



NORTH CAROLINA

Department of Transportation



The Piedmont Corridor

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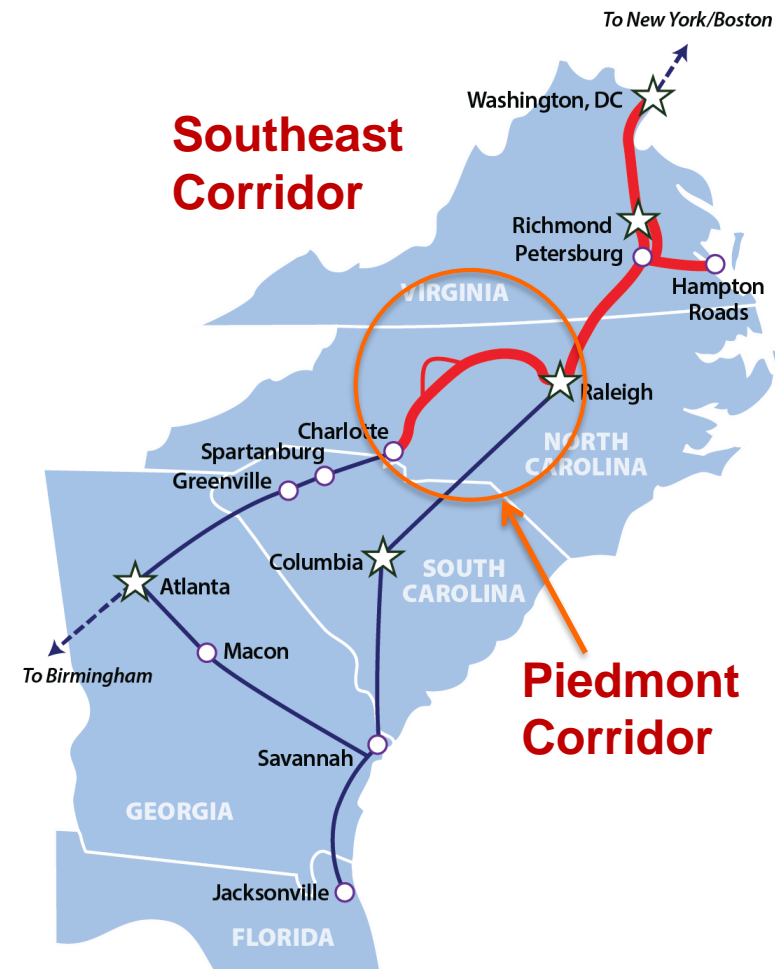
27 March 2018

