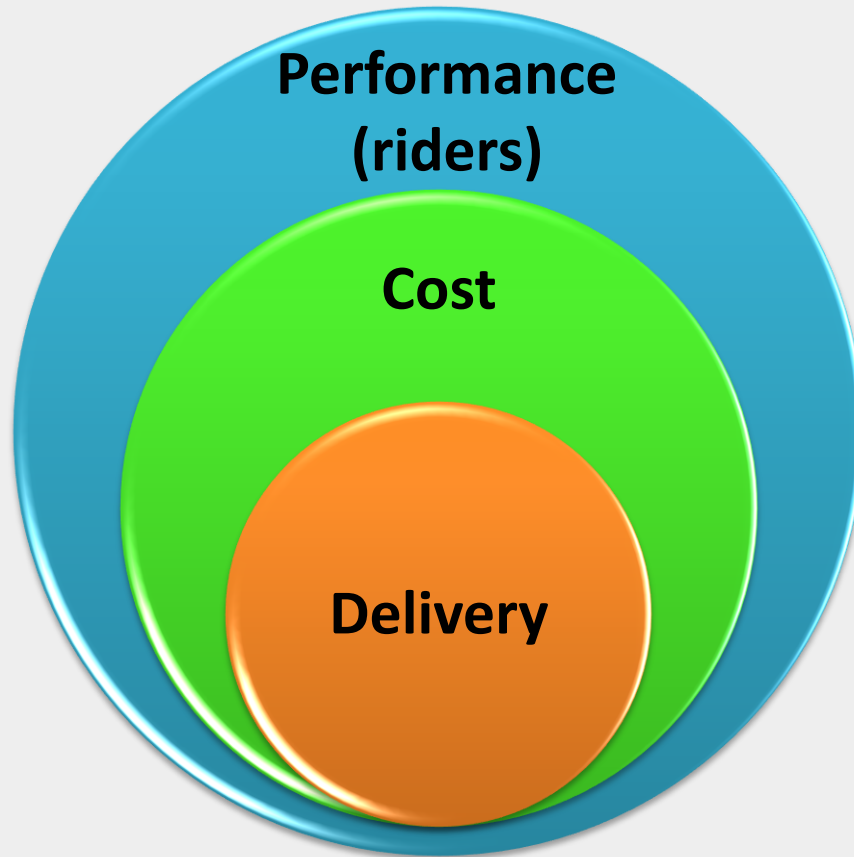


# Transportation Investment Act of 2010: Transit Project Analysis



**Atlanta Regional Roundtable  
July 7, 2011**

# Three Promises



Made to:

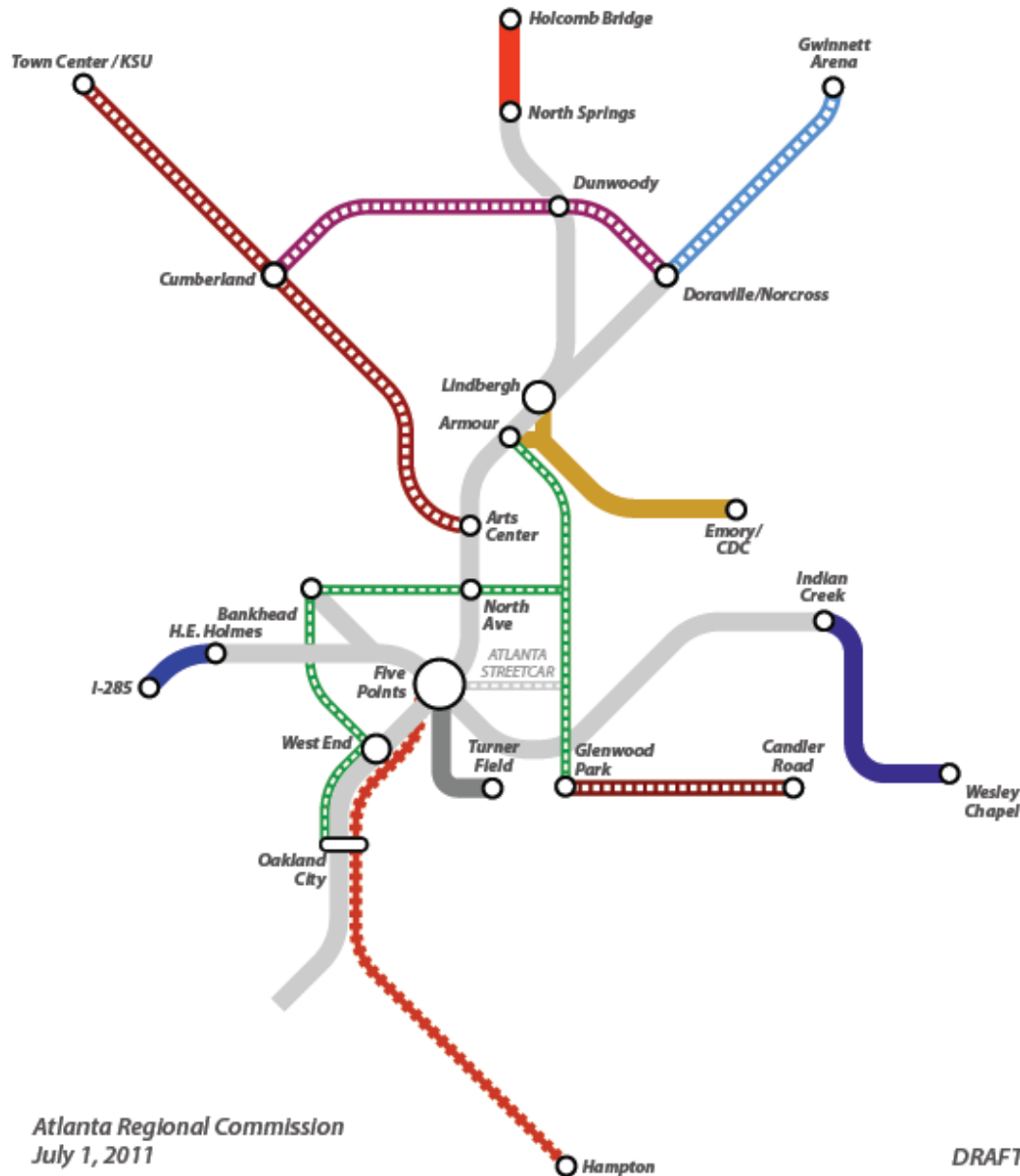
- Taxpayers
- Roundtable

PERFORMANCE

COST

DELIVERY

# TIA Unconstrained Rail Transit Projects



Source - \$22.9 B Unconstrained L

# Panel Discussion

- *Moderator-* **Jeff Boothe**, Holland & Knight
- **Mike Allegra** - General Manager, Utah Transit Authority
- **Lane Beattie** - President and CEO, Salt Lake City Chamber of Commerce
- **Mark Sharpe** - County Commissioner, Hillsborough County, FL
- **Phillip Washington** - General Manager, Denver Regional Transportation District
- **Jim Shroeder** - Vice President, HDR Engineering Co., Houston, TX

# Takeaways

- There is a 10 year promise that is made:
  - With the voters
  - With the other elected officials
- The promise is important:
  - Building public confidence
- The promises are around:
  - Executing a vision
  - Performance (riders)
  - Price
  - Schedule
- Keeping a promise means:
  - Under promise and over deliver
  - Budget and schedule conservatively
  - Reach agreements with local governments early
  - Commitment and focus are required

