

8. Financial Plan

Federal regulations require the 2040 MTP to be fiscally-constrained. This requirement means that the cost of the roadway, transit and other transportation facilities and services must be covered by state, federal, local, private and other transportation revenues that can be reasonably expected to be available. The Financial Plan provides a comparison of expected revenues and costs from 2011 through 2040 – the 30-year period of this plan.

All financial data in this section is presented in Year 2012 constant dollars, meaning the values indicate what it would cost to build the system if we paid for and built all the projects today. In reality, projects will be built over a 30-year time frame and inflation will affect costs. Appendix 12 provides additional data using the year-of-expenditure value that takes this inflationary effect into consideration.

The 2040 MTP divides projects into three time periods:

- 2011 to 2020;
- 2021 to 2030; and
- 2031 to 2040.

These periods are used not only as a matter of good planning practice that more evenly matches and distributes the total costs and revenues over the 30-year planning period, but also so we can analyze the impacts of our investments against air quality standards that require us to meet certain benchmarks.

8.1 Costs

The two MPOs used the same cost assumptions for the major parts of the plan, including:

- Roadway: The plan used the following hierarchy for highway costs. For example, the TIP cost was used for projects in the TIP, but if none is available (i.e., the project is not yet in the TIP), then the SPOT cost was used, and so on:
 - Draft FY 2014-2020 Transportation Improvement Program (TIP);
 - Strategic Planning Office of Transportation (NCDOT SPOT) data from the prioritization process.
 - 2012 highway cost estimate spreadsheet from NCDOT.
- Bus Transit and Rail Transit: Used two financial models with similar methodologies. One model is the one used by Triangle Transit in the Alternatives Analysis for the regional transit initiative and the other is the model used by Wake County for their county-wide transit plan.
- Travel Demand Management (TDM): Used costs estimates from the regional plan administered by the Triangle J Council of Governments.
- Intelligent Transportation Systems (ITS): Used cost estimates from the Triangle Region Intelligent Transportation Systems – Project Evaluation and Prioritization Report. (March 2010).

8.2 Revenues

Roadway Revenues

The MPOs used the NCDOT statewide financial model for the periods beyond the year 2020. The method assumed that CAMPO and DCHC would receive a portion of the statewide highway revenues commensurate with the MPOs' portion of the statewide population. CAMPO and DCHC received 15% and 5%, respectively, of the statewide revenues; minus any program funding that is not distributed through the Transportation Improvement Program (TIP) such as Powel Bill funding, administration costs and other transfers. The financial model assumes a 3.5% annual discount to adjust for inflation in the transportation sector.

It is important to note that some of the funds included in this statewide model, such as federal Surface Transportation Program (STP) do not have to be used for highways. Some of the funds can be "flexed," or transferred, to programs for other transportation modes such as transit, pedestrian and bicycles.

The method used the draft fiscal year 2014-2020 State Transportation Improvement Program (STIP) for the years 2011 through 2020. The STIP identifies the budgeted state and federal funding source for transportation projects and therefore is the best available source for near term revenue forecasts.

The NCDOT financial model and STIP do not represent all of the available highway revenue. The MPOs expect to have additional funding available from the following sources:

- Toll Revenues – As a general rule, seventy percent of the costs of managed lane projects are assumed to come from toll revenues.
- Local Funding – Local governments often issue bonds to finance specific projects such as roadways, intersection improvements, street paving, bicycle facilities and sidewalks; the revenue to repay these bonds is typically the property or sales tax revenues received by the local government over time.
- Private Funding – Sections of some of the roads in the 2040 MTP, or widenings of existing roads, will be paid for by private developers as they develop adjacent property.

Figure 8.1 identifies the highway revenue sources and calculation assumptions.

Figure 8.1: Roadway Revenue Assumptions

Item	CAMPO Assumptions	DCHC Assumptions
Capital - Federal / State	NCDOT financial model for gas taxes and fees (2010 to 2040). Uses 3.5% inflation factor.	NCDOT revenue model for gas taxes and fees (2010 to 2040). Uses 3.5% inflation factor.
Maintenance -- Federal/State/Other	Equal to 33% of NCDOT financial model revenues.	Equal to 33% of NCDOT financial model revenues.
Mobility Fund	NCDOT financial model for gas taxes and fees (2010 to 2040). Uses 3.5% inflation factor.	NCDOT financial model for gas taxes and fees (2010 to 2040). Uses 3.5% inflation factor.
Toll roadway	70% of managed lane cost expected to be covered through toll revenues.	70% of managed lane cost expected to be covered through toll revenues.
Local (Capital Improvement Program)	Staff forecast.	Staff forecast.
Private	Staff forecast.	Revenue equals full cost of roads in 2040 MTP that are expected to be built by private concerns.

