



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Oversize/Overweight Unit VMO Webinar

July 30, 2026



Collaboration for safe and efficient movement of really big stuff

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Andy Klinksiek

July 30, 2026



OBJECTIVES

- Discuss challenges
- Build awareness
- Foster collaboration

AGENDA:

- Introduction to OS/OW
- Typical challenges faced by OS/OW
- OS/OW Initiatives
- Collaboration with other units
- Summary
- Q & A





INTRODUCTION TO OVERSIZE & OVERWEIGHT UNIT

Introduction to Oversize Overweight Unit

Who is the OS/OW unit?

- Ben Hinnant – Director
- Jennifer Santitoro – Assistant Director
- 3 Admin Staff
- 6 Squad Leaders
- 15 Permitting Offices
- 26 total staff

What is the mission of the OS/OW unit?

- Ensure the safety of the motoring public
- Protect the infrastructure of the State of North Carolina

Introduction to Oversize Overweight Unit

What does the OS/OW unit do?

- Establish safe routes for movement of loads, vehicles, and vehicle combinations exceeding statutory requirements
- Issue OS/OW permits to industry

What needs a permit?

- Weight exceeds 80k
- Width over 8'-6"
- Height over 14'
- Length greater than 53'/60'

§ 20-116. Size of vehicles and loads.

(a) The total outside width of any vehicle or the load thereon, except as otherwise provided in this section. When hogsheads or barrels are loaded on a vehicle, a tolerance of six inches is allowed. When sheet or bale tobacco is loaded on a vehicle, the load must not exceed a width of 114 inches at the top of the load and the load must not exceed the width of 102 inches inclusive of allowance for the vehicle. Vehicles (other than passenger buses) that do not exceed the limits otherwise provided in this section may be operated in accordance with the provisions of this section.

(g).

(b) No passenger-type vehicle or recreational vehicle shall be operated with any load carried thereon extending beyond the line of the vehicle nor extending more than six inches beyond the line of the vehicle.

(c) No vehicle, unladen or with load, shall exceed a height of 14 feet.

Introduction to Oversize Overweight Unit

What are the general steps to issue a permit?

- Review application
- Enter and check initial route against TIMS/Drive NC
- Enter route in PIMS (Permit Information Management System)
- Review for flags
- Assign requirements (like escorts or NC Highway Patrol)
- Finalize and issue permit

How many permits does the unit issue?

- **205,723** permits issued in FY 2025
- Individuals issue 60 or more per day

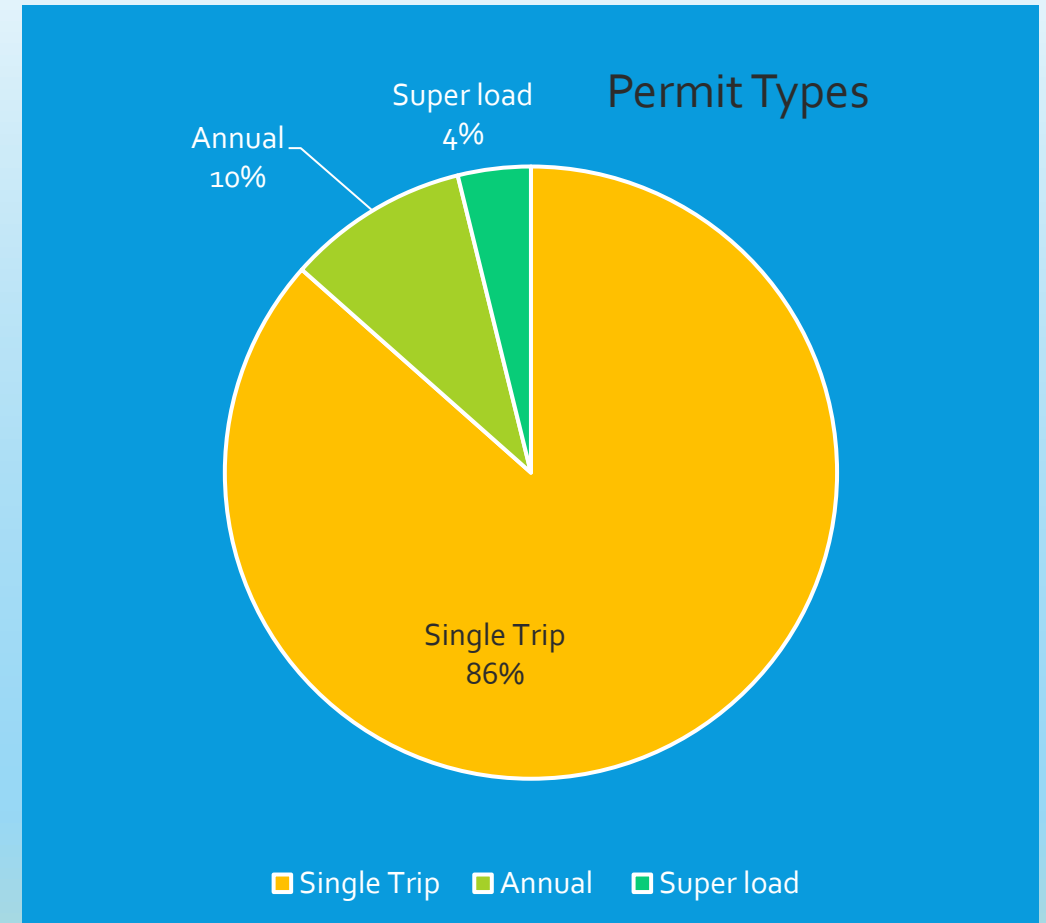
Introduction to Oversize Overweight Unit

What are the types of permits?

- Single Trip
- Annual
- Superload

What about the fees?

- \$24 to over \$1,000
- The OS/OW office is revenue neutral



Introduction to Oversize Overweight Unit

Why are they behind a locked door?

- Employees accept payment for issuing permits
- Payment Card Industry (PCI) security compliance

How does the office operate?

- 5 days a week, two shifts
- Office is staffed from 7AM to 10PM

What is the response time?

- Typically same day/within 24 hours
- Complex permits can take several days





TYPICAL CHALLENGES FACED BY OVERSIZE & OVERWEIGHT UNIT

Typical OS/OW Challenges - Vehicles



*Imagine these
going through
your projects...*



Typical OS/OW Challenges - Vehicles

And these...



Typical OS/OW Challenges - Vehicles

Oh my...



Superloads:

- *Over 132k lbs*
- *Over 17' wide*
- *Over 16' – 6" high*



Typical OS/OW Challenges - Vehicles

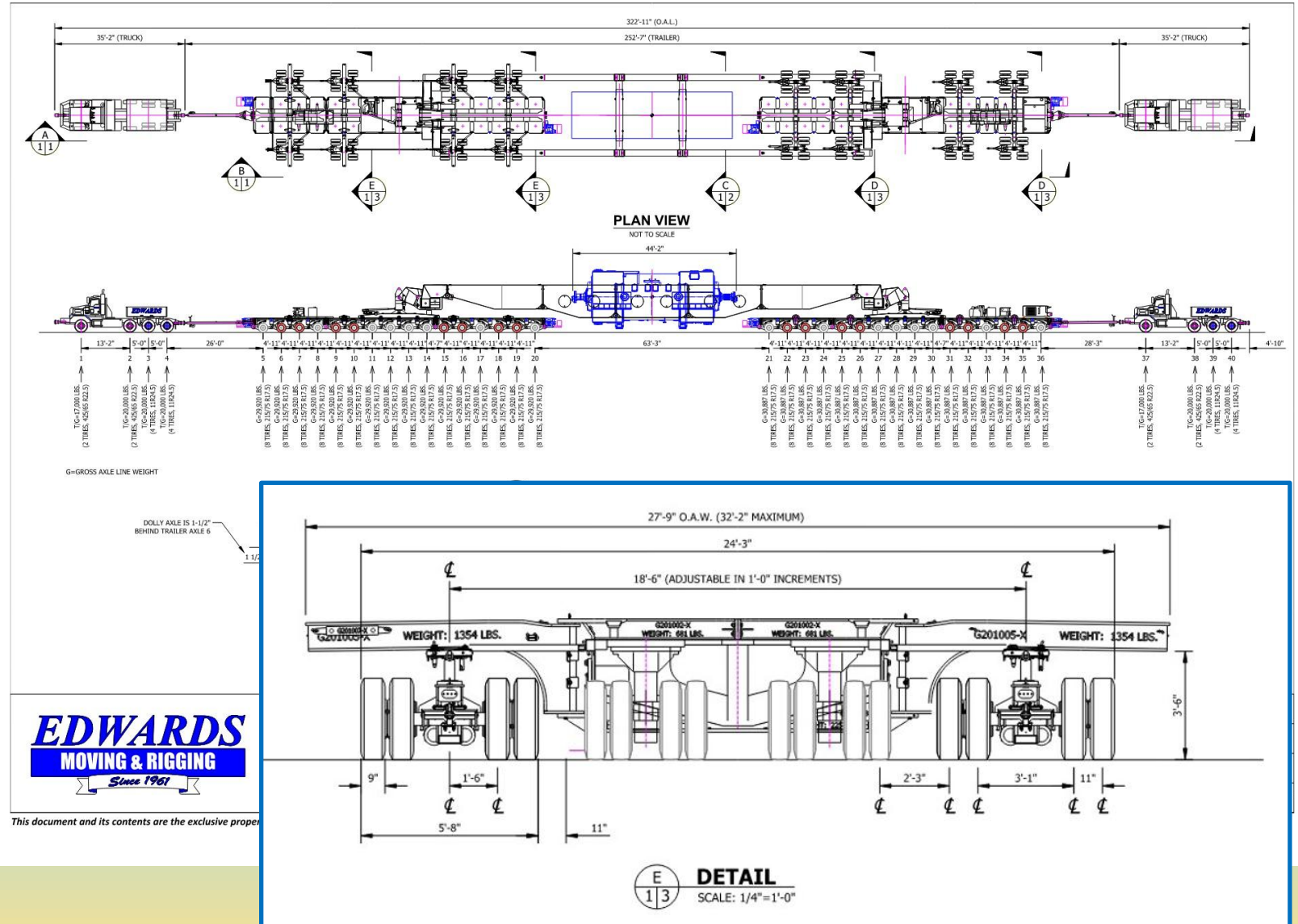
40 Axles!

16'-8" High!

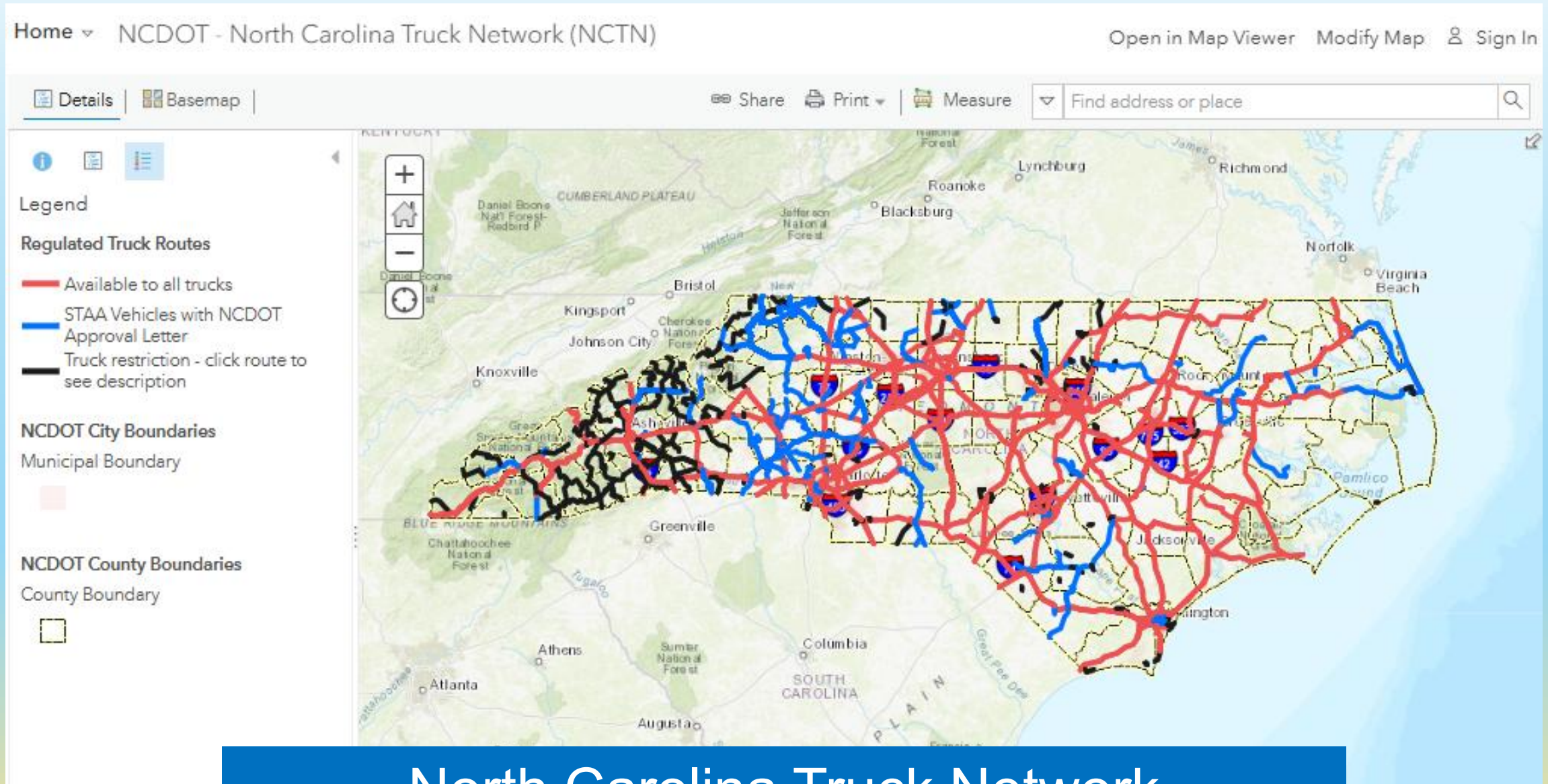
32' Wide!

322' Long!

1.7 Million Pounds!



Typical OS/OW Challenges - Routing



North Carolina Truck Network

Typical OS/OW Challenges - Routing

Home ▾ NCDOT - North Carolina Truck Network (NCTN) Open in Map Viewer Modify Map Sign In

[Details](#) | [Basemap](#) | Share Print Measure

Legend

Regulated Truck Routes

- Available to all trucks
- STAA Vehicles with NCDOT Approval Letter
- Truck restriction - click route to see description

NCDOT City Boundaries

Municipal Boundary

NCDOT County Boundaries

County Boundary

THE NC TRUCK NETWORK DOES NOT WORK FOR OS/OW ROUTES

North Carolina Truck Network



Typical OS/OW Challenges - Routing



Typical OS/OW Challenges - Routing

Typical Routing Restrictions:

