

## 20.0 FINANCIAL ANALYSIS

This chapter discusses the financial strength of the Charlotte Area Transit System (CATS) and CATS' ability to undertake a second major capital investment and operate and maintain its existing transit services. The analysis compares the financial implications of the No-Build Alternative, Light Rail Alternative and Light Rail Alternative – Sugar Creek Design Option. The general assumptions are the same for all three alternatives.

CATS *2030 Transit Corridor System Plan* calls for transit development in five corridors originating in Center City Charlotte and carrying passengers to every corner of Mecklenburg County. CATS implemented North Carolina's first, very successful light rail operation, the LYNX Blue Line, in November 2007. The \$462.7 million, 9.6-mile light rail line was the result of a funding partnership between the Federal Transit Administration (FTA), the State of North Carolina, and the local voter approved ½-percent sales and use tax.

CATS' financial capacity rests on the demonstrated strength of the voter approved ½-percent sales and use tax, the City of Charlotte's AAA investment bond rating and the very strong CATS Financial Policies, which require an annual year-end \$100 million fund balance and a 3.0x gross debt coverage ratio. CATS gross debt coverage ratio is utilized to ensure CATS debt service obligations are not greater than 1/3 of annual transit sales tax revenue in a given year.

The State of North Carolina is a major funding partner for CATS. The North Carolina Department of Transportation (NCDOT) is one of North Carolina's largest state government agencies with responsibility for highways, rail, aviation, ferries, bicycle and pedestrian facilities and public transit. NCDOT operates annually on a \$3.9 billion budget funded by both state and federal sources and employs more than 14,000 employees. NCDOT is led by a Transportation Secretary and is governed by the North Carolina Board of Transportation. The Board is designated as the agency of the State of North Carolina responsible for administering all programs relating to public transportation. NCDOT's strong support of CATS' rapid transit projects is demonstrated in State Statute 136-44.20, which authorizes the NCDOT Board of Transportation and the Secretary to enter into State Full Funding Grant Agreements (FFGA) to provide State matching funds for "new start" fixed guideway projects upon completion and approval of projects into preliminary engineering and in anticipation of federal funding. For Charlotte's South Corridor Light Rail Project, NCDOT executed a State FFGA with the City of Charlotte for a 25 percent share of the project cost two years prior to the execution of the Federal FFGA. A further measure of the State's commitment to public transit is North Carolina House Bill 1005, which was signed into law in 2009 and provides financial support for rail projects that do not qualify for Federal funding.

### 20.1 LYNX BLE Northeast Corridor Light Rail Project Capital Costs

The Light Rail Alternative is estimated to cost \$1,205.5 million in year-of-expenditure dollars, and the Light Rail Alternative Sugar Creek Design option is assumed to cost \$1,277.0 million in year-of-expenditure dollars based on revised 15 percent design cost estimates (July 2009), with the addition of the estimated construction cost for the Vehicle Light Maintenance Facility. Table 20-1 provides a cost breakdown by standard cost category as required by FTA and includes soft costs (such as preliminary engineering, final design project management for design and construction) and set asides for financing costs and allocated and unallocated contingencies. A 3.25 percent annual capital cost escalation rate is assumed. Capital expenditures begin with Preliminary Engineering in FY2008 and continue through the end of the project in FY2022.

**Table 20-1**  
**Capital Cost Estimate (Thousands of Year of Expenditure Dollars)**

Description	Light Rail Alternative	Light Rail Alternative - Sugar Creek Design Option
Guideway and Track Elements	\$208,099	\$213,464
Stations, Stops, Terminals, Intermodal	\$53,152	\$54,061
Support Facilities: Yards, Shops, Admin Buildings	\$54,137	\$55,596
Sitework and Special Conditions	\$148,948	\$158,920
Systems	\$118,699	\$120,581
Right-of-way, Land, Existing Improvements	\$124,099	\$171,531
Vehicles	\$159,851	\$159,851
Professional Services	\$188,951	\$191,736
Unallocated Contingency	\$107,039	\$107,831
Finance Charges	\$42,494	\$43,383
<b>Total Project Capital Cost</b>	<b>\$1,205,469</b>	<b>\$1,276,954</b>

