

## **The Path to Georgia's 21<sup>st</sup> Century Knowledge Economy:**

### **Economic Development, Capital and Operating Cost Estimates, Station Area Plans, Market Assessment, and Financing Options for the Macon to Atlanta Passenger Rail Corridor May, 2010**

Georgia has major decisions to make regarding its future economy and its built environment: will it continue along the 20<sup>th</sup> century path, which was extremely beneficial for its citizens, or will it recognize the structural changes demanded by the 21<sup>st</sup> century economy? Having prospered during an era of industrial growth, automobile dependency, land development that knew no bounds and cheap energy, it is difficult to contemplate changing. As the old expression says, 'if it ain't broke, don't fix it.' However, the world turns and the knowledge economy demands a different approach to surface transportation and a different form of the built environment to complement the existing pattern. Commuter and inter-city rail plays a major role in transitioning this new form of development. Embracing this new way of development will help ensure that metropolitan Atlanta, joined with metropolitan Macon, will continue to grow economically.

#### **Economic Development**

This report is about the economic development impact and financing options for the proposed Atlanta-Macon passenger line, presumably the first of many passenger rail lines re-introduced to Georgia. Passenger and freight rail was the primary reason for the 19<sup>th</sup> and early 20<sup>th</sup> century economic success of Georgia. However, it was supplemented and, in the case of passenger rail, nearly replaced by cars, truck, and air transport in the late 20<sup>th</sup> century. Now the pendulum appears to be swinging back toward rail passenger transportation in America's primary economic competitors, such as the European Union, Japan, China and Australia. Likewise, many American metropolitan areas, such as Dallas-Ft Worth, Phoenix, Denver, Salt Lake City, Washington, DC, and Seattle, among many others, understand this swing back to rail transit is occurring. These metropolitan areas have invested billions of locally raised dollars in light rail, street cars and commuter rail systems. Over the past six years, in an era known for being anti-tax at all levels of government, 2/3 of all local tax-raising ballot measures for rail transit were successful. Metropolitan St. Louis voters passed a ½ cent sales tax increase for both capital and operating subsidies for rail transit in April, 2010, during the middle of a slow economic recovery and great fear about the ability of local government agencies to balance their budgets.

A comparable example to metropolitan Atlanta is metropolitan Salt Lake City due to the conservative nature of the state's voters, strong business orientation and that its economy has been booming for the past generation. Metropolitan Salt Lake City began a regional planning process named *Envision*

Utah in 1997, initiated by the business community and under the aegis of Republican Governor Leavitt (later in the Bush II cabinet). It envisioned the probable economic growth over the next few decades and how that growth would lay out on the ground. The citizens and leadership rejected the conventional low-density pattern that relies exclusively on drivable development, since it paved over so much natural land that citizens felt was their stewardship responsibility, and since the total infrastructure costs were unacceptably large. Instead, a balanced approach to land development was approved, which required building extensive rail transit, rather than just road building, to accommodate. As a result of the on-going Envision Utah process, metropolitan Salt Lake City is engaging in one of the largest rail transit construction programs in the country, second only to Denver, another western, business-oriented metropolitan area.

Appendix I is an outline of the metropolitan Salt Lake City rail transit plan.

Metropolitan Atlanta was one of three fortunate metropolitan areas to obtain Federal funding for heavy rail in the 1970s, building the MARTA rail system. Unfortunately, metro Atlanta is a distant third behind the two other systems, Metro in the Washington, DC region and BART in metro San Francisco, according to a Brookings Institution study in 2007<sup>1</sup>, in taking advantage of the huge grant from the nation's taxpayers. It is the opinion of this Professional Team that this refusal to both extend the existing Atlanta rail transit network in a meaningful manner and encourage private development around the stations has hurt the regional economy in the past and will be a major drag on economic growth in the future if not addressed.

One of the reasons for not taking greater advantage of this initial rail transit investment is that Georgia views itself as a "rural" state. This is far from the reality. As of 2005, according to Brookings Institution data, 81 percent of Georgians live in the 15 metropolitan areas in the state, 84 percent of the jobs are in these metro areas, and they account for 89 percent of the GDP of the state. Georgia is a *metropolitan* state. The two metropolitan areas linked by this proposed passenger rail line account for 57 percent of the population of the state, 60 percent of the jobs and 70 percent of the state GDP.