Transit Revenues

The transit financial models discussed in an earlier part of this section are used to forecast transit costs and revenues.

In April 2009, the North Carolina House passed the Congestion Relief and Intermodal 21st Century Transportation Fund (House Bill 148). The legislation permits a local voter referendum to increase the sales tax to raise revenues for transit systems. The half-cent sales tax increase was approved in Durham County and Orange County, and is being considered for a vote in Wake County.

There are several major transit revenue assumptions in *Figure 8.2* that forecast the implementation of new revenue sources permitted by House Bill 148, including the ½ cent sales tax for transit services. One of the most important policy assumptions for the DCHC MPO is that the sales tax growth assumed in the 2040 MTP will exceed that for the Durham County and Orange County transit investment plans. This increase in the sales tax growth assumptions was based on the recommendations of economists consulted by Triangle Transit in the preparation for the New Starts application for light rail transit between Durham and Chapel Hill.

In addition to these major assumptions, there are many detailed bus and rail transit revenue assumptions that are important enough to be identified in this report. *Figure 8.3* and *Figure 8.4* present the detailed assumptions used for calculating the bus transit and rail transit revenues.

Figure 8.2: Major Transit Revenue Assumptions

Item	CAMPO Assumptions	DCHC Assumptions
Mobility Fund	State revenues for rail capital costs will not come from the Mobility Fund.	State revenues for rail capital costs will not come from the Mobility Fund.
Year begin ½ cent sales tax	Wake County: 2016	Durham County: 2013. Orange County: 2013.
Growth in sales tax for County Plans	Wake County: 1.5% in 2013 Wake County: 2.0% in 2014 Wake County: 2.5% in 2015 Wake County: 3.5% for 2016 and beyond	Durham County: 1.5% through 2015. Orange County: 1% through 2015. Durham County: 3.5% for 2016 & beyond. Orange County: 3.6% for 2016 & beyond.
Growth in sales tax for 2040 MTP	Same as above, assuming sales tax comes online in 2016	Same as above, except for... Durham County: 4.65% for 2016 & beyond Orange County: 4.4% for 2016 & beyond
Increased Vehicle Registration Fee	Wake County: currently \$5, increased to \$8, at 2% growth rate.	Durham County: currently \$5, increased to \$8, at 2% growth rate. Orange County: currently \$7, increased to \$10, at 2% growth rate.
New Vehicle Registration Fee	Wake County: new \$7 at 2% growth rate.	Durham County: new \$7 at 2% growth rate.
Rental Car Tax	Wake County: currently 6.5% at 1% growth rate.	Durham County: currently 5% at 4% growth rate. Orange County: currently 5% at 4% growth rate.

Figure 8.3: Detailed Bus Transit Revenue Assumptions

Item	CAMPO Assumptions	DCHC Assumptions
Capital -- Federal & State	For existing services, assumes 50% of total cost is Federal and 25% of total cost is State on CAT and TT. For future services, assumes 40% of total cost is Federal and 25% of total cost is State. Uses 3.5% inflation factor.	Assumes 80% of total cost is Federal and 10% of total cost is State. Uses 3.5% inflation factor.
Operations, Maintenance, Planning -- Federal & State	For existing services, assumes 10% of total cost is Federal and 10% of total cost is State on CAT and TT. Assumes 30% Federal and 5% State on C-Tran. For future services, assumes no federal or state contribution. Uses 2.5% inflation factor.	Average historic ratio of federal/state funding to total operating costs for each transit system; Uses 2.88% inflation factor for DATA, 3% for CHT and OPT, and 4% for Triangle Transit, based on historic figures.
Local	For existing services, assumes local funds will continue to fund 25% of capital costs and 80% of operating costs for CAT and TT, and 100% of capital costs and 65% of operating costs for C-Tran, less any percentage covered by fares. For new services, assumes portion of local sales tax and vehicle registration fees and portion of Triangle Transit revenues (see Figure 8.2.3).	For existing services, assumes that local contribution continues at same ratio of total cost as historic. For new services, assumes portion of local sales tax and vehicle registration fees and portion of Triangle Transit revenues (see Figure 8.6).
Fares	For existing services, historic ratio of fares to total operating costs for each transit system. Uses 2.5% inflation factor. For new services, assumes 15% of operating cost covered by Fares (lower in first 8 years of service, ramping up).	Historic ratio of fares to total operating costs for each transit system; Uses 2.88% inflation factor for DATA, 3% for CHT and OPT, and 4% for Triangle Transit, based on historic figures.
Private Capital – (university systems)	Private systems will cover own costs, thus revenues equal costs.	Private systems will cover own costs, thus revenues equal costs.
Private Operations – (university systems)	Private systems will cover own costs, thus revenues equal costs.	Private systems will cover own costs, thus revenues equal costs.