**20.2 Sources of Funds for General Capital Funds**

The CATS long-range transportation plan includes two types of capital projects. The first category involves general capital investment. Examples of general capital projects are: replacing old buses and vanpool vehicles and keeping bus garages and shelters in a state of good repair. General capital projects are often funded by federal grants CATS receives each year on a formula basis, such as Section 5307 Urban Area Formula Assistance. These types of federal grants provide 80 percent of the funding for a project and the other 20 percent may come from CATS’ sales tax revenues and grants from the State of North Carolina. In some cases, such as building new maintenance garages, the financial analysis assumes that CATS will use securities known as Certificates of Participation (COPS), to spread the payments out over a 10 to 30-year period depending on the life of the asset.

As discussed in Section 20.0, NCDOT funded 25 percent of the cost of the LYNX Blue Line (South Corridor) light rail project and is committed to funding 50 percent of the local share of the Northeast Corridor capital costs. For Federal grant programs, other than Section 5309 New Starts, a local match is calculated based on 80 percent Federal and 20 percent local allocation. On most federal grant programs, NCDOT continues to fund half of the local 20 percent local share, i.e. 10 percent of the Project cost.

**20.2.1 Federal Sources**

FTA Section 5307 Federal Formula Funds: The Federal Formula Funds Program (49 U.S.C. 5307) makes federal resources available to urbanized areas for transit capital projects and for transportation planning. Federal Formula funds are apportioned annually on the basis of legislative formulas. For areas such as Charlotte with a population of 200,000 and more, the formula is based on a combination of bus revenue vehicle miles, passenger miles, fixed guideway revenue miles, fixed guideway route miles, population and population density.

FTA Section 5309 Discretionary: In addition to providing funds for new fixed guideway systems (New Starts), the federal transit capital investment program (49 U.S.C. 5309) provides capital assistance for modernization of existing rail systems and new and replacement buses and facilities.

FTA 5309 Fixed Guideway Modernization Program: A formula program that allocates funds to meet the capital replacement needs of rail systems and dedicated busways. The statutory formula for allocating funds contains seven tiers. Funding under the last three tiers (5, 6, 7) applicable to CATS is apportioned based on the latest available route miles and revenue vehicles miles on segments at least seven years old as reported to the National Transit Database (NTD). New facilities must be in operation for seven years to qualify for this program.

Congestion Mitigation Air Quality (CMAQ) Program: Jointly administered by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), the CMAQ program was reauthorized in 2005 under SAFETEA-LU. The CMAQ program provides over \$8.6 billion in funds to State DOTs, MPOs and transit agencies to invest in projects that reduce air pollutants emitted from transportation-related sources. The formula for distribution of funds, which considers an area's population by county and the severity of its ozone and carbon monoxide and ozone non-attainment/maintenance areas, is continued.

American Recovery and Reinvestment Act (ARRA), 2009: The System Capital Funding Plan includes \$20.8 million awarded to CATS in FY2010 from the Transit Capital Assistance formula of ARRA funds. This will be expended on a rehabilitation of the 28-year-old CATS Davidson Street Bus Facility.

Department of Homeland Security: CATS has received Department of Homeland Security Grant Funds since FY2007 and anticipates receiving them throughout this plan. As these grant funds are 100% funded by the Department of Homeland Security and require no local match, the corresponding Department of Homeland Security expenditures offset the anticipated revenues.

Section 5339 Planning: In FY2010, CATS received \$237,500 for completion of Alternatives Analysis on the Charlotte Streetcar Project.

### 20.2.2 State Sources

State Matching Funds: The State of North Carolina typically provides one-half of the local matching share required for Federal Transit Administration grants, such as Section 5307 Urban Area Formula Assistance and Section 5309 Bus Discretionary grants. Federal Highway Program grants applied to mass transit purposes may also be matched by the State of North Carolina.