The built environment, comprised of real estate and the infrastructure that supports real estate, is the largest asset class in the economy; representing over 35% of the nation's and Georgia's wealth<sup>2</sup>. The built environment is crucial to the economic growth and fiscal health of the Atlanta metropolitan area and Georgia in general. Investment in the built environment, especially the housing sector, which is about 15% of total assets, is a major catalyst for economic growth. However, the collapse of housing sparks economic slowdowns. Economic *recessions* are generally caused by housing *depressions*, as described in a recent article in The Atlantic Monthly<sup>3</sup>.

This condition is being demonstrated in a particularly painful way during the "Great Recession". Nationally, economic output has fallen from late 2007 to late 2009 by 3.3 percent, while employment has dropped by 6.1 percent. However, leading the way into this recession, housing starts fell by 73 percent from their 2006 peak. This represented over 20 times the decline in GDP. About a third of all jobs losses are in construction, real estate finance and real estate services and management.

In metropolitan Atlanta, the recession was as bad as the rest of the nation according to the Brookings' MetroMonitor. The metropolitan GDP dropped 3.7 percent from its third quarter, 2007,

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<sup>1</sup> Leinberger, Christopher, "Foot Loose and Fancy Free: A Field Survey of Walkable Urban Places in the Top 30 U.S. Metropolitan Areas", Brookings Institution, December, 2007.

[www.brookings.edu/walkableurbanism](http://www.brookings.edu/walkableurbanism)

<sup>2</sup> Leinberger, Christopher B., *The Option of Urbanism; Investing in the Next American Dream*, Island Press, 2008

<sup>3</sup> Leinberger, Christopher B., "Here Comes the Neighborhood", The Atlantic Monthly, June, 2010.

peak while employment declined 7.8 percent, more than the US employment decline. Housing prices are continuing to drop in the region, while the foreclosure rate (7.16 per 1000 mortgages) is twice the national level.

The Great Recession is more than just the worst downturn since the 1930s and does not just reflect a *cyclical* downturn in real estate and housing. It is a *structural* change in how we approach the built environment. For the past 50 years, the market demanded, and the real estate industry delivered what is referred to as *drivable sub-urban* development: low density residential and commercial places where most trips are by car or truck. However, the development pattern demanded by the market appears to be structurally changing, so that today there is pent-up demand for what is referred to as *walkable urban* development: higher density development where transportation is provided by rail and bus transit, biking, car and truck, but many trips can be accomplished by walking. Walkable urban places are at least five times denser than drivable sub-urban places.

This structural change does not mean existing drivable sub-urban development is going away; it is just over-built. In fact, the severity of the housing decline, including the dramatic decline in house prices in many metro areas of the country, is the probable cause of, and the reason for, the severity of the Great Recession.

In most metropolitan areas, there appears to be pent-up demand for walkable urban housing and supporting commercial development. The reasons for this include:

- Two-thirds of all households are singles and couples, who tend to be the target market for walkable urban housing and neighborhoods. This percentage is estimated to increase over the next 20 years, since well over 80 percent of net new household formations will be singles and couples. The soon-to-be retiring Baby Boomers are part of this trend, but the delay in marriage and child rearing by the Millennials is an even more important reason, since this rising generation is even larger than the aging Baby Boomers.
- While not yet fully documented, the energy usage and greenhouse gas emissions of walkable urban households appear to be at least 1/3 less than drivable sub-urban households. Besides the cost and environmental benefits of less energy usage and greenhouse gas emissions, this has a direct market appeal to various sub-markets.
- The cost of transportation for drivable sub-urban households on average is 24 percent of total income versus 12 percent for walkable urban households; this represents about \$700 billion per year, about half of what an average household spends on health care.
- Recognition of the unintended consequences of the drivable sub-urban development model, which degrades the very promises it offers for suburban living: open space, ease of getting around by car, a clean environment, healthy and safe living, etc. With continued growth of drivable sub-urban development, the quality of life and market price enters a “more is less” *downward* cycle, which pushes demand further to the fringe where it repeats itself. This phenomenon is the cause of the anti-growth movement in this country. Walkable urban neighborhoods can achieve a “more is better” *upward* cycle as more growth creates more urban excitement and options within walking distance, increases quality of life and market values. This phenomenon may result in gentrification, either the most feared consequence due to the loss of affordable housing or the most welcome consequence due to increased quality of life and property values.
- The “creative class”, so essential to the emerging “knowledge economy”, appears to have a particular desire to live in walkable urban neighborhoods due to the increased convenience, stimulation and connections that occur.

