

SUSTAIN  CHARLOTTE

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GO FOR THE GOLD

Why Streetcars are a Win for Charlotte

May 24, 2013



C O N T E N T S

Introduction	4
Background on Charlotte’s Streetcar System	5
Benefits of Streetcar Systems	6
Economic Benefits	6
Charlotte-specific Economic Benefits	6
Social Benefits	8
Charlotte-specific Social Benefits	10
Environmental Benefits	10
Charlotte-specific Environmental Benefits	11
Selected Case Studies of Streetcar Systems in the United States	12
Case Study: Portland	13
Background and Impacts	13
Funding	14
Case Study: Seattle	14
Background and Impacts	14
Funding	15
Case Study: Little Rock	15
Background and Impacts	15
Funding	16
Modern Streetcar System Funding Plans	16
Cincinnati	16
Los Angeles	17
Milwaukee	17
Kansas City	17
Conclusion	19

Acknowledgements

We want to thank the following people for their contributions to this report.

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INTRODUCTION

This report represents the combined efforts of students from Davidson College, Central Piedmont Community College, UNC Charlotte, Johnson C. Smith University, and Duke University. The purpose of this report is to both educate the public about streetcars and to provide local policymakers with additional data so that they can make informed decisions regarding the proposed Gold Line. The report examines the background of Charlotte's past and proposed streetcar systems and their expected economic, social, and environmental benefits. Also discussed are several other streetcar systems in the United States: the history, impacts, and funding of two modern systems, one historic system, and the funding strategies and sources of several planned modern systems.



BACKGROUND OF CHARLOTTE'S STREETCAR SYSTEM

The growth and expansion of Charlotte in the late nineteenth and early twentieth centuries was intimately bound with the installation and development of its streetcar network. In January 1887, horse-drawn streetcars first appeared in Charlotte. They had a dramatic impact upon the growth of Charlotte by facilitating the rise of the city's first residential suburbs. The Elizabeth College streetcar line enhanced the prospects for real estate development in the surrounding countryside, including the farms along Providence Road. Additionally, the neighborhood now known as Myers Park was originally developed in the early 1900s into a lavish, sophisticated suburb. Among the essential amenities of Myers Park was a streetcar line. This type of streetcar-dependent development in many areas in and around Charlotte greatly influenced the city's positive growth and progress. Within two years, the streetcars had become a symbol of Charlotte's economic prowess and competitiveness. "Charlotte has something that every city of the same size hasn't," boasted the Charlotte Chronicle, on January 24, 1889.

By the 1930s, however, personal automobiles had become widespread in the United States. Cars, a symbol of freedom for many Americans, caused a decline in the use of the streetcar system in Charlotte. On March 14, 1938, the streetcar system was shut down.

Decades later, in 1981, the Charlotte

Consolidated Construction Company signed a \$40,000 contract with the Edison Electric Company to construct an electric streetcar system, revolutionizing the transportation industry. The Charlotte streetcar reopened in August 1996, and ran fairly regularly for a decade before being shut down once again when the light rail system began operation.

Today, Charlotte is poised to realize the benefits of streetcars once again and is following the lead of many other forward thinking cities such as Portland, Seattle, Atlanta, and Cincinnati that have developed or are planning modern streetcar systems. These modern systems will have many of the benefits of historical systems, as well as additional economic, social, and environmental benefits, as outlined in this report.

In Charlotte, the streetcar project is known as the CityLYNX Gold Line, and is an integral part of the 2030 Transit Plan. There are currently two phases of the project. Phase I consists of a 1.5 mile section, which is fully funded and under construction. Phase II will extend the system an additional 2.5 miles. Once Phase II is completed, an additional six miles of the system will be initiated in appropriate phases. The completion of the entire Gold Line will serve as a backbone for connecting the entire rapid transit system, resulting in economic development for the area and an enhanced transportation system as outlined below.



BENEFITS OF STREETCAR SYSTEMS

Economic Benefits

The economic benefits of streetcars have been demonstrated numerous times in many cities across the country and the world. From a city's perspective, streetcars are extremely useful in spurring investment and development, thereby driving up property values and tax revenue. In Washington, D.C., a study done on the potential benefits of a streetcar system found that tax revenue would increase by \$238-291 million, meaning they could recoup the \$1.5 billion streetcar development cost in only six years. Other cities have also found a very high rate of return on their investment in streetcar systems (Table 1).

