Welcome

A strategic transportation plan connecting communities across North Carolina, focused on creating a more responsive, diverse, and inclusive transportation system for keeping people and freight moving safely and efficiently.



Agenda Outline

- 1. Needs Assessment Context and Approach
- 2. Backlog and Needs Through 2050
- 3. Alternative Future Insights State Revenue Impacts
- 4. Conclusions/Takeaways
- 5. Next Steps

Multimodal Needs – Overall Approach

10-year project construction schedule + 10-year asset management strategy + Highway safety improvements + Routine maintenance + Other multimodal programs +

Long term priority project needs +

Local long-range plans +

Economic growth trends +

System performance forecasts +

N_{eeds} uncertainty

Needs uncertainty

Multimodal Needs trend through 2050











Backlog Needs through 2018

Multimodal Needs trend through 2030

Unmet prioritized projects in SPOT database +

Gap to meet asset state of good repair (MOPAR) +

short fall in other program (ex. Spot Safety) +

Multimodal Needs — Categories Sources/Analysis (billions)

Associated fund uses/sources:

Mobility and Modernization

Highway Assets

Other

- NCDOT/Partner Near-term Priorities (demand driven)
- Highway and Non-Highway Capital Improvements
- Highway Modernization (safety, operational)

- Pavement/Bridge Deterioration
- Routine Maint. (mowing, snow plowing, signs, rest areas)
- Storm Expenditures
- Asset Management Strategies, Goals and Targets
- Financial or Operational Support to Non-Highway Modes
- Support of Local Needs (sidewalk construction)
- Small Construction / Spot Safety Program
- Traffic Management and Signal Systems



Strategic Transportation Investments









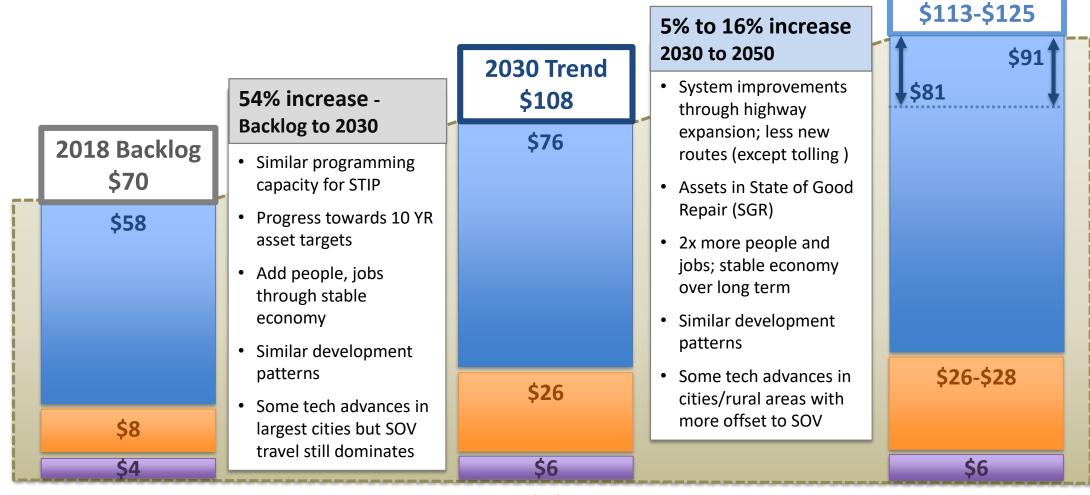




- Powell Bill
- Statewide Programs
- Appropriations

2050 Trend

Multimodal Needs Trend – Backlog to 2050 (billions)