The Atlanta metropolitan area does not have many walkable urban neighborhoods or places. According to consumer research conducted by Dr. Jonathan Levine<sup>4</sup>, professor and chair of the urban and regional planning program at the University of Michigan, approximately 29 percent of Atlanta households prefer a walkable urban neighborhood and another 30 percent of households would find it acceptable. On the other hand, 41 percent of Atlantans want drivable sub-urban neighborhoods. The problem is that for those who desire walkable urban neighborhoods, only 35 percent have satisfied that desire according to the Levine research results. However, over 90 percent of households who want drivable sub-urban neighborhoods in metro Atlanta satisfied their housing preference.

This means that, in the competition for economic development, metro Atlanta, and probably metro Macon as well, is not offering enough of the type of product, walkable urban, that the market wants. That is the reason walkable urban neighborhoods have appreciated so well, such as Virginia Highland, which has the highest selling price per square foot in the metropolitan region in 2010, according to Zillow, one of the largest national on-line housing databases. Drivable sub-urban Buckhead, the highest priced neighborhood for decades, had a 10 percent per square foot price premium over walkable urban Virginia Highland in 2000. By 2010 Virginia Highland had a 2 percent price premium; the lines crossed in the decade (this price premium is even more impressive when it is remembered that 30 years ago Virginia Highland was considered a slum). It also explains why emerging walkable urban neighborhoods like Grant Park and East Lake were the *only* neighborhoods in the region to have *constant dollar* price appreciation for the past decade, gaining 4 percent during that time. Surprisingly, every other neighborhood in the metro area lost on average 13 percent value in constant dollars over the decade. In *inflated dollars*, these walkable neighborhoods gained 33 percent in value versus 11 percent gain for the region on average for the past decade. The market is signaling that there is not enough walkable urban housing and too much drivable sub-urban housing.

A survey conducted by Brookings in 2007<sup>5</sup>, referenced above, ranked the top 30 metropolitan areas regarding the per capita number of regionally significant (places that play a role in the regional economy, as opposed to bedroom communities) walkable urban places. Metropolitan Washington, DC, has the highest number of these places, with 20 that are at critical mass and 10 more that are emerging. Given its 5.3 million population, almost exactly that of metropolitan Atlanta, that means there are between four and six regionally significant walkable urban places per million of population for metro Washington. Metro Atlanta had a total of four places (Midtown, Buckhead/Lennox Square, Decatur and Atlantic Station) or 0.8 per million of population, less than 20% of Washington's number. In Washington, 90 percent of the walkable urban places are rail transit served and 70 percent of these walkable urban places are in the suburbs.

One conclusion is that metropolitan Atlanta should develop 20-25 additional regionally significant walkable urban places, including getting downtown Atlanta to critical mass, and probably over a hundred walkable urban neighborhoods, like Virginia Highland. This represents tens of billions of dollars of primarily private investment while serving the pent-up demand for the economically required type of development of the 21<sup>st</sup> century knowledge economy.

Another conclusion is that most of these places will be anchored by rail transit. Americans appear to demand rail, as opposed to bus transit, due to its perception of speed, ease of use, certainty of the route, safety and consumer acceptance. Rail transit, as well as bus transit, biking and, of course, walking, is a necessary means of gaining access to walkable urban places. Such places obviate the

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<sup>4</sup> Levine, Jonathan, *Zoned Out, Regulations, Markets, and Choices in Transportation and Metropolitan Land-Use*, RFF Press, Washington, DC, 2006, chapter eight.

<sup>5</sup> IBID, "Foot Loose and Fancy Free: A Field Survey of Walkable Urban Places in the Top 30 U.S. Metropolitan Areas",

enormous cost of parking in structured decks and the pedestrian unfriendly consequences from continually widening roadways to accommodate traffic. However, for the foreseeable future, the majority of people will continue to gain access to these walkable urban places by car. This will decline over time and provide consumers transportation options they currently do not have, since they must drive today for nearly every trip from the home. The option of urbanism also means that some households can drop one or more cars out of their fleet, allowing them to divert income from their cars (always a depreciable asset) to housing (sometimes an appreciating asset), education, savings, etc. A recent study by the AAA estimates that dropping one car is equivalent to a \$9,200 annual saving per household, which translates into over \$120,000 of additional mortgage capacity.