Not only do streetcars generate substantial revenue for a city, but they also create a significant number of jobs. Infrastructure projects, both on the streetcar itself as well as the additional surrounding development, require a great deal of human capital and manpower. In fact, projects that reduce traffic, such as streetcars, provide the most jobs for the money invested. According to Smart Growth America, for every \$1 billion invested in public transit, more than 16,400 job-months were created, while the same amount spent on road development created less than 8,000 job months.

Streetcars are also more effective than buses at spurring economic development

because of their fixed tracks. Permanent transit systems provide assurance to businesses and bring in transit-oriented development. While buses have the flexibility of shifting their route, streetcars are committed to staying in one particular area because the tracks are in the ground.

From a citizen's perspective, streetcars provide a tremendous economic benefit in terms of reduced transportation costs. By commuting via streetcar, citizens save on gas, auto repairs, tires, and insurance. The American Automobile Association, Inc. estimates that the average cost of driving is about \$0.60 per mile. The average American commuter could save nearly \$15 per day, or \$3,750 per year, by not driving to work.

Charlotte-specific Economic Benefits

In January 2013, the city hired Bay Area Economics (BAE) to conduct a study on the potential economic impacts of a streetcar system. The findings were presented to the City Council Economic Development Committee on May 16, 2013. The study compared the CityLYNX Gold Line scenario to a "no Gold Line" scenario with existing bus service. The results of the study are summarized below and in Tables 2-4.

The BAE study found that the

Table 1. Returns on Investment in Streetcar Systems

City	Streetcar Infrastructure Costs	Development Investment along Route	Return On Investment
Portland, OR	\$103.2 million	\$3.5 billion	34 : 1
Little Rock, AR	\$28 million	\$400 million	14 : 1
Tampa, FL	\$48.3 million	\$1 billion	21 : 1
Kenosha, WI	\$5.2 million	\$150 million	29 : 1
Memphis, Tennessee	\$104.3 million	\$2 billion	19 : 1

Table 2. Expected Development along Gold Line from 2015-2035

Extension Corridor	No Gold Line Scenario	Expected Gold Line Scenario	Change/ Increase
Residential Units	1,189	1,920	+731
Retail SqFt	56,153	77,953	+21,800
Office SqFt	36,2479	639,207	+276,729
Hotel Rooms	288	389	+101

Table 3. Change in Gold Line Tax Increment Finance Revenue

Year	Increment: Change in Assessed Value	Existing TIF Rate	Annual Gold Line TIF Revenue
2020	\$ 560,704,555	0.4370 %	\$ 1,960,223
2025	\$ 1,121,409,109	0.4370 %	\$ 1,718,598
2030	\$ 1,752,930,422	0.4370 %	\$ 1,724,548
2035	\$ 2,354,133,419	0.4370 %	\$ 5,497,176

Table 4. Change in Gold Line Municipal Service District Revenue

Year	Total Assessed Value	Gold Line MSD Rate	Annual Gold Line MSD Revenue
2020	\$ 5,995,481,606	0.0200%	\$ 1,199,096
2025	\$ 6,556,186,160	0.0200%	\$ 1,311,237
2030	\$ 7,187,707,473	0.0200%	\$ 1,437,541
2035	\$ 7,788,910,470	0.0200%	\$ 1,557,782

development of the Gold Line would result in an estimated addition of 731 residential units, 21,800 square feet of retail space, 276,700 square feet of office space and 101 hotel rooms (Table 2). This represents an approximate increase of at least 1.1 million square feet in new development. The study suggests that the increase in development would occur because Phase 2 of the CityLYNX Gold Line would increase homebuyer, renter and commercial tenant demand for locations along the Gold Line corridor and motivate developers to invest in additional development.

The study also considers the increase in property tax revenues from a potential Tax Increment Finance (TIF) district, and an additional charge to existing and new Municipal Service District (MSD) districts. The earliest year that a TIF district could be established would be 2015, which also would mark the first full year of operations after Phase 1. The TIF district is expected to see an increase in assessed values starting from a baseline of \$0 in 2015 and growing to \$561 million in 2020 and ultimately \$2.356 billion in 2035 (Table 3).

