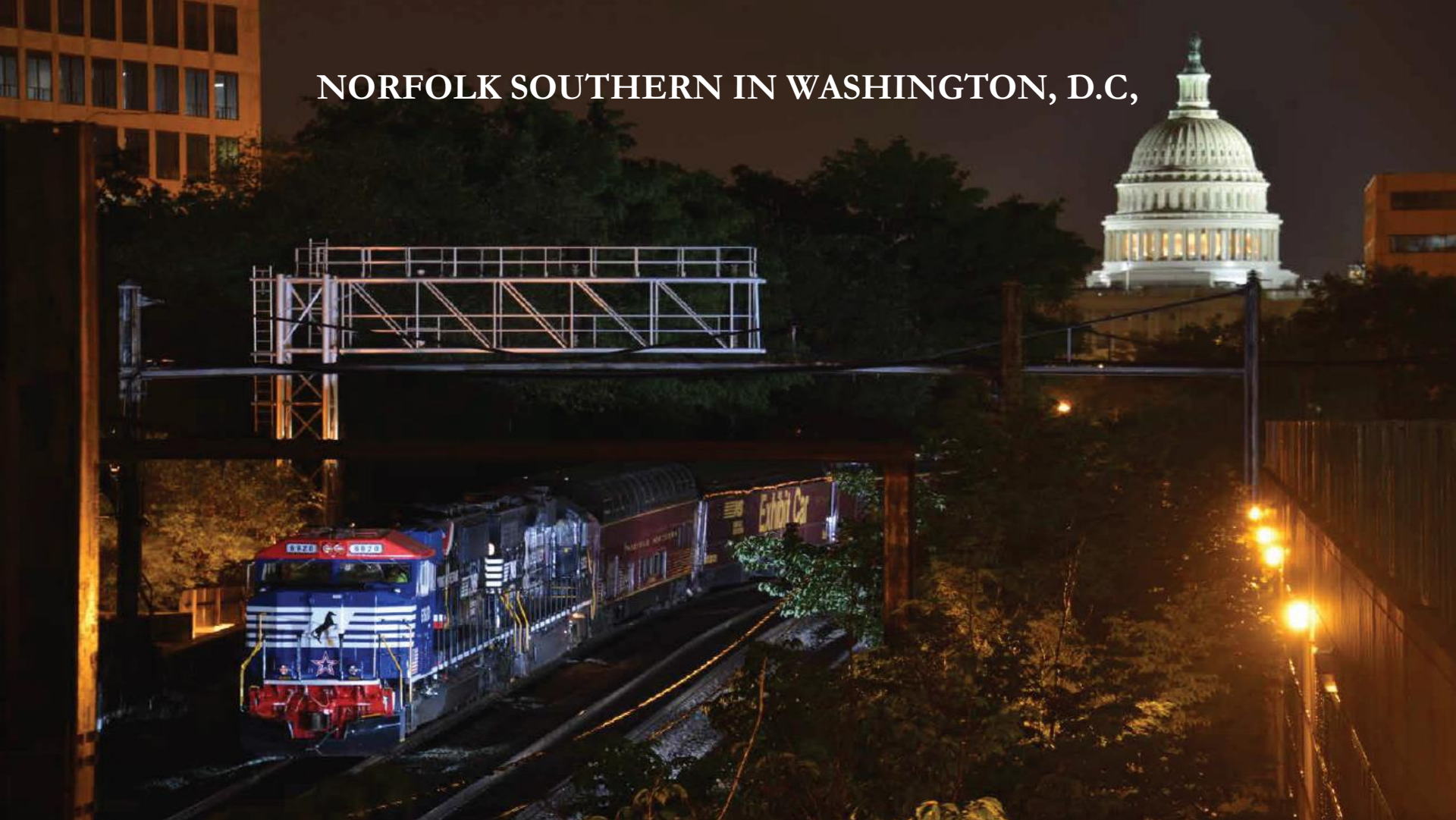
Dots represent a sample of the 1,500 origins and destinations of traffic crossing the Bridge annually

PITTSBURGH DOUBLE-STACK PROJECT

- Construction proposed at 9 bridge-track intersections to allow for double-stacked intermodal traffic to run on the Pittsburgh Line, rather than the Mon Line
- Will eliminate 4.7 million hours of delay over 30 years
- \$164 million saved in transportation over 30 years