A final conclusion is that most of the future demand for walkable urbanism, either regionally significant or neighborhoods, will be satisfied in the suburbs. This is about both the redevelopment of Atlanta and Macon, but it more about the transformation of their suburbs. The proposed Atlanta-Macon passenger rail line will provide economic stimulus for the two downtown termini, but it will provide even more for key station areas along the line.

Paying for the new rail transit will have to increasingly rely on locally-generated sources, both public and private, which result from the increased tax and private property values generated by the rail transit. This is *not* a new idea. In fact, private property developers and electric power companies were the primary builders of the street car, subway and commuter rail systems in American cities a century ago. The real estate developers were the predominate builders of rail transit so as to get their customers to the new land developments they were building. In Atlanta, the best known land developer who also built the first electric street car was John Hurt, the builder of the Hurt Building and the Equitable Building. Hurt built the Atlanta and Edgewood Railroad Company (image below), which led to his new sub-division, Inman Park. Rail transit in the late 19<sup>th</sup> century was not profitable, just as is the case today. In essence, the profits from the Inman Park housing development were used to subsidize the street car, demonstrating the approach modern rail transit has to re-learn.



Atlanta Developer John Hurt Built the Atlanta to Edgewood Streetcar to Bring Customers to His Inman Park Development, Subsidizing the Streetcar Out Of The Development Profits

Investment in rail transit is the *most* important transportation infrastructure for metro Atlanta and Macon in the early 21<sup>st</sup> century. Not investing in rail transit today would be akin to not investing in the highway system in the 1960s and 1970s. Rail is the essential infrastructure investment since *transportation drives development*, and the type of development that is in most demand is walkable

urban, which is best served by rail transit. The role of transportation driving development was dramatically demonstrated in metro Atlanta and Macon over the past nearly 200 years. Without the required transportation infrastructure investments in the 19<sup>th</sup> and 20<sup>th</sup> century (rail, roads and then air), the economic success story of Atlanta in particular would be very different. In the 21<sup>st</sup> century, rail transportation has re-emerged as an essential transportation infrastructure. Metropolitan areas around the world and throughout the United States endorse this premise and are investing billions to create a portfolio of transportation options the market and economy is demanding, focusing the most attention on rail. Now is the time for metropolitan Atlanta and Macon to recognize the same 21<sup>st</sup> century reality.

### **Scope of Work for the Assignment**

The scope of work and supporting appendices are listed below:

1. Provide justification for the investment in a balanced portfolio of transportation investments for economic growth in the 21<sup>st</sup> century knowledge economy (above and appendix I).
2. Station screening analysis and review of service plan and cost estimates (appendices II and III).
3. Develop market-based assumptions about growth by various real estate product types around each of the stations over the next 20 years (appendix IV).
4. Station area planning based upon the projected market demand (appendix V).
5. Create a list of financing sources (local, state and Federal) available for capital investment and operating costs (appendix VI).
6. Determine the public and private financial options of the rail line (appendix VII).

The team is not recommending one specific financial solution for the funding of capital and operating costs. It is providing the various ingredients for a “layer cake” of possible solutions, from which the state and local decision-makers will select the set of options most appropriate for Georgia.

### **Professional Team**

The Professional Team was lead by the Metropolitan Policy Program of the Brookings Institution. It included three specialists to determine the capital and operating cost estimates, real estate market analysis and financing alternatives of the Macon to Atlanta passenger rail line. The Team included HDR, Inc. (capital and operating cost estimates and station area plans), RCLCO (real estate market analysis) and Bleakly Advisory Group, Inc. (financing alternatives).

### **The Brookings Institution**

The Brookings Institution is the oldest, largest and, according to international surveys, the most influential ‘think tank’ in the world. Based in Washington, DC, the organization has been engaged in rigorous academic and public policy research since 1917. The Metropolitan Policy Program, which is leading this assignment, is one of five major programs at Brookings. Brookings’ research has lead to the conclusion that the United States has become a *metropolitan* nation. The Metropolitan Policy Program assists metropolitan areas, states and the Obama administration develop and implement policy reflecting this new reality and its consequences.

