

Transylvania County Comprehensive Transportation Plan (CTP) Meeting #2

North Carolina Department of Transportation (NCDOT)
Transportation Planning Division (TPD) **Daniel Sellers, PE**

North Carolina Department of Transportation (NCDOT) Division 14,
Steve Williams

Land of Sky Rural Planning Organization (LOSRPO)
Vicki Eastland, Nick Kroncke



Welcome and Introductions,



Vicki Eastland, LOSRPO
May 14, 2019

Agenda

- 3:00 PM** **Welcome and Introductions**
- 3:05 PM** **Brief Group Discussion. Questions from previous meeting/desired outcome**
- 3:10 PM** **Revisit Vision**
- 3:25 PM** **NCDOT Division 14 Presentation project construction process “So your project is in the STIP, now what?”**
- 3:40 PM** **Present Capacity maps 2010 – 2040, Crash and Bridge Deficiency maps**
- 4:15 PM** **Discuss facility types**
- 4:25 PM** **Wrap-Up**

Desired Outcomes

1. Work Group agrees on vision and objectives for Transylvania County's transportation system in 2045
2. Work Group has a better understanding of the NCDOT project delivery process
3. Work Group agrees second Tuesdays, 3:00 – 4:30PM, at Board of Elections (unless otherwise stated). CTP Work Group Meeting #3 **June 11th 3:00-4:30.**
4. Work Group has a working understanding of Capacity maps 2010 – 2040, Crash and Bridge Deficiency maps

Transylvania County CTP Vision and Goals



Vicki Eastland, LOSRPO
May 14, 2019

CTP Vision Statement. First cut...

Transylvania County and its municipalities will have a safe; robust and balanced transportation system; that will serve to connect its citizens to Services; will support diverse population growth; foster economic Investment opportunities, while preserving the county's cultural resources, natural beauty and productive farmlands. The transportation System will provide transportation opportunities for multiple modes of travel and enhance the quality of life for citizens of all ages.

Transylvania County CTP Vision

Transylvania County and its municipalities will have a safe, reliable transportation system for all modes, ages and abilities.

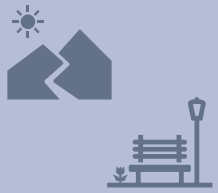
Objective #1

The transportation system will safely and efficiently connect users to services via multiple modes of travel while preserving cultural and natural resources.

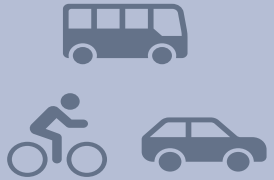
Objective #2

The transportation system will support diverse population growth, foster economic investment opportunities and enhance the quality of life for users of all ages and abilities.

Goals



Preservation (Preserving the existing natural beauty of the region, the community and character of downtown, and our existing neighborhoods)



Choices (Provide transportation mode choices: public transportation, bicycle, pedestrian, auto)



Connectivity (How our multi-modal transportation system gets us from one place to another)

Goals



Economic Development (Invest in projects that spur economic growth and create jobs)



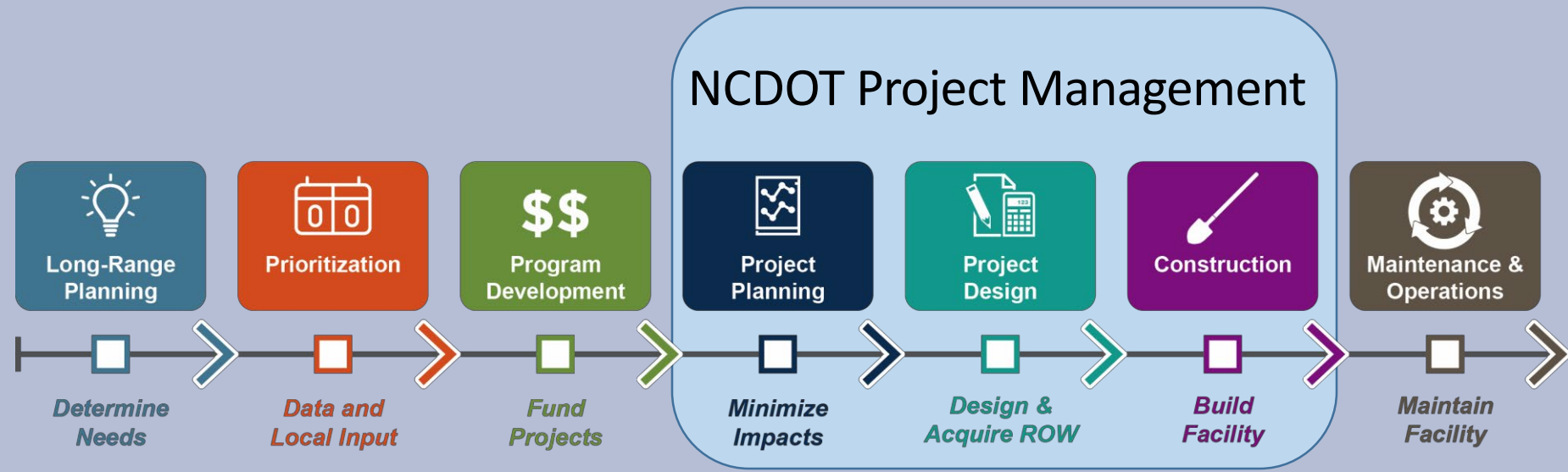
Improve Travel Times (safe and efficient roadway network with fewer intersections; adequate travel lanes for future volumes)

NCDOT Transportation Project Delivery Process

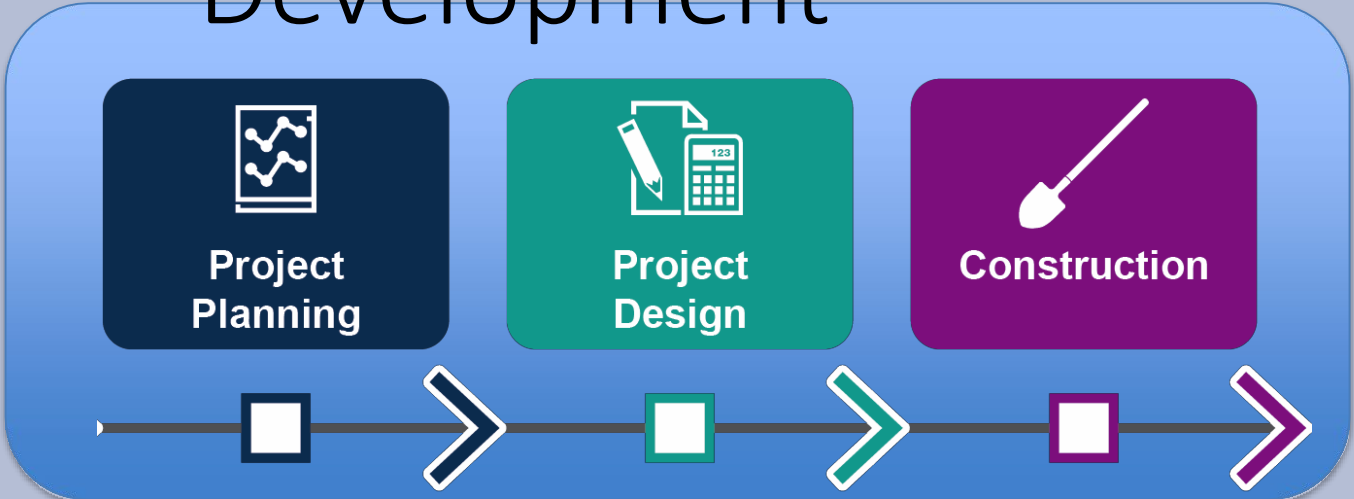
So Your Project Made it into the STIP, Now What?