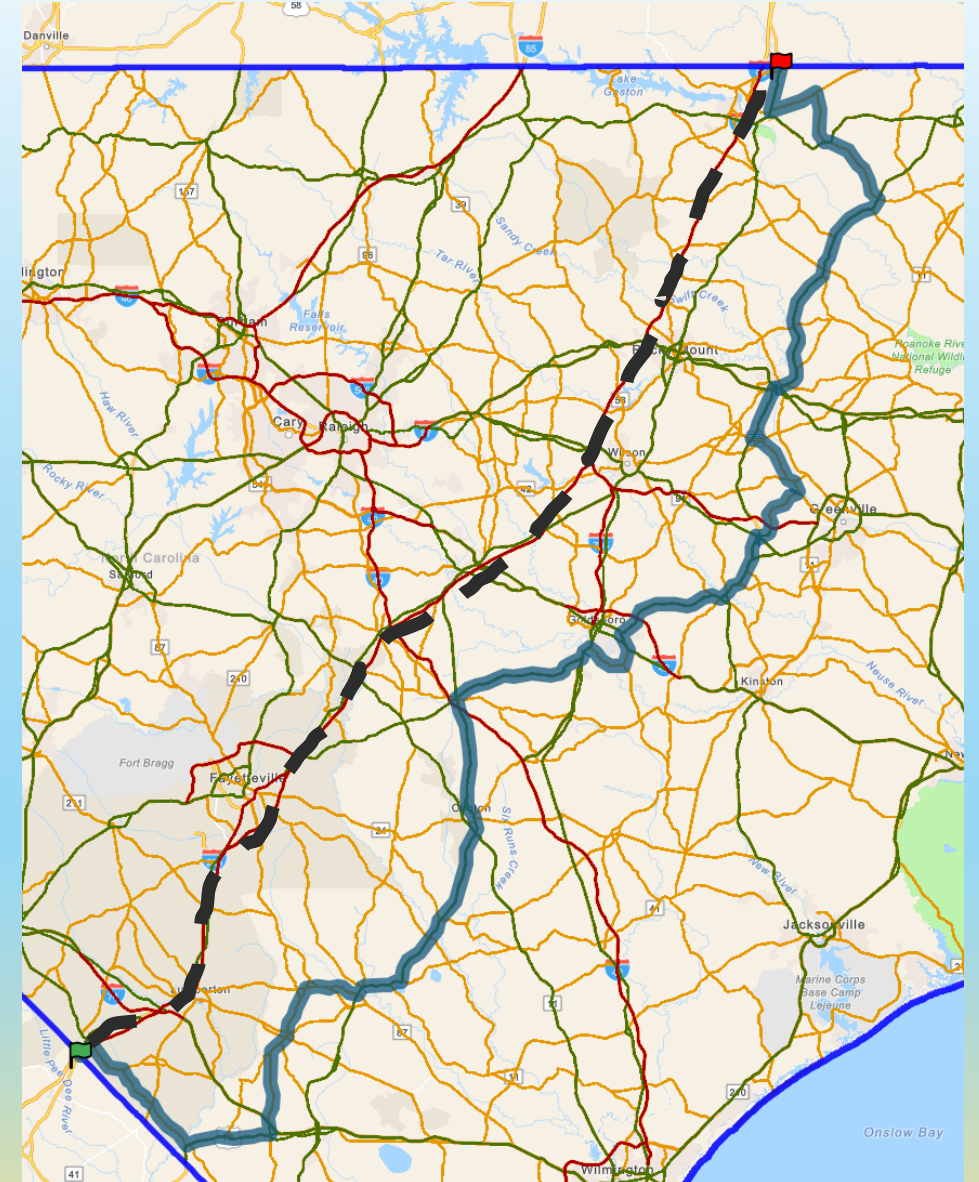
- Low clearance under bridge
- Low weight rated bridges
- Width restrictions (typically WZTC)
- Roadway vertical constraints (typically RR crossings)
- Roadway horizontal constraints (typically turning radius)



Typical OS/OW Challenges – Case Study

I-95 from SC border to VA border:

- Can't use I-95! (16' High, 15' Wide)
- Required Route (in blue):
 - **26 Turns**
 - **38 Towns & Communities**
 - **2 Roundabouts**
 - **7 At Grade Railroad Crossings**
 - **96 Miles Longer!**

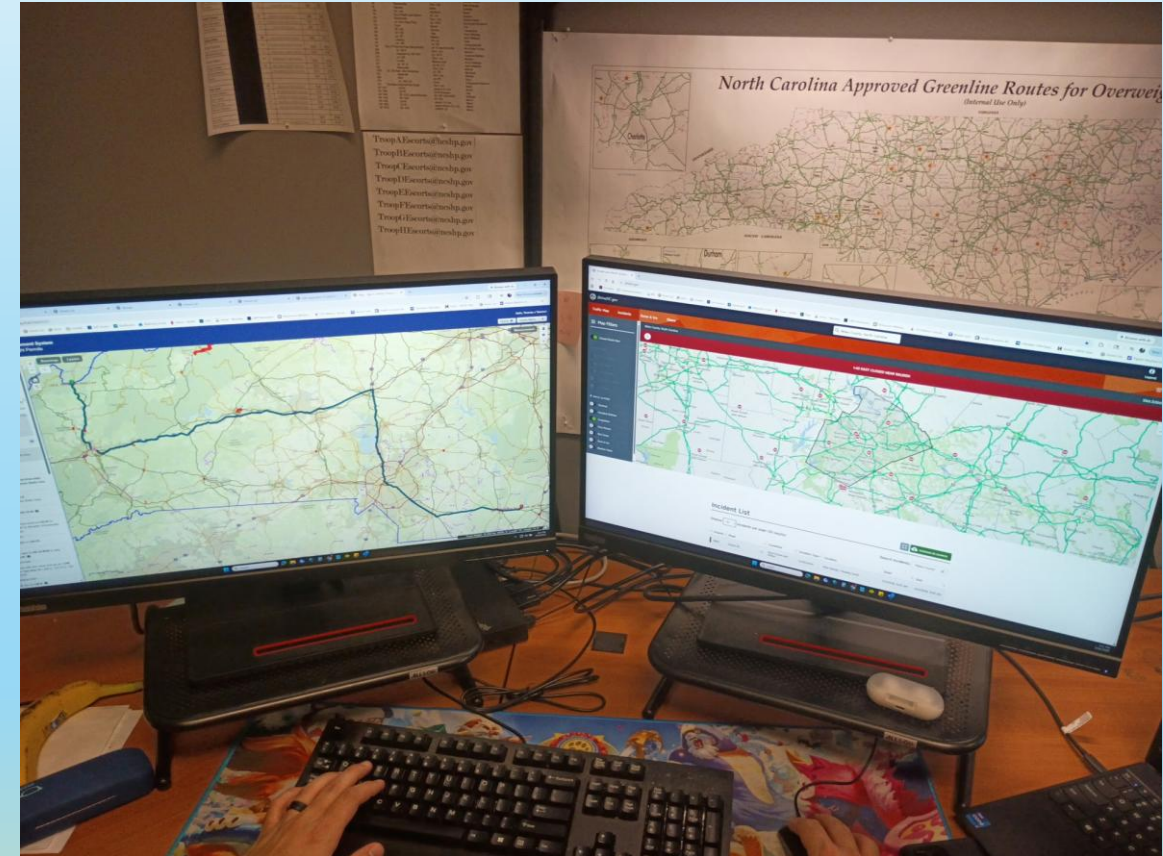


Typical OS/OW Challenges - Systems

Systems:

We utilize the following systems to determine safe routes for OS/OW loads:

- PIMS (Permit Information Management System)
- Statewide GIS
- Statewide Structure Inventory
- TIMS



What can go
wrong?



US 220 Rockingham County



Mebane Rail Crossing



Mebane Rail Crossing



Halifax Rail Crossing



Halifax Rail Crossing



OS/OW INITIATIVES

OSOW Initiatives – Grant Application

Bridge Planning Grant Application

- Envisioned and developed by OS/OW
- Seeking funding to replace low bridges on I-40 in Burke Co



I-40 - Clearing Oversize Vehicles
for Effective Routing (I-40 COVER)