There are currently three MSDs in the Uptown and Midtown areas that include parts of the Phase 1 and Phase 2 CityLYNX Gold Line corridors. For the BAE study it was assumed that either the boundaries of these MSDs are extended and/or new MSDs are created so that all properties within the Phase 1 and Phase 2 CityLYNX Gold Line corridors would be located within an MSD. An MSD tax rate of 0.02 percent is assumed throughout the Gold Line corridors as an additional charge for existing MSDs (Table 4).

From the BAE study, it is clear that the development of the streetcar will have a

positive impact on Charlotte's economy.

Furthermore, the Gold Line will help alleviate traffic congestion and therefore the costs of congestion, which are significant. In 2011, the total cost of congestion in Charlotte was estimated to be approximately \$653,000,000. This number includes the value of travel delay for 2011 (estimated at \$16.79 per hour of person travel and \$86.81 per hour of truck time) and excess gasoline and diesel consumption estimated using state average cost per gallon. In addition, the general economic impacts described above will also hold true for Charlotte.

Social Benefits

One of the most impactful social benefits that streetcars bring to a community is connectivity between neighborhoods, activity centers, and greater opportunities. Unlike light rail systems which generally operate on the outskirts of city downtown centers, streetcars are far more effective at improving the pedestrian experience because they run directly through and between activity centers. An additional benefit that arises from increased connectivity is a greater sense of community. By connecting disparate neighborhoods, streetcars extend the distance that a person can walk and allow them to visit and become familiar with areas they would not normally be able to access.

As an alternative to driving personal vehicles, streetcars reduce traffic congestion on highways and roads in and around the city. In 2011, Charlotte commuters experienced 28,974,000 hours of delay, which is measured by the

amount of time spent in traffic above that needed to complete a trip at free-flow speeds. Streetcars, as a part of a complete transportation system, could save individual commuters up to forty hours a year that would normally be wasted sitting in traffic.

Streetcars are also an important part of a multi-modal transportation system, something that is very attractive to the Millennial generation. This generation is defined as the population between 17 and 35 years old. The National Association of Realtors has found that Millennials drive less and own fewer cars than previous generations, and as a result, they view access to public transportation as a must when they consider their housing needs. Two-thirds of the Millennial generation favor public transportation and smart-growth as solutions for traffic, and 71% believe that their community would benefit from an expanded and improved public transportation system. A city or town that wants to be a competitive and attractive place for this generation must therefore have a comprehensive and complete transportation system.

Streetcars also are beneficial to the health of a community. Rail commuters are 80% less likely than the average American to become obese. They walk an average of 19 minutes per day, while the average American walks only 6 minutes per day. The Center for Disease Control recommends at least twenty-two minutes of walking per day. Additionally, injuries sustained while taking public transportation are around 1/25th less likely to be fatal than those associated with automobile injuries. The avoided healthcare and other social costs, although difficult to quantify, are a clear benefit of streetcars and should be accounted

for in any benefit-cost analyses of public transportation projects.

An additional element of rail transit that serves to amplify all of the described social benefits is the fact that it attracts higher ridership numbers than other forms of public transit, such as buses. It attracts between 34-43% more riders than bus service on equivalent routes. There are many cases of cities that have found very high ridership numbers on their streetcar systems. The City of Tacoma saw a 500% increase in riders when it converted an existing bus line to streetcar service. When Portland opened its first line in 2001, they projected 2,800 daily riders. The line now carries over 10,000 riders per day. Conversely, Seattle saw ridership drop to one-fifth of what it had been when they temporarily substituted buses for streetcars on one of its lines.

While the higher ridership numbers associated with streetcars has been empirically shown, the reasons for this phenomenon are still unclear. However, there are several factors that likely contribute to streetcars' appeal. First, rail transit operates on a direct, visible route. Passengers can see exactly where they are going and do not have to figure out confusing bus lines or schedules. Second, rail transit provides easy loading and unloading for the elderly and handicapped, as well as those with small children and bicyclists. Third, since rail transit is powered by electricity, the ride is smooth, clean, and quiet. Contrasted with buses, which are subject to often bumpy street conditions, streetcars operate on rails for a much smoother ride.

Many streetcar critics argue that buses can provide all of the same social benefits as streetcars for less cost. However, what

these critics fail to realize is that not only do streetcars provide additional benefits such as easier loading and unloading for the elderly, disabled, and children, but also by virtue of the fact that they attract more riders, all of these benefits are amplified.

