Future Connections Study
Central Austin Circulator

Austin Streetcar Financing Study

Final Report

May 2007

Prepared for:

Capital Metropolitan Transportation Authority

Austin, Texas

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In Association with:

PB Americas, Inc.

Austin, Texas

EXECUTIVE SUMMARY

Background

Capital Metro retained WHM/HDR (in association with PB Americas, Inc.) to evaluate the costs and benefits of a possible Central Austin Circulator (a.k.a. the Austin Streetcar Project, or the "Project"). The purpose of this study is to provide the basis for discussion among economic stakeholders at the local level in forming a partnership to invest in the Project. These stakeholders include: Capital Metro, the City of Austin, Travis County, the State of Texas, the University of Texas, Austin Independent School District (AISD), and private property owners.

This Final Report describes the Project and its costs and benefits to each of the stakeholders so that they may decide whether to approve an agreement in principle to support the concept of the Project. If an agreement is reached, then the next step would be to enter into negotiations and documentation of a more specific, detailed financing plan.

The Report is organized into the following principal sections:

1. Project Description
2. Potential Project Costs, Benefits, and Benefit/Cost Ratios
3. Possible Project Phasing
4. Funding Concept for the Project
5. Partner Analysis Sheets

Goal of the Project

The initial goal of the Project is to provide public transportation in the central part of Downtown Austin between key activity centers, and to underpin and further their ongoing revitalization. The streetcar system is envisioned as part of a larger regional commuting network. Additionally, the Project is anticipated to produce increases in the value of properties along the line, providing economic development opportunities and benefits.

Description of the Project

The project consists of an approximately 6.7 mile, double tracked, modern streetcar line. The assumed alignment starts near the intersection of 3rd and Bowie Streets in Downtown Austin and ends at 51st Street near the new Dell Children's Medical Center.

Potential Project Costs/Benefits

The total 20 year life cycle cost of the Project is $300 million (expressed in 2008 "NPV" dollars). In other words, if this amount of money was "put in the bank" in 2008, it would cover all capital and operating costs for the next 20 years. The capital cost for the Project is estimated at $210 million. The operating costs over the same period and

expressed in the same terms are estimated to be $90 million. The analysis contained in the Final Report projects a direct quantifiable return to the economic stakeholders of $1.4 Billion collectively in the same time cycle. This means that an investment of $300 m would generate $1.4 B in direct quantifiable benefits.

The report also indicates the amounts that each separate stakeholder stands to gain by the presence of the Project.

Conclusion

The results of the analysis indicate that there is a sound financial/economic/fiscal basis for each of the identified economic stakeholders to commence discussions in support of possible Project implementation. This conclusion is reinforced by significant qualitative socioeconomic benefits which support Austin's vision of its future as a dynamic, growing but environmentally aware metropolitan region with a high quality of life.

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I. INTRODUCTION

This Final Report presents the results of a financing study undertaken by WHM/HDR (in association with PB Americas, Inc.) to explore a possible partnership approach for financing, at the local level, the development of the Central Austin Circulator [a.k.a., the Austin Streetcar Project, or the "Project"]. The goal of the study was to develop and present sufficient information on the Project's concept, costs and benefits (on both an area and beneficiary-specific basis) so as to enable Capital Metro to initiate an informed dialogue with and between economic stakeholders that might be interested in collectively investing in the Project. The anticipated outcome is an "agreement in principle" by potential public and private "partners" on a funding approach so the partners could subsequently proceed into negotiations and documentation of a more specific, detailed financing plan.

During the course of the study, the costs and benefits specific to each potential partner have been reviewed with Capital Metro and the potential partners; feedback was used to further refine plausible development and financing scenarios. While a final "agreement in principle" has not yet been achieved, the study is now sufficiently complete that a specific, realistic, and rational approach may be proposed and considered seriously by all potential partners.

This Report is organized into the following principal sections:

1. Project Description
2. Potential Project Costs, Benefits and Benefits/Cost Ratio
3. Possible Project Phasing
4. Funding Concept for the First Phase
5. Partner Analysis Sheets

II. PROJECT DESCRIPTION

The Project consists of an approximately 6.7-mile, double-tracked, modern streetcar line. The assumed alignment starts in the general vicinity of the intersection of 3rd Street and Bowie Street in Downtown Austin, running east and north through Downtown, past the State Capitol and State Office complexes, through the University of Texas campus, and out Manor Road to a point terminating in the Mueller Redevelopment Project at 51st Street near the new Dell Children's Medical Center. For almost its entire length, the proposed system consists of parallel double tracks set directly into a concrete roadbed that also allows use of that same roadbed by other forms of transport and pedestrians. The current proposed alignment of the Project is shown in Exhibit 1 on the next page.

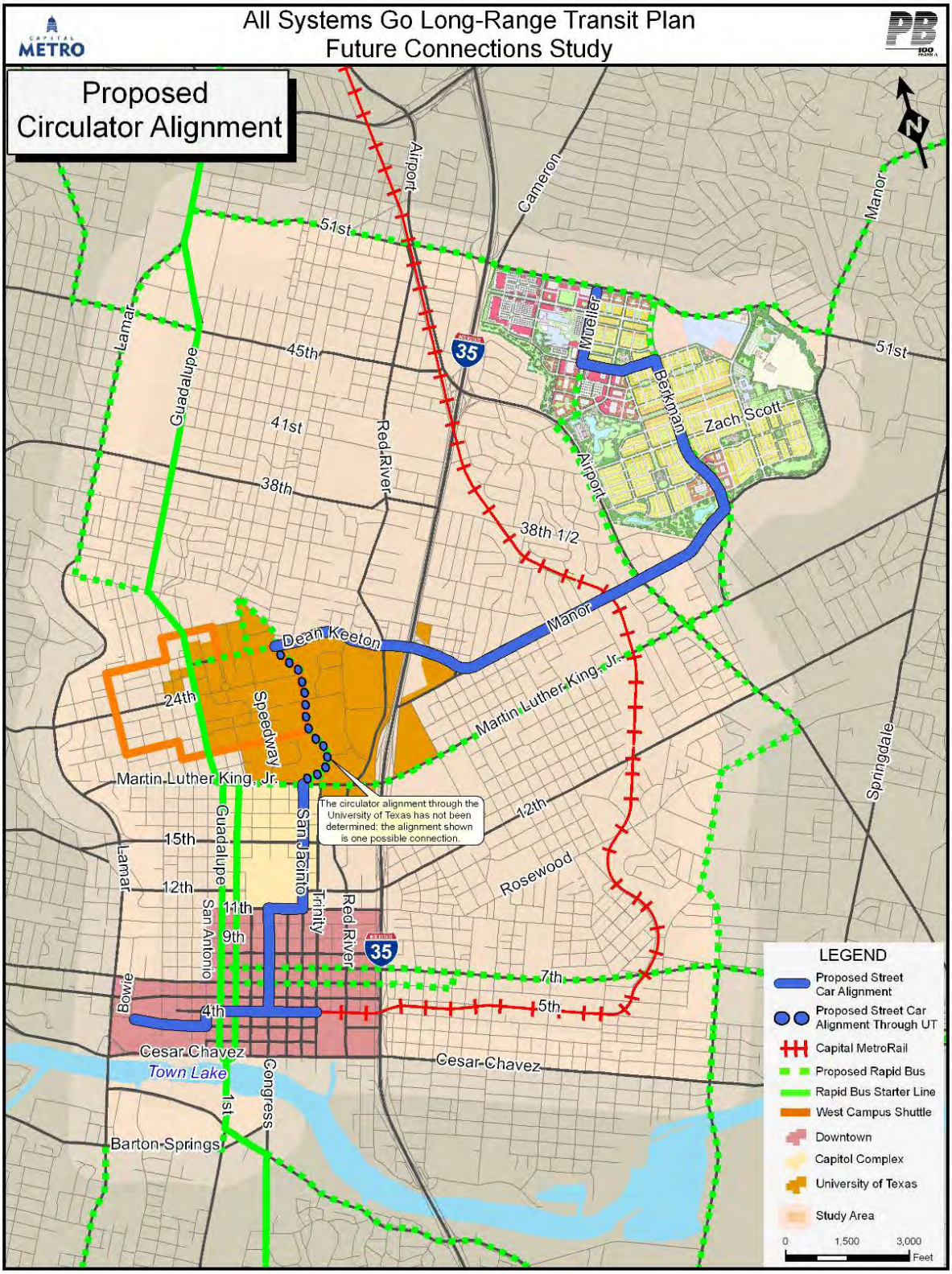
It should be noted that the location of the streetcar line through the University of Texas Campus is contingent upon final approval by the Board of Regents of the University of Texas as to their preferred alignment.

The principal use of the streetcar is seen as an attractive and reliable means of moving people on short trips between various destinations along the line. This first streetcar routing is seen as a downtown transit "backbone" that will be extended over time and connected to other transit modes to facilitate additional downtown and regional travel.

The initial goal is to provide public transportation in the central part of downtown Austin between key activity centers. Over the longer term, the streetcar system is envisioned as part of a larger regional commuting network, and is anticipated to expand as new development opportunities are created along its route, parking becomes more limited, and automobile commute costs and times rise. The Project will have two points of intersection with the Capital MetroRail commuter rail line (the latter opening in the fall of 2008). These factors, plus planned expansions of other elements in Capital Metro's transit network, will progressively improve the Austin area's transit travel experience.