An application for Bridge Investment Program (BIP) Planning Grant Funding

June 15, 2026

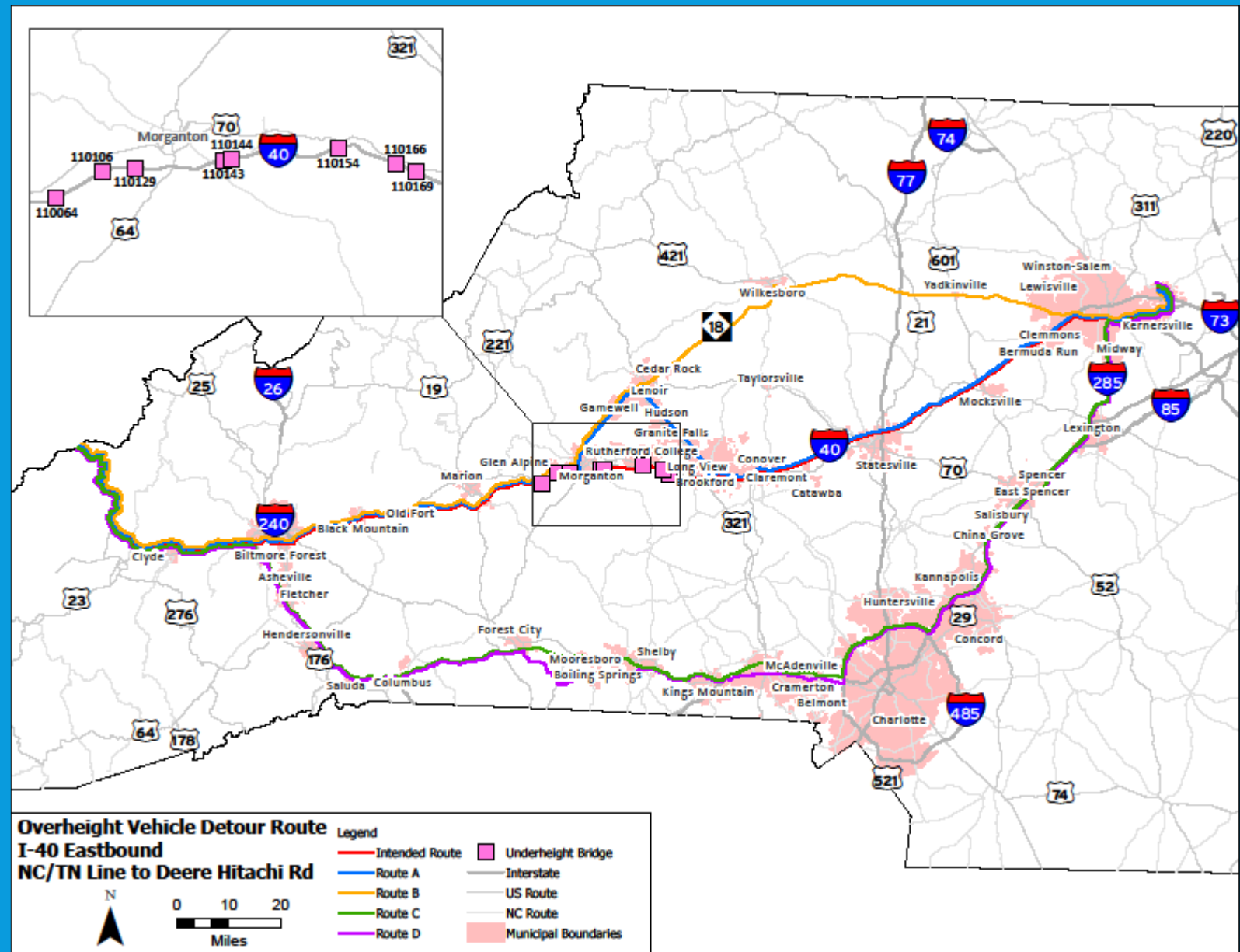
North Carolina Department of Transportation (NCDOT)

UEI: XSN8A4TTIDY5



OSOW Initiatives – Grant Application

COUNTY	STR#	E	W
BURKE CO - I-40			
	110025		14.11
	110029		14.05
	110064		14.11
	110095	15.00	
	110106		14.03
	110112	15.00	14.08
	110129	14.08	-
	110143	-	15.01
	110144	14.10	-
	110147	14.05	-
	110154	-	14.07
	110166	-	14.04
	110169	-	14.06
	110171	14.08	14.10
	110173	-	14.09
IREDELL CO - I-40			
	480090	-	15.00
	480169	14.09	
CLEVELAND CO - US-74			
	220021		15.00
	220087	14.06	
	220094		15.00
	254	16-07	-
	273	16-07	-
RUTHERFORD CO - US-74			
	800081		15.00
	800012	14.10	-
	800108	14.09	-
	800119	14.10	14.10