Steve Williams
DPE, NCDOT Division 14
May 14, 2019

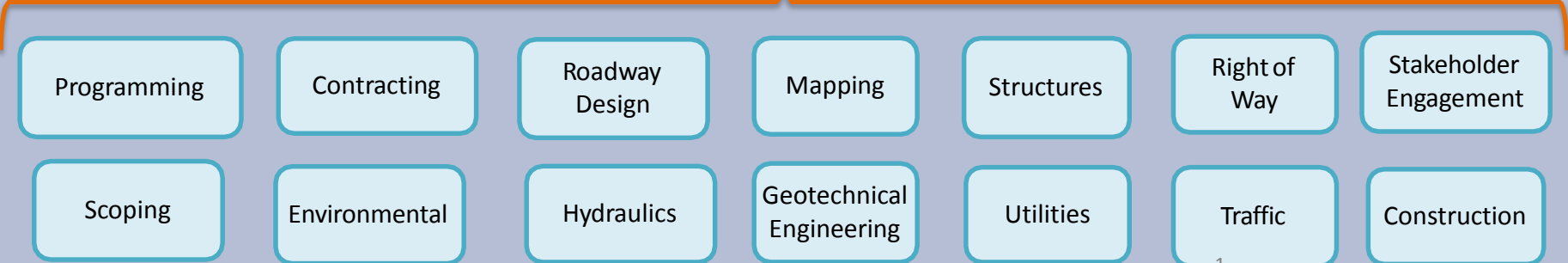
Project Life Cycle



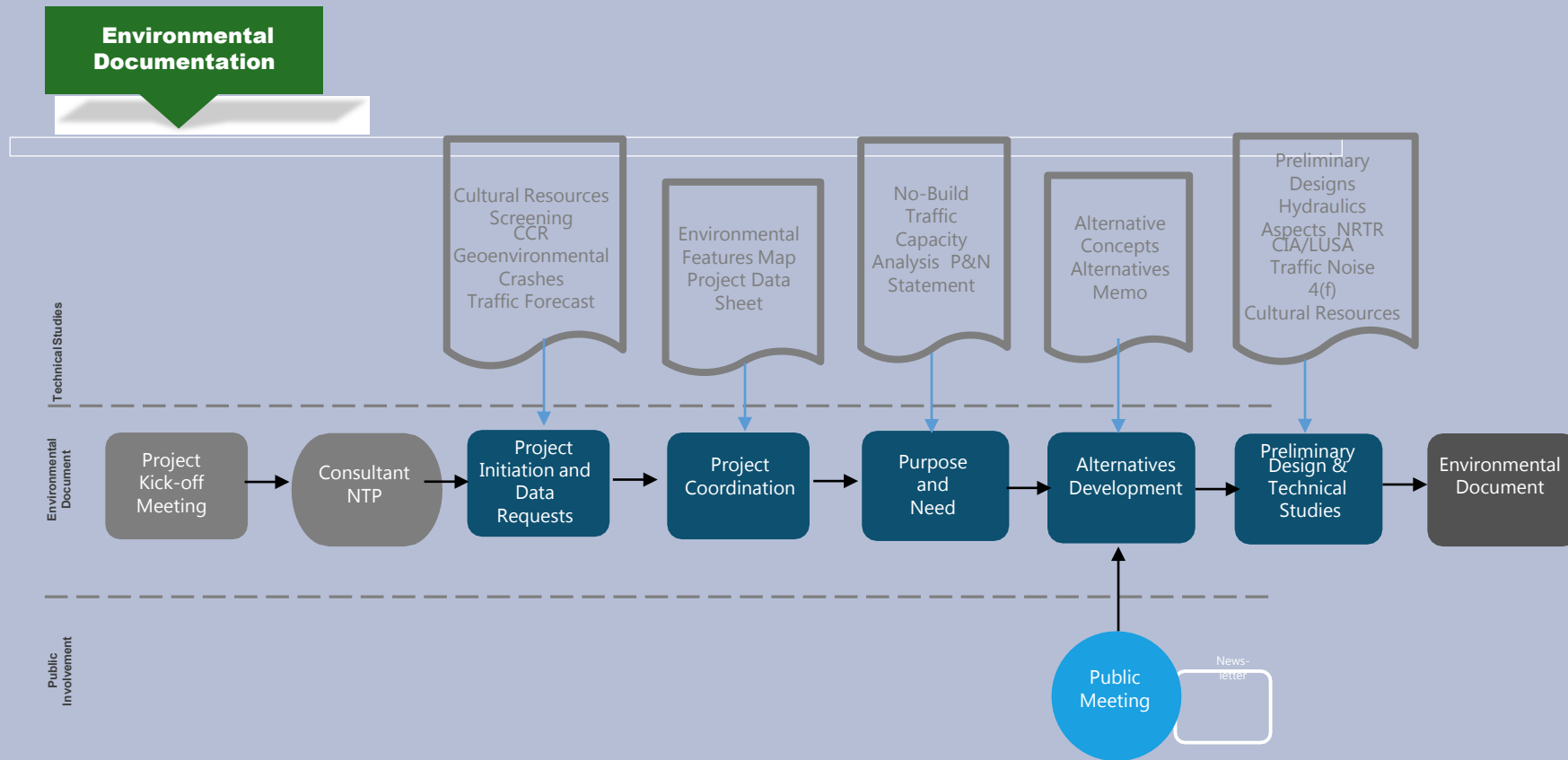
Project Development



Project Managers (Division & Central)
(Constant communication, coordination, and reporting)