State Technology Grants and Other: The State of North Carolina makes allocations to public transit agencies on a project-by-project basis for introduction of new technologies to improve transit operations.

### 20.2.3 Other Sources

Charlotte Area Transit System (CATS): CATS share of local matches would come from the ½-percent sales and use tax dedicated to undertaking future transit improvements and operating the current and expanded transit system. Voters in Mecklenburg County approved the sales tax in November 1998 and it has been collected since April 1999. By statute, revenues from the sales and use tax can only be applied to expenditures for planning, construction and operation of a county-wide public transportation system.

## 20.3 Sources of Funds for Corridor Capital Projects

The second type of CATS capital project involves corridor investments. This is the funding mechanism used to fund the LYNX Blue Line (South Corridor) and is anticipated for the LYNX BLE. Funding for the LYNX BLE project is planned to be funded 50 percent by federal grants, 25 percent by state grants and 25 percent by CATS from sales tax revenues.

The planned contributions for the LYNX BLE from each of the funding partners on an annual basis are shown in Table 20-2 for the Light Rail Alternative and in Table 20-3 for the Light Rail Alternative – Sugar Creek Design Option.

### 20.3.1 Federal Sources

FTA Section 5309 New Starts Program: The financial plan includes estimated funding for the Northeast Corridor from the New Starts program. FTA New Starts grants are expected to fund 50 percent of corridor capital investments. The FTA authorized the Northeast Corridor Light Rail Project (LYNX BLE) to advance into Preliminary Engineering in November 2007. The proposed project has received federal allocations from the New Starts program of \$4.65 million in Federal Fiscal Year (FFY) 2008 and \$20.3 million in FFY2009. The House and Senate have approved a \$14.7 million allocation as part of the Omnibus appropriations bill for FFY2010.

**Table 20-2**  
**Light Rail Alternative Scenario**  
**(\$-millions)**

Light Rail Alternative	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Total Project Cost in YOE Dollars	11.3	12.9	12.9	17.7	29.0	54.6	70.1	85.9	227.9	265.4	194.5	127.0	14.1	75.2	6.9	1205.5
Federal 5309 New Starts	0.0	2.0	23.2	14.7	30.0	30.0	0.0	47.4	100.0	100.0	100.0	100.0	14.4	37.6	3.5	602.7
State New Start Match – 25%	0.0	1.0	11.6	7.4	15.0	15.0	0.0	23.7	57.0	66.3	48.6	31.8	3.5	18.8	1.7	301.4
CATS 25%	11.3	10.0	0.0	0.0	0.0	0.0	0.0	52.4	70.9	99.0	37.3	0	0	18.8	1.7	301.4
Total Project Cost (10-100)	11.3	12.9	34.8	22.1	45.0	45.0	0.0	123.4	227.9	265.4	185.9	131.8	18.0	75.2	6.9	1205.5

**Table 20-3**  
**Light Rail Alternative – Sugar Creek Design Option Scenario**  
**(\$-millions)**

Light Rail Alternative	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Total Project Cost in YOE Dollars	11.5	13.1	14.8	23.1	33.0	68.2	70.4	56.4	161.2	296.5	275.3	169.3	8.0	68.8	7.4	1277.0
Federal 5309 New Starts	0.0	2.0	23.2	14.7	30.0	30.0	0.0	45.4	80.6	100.0	100.0	100.0	74.5	34.4	3.7	638.5
State New Start Match – 25%	0.0	1.0	11.6	7.4	15.0	15.0	0.0	22.7	40.3	74.1	68.8	42.3	2.0	17.2	1.8	319.2
CATS 25%	11.5	10.2	0.0	0.0	0.0	0.0	0.0	51.0	40.3	122.3	37.9	44.2	0.0	0.0	1.8	319.2
Total Project Cost (10-100)	11.5	13.1	34.8	22.1	45.0	45.0	0.0	119.0	161.2	296.5	206.8	186.5	76.5	51.6	7.4	1277.0

**20.3.2 State Sources**

North Carolina Department of Transportation: CATS is currently in discussions with NCDOT to replicate the funding agreement of the LYNX Blue Line (South Corridor) light rail project, in which the state participated in 25 percent of the total project costs.

