

Joint Meeting of the Durham-Chapel Hill- Carrboro & Capital Area MPOs

November 30, 2016

9:00 a.m.

UNC Friday Center

DURHAM - CHAPEL HILL - CARRBORO

DCHC

Metropolitan Planning Organization
Planning Tomorrow Today



NC Capital Area Metropolitan Planning Organization

Call to Order

- **Welcome & Introductions**
 - Steve Schewel, Chair, Durham-Chapel Hill-Carrboro MPO
 - Dick Sears, Chair, Capital Area MPO
- **Comments by the Public**

Joint MPO Legislative Agenda

- Additional Funds to Meet the State's Transportation Needs
- Exempt STBGP Funds from Strategic Transportation Investments Formula at the Division Level
- Remove the Ten Percent Cap on Statewide Funding within a Corridor
- Remove the Ten Percent Cap on Light Rail Transit Funding
- Remove the Ten Percent Cap on Regional Funding Available for Transit
- Allow for State Funds to be Directed to Bicycle and Pedestrian Projects

2045 Metropolitan Transportation Plan Update

- John Hodges-Copple, Triangle J COG

Connecting People & Places

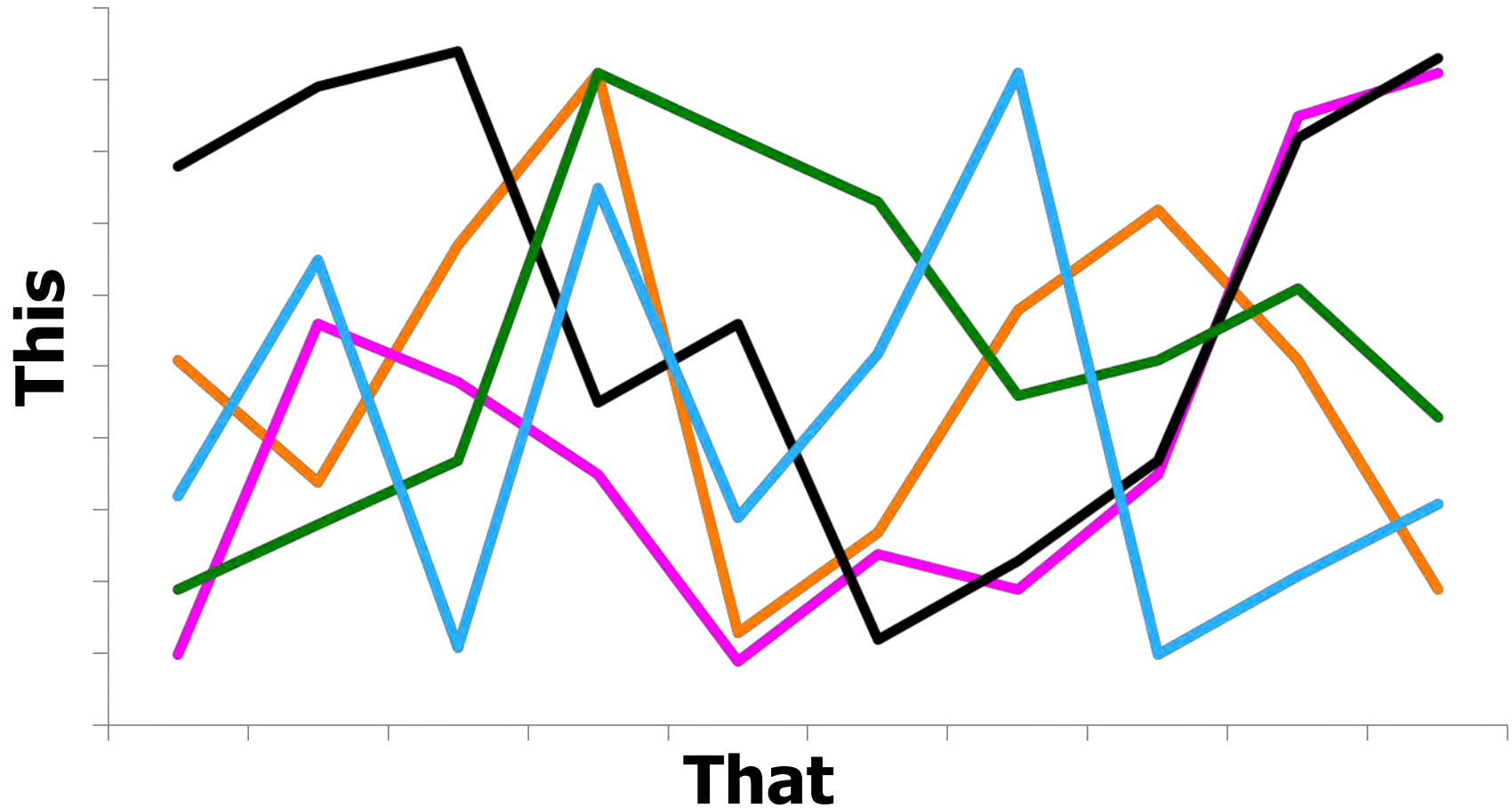
Development & Mobility Scenarios for the 2045 Metropolitan Transportation Plan

(with quotes from 4 famous “MPO” members
and one editorial comment)

John Hodges-Copple
Triangle J Council of Governments
November 30, 2016



When People With Engineering Degrees Use PowerPoint



Transportation investments are means, not ends



Planning: Why Bother?

“Communities should be planned with an eye to the effect on the human spirit of being continually surrounded by a maximum of beauty.”



Thomas Jefferson, Chair,
Monticello Planning
Organization (MPO)



"In preparing for battle I have always found that plans are useless, but planning is indispensable."

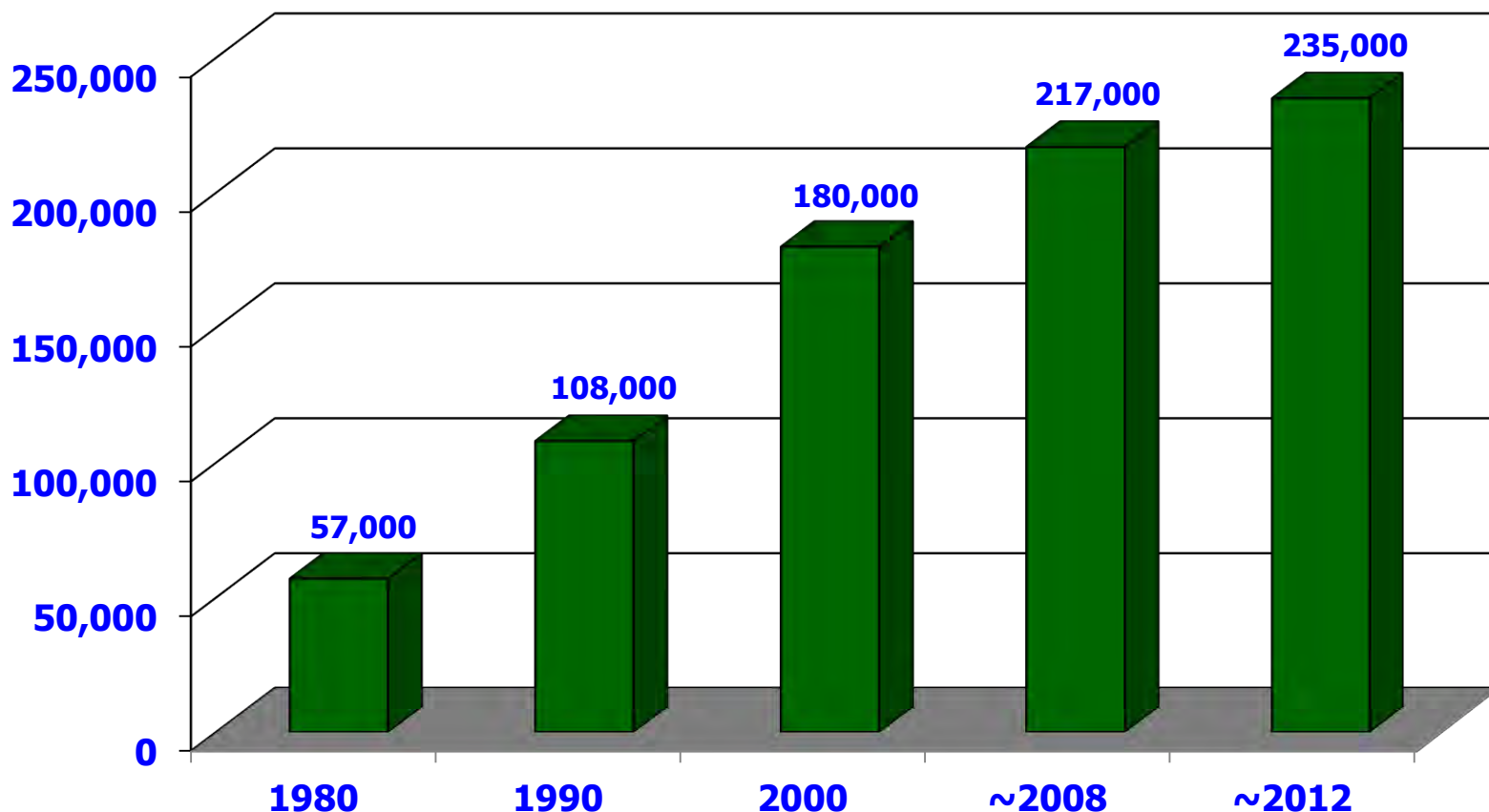


Dwight D. Eisenhower, Chair,
Military Planning Organization (MPO)

You've been leaders in planning together



Why the MPOs Plan Together: Growth is Increasing Our Connections (people crossing a county boundary to get to work)



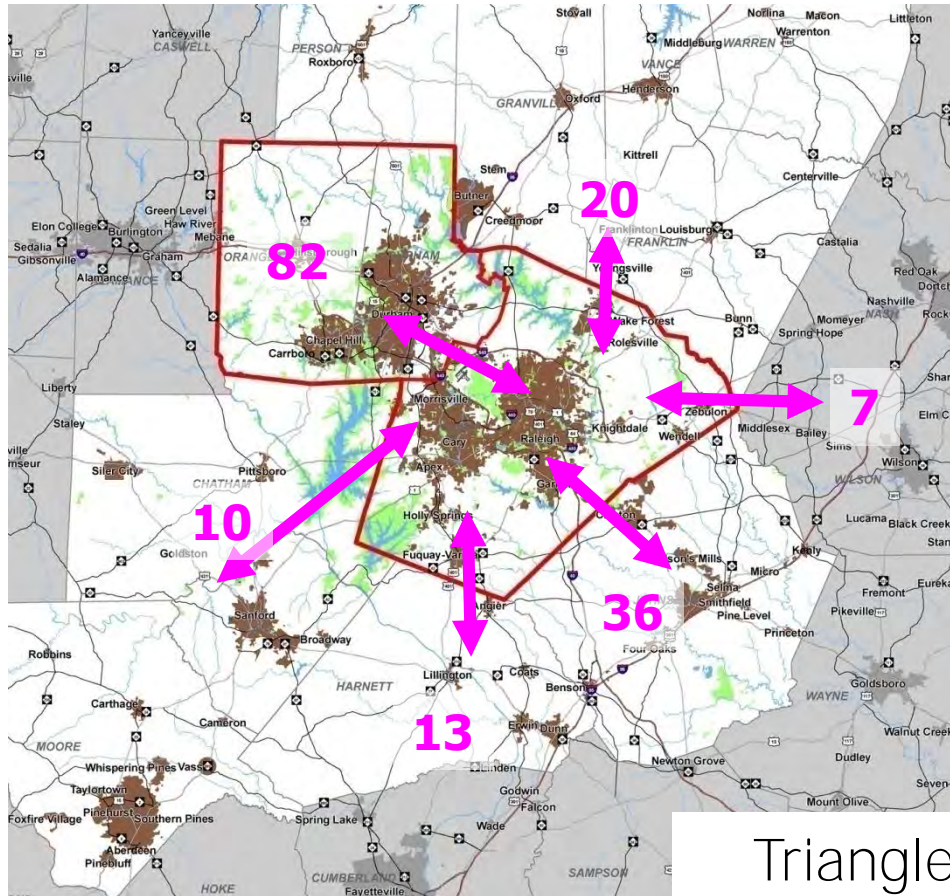
1 of every 8 workers who lives in Wake County works in Durham or Orange Counties

data are for TJCOG region

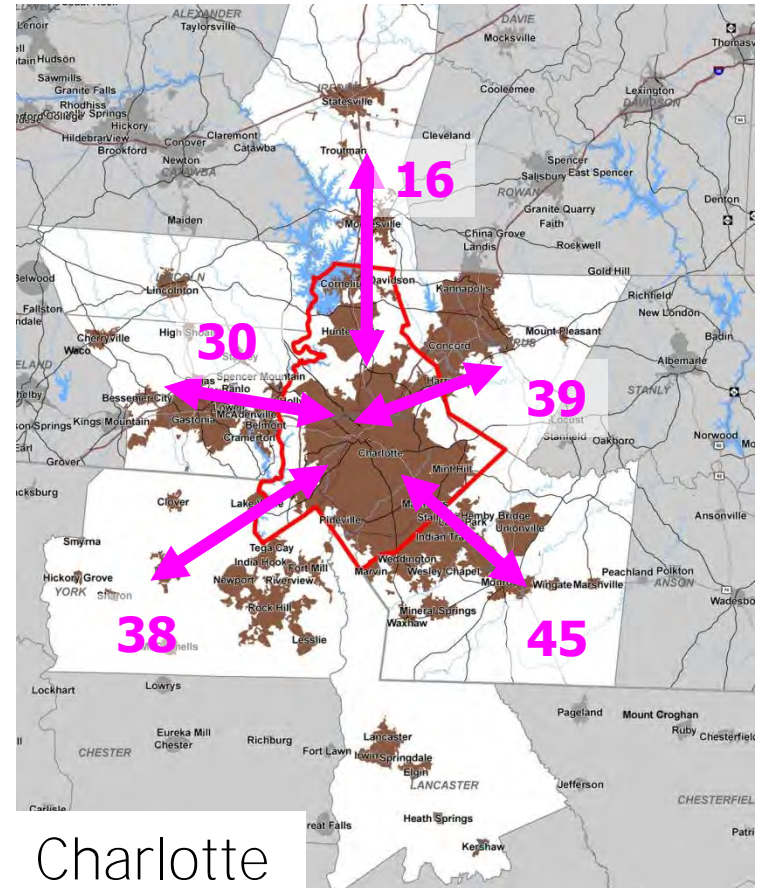
Why the MPOs Plan Together:

Our Travel Markets Differ From Typical Regions

(commuting flows in thousands to/from the largest county)



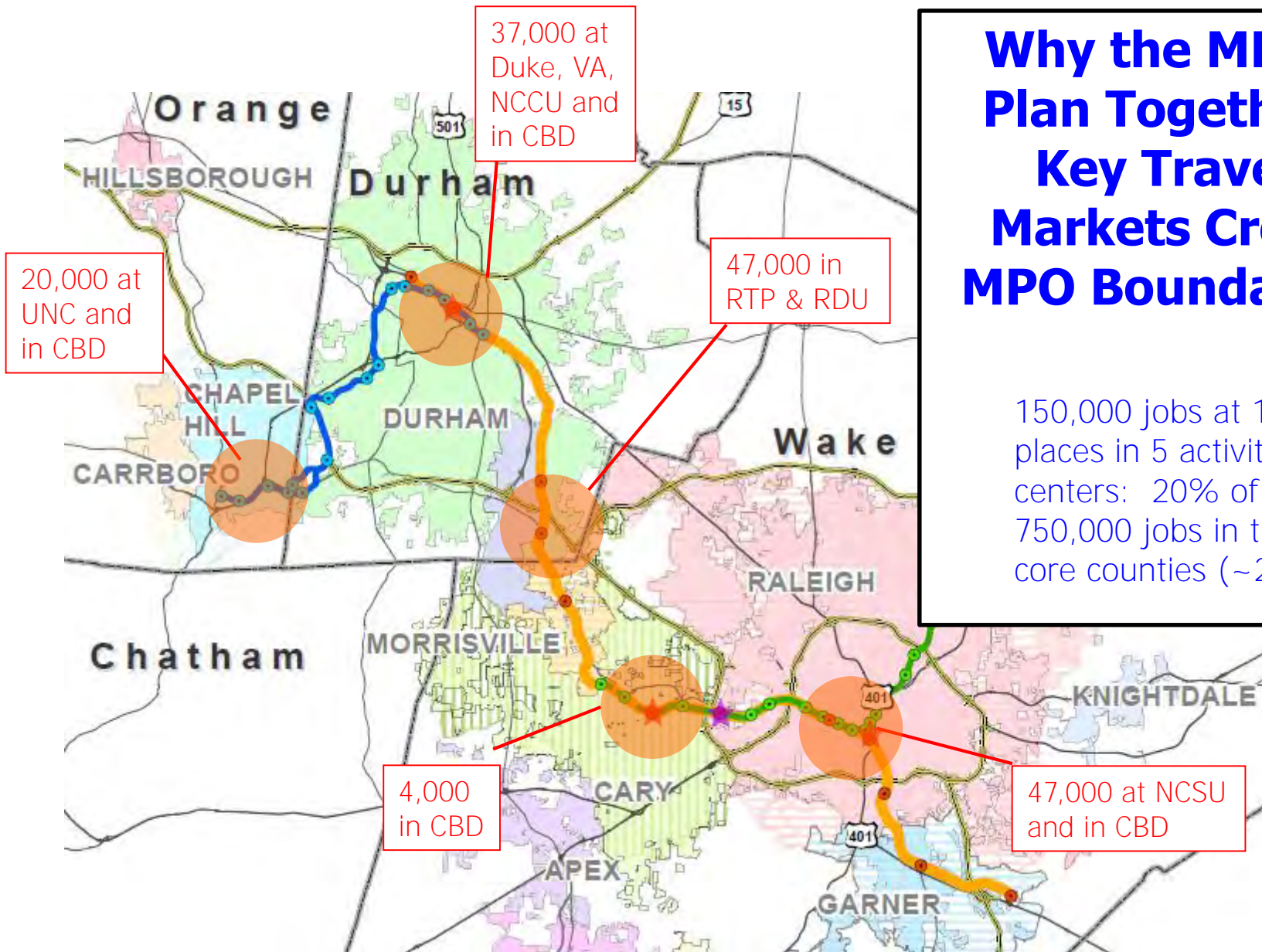
Triangle
(unbalanced flow)



Charlotte
(balanced flow)