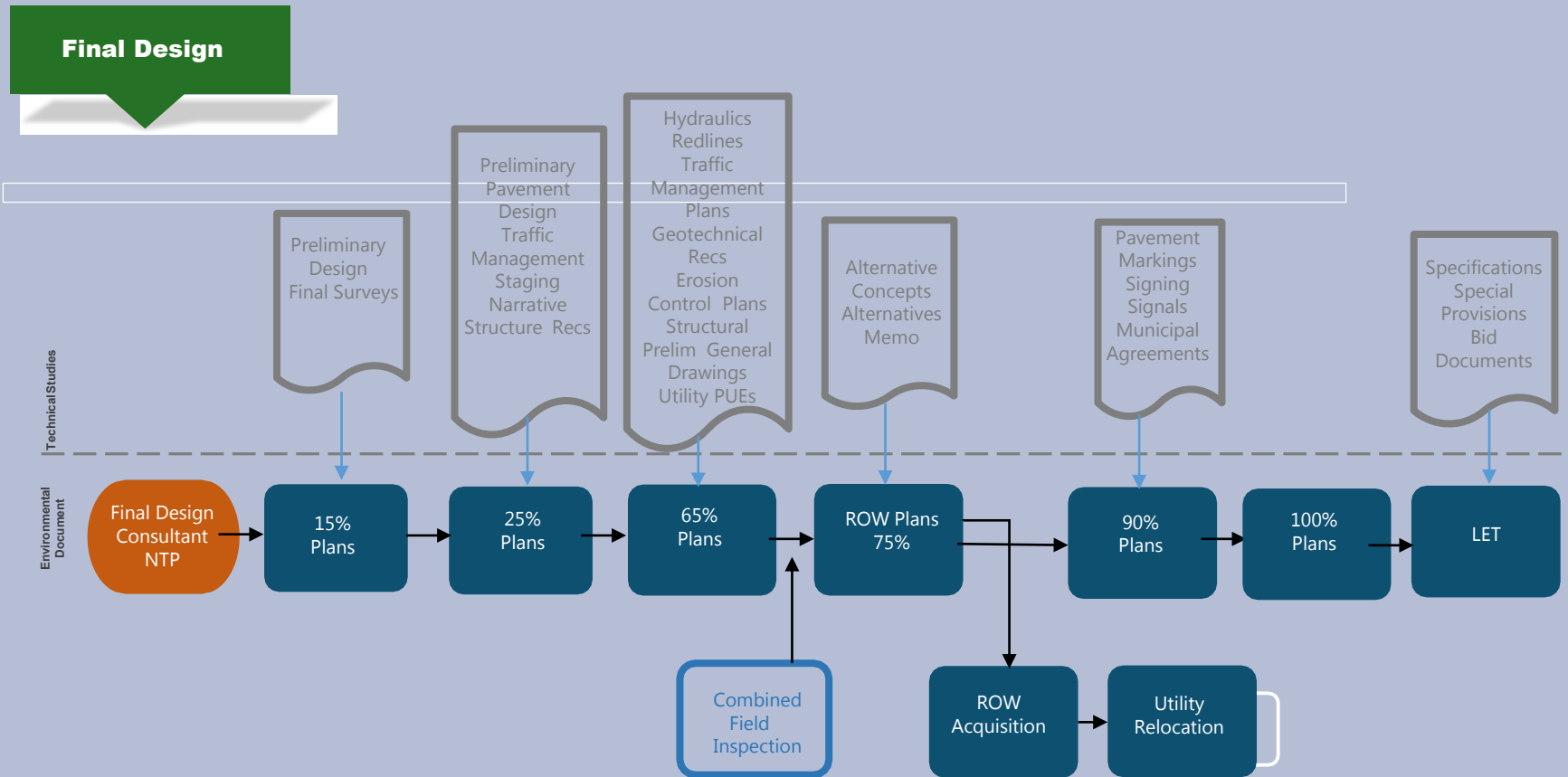
Project Development Process Maps



NOTE: ALL PROJECTS SHOULD BE EVALUATED TO DETERMINE APPLICABLE STEPS

Guidance & Resources

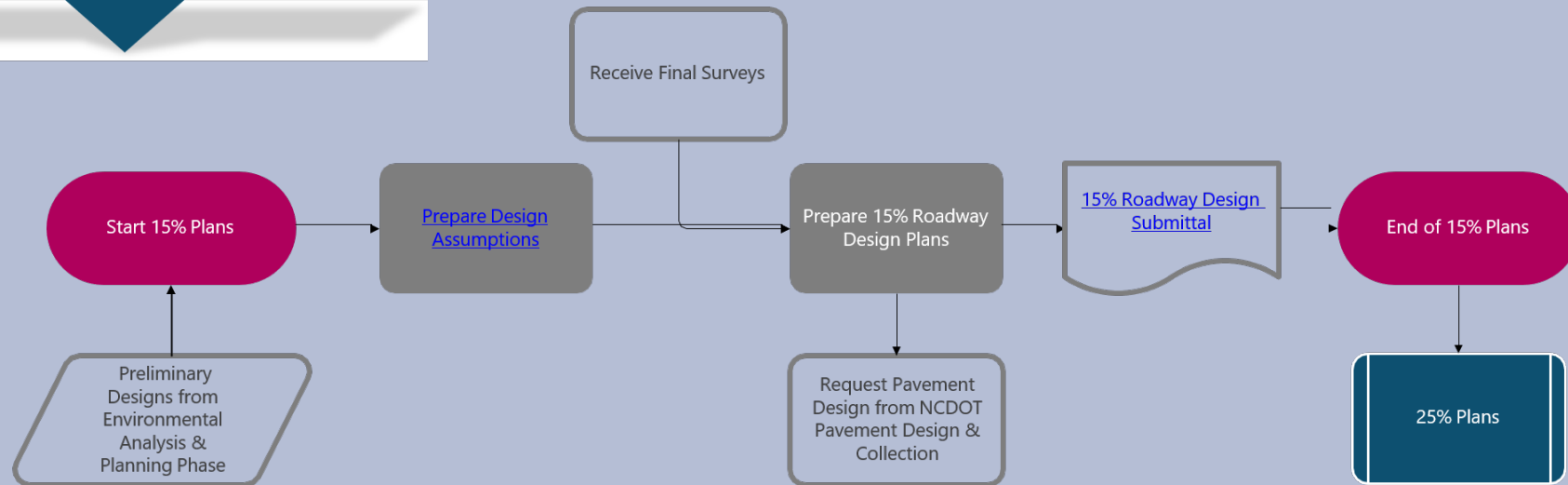
Project Development Process Maps



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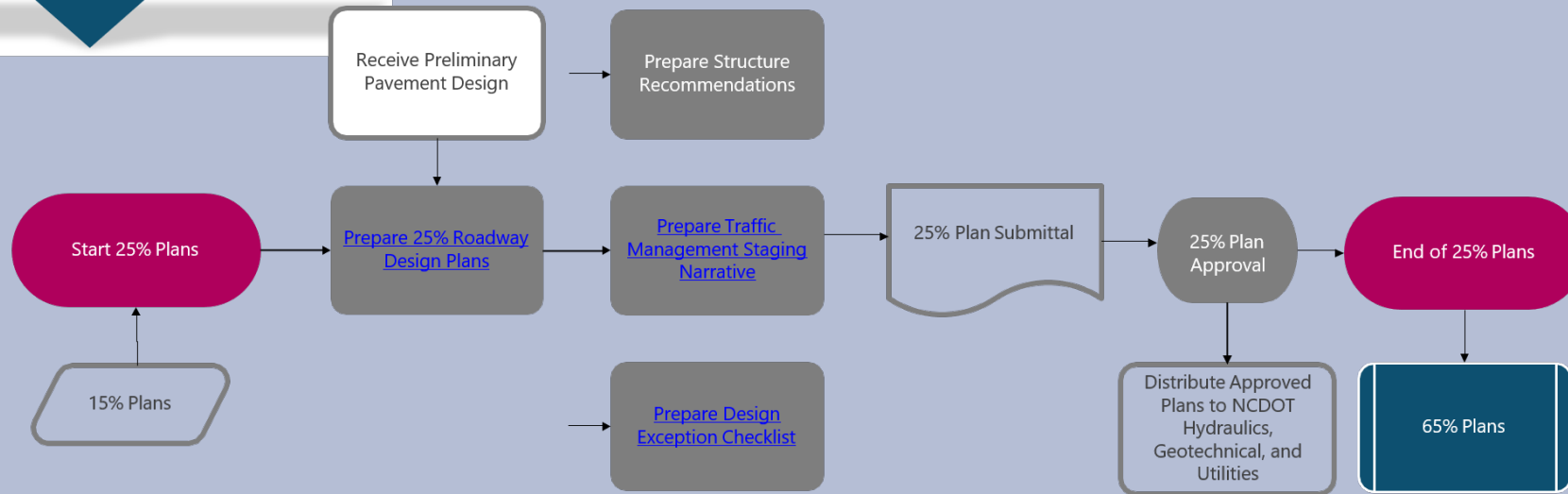
Guidance & Resources