NC FIRST Commission

02/28/20

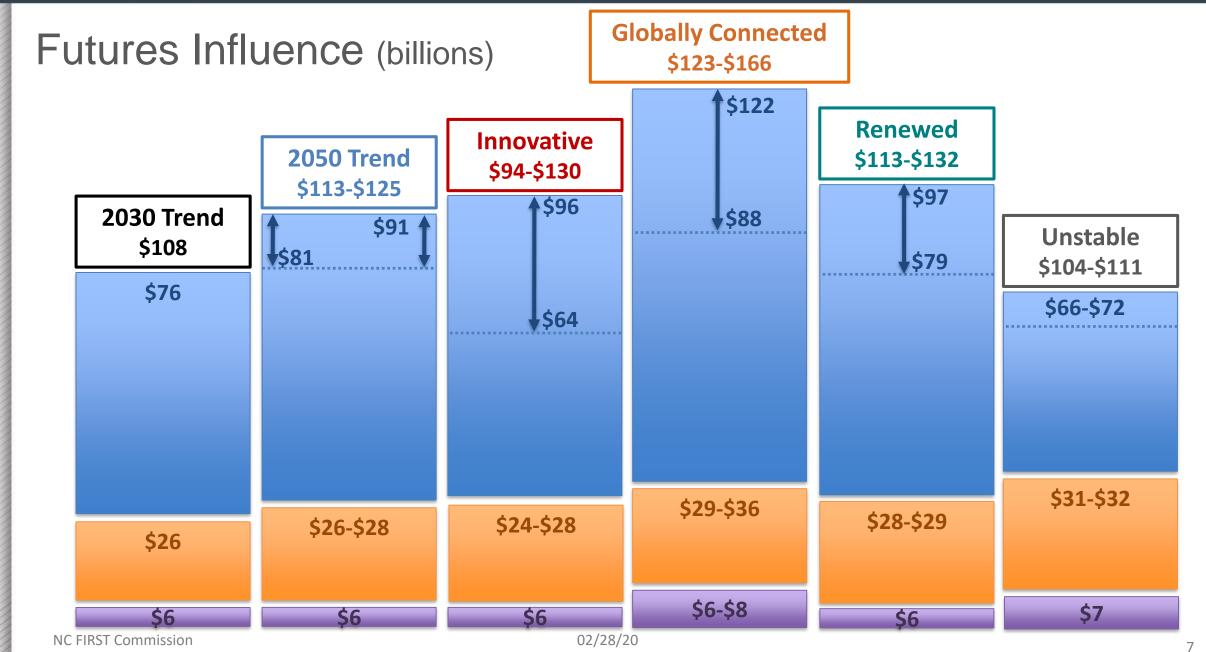
Influencing Assumptions – Trends vs. Baseline

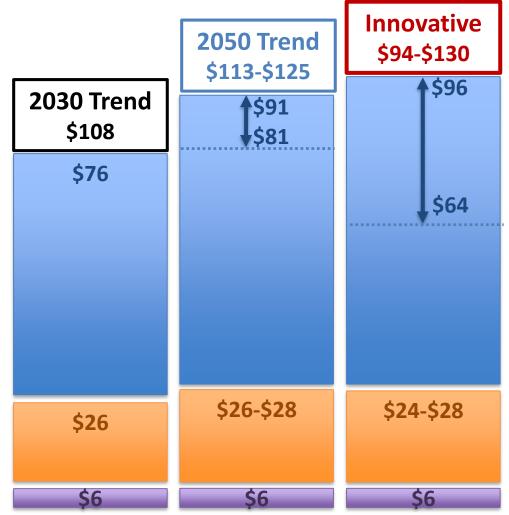
2030 TREND



2050 TREND

- 1.8 million more people, 1.2 million more jobs drive demand
- 15% more passenger/truck miles traveled; 75% of freight travels by truck
- 22% increase in vehicle hours traveled elongates peak period congestion
- More regional & commuter-based transit, especially in Piedmont Crescent
- Network capacity grows relative to State Transportation Improvement Program
- Travel costs relatively the same
- 4 million more people, 2.5 million more jobs
- More retires age in place; more development along coast, mountains
- 33-36% more passenger/truck miles traveled compared to baseline
- Freight volumes grow but shift slightly to other modes & move at higher speeds
- 60% increase in vehicle hours traveled leads to extensive peak hour congestion
- Technology enables a level of more efficient, seamless travel
- Network expands through highway improvements; some offset by more convenient, competitive non-highway travel options
- Travel costs uncertain







INNOVATIVE

- Optimized, efficient transportation network reduces need for large scale highway expansion
- Communications technology enables more telecommuting, on demand services and deliveries reducing travel demand
- More opportunities for convenient, time competitive non-highway travel options
- Mobility as a Service (MaaS) drives down vehicle ownership levels; widespread use of electric vehicles

Indicators Compared to Trend					
Forecast	System Performance				
	Annual VMT (billions)	Non-Hwy Mode Share	Revenue Impact		
2050 Trend	152	>2-3%	M F T	O SOLD O Hwy Use Tax	DMV Fees
INNOVATIVE	7	7	4	1	4