The Project will initially utilize ten (10) modern streetcar vehicles (maximum individual capacity of 125 passengers – seated and standing) with up to nine (9) vehicles operating at any given time. Projected travel time from line end-to-end will average about 32 minutes, allowing for consistent 10-minute headways (the time interval or distance between two streetcars traveling in the same direction over the same route). The Project could be built in a single phase, or in two or more phases as discussed later in Section IV. If an election were held in November 2007, and the Project was approved by the electorate, the development schedule calls for commencement of construction in 2008 and initial passenger travel in 2010 or 2011.

Exhibit 1


All Systems Go Long-Range Transit Plan
Future Connections Study
Proposed Circulator Alignment
Airport
Cameron
Manor
51st
Lamar
Guadalupe
45th
41st
38th
Red River
35
Mueller
Berkman
Zach Scott
38th 1/2
Dean Keeton
Martin Luther King, Jr.
24th
Speedway
The circulator alignment through the University of Texas has not been determined; the alignment shown is one possible connection.
15th
12th
11th
9th
San Jacinto
Trinity
San Antonio
Rosewood
Springdale
Bowie
4th
7th
5th
Cesar Chavez
Town Lake
Congress
1st
Barton Springs
LEGEND
Proposed Street Car Alignment
Proposed Street Car Alignment Through UT
Capital MetroRail
Proposed Rapid Bus
Rapid Bus Starter Line
West Campus Shuttle
Downtown
Capitol Complex
University of Texas
Study Area
0
1,500
3,000
Feet

It has been anticipated that streetcar fares would not exceed Capital Metro's maximum bus fares, and that free bus/streetcar transfers could be provided. Depending on the finance and operations plan developed, the system could allow riders unlimited access for a fixed monthly or annual fee, which may be paid by riders via indirect means (e.g., employee benefits, student fees, parking passes, and the like). A system where individual trips appear to be "free" to the rider would help maximize use, thus boosting the overall regional social, economic and fiscal benefits gained through maximum ridership[1].

All decisions concerning fares, ticketing, passes, etc. will be made by the Capital Metro Board of Directors.

[1] In this scenario, directly charging riders on a per ride basis could still be retained as a contingent option to be used in the event it becomes necessary to "ration" use of the Project due to excess popularity ("congestion pricing") and/or to raise funds for additional vehicles to reduce headways or to extend service hours.

III. POTENTIAL PROJECT COSTS, BENEFITS AND BENEFITS/COST RATIO

Project Costs

The Project's overall cost consists of two elements: 1) the capital expenditure necessary to plan, design, build, and equip the Project; and, 2) operating costs to start and subsequently operate and maintain the Project on an ongoing basis. For the purposes of analyzing a possible financing partnership, a 20-year time period has been assumed starting with the date the Project opens for passengers. This time horizon corresponds with the approximate low-end of the life cycle of streetcar vehicles (which represent a significant part of the entire capital investment) and also a reasonable mid-point in terms of the length of financing instruments (e.g., bonds or loans with 10 to 30 year terms). This time horizon provides the necessary time to realize some of the typical real estate and other value "paybacks" of such a Project. Limiting the analysis to a 20-year time horizon as the framework for determining benefits and investment payback also creates a conservative scenario where subsequent additional and/or higher benefits become a welcome "unexpected" public gain.

The planned total capital investment of the Project is presently estimated at approximately $210 million[2]. The 20-year operating cost from system opening is estimated to be $90 million[3]. Both costs are expressed in terms of 2008 dollars, and have been determined by first projecting them forward to their respective years of expenditure (including specified inflation factors) and then discounting back to 2008 dollars, using a blended average interest (discount) rate of 6%. Thus, the total 20 year "life cycle" cost of the whole system is estimated at $300 million. Total costs, and their breakdown into capital expenditures and operating costs, by principal line item, are shown in Table 1 below:

[2] Parson Brinckerhoff "Future Connections Study: Alternatives Evaluation: Final Report" (November, 2006). Used as a base with subsequent revisions by Capital metro staff. The $210 million used here assumes maximum utility relocation expenses, construction escalation at 5%/yr, and discounting to 2008 at 6%/yr. Detailed cost assumptions (capital and operating) are contained in Appendix 2.

[3] ibid. Based on a full system operation figure of $5.8 million/yr expressed in 2006 dollars. Escalated forward annually at 3.5% for inflation and then discounted back to 2008 at 6% for inflation and financing.

Table 1

CAPITAL Investments: (millions of 2008 $)		
ROW, Property, and Fixed Infrastructure		$120
Utility Relocations		$50
Rolling Stock and Training		$40
TOTAL: Discounted @ 6%		**$210**
OPERATING Costs: (millions of 2008 $)		
20-year Gross Costs (years 2011-2030)	$195	
TOTAL: Discounted @ 6%		**$90**
COMBINED TOTAL: 20 Year System Investment		**$300**

** These costs represent 2006 costs projected forward to year of occurrence with capital investment escalation at 5%/yr and operating cost inflation at 3.5%/year; and then all discounted back to 2008 at 6%. The year 2008 is used as the "base start date" for an approved formal financing plan.*

Project Benefits

The Project will benefit the general Austin metropolitan region as a whole as well as many specific constituencies within. Projected benefits have been organized in five major categories:

1. Increased Use of Public Transit
2. Reduction in Adverse Environmental Impacts
3. Direct Fiscal Gains
4. Property Value Increases Along the Line
5. Broader Community Benefits

Increased Use of Public Transit:

Public transit convenience and greater acceptance leads to increased ridership. The Project's key purpose is to serve as a "pedestrian accelerator," transporting people over short distances, quickly, frequently and enjoyably. Since streetcars tend to be more popular with a wider spectrum of the public than buses, "new" riders are attracted to public transit. A high level of customer acceptance coupled with travel convenience not only leads to higher ridership, but an increase in the public's support for public investment in streetcar infrastructure.

Ridership estimates within this report only address the streetcar; yet, the ability to move easily within the streetcar corridor without an automobile supports other transit modes. Experience in other jurisdictions around the country suggests that ridership on the Capital MetroRail and on connecting bus routes may rise once a streetcar system is in place. Ridership forecasts project that the Project will accommodate 4.2 million trips/yr in its first year of stabilized operations (2017), with this number rising to as many as 4.8 million trips/yr by 2030.

An analysis of the projected origination and destination points of streetcar trips[4] demonstrates approximately 28% of the trips will be associated with downtown stops and 23% with University of Texas (UT) locations. Manor Road locations will generate 21% of all boardings, with a large proportion tied to UT. Table 2 below provides more information on the origin/destination breakdown of the daily trips.

Table 2

DAILY TRIP BOARDINGS/EXITINGS: 2030		
LOCATION OF STOP	**BOARD-INGS**	**% of TOTAL**
Mueller	**1,950**	**15%**
Manor	**2,700**	**21%**
University of Texas	**3,100**	**23%**
State Capitol and Offices	**1,700**	**13%**
Downtown	**3,650**	**28%**
TOTAL	**13,100**	**100%**

Reduction in Adverse Environmental Impacts:

The reduction in automobile use in the congested central Austin area by people shifting to an alternative mode of transportation creates another set of benefits:

Trip Reductions and Road Cost Savings: An estimated 5,000 daily automobile trips are expected to be eliminated by use of the streetcar based on the trip generation statistics indicated in Table 2 and expected travel behavior patterns (i.e., would the person have otherwise driven?). This reduction in automobile use results in an annual savings preliminarily estimated to be approximately 3 million vehicle miles/yr on City of Austin streets, and another 1.4 million vehicle miles/yr on TxDOT arterials.[5] Over the 20-year analysis period, the City of Austin and TxDOT will be able to avoid a portion of the street maintenance and road re-building expenditures that would have been generated by a higher level of automobile use. It is also possible that future plans to improve Manor Road due to anticipated increased traffic from the Mueller Redevelopment Area to central Austin can be scaled back which would lead to additional cost savings.

[4] Correspondence with the Parson Brinckerhoff team that prepared the "Future Connections Study" cited in Footnote 2. More fine grained "origin and destination" surveys can be undertaken in a next phase of streetcar planning and give a more refined view on who may most benefit from using the system. For example, many of the Manor, Mueller and Downtown trips may also be associated with University of Texas ridership.

[5] For example, if there are 13,100 trips a day in 2030; reasonable starting "order of magnitude" assumptions might be that 30% are "streetcar induced", and 20% might be mode switch from buses currently operating along parts of the route, and the remaining 50% (6500) might be switches from autos. At 1.3 occupants per vehicle average that equals 5000 automobile trips a day saved. Average trip length is say 2.4 miles saving 12,000 vehicle miles/day or 4.4 million/yr.

Parking Facility Reductions: Elimination of automobile trips discussed above is expected to reduce the need for approximately 1,800 to 2,000+ parking spaces at destinations along the Project route[6]. This number may trend even higher as people living in streetcar accessible areas are more likely to use transit as opposed to owning or using a second car; the availability of Austin Carshare may also decrease the need for a second car. The minimum reduction of 1,800 spaces is estimated to be distributed approximately as follows: 450 parking spaces saved on UT Campus, 550 spaces saved elsewhere along the route in the Downtown area, 250 parking spaces saved at State Capitol/State office buildings; and 550 spaces saved in areas east of I-35. Savings (estimated at $25,000/space as the combined total of capital investment in structured parking and the net present value (NPV) of 20 years of operations and maintenance costs), could total the following: $12 million for UT; $6 million for State of Texas; and $14 million for property owners in the Downtown area.