Christopher B. Leinberger, visiting fellow at Brookings, professor at the University of Michigan and real estate developer, is the project manager for this assignment. During the 1980s and 1990s, Mr. Leinberger was managing director and co-owner of RCLCO, also a team member. He was the partner responsible for the opening of the Atlanta office of RCLCO in 1981, working closely with the resident managing director. His experience includes studying and analyzing Atlanta growth patterns since 1979 and he has used it as a model of national development patterns, for better and for worse.

He has profiled the region in articles in the *Atlantic Monthly*, *Urban Land*, and *The Atlanta Journal-Constitution*. In the Congress for New Urbanism 2010 conference book on Atlanta, he and the current RCLCO Atlanta partner analyzed the past, present and future development patterns for metropolitan Atlanta. A profile of Leinberger by CNN focused on metropolitan Atlanta to demonstrate his theory of development patterns taking place throughout the nation.

#### HDR, Inc

HDR has a long history of transit planning and design projects across the U.S. HDR has become one of the transit industry's most innovative and talented transit planning and design firms in the U.S. HDR's knowledge of transit service planning and delivery has led to a national in transit service planning and facility design across all modes of passenger transportation, including bus, streetcar, light rail, heavy rail, commuter rail and high-speed intercity rail.

David Taylor, HDR's National Director of Sustainable Transportation Solutions, led the transit service planning assessment and development of Station Area Plans for the Atlanta to Macon Passenger Rail Corridor Study. David was assisted by Patrick Wolfe and Daniel Nelson, transit planners experienced in bus and rail service planning and cost estimation, and Catherine Judd, a transportation planner, who specializes in urban design and station area planning.

#### RCLCO

RCLCO is a multidisciplinary real estate advisory firm providing end-to-end real estate solutions ranging from entity, portfolio, and asset strategies to market research, product programming, financial feasibility, deal structuring, and development implementation. Since 1967, RCLCO has been providing objective and actionable advice to federal, state, and local governments as well as colleges and universities, foundations, real estate developers, financial institutions, and Fortune 500 companies. Sarah Kirsch is a Senior Principal based in RCLCO's Atlanta office. Over the last eleven years, Sarah has worked on a range of private and public-sector engagements throughout the southeast. She is currently a member of the ULI, serves on the Atlanta District Council Executive Committee, and co-chairs the Technical Advisory Panels committee for the Atlanta District Council. Sarah is president of the RCLCO Foundation and recently joined the board of Atlanta Neighborhood Development Partnership.

#### Bleakly Advisory Group, Inc.

Bleakly Advisory Group, Inc. assists a wide range of clients in understanding the interaction of market trends and project economics. A substantial portion of the firm's practice deals with evaluating current market opportunities, financial analysis, public financing, and structuring public/private partnerships. Bleakly Advisory Group has assisted in the creation and operation of over two dozen Tax Allocation Districts in Georgia, and has served as the real estate advisor to local redevelopment authorities, community improvement districts and special development authorities. Bleakly Advisory Group has also served as market and implementation consultants for over 25 Georgia cities and counties on redevelopment and corridor development projects.

Ken Bleakly, president of the firm, has been a practicing real estate consultant for over 30 years in New Jersey, Boston, Denver and Atlanta. Following the 1996 Summer Olympic Games, he served a president of COPA, Inc., a non-profit development entity responsible for the redevelopment around Centennial Olympic Park in downtown Atlanta. Ken served on Mayor Shirley Franklin's housing task force, is a member of the Terwilliger Center for Workforce Housing's Atlanta advisory board, an active participant and sponsor of ULI-Atlanta, and is a frequent speaker on regional real estate and development trends. Ken was assisted by Jonathan Gelber, senior consultant at the firm, in preparation of the local revenue analysis.

## **Review of Service Plan, Station Locations and Cost Estimates (HDR, Inc)**

The issues that were addressed in the station selection process were how to balance community expectations and perceived opportunities, the estimated market potential, and the need to maintain competitive travel time for the entire corridor. In that regard, the Professional Team evaluated the 103-mile passenger rail corridor from downtown Macon to downtown Atlanta, reviewing 13 potential station locations.