Charlotte-specific Social Benefits

With the completion of the CityLYNX Gold Line, Charlotte will experience all of the social benefits described above. Specifically, Charlotte will benefit through increased connectivity between several universities that are located directly or close to the streetcar line. These academic institutions include Queens University, Johnson C. Smith University, Wake Forest University Charlotte Center, Central Piedmont Community College, Northeastern University's graduate campus, Johnson & Wales University, and University of North Carolina at Charlotte Center City. Many of the riders of the streetcar are anticipated to be students at these institutions.

While Charlotte has experienced a great deal of growth and development in neighborhoods like Ballantyne, South Park, and South End, there are areas that have not seen as much investment. The streetcar will promote investment in more areas of the city by connecting the western and eastern parts of Charlotte. These parts of the city have been highlighted by Mayor Anthony Foxx as places with people that "have as much ambition as someone from south Charlotte." The streetcar will provide enhanced access to these areas and encourage development.

Additionally, the streetcar will provide

a much-needed connection between different parts of the light rail system that are currently in place or proposed. Currently there is no connection between the LYNX Blue Line and the proposed LYNX Red Line extension. The streetcar will provide a way for commuters to seamlessly travel significant distances in, around, and outside of the city.

Environmental Benefits

By cutting down on personal vehicle travel, streetcars effectively conserve natural resources and reduce emissions of ozone, carbon dioxide, and other air pollutants. Streetcars operate using electricity, which means there are no direct emissions into the local environment. Cities may also source their electricity from clean, renewable energy sources, potentially making streetcars a zero-emissions form of transportation. Additionally, streetcars are more environmentally friendly than buses because they can accommodate almost twice as many passengers as a bus, thereby reducing the amount of vehicles on the road.

As part of a multi-modal, comprehensive transit plan, streetcars encourage concentrated, urban and mixed use development along its fixed tracks. This denser style of living decreases the need for vehicles travelling from place to place and can significantly reduce the carbon dioxide emitted annually per household by up to 45% over suburban environments.

Many other cities have realized the environmental benefits of streetcars. According to the City of Cincinnati Climate Protection Plan, the number of people riding the streetcar rather taking

private automobiles or taxis will prevent 4,321 tons of CO₂ from being released into the atmosphere each year. Portland has also estimated that the emissions from residential development along their streetcar corridor are approximately 65% less compared with suburban households, while emissions from commercial development are approximately 45% less.

Charlotte-specific Environmental Benefits

Charlotte is located in an 8-Hour Ozone Nonattainment area, which means that it does not meet the national primary or secondary air quality standards for ozone. Mecklenburg and the surrounding counties are the only areas in all of North and South Carolina that do not meet the federal standards. Ground-level ozone has many harmful health effects on both humans and the environment. Children, the elderly, people who exercise outdoors, and people with lung cancer are particularly susceptible to ozone's effects. Ozone can also harm sensitive vegetation and ecosystems that make up the forests, parks, and natural areas in and around Charlotte.

The most significant sources of air pollution are mobile sources due to the high level of commuter traffic. Therefore, a major strategy to come into compliance with air quality standards is to expand public transportation options that encourage people to use their cars less. This will not only help Charlotte and the surrounding communities avoid the legal penalties associated with nonattainment, but will also have positive health effects on the population and the environment.

The development of a streetcar system in Charlotte will also cut down on carbon dioxide emissions and oil use. In 2011, Charlotte commuters released 296,000,000 pounds of carbon dioxide and consumed 14,599,000 gallons of fuel, both due to congestion and in addition to what would be released or consumed in free-flow traffic.



SELECTED CASE STUDIES OF STREETCAR SYSTEMS IN THE UNITED STATES

There are currently thirteen historical streetcar systems and two modern streetcar systems in operation in the United States. The two modern systems are located in Portland and Seattle. Twenty-two modern streetcar systems are currently being constructed or are in the planning and design stages in cities all over the country. The map below shows the location of each modern, historical, and planned streetcar system in the United States. The growing number of planned systems and the rapid rate of development make it clear that modern streetcar systems are becoming an integral element of future transportation plans of modern,

livable, and accessible cities. However, like any major transit project, streetcars require a large amount of planning and capital. The case studies below summarize the background, impacts, and funding strategies for several streetcar systems in major cities around the United States.