NORFOLK SOUTHERN IN WASHINGTON, D.C,



Norfolk Southern and the Virginia Community



PEOPLE

4,015 NS Employees

3,170 Railroad Retirement Recipients

ECONOMIC IMPACT

pays **\$307** MILLION

PAYROLL

invests **\$119** MILLION

INFRASTRUCTURE & FACILITIES

spends **\$201** MILLION

PURCHASES, PAYMENTS, & TAXES



PARTNERSHIPS



BUSINESS MAGNET

NS helped **5** industries locate or expand in 2017, resulting in:

\$30 MILLION CUSTOMER INVESTMENT

53 NEW JOBS



CHARITABLE GIVING

The NS Foundation contributed **\$20 MILLION** to Virginia communities over the last five years.



CONNECTIONS

NS tracks connect with **6** short line railroads in Virginia.



PASSENGER RAIL

Amtrak and the Virginia Railway Express operate regularly over NS tracks in Virginia.

A PIER WITHOUT PEER

Pier 6 at Lamberts Point in Norfolk is the largest and fastest coal transloading facility in the Northern Hemisphere.



CONNECT WITH NS
www.nscorp.com



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2017 data.

BEHIND EVERY NS TRAIN IS AN EXTENSIVE NETWORK OF TRACK AND TERMINALS, A FLEET OF SOPHISTICATED LOCOMOTIVES AND FREIGHT CARS, AND A TEAM OF DEDICATED EMPLOYEES WHO WORK AROUND THE CLOCK TO PROVIDE SAFE AND RELIABLE RAIL TRANSPORTATION.



INFRASTRUCTURE *in Virginia*

1,990
Miles of Track
Operated

1,240
Bridges

37
Tunnels

WHAT NS MOVES BY RAIL IN THE OLD DOMINION



Intermodal
68%

coal
18%

metals &
construction
6%

paper, clay
& forest
products
4%

agricultural
products
3%

chemicals
1%

OUTBOUND



INBOUND



Intermodal
52%

coal
29%

agricultural
products
8%

chemicals
4%

paper, clay
& forest
products
3%

other
4%



2017 carloads

FREIGHT ROUTES IN VIRGINIA



Freight Routes in Virginia

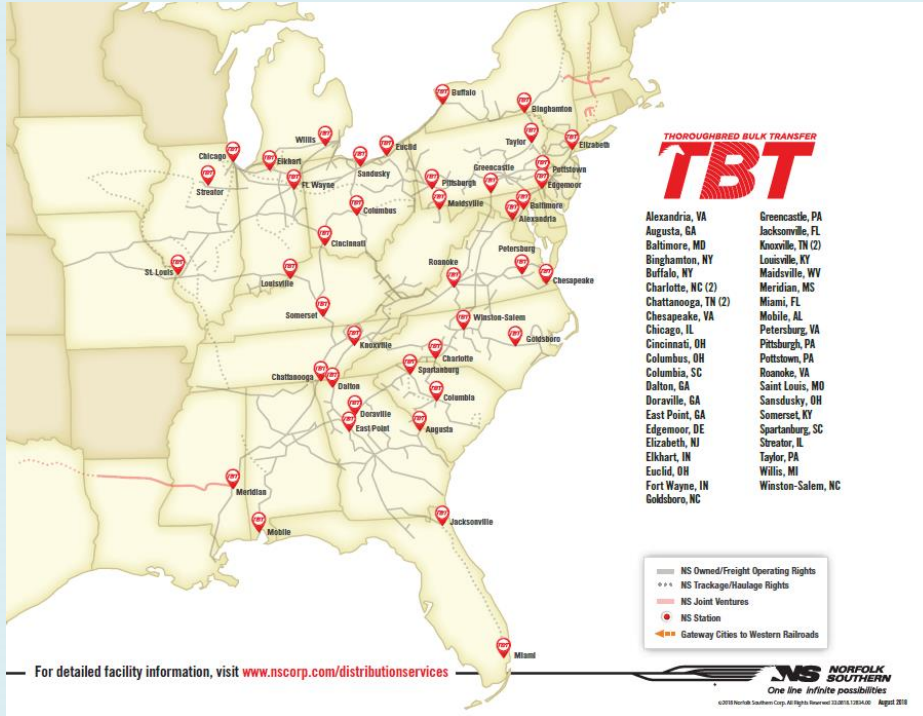
- Norfolk Southern
- CSX Transportation
- Shortline
- Discontinued
- Cities/Towns