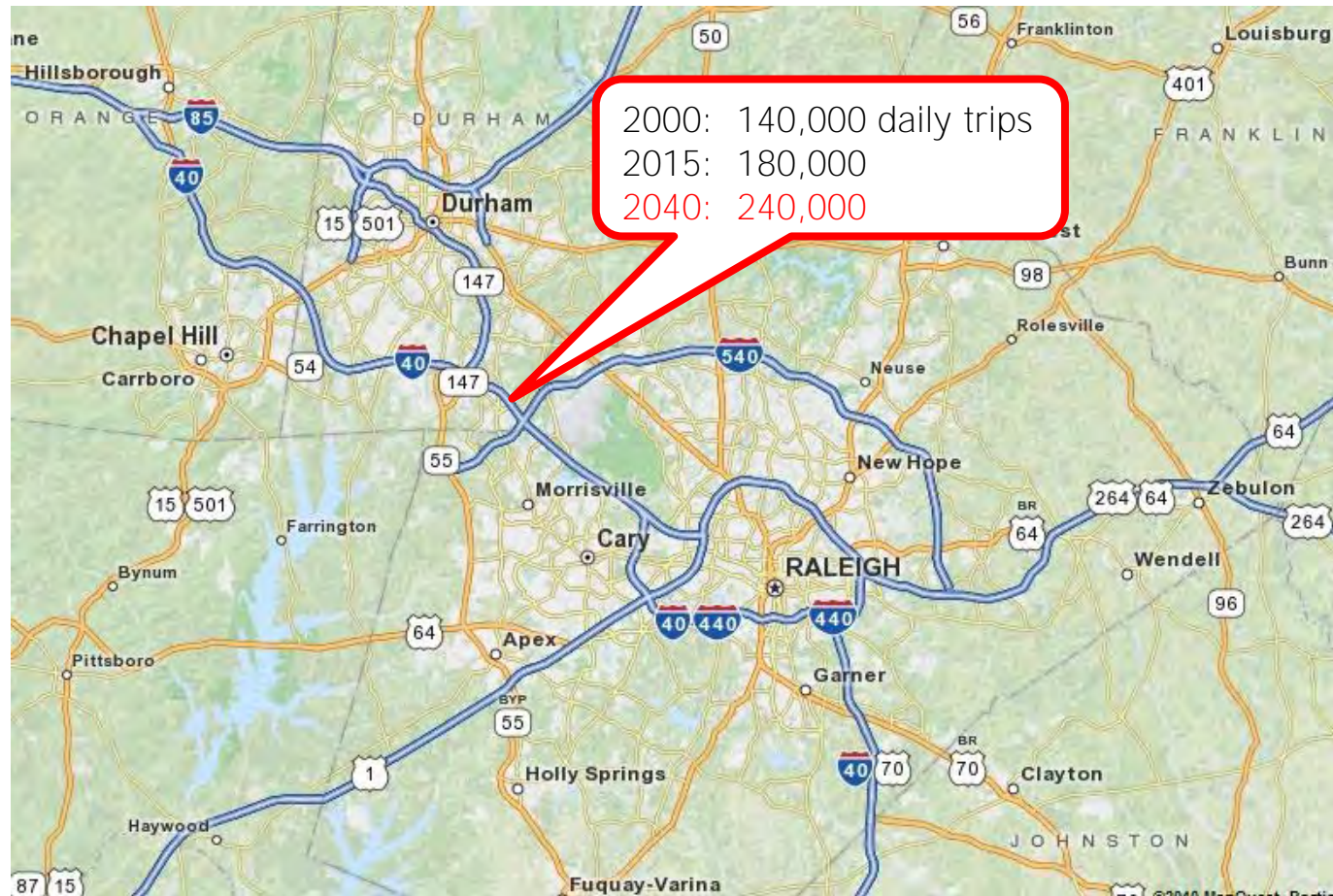
Why the MPOs Plan Together: Key Travel Markets Cross MPO Boundaries

150,000 jobs at 11
places in 5 activity
centers: 20% of the
750,000 jobs in the 3
core counties (~2012)



Why the MPOs Plan Together:

The most heavily traveled road segment in the Triangle is I-40 at the Wake-Durham line



Travel increase of
~30% from 2000
to 2015

#s in black are
from NCDOT
traffic counts

#s in red are from
2040 MTP Triangle
Regional Model
forecasts

So, what lies ahead?



The Metropolitan Transportation Plan is your way to choose investments in transportation infrastructure and services to accommodate growth **and create places people want...**

- ❖ ... serving many people who are not yet here ...
- ❖ ... in a time and place that may be quite different from today ...
- ❖ ... with technologies that are uncertain.

Scenarios Help Us Think About What Lies Ahead

Scenarios are “constructed futures” since we can’t know what will be.

“Are these the shadows of the things that Will be, or are they shadows of things that May be, only?”

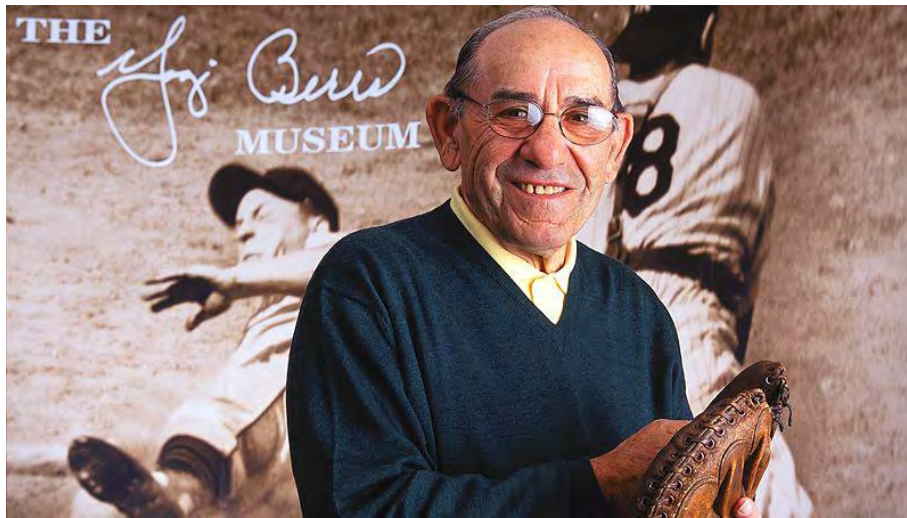


Ebenezer Scrooge, Chair,
Miserly Pennypinchers Organization
(MPO)

Scenarios Help Us Think About What Lies Ahead

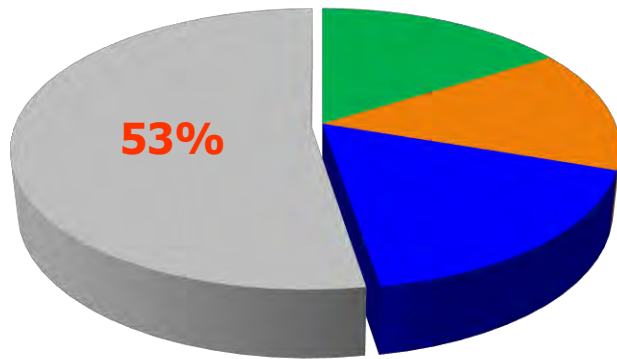
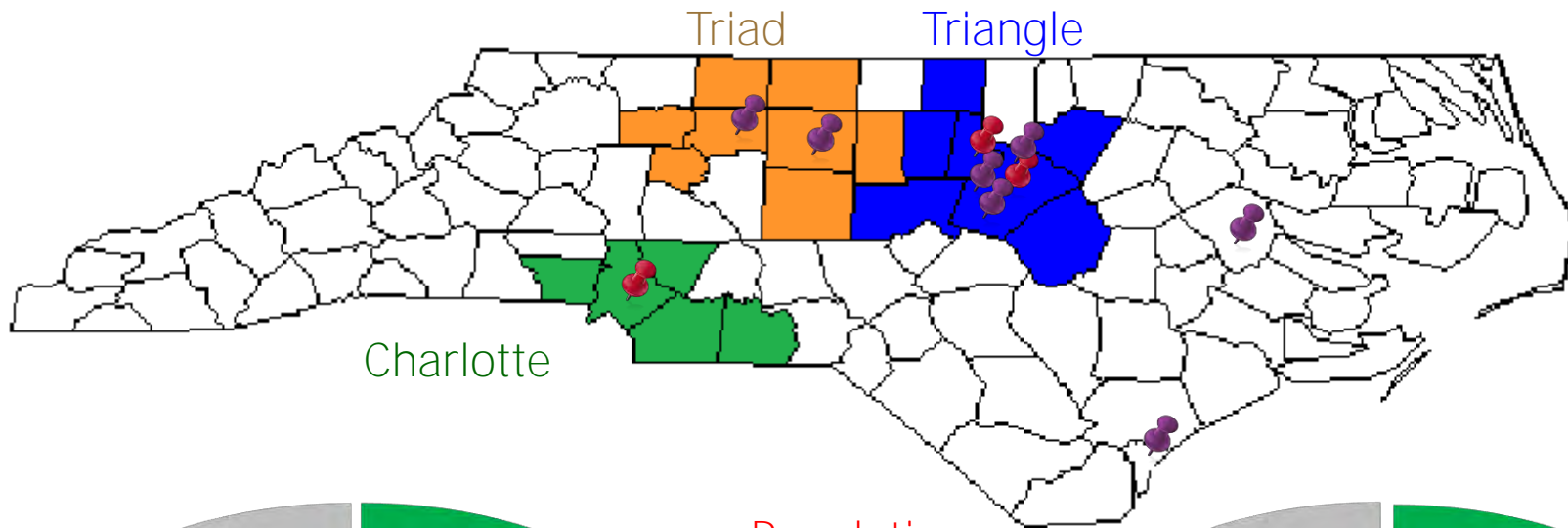
Done right, scenarios should be clear about what we don't know, what seems reasonable and plausible, and help us understand the impacts of taking different paths.

"What gets us into trouble isn't what we *don't* know; it's what we know for sure that just ain't so"



Yogi Berra, Chair,
Managing Pitchers Organization
(MPO)

NC's Growth Will Be Metro Growth

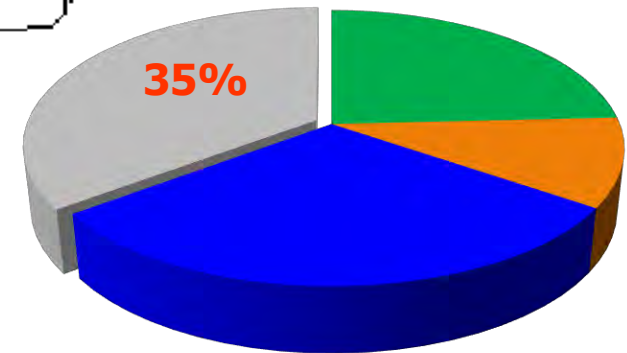


■ Charlotte
■ Triad
■ Triangle
■ Rest of State

Population

← In 2010

2010-40
growth →

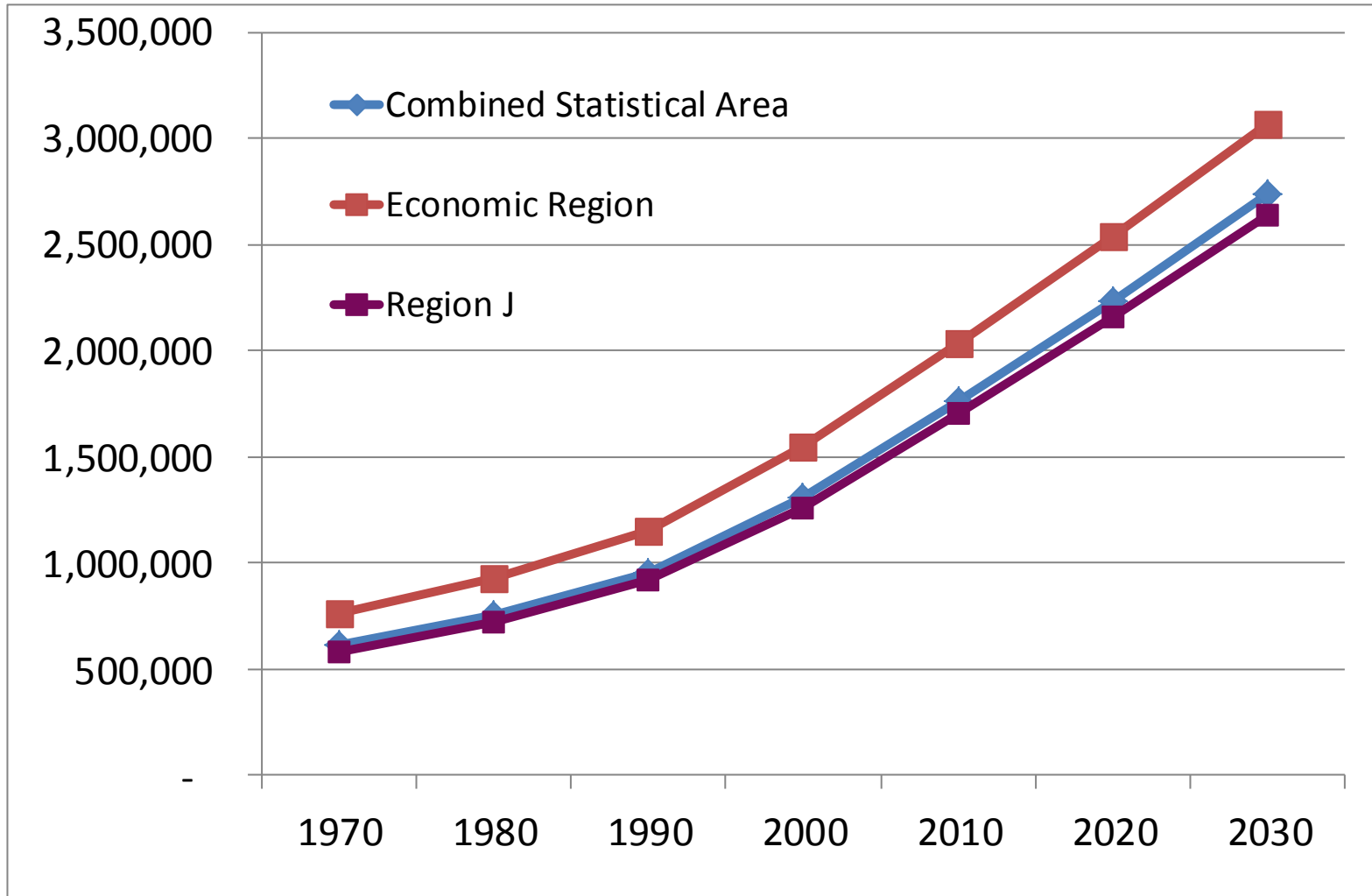


■ Charlotte
■ Triad
■ Triangle
■ Rest of State

3 metros have 47% of population, over half of jobs and about two-thirds of value of goods and services.
 Red pins show 3 cities (Raleigh, Durham, Charlotte) with 1/3 of NC growth from 2010-2013.
 Purple pins add 7 cities (Greensboro, Winston-Salem, Greenville, Wilmington, Cary, Apex, Wake Forest) that together with the other 3 had 1/2 of NC growth.

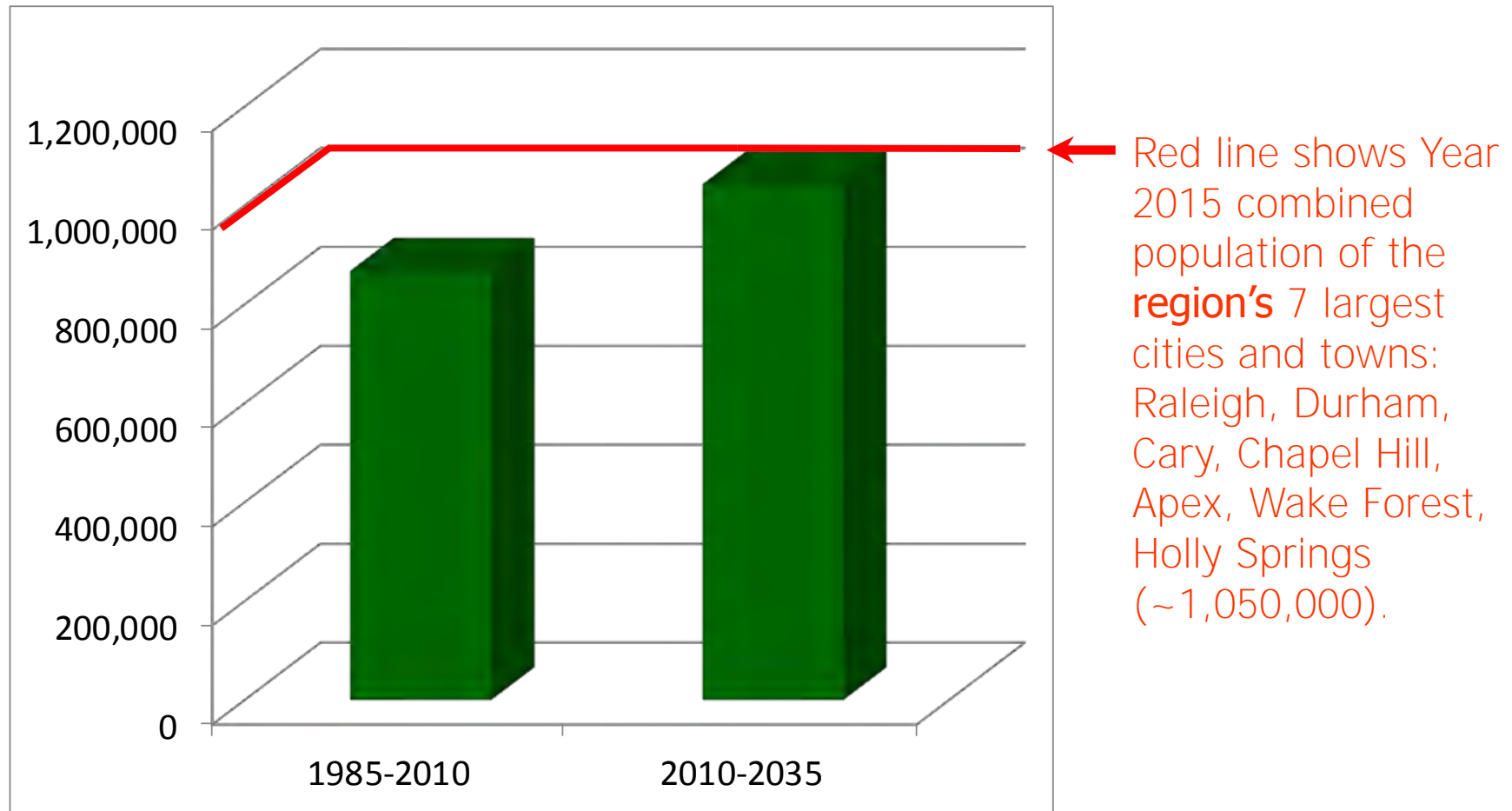
The Triangle Will Be A Growth Leader

Population in The Triangle Region(s)



We Will Build the Equivalent of Our 7 Largest Cities Over the Next Generation

Population Added to the Region





Regional Transportation Investments Build on Demographic and Market Forces

- ❖ We will add another million people over the next generation, taking us close to 3 million people; 12 of the 13 regions with 2 to 3 million people today have rail transit
- ❖ 32,000 households in the Triangle have no car available (up from 29,000 in 2000 and 27,000 in 1990)
- ❖ By 2030, 17% of Triangle residents will be 65 or older, up from 9% in 2000
- ❖ Increasing shares of households are made up of single-person and two-person households without children
- ❖ ~25-33% of households would prefer to live in a compact, walkable neighborhood with a mix of activities