Case Study: Portland



In the 1960s, Portland was experiencing sprawling suburban, business, and retail development that was draining the vitality from the city center. To combat this, Portland focused on transit and cooperative planning as a way to drive the central city towards the thriving, successful one it is today. One of the key aspects of this planning was the creation of the Portland Streetcar system, which was part of a unique public/private strategy to link investment in high quality transit service with major redevelopment.

Background and Impacts

After over a decade of planning and construction, the streetcar began operation on July 20, 2001. The initial

Table 5. Funding Sources for Portland Streetcar

Source	Amount (in Millions)
City Parking Fund	\$2
City Parking Bonds	\$28.6
City Transportation Fund	\$1.7
Connect Oregon	\$2.1
Federal Transit Administration	\$75
Federal Transportation Funds	\$5
Gibbs Extension Savings	\$0.66
Local Improvement District	\$34.9
Portland Development Commission	\$27.68
Regional Transportation Funds	\$13.62
SDC/Other City Funds	\$6.11
State Funds for Vehicles	\$20
Stimulus Funds	\$0.36
Tax Increment (North Macadam URA)	\$12.2
Tax Increment (South Park Blocks URA)	\$7.5
Tax Increment Funds	\$1.8
Tram Transfer	\$0.15
Transportation Fund	\$0.6
Transportation Land Sale	\$3.1
Transportation Systems Development	\$2.5
U.S. HUD Grant	\$1.95
Miscellaneous	\$3.89
Total	\$251.42

ridership goal was 3,500 riders during weekdays. This goal was immediately surpassed, and currently the ridership is as high as 12,000 during weekdays. There have also been significant development changes along the corridor. Since 1997, when the streetcar alignment was first identified, approximately \$3.5 billion has been invested within two blocks of this alignment. This investment has realized 10,212 new housing units and 5.4 million square feet of office, institutional, retail and hotel construction. Overall, 55% of development in the Central Business District since 1997 has occurred within 1-block of the streetcar. The real estate and development community has recognized the streetcar as the main catalyst for these changes.

The streetcar has also contributed to increases in property values in Portland. Between 1997 and 2003, the value of properties near the streetcar increased by 44% for single-family residences and by 112% for raw land. From 2003 to 2008, Portland experienced a 60% increase in property values for industrial, 95% increase for single-family residences and 101% increase for raw land.

Funding

The Portland Streetcar was funded from a variety of sources. The total budget to build 7.35 miles of track was \$251.42 million, which averages out to \$17.1 million per mile of track. See Table 5 for the breakdown of the

Case Study: Seattle

Background and Impacts

Like Portland, Seattle wanted to create a multi-modal transit system as a way to provide new urban mobility options that would enhance the city and regional transportation system while shaping and supporting continued economic growth. The South Lake Union Streetcar was the first part of this endeavor and was meant to transform a rundown industrial neighborhood into something that is more vibrant and intensive. Since the SLU line began operation, the consensus in Seattle is that it has been very successful. There have been significant economic changes due to the planning and development of this streetcar. Within a three block radius of the streetcar line, approximately \$2.4 billion in investment has occurred, driving property values to increase at a higher rate than city-wide rates. Raw land value within three blocks of the line increased in value by 123%, and mixed use property value increased by 81%, compared to 53% and 50% for the city-wide averages, respectively. This investment has amounted to an additional 2,500 housing units and 12,500 jobs. There were also 16,000 construction jobs created from streetcar-oriented development over the past six years.

Seattle has planned a second streetcar line, the First Hill Streetcar, which will provide connections to the light rail, a university, and a hospital and is not currently well-served by buses. Construction began in 2012, and operation is expected to start in mid-2014. The line will provide connections to a variety of different transit options, including the Amtrak passenger rail, the light rail system, regional train service, bus lines, bike networks, ferries,

and water taxis. Due to the success of the SLU line and the anticipated success of the First Hill line, Seattle has also planned the Broadway Extension, which will connect even more diverse people and neighborhoods to the Broadway retail district.