**20.3.3 Other Sources**

Charlotte Area Transit System (CATS): Twenty-five percent of the proposed project’s total capital cost would be funded using revenues from the CATS ½-percent sales and use tax dedicated to undertaking future transit improvements and operating the current and expanded system. Voters in Mecklenburg County approved the sales tax in November 1998 and it has been collected since April 1999. By statute, revenues from the sales-and-use tax can only be applied to expenditures for planning, construction and operation of a county-wide public transportation system. The sales tax receipts in CATS capital revenues are the funds remaining after operating expenses are paid.

**20.4 Capital Investment Program**

The alternatives analyzed under this Draft Environmental Impact Statement (EIS) are described in detail in Chapter 2.0: Alternatives Considered and are summarized as follows:

- The No-Build Alternative assumes a fleet expansion to 372 buses in 2030 and the continued operation of the current LYNX Blue Line (South Corridor) light rail service. This compares to a current fleet of 324 in FY2010.
- The Light Rail Alternative and the Light Rail Alternative – Sugar Creek Design Option are both being considered for the Northeast Corridor. In addition to the light rail line, CATS would improve bus service to the light rail stations, resulting in a bus fleet of 383 vehicles in FY2030.

Table 20-4 demonstrates characteristics of the alternatives.

**Table 20-4  
2030 Characteristics of Financial Scenarios**

Characteristics	No-Build Alternative	Light Rail Alternative	Light Rail Alternative – Sugar Creek Design Option
Peak Buses – 2030	310	319	319
Bus Fleet – 2030	372	383	383
Annual Revenue Bus Hours	991,712	1,027,178	1,027,178
Annual Unlinked Trips (Bus)	37,697,550	40,883,056	40,883,056
Annual Unlinked Trips - Rail	7,074,900	14,241,000	14,241,000

The funding sources and expenditure categories for the entire CATS capital program under the Light Rail Alternative and the Light Rail Alternative – Sugar Creek Design Option are shown in Tables 20-5 and 20-6.

**Table 20-5  
CATS Sources of Capital Funding Expenditures – Light Rail Alternative**

<b>Capital Revenues</b>	<b>2010-2030 Total</b>
<b>Non-Federal Capital Funds</b>	
Balance from Operations	\$694,042
Net Debt Proceeds	\$195,000
Investment and Other Capital Income	\$42,827
<b>CATS Capital Funds</b>	<b>\$931,869</b>
State Match for Section 5307 - Formula Funds	\$66,729
<b>State Match for Proposed New Start - Northeast Corridor</b>	<b>\$300,387</b>
State Match for Section 5309 - Bus and CMAQ	\$1,900
State Match for Section 5309 - Fixed Guideway Modernization	\$7,413
State Technology Grants & Other	\$4,190
<b>State Capital Funds</b>	<b>\$380,619</b>
<b>Total Non-Federal Sources</b>	<b>\$1,312,488</b>
<b>Federal Funds</b>	
Section 5307 - Formula Funds	\$546,465
Section 5339 - Planning	\$237
<b>Proposed New Start - Northeast Corridor</b>	<b>\$600,775</b>
Section 5309 - Fixed Guideway Modernization	\$59,362
Section 5309 - Bus, CMAQ	\$34,704
ARRA Grant, Homeland Security Grant and Other	\$56,850
<b>Total Federal Funds</b>	<b>\$1,298,392</b>
<b>Total Capital Revenues</b>	<b>\$2,610,880</b>
<b>Capital Expenditures</b>	
Bus and Bus Amenities, Rail Facilities and Equipment, and Other Capital	\$769,035
State of Good Repair	\$54,613
Rapid Transit Program	
<b>Proposed New Start - Northeast Corridor</b>	<b>\$1,185,975</b>
Other Corridors	\$21,071
<b>Total Capital Expenditures</b>	<b>\$2,030,695</b>
<b>Total Debt Service Expenditures</b>	<b>\$422,637</b>
<b>Balance, Capital Program</b>	<b>\$157,548</b>