Pollution and Congestion Reductions: Due to the 5,000 daily automobile trips saved, the Project will directly reduce tailpipe exhaust pollutants as well as water/road runoff pollutants. In addition, cumulative congestion on major arterials in the central Austin area will be reduced, resulting in slight savings in travel time, fuel use, and pollutant reductions by each of the many other drivers passing through the area each day.

Direct Fiscal Gains:

Property Taxes: Property rents and values along fixed rail lines and at associated transit stops command a premium over sites typically more than ¼ to ½ of a mile distant from the line. The premiums derive from two primary sources: (i) nearby property users (e.g., residents, shops and businesses) willing to pay a rent "proximity premium" (typically 10 - 20% additional rent for same size and quality of construction per unit compared to space not within ½-mile), and (ii) added property value due to anticipation of additional density that may be permitted on parcels served by transit (e.g., more units or building square feet per acre), as well as capital savings through the need to build less parking infrastructure.

For streetcar lines with stops every few blocks, these premiums tend to be distributed fairly evenly over the length of the streetcar route for a distance of 2 to 3 blocks deep along the line (extending outwards perpendicular to line on either side). This is distinct from heavy or light rail, where stations are a greater distance apart; density and rent premiums concentrate immediately around the station with little impact along the line more then ½ of a mile from the station.

All of these factors suggest that property value increases will occur early in the Project cycle (even prior to the actual commencement of Project operations) and continue to increase over time. Moreover, because property markets around streetcar routes tend to respond quickly and to capitalize early on future benefits, this leads to an accelerated

[6] For a conservative assumption: above 5000 (round trip) auto number divided by 2 equals 2500 inbound trips only. Assume ½ or 1250 are commuters who would occupy all day parking (1250 spaces) and ½ visitors/patrons using spaces with approximately 3 turns/day equals 400 spaces, with some allowance for peaking – say 150 spaces equals 1800 spaces total.

increase in assessed values. The higher assessments represent a true streetcar-induced increase in total property value (and property tax revenue to the City, County, and School District); not simply a shift in value from other locations within the taxing jurisdictions. Also, the presence of the streetcar line is likely to slightly increase the taxing jurisdictions' total market share of new regional development, and not just shift development away from other parts of the jurisdiction where they may have gained the taxes anyway.

First order magnitude estimates of these fiscal impacts have been prepared by various consultants for the Downtown, Manor Road, and Mueller Redevelopment Area segments of the line. A summary of these analyses is shown in Table 3:

Table 3

Increase in Estimated Tax Collections to 2030 Due to Streetcar over and above Normal Growth (in $ millions, discounted at 6% to 2008)*				
	City of Austin	**Travis County**	**AISD**	**TOTAL**
Downtown	$52	$57	$188	**$296**
Manor	$10	$11	$35	**$56**
Mueller	$7	$ 8	$27	**$43**
TOTALS	**$69**	**$75**	**$250**	**$394**

** These numbers represent the projected difference (i.e., increase) in property tax collections by each respective taxing jurisdiction over and above what would be collected between now and 2030 compared to what would occur without the streetcar effect, using current 2006 tax rates. The increased taxes collected in any particular year, say 2027, are discounted backwards to 2008 at 6% and the results for all years summed. Errors in totals due to rounding to nearest $1million in individual cells.*

The numbers in Table 3 represent the NPV of future fiscal benefits received by each taxing jurisdiction due to the "streetcar effect" and would accrue regardless of any specific measure to sequester them via a particular legal mechanism to directly finance the streetcar (e.g., a Tax Increment District). The amount of money that might be captured by a Tax Increment District specifically set up for streetcar and/or other types of revitalization financing is a separate calculation that varies depending on the defined boundaries of a proposed district, the "base year" and exclusions specified, the parties participating, and the percentage of any "increment" specifically made available for the streetcar financing (e.g., 40, 60, …100%)

Table 3 indicates that City of Austin would receive a projected $69 million in added tax revenues, the County $75 million, and the AISD $250 million over the next 20 years due to the presence of the streetcar line. These benefits total $394 million (expressed in 2008 dollars), or approximately one hundred and twenty percent (120%) of the similarly expressed total cost of the streetcar for the same time period (i.e., thru 2030).

<u>Sales Taxes and Other Forms of Revenue:</u> Use of the line will increase economic activity along its length, such as daytime workers traveling to lunch and shopping

destinations, or residents, UT students and visitors traveling to evening entertainment, eating and shopping venues. Some of this will be new and "induced" economic activity that would not have otherwise occurred in the absence of the line; some of it will be activity that would have otherwise occurred in more distant suburban jurisdictions outside the taxing boundaries of the sponsors; and, some of it would have occurred anyway and elsewhere in the taxing jurisdictions. At this point, this benefit has not been quantified, but it would add to the line item revenue sources in the City of Austin's and some of the other taxing jurisdictions' budgets (e.g., sales taxes, business licenses, etc.).

Property Value Increase Along the Line:

As explained earlier, the value of existing property (land and buildings) along the line can be expected to increase significantly due to the premium associated with both being proximate to "fixed" public transit, and with the added density and accelerated pace of development that may be obtained.

The total amount (NPV expressed in 2008 dollars) of the projected property value increase accruing to private owners alone attributable to a new streetcar line is shown in Table 4. It should be noted that this value increment does not include the value of additional new construction, but rather reflects how much existing properties could increase in value.

Table 4

Property Value Increase Generated: Private Property ($ millions of 2008 dollars)*	
Downtown	**$516**
Manor	**$62**
Mueller	**$86**
TOTAL	**$664**

** Total projected increase in value of existing privately owned land and buildings in the various areas due to the presence of the streetcar. These increases would reasonably be expected to have been capitalized into property values within 2 or 3 years of the line opening for operations. Property values would begin to rise to the higher levels once the streetcar project is formally funded and design and construction is considered irreversible.*

This wealth increase alone is over twice the total 20-year investment required for the Project and its operation, and also far exceeds the combined total of the other direct fiscal benefits listed above. Similar property value increases were the principal reasons that led land developers, power companies, and other speculators in most midsize to large U.S. cities to sponsor and privately finance the costs of streetcar lines in the late 1800's and early 1900's. These investors understood that the initial expenditure would be more than repaid by the increase in land and building values in their portfolios, and that development would accelerate in the streetcar-connected suburbs. This factor was

at play when M. M. Shipe opened the Austin Rapid Transit Railway Company in 1891 to access his developments at Hyde Park north of the Downtown area.

On the public sector side, the City of Austin, State Government, UT, and Travis County all own developable properties within 3 blocks of the proposed route alignment that would increase in value if the Project is built. This value is potentially directly recoverable through sale and/or lease of these properties (e.g., via public-private development partnerships) and/or could be leveraged through various financing techniques. Table 5 below shows an estimate of the amounts of value increase likely to accrue amongst the different parties holding these developable properties. These do not include increases in the value of properties unlikely to redevelop over the 20-year time period (e.g., City Hall, Convention Center, State or UT principal function buildings).

Table 5

Property Value Increase Generated: Developable Public Properties ($ millions of 2008 dollars)*	
City of Austin	**$ 77**
Travis County	**$19**
State of Texas	**$59**
University	**$70**
TOTALS	**$225**

** Includes vacant land, and underutilized facilities (e.g., low density buildings, parking garages, and other uses) that would be ripe for redevelopment within the next 20 years, especially if there is substantial surrounding "streetcar induced" development. In each case we have estimate the value of development based on assumptions as to what might be the highest and best use of the property with streetcar, and subtracted from that its value without streetcar.*

Community Benefits:

The fact that the direct financial/economic/fiscal benefits are strong provides compelling reasoning for undertaking the Project. Yet, opening of the streetcar line will yield other substantial benefits that will individually and collectively, over time, add to the quality of life and success of Austin as a dynamic, desirable and thriving metropolitan area. These qualitative factors are important to the region's citizens, voters and stakeholders, and are benefits that most people identify with and appreciate. Each participating Partner can demonstrate that it is acting in a prudent and fiscally responsible manner, *and* that it is supporting the Project on behalf of the larger socioeconomic goals and values contained in Austin's "Vision" of its future as a metropolitan region as follows:

Regional Development and Competitiveness

- An investment in realizing the Envision Central Texas goal of more intense development in the center.

- A dynamic central Austin; paramount in producing regional economic development.

- Further strengthening of Austin's reputation as a "cool city" – one with a rich mix of interconnected, easy to access, pedestrian oriented entertainment, cultural, educational, recreational and other venues attractive to the types of skilled workers the region seeks to attract and retain.

Transportation

- Convenient and safe travel for those who cannot or do not want to drive (teens, elderly, handicapped).

- Some "insurance" against sudden future constraints on the automobile-oriented transportation system, such as high gas prices or outright supply shortages.

- The "backbone" of a future transit system that can generate "economies of scale" and interconnectivity as more lines are added and a greater proportion of development locates along transit lines in the future.

- A decrease in bus traffic on Congress Avenue (by 50 - 80% - depending on route/service specifics) which will improve the ambiance and appeal of Congress as a retail shopping street.