Piedmont Corridor – Part of Federal Southeast Corridor

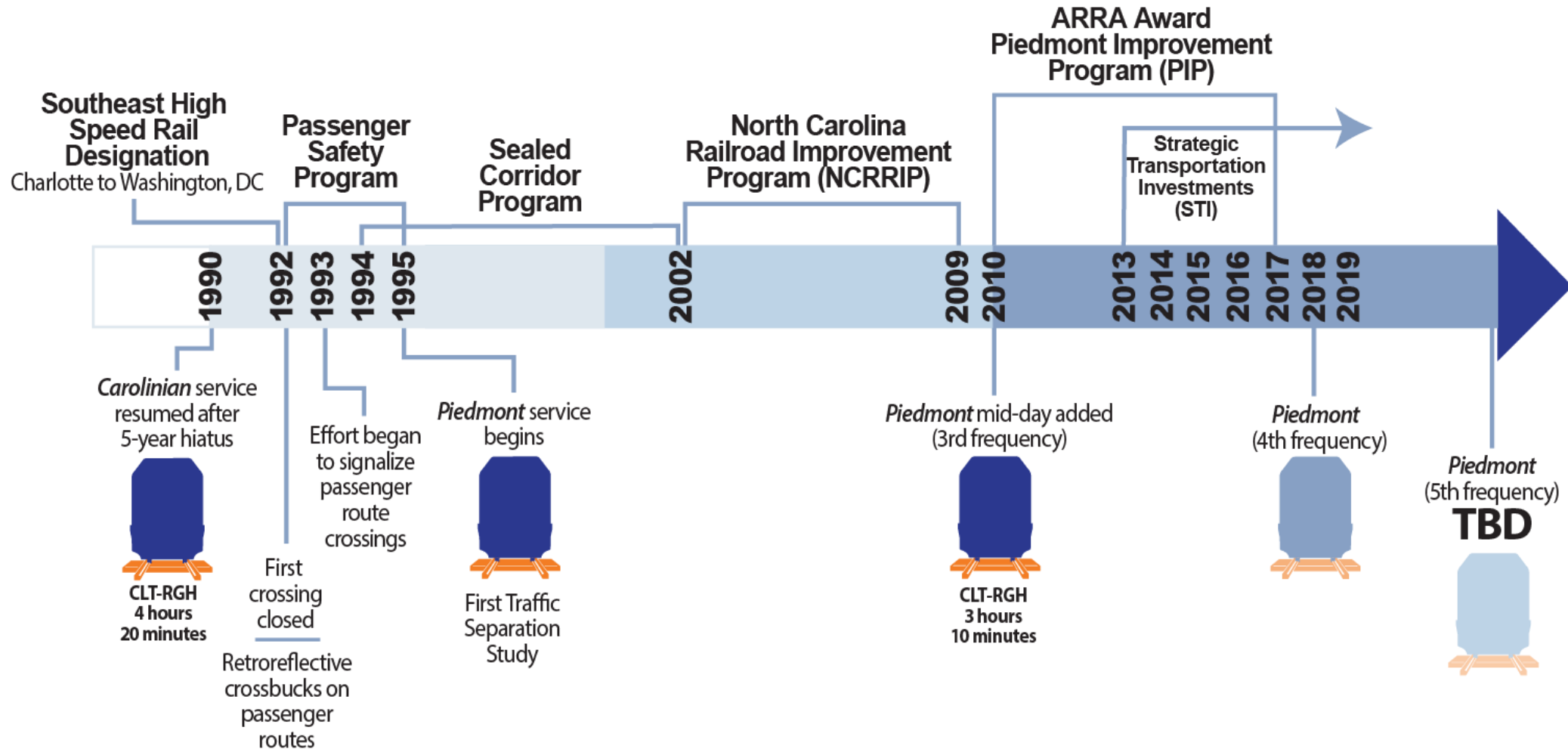
1992 – Federal Railroad Administration designated Southeast High Speed Rail Corridor

- Important Freight Corridor
- Portion of North Carolina Railroad Company Corridor

This designation opened the door to substantial funding opportunities such as ARRA, Congestion Mitigation and CMAQ.



Major Improvement Programs & Initiatives on the Piedmont Corridor



Sealed Corridor Program

First of Its Kind in the United States

1994 – 2002

Goal: “Seal” or protect every public rail/highway crossing to improve safety along high-traffic Charlotte to Raleigh corridor

- Funded by Federal grants with State matching funds
- Recommendations included crossing consolidations and associated mitigation projects, grade separations, signal upgrades and recommendations for roadway improvements
- Partnership with municipalities, MPOs, railroads with public input



Why a Sealed Corridor?

- Safety, safety, safety
- High at-grade crossing crash rate
- Federal High Speed Rail designation
 - ✓ Speed
 - ✓ Capacity
 - ✓ Reliability
- Passenger service and investment
 - ✓ *Piedmont* – Raleigh to Charlotte
 - ✓ *Carolinian* – Charlotte-Raleigh-Washington-New York



Why a Sealed Corridor?

- Gate runners
- Cost-effective solutions
- Corridor approach
- Can't close them all...



Sealed Corridor Treatments

Hierarchy of Treatments

- Crossing closure
- Grade separation
- Obsolete signal system
- Median separators
- Longer gate arms
- 4-quadrant gate arms
- Median separators with 4-quadrant gates.



Sealed Corridor Program Implementation



- **53** crossing closures – public & private
- **53** four-quadrant gates
- **4** grade separations
- **2** four quadrant gates with median separators
- **11** median separators
- **81** long gate arms

Sealed Corridor Program Results

- Median Separators – Reduced crossing violations by **77%**
- Four Quadrant Gates – Reduced crossing violations by **86%**
- Longer Gate Arms – Reduced crossing violations by **84%**

(However, created maintenance issues from gate strikes)

***Video validation performed by NS and NCDOT showed reduction in gate violations from 67% to 98%.
A 2009 Assessment by USDOT Volpe Center estimated 19.7 potential lives saved.***



North Carolina Railroad Improvement Program Expanding Capacity – Expanding Service