**Table 20-6  
CATS Sources of Capital Funding and Expenditures  
Light Rail Alternative – Sugar Creek Design Option  
Year-of-Expenditure Dollars (thousands)**

<b>Capital Revenues</b>	<b>2010-2030 Total</b>
<b>Non-Federal Capital Funds</b>	
Balance from Operations	\$690,143
Net Debt Proceeds	\$210,000
Investment and Other Capital Income	\$46,916
<b>CATS Capital Funds</b>	<b>\$947,059</b>
State Match for Section 5307 - Formula Funds	\$66,729
<b>State Match for Proposed New Start - Northeast Corridor</b>	<b>\$318,259</b>
State Match for Section 5309 - Bus and CMAQ	\$1,900
State Match for Section 5309 - Fixed Guideway Modernization	\$7,413
State Technology Grants and Other	\$4,190
<b>State Capital Funds</b>	<b>\$398,491</b>
<b>Total Non-Federal Sources</b>	<b>\$1,345,549</b>
<b>Federal Funds</b>	
Section 5307 - Formula Funds	\$546,465
Section 5339 - Planning	\$237
<b>Proposed New Start - Northeast Corridor</b>	<b>\$636,517</b>
Section 5309 - Fixed Guideway Modernization	\$59,361
Section 5309 - Bus, CMAQ	\$34,704
ARRA Grant, Homeland Security Grant and Other	\$56,850
<b>Total Federal Funds</b>	<b>\$1,334,133</b>
<b>Total Capital Revenues</b>	<b>\$2,679,682</b>
<b>Capital Expenditures</b>	
Bus and Bus Amenities, Rail Facilities and Equipment, and Other Capital	\$757,084
State of Good Repair	\$54,613
Rapid Transit Program	
<b>Proposed New Start - Northeast Corridor</b>	<b>\$1,257,460</b>
Other Corridors	\$21,071
<b>Total Capital Expenditures</b>	<b>\$2,090,228</b>
<b>Total Debt Service Expenditures</b>	<b>\$436,310</b>
<b>Balance, Capital Program</b>	<b>\$153,144</b>

## 20.5 Operating Program

### 20.5.1 Operating Income

CATS operating program is predominantly funded from two key sources: farebox and the dedicated ½-percent sales and use tax. Additional sources of operating income include: service reimbursements; interest income; maintenance of effort payments by the City of Charlotte, Mecklenburg County and the Town of Huntersville; State maintenance assistance; and other miscellaneous sources.

½-Percent Sales and Use Tax: Effective August 21, 1997, Subchapter VIII of Chapter 105 of the North Carolina General Statutes was amended to add a new Article 43, Local Government Public Transportation Sales and Use Tax Act, which authorized the collection of a ½-percent sales and use tax in Mecklenburg County, with proceeds from the new tax to be used exclusively for public transportation. On November 3, 1998, Mecklenburg County voters approved the measure in a referendum to support the implementation of the *2025 Integrated Transit/Land Use Plan*, and the Mecklenburg Board of County Commissioners passed a resolution on February 16, 1999 levying the tax effective April 1, 1999. From FY2003 to FY2008, the ½-percent sales and use tax has averaged an annual growth rate of 7.3 percent and generated between 55-60 percent of CATS total operating income, and is projected to continue doing so throughout the analysis period. The FY2008-10 recession in the national economy significantly impacted income from the ½-percent sales and use tax in FY2009. It is too early to determine the long-term impact of the FY2008-10 recession. CATS has established projected sales tax growth in concurrence with prior economic recessions and recoveries. In terms of annual average growth rates, CATS projects a 3.5 percent growth in FY2011, 5.5 percent in FY2012, and 7.5 percent in FY2013-2015, followed by a long term growth rate of 5.5 percent, as shown in Table 20-7.

