

2045 MTP – Draft Preferred Option

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Executive Summary

Goals and Objectives

DCHC MPO and Capital Area MPO (CAMPO) have coordinated to create the same Goals, Objectives and Performance Measures. DCHC MPO used an extensive public input process to create Goals and Objectives that are aligned with a set of performance measures and targets. This alignment makes it easier to evaluate how the 2045 MTP investments meet the Goals and Objectives. In the Preferred Option, the MPO has endeavored to the greatest extent possible to make sure that the 2045 MTP transportation projects and budget reflect these Goals and Objectives despite the constraints imposed by the current North Carolina transportation policy, i.e., Strategic Transportation Investments (STI).

The Goals include:

- I. Protect environment and minimize climate change
- II. Connect people
- III. Promote multimodal and affordable travel choices
- IV. Manage congestion & system reliability
- V. Improve infrastructure condition
- VI. Ensure equity and participation
- VII. Promote safety and health
- VIII. Stimulate economic vitality

Land Use

The MPO forecasts socioeconomic data (SE Data), such as dwelling units, population and employment, to the year 2045. The county-level forecasts, shown in the table on the next page, are distributed within the counties using a regional land use modeling process. That modeling process adopted the AIM-High land use scenario which is based on local land use plans and policies, and includes increases in land use density and mix around the future light rail stations that are within the realm of those markets.

Highways

The highway and interchange projects in the Preferred Option were selected based on their ability to promote the MPO's draft Goals and Objectives and the expected availability of funding. A project table and interactive online map depict the highway projects (see Preferred tab on the 2045 MTP Web page: www.bit.ly/DCHC-MTP).

Population				
County	2013	2045	2013-45	% change
Chatham*	41,543	72,110	30,567	74%
Durham	286,210	475,091	188,881	66%
Orange	139,289	194,867	55,578	40%
<i>Total</i>	<i>467,042</i>	<i>742,068</i>	<i>275,026</i>	<i>59%</i>
Employment				
County	2013	2045	2013-45	% change
Chatham*	9,339	17,718	8,379	90%
Durham	192,877	342,910	150,033	78%
Orange	64,212	107,791	43,579	68%
<i>Total</i>	<i>266,428</i>	<i>468,419</i>	<i>201,991</i>	<i>76%</i>

* Only includes portion of Chatham County in the modeling area.

Public Transportation

The Preferred Option adopts the transit services as approved in 2017 in the Durham County Transit Plan and Orange County Transit Plan. The principal transit services include:

- D-O LRT: light rail transit service between UNC Hospitals in Chapel Hill and North Carolina Central University (NCCU) in Durham
- CRT: commuter rail transit service between west Durham and Wake County
- BRT: bus rapid transit from Eubanks Road to Southern Village in Chapel Hill
- Bus: increases in bus service hours
- Capital Projects: a rail station in Hillsborough, additional transit stations and stops, improved amenities and facilities.

In addition, an extension of the D-O LRT to Carrboro and the CRT to Hillsborough are proposed.

Bicycle, Pedestrian and Multiuse Paths

The 2045 MTP does not specifically list the bicycle and pedestrian projects. The local jurisdictions and counties have identified and in many cases prioritized these projects, and have coordinated their interaction in the jurisdiction boundary areas through the DCHC MPO. The 2045 MTP defers to the details and priorities of these local governments plans. The financial plan provides \$225 million to implement these projects; that is \$75 million for each decade in the 2045 MTP.

Financial Plan

The MPO created and reviewed three financial projections in the Alternatives Analysis, including Constrained, Moderate, and, Optimistic (formerly known as Aspirational). The Preferred Option uses the Optimistic financial projection. The financial plan abides by the North Carolina STI (Strategic Transportation Investment) legislation and policy in the first two decades of the plan, i.e., 2025 and 2035. In the third decade, 2045, the financial plan assumes that statewide and national policy would relax restrictions on the use of funding for transit projects, and permit some traditional highway funding to extend the Commuter Rail Transit (CRT) and Light Rail Transit (LRT) lines.

Preferred Option Investments:

<u>Roadways</u>	<u>Total</u>
Roadways (statewide)	2,618
Roadways (regional)	354
Roadways (division)	429
Maintenance (all)	3,525
Total Roadways	6,926
<u>Alternative Transportation</u>	
Bicycle & Pedestrian (division)	270
Transportation Demand Management (division)	38
Intelligent Transportation Systems (statewide)	60
Transportation System Management (all)	120
Total Alternated	488
<u>Transit</u>	
Total Transit	4,760
Total Costs	12,173
(in \$ millions)	

Performance Measures

Performance Measures from the Triangle Regional Model (TRM) provide general, system-wide measures that are not specific to a particular roadway or travel corridor. The Measures are useful for comparing the effectiveness of the Preferred Option with the 2015 Base Year and the 2045 Existing Plus Committed (E+C) no build scenarios. The key Measures and summary are in the following table:

Summary	Performance Measure	2015	2045 E+C	Preferred Option
The population and employment increases through the year 2045 will push a large increase (~50%) in travel demand.	Vehicle Miles Traveled (daily) (millions)	14	21	21
Delay and congestion increases are huge in the no build (E+C) scenario but the Preferred Option does well to mitigate the impacts. However, these measures will not return to those of the present.	Minutes of Delay (daily) (per capita)	4	15	7
	Percent of Congested VMT (peak)	2%	18%	6%
Mode shares vary little among the scenarios.	Drive alone mode share (work trips)	80%	79%	78%
The investment in fixed-guideway and bus transit stimulate a large increase in transit ridership and help increase the transit mode share, which is fairly inflexible.	Transit mode share (work trips)	5%	4%	7%
	Transit ridership	116,484	159,200	288,431