Funding

The South Lake Union Line was developed without the use of the City of Seattle General Fund. The centerpiece of the creative financing package of the project was a \$25.7 million Local Improvement District, by which local property owners agreed to establish a special property tax levy reflecting the benefits they will receive from the investments in the streetcar. Federal and state grants and funds from the sale of surplus City properties in the South Lake Union area comprise the remainder of the funding for a total budget of \$52.1 million. The breakdown of the funding is below :

- Federal: \$14.9 Million
- State: \$3 Million
- Local Improvement District: \$25.7 Million
- Surplus Property Proceeds: \$8.5 Million

The First Hill Line is fully funded through a voter-approved sales tax measure. Seattle has also secured funding for the planning and design of the Broadway Extension.

Case Study: Little Rock

History and Impacts

In 1995, Little Rock initiated a downtown revitalization plan to spur economic development and reignite the metropolitan urban core. An important aspect of this plan is the River Rail Streetcar system, which was emphasized as an integral part of the larger project, meant to enhance the efforts by serving as a connector for tourists, visitors, and locals to major activity centers. The streetcar has been praised as an instrumental marketing tool for businesses and government agencies in attracting growth and visitors.

The first phase of the streetcar began operation on November 1, 2004. The second phase opened a few years later, in February 2007. The Central Arkansas Transit Authority subsequently conducted a study on the economic impacts of the River Rail Streetcar on the surrounding area between 2000 and 2012. It was found that 957 new residential units were developed, 13,194 employees were added or retained, over 5 million students or visitors came to the city, and \$816.5 million was invested in the area. The study area has also seen a 21% increase in population, a 56% increase in residential property values, and 44% increase in retail property values. The study concluded that the River Rail Streetcar successfully contributed to downtown revitalization by attracting capital investments, generating tourism, enhancing residential living, helping job growth and retention, and increasing property and sales tax revenue.

Funding

While Little Rock's streetcar system is a historical system rather than a modern one, it provides a model of a successful streetcar that has significantly contributed to the local economy. It was funded by several Congressional earmarks totaling \$24 million, as well as \$6 million of local contribution split evenly between the cities of Little Rock and North Little Rock, and Pulaski County. The Central Arkansas Transit Authority is also selling naming rights and has a sponsorship program to help pay for the streetcar costs.

Modern Streetcar System Funding Plans

Cincinnati



Cincinnati's vision for their streetcar is a system that spurs development and is part of a larger multi-modal transportation system that links areas outside the downtown core and throughout the region. The final design is complete, and the city is currently seeking bids for construction of the system. The streetcar is funded by local sources as well as three federal grants. The federal grants are reimbursement grants. This means that the grants will reimburse the project for 80% of its eligible expenses. The remaining 20% is required local match and will be provided by city sources.

Local funding for the Streetcar Project comes from \$64 million in proceeds from bonds as well as \$6.5 million in streetlight sale proceeds and private contributions. The \$64 million in bond proceeds is backed in three ways.

The first is the Property Tax Capital, which consists of \$28 million of bonds backed by appropriating over several years a portion of the \$28.9 million collected by the city annually for property taxes. Cincinnati City Council approved this measure in 2010.

The second way is through Tax Increment Financing (TIF), which will back \$11 million. An additional \$14 million will come from Fund 762 Urban Redevelopment Tax Increment Equivalent Fund which collects service payments from Westin/Star and Hyatt Saks. By law, it is not available to help with the current city budget.

Thirdly, the city will sell the Blue Ash Airport for \$11 million. The City Council has approved an additional \$15 million to front costs in relation to Duke Energy's relocation of utilities.

The remaining \$6.5 million in local sources will come from the sale of city streetlights to Duke Energy in 2009, worth \$3.5 million, as well as \$3 million in contributions from Duke as part of Duke's 2008 Electric Security Plan. A small amount of private contributions are included in this total.

Los Angeles



Los Angeles has planned a four-mile streetcar system that will contribute to the economic growth of the region and stimulate movement to the downtown's historic and entertainment facilities. The Streetcar will be funded by a combination of federal and local dollars. The Federal Transit Authority only approves funds once a local funding match is in place. For Downtown L.A., that commitment is known as a Communities Facilities District (CFD). The CFD was approved by voters on December 3, 2012, and it will fund approximately 50% of capital costs (i.e.: design, engineering and construction.) Operations will be covered by fare revenues and government sources.

The CFD will raise \$62.5 million in capital funds for construction of the Streetcar. As is the case with any bond, administration, issuance costs and other fees are part of the bond total in addition to the actual capital being raised. The maximum "not to exceed" amount set for the streetcar CFD is \$85M. Based on this maximum amount, the majority of residential units included in the CFD will pay less than \$100 a year, with the median rate for a 1,000 square foot unit coming in at roughly \$60 a year.