Farebox: Farebox revenue totaled approximately \$21.7 million in FY2009 and is forecast to grow to \$80.1 million in FY2030. Farebox revenue estimates are the product of ridership estimates and average fare assumptions. The Operating Plan breaks the farebox revenue into two sources, i.e. existing system (which includes fares from the LYNX Blue Line light rail service in the South Corridor) and proposed fares from the LYNX BLE.

Maintenance of Effort: Annual payment from the City of Charlotte, Mecklenburg County, and the Town of Huntersville in the amount of \$18.6 million (with no escalation). This payment is required by statute and is a condition for CATS to receive its sales and use tax revenue. It has remained constant at the \$18.6 million level since FY1999.

Service Reimbursements: These are fees collected pursuant to local transportation partnership CATS has with various local entities, including the UNC Charlotte campus circulator and the Wachovia CIC shuttle. Regional Express Services are also included in the service reimbursement revenues. Service reimbursements amount to approximately \$1.4 million in FY2010-11, and are projected to escalate at 4.0 percent per annum thereafter.

Interest Income: The financial analysis assumes a long-term interest rate on fund balances of approximately 3.0 percent.

State Maintenance Assistance Program (SMAP): NCDOT provides operating assistance to transit properties in North Carolina on an annual basis. NCDOT's annual appropriation for SMAP to its urban areas has remained constant over the past few years. From FY2008-2010, CATS has received approximately 38 percent of NCDOT's SMAP appropriation. It is projected that this income will escalate at 4.0 percent per annum from FY2011. The anticipated escalation is based on CATS working with NCDOT to modify the current SMAP formula, which does not currently include light rail in the calculation.



Table 20-7  
2000 - 2020 CATS Sales Tax Revenues (millions)

	ACT 2000	ACT 2001	ACT 2002	ACT 2003	ACT 2004	ACT 2005	ACT 2006	ACT 2007	ACT 2008	ACT 2009	BUD 2010
Sales Tax	\$53.1	\$54.9	\$51.1	\$50.1	\$53.9	\$59.0	\$65.6	\$70.4	\$71.1	\$61.7	\$62.7
Growth Rate		3.4%	-7.0%	-1.9%	7.6%	9.6%	11.1%	7.3%	1.0%	-13.2%	1.6%
	PROJ 2011	PROJ 2012	PROJ 2013	PROJ 2014	PROJ 2015	PROJ 2016	PROJ 2017	PROJ 2018	PROJ 2019	PROJ 2020	
Sales Tax	\$64.9	\$68.5	\$73.6	\$79.1	\$85.1	\$89.8	\$94.7	\$99.9	\$105.4	\$111.2	
Growth Rate	3.5%	5.5%	7.5%	7.5%	7.5%	5.5%	5.5%	5.5%	5.5%	5.5%	

20.5.2 Operating Expense

In the Light Rail Alternative and the Light Rail Alternative – Sugar Creek Design Option about 60 percent of CATS future operating expenses would be for bus services on existing and expanded routes. The LYNX Blue Line (South Corridor) light rail service represents approximately 10 percent of CATS’ total operating expenses from 2010 – 2030. Vanpools and special transportation services for disabled and human services recipients (Paratransit Services) are projected to require over \$326 million or over 8 percent of all expenses. More than 4 percent of CATS’ operating expenses would be for administrative costs. The LYNX BLE (Northeast Corridor) light rail operations are anticipated to consume approximately 5 percent of all operating expenses. The remaining 11 percent of operating expense would be for Direct Support services such as Transit Security and Facilities Maintenance. A summary is depicted in Tables 20-8 and 20-9.