15% Plans



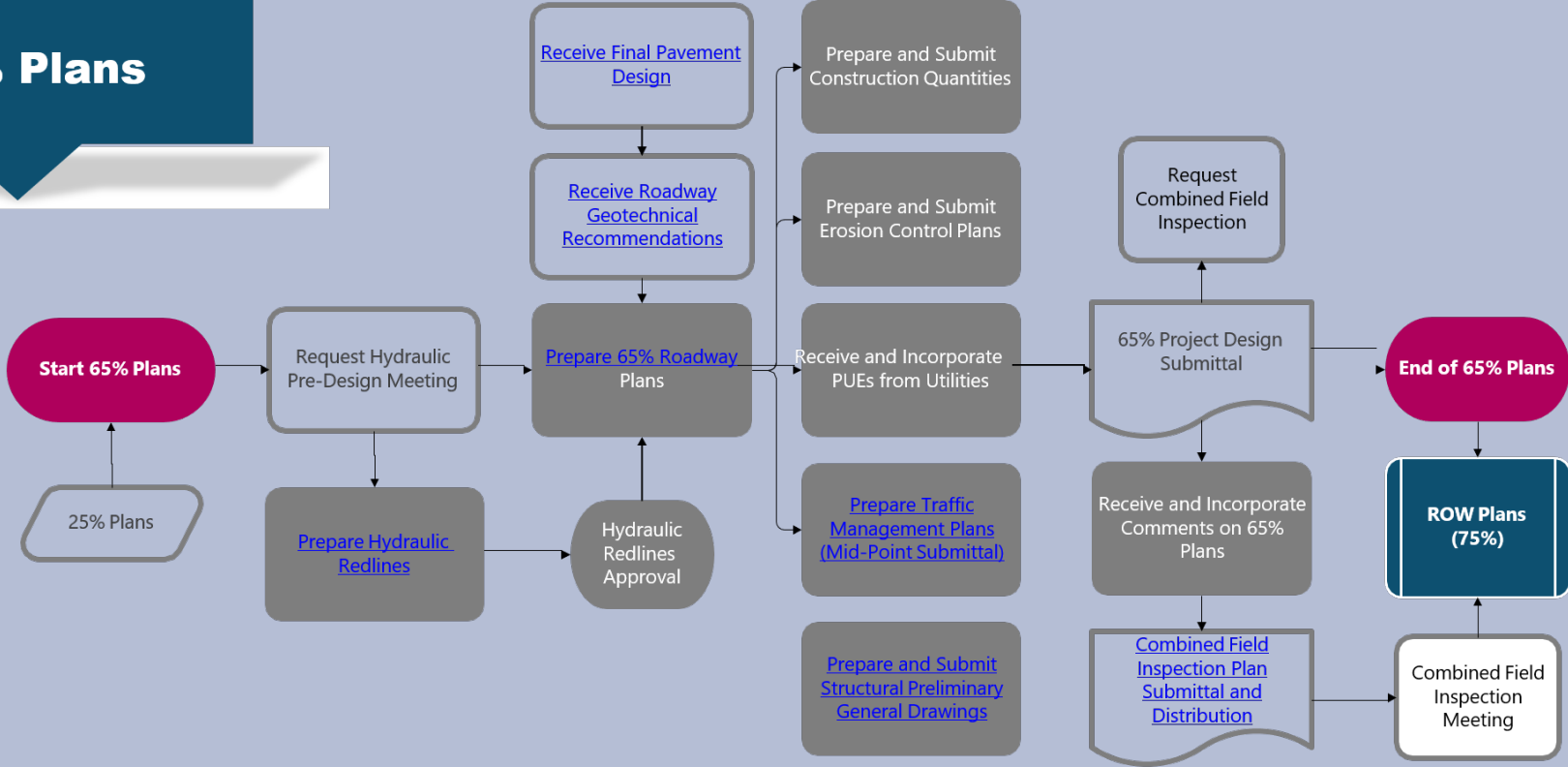
NOTE: ALL PROJECTS SHOULD BE EVALUATED TO DETERMINE APPLICABLE STEPS

25% Plans



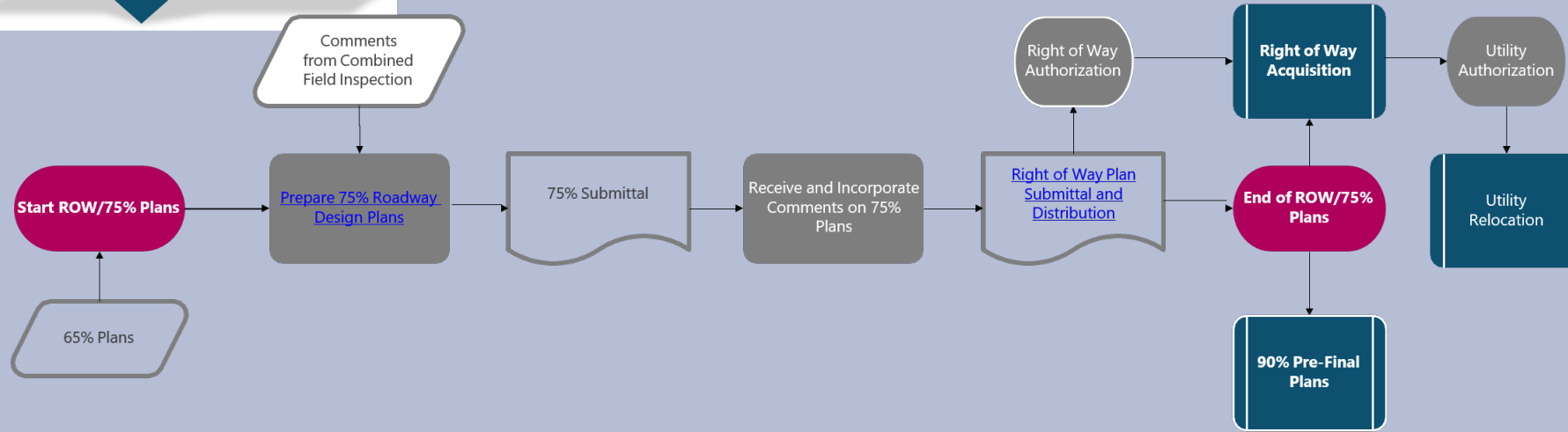
NOTE: ALL PROJECTS SHOULD BE EVALUATED TO DETERMINE APPLICABLE STEPS

65% Plans



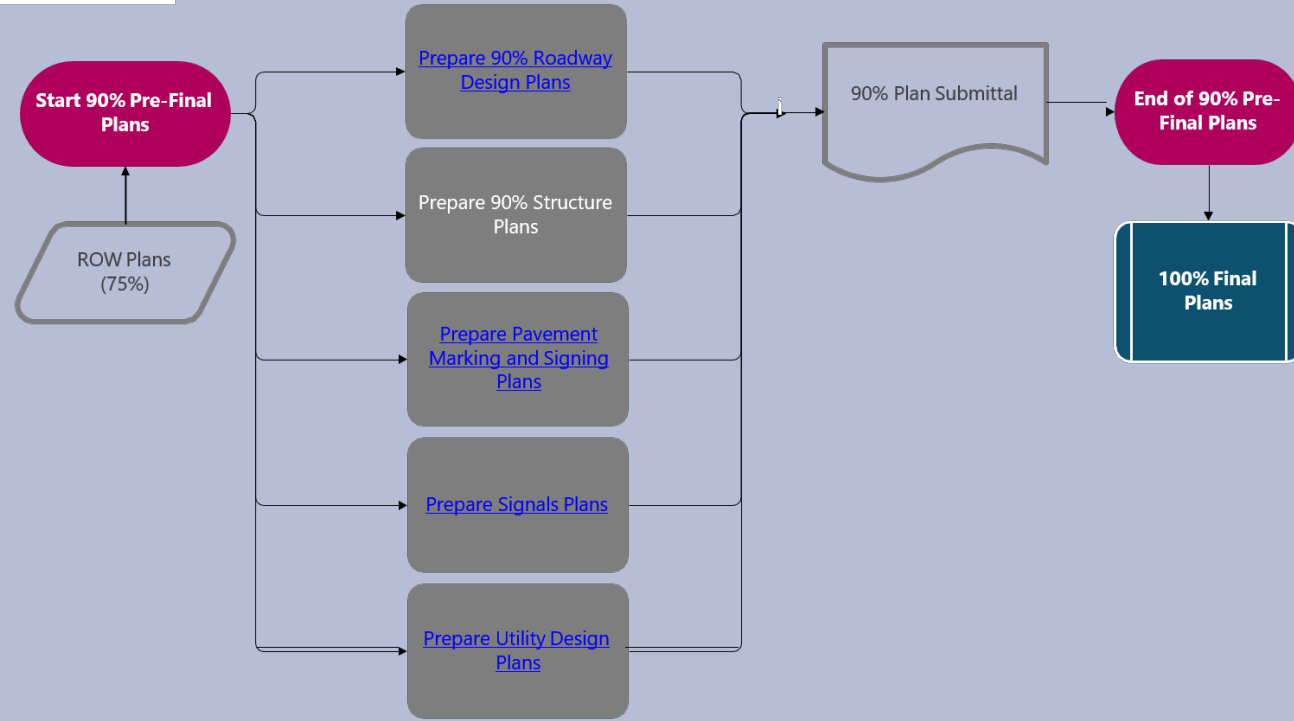
NOTE: ALL PROJECTS SHOULD BE EVALUATED TO DETERMINE APPLICABLE STEPS

ROW Plans (75%)



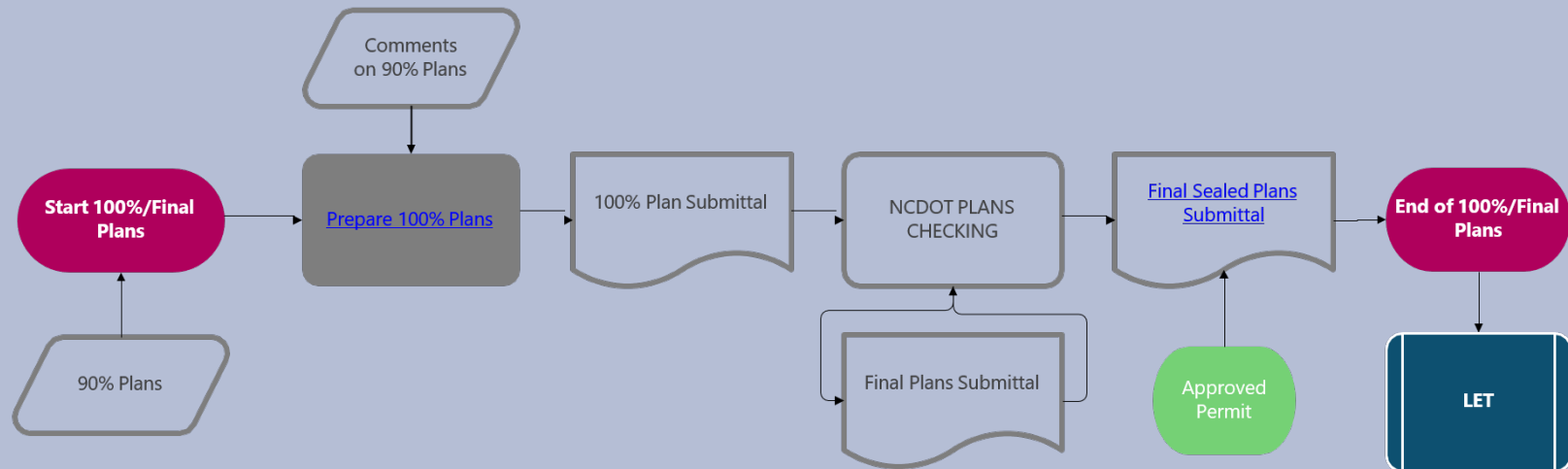
NOTE: ALL PROJECTS SHOULD BE EVALUATED TO DETERMINE APPLICABLE STEPS

90% Pre-Final Plans



NOTE: ALL PROJECTS SHOULD BE EVALUATED TO DETERMINE APPLICABLE STEPS

100%/Final Plans



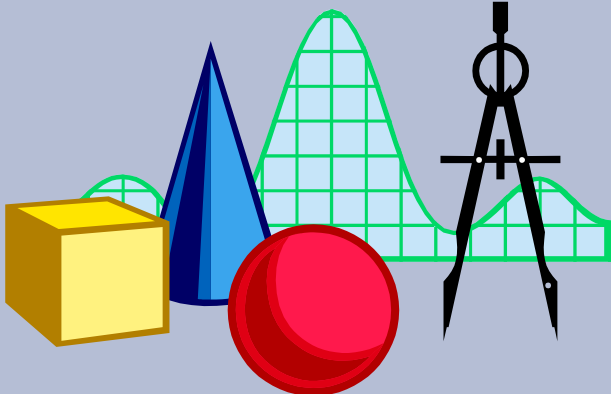
NOTE: ALL PROJECTS SHOULD BE EVALUATED TO DETERMINE APPLICABLE STEPS

WHY?

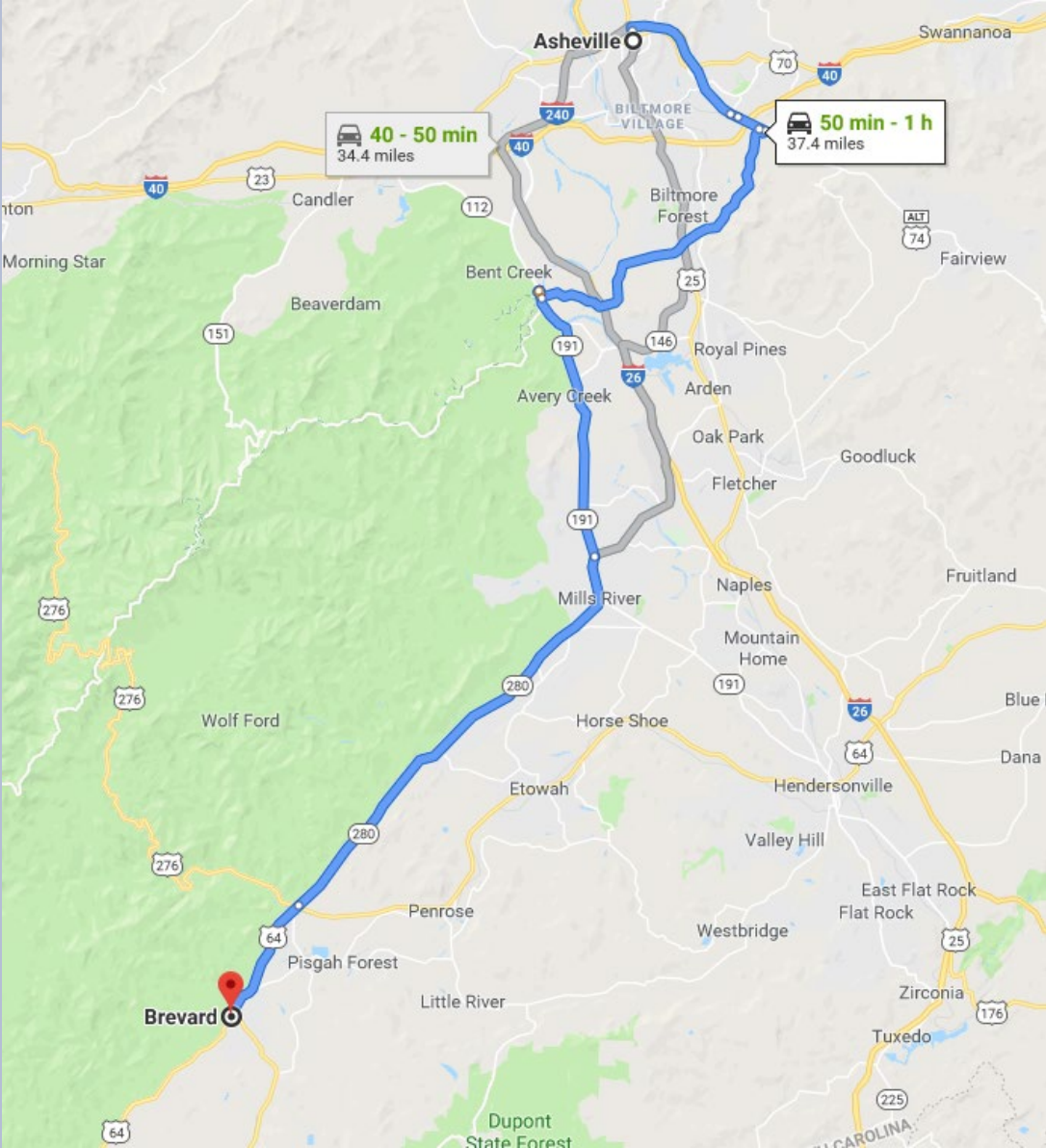
- Deliver Quality Plans
 - Accurate Bids
 - Deliver Intended Project
 - Reduce Cost Over-Runs
 - Minimize Construction Time
 - Construction Zone Safety
 - Accurately Identify Environmental Resources/Impacts
 - Community Involvement
 - Transparent Process