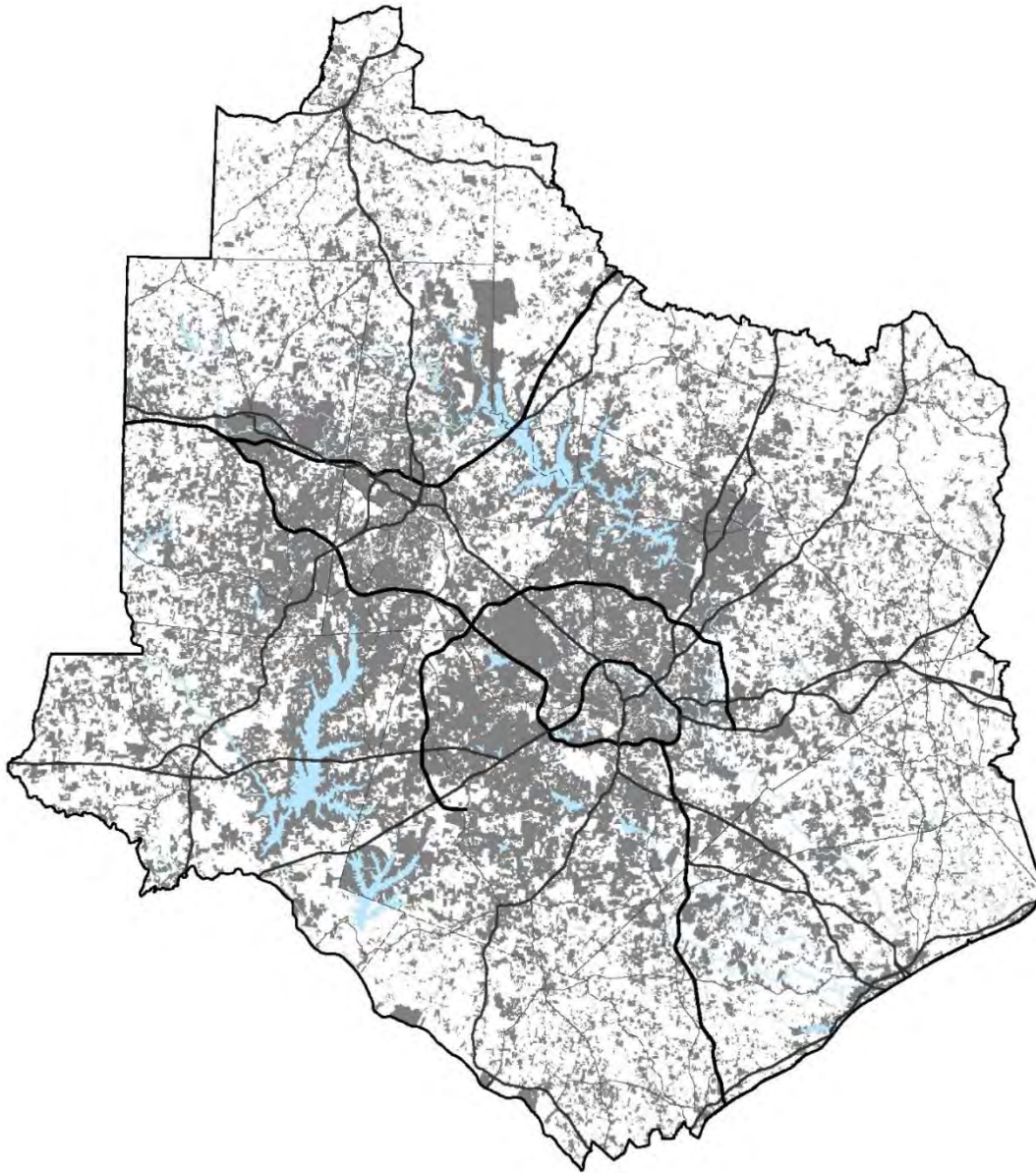
So what, exactly, is a scenario?

The 3 basic ingredients of a development & mobility scenario:

- ❖ The stuff that is here [existing development & infrastructure]
- ❖ The stuff we think is coming [growth]
- ❖ How the stuff is connected [new mobility investments]

Connect 2045 Scenario Matrix							
			Mobility Investment Foundation				
			Existing	Constrained	Moderate	Aspirational	CTP
	Development Foundation	Existing or Underway					
		By Right		✓			
		Community Plans			The Learning Scenario		
		AIM-High			✓	✓	
		Build-Out					

Land Development Status (Learning Scenario)

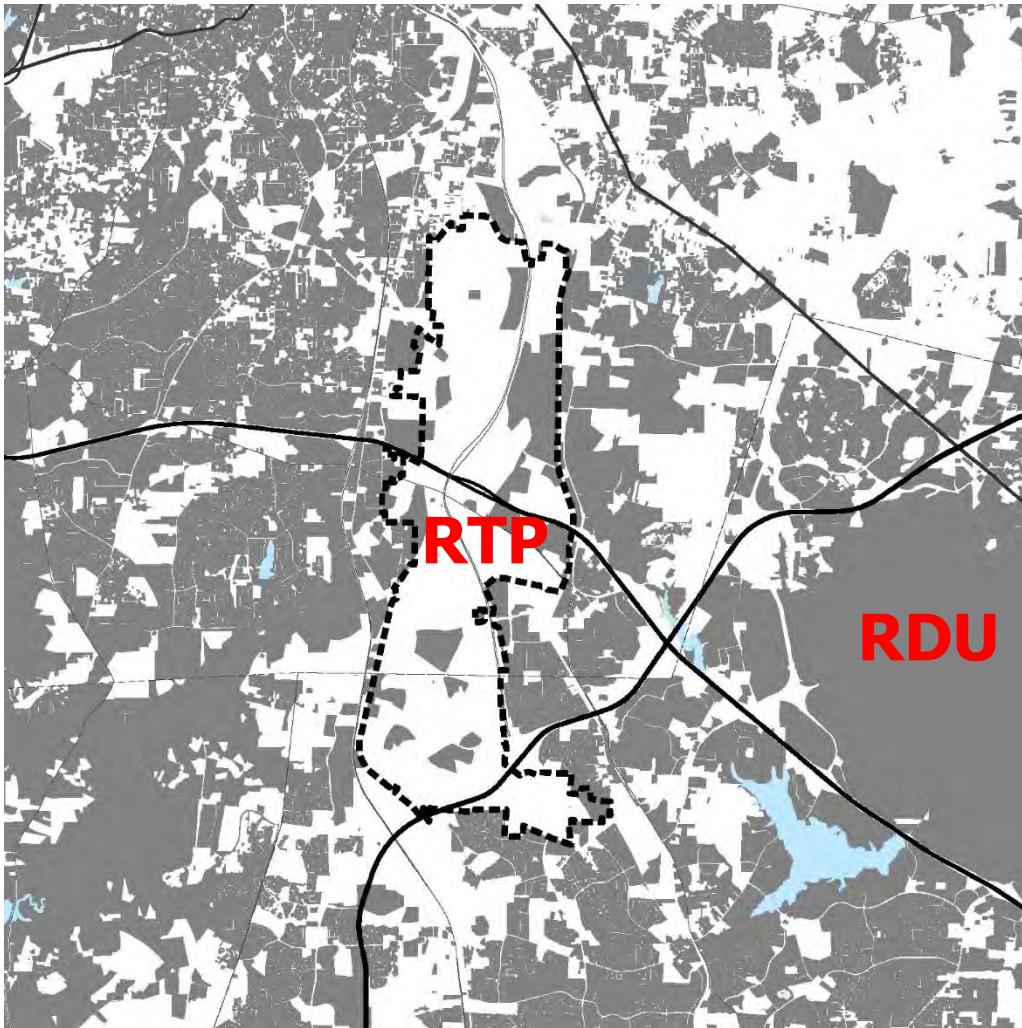


- ☐ Land with at least some development or re-development potential
- ☐ Land not available:
 - Protected greenspace
 - Water
 - Fully developed
 - Committed
 - (land subject to environmental constraints such as wetlands or stream buffers)

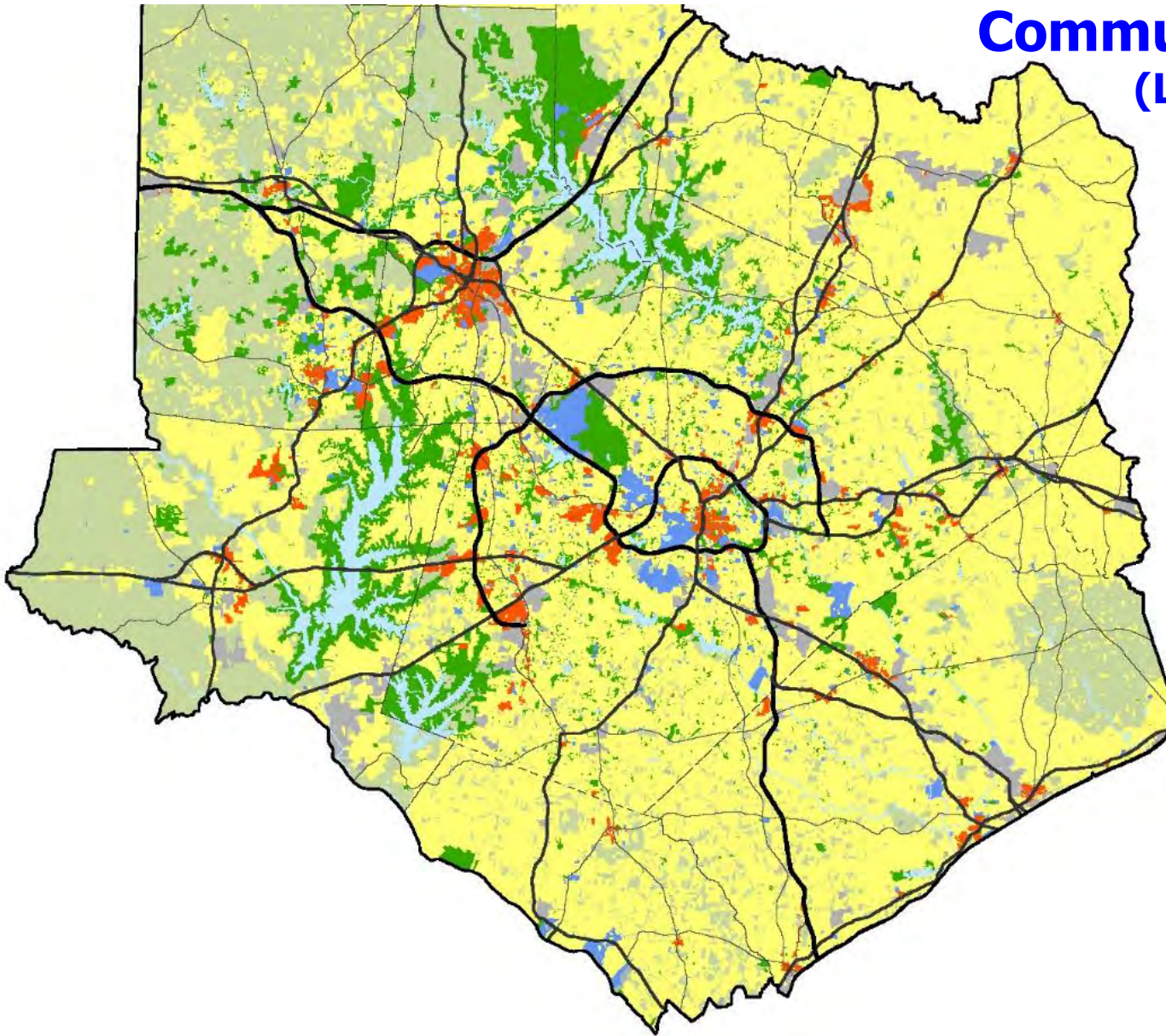
Land Development Status

(Learning Scenario)

- ☐ Land with at least some development or re-development potential
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 - Protected greenspace
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 - Committed
 - (land subject to environmental constraints such as wetlands or stream buffers)



Community Patterns (Learning Scenario)



What kind of place *can* this be?

Green Space

Rural

Suburban

City & Town

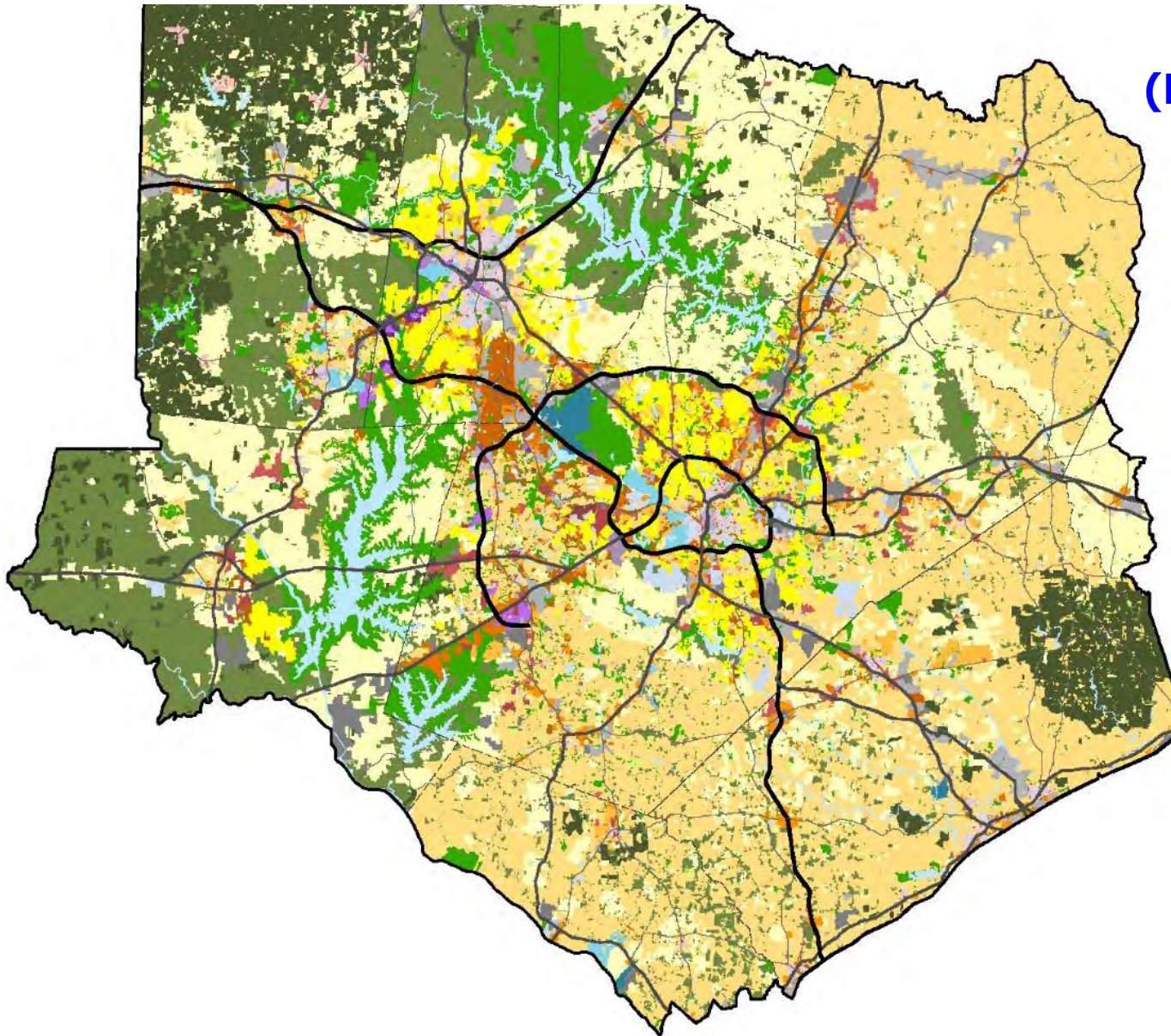
Industrial

Special

- University
- Medical campus
- Civic
- Airport



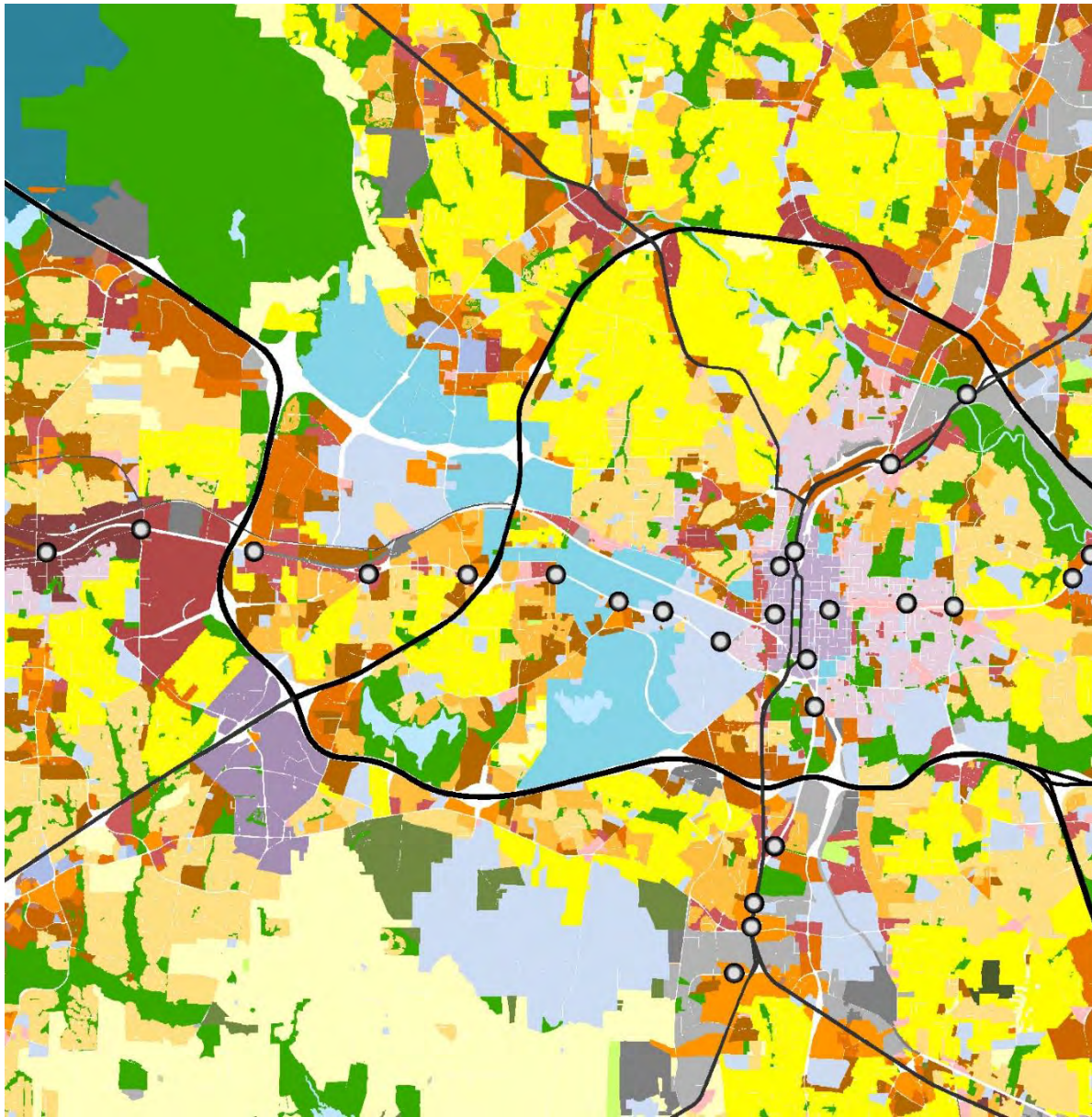
Place Types (Learning Scenario)



Protected Green Space	
Farms and Forest	Rural
Rural Living	
Rural Crossroads	
Mobile Home Neighborhood	
Larger Lot Residential	Suburban
Midsized Lot Residential	
Smaller Lot Residential	
Mixed Density Residential	
Neighborhood Commercial	
Community Commercial	
Lodging	
Office Center	
Regional Employment Center	City and Town
Multifamily Residential	
Urban Neighborhood	
High Rise Residential	
Mixed Use Residential	
Mixed Use Center	
Town Center	
Metropolitan Center	
TOD 1	
TOD 2	
TOD 3	
Light Industrial	Indus
Heavy Industrial	
Civic and Institutional	Special
University and Campus	
Health Care Campus	
Airport	