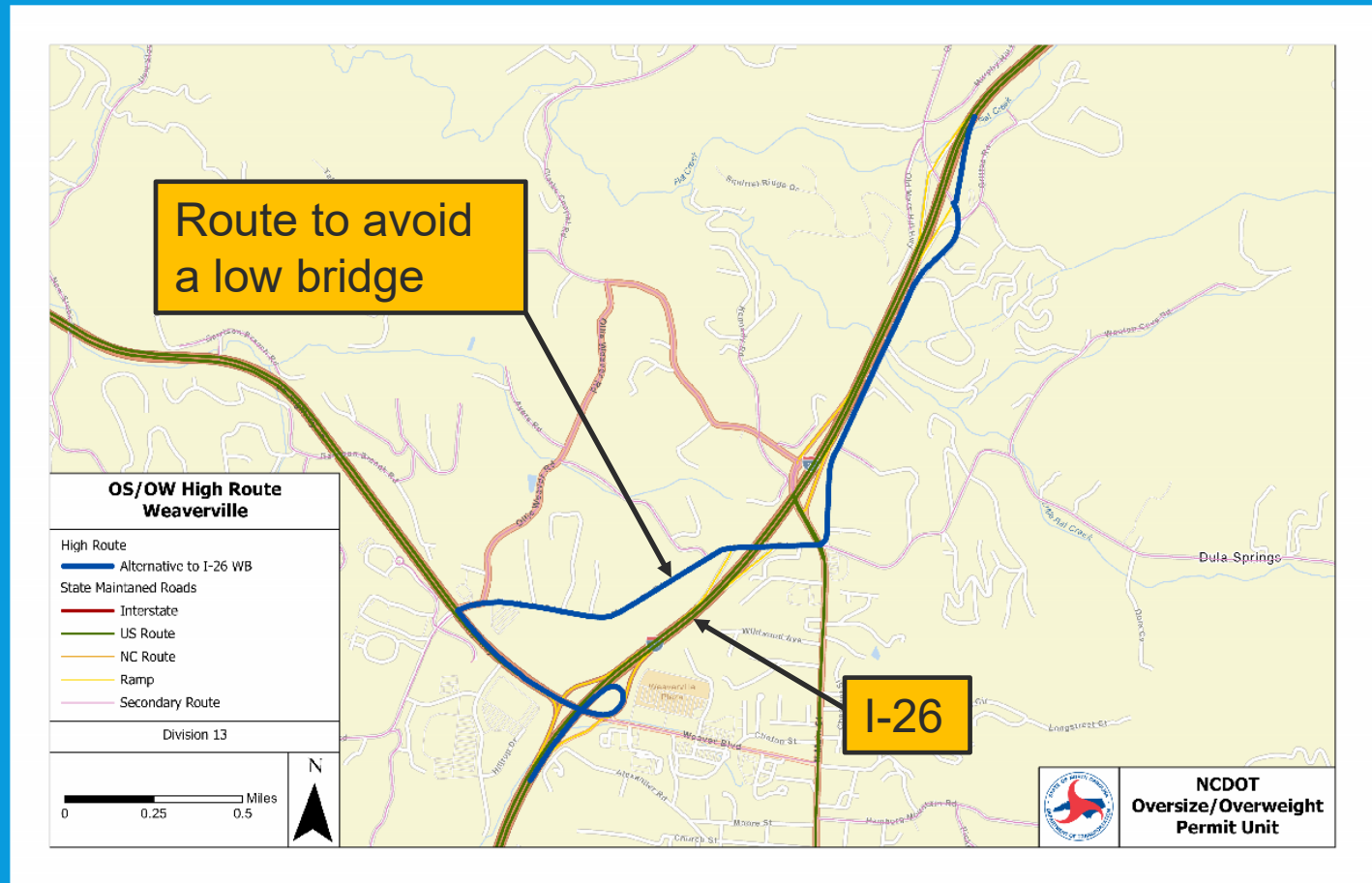


OSOW Initiatives – New Collaboration Tools

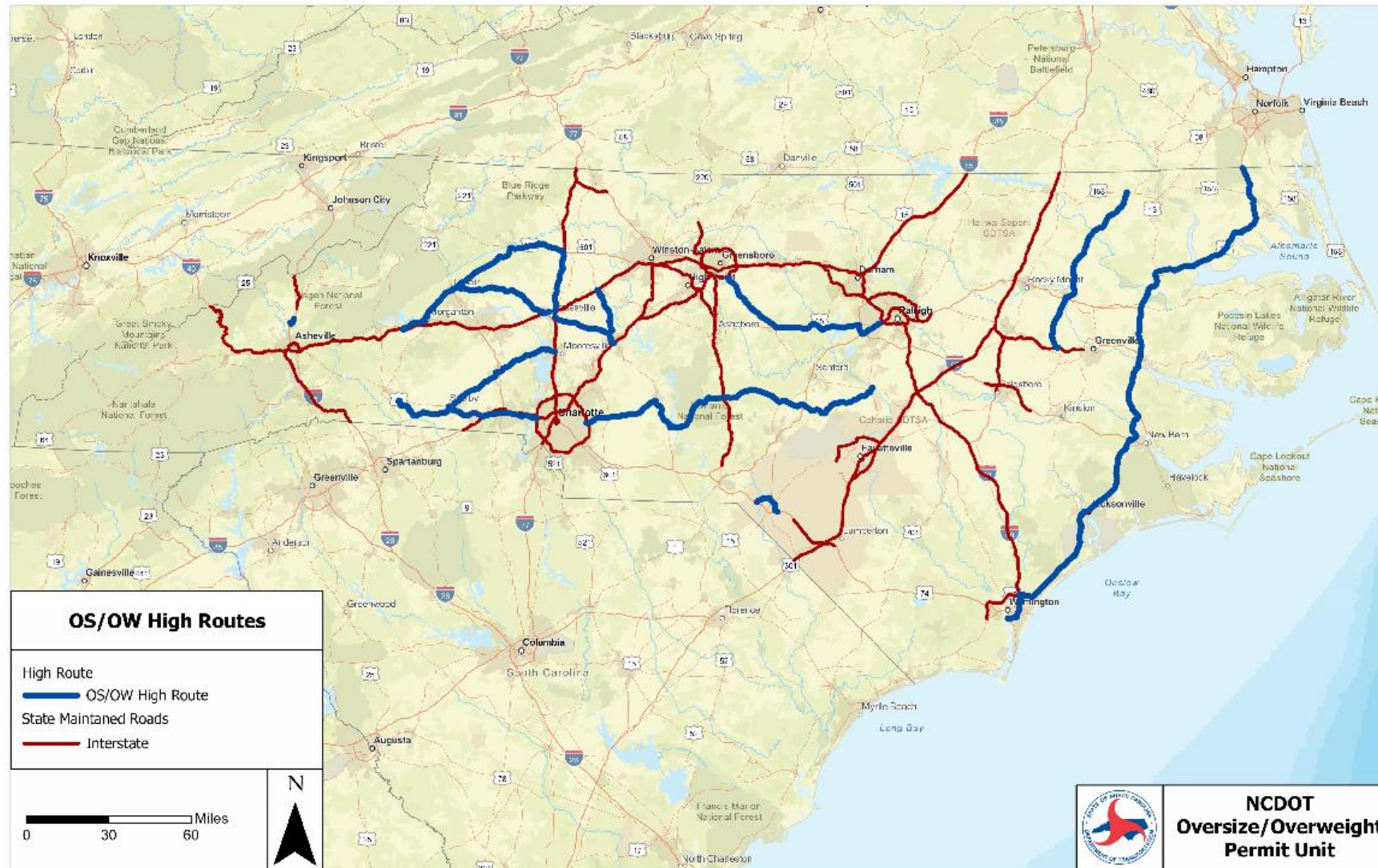
New collaboration tools!

- Identifying frequently used OS/OW routes
- Requesting collaboration for projects on critical OS/OW routes
- Adding to PDN

Example:



OSOW Initiatives – New Collaboration Tools



OSOW Initiatives – Weigh Stations

Weigh Stations

- OS/OW funds and manages NC Weigh Station maintenance
- Maintenance Contracts
- Future upgrades





COLLABORATION WITH OTHER UNITS

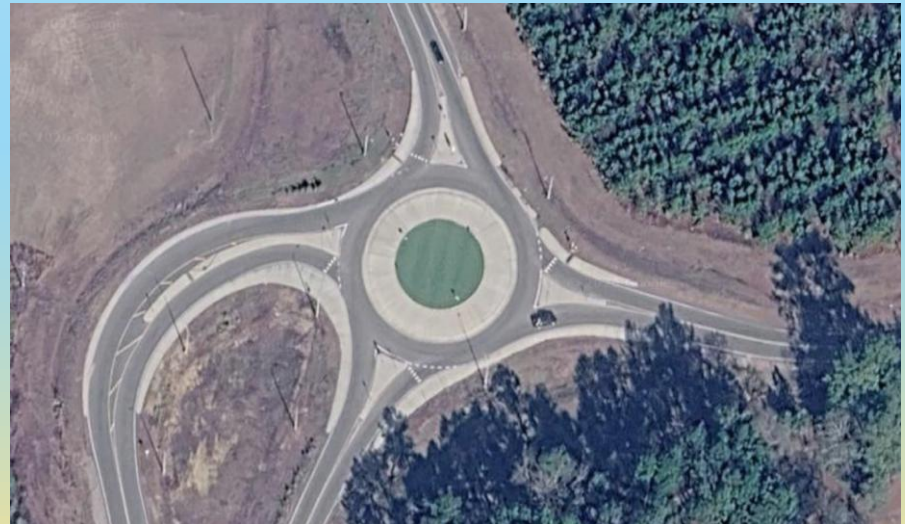
Roadway Geometry Collaboration

Geometry:

Geometric changes can greatly improve efficiency and safety.

Geometric changes can also negatively impact movement of large loads in some cases.

Let's collaborate for context sensitive solutions.



Roadway Geometry Collaboration

Ramping:

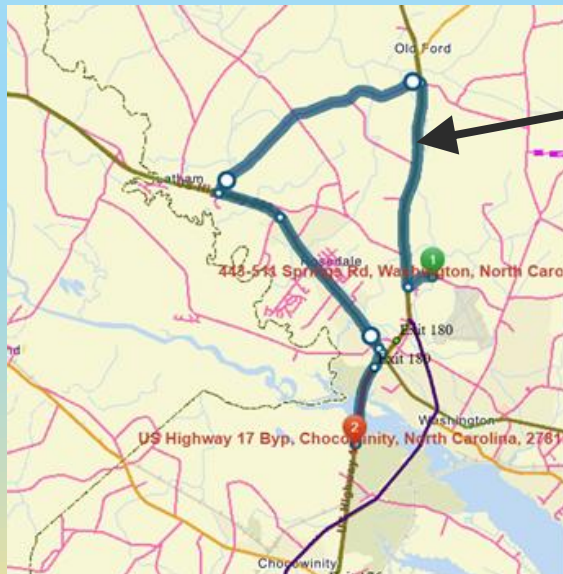
- Low bridge clearance
- High loads bypass via ramps
- Ramp intersection design can impact the use of the route



Roadway Geometry Collaboration

Case Study:

- Project US 17.
- Reduced conflict corridor.
- Construction Equipment Company
- Diversion routes are long



14 miles
longer

35 miles
longer



Roadway Geometry Collaboration

What to watch for:

Projects on critical OS/OW
Routes

Ramping around low bridge

Truck traffic context:

- Mobile home manufacturing
- Ag and construction equipment Companies
- Power plants
- Industrial development...



Example

Signing Collaboration

MUTCD Requirements:

Vertical Clearance shall be posted if clearance is 12" above statutory maximum vehicle height (or less).