Highway Capacity Maps 2017 – 2040



Daniel Sellers, P.E.
NCDOT Transportation Planning Division
May 14, 2019



2045 Volume/ Capacity

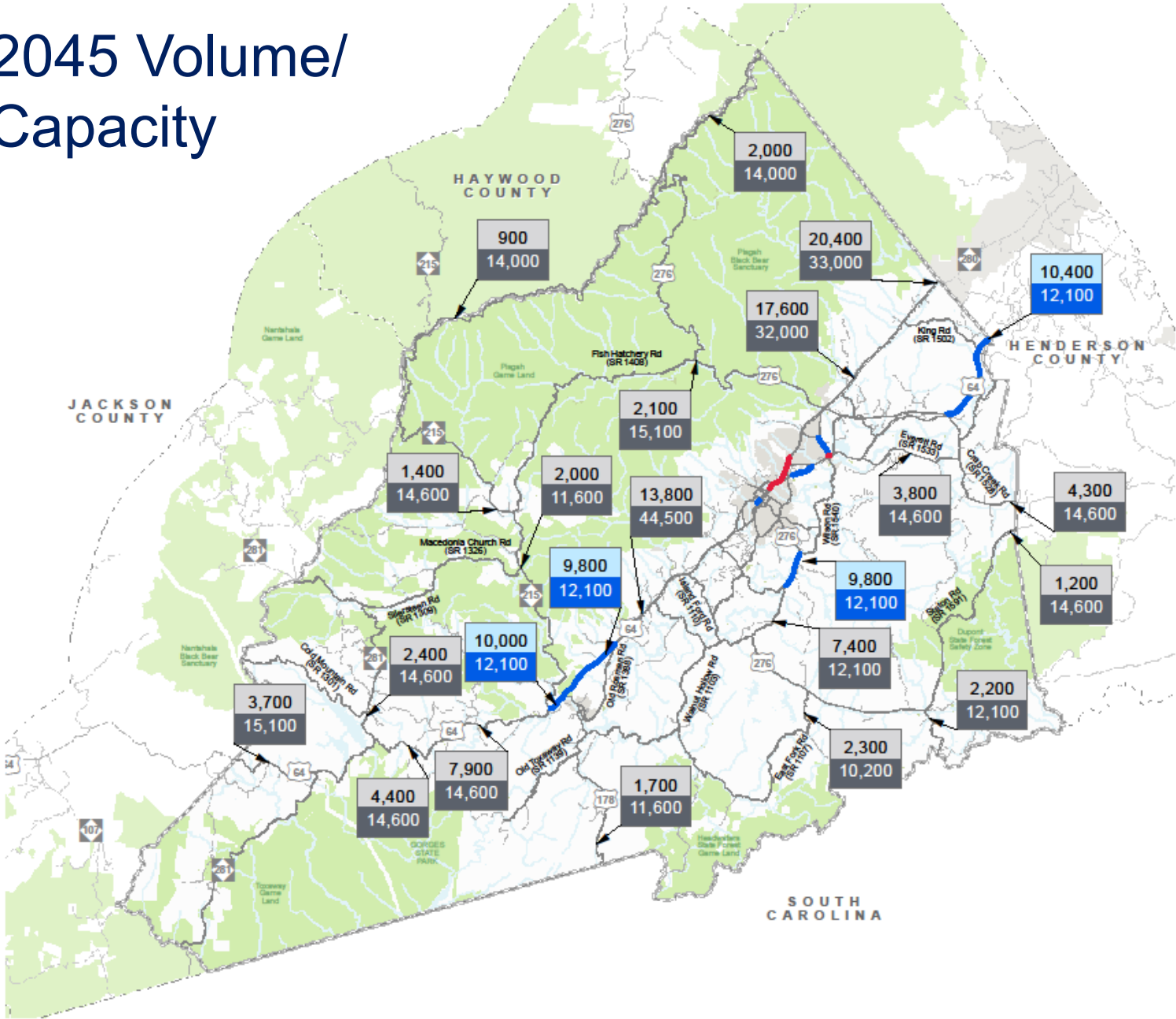


Figure 2
**2045 VOLUME AND
CAPACITY DEFICIENCIES**



TRANSYLVANIA COUNTY

CTP Analysis and Information

Volume and Capacity Ratio Features
(Future Year 2045)

- 2045 Volume / 2045 Capacity Under Capacity (0-0.79)
- 2045 Volume / 2045 Capacity Near Capacity (0.80-0.99)
- 2045 Volume / 2045 Capacity Over Capacity (1.00+)



Full report at:
<https://tinyurl.com/y5wy3te3>



Sheet 2 of 2

Base map date: March 18, 2018

Legal Disclaimer

This product contains mapping data for informational and planning purposes only, and is subject to change. Users should review or consult the primary data sources to ascertain the usability of the information.

DRAFT WORKING MAP
Plan Date: May 13, 2019

What is a travel demand model

- A series of mathematical equations that represent how choices are made when people travel. Travel demand models are developed to simulate actual travel patterns and existing demand conditions.
- Basically...where are people coming & going to and how are they getting there!

How are Models Built?

4 Step Model Process

Trip Generation

Trip Distribution

Mode Choice

Traffic Assignment

Step 1: Trip Generation

How Many Trips are There in the Area?

Non-Resident Trips



School Trips



Shopping Trips



Work Trips
& more

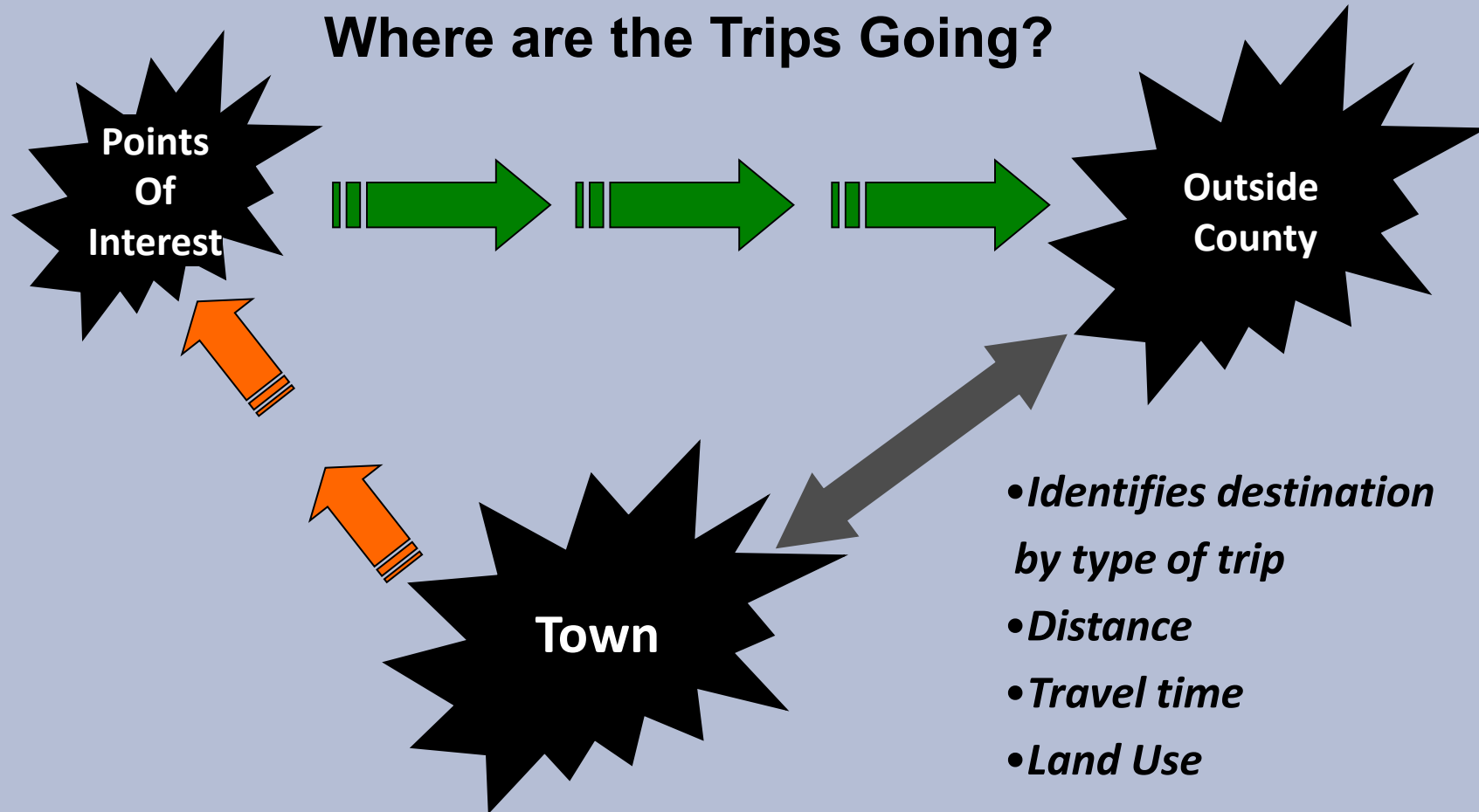


Commercial Vehicle Trips



Step 2: Trip Distribution

Where are the Trips Going?



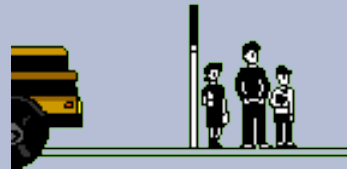
Step 3: Mode Choice

How do you Travel?