Place Types (Learning Scenario)

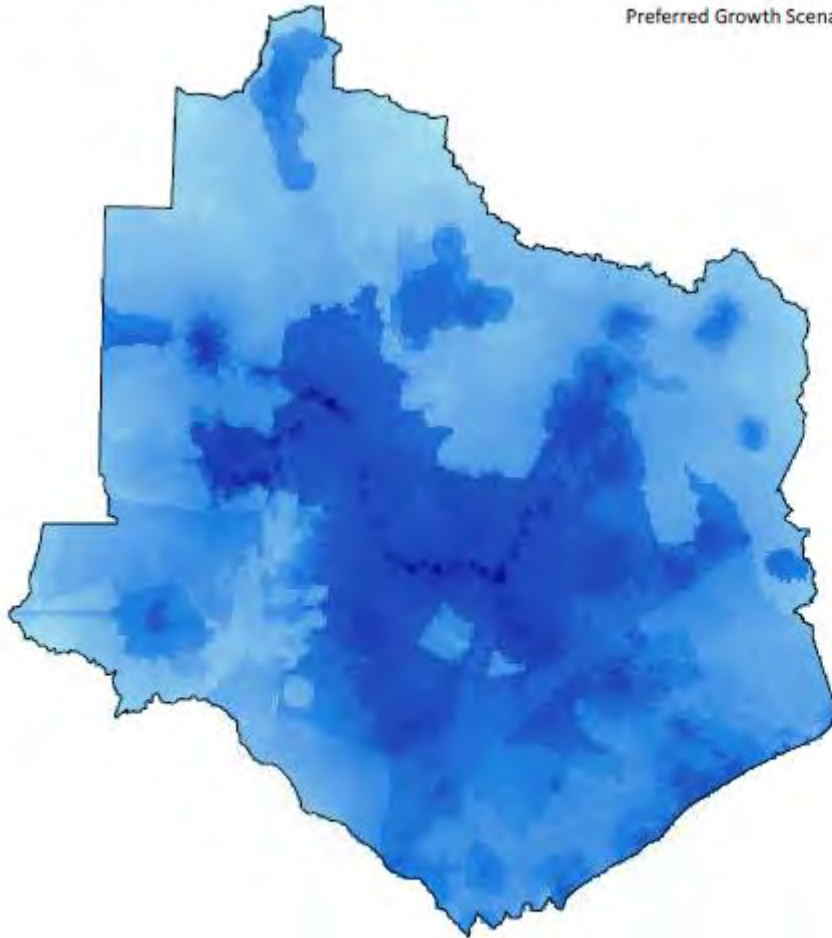


Protected Green Space	Rural
Farms and Forest	
Rural Living	
Rural Crossroads	
Mobile Home Neighborhood	Suburban
Larger Lot Residential	
Midsized Lot Residential	
Smaller Lot Residential	
Mixed Density Residential	
Neighborhood Commercial	
Community Commercial	
Lodging	
Office Center	
Regional Employment Center	
Multifamily Residential	City and Town
Urban Neighborhood	
High Rise Residential	
Mixed Use Residential	
Mixed Use Center	
Town Center	
Metropolitan Center	
TOD 1	
TOD 2	
TOD 3	
Light Industrial	Indus
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Civic and Institutional	Special
University and Campus	
Health Care Campus	
Airport	

Suitability

Imagine 2040 - Triangle Region Scenario Planning

Preferred Growth Scenario

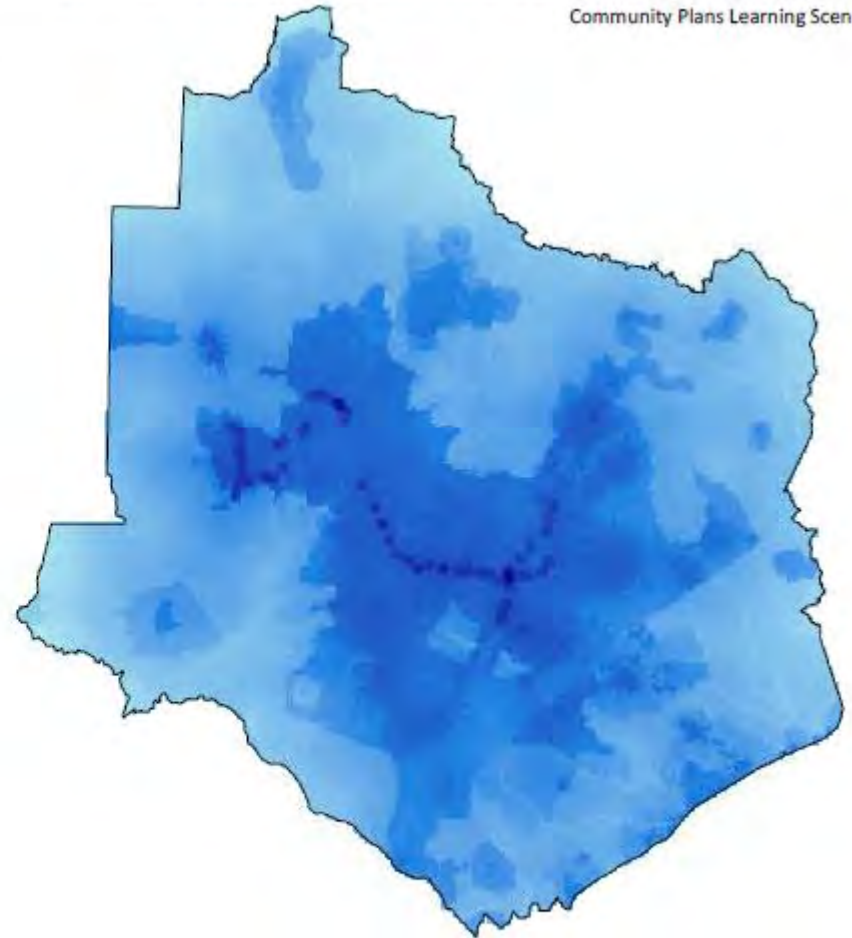


Regional Composite Map - Suitability Scores



Connect 2045 - Triangle Region Scenario Planning

Community Plans Learning Scenario

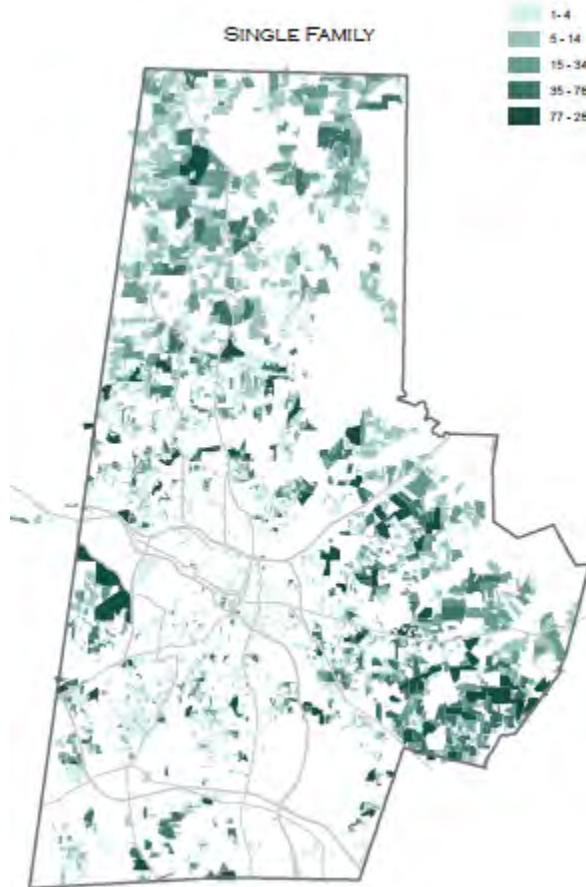


Regional Composite Map - Suitability Scores

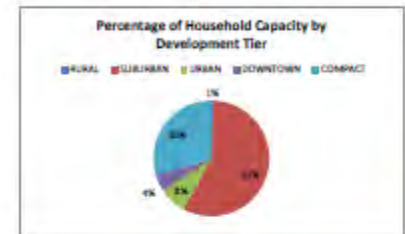


Housing Capacity (Durham County)

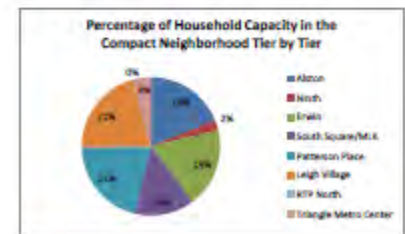
2045 MTP Learning Scenario



Household Capacity by Development Tier (CP)			
	SINGLE FAMILY	MULTI FAMILY	TOTAL
RURAL	7,593	0	7,593
SUBURBAN	48,875	5,673	54,548
URBAN	4,491	1,736	6,227
DOWNTOWN	215	4,519	4,734
COMPACT	2,399	16,181	18,580
TOTAL	63,574	28,109	91,682

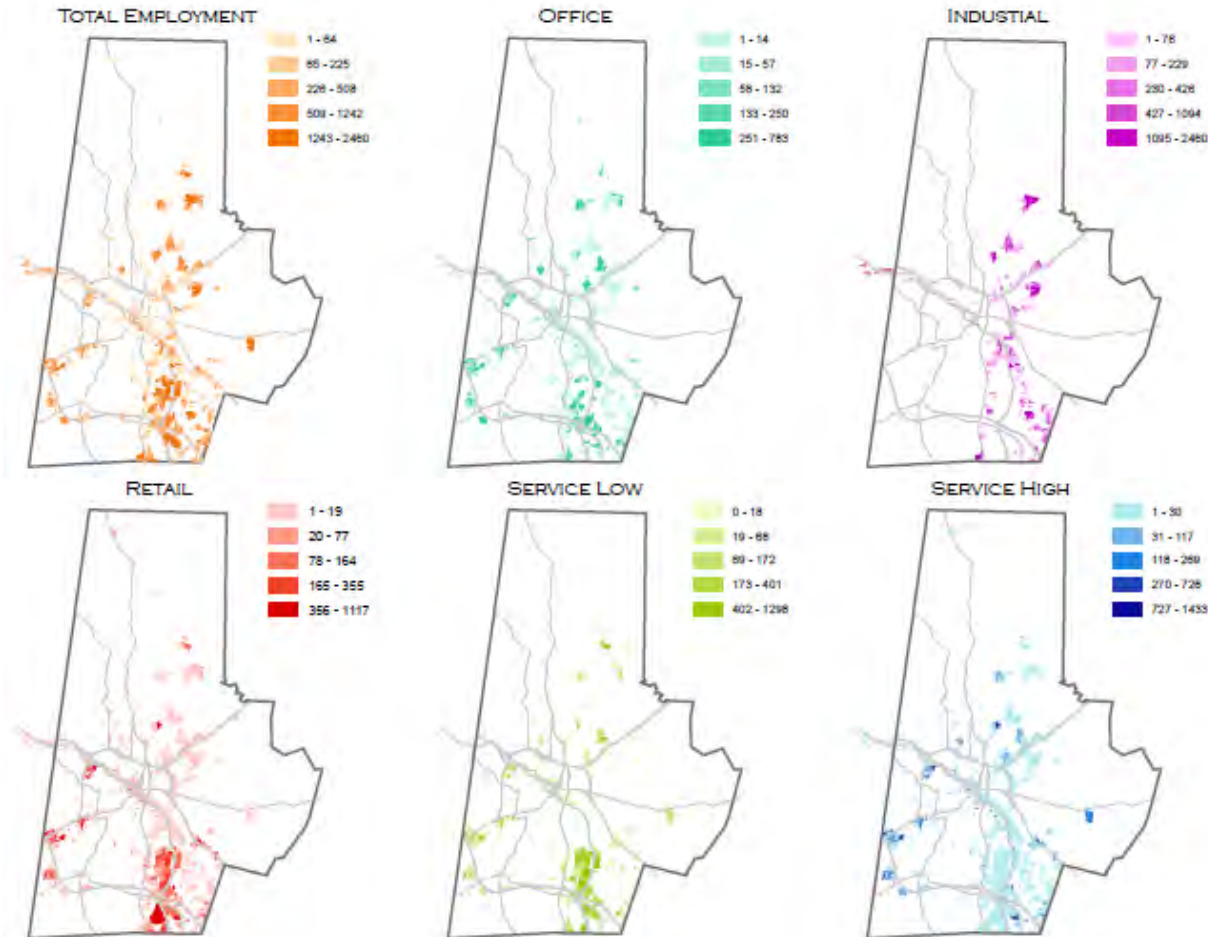


Household Capacity in the Compact Neighborhood Tiers (CP)			
	SINGLE FAMILY	MULTI FAMILY	
Alston	0	3,502	3,502
North	77	377	454
Ennis	0	3,462	3,462
South Square/MLK	245	2,255	2,501
Patterson Place	1,391	2,488	3,879
Leigh Village	686	3,241	3,927
RTTP North	0	0	0
Triangle Metro Center	0	759	759
TOTAL	2399	16181	18580



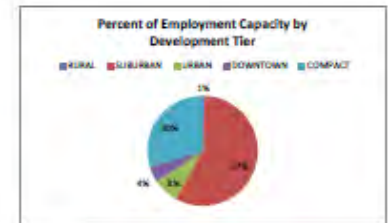
Jobs Capacity (Durham County)

2045 MTP Learning Scenario

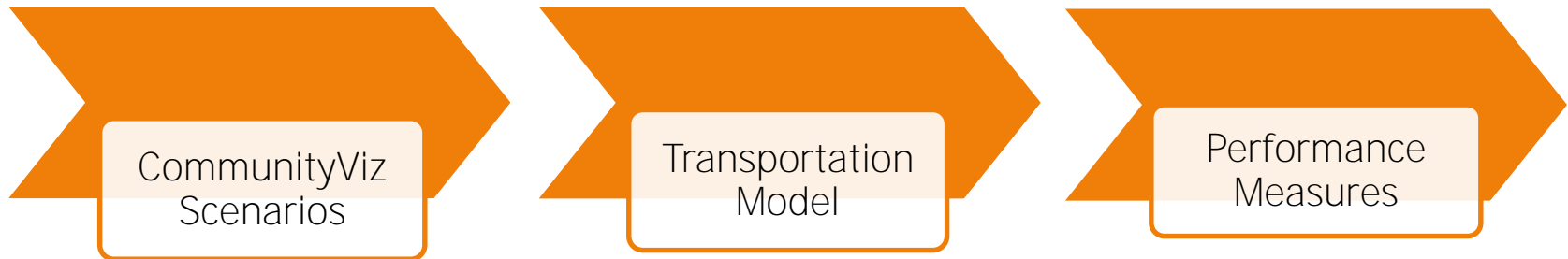


Total Employment Capacity on Future Land Use Map		
	JOBS	SF
Industrial	78,098	43,387,963
Office	93,656	28,381,275
Retail	67,606	23,305,268
Service Low	65,945	22,739,784
Service High	37,665	11,770,235
Total	342,970	129,584,525

Employment Capacity by Development Tier (CP)		
	JOBS	SQUARE FEET
RURAL	2,101	716,307
SUBURBAN	198,576	79,318,655
URBAN	26,243	11,116,005
DOWNTOWN	15,583	5,095,638
COMPACT	102,748	34,014,053



How the Scenario Results are Used



❖ Types of Performance Measures

- ❑ Development
 - Capacity
 - Proximity
 - Walkability
- ❑ Mobility
 - Congestion
 - Reliability
 - Accessibility

Time to Hear From You

- ❖ Structured Questions
- ❖ General Discussion

Coffee Break

- 10:30 a.m.

Regional Transit Plans and Financial Assumptions Update

- Durham / Orange Counties Report – Jeff Mann/John Tallmadge, GoTriangle
- Wake County Report – Bret Martin, CAMPO



Durham and Orange County Transit Plans Report

November 30, 2016

Durham and Orange County Plans

Durham County

- 50,000 revenue hour expansion of bus service & associated buses
- Durham-Orange Light Rail Project
- \$15 Million in bus capital project improvements
- Wake-Durham Commuter Rail

Orange County

- 35,300 revenue hour expansion of bus service & associated buses in first 5 years
- Durham-Orange Light Rail Project
- \$7 Million in bus capital project improvements
- North-South BRT Project in Chapel Hill
- Hillsborough Train Station

Financial Update

New Information on D-O LRT

- State Revenue is Capped at 10%
- FTA Direction to Lower Annual Funding Assumption to \$100M
- Capital Cost Estimate (includes NCCU, Joint Development)
- Updated Baseline Sales Tax Forecast from Moody's Analytics Financial Consultants
- Review of Assumptions from Public Financial Management

New Information on North-South BRT

- Cost Estimate Has Grown from \$25M to \$125M
- Assume No State Grant Funding

Impact on Funding Gap

- Confidence that Planned Additional Local Funding Target of \$250M is Appropriate

Why Is There A Gap?

Bus Service

- State: 7.5%
- Local: 92.5%

Vehicles, Bus Stops, Park and Rides

- Federal: 80% → 38%
- State: 10% → 8%
- Local/Other: 10% → 54%

Light Rail, Commuter Rail

- Federal: 50% → 50%
- State: 25% → 10%
- Local/Other: 25% → 40%

Bus Rapid Transit

- Federal: 50% → 70%
- State: 25% → 0%
- Local/Other: 25% → 30%

Hillsborough Train Station

- State: 90% → 91%
- Local: 10% → 9%

Ways to Resolve the Funding Gap

Includes 10% State Funding

Private

In-Kind Right-of-Way	\$15 M - \$30 M
Foundations/Endowments/ Private Capital	\$25-50 M
Duke	
UNC	
NCCU	
Foundations Donations	
Total	\$40 M - \$80 M

Public

In-Kind Right-of-Way	\$5 M
State \$4.1 M	
Local \$600k	
Federal \$225k	
Other Federal Funds	\$0-20 M
CMAQ + STP	
\$2 M/year x 10 years	
Additional Local Funds	\$175 M
Durham – 77%	
\$13.5 M/yr x 10 yrs	
(\$135 M)	
Orange/Chapel Hill – 23%	
\$4.0 M/yr x 10 yrs	
(\$40M)	
Total	\$180-200 M

Note: No Additional funds needed prior to 2020.