Benefit/Cost Ratio[7] for the Entire Project

The directly quantifiable Project benefits to all of the participants collectively are 4.7 times the 20-year investment, as summarized in Table 6. This large benefit to

[7] Those "benefits" measured here in dollar terms represent either the net present value of specific income or cost savings flows over the next twenty years (e.g. property taxes, parking O & M costs) or capitalized values (e.g. cost of building a parking space, or capitalized value of rent premiums due to streetcar presence, etc.) It could be argued that the portion of residual value remaining in these assets (buildings, land) at the end of the 20 years and attributable to streetcar should perhaps be discounted back to the 2008 measuring date and subtracted out from the totals as representing benefits accruing from beyond the 20 year measuring period. However, to the extent that these are private investment assets, the "blended investment" discount rates on these items would be fairly high (typically 9-15%/year) meaning the NPV of the future residuals that should be subtracted would be in the order of 10 to 20% of the respective asset's residual value. While perhaps academically correct to discount these benefits in a true economic cost benefit analysis, in the subject case it is more complicated: (i) we did not similarly subtract from the streetcar costs the residual value of those components lasting more than 20 years (e.g. the land and maintenance barn, the tracks, or electrical substations, utilities, etc) (ii) we did not calculate the residual value of the property tax gains from beyond 20 years and (iii) the property owners, for example, who hold the assets that increase in value can obviously cash out at any time and immediately pocket the full effects of all the future benefits! (much as the holder of Google stock can realize the benefits of infinitely long term future profit streams by cashing out today).

Benefits in the sections that follow have therefore been collectively aggregated to allow an approximate basis of comparison to the investment in the system. In general, the approach has been to translate future benefits into a net present value (expressed in 2008 dollars) to compare to the system costs, similarly expressed. There can be some variance in results achieved based on varying assumptions as to the discount rates, inflation rates and durations applied to each benefit and cost stream, but overall, the resulting totals for the 20 year life cycle are believed to provide sound "order of magnitude" estimates of the ratio.

investment ratio presents a compelling argument for the parties to implement the Project, one that is additionally supplemented by the qualitative factors previously listed.

With a cooperative effort, all potential Partners can benefit substantially. As long as each Partner's benefits exceed its investment, the Project will improve each Partner's financial status as opposed to no Project being implemented. A goal of "equalizing" each Partner's return relative to its investment is virtually impossible to achieve due to the diversity of the individual partners and benefits. A standard of exact proportionality is extremely rare in public-public partnerships. First, it is difficult, if not impossible to precisely quantify the benefits each partner may receive relative to its investment because even the quantifiable benefits are subject to estimations. Second, some of the benefits are not purely economic, but are socioeconomic, quality of life benefits or other benefits not easily subject to quantification. Third, the degree of value each potential partner places on quantifiable versus non-quantifiable benefits is unique to their own philosophies, needs and calculation.

Table 6

Benefits/Costs Summary ($ millions of 2008 dollars)	
BENEFITS:	
Cost Savings	**$60**
Fiscal Revenues	**$394**
Property Value Increases	**$889**
Other*	**$60**
TOTAL BENEFITS	**$ 1,403**
TOTAL COSTS	**$300**
Benefits/Cost Ratio	**4.7 to 1**

Includes only those benefits which could readily be converted into monetary equivalents. The total is less than the sum of all individual partner benefits shown in Sections VII XIII due to the elimination from this table of any benefits that may be subject to possible double counting or that were more speculative in nature.

** This category includes the following three items: (i) $10 million in potential revenue from advertising and naming rights over the 20 years (ii) $10 million in increased Federal and State formula operating grants to Capital metro due to increased hours and miles of passenger vehicle operation and (iii) "imputed" ridership value to each passenger carried on the Streetcar, calculated at $1 per passenger and discounted to 2008. = approximately $40 million.*

IV. POSSIBLE PROJECT PHASING

Notwithstanding the large benefit to investment ratio for the overall Project, it is possible that some of the potential Partners are not in a position to reach an early decision on participation due to a wide variety of factors. Other potential Partners indicated an interest in early participation, but possibly at a reduced financial level.

As a result, it became logical to explore whether a "phased development" approach presents a viable strategy to overcome these obstacles and enable the Project to proceed, with additional partners and expansions to follow initial successes.

A low-risk phased approach does, in fact, appear possible. A "First Phase" could complete the streetcar line from its "origin" in the vicinity of 3rd Street and Bowie through the Downtown and State Capitol areas out to Martin Luther King Boulevard. This phase might comprise only 1/3 of the length of the entire line currently being considered, yet account for most of the immediate ridership and the bulk of the longer term benefits. Later phases could extend the line through the UT campus and on out to Mueller. This approach captures the majority of early and ongoing benefits with a lesser level of investment.

Table 7 compares the Benefits/Cost Ratio of the entire Project with that of the described "First Phase". Such a "First Phase" reduces the projected 20-year costs by 57% from $300 million to $130 million, while benefits only decrease by 27% from $1,403 million to $1,027 million. The Benefits/Cost Ratio for the "First Phase" is a very favorable 7.9:1 compared to 4.7:1 for the entire line currently being considered.

The end result of this "First Phase" approach is a more manageable funding proposition which provides substantially better benefits to cost ratios.

Table 7

Benefit/Cost Ratios: Total Project vs. "First Phase" (Combined Capital and Operating) (in millions of 2008 dollars)		
Benefit	**Total**	**Phase 1**
Cost Savings		
Parking Garages	$45	$28
Utility Upgrades	$15	$ 8
	$60	**$36**
Fiscal Revenues		
City	$69	$52
County	$75	$57
AISD	$250	$188
	$394	**$297**
Property Value Increases		
Private	$664	$516
Public	$225	$150
	$889	**$666**
Other		
Naming Rights/Advertising	$10	$5
Federal Grants	$10	$3
Ridership Value	$40	$20
	$60	**$28**
Total Benefits	**$1,403**	**$1,027**
Cost	**$300**	**$130**
Benefit/Cost Ratio	**4.7**	**7.9**

V. FUNDING CONCEPT FOR THE PROJECT

At this point, no single allocation has been proposed or agreed upon by the various potential Partners. However, sufficient analytical work has been completed and discussions held to begin identifying possible target ranges of participation in the entire Project by the various potential Partners. Based on this work, a "test" allocation is provided below in Table 8.

When an actual agreement is reached among the Partners, Table 8's final column ("Agreed Amounts") can be completed to provide the "agreement in principle" needed to advance the Project to the next step. This "agreement in principle" would reflect the various Partners' respective individual evaluations of benefits received and their specific resources available now and in the future. Their individual commitments should be at a level sufficient to fully fund the Project, and the Partners would then direct their staffs to refine these estimates and negotiate the specifics of a financing plan over coming months.

Table 8

Range of Test Investment in the Streetcar Project (Combined Capital and Operating Costs) ($ millions of 2008 dollars)		
Partner	**"TEST"**	**"AGREED"**
Capital Metro	**$70**	
City of Austin	**$80**	
Travis County	**$50**	
AISD	**$ 0**	
State of Texas	**$25**	
University	**$25**	
Other Property and Business Owners	**$50**	
TOTAL	**$ 300**	

VI. PARTNER PERSPECTIVES

In the following sections, benefits and investment are shown for each possible Partner on a complete Project basis. The investment range shown for each potential Partner reflects varying assumptions as to how the benefits received by that Partner may relate directly to the total produced by the system. The proportions vary depending upon the factors considered by each Partner (e.g., ridership and other non-monetary benefits vs. purely fiscal revenues), providing a starting point for a range to determine each Partner's possible investment share.

For each potential Partner, a possible menu of resources is identified from which to draw to fund its share of the Project system investment. This menu is not comprehensive, nor have estimates of magnitude for many of the items been generated. Each Partner can make its own internal choices of funding sources that is most convenient or appropriate to its particular needs. The menu for each Partner is presented simply to highlight categories of "streetcar related" resources that have been typically used in other locales to support funding for similar type projects and that the particular Partner might wish to consider for funding.

While the determination of the share level itself is based upon the parallel process of investment/benefit calculation and resultant negotiations amongst the Partners, the financing source(s) each chooses for its respective share may be more a case of convenience and/or lowest cost source of funds, consistent with each funding entity's other financial capacity priorities and considerations.

VII. PARTNER ANALYSIS SHEET: CAPITAL METRO

Capital Metro is unique among the Partners in its role as the owner/operator of the Project and as an "agent" acting for the benefit of the other Partners. It does not own any significant property along the line nor does it have power to tax property. Its revenue sources do not vary significantly with the advent of a streetcar. Benefits flow through to its riders, and the businesses, property owners, and other stakeholders in its service area. Therefore the benefits described as accruing to the other Partners do not readily apply to Capital Metro. The following sections are limited to discussing general impacts that may occur to Capital Metro if the system is implemented.

Benefits Tests

- Ridership Growth: Other cities implementing rail transit projects, both light rail and streetcars, have experienced ridership growth in the existing transit network (usually bus-based) as a result of two factors: 1) breaking the "transit barrier" for choice riders, and 2) improving the functionality of the transit system for passengers. The first factor is seen when choice riders (people who have access to an automobile (non-transit-dependent)) begin to use the transit system because of the attractiveness of rail transit. Some of these new riders then begin utilizing the bus network as well. The second related factor is seen when existing transit riders take additional trips using transit, due to the new linkages opened by the rail-line. These new trips are often in the form of non-commuting trips previously not practicable by a hub-and-spokes transit network, and better served by the circulatory nature of the streetcar project.