Host Railroads

- BCR* Bay Coast Railroad
- BB* Buckingham Branch Railroad
- CA* Chesapeake & Albemarle Railroad
- CHW* Chesapeake Western Railway

- CWRV* Commonwealth Railway
- NPB* Norfolk & Portsmouth Belt Line Railroad
- NCVA* North Carolina & Virginia Railroad
- SV* Shenandoah Valley Railroad
- WW* Winchester & Western Railroad

ALEXANDRIA THOROUGHbred BULK TRANSFER



VIRGINIA INLAND PORT



100

Car Train Unit

=



340

Semi-trailer Trucks

Source: REF BCA



1

152



HANJIN

HYSTER
RS 04

REX

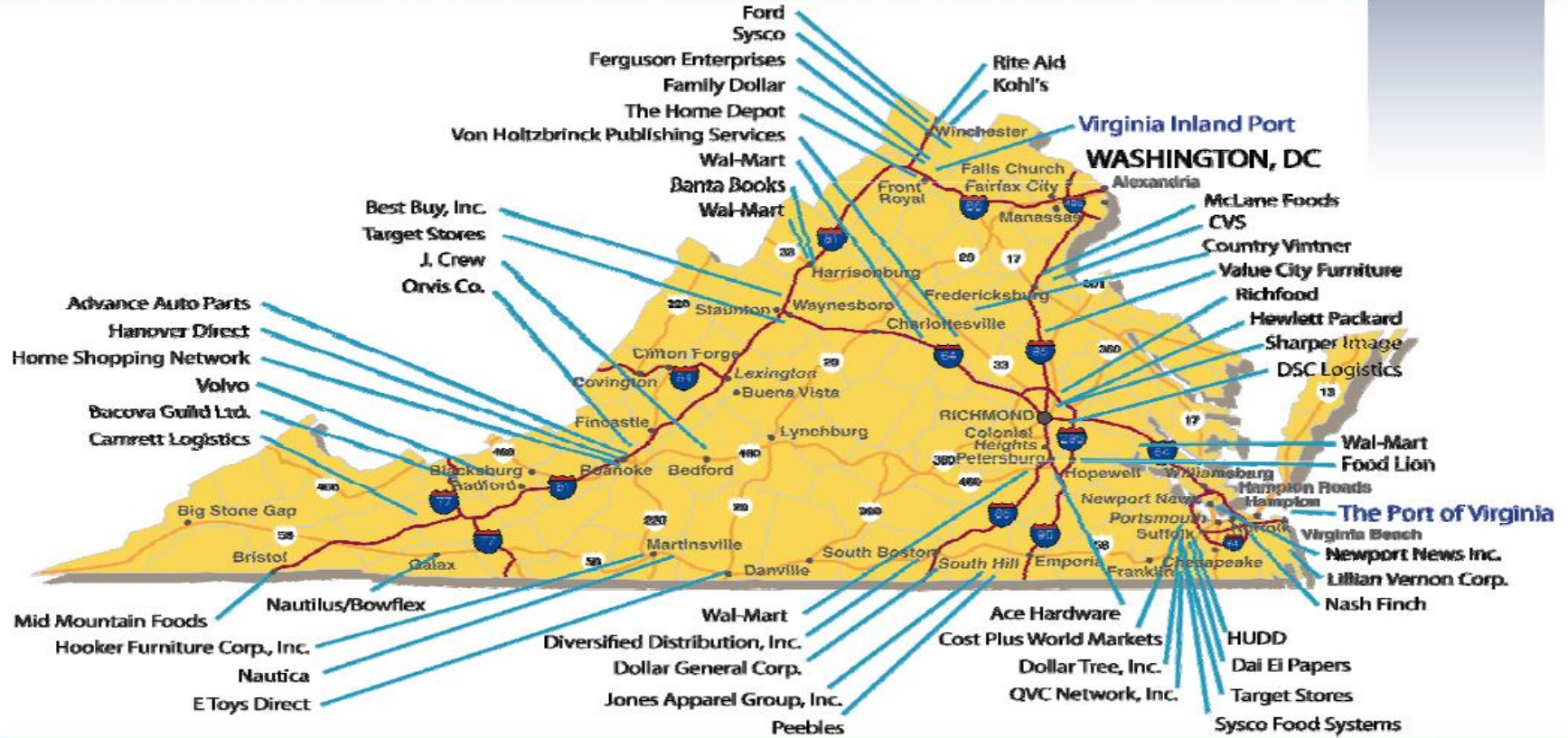
06
HYSTER
HR45-25

HANJIN

TEX

47878

Selected Distribution Facilities Located in Virginia



MANASSAS YARD



Pictured above is the Class J Number 611 thunders through Marshall, Va., on a steam excursion from Manassas to Front Royal.