Milwaukee



The Milwaukee Streetcar has been designed in order to project an image of a modern and forward-thinking city that will help attract outside investment, business, and talent. Currently, the final design team is in place and construction is scheduled to begin in the spring of 2014. The capital costs for the initial route are estimated at \$64.6 million. For the initial route, federal funding would supply \$54.9 million, and \$9.7 million will come from local sources. The City will seek federal funding opportunities to finance secondary route extensions.

Kansas City



Scheduled to become operational in the summer of 2015, the Kansas City Streetcar will fill a long-noted gap in the resurgent downtown. It will be funded through a variety of federal, state, and local sources.

Seventy-five percent of the funding will come from local public and private sources. The primary funding source will be a Missouri Transportation Development District (TDD). Within this boundary, special assessments will be applied to cover the portion of the project costs not covered through other federal, state, and City funds, as well as ongoing operation and maintenance. The revenue sources for the TDD break down as follows:

- A 1% sales tax within the TDD boundary
- A special assessment on real estate within the TDD boundary, with the following maximum annual rates:
 - \$.48 for each \$100 of assessed value for commercial property
 - .70 for each \$100 of assessed value for residential property
 - \$1.04 for each \$100 of assessed value for property owned by the City

The proposed TDD rates take into account differing assessment rates for residential and commercial property to ensure that costs are spread equally. There will also be a supplemental special assessment on surface pay parking lots within the TDD boundary (this does not include private lots or lots dedicated to residences and businesses). The rate is \$0.15 per pay parking space. Property with non-profit uses will have a \$0.40 cost for each \$100 of assessed value, but because the first \$300,000 of market value is excluded, most non-profits will have no streetcar costs. There is also no streetcar assessment on market value greater than \$50,000,000 for non-profit uses.

The City is committed to reducing the commercial assessment further by supplementing with other funds such as downtown on-street parking revenues. Overall, the maximum cost to residential property owners is \$133 for every \$100,000 dollars of value, based on state and federal funding that the project is likely to secure. For commercial property owners, the maximum figure is \$1,536 for every \$1,000,000 dollars of value.

Additionally, the City is preparing a federal TIGER grant application for \$25 million. Other federal funds, special low interest financing, and cost saving measures are also expected to reduce overall project cost.



C ONCLUSION

The City of Charlotte and the towns within Mecklenburg County have made a strong commitment to the integration of land use and transportation planning. As a part of this commitment, leaders in the Charlotte region have established a growth strategy and transit vision, the 2030 Transit Plan, which calls for providing more transportation choices to the citizens of Charlotte and the surrounding areas. An integral part of the transit plan is the City LYNX Gold Line. As city manager Ron Carlee has described, the City LYNX Gold Line will “provide a critical economic development tool to focus growth along key corridors...and will serve as the backbone for connecting the entire 2030 Corridor System Plan together.” Based on the projected economic, social, and environmental benefits that the streetcar system will have for Charlotte, and the extensive benefits other cities with streetcars have realized, as described in this report, it is clear that investing in the City LYNX Gold Line is a win for Charlotte.

¹ Pino, O. D. (1995, August 16). Clang, Clang Go the Trolleys. *Charlotte Observer*, p. 1C.

² Carlee, R. (2013). *CityLYNX Gold Line Phase 2 City Manager's Recommendation*. Charlotte: Charlotte Area Transit System.

³ http://www.mereda.org/documents/eventmaterials/event338_core_connector_study.pdf

⁴ Natural Resources Defense Council. (2012, March). *Less Driving, More Saving*. Retrieved May 23, 2013

⁵ City of Charlotte. (2013). *Charlotte Streetcar Fast Facts*. Retrieved May 23, 2013, from <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CDEQFjAA&url=http%3A%2F%2Fcharmack.org%2Fcity%2Fcharlotte%2Fcats%2Fplanning%2Fstreetcar%2Ffacts%2FDocuments%2FFastfactsStreetcar.pdf&ei=-HmeUee5FYXABASH1YGIaw&usg=AFQjCNGJD4YyLjt>

⁶ Natural Resources Defense Council. (2012, March). *Less Driving, More Saving*. Retrieved May 23, 2013

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