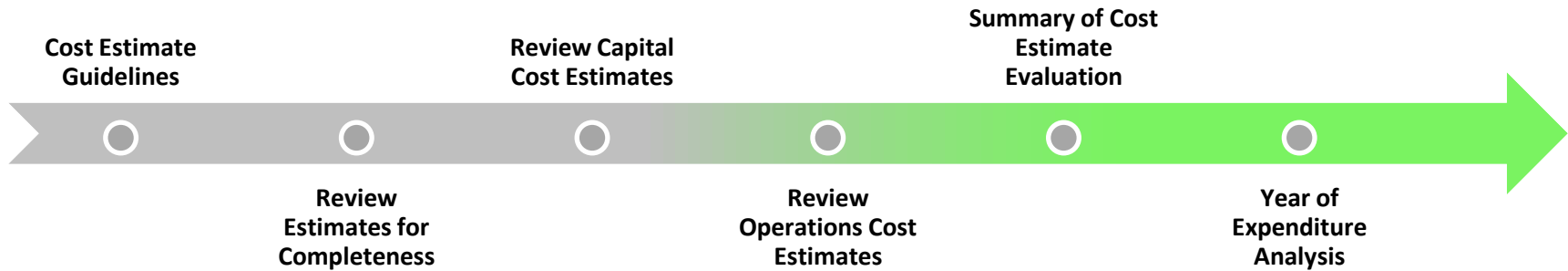


# TRANSIT PROJECT COST ESTIMATE REVIEW

## OVERVIEW

Updated August 5, 2011

# Process



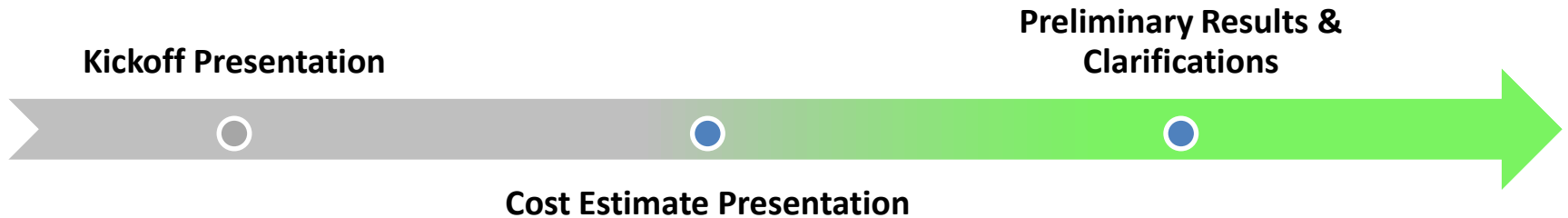
- ✓ **Cost Estimating Guidelines**
- ✓ **Review Estimates for Completeness**
- ✓ **Capital Cost Review**
  - ✓ 15 Major Transit Capital Projects from Project Delivery Assessment
    - 21 Fixed Route Bus / Bus Rapid Transit (BRT) type projects
- ✓ **Operations Cost Review** – review the 41 operational cost estimates.
- ✓ **Year of Expenditure (YOE) Analysis** – forecast of future value.

PERFORMANCE

COST

DELIVERY

# Sponsor Engagement



- **Methodology Work Session – June 9**
- **Work with Sponsors to re-submit costs using consistent budget**
- **Cost Estimating Presentation – July 8**
- **Preliminary Results & Clarifications – July 8-12**