PEOPLE

130 NS Employees

130 Railroad Retirement Recipients

Norfolk Southern and the Maryland Community



PARTNERSHIPS

Norfolk Southern works with Amtrak to provide efficient freight and passenger rail service throughout the Northeast.

BIG BUSINESS IN BALTIMORE

Norfolk Southern trains transport large heavy-duty machinery, such as tractors and military equipment, making frequent deliveries to the Port of Baltimore.

ECONOMIC IMPACT

pays **\$8 MILLION**

PAYROLL

invests **\$5 MILLION**

INFRASTRUCTURE & FACILITIES

spends **\$39 MILLION**

PURCHASES, PAYMENTS, & TAXES



BUSINESS MAGNET

NS helped 8 industries locate or expand in Maryland since 2012, resulting in:

\$16 MILLION CUSTOMER INVESTMENT
35 NEW JOBS



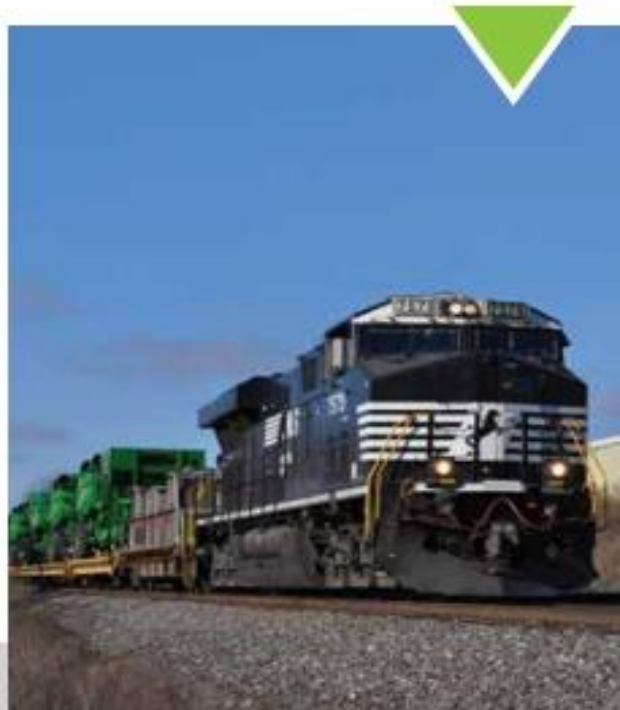
CHARITABLE GIVING

The NS Foundation contributed **\$158,000** to Maryland communities over the last five years.



CONNECTIONS

NS tracks connect with 4 short line railroads in Maryland.



BEHIND EVERY NS TRAIN IS AN EXTENSIVE NETWORK OF TRACK AND TERMINALS, A FLEET OF SOPHISTICATED LOCOMOTIVES AND FREIGHT CARS, AND A TEAM OF DEDICATED EMPLOYEES WHO WORK AROUND THE CLOCK TO PROVIDE SAFE AND RELIABLE RAIL TRANSPORTATION.



NS OPERATIONS

 Auto Distribution Facility

 Coal Transloading Terminal


 Intermodal Terminal

 Port Served

 Rail Yard

 Rail-Truck Transfer Facility

 Amtrak Northeast Corridor

 NS Lines or Local Freight Rights

Not all lines shown.