Table 20-8  
2010 – 2030 CATS Operating Revenue and Expense  
Light Rail Alternative  
Year-of-Expenditure Dollars (thousands)

Operating Revenue	2010-2030	
Existing System Fares	\$933,532	20.9%
Proposed Northeast Corridor Fares	\$105,673	2.4%
Service Reimbursements	\$44,693	1.0%
Interest Income	\$75,358	1.7%
Maintenance of Effort	\$390,587	8.7%
State Operating Assistance	\$435,931	9.8%
Other	\$38,772	0.9%
½ -percent Sales Tax	\$2,445,181	54.6%
<b>Operating Revenues</b>	<b>\$4,469,728</b>	<b>100.0%</b>
Operating Expense	2010-2030	
Bus Direct O & M	\$2,337,420	60.3%
Other Direct Services	\$450,845	11.6%
Paratransit and Vanpool	\$326,784	8.4%
South Corridor	\$386,059	10.0%
Northeast Corridor	\$207,892	5.4%
Administrative Overhead	\$168,209	4.3%
<b>Operating Expenses</b>	<b>\$3,877,209</b>	<b>100.0%</b>
<b>Operating Balance</b>	<b>\$592,519</b>	

**Table 20-9**  
**2010 – 2030 CATS Operating Revenue and Expense**  
**Light Rail Alternative – Sugar Creek Design Option**  
**Year-of-Expenditure Dollars (thousands)**

<b>Operating Revenue</b>	<b>2010-2030</b>	
Existing System Fares	\$933,532	20.9%
Proposed Northeast Corridor Fares	\$105,673	2.4%
Service Reimbursements	\$44,693	1.0%
Interest Income	\$71,459	1.6%
Maintenance of Effort	\$390,587	8.7%
State Operating Assistance	\$435,931	9.8%
Other	\$38,772	0.9%
Half-Cent Sales Tax	\$2,445,181	54.8%
<b>Operating Revenues</b>	<b>\$4,465,829</b>	<b>100.0%</b>
<b>Operating Expense</b>	<b>2010-2030</b>	
Bus Direct O & M	\$2,337,419	60.3%
Other Direct Services	\$450,845	11.6%
Paratransit and Vanpool	\$326,784	8.4%
South Corridor	\$386,059	10.0%
Northeast Corridor	\$207,892	5.4%
Aministrative Overhead	\$168,209	4.3%
<b>Operating Expenses</b>	<b>\$3,877,208</b>	<b>100.0%</b>
<b>Operating Balance</b>	<b>\$588,620</b>	

## 20.6 Financial Projections

Table 20-10 summarizes the results of the three financial scenarios corresponding to the alternatives analyzed in this Draft EIS by adding together CATS capital and operating revenues and expenses. Year-by-year cash flow calculations were completed for each alternative to support these findings. CATS has the fiscal capacity to build the Light Rail Alternative or its design option in the Northeast Corridor and operate its existing bus and light rail services with an ending balance in 2030 of approximately \$158 million for the Light Rail Alternative and \$153 million for the Light Rail Alternative – Sugar Creek Design Option. The state and local funding sources to accomplish this program are already committed in the form of the CATS sales and use tax and creation of the State Transit Trust Fund.