- Fiscal Impacts: Capital Metro does not presently own any properties along the projected line and within 3 blocks of it other than small segments of right of way in the Seaholm Power Plant area. Consequently, Capital Metro would not directly benefit from any property value increment that might be created along the present proposed alignment.

  The Project's physical assets (stops, vehicles, route maps) represent an opportunity to create value through naming rights, sponsorships, and advertising space. These may generate $5 million over the projection period.

  By virtue of operating the system and carrying riders, Capital Metro becomes eligible for some operating grants and subsidies from entities outside the region (Federal and State) bringing in added resources based on ridership and vehicle miles/hours of daily operation. These added revenues are assumed to not total more than $3 million over the projection period.

- Other Benefits: Not applicable.

Share of Total System Costs: 20 years Capital and Operating

- Possible Range for Participation: 20 – 30%
- Test: 23% or $70 million

	Capital Metro
NUMERICAL BENEFITS:	
N/A	
FINANCIAL BENEFITS:	
Operating Subsidies (Federal/State)	$ 10
Advertising/Sponsorship	$ 10
TOTAL - FINANCIAL BENEFITS	**$ 20**
SHARE OF SYSTEM COST	
$300	
Low	20.0%
High	30.0%
TEST	**23.0%**
AMOUNT	**$ 70**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**0.29**

Capital Metro alone, of the various participants, will be expending funds in excess of what it can recover directly as a result of participating in the Project. For Capital Metro alone, the Project creates an additional expense with insufficient new offsetting revenues. The deficit would come out of Capital Metro's general area-wide sales tax funding stream or fares. As a result, Capital Metro's share, if any, of the capital cost component should be realistically calibrated to what it can recover through operating subsidies from other entities, advertising/sponsorships, and, as appropriate, the farebox. The Project Benefits section (III) suggests that the farebox only be used as a last resort to manage rationing if the system becomes congested and to help finance growth of the system. It should not be relied on as a source of revenue to fund daily operations of the line.

Resource Base Available to Capital Metro

Capital Metro has a fairly limited menu of resources for investment in the Streetcar Project. Since it neither owns property along the line nor has a property based revenue source, it will not see any financial gains from the opening of the Streetcar. However, there are some grant funds that would become available from the increased ridership. There are some advertising/sponsorship opportunities, and some station naming rights. These sources would be in addition to such share of Capital Metro's existing general operating funds resources (derived from the sales tax) that it might allocate towards annual operations of the Project. The list is limited to a listing of those additional new funds that may accrue and become accessible to Capital Metro due to implementation of the Project.

Investing $70 million into the Streetcar Project over the period until 2030 would be a very significant committment for Capital Metro.

VIII. PARTNER ANALYSIS SHEET: CITY OF AUSTIN

Benefits Tests

- Ridership Share: The number of City employees and customers to City offices who will ride the streetcar is expected to be a small percentage of the total – perhaps 1 to 2%. However, approximately one half of the total ridership will be to or from Austin businesses, employers, and neighborhoods along the line and these will generate economic gains that will directly impact the City's fiscal revenues and base.

- Fiscal Impacts: Based on studies by Capitol Market Research; PB Consult, Inc.; and HDR, the projected increase (over a No Build scenario) in property tax revenues to the City through 2030 due to the Streetcar (at today's tax rate of $0.41260/$100 assessed value) would total $69 million in 2008 dollars. This is 17.5% of the combined total of such increased property tax revenue benefits to the City, Travis County, and the Austin Independent School District.

  City owned properties[8] susceptible to redevelopment along the streetcar line or within 3 blocks of it are projected to increase in value by $77 million due to the "streetcar effect."

  In addition City offices and facilities will gain implicit value by proximity to the Streetcar line as do other private offices and residences. This increased value has not been estimated, since it would not be available unless the City sold or redeveloped the subject land and buildings.

  The City could also potentially capture additional fiscal streams through Transit Oriented Development zoning overlay districts that granted increases in density or variances in zoning regulations (e.g., reduction in parking ratios) to streetcar oriented properties and required "community benefits" contributions to mitigate any extra impacts.

  The City will also benefit by reduced demand on its streets due to transfer of some automobile trips to the Streetcar. There will be some savings in maintenance and capital costs.

  The City will also obtain some increases in sales tax, licensing, and other revenues. However, these have not been quantified.

  A portion of the projected cost of the system ($15 million) reflects an allowance for more complete relocation and upgrading of City owned utilities over and above an

[8] List includes parcels comprising the Seaholm Power Plant and Water Treatment Plant sites, the West Avenue half-block, and less important sites out Manor Road and near south entrance to Mueller. The City of Austin may or may not be able to directly realize some of this value increase - it depends on the nature of the real estate arrangements it makes with its existing or potential private developer partners for these sites. If the City does not achieve the increase, then the values shown in section XIII (Other Property/Business Owners) should be correspondingly increased.

assumed “base case” of $27 million ($15 million for private utility relocations and $12 million for “unavoidable” City utility relocations). These extra costs are included in the City component estimate as both a cost and a benefit. In the event that the City does not see the benefit and does not want them done at the time of Streetcar construction, then the cost of the project could be decreased by a similar amount.

- Other Benefits:

  The City stands to benefit significantly from the qualitative benefits described in the Project Benefits section. In addition, the City may see some increase in attendance at its museums, cultural, entertainment and sports attractions due to increased convenience of access.

Share of Total System Costs: 20 years Capital and Operating

- Possible Range for Participation: 25 – 35%
- Test: 27% or $80 million

	City
NUMERICAL BENEFITS:	
Road Trip Miles Saved (per day on streets)	8,000
FINANCIAL BENEFITS:	
Property Tax	$69
Property Value Increments: Direct	$77
Utility Reconstruction or Cost Reductions	$15
TOTAL - FINANCIAL BENEFITS	**$161**
SHARE OF SYSTEM COST	
$300	
Low	25.0%
High	35.0%
TEST	**27.0%**
AMOUNT	**$80**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**2.0**

City of Austin receives a direct fiscal benefit of 2.0 to 1 on its investment over 20 years. The return can be substantially higher if the City seeks to recoup any of the private land value gains more directly through such mechanisms as linking density bonuses to community benefits packages, collection of transfer taxes on sales of properties within 3 blocks of the line, etc.

Resource Base Available to City

The City has a variety of available potential funding sources that might provide funding for this investment. The most obvious is to utilize tax increment generated by the presence of the Streetcar to help finance its development and ongoing operation. This could be done either via appropriations from the increased General Fund revenues being received or via the creation of a “streetcar” oriented Tax Increment financing District paralleling the new line. r. Another fairly standard potential source would be development revenues from City-owned land being developed or redeveloped to a higher value. The City also has the potential to negotiate investments in the Streetcar in exchange for development rights such as density bonuses, or reduced parking requirements.

The City of Austin also has a number of line item taxes and fees that might be considered as sources of funds for this project. As well, some portion of revenue from parking meters and garages could be a source of funding. Finally, a limited portion of existing and potential grant funds (from Federal and State sources) may be available to finance specific elements or aspects of the project (e.g. CDBG and EDA grants for specific community oriented aspects of the project). Elevated utility hookup fees to new users located within a few blocks of the line (and benefiting most from its added development potential and effects on property values) could be another source of revenue.

Unlike many other cities, Austin owns its Electric Utility. Since the Streetcar operates on electricity, offering a reduced electrical rate for the Streetcar operation could be a significant in-kind source of funding. Alternatively, the Electric Utility could invest in some portion of the electrical distribution system in return for gaining the Streetcar as a major user of electricity.

IX. PARTNER ANALYSIS SHEET: TRAVIS COUNTY

Benefits Tests

- Ridership Share: The number of County employees and customers to County offices who will ride the streetcar is expected to be a small percentage of the total – less than 1%. The County's ridership use could increase in the event that some portion of the County's downtown offices was shifted along the streetcar line, in particular along Manor Road.

- Fiscal Impacts: Based on studies by Capitol Market Research; PB Consult, Inc.; and HDR, the projected increase (over a No Build scenario) in tax revenues to the County to 2030 due to the Streetcar (at today's tax rate of $0.4499/$100 Assessed Value would total $75 million in 2008 dollars. This is 19.1% of the combined total of such increased property tax revenue benefits to the City, Travis County, and the Austin Independent School District.

  County owned properties susceptible to redevelopment along the Streetcar line or within 3 blocks of it are projected to increase in value by $19 million due to the "streetcar" effect.

  In addition County offices and facilities will gain implicit value by proximity to the Streetcar line as do other private offices and residences. This increased value has not been estimated, since it would not be available unless the County sold or redeveloped the subject land and buildings.

  The County will also obtain some increases in sales tax, licensing and other revenues. However, these have not been quantified.

- Other Benefits: The County stands to benefit significantly from the qualitative benefits described in the Project Benefits section (III).