2002 – 2010

- Refurbished or built train stations and multimodal centers statewide with FHWA Enhancement Funds and NCDOT Moving Ahead Funds
- Upgraded *Piedmont* equipment
- Added second state-sponsored *Piedmont* service (2010)
- Developed Capital Plan linked to number of train frequencies
- Applied for ARRA funding (2009)

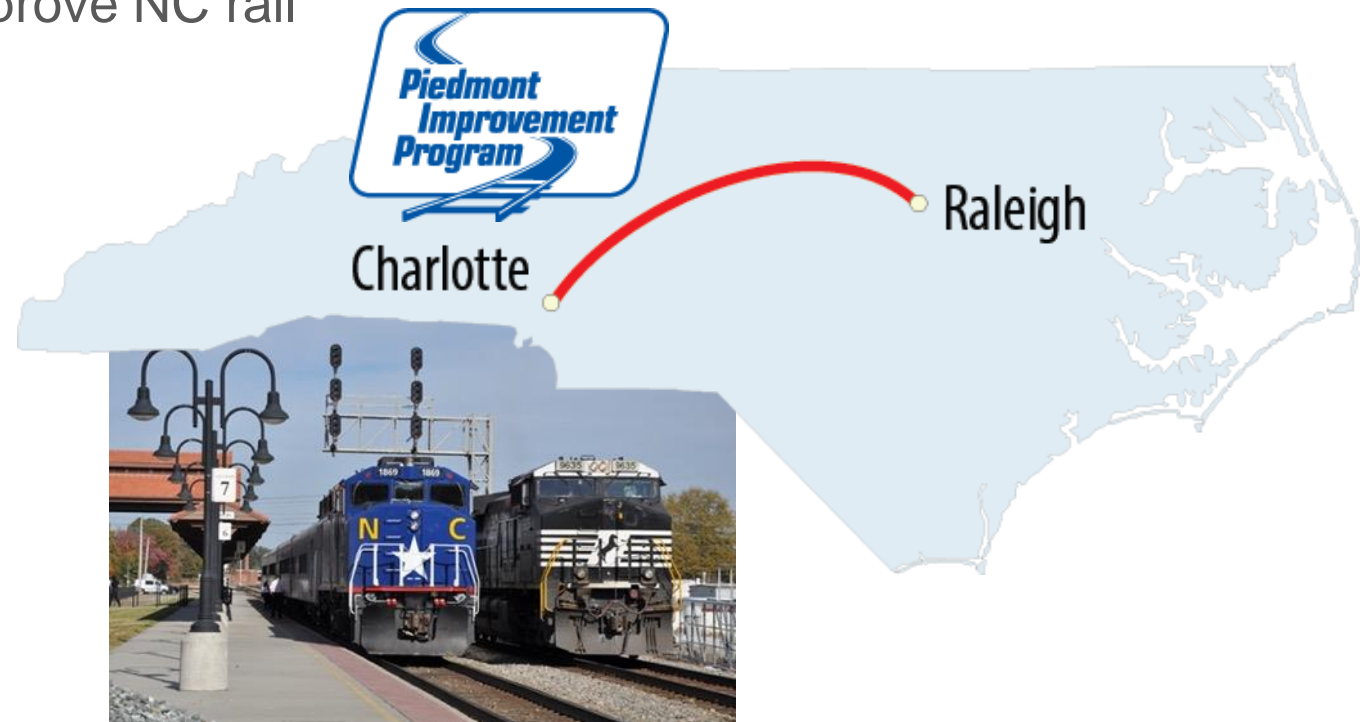




\$520 Million ARRA Grant Award Funds Piedmont Improvement Program

2010 – NCDOT awarded \$520 million ARRA grant for rail infrastructure improvements

- Rail capacity and safety projects targeted
- Largest program of projects to improve NC rail infrastructure in modern times
- Deadline for all ARRA projects –
 - ✓ September 30, 2017 deadline
 - ✓ COMPLETED
- Third and fourth state-sponsored *Piedmont* service



Piedmont Improvement Program Projects



30 Distinct Projects

- **27** miles second main track and 5 miles passing sidings
- **13** grade separations
- Over **40** at-grade crossings closed and **12** improved signal systems
- Over **30** curves improved for increased operating speeds
- Additional passenger equipment
- Improved stations, platforms

Piedmont Improvement Program Projects



Key:

- DT Double Track Construction
- PS Passing Siding
- RGS Grade Separation, RR over HWY
- HGS Grade Separation, HWY over RR
- GT Railroad Roadbed Grading & Trackwork
- SX RR or HWY Stream Crossing
- H Highway Work
- PD Planning, Design, Property Acquisition



5



Locomotives

2



Cab Control Units

9



Passenger Coaches

Double Track



Passing Sidings



Curve Realignment



Grade Separations



Railroad Bridges



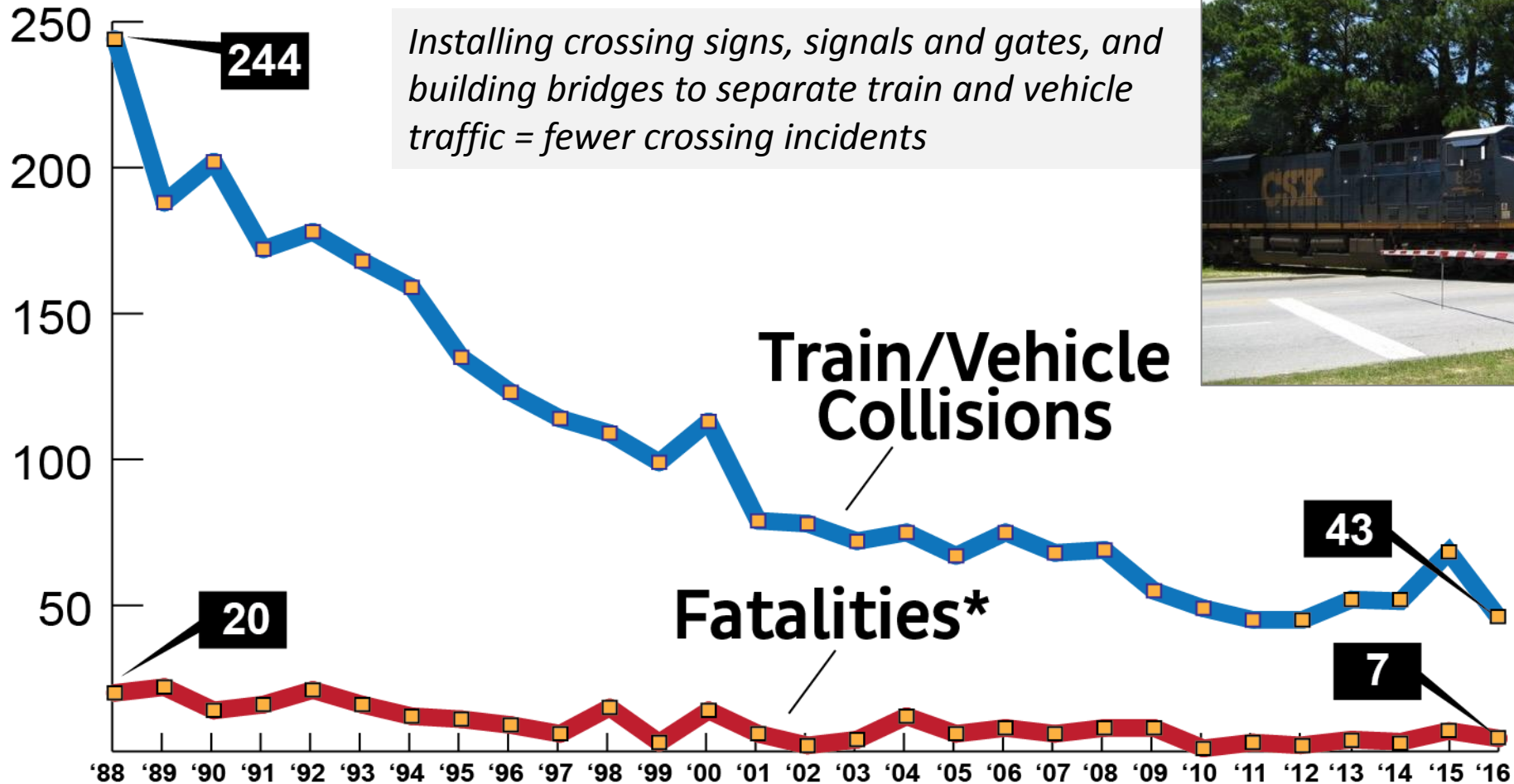
Results



Raleigh to Charlotte – 1992 to present

- **108** grade crossings closed
(total of 150 grade-separated crossing today)
- Installed 4-quadrant gates at **48** grade crossings
- Installed medians at **12** crossings
- Installed 4-quadrant gates with medians at **4** crossings
- **2** daily round-trip state-sponsored *Piedmont* services
 - ✓ 3rd services to begin in June 2018
 - ✓ 4th service to begin in 2020
- 173 mile route – trip time reduction of **1 hour-10 minutes**
(27% reduction)