**Table 20-10**  
**2010 – 2030 Capital and Operating Summary Forecast**  
**Year-of-Expenditure Dollars (thousands)**

	2010-2030	2010-2030	2010-2030
	Light Rail Alternative	Light Rail Alternative – Sugar Creek Design Option	No-Build
<b>Opening Balance</b>	<b>\$101,523</b>	<b>\$101,523</b>	<b>\$101,523</b>
<b>Operating Revenue</b>			
Existing System Fares	\$933,532	\$933,532	\$918,004
Proposed Northeast Corridor Fares	\$105,673	\$105,673	\$0
Service Reimbursements	\$44,693	\$44,693	\$44,693
Interest Income	\$75,358	\$71,459	\$152,042
Maintenance of Effort	\$390,587	\$390,587	\$390,587
State Operating Assistance	\$435,931	\$435,931	\$435,931
Other	\$38,772	\$38,772	\$38,772
Half-Cent Sales Tax	\$2,445,181	\$2,445,181	\$2,445,181
<b>Operating Revenues</b>	<b>\$4,469,728</b>	<b>\$4,465,829</b>	<b>\$4,425,210</b>
<b>Operating Expense</b>			
Bus Direct O & M	\$2,337,420	\$2,337,419	\$2,337,420
Other Direct Services	\$450,845	\$450,845	\$438,843
Paratransit and Vanpool	\$326,784	\$326,784	\$326,784
South Corridor	\$386,059	\$386,059	\$386,059
Northeast Corridor	\$207,892	\$207,892	\$0
Aministrative Overhead	\$168,209	\$168,209	\$168,209
<b>Operating Expenses</b>	<b>\$3,877,209</b>	<b>\$3,877,208</b>	<b>\$3,657,315</b>
<b>Operating Balance</b>	<b>\$592,519</b>	<b>\$588,620</b>	<b>\$767,895</b>
<b>Capital Revenues</b>			
Federal Grants	\$1,298,391	\$1,334,134	\$735,507
State Grants	\$380,619	\$398,491	\$99,177
Other Capital Funds	\$237,827	\$256,916	\$333
CATS Operating Balance	\$592,519	\$588,620	\$767,895
<b>Capital Revenues</b>	<b>\$2,509,356</b>	<b>\$2,578,160</b>	<b>\$1,602,912</b>
<b>Capital Expense</b>			
Debt Service	\$422,637	\$436,310	\$255,320
Other Capital Outlays	\$823,648	\$811,697	\$797,608
Rapid Transit Expansion	\$1,207,046	\$1,278,531	\$81,277
<b>Capital Expense</b>	<b>\$2,453,331</b>	<b>\$2,526,539</b>	<b>\$1,134,205</b>
<b>Balance</b>	<b>\$157,548</b>	<b>\$153,144</b>	<b>\$570,230</b>

## 20.7 Forecast Risks

Long-range financial forecasts hold risks that revenue projections will fall short or expenses will grow faster than expected. If costs should grow, or federal funding is delayed, CATS has the financial capacity to borrow against its future revenues. Additional debt capacity exists if necessary. Spreading out large capital construction costs, like using a mortgage to finance buying a home, gives CATS flexibility in matching revenues and future cash outlays. The financing scenarios demonstrate that CATS has the fiscal capacity to build either of the light rail scenarios as long as the ½-percent sales tax stabilizes and bus ridership projections are realized.

Capital Costs: Should the capital costs for the Light Rail Alternative exceed the \$1,205.5 million budget by \$60 million (approximately 5 percent), CATS could address the higher costs with additional debt. This scenario is run by assuming that an additional \$20 million in debt proceeds would offset the increase in capital expenditures. However, debt service payments would increase by \$19.0 million in years FY2019-30 (assuming 30-year debt and a fixed 5.0 percent interest rate). Should this need arise, CATS would still be able to maintain a minimum gross debt service coverage ratio of 3.0x and net debt service coverage ratio of 1.15x in all years except 2019 (1.12x), and a minimum annual fund balance of \$100 million.

½-percent Sales Tax: The projections assume an average ½-percent sales tax growth rate of 5.5 percent in FY2016 through FY2030 versus the 7.3 percent average growth rate realized between FY2003 and FY2008. Should a lower average growth rate of 5.25 percent be assumed, CATS would still be able to maintain a minimum gross debt service coverage ratio of 3.0x and net debt service coverage ratio of 1.15x in all years except 2020 -2028, where the ratio fell to a low of 1.08x. A minimum fund balance of \$100 million would be maintained in all years and the fund balance would total \$113.7 million in FY2030. Because the ½-percent sales tax revenue comprises approximately 60 percent of CATS' operating revenue in the base case financial projections, a reduction in the sales tax growth rate may be considered a surrogate for several different downside scenarios in the operating program (e.g. lower ridership, lower fares, higher bus operating costs, etc.).