Share of Total System Costs: 20 years Capital and Operating

- Possible Range for Participation: 12 - 20%
- Test: 17% or $50 million

	County
NUMERICAL BENEFITS:	
N/A	
FINANCIAL BENEFITS:	
Property Tax	$57.0
Property Value Increments: Direct	$19.0
TOTAL - FINANCIAL BENEFITS	**$76.0**
SHARE OF SYSTEM COST	
$300	
Low	12.0%
High	20.0%
TEST	**17.0%**
AMOUNT	**$50**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**1.5**

Travis County receives a direct fiscal benefit of 1.5 to 1 on its investment over 20 years.

Resource Base Available to County

Travis County has fewer potential funding sources to loo9k to for funding the Streetcar than the City does. The most obvious source is the increased property tax revenue that would be generated by the Streetcar's effect on development and, as in the case of the City, this could be accessed either through its General Fund, or the creation of a dedicated Tax Increment Financing District.

The County also has some properties with real development potential that would be positively affected by the Streetcar and could generate revenues towards Streetcar funding.

X. PARTNER ANALYSIS SHEET: AUSTIN INDEPENDENT SCHOOL DISTRICT

Benefits Tests

- Ridership Share: The number of School District employees and students who will ride the streetcar is expected to be a very small percentage of the total – fewer than 5% of the total.

- Fiscal Impacts: Based on studies by Capitol Market Research; PB Consult, Inc.; and HDR, the projected increase (over a No Build scenario) in tax revenues to the County to 2030 due to the Streetcar (at today's tax rate of $1.493/$100 Assessed Value would total $188 million in 2008 dollars. This is 63.4% of the combined total of such increased property tax revenue benefits to the City, Travis County, and the Austin Independent School District.

  There may be opportunities to combine some of Capital Metro's and the AISD's vehicle maintenance facilities, with resultant savings to the AISD.

- Other Benefits: The District stands to benefit from the qualitative benefits described in the Project Benefits section (III).

  The District's ability to upgrade its delivery of a high quality level of education can be directly improved by the Streetcar project in two ways:

  - The substantial added fiscal revenue to the District mentioned above[♦].

  - Streetcar access to AISD students will increase their ability to freely access the rich cultural and educational opportunities in the Downtown-State Capitol-University of Texas corridor.

[♦] State law concerning school district finance, including revenue sharing among school districts, restrictions on tax-increment financing, and other specific legal matters have not been explored in this report. The analysis presented herein should be regarded as preliminary in nature.

Share of Total System Costs: 20 years Capital and Operating

- Possible Range for Participation: 0 – 3%
- Test: 0% or $0 million

	Austin Independent School District
NUMERICAL BENEFITS:	
N/A	
FINANCIAL BENEFITS:	
Property Tax	$188
Maintenance Cost Savings	$2
Transportation Services	$1
TOTAL - FINANCIAL BENEFITS	**$191**
SHARE OF SYSTEM COST	
$300	
Low	0.0%
High	3.0%
TEST	**0.0%**
AMOUNT	**$0.0**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**Infinite**

Austin Independent School District receives a very large direct fiscal benefit due to the presence of a streetcar. In essence, development of the Project should result in a substantial opportunity to improve the quality of Austin education, by virtue of strengthening the fiscal base of the District. While the ability of the District to directly participate in the funding of the Project may be limited due both to its charter and the operation of State law, it may be able to offer limited financial support through purchase of travel passes for students, faculty and staff; and/or by consolidation of vehicle maintenance operations with Capital Metro and thereby using and funding a portion of Capital Metro's maintenance operations through a line item in District's vehicleoperations and transportation budgets.

Resource Base Available to Austin Independent School District

Notwithstanding the large amount of increased tax revenues likely to accrue to the AISD, it is difficult to imagine ways the District might directly financially support the Streetcar given constitutional, political and legal restraints on its spending decisions. There may be some potential savings that could be passed on to the project in the form of cost sharing with regard to vehicle maintenance (use of a joint maintenance facility and team); and there may be some up front or ongoing funding that could be offered so that AISD staff and students could have unlimited access to Streetcar use.

XI. PARTNER ANALYSIS SHEET: STATE OF TEXAS

Benefits Tests

- Ridership Share: The number of State (excluding UT) employees and customers to the Capitol and State offices who will ride the Streetcar is expected to be approximately 13% of the total.

- Fiscal Impacts: State will not derive significant direct incremental fiscal impacts from tax revenues. Most of its fiscal benefits will come in the form of property value increases and cost avoidance.

  State owned properties susceptible to redevelopment along the Streetcar line or within 3 blocks of it are projected to increase in value by $59 million due to the "streetcar" effect. Particularly noteworthy are the State's holdings along San Jacinto north of 12th Street – this area offers excellent potential as a high premium mixed use transit oriented development, and the Streetcar line can be expected to further reduce the need for some of the existing State parking garages in this area. Also, the State's parking garage at 4th Street and San Antonio could increase substantially in value either through redevelopment as a mixed use development served by the Streetcar and/or as a parking location for commuters from southwest portions of the region who the use the streetcar from that point onwards.

  In addition State offices and facilities will gain implicit value by proximity to the Streetcar line as do other private offices and residences. This increased value has not been estimated, since it would not be available unless the State sold or redeveloped the subject land and buildings.

  The State will also benefit by reduced demand on TxDOT maintained roads due to transfer of some automobile trips to the Streetcar.

  The State will also benefit by a reduced demand (250 spaces) for parking to serve its facilities. This avoided cost amounts to a savings of $6 million in the form of avoided future costs (not having to build added spaces) or revenues that could be obtained by transferring an equivalent number of existing spaces (if surplussed) to other users or uses.

- Other Benefits: The State stands to benefit significantly from the qualitative benefits described in the Project Benefits section (III).

  The State Capitol area could experience increased convenience, image and added revenues through redevelopment of some of its properties along the line into mixed use, transit oriented central city neighborhoods.

  In addition, the State may see some increase in attendance at its State of Texas History Museum, the State Capitol, and other cultural attractions on the State campus.

Share of Total System Costs: 20 years Capital and Operating

- Possible Range for Participation: 6 - 10%
- Test: 8 % or $25 million

	State
NUMERICAL BENEFITS:	
Riders (per day)	1,700
Parking space reductions	250
Road Trip Miles Saved (per day on roads)	2,000
FINANCIAL BENEFITS:	
Property Value Increments: Direct	$59
Parking Cost Reductions	$6
TOTAL - FINANCIAL BENEFITS	**$65**
SHARE OF SYSTEM COST	
$300	
Low	6.0%
High	10.0%
TEST	**8.0%**
AMOUNT	**$25**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**2.6**

State of Texas receives a direct fiscal benefit of 2.6 to 1 on its investment over 20 years.

Resource Base Available to State

The most probable direct sources of funding from the State would include grants or low interest loans from various State transportation funds, allocated to the project based on its either meeting certain specified programmatic criteria, or as a “demonstration” project. These sources alone could provide the entirety of the amount needed to meet the State’s share of the project.

Other sources include, as in the case of the City and County, revenues from sale, contribution or development of State owned property along the line, either by State itself or in some form of public-private partnership. Also, the Statecould consider allocating to the project funds that it might otherwise have had to spend on building additional parking garages in the State office area but which may become uneccesary due to presence of Streetcar.

XII. PARTNER ANALYSIS SHEET: UNIVERSITY OF TEXAS

Benefits Tests

- Ridership Share: UT students, faculty, staff and visitors are anticipated to be major users of the system. Ridership models to date project 3100 (or 23%) of all daily boardings/exitings to be at the Campus stops. While more detailed travel demand studies need to be completed, there is both statistical and anecdotal evidence that there is and will be substantial travel between the Campus, the 6th Street and 2nd Street entertainment districts, Town Lake, downtown hotels, new residential and shopping areas, activities south of the river (Palmer, South Congress, Barton Springs), from State and downtown offices and to locations out Manor Road and in Mueller. The indirect imputed value of this ridership, at $1/ride to its students, faculty, staff and visitors, over a 20 year period, could total $15 million.

- Fiscal Impacts: The University does not receive any revenues from operation of the line.

  However, University owned properties south of Martin Luther King Boulevard and susceptible to redevelopment along the Streetcar line or within 3 blocks of it are projected to increase in value by $70 million due to the "streetcar" effect. This estimate is restricted to University property that might be used for housing or commercial uses and makes allowance for replacement of existing parking. Much of the University's academic and recreational properties will also gain in intrinsic value and utility, but no attempt has been made to quantify these increments.

  The University will also benefit by a reduced demand (450 spaces) for parking to serve its facilities. This avoided cost amounts to a savings of $11 million in the form of avoided future costs (not having to build added spaces) or revenues that could be obtained by transferring an equivalent number of existing spaces (if surplussed) to other users or uses.

  The University may also be able to recover a portion of the above referenced imputed ridership benefits through changes in the pricing of its transportation and parking contracts and benefits packages to student, faculty and staff.

  The University could obtain alumni naming/sponsorship rights to Streetcar stops at locations on the University Campus.

- Other Benefits: The University stands to benefit significantly from the qualitative benefits described in the Project Benefits section (III).

  In addition, the University may see some increase in attendance at its museums (e.g., the Blanton Art Museum), cultural, entertainment and sports attractions due to increased convenience of access.