Walk

Transit



Auto

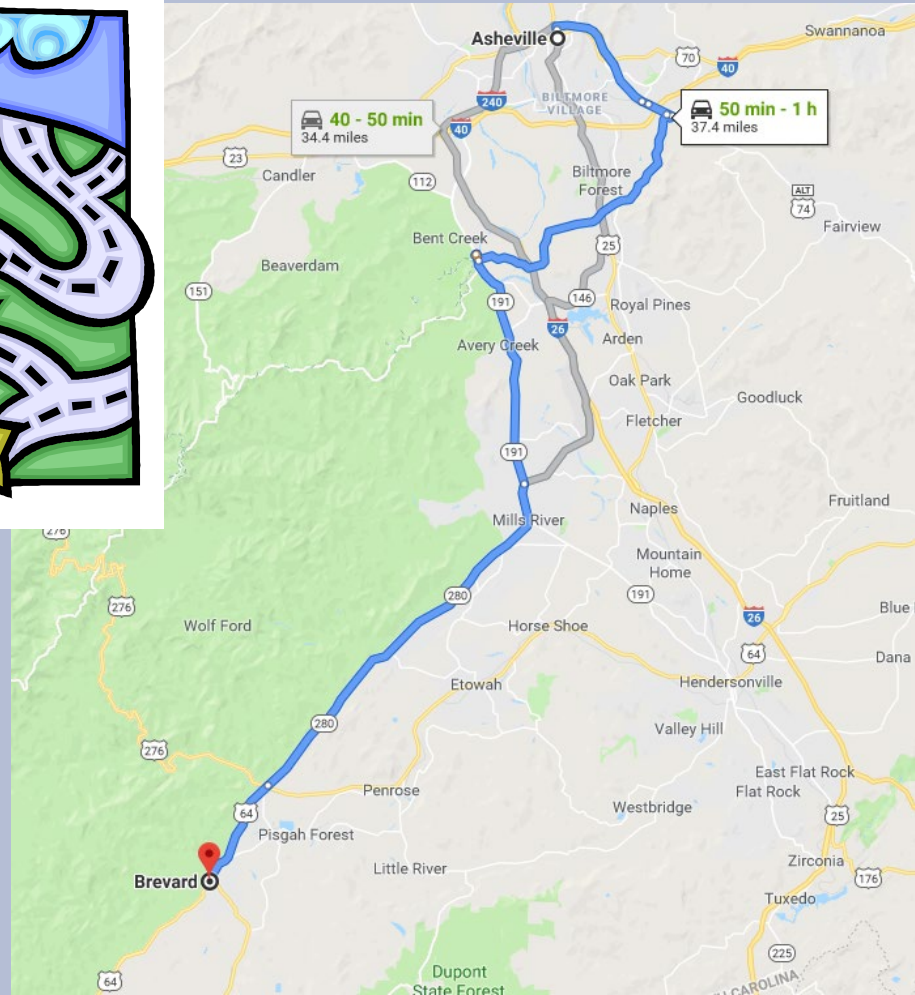
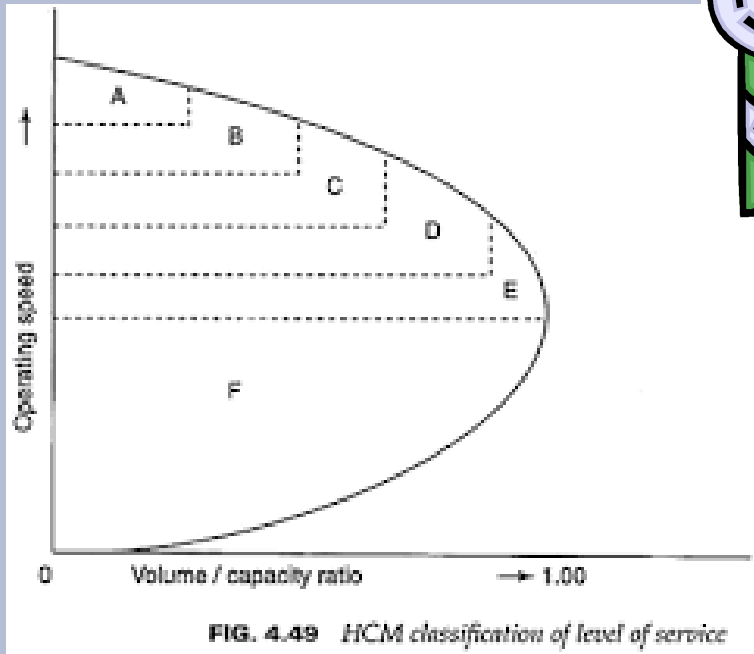


Bike



Step 4: Traffic Assignment

What path do you use to get there?



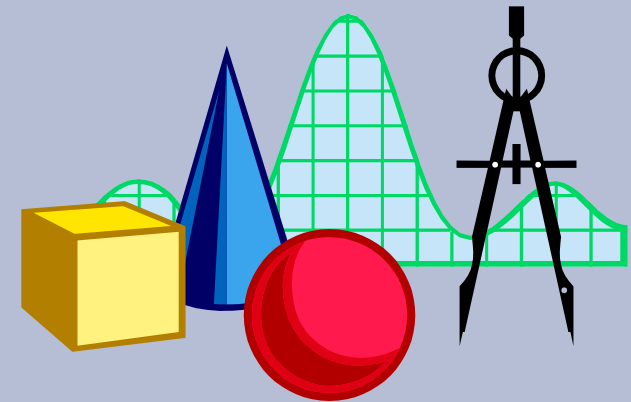
After the 4 Step Process...

Calibrate the model

Validate results

Forecast Future Year Data

USE THE MODEL!!



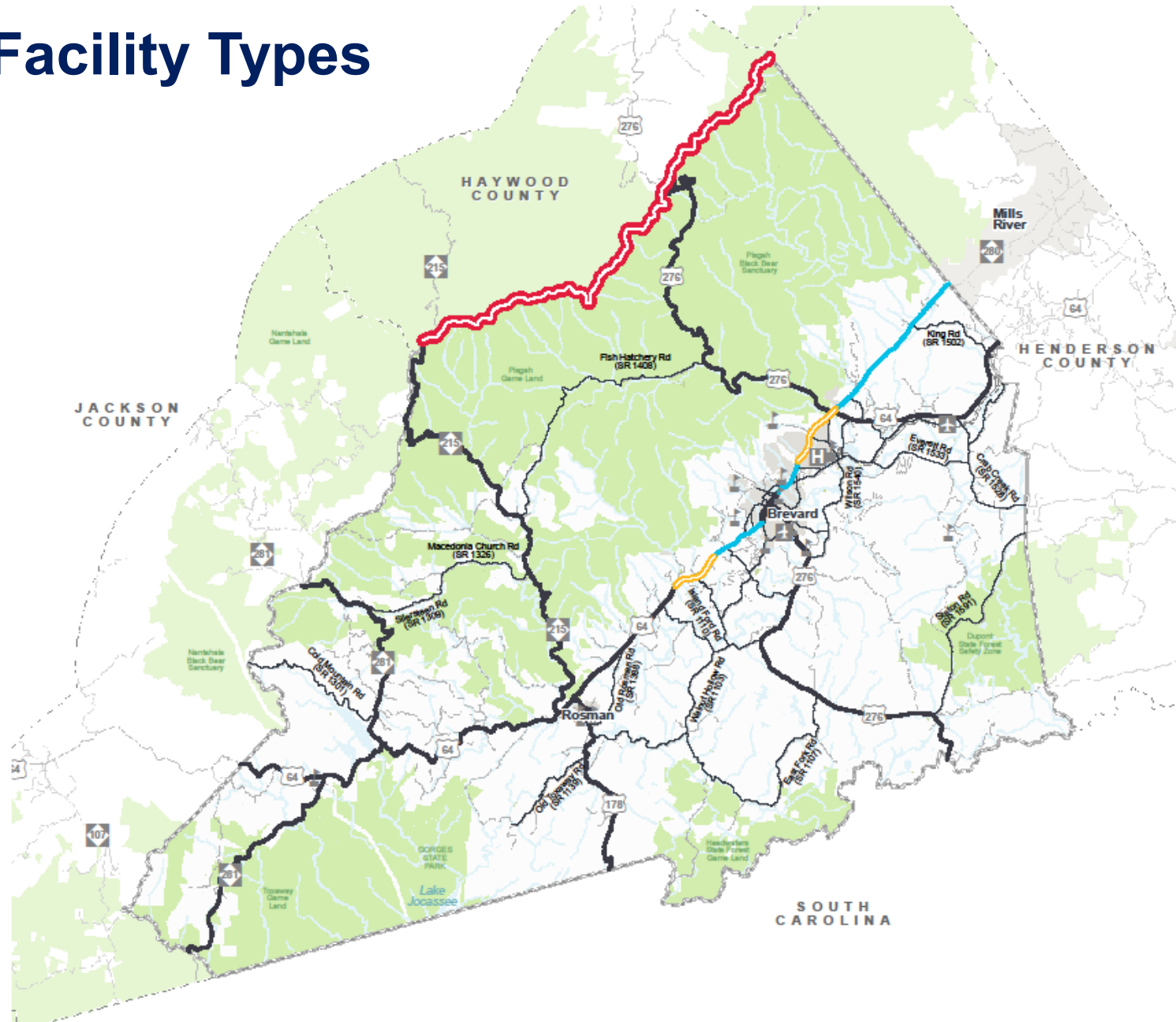
Final Modeling Thoughts

Travel Models: A Means of Predicting the Unpredictable

- No model can perfectly replicate or predict Reality
- Does provide valuable information
- Helps support the decision making process

Questions?

Facility Types



FACILITY TYPES

Facility classifications for mobility and control of access planning through 2045



TRANSYLVANIA COUNTY

Comprehensive Transportation Plan

Facility Types and Control of Access
(Listed in Order of Mobility Function)

	Projected	New Location
Freeway		
Expressway (Multilane Divided)		
Boulevard (Multilane Divided)		
Major Thoroughfare (Multilane Undivided)		
Major Thoroughfare (2 Lane)		
Minor Thoroughfare		
Other Features		
	Studied Roads	



Full report at:
<https://tinyurl.com/y5wy3fe3>



Sheet 1 of 4

Base map date: March 18, 2018

Legal Disclaimer

These concepts will need additional analysis to meet state and federal environmental regulations, to determine final locations and designs, and to be funded for implementation. Local zoning or subdivision ordinances may require the dedication of right of way based on the concepts shown on the Comprehensive Transportation Plan and local collector street plans, based on N.C.G.S. § 136-66.2 and § 136-66.10.