PERFORMANCE

**COST**

DELIVERY

# Estimate of Maximum Probable Cost

August 5, 2011

PROJECTS (not Ranked)	Route Length	Annual Vehicle Revenue Hours	Opening Date	2011 \$		
				CAPITAL COST	OPERATING COST	TOTAL
<b>LRT I-285</b> (Doraville Station to Sandy Springs Station)	4.6 mi	16,900 hrs	Jul-2021	\$460.0 M	\$78.9 M	<b>\$538.9 M</b>
<b>CRT Commuter Rail</b> (Atlanta to Griffin) <sup>1</sup>	42.0 mi	41,800 hrs	Sep-2020	\$479.6 M	\$402.6 M	<b>\$882.2 M</b>
<b>LRT I-20 East</b> (Atlanta to Candler Road)	8.1 mi	65,700 hrs	Jul-2023	\$575.9 M	\$306.8 M	<b>\$882.7 M</b>
<b>HRT I-20/I-285 East</b> (Indian Trail Station to Wesley Chapel Road)	5.4 mi	9,500 hrs	Sep-2020	\$769.0 M	\$64.6 M	<b>\$833.6 M</b>
<b>HRT Turner Field</b> (Garnett Station to Turner Field)	1.0 mi	25,210 hrs	Jul-2019	\$229.7 M	\$92.0 M	<b>\$321.7 M</b>
<b>HRT Clifton Phase 1ABC</b> (Lindberg to Emory to Decatur Road P&R)	5.1 mi	62,930 hrs	Apr-2022	\$1,003.8 M	\$313.0 M	<b>\$1,316.8 M</b>
<b>HRT West</b> (New Holmes Road to MLK / I-285)	1.2 mi	3,350 hrs	Oct-2020	\$282.1 M	\$18.6 M	<b>\$300.7 M</b>
<b>LRT NW I-75 / US-41 Phase I</b> (Arts Center Station to Cumberland)	12.8 mi	51,792 hrs	Jan-2027	\$1,167.4 M	\$241.8 M	<b>\$1,409.3 M</b>
<b>HRT NE I-85 Section I</b> (Doraville Station to Oakcliff Road)	1.1 mi	1,840 hrs	Jan-2019	\$183.4 M	\$8.2 M	<b>\$191.5 M</b>
<b>NE I-85 Section I-V</b> (Doraville Station to Gwinnett Arena)	15.5 mi	120,760 hrs	Oct-2024	\$1,227.9 M	\$563.9 M	<b>\$1,791.8 M</b>
<b>Streetcar/LRT Beltline Section 1</b> (Northeast Atlanta to Downtown)	3.6 mi	19,050 hrs	Apr-2017	\$194.3 M	\$89.0 M	<b>\$283.3 M</b>
<b>Streetcar/LRT Beltline Section 2</b> (South Buckhead to Midtown)	4.5 mi	26,410 hrs	Nov-2018	\$327.3 M	\$123.3 M	<b>\$450.6 M</b>
<b>Streetcar/LRT Beltline Section 3</b> (Southeast Atlanta to Midtown)	5.4 mi	26,410 hrs	Jul-2018	\$353.1 M	\$123.3 M	<b>\$476.4 M</b>
<b>Streetcar/LRT Beltline Section 4</b> (Southwest Atlanta to Midtown)	7.9 mi	39,610 hrs	Jan-2018	\$490.0 M	\$185.0 M	<b>\$675.0 M</b>
<b>HRT GA 400 Extension</b> (North Springs Station to Holcomb Bridge Road)	6.0 mi	12,800 hrs	Jan-2026	\$884.6 M	\$59.8 M	<b>\$944.4 M</b>

LRT = Light Rail Transit • HRT = Heavy Rail Transit • CRT = Commuter Rail Transit

\$8,627.8 M      \$2,670.8 M      \$11,298.6 M

Note 1: Norfolk Southern Right-of-Way Access or Purchase excluded.

Note 2: Operating Costs based upon 20 years from Opening Day in 2011 \$ and does not include fare box recovery or other subsidy.

PERFORMANCE

COST

DELIVERY

# Summary

August 5, 2011

PROJECT	2011 - 2019	2020 - 2029	2030 - 2039	2040 - 2049
<b>Streetcar/LRT Beltline Section 1</b> (Northeast Atlanta to Downtown)	\$194.3 M		\$89.0 M	
<b>Streetcar/LRT Beltline Section 4</b> (Southwest Atlanta to Midtown)	\$490.0 M		\$185.0 M	
<b>HRT NE I-85 Section I</b> (Doraville Station to Oakcliff Road)	\$183.4 M		\$8.2 M	
<b>HRT Turner Field</b> (Garnett Station to Turner Field)	\$229.7 M		\$92.0 M	
<b>Streetcar/LRT Beltline Section 3</b> (Southeast Atlanta to Midtown)	\$353.1 M		\$123.3 M	
<b>Streetcar/LRT Beltline Section 2</b> (South Buckhead to Midtown)	\$327.3 M		\$123.3 M	
<b>HRT I-20/I-285 East</b> (Indian Trail Station to Wesley Chapel Road)	\$769.0 M		\$64.6 M	
<b>HRT West</b> (New Holmes Road to MLK / I-285)	\$282.1 M		\$18.6 M	
<b>HRT Clifton Phase 1A</b> (Lindberg to Emory)	\$1,003.8 M		\$313.0 M	
<b>CRT Commuter Rail</b> (Atlanta to Griffin) <sup>1</sup>	\$479.6 M		\$402.6 M	
<b>LRT I-285</b> (Doraville Station to Sandy Springs Station)	\$460.0 M		\$78.9 M	
<b>LRT I-20 East</b> (Atlanta to Candler Road)	\$575.9 M		\$306.8 M	
<b>NE I-85 Section I-V</b> (Doraville Station to Gwinnett Arena)	\$1,227.9 M		\$563.9 M	
<b>HRT GA 400 Extension</b> (North Springs Station to Holcomb Bridge)	\$884.6 M		\$59.8 M	
<b>LRT NW I-75 / US-41 Phase I</b> (Arts Center Station to Cumberland)	\$1,167.4 M		\$241.8 M	