Share of Total System Costs: 20 years Capital and Operating

- Possible Range for Participation: 6 – 10 %
- Test: 8% or $25 million

	University of Texas
NUMERICAL BENEFITS:	
Riders (per day)	3,100
Parking Space Reductions	450
FINANCIAL BENEFITS:	
Land Value Increments: Direct	$70
Parking Cost Savings	$11
Transportation Fee/Contract Changes	$15
TOTAL - FINANCIAL BENEFITS	**$96**
SHARE OF SYSTEM COST	
$300	
Low	6.0%
High	10.0%
TEST	**8.0%**
AMOUNT	**$25**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**3.8**

University of Texas receives a direct fiscal benefit of 3.8 to 1 on its investment over 20 years.

Resource Base Available to University

The University may have access to a variety of mechanisms with which to fund any participation in the Streetcar. First and foremost, since University students, faculty, staff and visitors would be prime users, adjustments could be made in the various “fee for service” arrangements currently existing between University and Capital Metro, so that, in return for an upfront or annual contributions to the Streetcar, these groups could ride for “free”. In return, the University could adjust and recover its contributions by small increases in the periodic “activity” or “transportation” fees included as part of the typical bursar bill.

As with the State, bringing the Streetcar through the Campus could significantly reduce the need for new structured parking and possibly reduce demand at some of the surface lots. The funds saved from avoiding expensive new garages on Campus could be applied instead towards Streetcar.

Various well situated University properties (presently used for surface parking and/or non academic uses and not needed for future academic development) would see their future redevelopment value greatly increased by presence of Streetcar. These or other non- essential University other sites could be used as a source of University funding towards the Streetcar.

Lastly, the University through its various line items in the State budget and/or its alumni, may be able to access other less traditional sources of funding.

XII. PARTNER ANALYSIS SHEET: OTHER PROPERTY/BUSINESS OWNERS

Benefits Tests

- Ridership Share: Approximately 8300 daily trips or 63% of the total daily ridership will begin or end at business, residential or entertainment locations along the line.

- Fiscal Impacts: Property owners along the line and within approximately 3 blocks of it will experience substantial increases in rents and values with the presence of the streetcar line, due to several causes:

  - Rent/sales price premiums: as mentioned in the Project Benefits section (III), the "streetcar effect" typically increases the per unit value of property along the line by anywhere from 10 to 20% of finished property value over a number of years preceding and after the line begins operation. This could conservatively equate to $20/sf of Gross Floor Area (GFA) ($200/sf of finished building value times 10%) With a total of 24 million square feet of anticipated build-out under current zoning alone, the streetcar could increase bottom line land value to owners along the line by approximately $664 million.

  - Additional value increase could be generated in the event City agrees to allow increases in density over those assumed in #1 above. Zoning and development agreements could allocate a portion of any such density bonus to the City to fund part of its share of the Streetcar project. An addition of an effective 10% bonus could add 2.4 million sf of GFA of highly streetcar accessible sites with a value of $40/sf, or $96 million in potential value creation.

  The City of Austin could also agree to permit property owners to reduce on site parking required at streetcar accessible sites and make "in-lieu" contributions (equal to the saved parking capacity) to the Streetcar line project. In locations with decked parking costing anywhere from $20,000 to $25,000/space over 20 years this could be a strong incentive. The Streetcar could, over time, result in the elimination of demand for 1100 spaces on private property, resulting in a savings of $27 million ($25,000/space average).

  Businesses will also see an increase in gross sales receipts, and reduction in employee costs (easier, cheaper commutes).

- Other Benefits: Property owners stand to benefit substantially through an accelerated pace of development, thus saving significantly on marketing, overhead, carrying and financing costs.

  Businesses and property owners will benefit from increased patterns of visibility, accessibility, popularity and visitation, increasing both their daily revenue flows and the longer term value of their enterprises.

Share of Total System Costs: 20 years Capital and Operating

- Possible Range for Participation: 15-30 %
- Test: 17% or $50 million

	Other Owners
NUMERICAL BENEFITS:	
Riders (per day)	8,300
Parking Space Reductions	1,100
FINANCIAL BENEFITS:	
Property Value Increments: Rent Premium	$664
Property Value Increments: Bonus Density	$96
Parking Cost Savings	$27
Marketing/Finance Cost Savings	$15
TOTAL - FINANCIAL BENEFITS	**$802**
SHARE OF SYSTEM COST	
$300	
Low	15.0%
High	30.0%
TEST	**17.0%**
AMOUNT	**$50.0**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**16**

Business and property owners along the line receive a direct fiscal benefit of 16 to 1 on their investment over 20 years making this an extremely high return investment. As a group, they should be motivated to see the Project constructed.

Resource Base Available to Business and Property Owners

There are a variety of financing tools available to the Business and Property Owners category to fund whatever their agreed upon share of the Streetcar might be. These include:

Public Improvement District: An assessment district (either the existing Downtown one, or with modified boundaries, or a new one) could be used to recover some portion of the Streetcar's capital and operating costs from the parties most directly benefiting from it – the Property and Business Owners described in this section. A bonding mechanism could be used to allow them to spread their share over an extended period (say 20 years), with a possible provision for any owner to opt out by paying off his full share at any time (e.g., upon sale of his property or business, at a likely increased profit due to the line). For purposes of illustration, about $10 million (expressed as NPV in 2008) could be paid off over 20 years by a 2-½ cent (per $100 AV) surcharge within the existing Downtown Public Improvement District boundaries.

Bonus Density: Bonus density could be linked to paying down outstanding indebtedness on Streetcar bonds via a mechanism written into a new bonus density Zoning Ordinance overlay district.

In-lieu Parking Contributions: Zoning Ordinance changes in an overlay district could allow all new development (base amount and/or bonus density) to occur at reduced parking ratios, upon payment of in-lieu fees towards the Streetcar fund.

Transfer or Other Surcharges: Some of the gains generated by the streetcar could be recaptured from benefited owners but limited to the time they sell their businesses or property. For example, a transfer surcharge system could be designed, limited to property within 3 blocks of the line, and payable only on a portion of gains over a level set at the time the Streetcar is announced. Similarly, business license, payroll or other surcharges could be added to establishments within 3 blocks, again linked to recapturing a portion of the benefits created.

Future Connections Study
Central Austin Circulator

Austin Streetcar Financing Study

Final Draft Report

Appendix 1:
Phase 1 Analysis

May 2007

Prepared for:

Capital Metropolitan Transportation Authority

Austin, Texas

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WHM/HDR

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Austin, Texas

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I. INTRODUCTION

This Appendix provides Partner analysis data for a shorter "First Phase" Project extending from 3rd and Bowie to MLK. This smaller Project would have a projected 20 year life cycle cost of $130 million.

II. PARTNER ANALYSIS SHEET: CAPITAL METRO

Share of Total First Phase Costs: 20 years Capital and Operating

- Possible Range for Participation: 25 – 30%
- Test: 27% or $35 million

	Capital Metro
NUMERICAL BENEFITS:	
N/A	
FINANCIAL BENEFITS:	
Operating Subsidies (Federal/State)	$ 3
Advertising/Sponsorship	$ 5
TOTAL - FINANCIAL BENEFITS	**$ 8**
SHARE OF SYSTEM COST	
$130	
Low	25.0%
High	30.0%
TEST	**27.0%**
AMOUNT	**$ 35**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**0.25**

Capital Metro alone, of the various participants, will be expending funds in excess of what it can recover directly as a result of participating in the Project. For Capital Metro alone, the Project creates an additional expense with insufficient new offsetting revenues. The deficit would come out of Capital Metro's general area-wide sales tax funding stream or fares. As a result, Capital Metro's share, if any, of the capital cost component should be realistically calibrated to what it can recover through operating subsidies from other entities, advertising/sponsorships, and, as appropriate, the farebox. The Project Benefits section (III) suggests that the farebox only be used as a last resort to manage rationing if the system becomes congested and to help finance growth of the system. It should not be relied on as a source of revenue to fund daily operations of the line.

Resource Base Available to Capital Metro

Following is a list of potential streetcar oriented resources from which Capital Metro can draw its share of the Project's capital cost. These sources exclude the possible effect on Capital Metro's general operating funds resources derived from the sales tax, and are limited to a listing of those additional new funds that may accrue and be accessible due to implementation of the Project. They may be sufficient to fund up to about 8% of the capital cost of $100 million.

	Capital Metro
Naming rights Periodic Advertising/Sponsorships Transit Operating Grants (Federal, State)	$3 $2 $ 3
A. TOTAL AVAILABLE TO CAPITAL METRO	**$ 8**
B. TOTAL INVESTMENT BY CAPITAL METRO (CAPITAL COSTS ONLY)*	**$8**
COVERAGE FACTOR (A/B)	**1:1***

** On the operating side, Capital Metro would have to make up any Streetcar operating deficits out of the revenue stream (after allowing for any fares charged) deriving from its 1% sales tax or increases in Federal funding that is based on population and other mobility factors.*

III. PARTNER ANALYSIS SHEET: CITY OF AUSTIN

Share of Total First Phase Costs: 20 years Capital and Operating

- Possible Range for Participation: 25 – 35%
- Test: 27% or $35 million

	City
NUMERICAL BENEFITS:	
Road Trip Miles Saved (per day on streets)	4,000
FINANCIAL BENEFITS:	
Property Tax	$52
Property Value Increments: Direct	$70
Utility Reconstruction or Cost Reductions	$12
TOTAL - FINANCIAL BENEFITS	**$134**
SHARE OF SYSTEM COST	
$130	
Low	25.0%
High	35.0%
TEST	**27.0%**
AMOUNT	**$35**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**3.8**

City of Austin receives a direct fiscal benefit of 3.8 to 1 on its investment over 20 years making this a high return investment. The return can be substantially higher if the City seeks to recoup any of the private land value gains more directly through such mechanisms as linking density bonuses to community benefits packages, collection of transfer taxes on sales of properties within 3 blocks of the line, etc.