The Professional Team recognized that transit-oriented development would not be economically feasible around each and every one of the 13 proposed stations. Based on these market realities and certain land use constraints at several of the proposed station locations, we concluded that some of the previously identified stations should be removed or consolidated. Some of the added benefits that could be realized from the use of fewer stations included cost savings on station construction and maintenance and improved travel times. In order to maximize the economic potential of the project, we screened the proposed station areas based on key criteria, including:

- Developable land;
- Drivers of ridership (employers, concentration of housing, universities);
- Drivers of real estate development demand (employment, underlying demographics, physical and locational characteristics);
- Proximity of stops to one another, particularly of those within the same county; and
- Station platform/rail alignment connection

The stations proposed are:

- Atlanta Multi-Modal Passenger Terminal (MMPT)
- Hapeville
- Morrow
- Hampton
- Griffin
- Forsyth
- Macon

Appendix II provides the station screening analysis.

It is proposed that the entire corridor be opened at once, with construction starting in 2016 and the system opening for revenue service in 2018. During each workday, there would be a total of 12 round trips (24 one-way trips) made by six train sets (consisting of a locomotive and three cars each). Two of the train sets would operate between Macon and Atlanta, with a total of 4 round trips (8 one-way trips). The other four train sets would operate between Griffin and Atlanta, with a total of 8 round trips (16 one-way trips). Trips would be scheduled to satisfy travel demand in the peak direction (i.e. inbound toward Atlanta in the AM and outbound from Atlanta in the PM), with mid-day demand being served on the “shoulders” of the peak period.

In the future, service frequencies may be increased, more trips may be extended to serve Macon, and infill stations may be added, depending upon market demand, financing and other considerations.

In determining the capital and operating costs, existing plans and studies prepared by other consultants over the past decade were used as the basis for assumptions regarding service planning and the associated capital, operations and maintenance (O&M) cost estimates. The project team did NOT conduct an independent engineering review of design plans, equipment needs or unit costs.

The project team does not validate or endorse the design plans or cost estimates developed by others but did judge them for reasonableness based upon national and regional experience. The summary of capital and operating costs is:

<b>Capital Costs</b>		<b>Total 2016-2018</b>	
Atlanta-Griffin		\$ 260	
Griffin-Macon		\$ 140	
Capital Total		\$ 400	
<b>Operations &amp; Maintenance</b>		<b>Annual</b>	<b>Total 2018-2030</b>
O & M Total		\$ 25.0	\$ 325
<b>Capital + O&amp;M Total</b>			\$ 725

*\* Costs in \$ millions, Source: HDR*

Appendix III provides the detailed service plan and cost estimate.

### **The Market for Walkable Urban Real Estate Development Adjacent to the Stations (RCLCO)**

National and local consumer research consistently points to greater demand for walkable urban environments and the need for increased access to transit, especially rail transit. RCLCO attempted to quantify the share of the market that truly values walkable urban environments and transit in the sense that they will make trade-offs (accept a less than ideal home, accept a smaller home, give up other amenities, etc.) and/or that they will pay more for it. We looked at how these preferences change by age and life stage, by income, educational attainment, and tenure (renter versus owner). To date, the opportunity to live in a walkable environment is a much greater motivator for the residential market than proximity to transit. It is also worth noting that the impacts and level of influence of commuter rail opposed to generic “transit” on market preferences is untested.

In the Atlanta market, living near transit is generally considered a “nice to have” but is not “critical” at the present time. That is, residents and office tenants seek transit, and having transit often expands the market audience and/or market capture of a project. However, it has yet to garner any significant price premiums in metropolitan Atlanta. For instance, historically, apartment communities and office buildings proximate to MARTA are able to sustain higher occupancies than comparable properties lacking MARTA access, but they have not seen such properties achieve pricing premiums. Other comparable metropolitan areas with more rail transit options than metropolitan Atlanta have achieved significant price premiums for office, retail and for-sale residential.

Commuter rail will not have the frequency or level of service of MARTA, and nationally there are few new examples to understand how the market responds to commuter rail. As such, we have developed two market projections, both of which are conservative: (1) the “Base Case” scenario which places *no* emphasis on the impact of rail on market demand, and (2) the “Upside Potential” scenario which places modest impact of the rail on market demand. Conditions may change in the future as the market for walkable urban real estate matures, as has been seen in other metropolitan areas. For these projections, the team also employed conservative assumptions about price premiums resulting from rail transit availability.

This analysis is based on economic forecasts and RCLCO’s estimate of the likely timing of recovery of the housing and real estate market. The next significant growth cycle in Atlanta is assumed to begin in 2012/ 2013 and run through 2019/ 2020. The second major real estate development cycle is assumed to begin in 2024, following three to four years of more moderate levels of growth and

development, and will run through 2030. With rail operational at this point, there are opportunities for more significant levels of real estate development in this second cycle compared to the first.