DRAFT WORKING MAP
Plan Date: May 11, 2019

Highway Crash Data

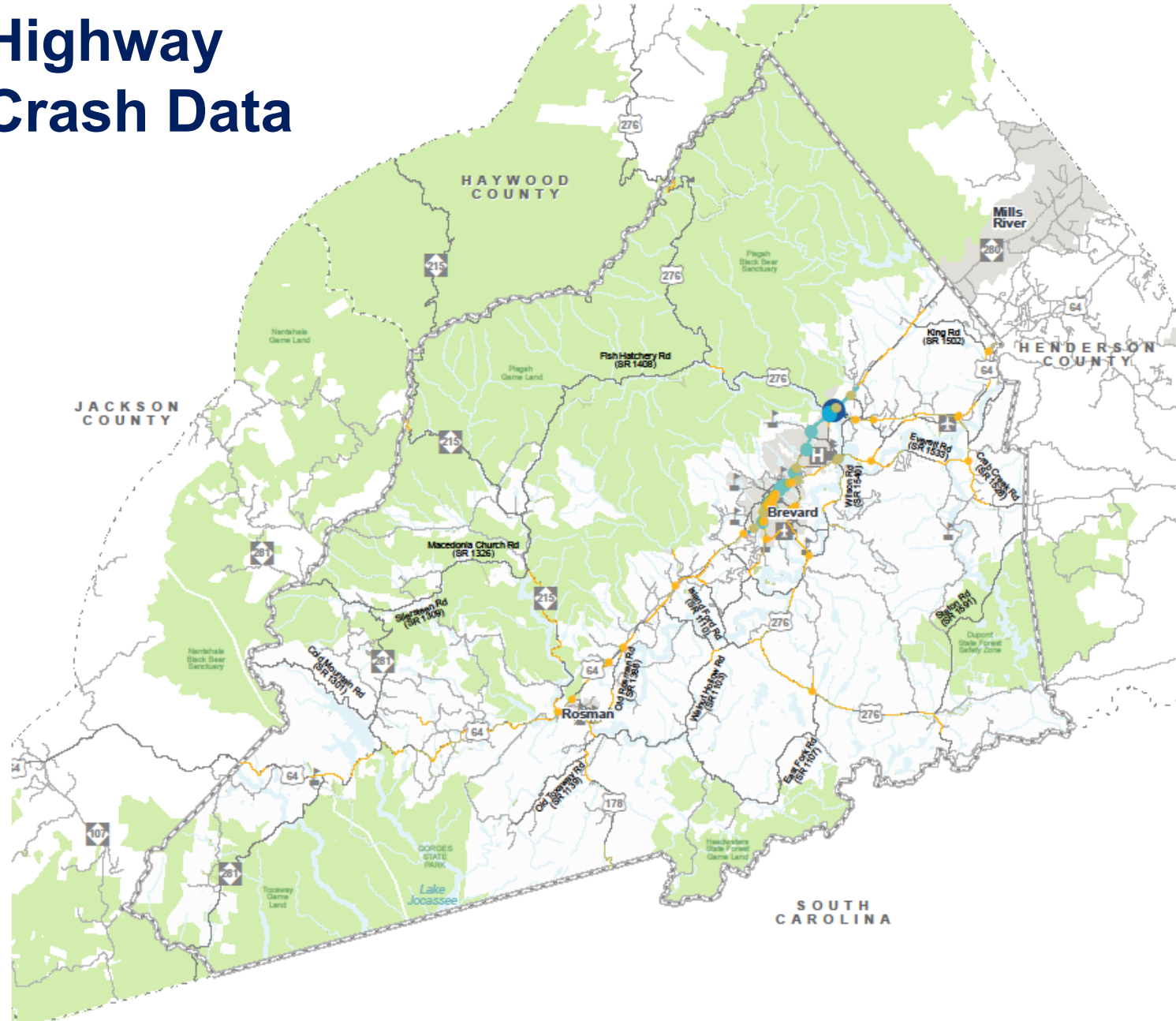


Figure 5
**HIGH FREQUENCY
CRASH LOCATIONS**



TRANSYLVANIA COUNTY

CTP Analysis and Information

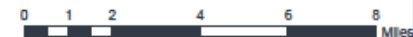
High Frequency Crash Features
(January 2012 - December 2016)

Total Crashes	Intersection	Road Section
5 - 9		
10 - 19		
20 - 29		
31 - 39		
40 - 49		
50 and above		

Other Features
 Study Road



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Sheet 2 of 4

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DRAFT WORKING MAP
Plan Date: May 11, 2019

Pedestrian Crash Data

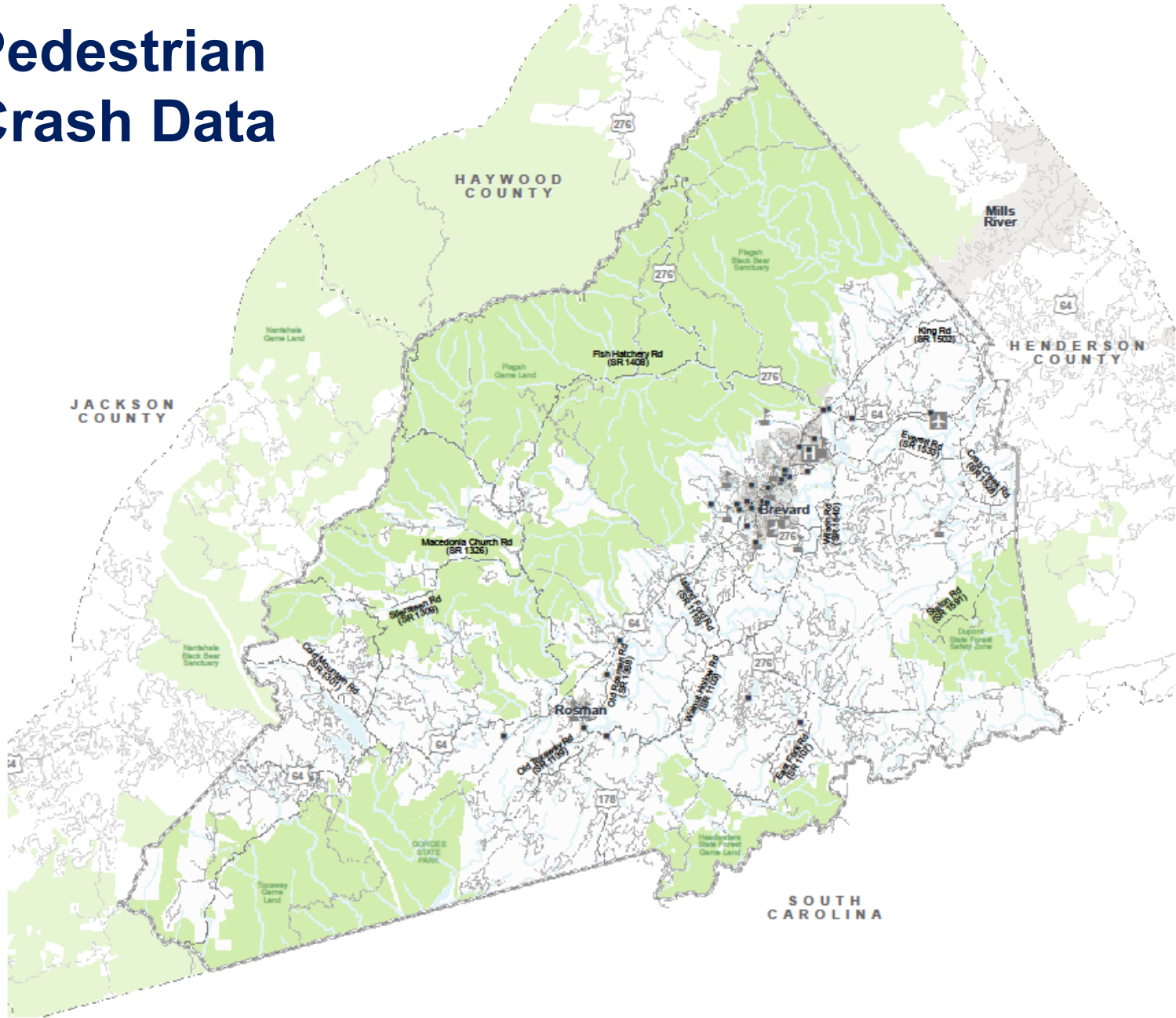


Figure 3
Pedestrian Analysis



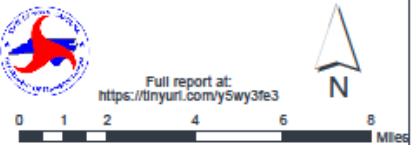
TRANSYLVANIA COUNTY

CTP Analysis and Information

- Pedestrian Features**
- Sidewalk —
 - Multi-Use Path —
 - Common Roadway —
 - Bicycle and Pedestrian Bridge ○
- Other Features**
- Pedestrian Crash Location
 - ▣ Destination
 - Study Road



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Sheet 2 of 5

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DRAFT WORKING MAP
Plan Date: May 12, 2019