Timeline

	Dec 2016	April 2017	June 2018
GoTriangle Action	Complete D-O LRT Project application to enter Engineering Phase	Sign contract, begin D-O LRT Project Engineering Phase	Apply to include D-O LRT Project in President's Budget
Local Government Action	Provide non-binding letter of intent to work w/ GoTriangle to identify funds to complete D-O LRT Project	Review/Approve updated County Transit Plans with planned revenue assumptions	Commit any local funds agreed to be part of D-O LRT Project financial plan
Local Government Staff	Work with GoTriangle to refine County Transit Plan Assumptions	Present revised plan to elected officials w/ GoTriangle	Review Plan Progress
Private Partners	Provide non-binding letters of intent for land/other commitments to support D-O LRT Project	Secure additional commitments	Sign agreements to make commitments official

- Review expense assumptions in original plan and current FTA Financial Plan
- Agree on proposed changes to service/ project scope descriptions and spending by year
- Agree on assumptions about revenues and financing
- Develop public involvement strategy and schedule
- Coordinate government relations

Plan Update Schedule

January 13 – Complete draft outputs from Staff Teams

Late January/early February

- Present overview of scope, schedule and public involvement; request release of drafts for public comment on February 10

February 10 – Complete Draft Plans

February 10 – March 12

- Public comment, including presentations of draft plans to all Boards

March 20 - Complete Final Draft Plans

Late March/late-April

- Present final updates for approval



Questions



Wake Transit Activity Report

**CAMPO/DCHC MPO
Executive Boards Joint Meeting
November 30, 2016
9:00 AM**

Governance Activity

Wake County Transit Planning Advisory Committee (TPAC)

- **22 member staff-level technical committee**
 - Recommends technical implementation details to governing boards
 - Annual budgets, mid-range project programming, financial model
 - 15 regular meetings beginning June 20th (every week to 2 weeks)
 - 3 sub-committees (meet every week to 2 weeks)
- **Staffed by CAMPO**



TPAC Operational Structure

TPAC Operational Structure – Bylaws Approved September 28th

Voting Membership

Organization	Voting Members
CAMPO	2
GoTriangle	2
Wake County	2
City of Raleigh	2
Town of Cary	2
Town of Apex	1
Town of Fuquay-Varina	1
Town of Garner	1
Town of Holly Springs	1
Town of Knightdale	1
Town of Morrisville	1
Town of Rolesville	1
Town of Wake Forest	1
Town of Wendell	1
Town of Zebulon	1
NC State University	1
RTP Foundation	1
TOTAL	22

Ongoing TPAC Work Product Deadlines

Annual Work Plan Delivery Schedule

Fiscal Year	Draft Annual Work Plan	Final Recommended Annual Work Plan
2017 *	November 2016***	December 2016
2018	November 2016	May 2017
2019**	November 2017	May 2018
2020**	November 2018	May 2019
2021**	November 2019	May 2020

Progress Report Schedule

Report	Report Period Ends	Report Delivery
FY 2017 Annual Report	June 2017	December 2017
FY 2018 First Quarter Report	September 2017	December 2017
FY 2018 Second Quarter Report	December 2017	March 2018
FY 2018 Third Quarter Report	March 2018	June 2018
FY 2018 Annual Report	June 2018	December 2018
FY 2019 First Quarter Report	September 2018	December 2018
FY 2019 Second Quarter Report	December 2018	March 2019
FY 2019 Third Quarter Report	March 2019	June 2019
FY 2019 Annual Report	June 2019	December 2019

* The 2017 Annual Work Plan will cover from April 2017 through June 2017.

** Schedules shown in FY 2019, FY 2020 and FY 2021 reflect a goal for a consistent and regular schedule.

*** The quick turnaround for the FY 2017 cycle will limit review time.

Lead Agency Work Product Assignments

- **CAMPO - Planning/Prioritization/Program Management**
 - Wake Transit Plan update
 - Mid-range project programming/prioritization policies/designation of project sponsors
 - Concurrence check process for major capital project development
 - Public outreach/participation strategy for plan implementation – **shared with GoTriangle**
 - Staffing plan – **shared with GoTriangle**
 - Community Funding Area program management
 - TPAC admin/annual work plan consolidation and processing
- **GoTriangle – Financial/Regulatory**
 - Annual budgets and ordinances
 - Financial and project status reports
 - Financial plan/model updates
 - Project funding agreements



WHAT DOES THE TPAC PRODUCE?

Annual Wake Transit Work Plan

Multi-Year Operating Program

First Year: Annual Operating Budget
(Includes Tax District Admin Budget)

First Year: Annual Operating Budget Ordinance

Annual Operating Funding Agreements

Multi-Year Capital Improvement Plan

First Year: Annual Capital Budget

First Year: Annual Capital Budget Ordinance

Annual Capital Funding Agreements

Update of the Wake Transit Financial Plan

Financial Model Assumptions

Corresponding Update of Funds Available for Future Projects Not Included in Multi-Year CIP

*****Considered/Approved by CAMPO and GoTriangle Boards Annually*****



WHAT DO THESE WORK PRODUCTS LOOK LIKE?

(For Illustrative Purposes Only)

Annual Budgets

FY17 Triangle Tax District: Wake Operating

	Triangle Tax District: Wake Operating	
Revenues		
Tax District Revenues (Q4 only)		
Article 43 1/2 Cent Local Option Sales Tax	\$ 18,893,000	
Vehicle Rental Tax	\$ 877,519	
\$7.00 Vehicle Registration Tax	\$ -	
\$3.00 Vehicle Registration Tax (Transfer from Wake Tax District)	\$ 621,000	
Interest / Investment Income	\$ -	
Other Tax District Revenues	\$ -	
Total Revenues	\$ 20,391,519	
Expenditures		
Allocations to Agencies		GoTriangle CAMPO GoRaleigh GoCary TRACS
Transit Plan Administration		\$ 384,493 \$ - \$ - \$ - \$ -
Systemwide Planning		\$ 700,000 \$ - \$ - \$ - \$ -
Transit Operations		\$ 100,000 \$ - \$ - \$ - \$ -
<i>Total Allocations</i>	\$ 1,184,493	
Tax District Administration		
Salaries and Benefits	\$ 42,500	
Contracted Services	\$ -	
Technology	\$ 4,014	
Insurance	\$ 4,160	
Printing and Publications	\$ 1,972	
Other	\$ 22,354	
<i>Total</i>	\$ 75,000	
Debt Service	\$ -	
Allocation to Debt Service Reserve	\$ -	
Transfer to Triangle Tax District --		
Wake Capital	\$ -	
Allocation to Wake Operating		
Fund Balance	\$ 19,132,026	
Total Expenditures	\$ 20,391,519	
Revenues over Expenditures	\$ -	

Model Assumption Updates

Model Assumptions Update Summary

FY 2017 Wake Transit Plan Model Assumptions - Wake Transit Work Plan

Assumption	Type	Wake Transit Plan Assumption	FY 2017 Proposed Assumption	FY 2018 Proposed Assumption	Source	Impact/Notes
Operating Revenues						
Tax District Revenues						
Article 43 1/2 Cent Local Option Sales Tax	Growth Rate	4.0%	4.0%	4.0%	Budgeted Growth in Wake County Financial Model for Article 39	
Vehicle Rental Tax	Growth Rate	2.5%	2.5%	2.5%	Historical Growth	
Vehicle Registration Tax, \$7.00 per Vehicle	Growth Rate	2.0%	2.0%	2.0%	Historical Growth	1/4 Fiscal Year Removed from FY 2017 (\$1.449 M)
Vehicle Registration Tax, \$3.00 per Vehicle	Growth Rate	2.0%	2.0%	2.0%	Historical Growth	
Agency Revenues						
State Share of Operating Costs						
State Maintenance Assistance Program	% of Costs	10%	10%	10%		
Federal Share of Operating Costs						
Federal Formula Transit Grants Section (5307)	FTA Formula Inputs and Data Unit Value for Revenue Miles	54.7 cents/mile	54.7 cents/mile	54.7 cents/mile	FY 2014 NTD Data Unit Values	For FY 2018 work plan, data unit value will be updated. Other federal funding formula inputs will also be reviewed.
Farebox Recovery Ratios						
Bus Rapid Transit (Beginning in 2024)						
Agency A	% of Costs	24%	24%	24%		Model assumes farebox for new service is part of recovery ratio and cash in plan. Further discussion in later years is needed on how to measure health of plan regarding these dollars and measures.
Rail (Beginning in 2027)						
Agency A	% of Costs	20%	20%	20%		
Local Bus						
Raleigh	% of Costs	18.28%	15.0%	15.0%	City of Raleigh	Reflects current farebox recovery ratio for Raleigh. Out years in plan remain at higher percentage as bus implementation has not been decided.
Cary	% of Costs	18.28%	7.95%	7.95%	Town of Cary	Reflects current farebox recovery ratio for Cary. Out years in plan remain at higher percentage as bus implementation has not been decided.
GoTriangle	% of Costs	18.28%	15.00%	15.00%	GoTriangle	Reflects current farebox recovery ratio for GoTriangle. Out years in plan remain at higher percentage as bus implementation has not been decided.
Other Agency Revenues	Growth Rate					

Multi-Year CIP and Operating Program

Operating Program

Operations / Service Type	Sponsor Agency	Managing/Operating Agency	Description	FY2017-2026 Wake Transit Multi-Year Operating Program Summary									
				GEOGRAPHY	Annual Hrs.	Source	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23
Bus Paratransit	GoTriangle	GoTriangle	REGIONAL PARATRANSIT SERVICE	CARY	1,694	Tax District	\$ -	\$ 215,138	\$ 220,516	\$ 226,029	\$ 231,680	\$ 237,472	\$ 243,400
Express/Regional Bus Service	GoTriangle	GoTriangle	SYSTEMWIDE EXPRESS/REGIONAL BUS OPERATIONS/SERVICE	RALEIGH	14,911	Tax District	\$ 100,000	\$ 1,557,632	\$ 1,596,573	\$ 1,636,487	\$ 1,677,399	\$ 1,719,334	\$ 1,762,310
Tax District Admin	GoTriangle	GoTriangle	TAX DISTRICT ADMIN	WAKE	N/A	Tax District	\$ 75,000	\$ 150,000	\$ 153,750	\$ 157,594	\$ 161,534	\$ 165,572	\$ 169,711
Transit Plan Admin/Implementation	(Tax District)	(Tax District)	TRANSIT PLAN ADMIN/IMPLEMENTATION/SYSTEMWIDE PLANNING	COUNTY	N/A	Tax District	\$ -						
	GoTriangle	GoTriangle		WAKE			\$ 1,084,493	\$ 1,038,297	\$ 1,064,254	\$ 1,060,861	\$ 1,118,132	\$ 1,146,086	\$ 1,174,730
				COUNTY									
Bus Paratransit	GoCary	GoCary	LOCAL PARATRANSIT SERVICE	CARY	N/A	Tax District	\$ -	\$ 85,000	\$ 87,125	\$ 89,303	\$ 91,536	\$ 93,824	\$ 96,170
Local Bus Service	GoCary	GoCary	SYSTEMWIDE LOCAL BUS OPERATIONS/SERVICE EXPANSION	CARY	10,466	Tax District	\$ -	\$ 753,522	\$ 772,360	\$ 791,669	\$ 811,461	\$ 831,747	\$ 852,540
Planning/Admin	GoCary	GoCary	SYSTEMWIDE EXPANSION PLANNING/ADMIN	CARY	N/A	Tax District	\$ -	\$ 206,000	\$ 211,150	\$ 216,429	\$ 221,839	\$ 227,385	\$ 233,070
Local Bus Service	GoRaleigh	GoRaleigh	SYSTEMWIDE LOCAL BUS OPERATIONS/SERVICE EXPANSION	RALEIGH	14,711	Tax District	\$ -	\$ 1,468,665	\$ 1,505,382	\$ 1,543,016	\$ 1,581,592	\$ 1,621,131	\$ 1,661,660
Planning/Admin	GoRaleigh	GoRaleigh	SYSTEMWIDE EXPANSION PLANNING/ADMIN	RALEIGH	N/A	Tax District	\$ -	\$ 95,000	\$ 97,375	\$ 99,809	\$ 102,305	\$ 104,862	\$ 107,480
General Public Demand-Response	Wake County TRACS	Wake County TRACS	COUNTYWIDE GENERAL PUBLIC DEMAND-RESPONSE SERVICE	WAKE COUNTY	N/A	Tax District	\$ -	\$ 150,000	\$ 153,750	\$ 157,594	\$ 161,534	\$ 165,572	\$ 169,711
Transit Plan Admin/Implementation	CAMPO	CAMPO	TRANSIT PLAN ADMIN/IMPLEMENTATION	WAKE COUNTY	N/A	Tax District	\$ -	\$ 150,000	\$ 153,750	\$ 157,594	\$ 161,534	\$ 165,572	\$ 169,711
Transit Plan Admin/Implementation	TBD	TBD	TRANSIT PLAN ADMIN/IMPLEMENTATION	WAKE COUNTY	N/A	Tax District	\$ -	\$ 3,125,000	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL OPERATIONS FROM TAX DISTRICT REVENUES							\$ 1,259,493	\$ 8,994,254	\$ 6,015,985	\$ 6,166,385	\$ 6,320,546	\$ 6,478,557	\$ 6,640,520

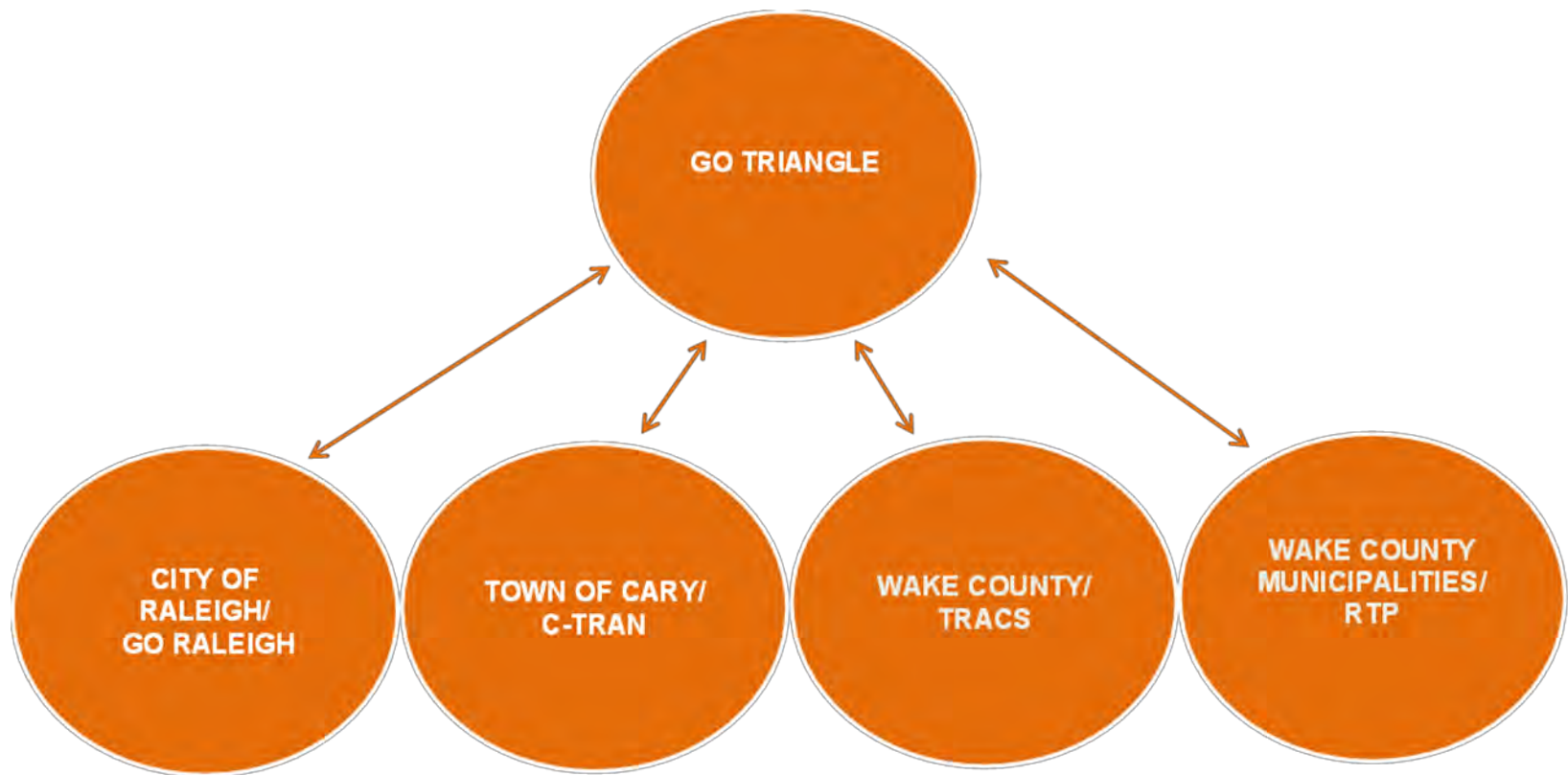
Multi-Year CIP and Operating Program

Capital Improvement Plan (CIP)

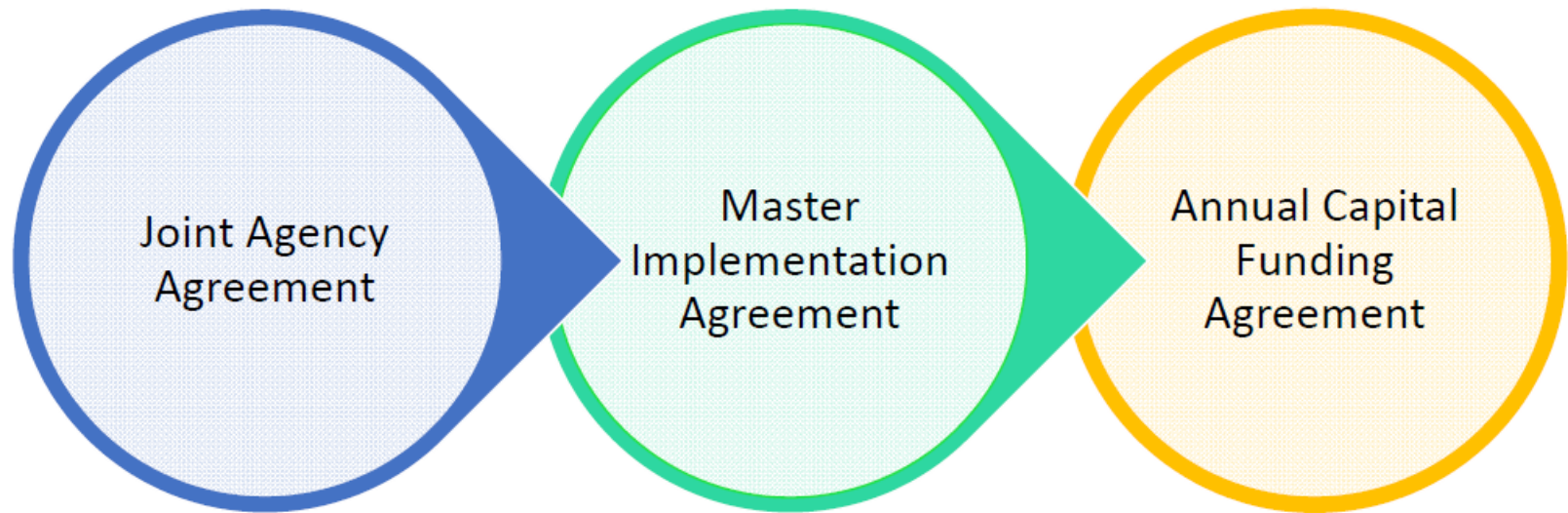
Project	Project Type	Sponsor Agency	Description	FY2017-2026 Wake Transit Capital Improvement Program Summary									
				Phase	Source	Prior Yr.	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23
Systemwide Expansion Vehicles for Bus Service	Vehicles	GoCary	20 NEW EXPANSION VEHICLES FOR SERVICE TO BE INITIATED IN FYs 2019 OR 2020/CONTINUE LEASE OF VEHICLES	Purchase	Tax District			\$ 10,182,500	\$ 172,200	\$ 176,505	\$ 180,918	\$ 185,441	\$ 190,07
		GoRaleigh		Lease									
		GoTriangle											
Bus Facilities	Infrastructure	GoTriangle	FUQUAY-VARINA PARK-AND-RIDE LEASE	Lease	Tax District			\$ 4,500	\$ 4,613	\$ 4,728	\$ 4,846	\$ 4,967	\$ 5,09
Park-and-Ride	Planning/Studies	GoTriangle	RALEIGH UNION STATION BUS FACILITY (PLANNING AND DESIGN)	N/A	Tax District			\$ 1,900,000					
Bus Infrastructure	Infrastructure	GoCary	BUS STOP SIGN REPLACEMENT, BUS STOP ADA IMPROVEMENTS	Construction	Tax District			\$ 538,000					
Bus Infrastructure	Planning/Studies	GoCary	DOWNTOWN MULTIMODAL FACILITY STUDY, SW WAKE TRANSIT MAINTENANCE FACILITY A&E	N/A	Tax District			\$ 1,200,000					
Capital Planning/Studies	Infrastructure	GoRaleigh	DOWNTOWN RALEIGH TRANSIT ACCESS, POOLE ROAD PARK-AND-RIDE FACILITY (CONSTRUCTION)	Construction	Tax District			\$ 2,390,000					
Bus Facilities	Planning/Studies	TBD	FIXED GUIDEWAY ANALYSES/IMPLEMENTATION STUDIES	Planning	Tax District			\$ 9,300,000					
BRT/CRT Planning													
Capital projects/expenditures in FY 2019 and subsequent years will be determined by the Multi-Year Service Implementation Plan and Transit Corridors Major Investment Study currently under development													
Bus Infrastructure			FUTURE BUS INFRASTRUCTURE	Various	Tax District			\$ 17,552,989	\$ 51,646,870	\$ 37,829,400	\$ 23,576,777	\$ 12,828,90	
CRT			COMMUTER RAIL	Various	Tax District/Federal			\$ 48,541,252	\$ 56,639,914	\$ 88,633,169	\$ 147,622,620	\$ 195,826,72	
BRT			BUS RAPID TRANSIT	Various	Tax District/Federal			\$ 24,896,856	\$ 28,854,028	\$ 75,634,892	\$ 140,784,528	\$ 73,210,43	
Expansion and Replacement Vehicles			FUTURE BUS ACQUISITION	Various	Tax District			\$ 23,920,800	\$ 16,372,626	\$ 17,692,144	\$ 6,010,554	\$ 20,573,39	
Other Capital			OTHER FUTURE CAPITAL	Various	Tax District			\$ 4,679,434	\$ 4,866,612	\$ 5,061,276	\$ 5,263,727	\$ -	
Subtotal Capital								\$ 25,515,000	\$ 119,768,144	\$ 158,561,282	\$ 225,036,645	\$ 323,448,614	\$ 302,634,61