Figure 8.4: Detailed Rail Transit Revenue Assumptions

Item	CAMPO Assumptions	DCHC Assumptions
Capital -- Federal & State	Federal is 50% and State is 25% of total capital costs	Federal is 50% and State is 25% of total capital costs
Operations & Maintenance -- Federal & State	For commuter rail, State is 10% of total operations costs with no Federal share. For light rail there is no State or Federal operations share.	Federal is 20% and State is 10% of total operations costs
Local	Local sales tax and vehicle registration fees starting in 2016. Sales tax growth of 3.5% in Wake County. Vehicle registration fee growth of 2%. 68% of Triangle Transit revenues used in CAMPO area.	Local sales tax and vehicle registration fees starting in 2013. Sales tax growth of 4.65% in Durham County and 4.4% in Orange County. Vehicle registration fee growth of 2%. 32% of Triangle Transit revenues used in DCHC area.
Fares	Farebox recovery equals 20% of operations costs (less in first 3 years of service)	Farebox recovery equals 20% of operations costs
Bond Proceeds	Issue bonds for revenue to support system construction and capitalization. Transit system will net surplus (bond proceeds minus debt payment) before year 2040	Issue bonds for revenue to support system construction and capitalization. Transit system will net surplus (bond proceeds minus debt payment) before year 2040

8.3 Balancing Costs and Revenues

DCHC MPO – Roadways – \$3.5 Billion Roadway/Bike/Pedestrian Plan

Figure 8.5 shows the roadway related costs and revenues in separate sections and provides subtotals for the three horizon periods. The cost and revenue comparison shows a positive balance of \$67 million. There are relatively small differences in the 2011-2020 and 2021-2030 time periods but these amounts are less than three percent of the subtotals for those periods and therefore will be balanced as projects move through the Transportation Improvement Program process.

Figure 8.5: DCHC Roadway Costs and Revenues

Cost Category (millions \$)	DCHC	TIP/'11 to '20	'21 to '30	'31 to '40
Roadways - Total	\$ 3,203	\$ 420	\$ 1,447	\$ 1,336
Roadways	\$ 2,219	316	997	906
Maintenance	\$ 984	104	450	430
Other - Total	\$ 303	\$ 101	\$ 101	\$ 101
Pedestrian/Bicycle	\$ 180	60	60	60
Transportation Demand Management	\$ 30	10	10	10
Intelligent Transportation Systems	\$ 48	16	16	16
Transportation System Management	\$ 45	15	15	15
Cost Total	\$ 3,506	\$ 521	\$ 1,548	\$ 1,437
Revenue Category (millions \$)	DCHC	TIP/'11 to '20	'21 to '30	'31 to '30
Roadways, Bike & Ped - Total	\$ 3,573	\$ 509	\$ 1,517	\$ 1,547
State and Federal Funding	\$ 2,144	364	920	860
Maintenance	\$ 984	104	450	430
Managed Lanes - toll road (70% of cost)	\$ 244	-	76	168
Private Funding	\$ 96	6	36	54
Local Funding- Highway	\$ 60	20	20	20
Local Funding- Bicycle/Pedestrian	\$ 45	15	15	15
Revenue Total	\$ 3,573	\$ 509	\$ 1,517	\$ 1,547
Difference	\$ 67	\$ (12)	\$ (31)	\$ 110

DCHC MPO – Transit – \$4 Billion Transit Plan

The values shown in Figure 8.6 represent both the costs and revenues for DCHC MPO transit services. The Existing Services section represents a continuation of the current transit services and program funding. The New Services section represents the additional funding made available by the transit sales tax and increased vehicle registration fees enabled by House Bill 148 and the subsequent county sales tax referendums, and the additional support from state and federal sources for improved bus transit services and new rail transit. The New Services are two-thirds of the total transit funding, indicating the MPO's increasing commitment to transit. The values are broken out by Durham County and Orange County services to assist the reader in assessing the impact of the approved transit sales tax referendums in those counties.