Bicycle Crash Data

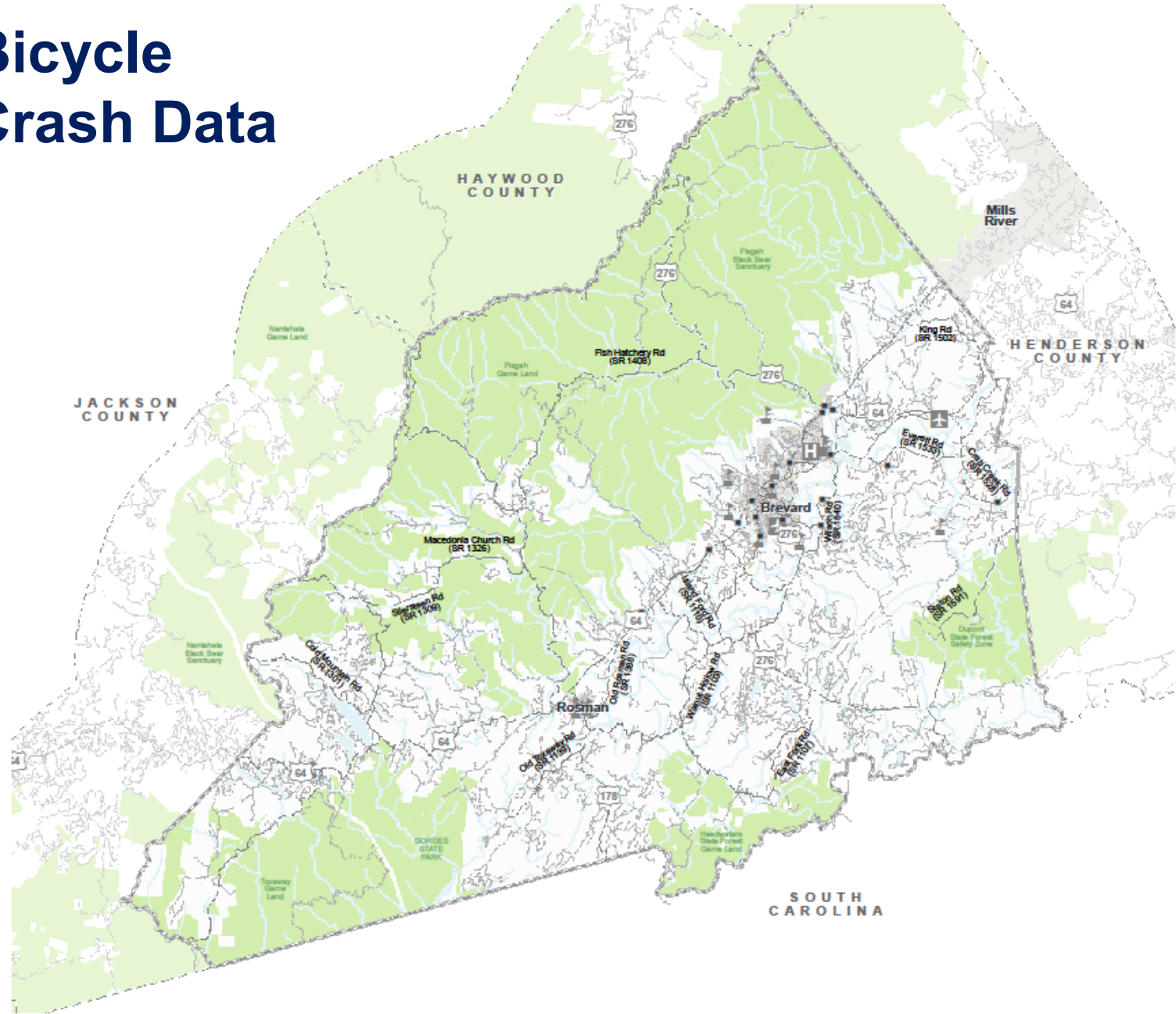


Figure 3
Bicycle Analysis



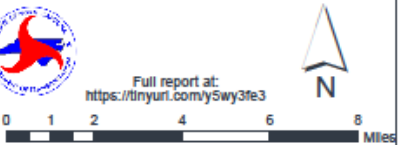
TRANSYLVANIA COUNTY

CTP Analysis and Information

- Bicycle Features**
- Bicycle Lane —
 - Bicycle Route —
 - Multi-Use Path —
 - Common Roadway —
 - Bicycle and Pedestrian Bridge ○
- Other Features**
- Bicycle Crash Location
 - Destination
 - Study Road



Full report at:
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Sheet 1 of 5

Base map date: March 18, 2018

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DRAFT WORKING MAP
Plan Date: May 12, 2019

Bridges

- Structurally Deficient - in relatively poor condition, or has insufficient load-carrying capacity. The insufficient load capacity could be due to the original design or to deterioration.
- Functionally Obsolete - it is narrow, has inadequate under-clearances, has insufficient load-carrying capacity, is poorly aligned with the roadway, and can no longer adequately service today's traffic
- A bridge must be classified as deficient before it is eligible for federal bridge replacement or rehabilitation funds.

Bridge Data

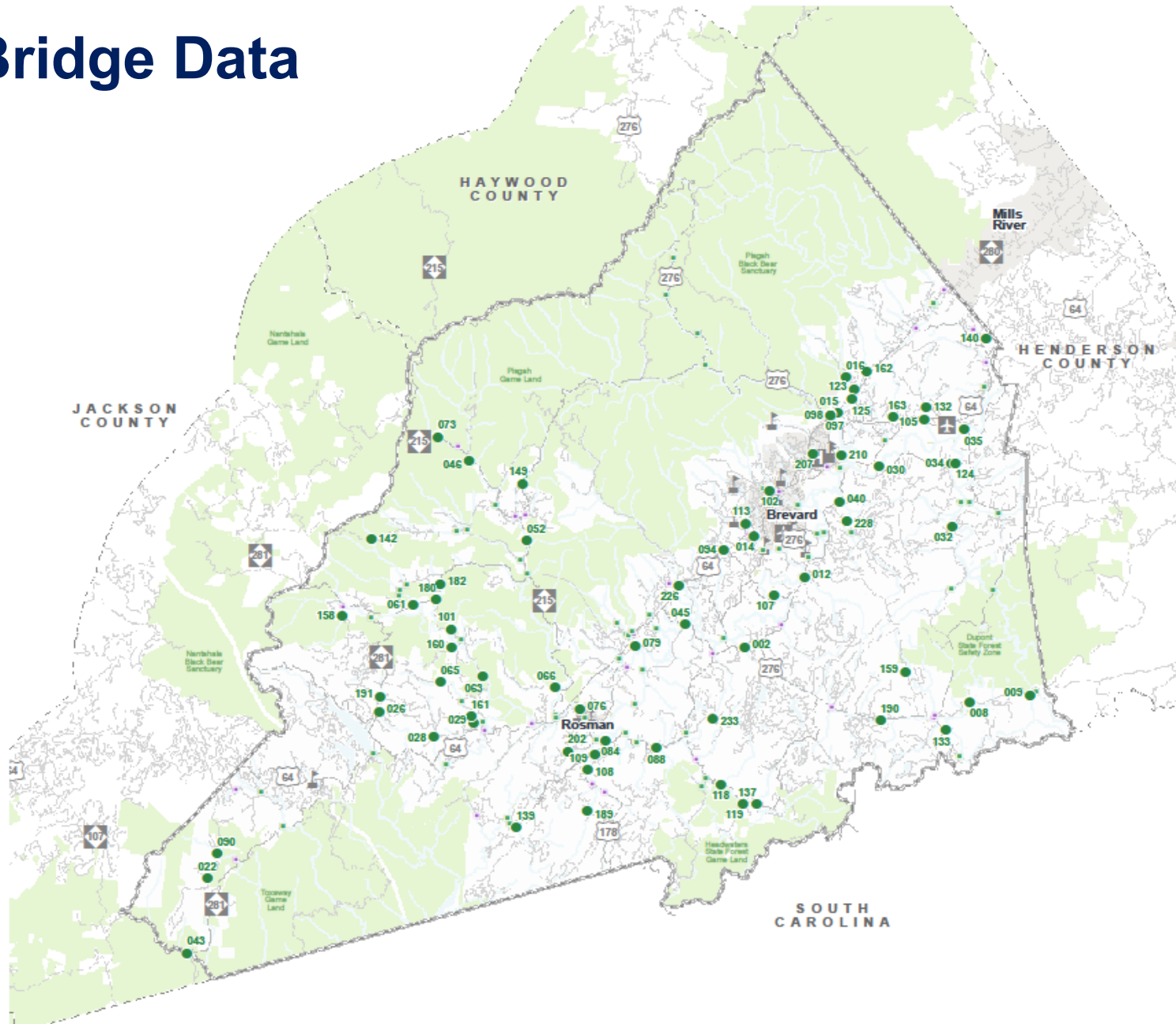


Figure 6
BRIDGE DEFICIENCIES



TRANSYLVANIA COUNTY
CTP Analysis and Information

- Bridge Features**
- Deficient Bridge
 - Bridge
 - Other Structure
- Other Features**
- Study Road



Sheet 3 of 4

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DRAFT WORKING MAP
Plan Date: May 11, 2019

Future Meetings

- Approximately Monthly
- Second Tuesdays/3:00 – 4:30
- Next Meeting June 11th 3:00-4:30
- Board of Elections (unless otherwise noted)
- **No July Meeting**



Desired Outcomes Achieved?

1. Work Group agrees on vision and objectives for Transylvania County's transportation system in 2045
2. Work Group has a better understanding of the NCDOT project delivery process
3. Work Group agrees second Tuesdays, 3:00 – 4:30PM, at Board of Elections (unless otherwise stated). CTP Work Group Meeting #3 **June 11th 3:00-4:30.**
4. Work Group has a working understanding of Capacity maps 2010 – 2040, Crash and Bridge Deficiency maps

Contact info for your team

- Vicki Eastland, Land of Sky RPO, vicki.Eastland@landofsky.org 828-251-6622
- Nick Kroncke, Land of Sky RPO nick@landofsky.org 828-251-6622
- Daniel Sellers, NCDOT TPD, dcsellers1@ncdot.gov 919-707-0978
- Steve Williams, NCDOT Division 14, sjwilliams@ncdot.gov 828-586-2141
- Troy Williams, NCDOT Division 14, tswilson@ncdot.gov 828-586-2141



**QUESTIONS?
COMMENTS?**