Agreements

Transit providers and municipalities in Wake County enter into project agreements with GoTriangle



General Agreement Structure



Other TPAC Work Products

Work Product	Informs
Transit Corridors Major Investment Study	10-Year CIP and Operating Program
Multi-Year Service Implementation Plan	
Staffing Model/Expectations Plan	
Plan Implementation Project Prioritization Policy	
Designation of Project Sponsors	
Multi-Year Vision Plan (Extension of Wake Transit Plan Beyond 10-year Horizon)	
Community Funding Areas Program Management Plan	
Concurrence Check Process for Major Capital Project Development	Public participation opportunities for work plan development and project development/implementation
Public Outreach/Involvement Strategy	

****These work products do not recur annually****

****Scheduled for completion before TPAC FY 2019 Work Plan Recommendation (May 2018)****

****Development of Work Products Outsourced to Consultants****

****Currently in Scoping****

Proposed Investments in Draft FY 2017 Work Plan

- Establish resources for tax district admin and upcoming implementation plans/studies
- GoTriangle – 4.5 new FTE's for tax district admin, public outreach/communications, and plan/study project management
- Transit Corridors Major Investment Study
- Other plans/studies initiated with external funding
- GoTriangle service preparation for FY 2018 deployment

Proposed Investments in Draft FY 2018 Work Plan

- High demand bus service deployed with existing capital resources – Low hanging fruit
 - Weekend/Weeknight service
 - Frequency increases
 - Continuation of regional routes supported by provisional funding
 - Countywide general public demand-response service expansion
- Planning/Project management staff – GoRaleigh, GoCary, CAMPO
- Continuation of transit plan implementation studies and capital project planning
- Bus stop improvements and purchase expansion vehicles for use in FY 2019 and beyond
- Bus facility development

Investments for FY 2019 and Beyond Informed By:

- **Multi-Year Service Implementation Plan**
→ For Bus Services
- **Transit Corridors Major Investment Study**
→ For Fixed Guideway Services

A decorative border at the top of the slide consisting of various colored triangles (blue, green, orange, yellow) arranged in a geometric pattern.

QUESTIONS??

Public-Private Partnerships

- Steve DeWitt, ACS Infrastructure Development

Public Private Partnerships in Transportation

**Current Practice in the US and
Raleigh/Durham/Chapel Hill Regional Opportunities**

**Joint Meeting of the Executive Boards of the
Durham-Chapel Hill-Carrboro MPO and the Capital Area MPO**



Steven D. DeWitt, PE
Senior VP for Business Development
ACS Infrastructure Development, Inc.

Public Private Partnerships Defined

Public Private Partnerships (“P3”) are contractual agreements formed between a public agency and a private sector entity that allow for greater private sector participation in the delivery and financing of infrastructure projects. P3s generally include financing by the private entity.

Why Consider P3s?

Insufficient Funding

- Accelerating project delivery
- Delivering projects that can't be delivered any other way
- \$1 B isn't what it used to be (!)
- Leveraging available funding (a Project vs. a Program)

Better Project Value

- Life cycle view with long term obligations
- Ensure long term performance
- Better overall project value

P3 Benefits

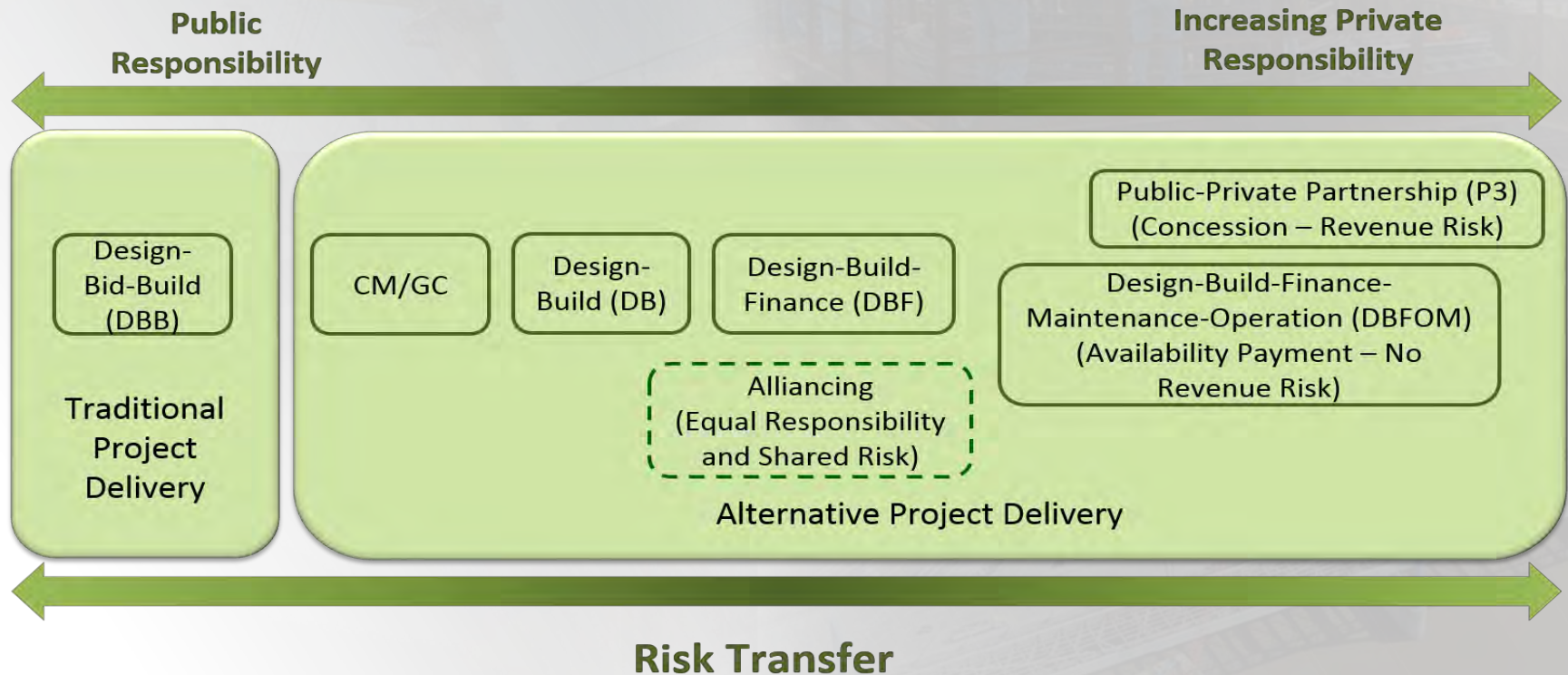
P3s leverage private sector expertise and risk appetite to deliver benefit to the public through transferred risk, cost efficiencies and accelerated project delivery.

Cost Certainty	<ul style="list-style-type: none">• Proven record of delivering projects on budget• Private sector capital providers drive rigorous fiscal management
Schedule Acceleration and Certainty	<ul style="list-style-type: none">• Proven record of delivering projects on time• Robust security packages ensure delivery and performance
Cost Savings	<ul style="list-style-type: none">• Integrated bidding process drives down project costs
Lifecycle Cost Optimization	<ul style="list-style-type: none">• Maintenance and renewal costs optimized over 15-30 year period
Innovation	<ul style="list-style-type: none">• Functional specification approach allows design freedom• Integrated design/construction approach• Integrated construction and operations approach• Competitive global market brings best practices & ideas to the project

Key Considerations

- A P3 is not a new funding source – it is a financing and delivery option
- Debt is still debt and must be paid back
- Equity is always more expensive than debt
- P3s can be expensive to procure
- P3s can be expensive to pursue
- While the “excitement” tends to be on the financing these are long term performance contracts and need to be treated accordingly
- These are business transactions – profit is involved
- Don’t let the statement “Public financing is always cheaper than private financing” limit “P3 thinking”

Alternative Delivery Risk Spectrum



Alternative Delivery options have been developed out of a desire to accelerate project delivery. These options have resulted in shifting of risks and responsibilities to the private sector.

What We are Seeing Today

- P3s across Asset Classes
 - Water Systems
 - Energy
 - Social Infrastructure
 - Transportation
- Transportation
 - Greenfield Toll Roads
 - Managed Lanes Projects
 - Non-toll roads
 - Transit Projects
 - LRT
 - High Speed Rail
 - Stations
 - Ports
 - Airports & associated assets
 - LED Street Lighting



Key Approaches

Availability Payments

- Concessionaire provides equity and takes on debt
- Owner retains revenue risk
- Owner pays Concessionaire through periodic payments based on project performance
- Could be applicable to virtually any kind of project

Revenue Risk

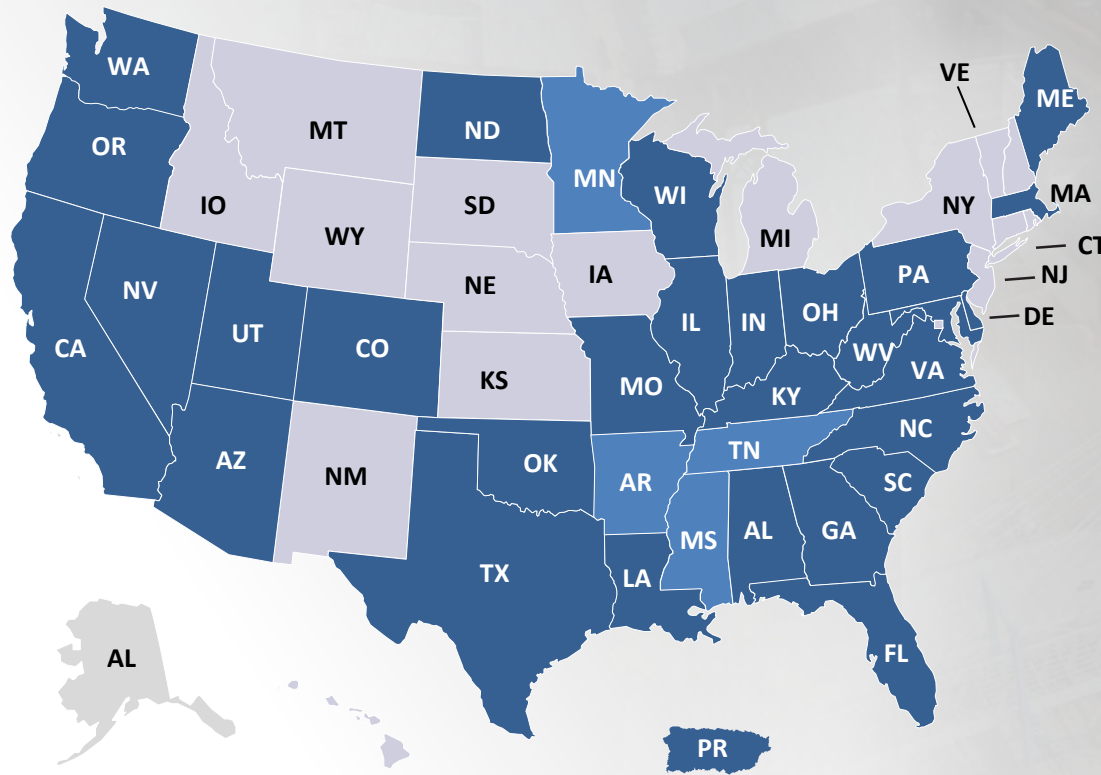
- Concessionaire provides equity and takes on debt
- Concessionaire takes revenue risk
- Concessionaire ensures Project performance in accordance with contract requirements
- Applicable to projects with “financeable” revenue streams



Recent Public Private Partnership Projects

P3s Nationally

- Broad P3 Enabling Legislation
- Limited or Project-specific Legislation



≈ 30 States have Broad P3 Legislation

Private Partnerships for Transportation
 Dec 2011

Agency	Development
Texas DOT	SH-288 Financial Close: May 2016
Denver DOT	I-70 ML in Procurement
Pennsylvania DOT	PennDOT Rapid Bridges – Financial Close: April 2015
Ohio DOT	Portsmouth Bypass – Financial Close: April 2015
N. Carolina DOT	I-77 Financial Close: May 2015
Virginia DOT	I-66 Outside the Capital Beltway – Conditional Award
Michigan	Highway Lighting – Financial Close: August 2015
Kentucky	Broadband – Financial Close: September 2015
North Dakota DA	Flood Diversion Channel – in Procurement
Maryland DOT	Purple Line – Financial Close: June 2016
LAWA - LAX	Automated People Mover – in Procurement
LAWA - LAX	CONRAC – Procurement Imminent
LaGuardia PANYNJ	Terminal Improvements – Financial Close: June 2016

PennDOT Rapid Bridge Replacement

- Replacement of 558 structurally deficient bridges
- \$ 1.1 B, Availability Payments over 25 years
- Bridges chosen for highest public benefit
- Developer responsible for design and construction related maintenance long term
- Maintenance performance dictated by contract, enforced by Availability Payment deductions
- Handback requirements
- High local participation



Managed Lanes

SH 288 Toll Lanes



- **\$1.1 Billion total investment**
- **Financial Close March 2016**
- ✓ Managed lanes revenue-risk project; financing structure includes PABs and TIFIA
- ✓ 10 miles of 4 new lanes in the median and partial rehabilitation of the existing SH 288
- ✓ 2 major interchanges providing connectivity from and to the managed lanes (at IH 610 and at Beltway 8)
- ✓ Technical innovations provided enhanced connectivity and significant value to TxDOT
- ✓ ACS led team

I-77 HOT Lanes



- **\$650 M Construction Cost**
- **Financing includes TIFIA, PABs, equity**
- **Financial Close – early 2015**
- **Scheduled opening - 2017**
- ✓ Revenue Risk Concession
- ✓ 1st Managed Lanes Project in NC
- ✓ HOV to HOT Conversion
- ✓ Cintra led team

Kentucky Broadband

- 3,200-mile network of major fiber lines, connecting all 120 counties
- \$350 million project, financed through a series of bonds & equity
- State to pay via AP over the 30 years
- Performance Based
- 1st Stage: Construct main broadband fiber lines across the state
- Open access network allows private sector to use the fiber to deliver services to communities.
- Once complete, other internet service providers, cities, partnerships, or other groups will be able to tap into the system.
- Improved cell phone coverage is also anticipated as part of the initiative.



Michigan Freeway Lighting

- \$45 million project, financed through a series of bonds & equity
- State to pay via AP over the 13 years
- Performance Based
- $\approx 90\%$ of the 15,000 freeway lights in the Detroit area are high-pressure sodium or metal halide
- These will be replaced with energy-efficient LED lights in the first two years.
- $\approx 70\%$ of existing lights are working. Problems include funding, copper theft, and other challenges.
- 90% of the lights must be operational after the first year, 98% after the second year.
- Developer is contractually obligated to monitor all lighting infrastructure while identifying and repairing deficiencies.
- The 15-year contract is divided into one two-year construction period and another 13-year O&M period.