Statewide Safety Improvement Results

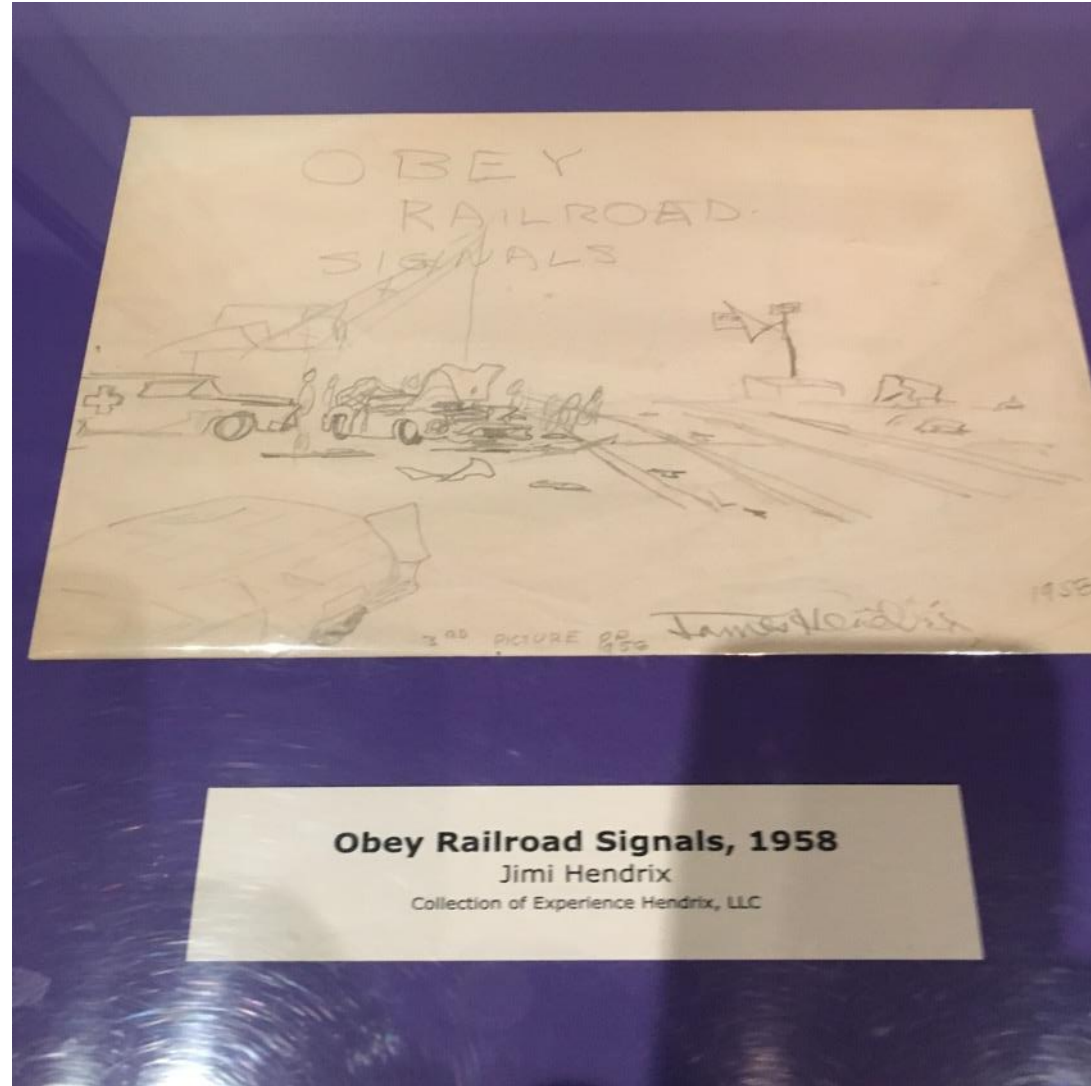


* Does not include trespasser fatalities.

Thank You!
Contact: remullinax@ncdot.gov



Hidden Egg



Again,
Thank
You