Resource Base Available to City

Following is a list of potential streetcar oriented resources from which the City can draw its share of the Streetcar project cost.

	City
TIF ("streetcar increment" only)* Land Sales/Swaps Development Rights - Bonus Density Other Taxes (Sales, licensing, etc) Naming rights Utility fees, hookups, incentives Parking revenues Transportation grants Other grants (e.g., CDBG)	$52
A. TOTAL AVAILABLE to CITY	**$ 52+**
B. TOTAL INVESTMENT BY CITY	**$35**
COVERAGE FACTOR (A/B)	**1.5+**

** The amount shown is only that portion of Tax Increment directly attributable to the presence of streetcar as compared to no streetcar. A 3 block TIF set up along the streetcar line would generate total TIF revenues approximately 5 times as large.*

IV. PARTNER ANALYSIS SHEET: TRAVIS COUNTY

Share of Total First Phase Costs: 20 years Capital and Operating

- Possible Range for Participation: 12 - 20%
- Test: 15% or $20 million

	County
NUMERICAL BENEFITS:	
N/A	
FINANCIAL BENEFITS:	
Property Tax	$57
Property Value Increments: Direct	$19
TOTAL - FINANCIAL BENEFITS	**$76**
SHARE OF SYSTEM COST	
$130	
Low	12.0%
High	20.0%
TEST	**15.0%**
AMOUNT	**$20**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**3.8**

Travis County receives a direct fiscal benefit of 3.8 to 1 on its investment over 20 years making this a high return investment.

Resource Base Available to County

Following is a list of potential streetcar oriented resources from which Travis County can draw its share of the Streetcar project cost.

	County
TIF ("streetcar increment" only)* Land Sales/Swaps Other Taxes (Sales, licensing, etc)	$57
A. TOTAL AVAILABLE TO COUNTY	**$57+**
B. TOTAL INVESTMENT BY COUNTY	**$20**
COVERAGE FACTOR (A/B)	**2.8**

** The amount shown is only that portion of Tax Increment directly attributable to the presence of streetcar as compared to no streetcar. A 3 block TIF set up along the streetcar line would generate total TIF revenues approximately 5 times as large.*

V. PARTNER ANALYSIS SHEET: AUSTIN INDEPENDENT SCHOOL DISTRICT

Share of Total First Phase Costs: 20 years Capital and Operating

- Possible Range for Participation: 0 – 3%
- Test: 0% or $0 million

	Austin Independent School District
NUMERICAL BENEFITS:	
N/A	
FINANCIAL BENEFITS:	
Property Tax	$188
Maintenance Cost Savings	$2
Transportation Services	$1
TOTAL - FINANCIAL BENEFITS	**$191**
SHARE OF SYSTEM COST	
$130	
Low	0.0%
High	3.0%
TEST	**0.0%**
AMOUNT	**$0.0**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**Infinite**

Austin Independent School District receives a very large direct fiscal benefit due to the presence of a streetcar. In essence, development of the Project should result in a substantial opportunity to improve the quality of Austin education, by virtue of strengthening the fiscal base of the District. While the ability of the District to directly participate in the funding of the Project may be limited due both to its charter and the operation of State law, it may be able to offer limited financial support through purchase of travel passes for students, faculty and staff; and/or by consolidation of vehicle maintenance operations with Capital Metro and thereby using and funding a portion of Capital Metro's maintenance operations through a line item in District's vehicle operations and transportation budgets.

Resource Base Available to Austin Independent School District

Following is a list of potential streetcar oriented resources from which AISD can draw its share of any Streetcar project costs.

	AISD
TIF ("streetcar increment" only)*	$188
Budget Line Item – Vehicle Maintenance	$2
Transportation Services	$1
A. TOTAL AVAILABLE TO AISD	**$191**
B. TOTAL INVESTMENT BY AISD	**$0**
COVERAGE FACTOR (A/B)	**Infinite**

** The amount shown is only that portion of Tax Increment directly attributable to the presence of streetcar as compared to no streetcar. A 3 block TIF set up along the streetcar line would generate total TIF revenues approximately 5 times as large.*

VI. PARTNER ANALYSIS SHEET: STATE OF TEXAS

Share of Total First Phase Costs: 20 years Capital and Operating

- Possible Range for Participation: 15 - 25%
- Test: 20.0 % or $25 million

	State
NUMERICAL BENEFITS:	
Riders (per day)	1,700
Parking space reductions	200
Road Trip Miles Saved (per day on roads)	2,000
FINANCIAL BENEFITS:	
Property Value Increments: Direct	$59
Parking Cost Reductions	$6
TOTAL - FINANCIAL BENEFITS	**$65**
SHARE OF SYSTEM COST	
$130	
Low	15.0%
High	25.0%
TEST	**20.0%**
AMOUNT	**$25**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**2.6**

State of Texas receives a direct fiscal benefit of 2.6 to 1 on its investment over 20 years.

Resource Base Available to State

Following is a list of potential streetcar oriented resources from which the State can draw its share of the Streetcar project cost.

	State
Transportation Grants/Funds Land Sales/Swaps In–lieu Parking Contributions	$25
A. TOTAL AVAILABLE TO STATE	**$25**
B. TOTAL INVESTMENT BY STATE	**$25**
COVERAGE FACTOR (A/B)	**1+**

VII. PARTNER ANALYSIS SHEET: UNIVERSITY OF TEXAS

Share of Total First Phase Costs: 20 years Capital and Operating

- Possible Range for Participation: 0 – 10 %
- Test: 4% or $5 million

	University of Texas
NUMERICAL BENEFITS:	
Riders (per day)	2,000
Parking Space Reductions	300
FINANCIAL BENEFITS:	
Land Value Increments: Direct	$20
Parking Cost Savings	$5
Transportation Fee/Contract Changes	$5
TOTAL - FINANCIAL BENEFITS	**$30**
SHARE OF SYSTEM COST	
$130	
Low	0.0%
High	10.0%
TEST	**4.0%**
AMOUNT	**$5**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**6.0**

University of Texas receives a direct fiscal benefit of 6 to 1 on its investment over 20 years, making this a high return investment.

Resource Base Available to University

Following is a list of potential streetcar oriented resources from which the University can draw its share of the Streetcar project cost.

	University of Texas
Transportation Fee/Contract Changes Land Sales/Swaps Budget Line Item Grant	$5
A. TOTAL AVAILABLE TO UNIVERSITY	**$5+**
B. TOTAL INVESTMENT BY UNIVERSITY	**$5**
COVERAGE FACTOR (A/B)	**1+**

VIII.PARTNER ANALYSIS SHEET: OTHER PROPERTY/BUSINESS OWNERS

Share of Total First Phase Costs: 20 years Capital and Operating

- Possible Range for Participation: 5 – 20 %
- Test: 8% or $10 million

	Other Owners
NUMERICAL BENEFITS:	
Riders (per day)	3,000
Parking Space Reductions	550
FINANCIAL BENEFITS:	
Property Value Increments: Rent Premium	$516
Property Value Increments: Bonus Density	$96
Parking Cost Savings	$14
Marketing/Finance Cost Savings	$15
TOTAL - FINANCIAL BENEFITS	**$641**
SHARE OF SYSTEM COST	
$130	
Low	5.0%
High	20.0%
TEST	**8.0%**
AMOUNT	**$10**
DIRECT FINANCIAL BENEFIT/COST RATIO:	**64.1**

Business and property owners along the line receive a direct fiscal benefit of 64.1 to 1 on their investment over 20 years making this an extremely high return investment. As a group, they should be motivated to see the First Phase constructed.

Resource Base Available to Business and Property Owners

Following is a list of potential streetcar oriented resources from which Business and Property Owners can draw their share of the Streetcar project cost. This list covers the assumed Business and Property Owners share of cost 3.7 times over, providing a number of options to finance the prospective share allotted to private owners (the share used in this analysis is for test purposes only).

	Other Business and Property Owners
Public Improvement District * Development Rights - Bonus Density In-lieu Parking Contributions Transfer Tax & Other Surcharges Limited Solely to Beneficiaries	$10+
A. TOTAL AVAILABLE TO OWNERS	**$10 +**
B. TOTAL INVESTMENT BY OWNERS	**$10**
COVERAGE FACTOR (A/B)	**1+**

** Existing Downtown PID boundaries with a 2½ cent surcharge beginning in 2009 raises about $10 million (NPV) in 2008 dollars*

Notes on Above Funding Sources:

Public Improvement District: An assessment district could be used to recover some portion of the Streetcar's capital and operating costs from the parties most directly benefiting from it – the Property and Business Owners described in this section. A bonding mechanism could be used to allow them to spread their share over an extended period (say 20 years), with a possible provision for any owner to opt out by paying off his full share at any time (e.g., upon sale of his property or business, at a likely increased profit due to the line). For purposes of illustration, about $10 million (expressed as NPV in 2008) could be paid off over 20 years by a 2-½ cent (per $100 AV) surcharge on the existing Downtown Public Improvement District.

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