- NC Statutory minimum recently changed from 13'-6" to 14'-0"
- MUTCD allows posting clearances up to 3" lower than actual. Suggest consistent approach



Section 2C.25 Low Clearance Signs (W12-2, W12-2a, and W12-2b)

Standard:

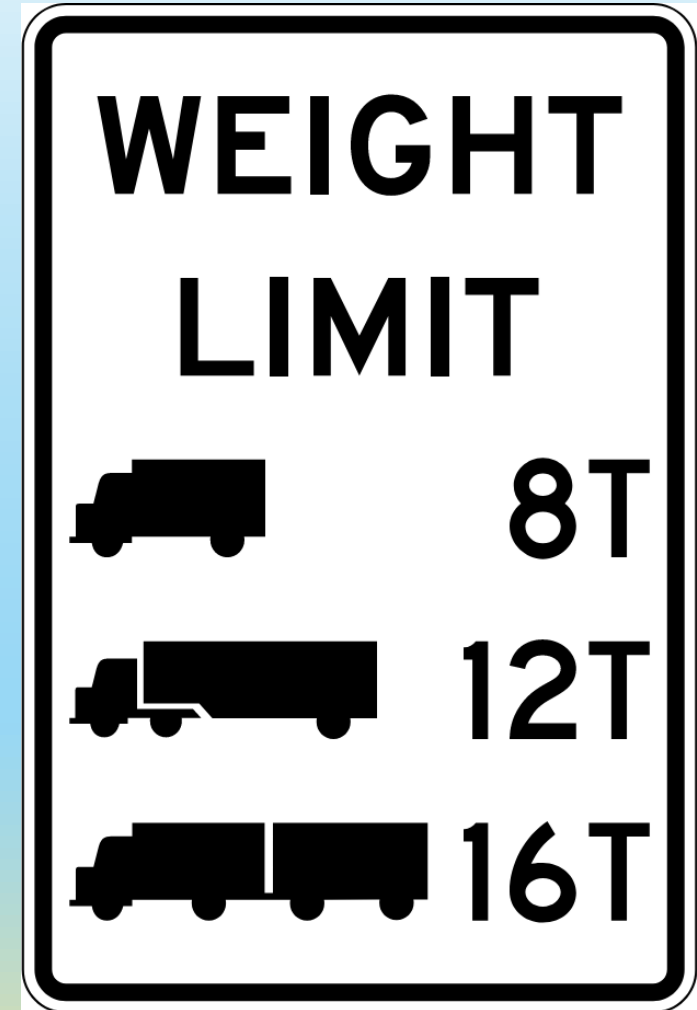
- 01 The Low Clearance Advance (W12-2) sign (see Figure 2C-6) shall be used to warn road users of vertical clearances less than 14 feet 6 inches, or vertical clearances less than 12 inches above the statutory maximum vehicle height, whichever is greater.

Signing Collaboration

MUTCD Requirements:

Bridge weight posting signs
updated in 11th Edition MUTCD

- Compliance date specified in 11th Edition MUTCD is 2028



Signing Collaboration

Removal of Signs:

Please remove signs when they no longer apply due to bridge replacement

- Case Study: Clearance sign not removed when the bridge was replaced



Structures Management Collaboration

Structure Inventory:

In some cases, the inventory is not up to date

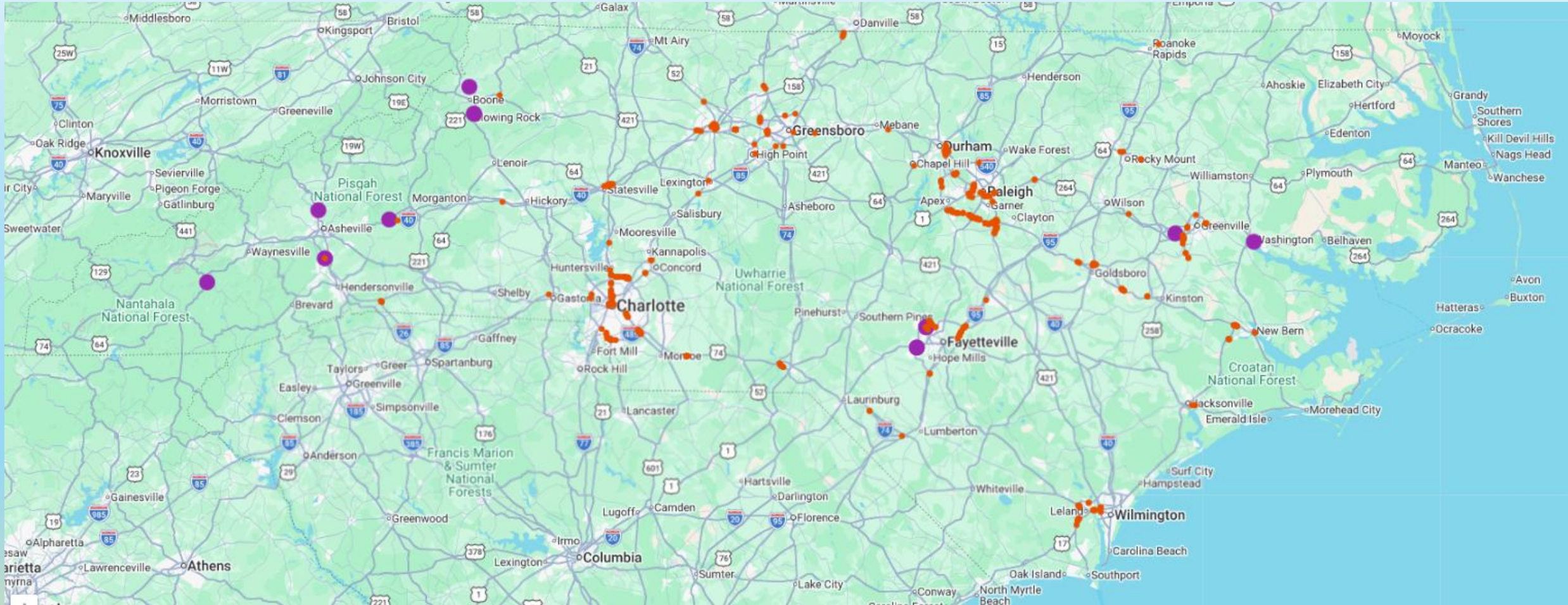
- New sign structures are being flagged
- Low bridges replaced are still being flagged

 Height Restricted Structures
Structure #: 120434, Overhead Sign in Cabarrus Co, 15 ft. 9.960 in. Vertical Under-Clearance
Structure #: M590558, T-pole Sign in Mecklenburg Co, 16 ft. 6.000 in. Vertical Under-Clearance
Structure #: M590340, Overhead Sign in Mecklenburg Co, 16 ft. 6.000 in. Vertical Under-Clearance
Structure #: M590339, Overhead Sign in Mecklenburg Co, 16 ft. 6.000 in. Vertical Under-Clearance
Structure #: M590346, Cantilever Sign in Mecklenburg Co, 16 ft. 6.000 in. Vertical Under-Clearance
Structure #: M590349, Cantilever Sign in Mecklenburg Co, 16 ft. 6.000 in. Vertical Under-Clearance
Structure #: M590338, Overhead Sign in Mecklenburg Co. 16 ft. 6.000 in. Vertical