Non Toll Roads/Bridges

Portsmouth Bypass



- **\$557 Million total investment**
- **Financing includes a \$208 Million TIFIA loan**
- **Financial Close in April 2015**
- ✓ First P3 project in Ohio
- ✓ Includes \$227 Million of PABs, of which \$108 Million are wrapped by Assured Guaranty
- ✓ 16 miles of greenfield highway; 20 million cubic yards of fill and excavation
- ✓ O&M scope optimized with ODOT to provide best value allocation

- Common Misconception: DBFOM (Design, Build, Finance, Operate, Maintain) highway P3s are all and always toll roads
- Availability Payment structures can be used for any asset class
- National trend is towards more Availability Payment based projects

Transit

Eagle P3 - Denver



- **\$2.2 Billion total investment**
- **Availability Payments**
- **Financial Close in 2011**
- **Opened mid 2016**
- ✓ 36+ mile new light rail transit (LRT) system from Denver International Airport to downtown Denver and surrounding communities
- ✓ Includes 14 stations, maintenance and storage facility
- ✓ The light rail vehicles have been procured as part of the P3 contract

Purple Line - Maryland



- **\$2.5 Billion Capital Cost**
- **Availability Payments**
- **Financial Close anticipate 2016**
- ✓ 16 mile light rail line that will extend from Bethesda to New Carrollton. It will provide a direct connection to the Metrorail Red, Green, and Orange lines; at Bethesda, Silver Spring, College Park, and New Carrollton
- ✓ 1 tunnel, 22 stations
- ✓ Includes context sensitive solutions
- ✓ Anticipated Opening: 2021

I-66 Outside the Beltway

- Managed Lanes
- \$3 B Construction Cost
- Revenue Risk
- Winning Bidder:
 - No Public \$ Contribution
 - \$500 M Concession Payment
 - \$800 M for Transit
 - \$350 M for Congestion Relief





In Procurement

I-70 Managed Lanes - Denver

- Rebuilds I-70 through Denver (Phase I)
- Lowers sections of the highway
- Includes 4 acres of cover
- \$1 B, Availability Payment



Miami Beach Light Rail

- \$250 M, Availability Payment
- Part of larger planned Miami area system
- Submitted as an Unsolicited Proposal
- Negotiations underway



LAX LAMP Program



2 P3 Projects

- Automated People Mover (\approx \$2B)
- CONRAC (\approx \$ 800 M)
- Availability Payments



LAX
Los Angeles World Airports

Fargo-Moorhead Diversion Channel

- Part of a Larger Flood Prevention Program
- FM Diversion Authority
- USACE
- \$800 M AP P3





“The Denver Story”

US 36 – HPTE DBFOM
RTD supported \$\$
for Bus access to ML

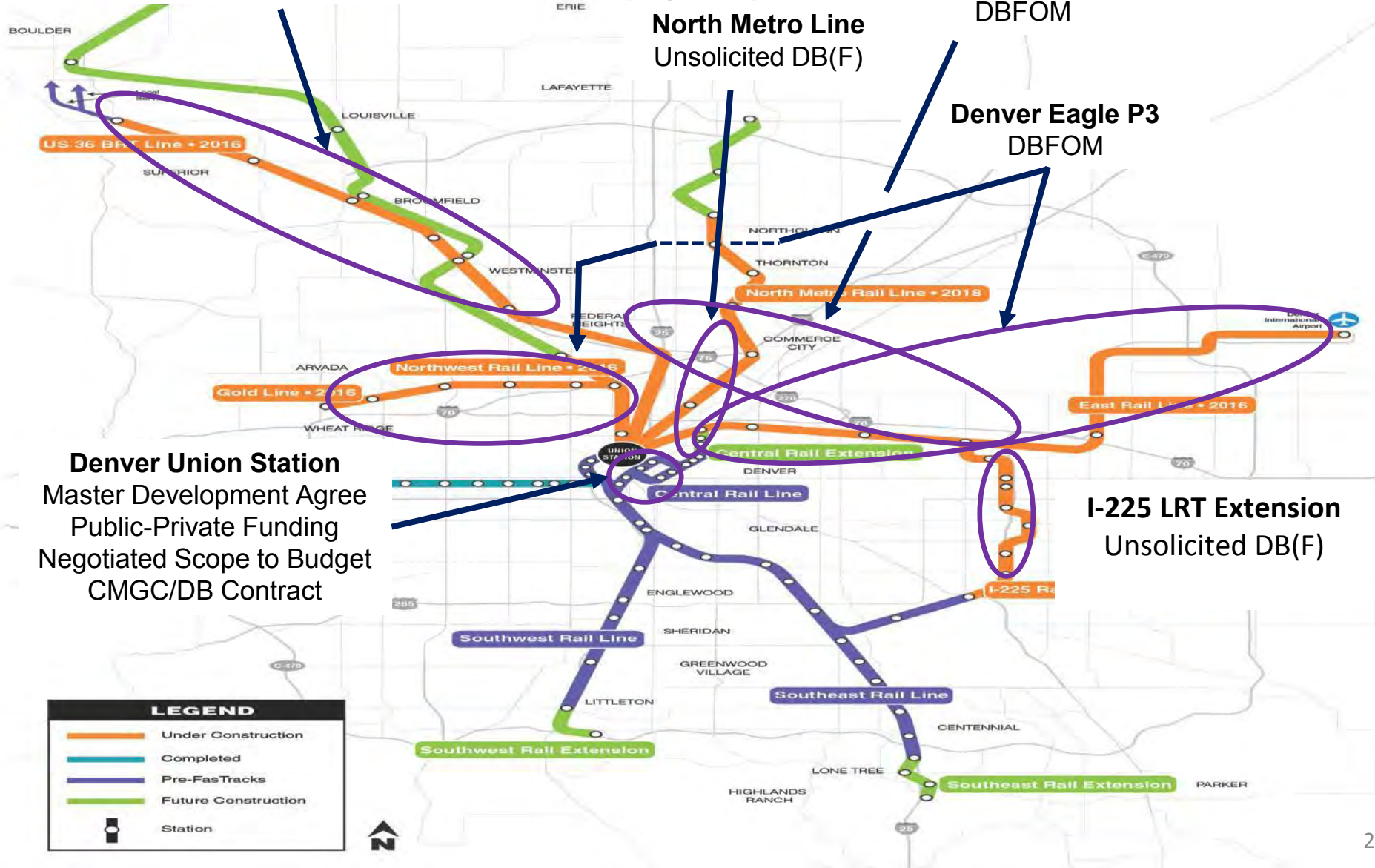
I-70 Central ML
DBFOM

North Metro Line
Unsolicited DB(F)

Denver Eagle P3
DBFOM

I-225 LRT Extension
Unsolicited DB(F)

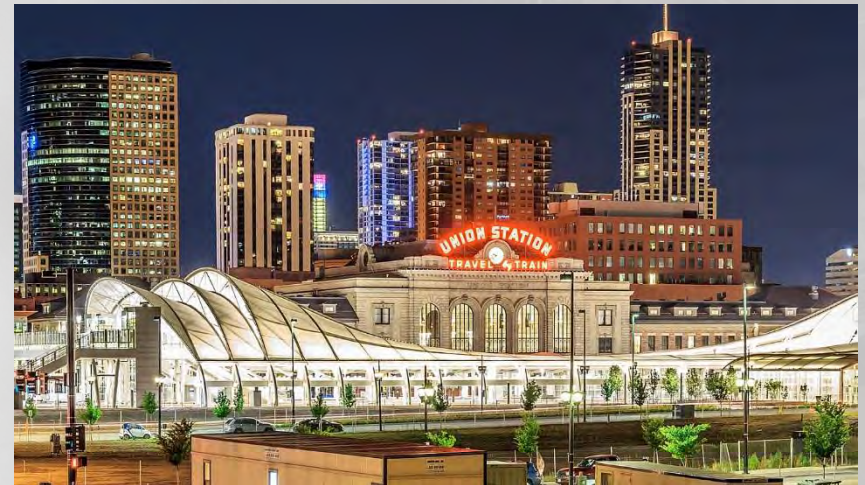
Denver Union Station
Master Development Agree
Public-Private Funding
Negotiated Scope to Budget
CMGC/DB Contract



Denver Union Station

Regional Transportation District (RTD) provided ≈ 20 acres of prime downtown real estate to Master Developer

- Enhances site as a multimodal transportation hub
- Integrated the site into the surrounding neighborhoods
- Economically sound and self sustaining
- Reflects the history and historic character of the site
- Contributed to the financing of the transportation infrastructure
- Includes AMTRAK station, hotel, restaurant and retails space, 12,000 SF great hall
- Centerpiece of the newly redeveloped neighborhood

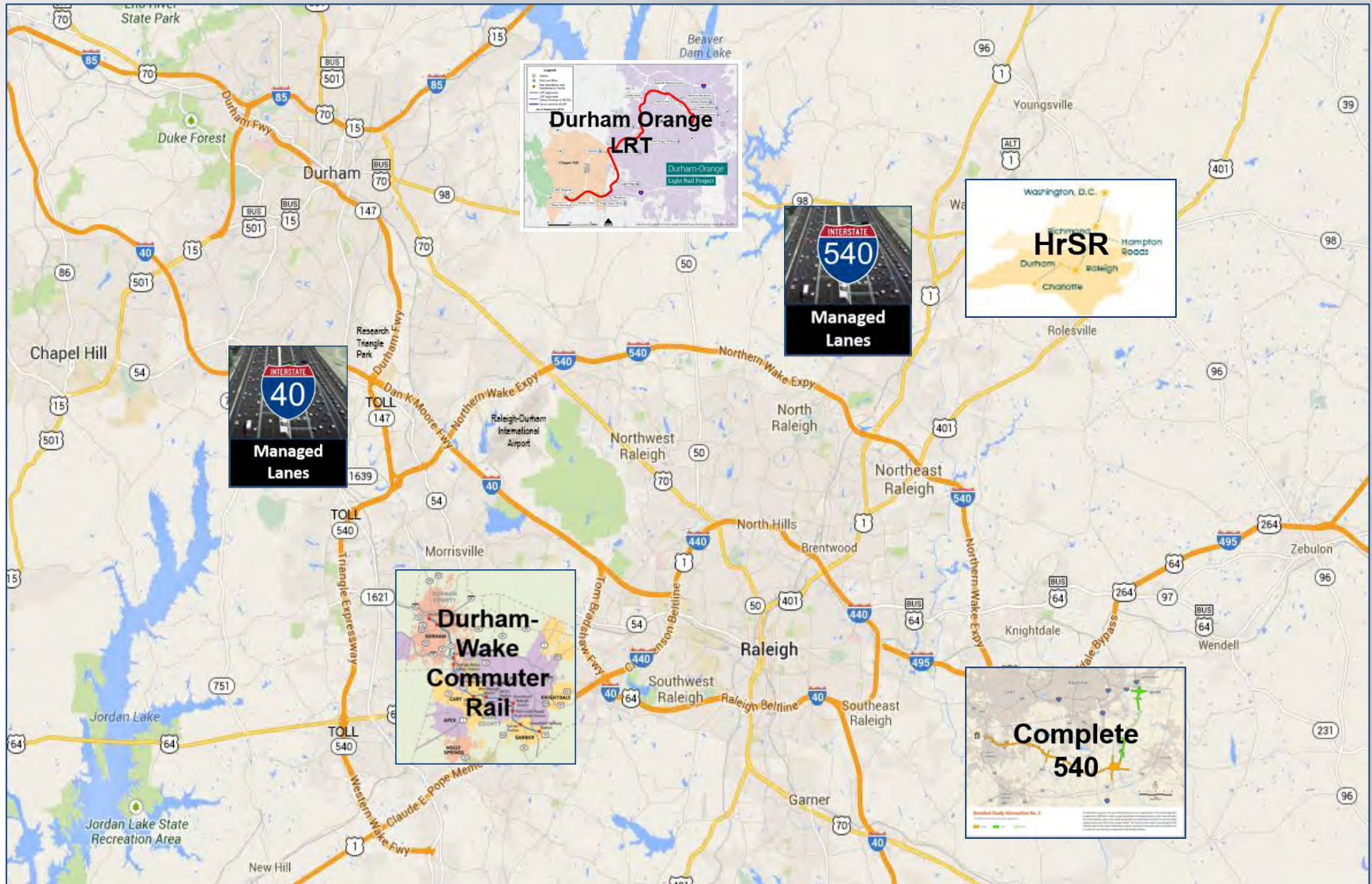


"The redevelopment of DUS is a complex undertaking that will require the balancing of many interests and considerations in implementing the multimodal transportation program, the private development, and the public spaces."



Raleigh/Durham/Chapel Hill

Raleigh/Durham/Chapel Hill



Raleigh Union Station



Regional Studies Briefings

- **Regional Freight Study – Joe Bryan, WSP/PB**
- **Regional Toll/Managed Lanes Study – Lynn Purnell, WSP/PB**
- **NC 98 Corridor Study – Will Letchworth, WSP/PB**



TRIANGLE REGIONAL FREIGHT PLAN



Selected Findings for: Joint Executive Board Meeting Capital Area & DCHC MPOs

November 30, 2016

PLAN PURPOSE

- Conduct a comprehensive regional study of freight, goods movements, and services mobility needs
- Develop a framework to proactively address these mobility needs, and their challenges in our region
- Examine all modes of freight with emphasis on trucks, rail and air cargo, and develop recommendations for the 2045 joint Metropolitan Transportation Plan
- ➔ Guide policy and investment to address the needs of industry and people, within overarching regional goals for safety, equity, livability, sustainability, and economic productivity.

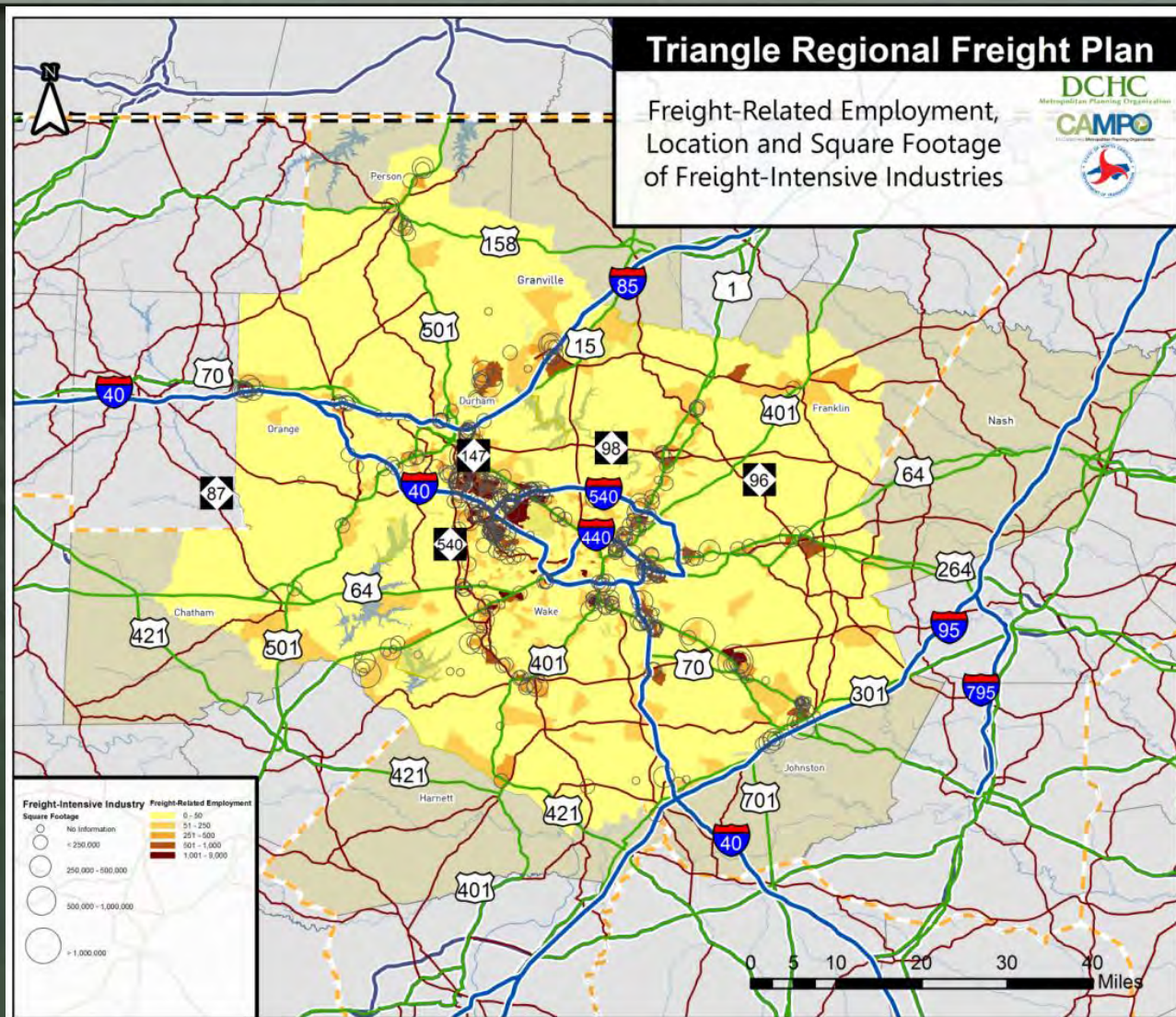


TRIANGLE REGIONAL FREIGHT PLAN

FREIGHT-DEPENDENT EMPLOYMENT & FREIGHT-INTENSIVE INDUSTRIES

- Freight-dependent industries account for *one-third* of Triangle Gross Regional Product - \$21 Billion*

* Bureau of Economic Analysis, 2013
(2009 chained \$)

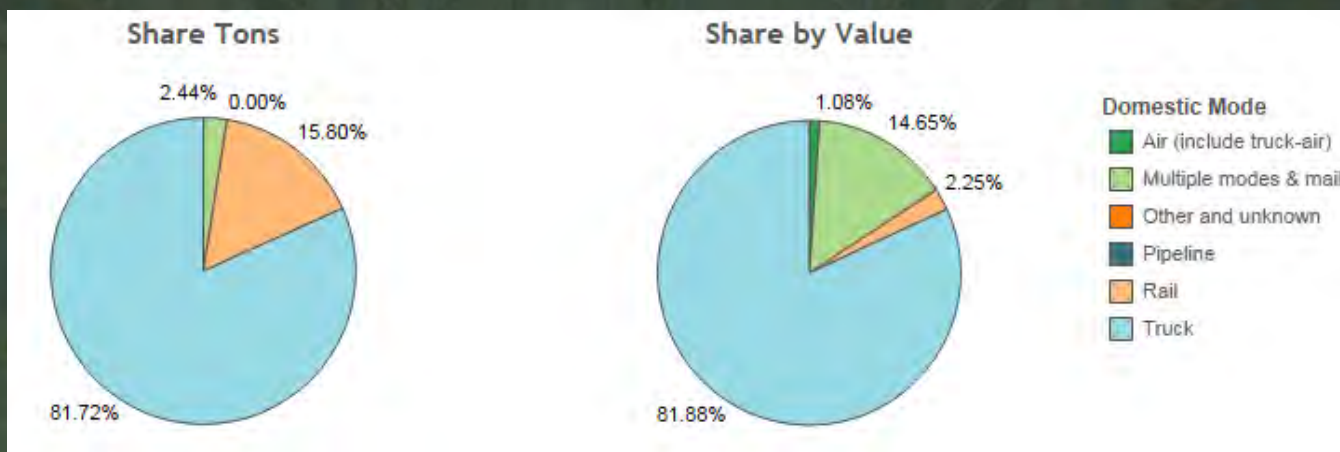
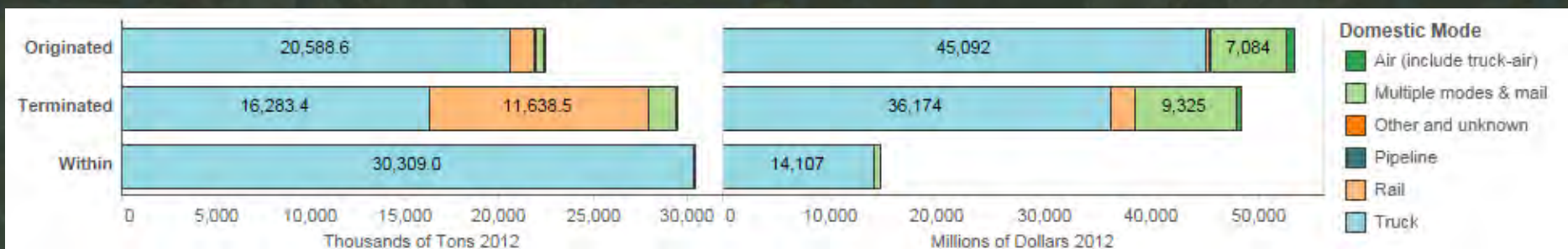