Globally Connected \$123-\$166

\$122

\$29-\$36

\$6-\$8



GLOBALLY CONNECTED



\$26-\$28

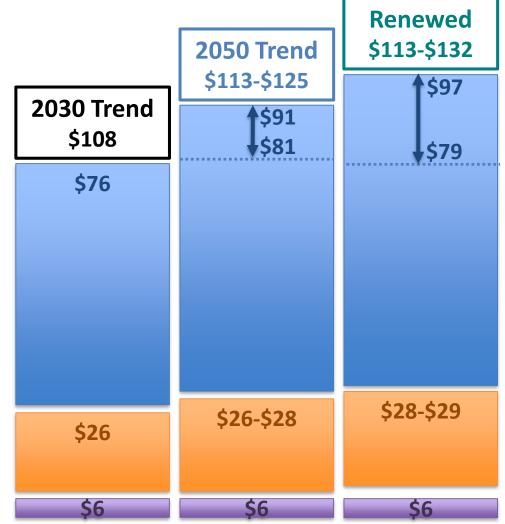
\$6

- Economic growth across sectors increases travel demand, particularly freight volumes
- Some travel demand and asset management needs offset by technology advances and more locally produced products; greater adoption of commercial electric fleets
- Significant needs increase compared to trend for both mobility and assets

Indicators Compared to Trend					
Forecast	System Performance				
	Annual VMT (billions)	Non-Hwy Mode Share	Revenue Impact		oact
2050 Trend	152	>2-3%	M F T	Hwy Use Tax	DMV Fees
Globally Connected	1		7	1	1

\$26

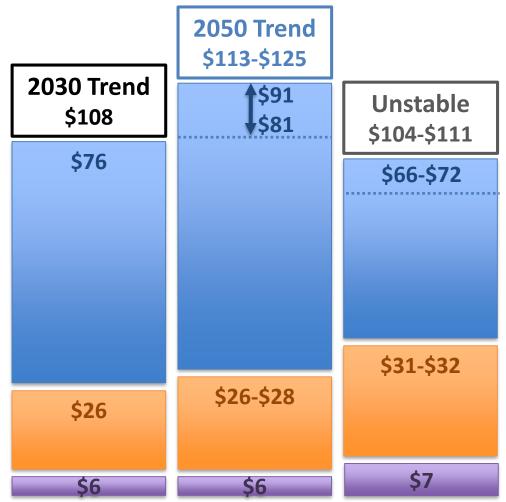
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- Growth in rural communities and small cities increases travel demand and need to support longer-distance travel
- Overall economic growth and an aging population require more multimodal options and improved local, regional connectivity
- Needs estimate comparable to trend with higher top-end to support growing rural economies

Indicators Compared to Trend					
Forecast	System Performance				
	Annual VMT (billions)	Non-Hwy Mode Share	Revenue Impact		
2050 Trend	152	>2-3%	M F T	Hwy Use Tax	DMV Fees
Globally Connected	7	7	7	1	1





UNSTABLE

- Lower economic growth and travel demand relative to the trend results in less mobility needs; higher travel costs
- Asset management needs increase to address frequency and severity of weather events and other system disruptions
- Incremental increase in transportation management to improve system efficiency; greater reliance on other modes

Indicators Compared to Trend					
Forecast	System Performance				
	Annual VMT (billions)	Non-Hwy Mode Share	Revenue Impact		
2050 Trend	152	>2-3%	M F T	Hwy Use Tax	DMV Fees
Unstable	4	7	4	4	4

Revenue Impact Summary Near Term Considerations

Indicators Compared to All Futures						
Forecast	System Performance		Revenue Impact			
	Annual VMT (billions)	Non-Hwy Mode Share	M F T	Hwy Use Tax	DMV Fees	
2050 TREND	152	>2-3%				
INNOVATIVE	7	7	1	4	1	
GLOBALLY CONNECTED	1	\rightarrow	7	^	1	
RENEWED	7	7	7		1	
UNSTABLE	7	7	→	→	1	

2030 Preparation

Incremental change

- More fuel-efficient trucks carry freight longer distances
- Increased adoption of electric vehicles
- Continued growth of transportation network companies (Uber, Lyft)
- Continued growth of on demand shipping and services (Amazon affect)

NC Moves 2050 Plan Development Next Steps

Spring 2020

Finalize Strategies



Robust decision-making framework aligning timing and cost with potential risk and implementation reality



QUESTIONS