October 2024

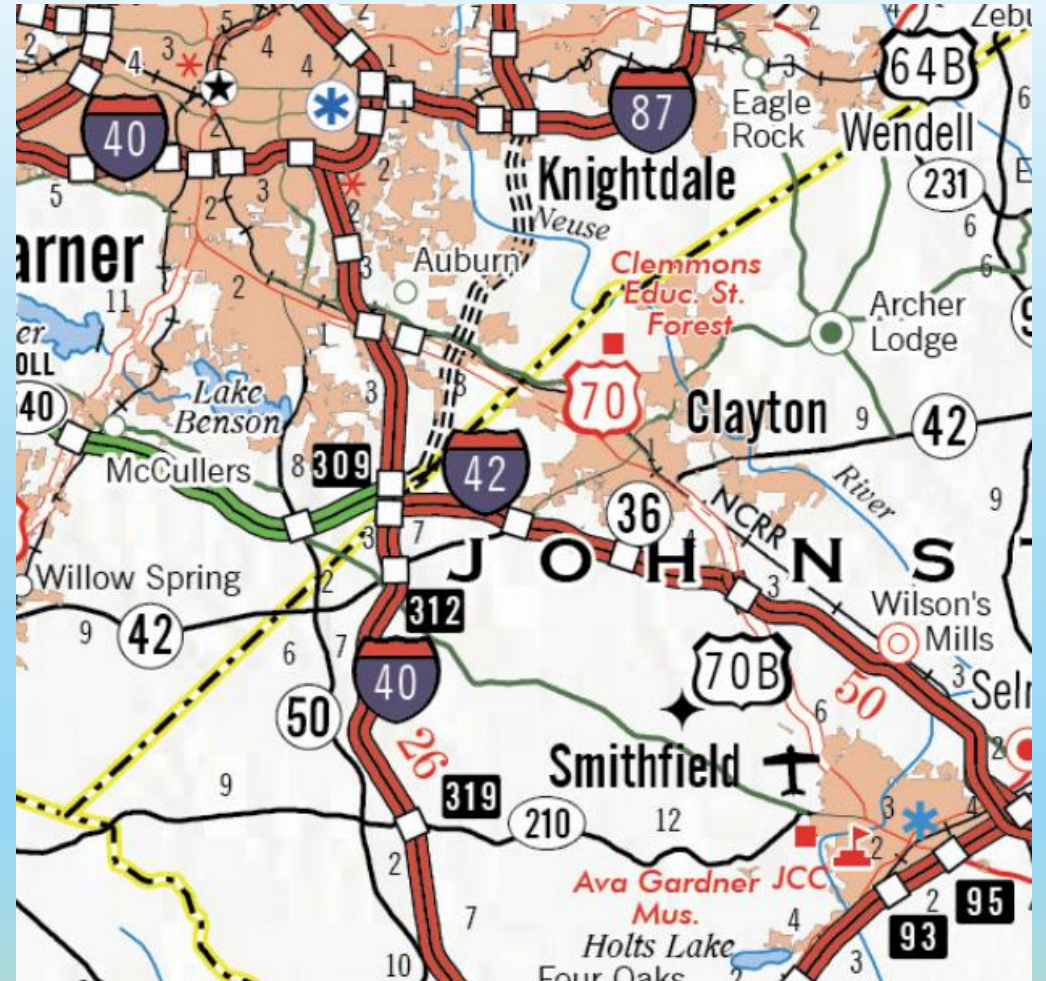
Structure Inventory Map:



Route Change Collaboration

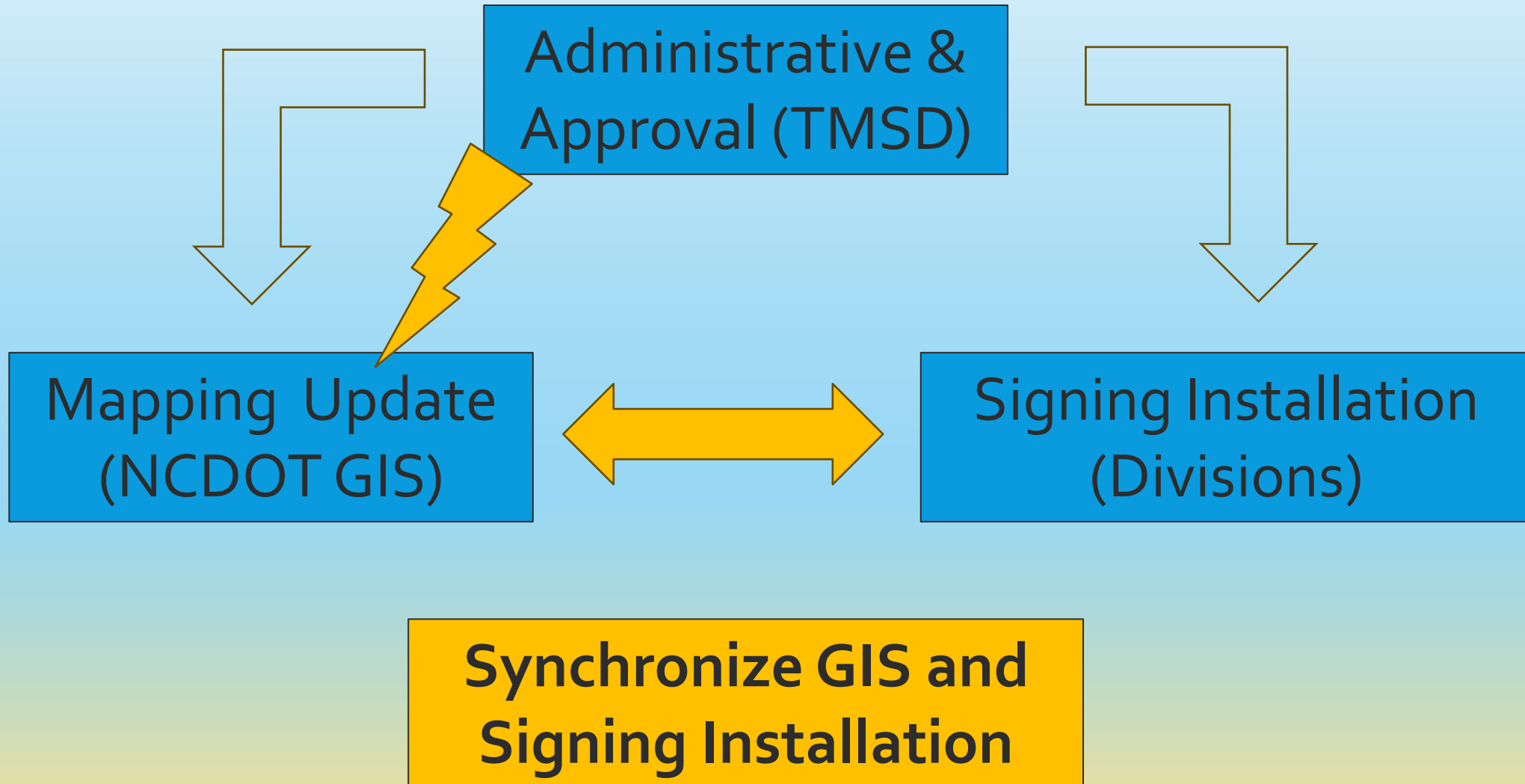
Route Changes:

- Administered by TMSD
- Includes changes in routes and exit numbers
- Issued permits include explicit directions for the route.
- There is significant risk and a severe penalty for drivers caught “off route”



Route Change Collaboration

Route Change Process:

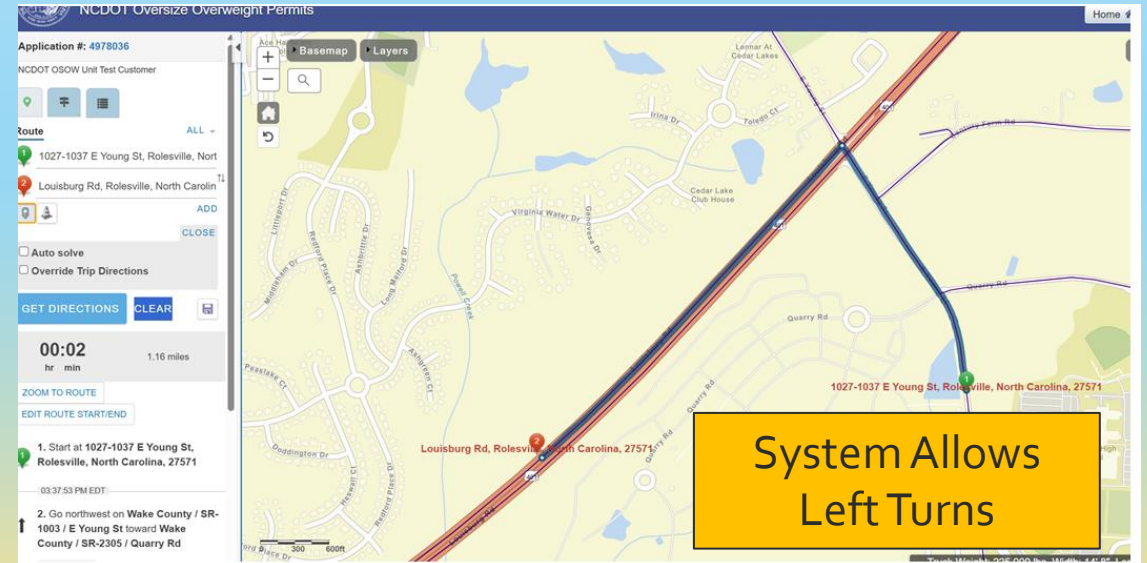


GIS Collaboration

GIS:

PIMS uses NCDOT GIS for routing

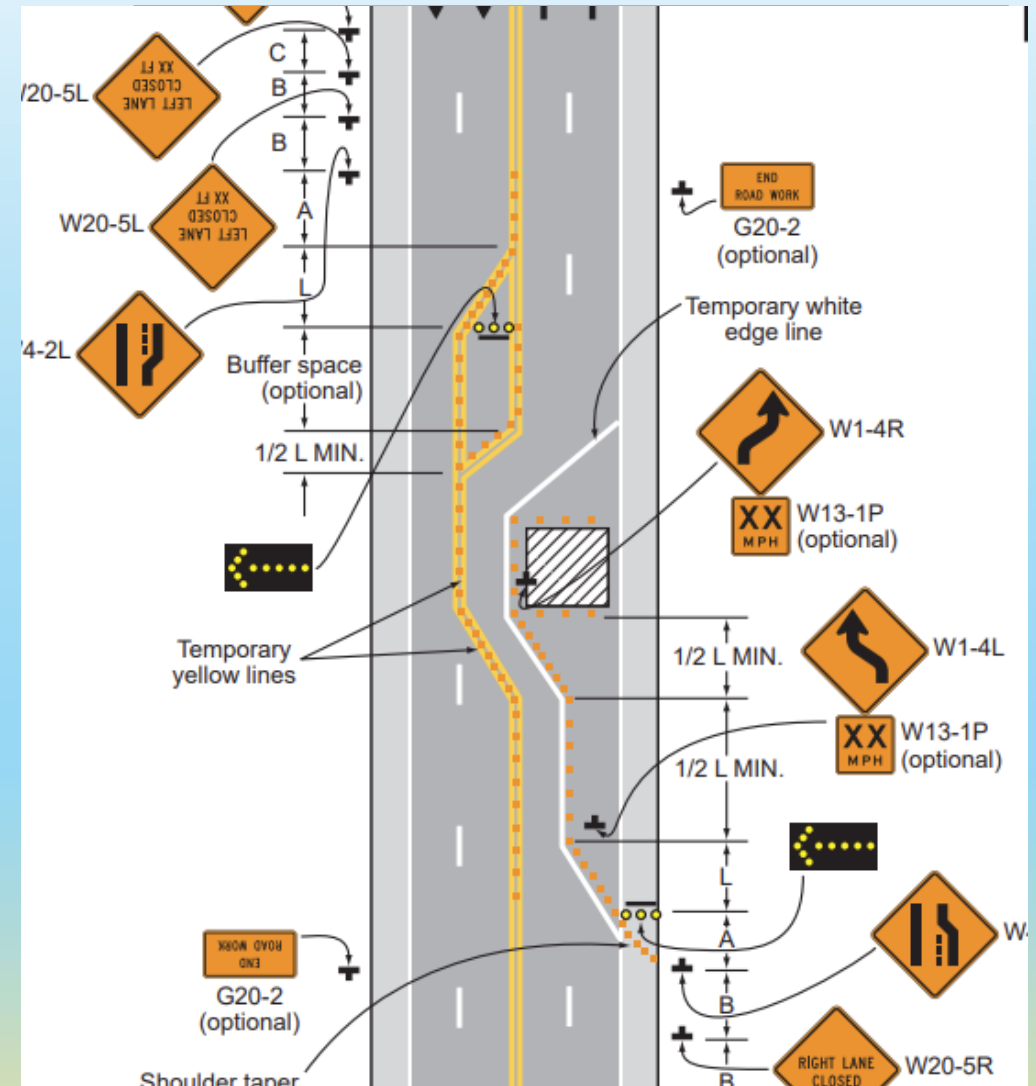
- Collaborate to synchronize implementation of route changes with sign installation and ordinances.
- Collaborate to clean up glitches that impact OS/OW



Work Zone Collaboration

Temporary Restrictions and Detours:

- For OS/OW critical routes, collaborate detour routes.
- For OS/OW critical routes, collaborate temporary restrictions.
- TIMS Updates



Traffic Operations Collaboration

Collaboration:

- OS/OW uses TIMS to manually assign routes in PIMS.
- Potential for PIMS connect to TIMS.
- All closures and restrictions not entered in TIMS





SUMMARY

Summary

OS/OW loads are becoming more frequent and LARGER

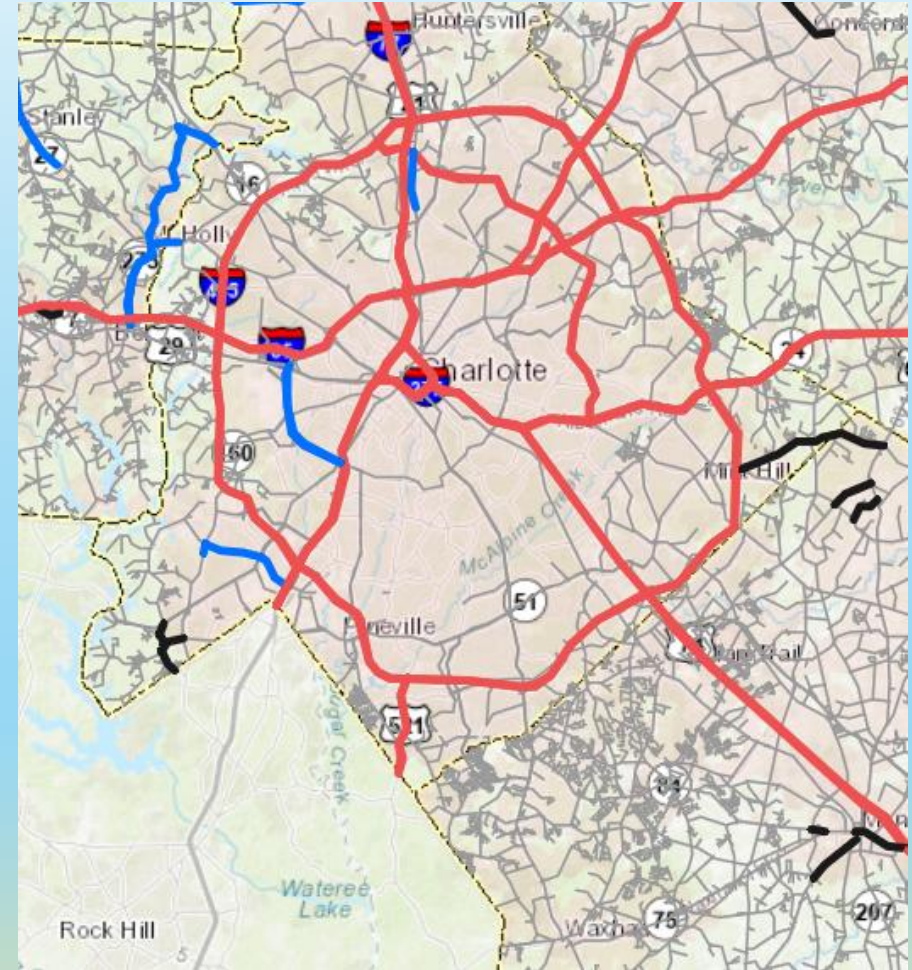
- Commonly over 18' wide
- Commonly over 16' high
- More superloads
- Can be over 1 million lbs
- Tied to economic development



Summary

Our network is changing every day

- New facilities under const
- Low clearance bridges being replaced
- Low weight rated bridges being replaced
- Some projects create barriers



Summary

Collaborate for safe and efficient movement of goods

- Consider OS/OW routes
- Standardize signs
- Synchronize route change signs and GIS implementation
- Consider detours on critical OS/OW routes. Temporary restrictions consistently in TIMS
- Consistently update TIMS, GIS, bridge database for new projects.



Summary

OS/OW Contact:

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