TRIANGLE REGIONAL FREIGHT PLAN

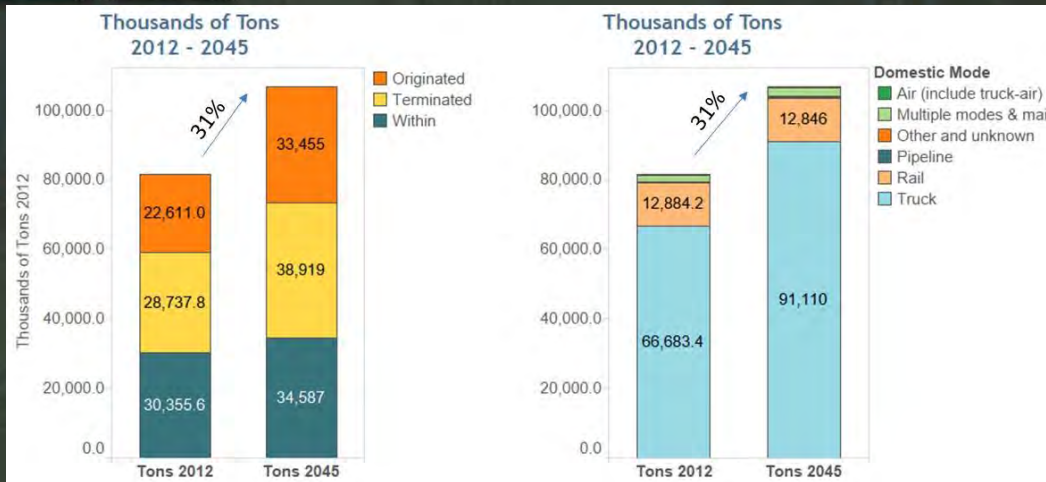
OVERVIEW OF RECENT FREIGHT FLOWS

- The region handled 81.7 million tons of freight worth \$109.3 billion dollars in 2012 – mainly by truck

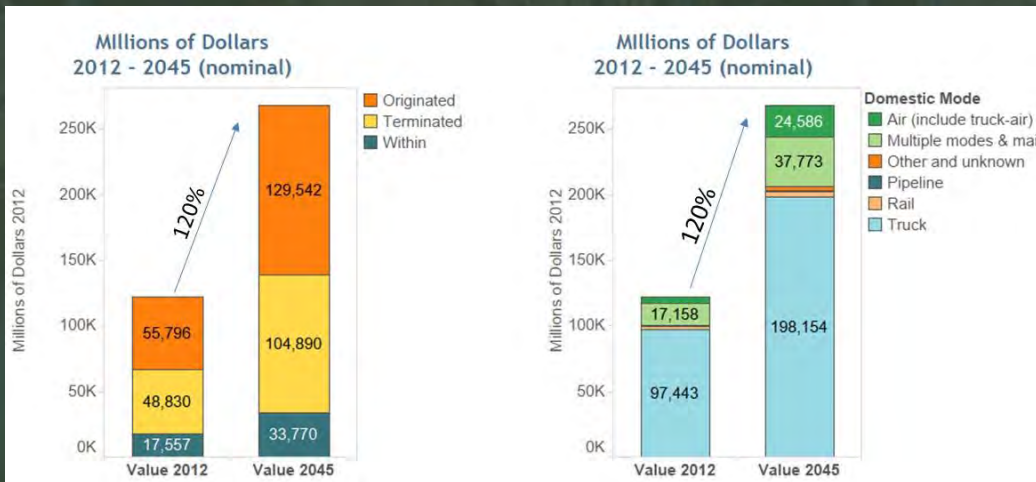


Freight Analysis
Framework 4.0

2045 FORECAST VOLUME



- **Tonnage: 31% growth**
 - 25 million incremental tons
 - Increment is 97% truck, 43% outbound

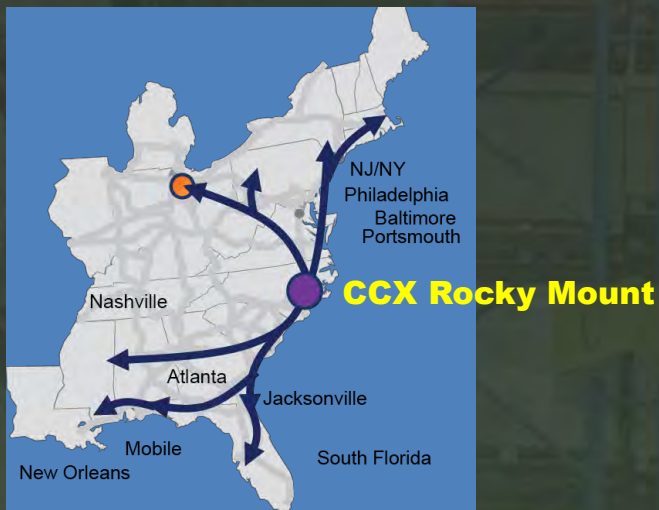


- **Value: 120% growth**
 - 146 billion incremental dollars
 - Increment is 69% truck, 14% air, 51% outbound

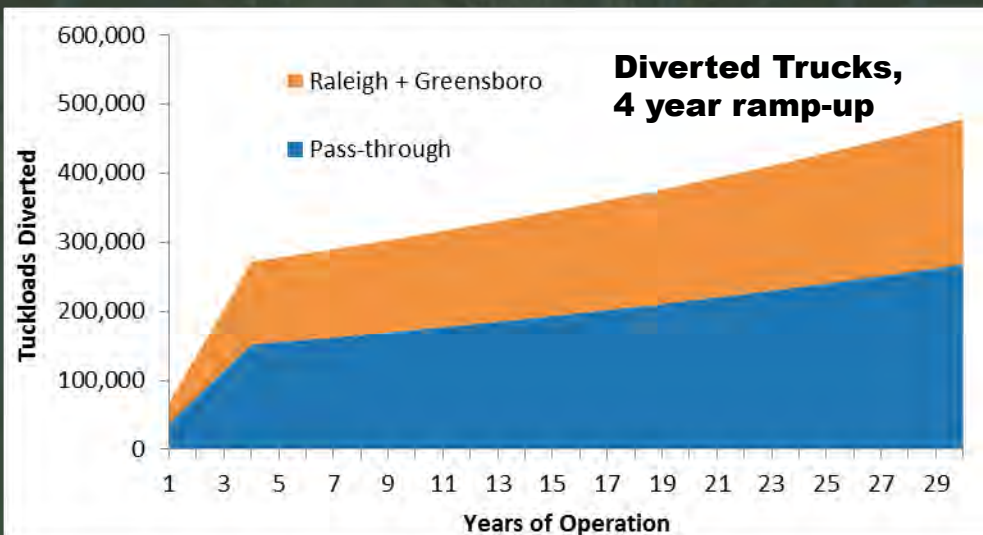
Source: Freight Analysis Framework 4.1, in current dollars

TRIANGLE REGIONAL FREIGHT PLAN

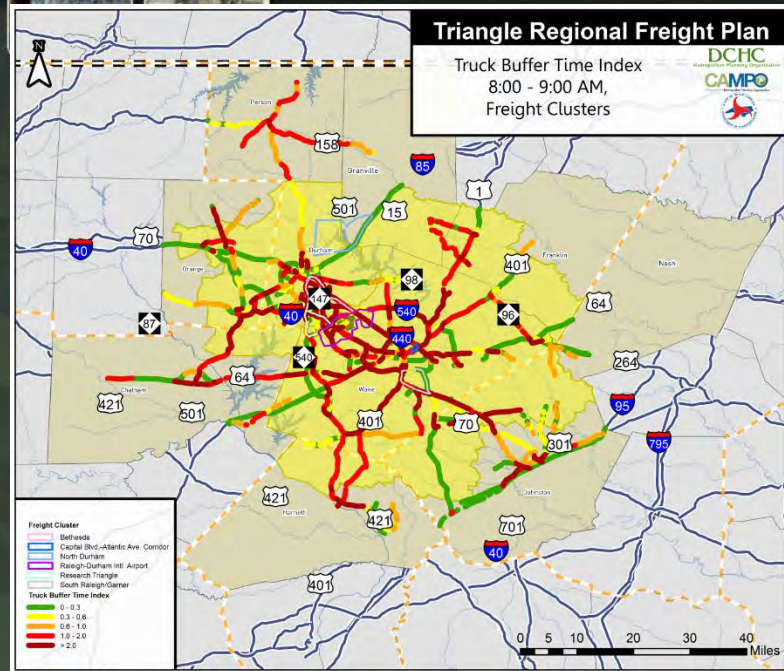
RAIL FUTURE CONDITIONS: New CSX Hub



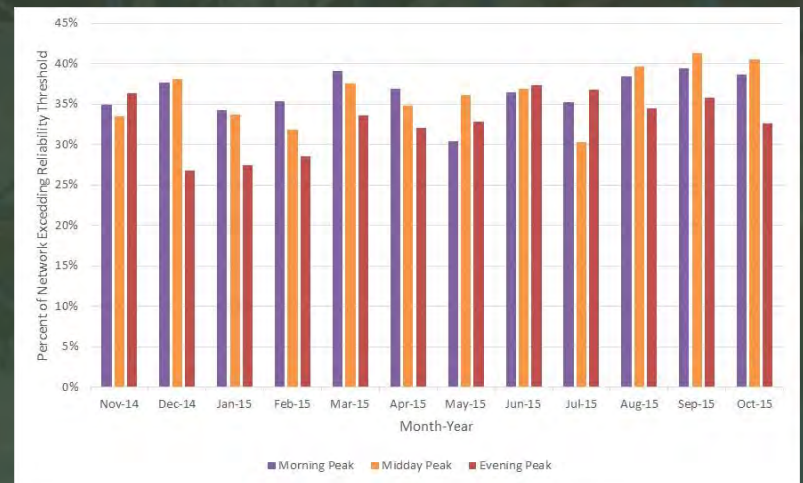
- New CSX Intermodal hub opens 2020 in Rocky Mount
- “CCX” is 2nd hub in new intermodal operating model
- 119K NC trucks/year and 2.7 mil. truck miles diverted to rail from the Triangle/Greensboro region
- Diverts another 150K trucks/year and 13.2 mil. truck miles passing through NC
- ➔ Significant for I-87



HIGHWAY FREIGHT RELIABILITY PERFORMANCE



- **Buffer Time Index measures extra travel time needed to arrive on time with 95% reliability**
 - BTI = 0.5 means a normal 30-minute truck trip needs 50% more time: +15 minutes
 - BTI doubles as a productivity measure



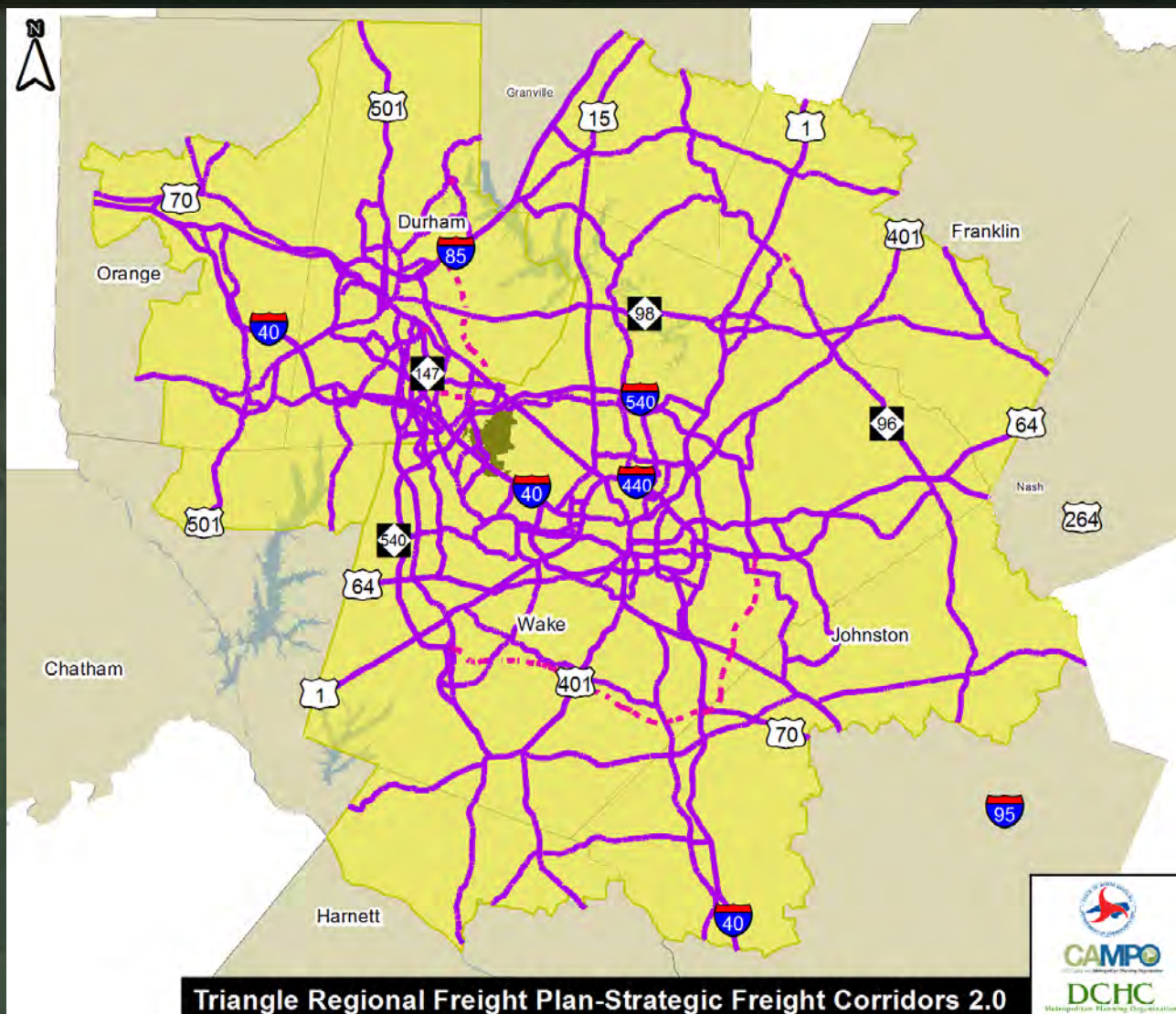
- **Over 30% of the road network is at double time: BTI > 1.0**
 - Key indicator for performance improvement needs

Source: FHWA NPMRDS Truck Data for Triangle NHS

% Network with BTI > 1.0, 11/14 – 10/15

STRATEGIC FREIGHT CORRIDOR SYSTEM

- DRAFT reflecting ongoing review
- Serves 3 purposes:
 - Concentrates limited financial and management resources
 - Anticipates and prepares for future
 - Manages performance affecting Triangle supply chains
- ➔ Key locations for projects



Triangle Regional Freight Plan-Strategic Freight Corridors 2.0





TRIANGLE REGIONAL FREIGHT PLAN

NEXT STEPS

- Conclude definition of freight corridors and key development zones
- Develop recommendations and implementation strategy
- Final Report: March 2017



TRIANGLE TOLLING STUDY

- Lynn Purnell, WSP/PB – Consultant Project Manager

Study Purposes

Develop Triangle tolling/managed lanes strategy

- Demand estimation
- Technology evaluation
- Performance measures to evaluate tolling decisions (impacts on low-income persons)

Identify implementation strategy

- Operational recommendations
- Project prioritization
- Funding possibilities

Develop outreach strategy for public education & input

- One-on-One Stakeholder Interviews
- Business & Civic Organization Presentations
- Project Website
- Social Media

Study Approach



Express Lanes

I-15 San Diego



SR-91 Riverside, CA



Express Lanes



Study Oversight



Executive Board Input/Review

Workshop #1 Jan 2017

- Explore tolling concepts & confirm goals for user fees
- Review Best Practices Research
- Document parameters for evaluation criteria & performance measures

Workshop #2 Sep 2017

- Review Tier 1 screening findings
- Provide guidance on Tier 2 screening attributes

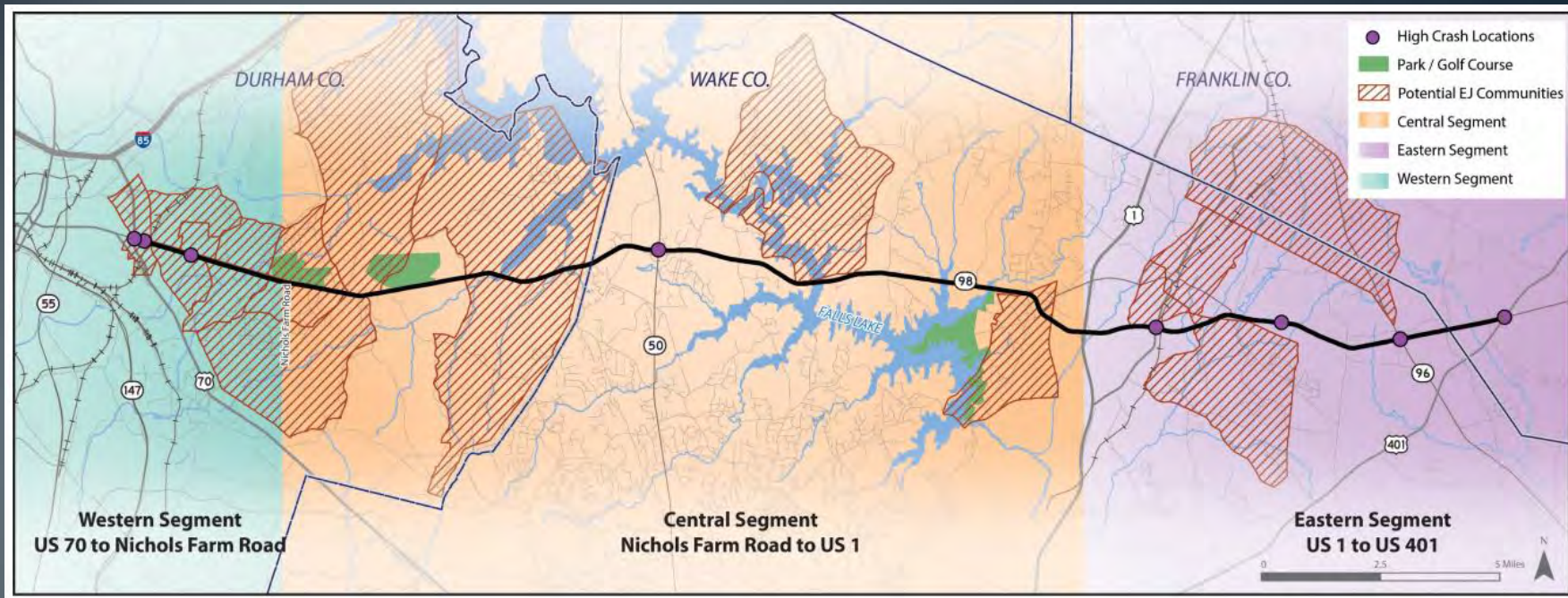
Workshop #3 Jan 2018

- Identify prioritization plan & strategies
- Develop implementation plan (phasing recommendations)
- Determine potential pilot studies

NC 98 Corridor Study

- **Will Letchworth, WSP/PB – Consultant Project Manager**

Study Area



WEST

- Environmental Justice (EJ) populations
- Limited English Proficiency populations
- Transit routes
- Limited access management
- Limited pedestrian facilities
- Multiple high crash locations
- Connection to US 70
- Numerous community resources
- Variety of land uses
- 4-lane roadway

CENTRAL

- High-end subdivision development
- Access to regional recreation areas
- Numerous natural resources
- Crossing of Falls Lake
- Connection to NC 50
- Limited bicycle facilities
- Primarily residential (subdivisions)
- 2-lane roadway, transitions to 4-lane roadway near US 1

EAST

- Rapidly developing areas
- Connection to US 1, US 401, and NC 96
- Numerous community resources
- Multiple high crash locations (recent fatality)
- Farm to market roads east of Wake Forest
- Primarily residential, transitions to rural
- 4-lane roadway, transitions to 2-lane roadway at the eastern end

US 70 to US 401

Study Purpose

- Address for all modes
 - Safety
 - Mobility
 - Operational Deficiencies
- Align project metrics with NCDOT prioritization process
- Engage the community in multiple ways
- Link environmental analysis and transportation planning

Schedule

- Begin November 2016
- End April 2018
- Public Meetings
 - February
 - June
 - October

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- **Other Business**
- **Adjournment**