INFRASTRUCTURE
in Maryland

233
Miles of Track Operated

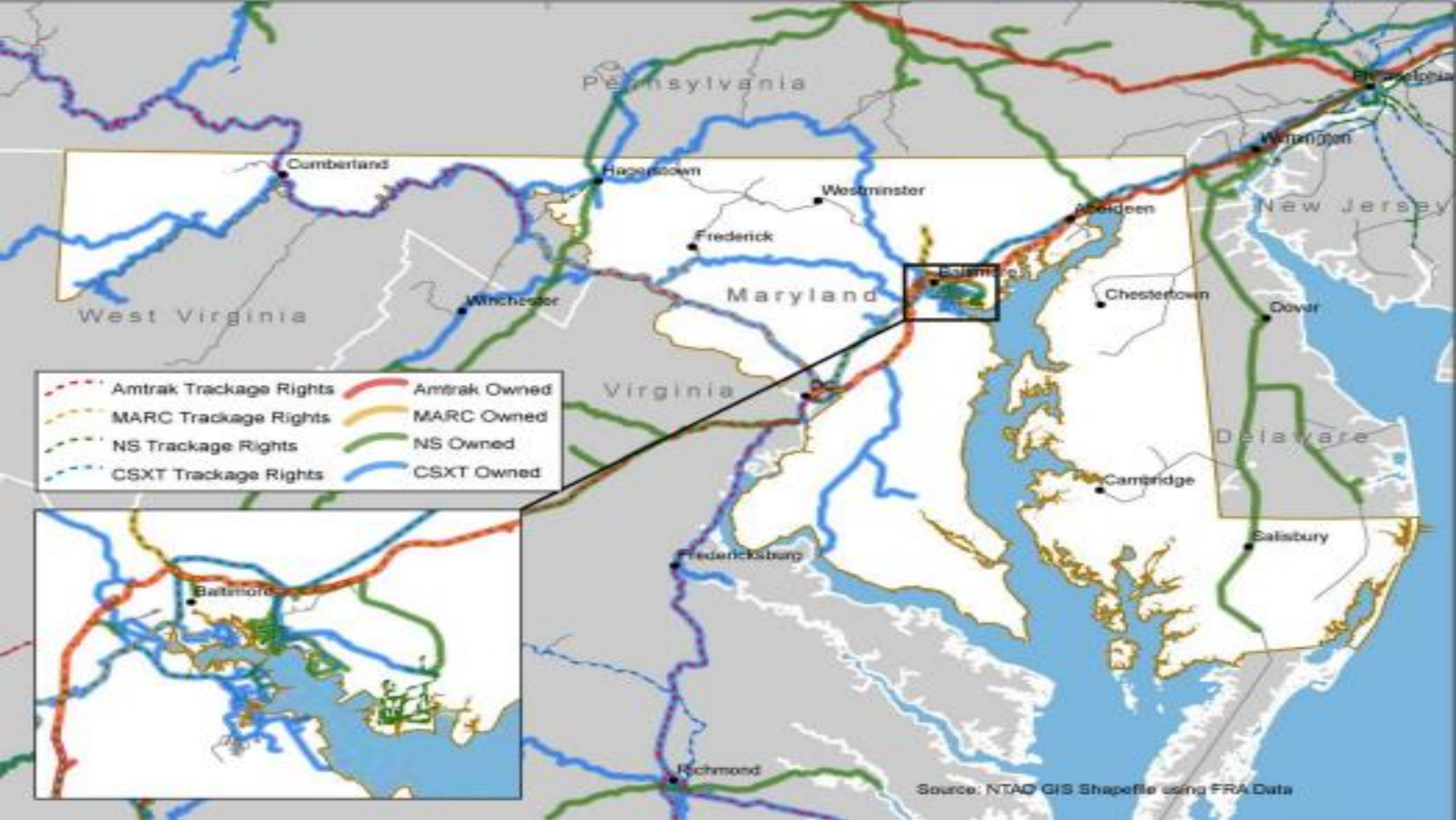
47
Bridges

80
Grade Crossings (public and private)

WHAT NS MOVES BY RAIL IN THE OLD LINE STATE



2017 carloads.



NORFOLK SOUTHERN'S BAYVIEW YARD

Norfolk Southern's Bayview Yard is located in Baltimore, MD; the yard serves the Port of Baltimore.



Bayview Yard is Norfolk Southern's main classification yard in Maryland.



CSX

Amtrak

NS Bayview Yard

NS Intermodal Facility

ECO-LOCOMOTIVE FLEET

- Through the NS rebuild program, older bodies are recycled and engines are upgraded with new technologies that maximize fuel economy and emissions reduction
- Repurposing old locomotives further reduces carbon-related emissions
- Each upgraded locomotive can replace two older, less efficient locomotives
- Locomotives are often paired with a slug unit, increasing efficiency
- Eco-locomotives have been installed in Atlanta and Chicago
- NYSDOT has awarded funds to NS for installation in Buffalo



THANK YOU