Historically, the primary direction of growth in Atlanta has been in the northern quadrant of the metropolitan area. This has been where the vast majority of employment and household growth has occurred, attracted by the major concentration of executive housing in the region, growing out the I-75, I-85, and Georgia 400 corridors to the north. The primary office cores marched north from Downtown to Buckhead and on to the third generation office cores at Cumberland-Galleria and Perimeter Center. Fourth generation cores sprang up at North Point/Alpharetta. According to the ARC, 70% of the region’s growth over the past two decades is found north of I-20.

The south side of the metropolitan area experienced lower growth than the north; in particular there has been little growth in regionally-significant employment concentrations. However, since 2000, growth on the south side began to see a pick up, with areas south of I-20 capturing 41% of the region’s growth, though most of that growth was residential and local-serving commercial in nature.

Macon is a distinct market and economy from Atlanta and has its own unique characteristics and directions of growth. Looking at the Macon region, growth historically grew to the north, which is generally positive for development opportunities along the rail line. New and upscale retail, as well as new and higher-end residential development, occurred in northern Bibb County and into Monroe County. Downtown Macon saw limited new growth and development but remains an important commercial center for the metropolitan area.

Based on the macro trends, regional trends, various economic and demographic forecasts, RCLCO consumer research, existing market conditions, and qualitative factors, RCLCO modeled the likely demand for residential and commercial development in each of the identified station areas. Below are the aggregate 2010 – 2030 time period projections for both the “Base Case” and “Upside Potential” Scenarios. Some of the market demand, especially large lot single family uses, is anticipated beyond the station area, defined as ½ mile from the station area. For that reason, station area plans, presented in the next section, allocate those uses considered to be transit-supportive.

Use	Base Case (SF/ units)	Upside Potential (SF/ units)
Regional Office	1.8 million	2.5 million
Local Office	220,000	410,000
Neighborhood Retail	1.5 million	2.8 million
Add'l Regional Retail	740,000	930,000
Small lot SFD	2,900	5,800
TH/ Live-work	1,750	3,600
Flats	3,800	8,200
Rental Apartments	3,100	5,800
Large lot SFD	1,700	2,650

Appendix IV provides detailed analysis of the market assessment.

### **Station Area Planning (HDR, Inc)**

RCLCO's market analysis illustrates the potential for development in association with the proposed passenger rail between Macon and Atlanta. Over the next 20 years, the conservative base case suggests an estimated additional 28,250 population, 3,500,000 square feet of office and commercial uses, and a total of 14,750 housing units are possible along the corridor. The purpose of the Station Area Planning is to demonstrate the ability of the stations along the line to attract and accommodate this estimated growth. As discussed earlier, due to the length of the corridor, 103 miles, the required speed of service, and the need to be able to develop station areas based on market potential, there was a need to reduce the number of stations from 13 to seven between Atlanta and Macon. Further, the station planning process demonstrates that the affected communities cannot develop the stations based on a "Business as Usual" approach. A common planning model is applied to each station that assumes the communities embrace a new development approach, which includes increased densities, intensities, and mix of uses.

Appendix V provides detailed analysis of the station area planning.

### **Traditional Federal, State and Local Financing Sources (HDR, Inc)**

Transportation project sponsors in the United States utilize a variety of mechanisms to finance their project's capital and operating costs. Traditional methods that were used to fund intercity and commuter rail projects range from user fees (i.e., fare revenues) to taxation. As single sources are often times insufficient to cover a project's capital and operating costs, multiple sources are bundled to create funding packages, a "layer cake" approach.

Appendix VI provides an outline of the current Federal, state and local funding sources.

### **Public and Private Local Financing Sources (Bleakly Advisory Group, Inc)**

A range of existing and potential local financing sources were identified that could be used by Georgia counties and municipalities to support the capital and O&M costs of the rail line. The potential local financing sources considered are below. Examples of possible assessments that could be employed were developed, but they are not presented as recommendations, rather as *options* to be considered as part of the financing layer cake. All dollars are quoted in 2010 dollars and are based upon the Base Case growth scenario previously described.