Figure 8.6: DCHC Transit Funding

Transit Expenditures (millions \$)	DCHC	% of Total	Durham	Orange
Existing Services	\$ 1,374	\$ 1	\$ 702	\$ 672
<i>Federal</i>	\$ 376	27%	181	195
<i>State</i>	\$ 235	17%	92	143
<i>Local</i>	\$ 628	46%	312	316
<i>Fares</i>	\$ 120	9%	112	8
<i>Other</i>	\$ 15	1%	5	10
New Services (county transit plans)	\$ 2,667		\$ 2,096	\$ 571
Federal				
<i>Federal Capital</i>	\$ 954	36%	746	208
<i>Federal Operations</i>	\$ 86	3%	67	19
State				
<i>State Capital</i>	\$ 449	17%	355	94
<i>State Operations</i>	\$ 80	3%	54	26
Local				
<i>Sales Tax</i>	\$ 700	26%	552	148
<i>Vehicle Registration Fee</i>	\$ 69	3%	51	18
<i>Rental Tax</i>	\$ 47	2%	30	17
<i>Fares</i>	\$ 87	3%	76	11
<i>Bonds</i>	\$ 195	7%	165	30
Total Transit Expenditures	\$ 4,041		\$ 2,798	\$ 1,243

CAMPO – Roadways – \$10 Billion Roadway/Bike/Pedestrian/Other Projects

Figure 8.7 shows the roadway related costs and revenues in separate sections and provides subtotals for the three decades of the plan. The cost and revenue comparison shows fiscal constraint across all horizon years in the plan.

Figure 8.7: CAMPO Transit Funding

Cost Category (millions \$)	CAMPO	2011-20	2021-30	2031-40
Roadways - Total	\$ 8,875	\$ 1,325	\$ 3,580	\$ 3,970
<i>Roadways (w/ancillary Ped/Bike)</i>	\$ 5,720	\$ 800	\$ 2,220	\$ 2,700
<i>Maintenance</i>	\$ 3,155	\$ 525	\$ 1,360	\$ 1,270
Other - Total	\$ 1,135	\$ 95	\$ 890	\$ 150
<i>Pedestrian/Bicycle</i>	\$ 321	\$ 45	\$ 200	\$ 76
<i>System Optimization</i>	\$ 314	\$ 50	\$ 190	\$ 74
<i>(Includes TDM/TSM/CSM/Standalone ITS)</i>				
<i>TIP Carryover</i>	\$ 500	\$ -	\$ 500	\$ -
Cost Total	\$ 10,010	\$ 1,420	\$ 4,470	\$ 4,120

Revenue Category (millions \$)		CAMPO	2011-20	2021-30	2031-40
Roadways & Other - Total		\$ 10,010	\$ 1,420	\$ 4,470	\$ 4,120
	<i>State & Federal Funding</i>	\$ 5,835	\$ 485	\$ 2,760	\$ 2,590
	<i>Maintenance</i>	\$ 3,155	\$ 525	\$ 1,360	\$ 1,270
	<i>Local / Development</i>	\$ 1,020	\$ 410	\$ 350	\$ 260
Revenue Total		\$ 10,010	\$ 1,420	\$ 4,470	\$ 4,120

CAMPO – Transit – \$4 Billion Transit Plan

The values shown in Figure 8.8 represent both the costs and revenues for CAMPO transit services. The Existing Services section represents a continuation of the current transit services and program funding. The New Services section represents the additional funding made available by the transit sales tax and increased vehicle registration fees enabled by House Bill 148 and the subsequent county sales tax referendums, and the additional support from state and federal sources for improved bus transit services and new rail transit. The New Services are 70 percent of the total transit funding. This is consistent with the proportion of additional transit service identified in the 2040 MTP.

Figure 8.8: CAMPO Transit Funding

Transit Expenditures (2012 \$)		CAMPO
Existing Services		\$ 1,341
	<i>Existing Federal</i>	\$ 191
	<i>Existing State</i>	\$ 136
	<i>Existing Local</i>	\$ 770
	<i>Existing Fares/Fees/Other</i>	\$ 156
	<i>Other</i>	\$ 89
New Services (county transit plan+)		\$ 3,255
	<i>Federal Capital</i>	\$ 832
	<i>Federal Operations</i>	\$ 144
	<i>State Capital</i>	\$ 438
	<i>State Operations</i>	\$ 84
	<i>Sales Tax</i>	\$ 1,260
	<i>Vehicle Registration Fee</i>	\$ 163
	<i>Rental Tax</i>	\$ 57
	<i>Fares</i>	\$ 137
	<i>Bonds</i>	\$ 140
Total Transit Expenditures		\$ 4,596