**County Special Assessment Districts**—Due to the substantial existing tax digests in several of the counties along the rail line, creation of a countywide assessment district at a very low millage level of 0.25 mils would generate substantial revenues—increasing from \$9.5 million in 2016 to \$12.8 million annually by 2026. Alternatively, it is likely a corridor-based county assessment district could generate comparable revenue based upon a 0.5 millage rate, exclusive of Lamar County.

**Municipal Special Assessment Districts**—Due to the more limited digest values of the municipalities where the stations are located in comparison to their home county, the creation of a municipal special assessment district would not be very robust. Creating 1 mil, municipal-wide assessment districts would generate \$1.7 million in 2016, increasing to \$2.3 million in 2026.

**Special Purpose Local Option Sales Tax (SPLOST) Allocation**—An allocation of 2.5% of SPLOST funds from counties along the rail corridor would generate significant revenue to support

the rail line. It would grow from \$7.0 million in 2016 to \$9.4 million in 2026. Importantly, it could generate significant funds during the earlier years of the line's operation.

**Tax Allocation District (TAD) Funding**—TAD provides the potential to generate significant revenues to support the operation of the rail line. Annual TAD incremental revenues would increase from \$1.3 million in 2016, when development in the station areas would just be beginning, to \$40.2 million by 2026, and these funds could be used on a pay-as-you-go basis to fund current costs of the line. Alternatively, the growth in the station area TADs would support the issuance of three bond issues totaling \$356 million. The biggest challenge in using TAD funds is that they are limited in the initial five years of the projection period, since they rely on new development occurring to generate revenues.

**Community Improvement Districts (CIDs)**—The analysis of the potential of creating a CID in each of the station areas indicates a relatively modest level of revenue potential. Based on a substantial 4 mil additional assessment in each of the station areas, it would generate only \$600,000 in 2016 and increases to \$1.5 million by 2026. The comparatively modest value of revenues from the CID can be attributed to the relatively low level of commercial property in the proposed station areas, which are dominated by residential development which is exempt from CID assessments.

**Private Value Capture**—The analysis of potential private value capture within the station areas indicated that the developed parcels within the station areas will see their market values increase by \$3.6 billion, more than a five-fold increase, as a result of the creation of the rail line. We have assumed that through negotiation with the land owners and developers, the development authority or authorities along the rail line will be able to capture 15% of the *new* value created from the development sites influenced by the rail transit. This would generate approximately \$135 million in revenue to support the creation of the rail line over the fifteen-year period

The combination of Base Case scenario local revenue sources could generate \$432 million in local revenues between 2016 and 2030. These local-source revenues could generate sufficient revenue to fund all of the operating and maintenance costs associated with operation of the passenger rail line between 2016 and 2030, as well as a portion of the capital costs for the rail line.

Modeling the higher levels of growth included in the Upside Potential scenario indicates there is significant additional revenue that could be generated for the rail line if this higher level of development can be achieved. In particular, the Upside Potential development created from capturing more of the regional demand for transit-oriented development in the station areas would increase the potential TAD revenues from a total \$452 million in the Base Case to \$801 million in the Upside Potential scenario.

These local revenue sources will not all be available uniformly throughout the fifteen-year development period. In particular, revenue sources based on newly stimulated development, such as TAD and value capture, begin slowly and build throughout the development period. Thus a dynamic combination of development-based revenue sources, along with other broad-based revenue sources, will be required to assure sufficient annual funding, particularly in the early years of the development period.

Appendix VII is the narrative review of the financing options.

## **Conclusions**

The two market scenarios, the Base Case and Upside Potential, are both conservative assumptions about the future local revenues which could be generated to support the capital and O&M costs of the Macon-Atlanta passenger rail corridor. Since there is no one financing source that will pay for either the capital costs or O&M, it is assumed there will be a layer cake of options. This analysis has showed that there are five local revenue options available with over \$100 million of total funding potential. These sources are in order of size (\$ millions in 2010 \$):

Source	Base Case	Upside Potential
Incremental Tax Revenue*	\$453	\$802
TAD Bonds*	356	640
Countywide Assessment	177	177
Private Sector Value Capture	135	248
Countywide SPLOST	129	129

\*Incremental Tax Revenues and TAD Bonds are mutually exclusive and can not be used together

These sources could be employed to fund capital costs or to offset O&M costs, depending on other Federal and state sources of funding. However, it is obvious that considerable local resources can be brought to bear, if there is the local political will to do so.