**Projects are not Ranked.**

within 6 years

within 10 years

after 10 years

*Note 1: Norfolk Southern Right-of-Way Access or Purchase excluded.*

*Note 2: Operating Costs based upon 20 years from Opening Day in 2011 \$ and does not include fare box recovery or other subsidy.*

*LRT = Light Rail Transit • HRT = Heavy Rail Transit • CRT = Commuter Rail Transit*

PLANNING • DESIGN • CONSTRUCTION (2011 \$)  
OPERATIONS<sup>2</sup> (20 YEARS) (2011 \$)



**PERFORMANCE**

**COST**

**DELIVERY**

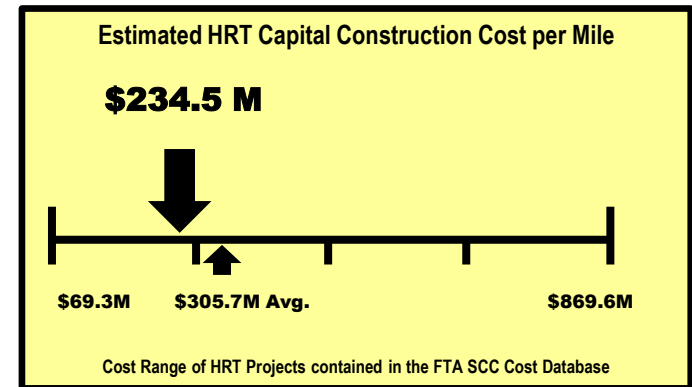
# 06: HRT CLIFTON PHASE 1A

TIA-M-028

Lindberg Station to Emory

July 27, 2011

COST	LENGTH	2011 \$
CAPITAL		\$1,003.8 M
OPERATING		\$313.0 M
<b>TOTAL</b>	<b>4.3 mi</b>	<b>\$1,316.8 M</b>



## Cost Drivers

- 71% of the guideway is either aerial structure, built-up fill, retained cut/fill or tunnel representing 37% of the total construction cost.
- Five stations, including one underground station represent 25% of the total construction cost.
- HRT requires no maintenance facility or vehicle costs.
- Operating costs allocated 100% to extension.

SCC Cost Category	Cost	Percent	
		SSC 10-50	Total
SCC 10 Guideway	\$234,998,000	44%	
SCC 20 Stations	\$131,523,000	25%	
SCC 30 Maintenance Facilities	\$0	0%	
SCC 40 Sitework	\$93,159,000	17%	
SCC 50 Systems	\$70,194,000	13%	
<b>Construction (SCC 10 - 50)</b>	<b>\$535,173,000</b>	<b>100%</b>	<b>53%</b>
SCC 60 Right-of-Way	\$91,503,000		9%
SCC 70 Vehicles	\$0		0%
SCC 80 Professional Services	\$216,531,000		22%
SCC 90 Unallocated Contingency	\$160,552,000		16%
<b>Total Project Cost</b>	<b>\$1,003,759,000</b>		<b>100%</b>

# ARC Cost Assumption Recommendations

- 30% contingency maintained in capital costs
- 10 years of O&M for TIA (sources for additional 10 years to be defined in agreements negotiated prior to October vote on final list)
- 30% minimum cost recovery requirement

These modifications reduce the total level of TIA funding required for all 15 projects from \$10.8 billion to \$9.4 billion, a reduction of 13% . (Source: ARC)

			Millions in 2011 Dollars			
Project Description	Daily Riders	Open Date	Capital Cost	O&M Cost (20 yrs)	Net O&M Cost (30% Offset)	Total Capital with Net O&M
I-285 North Light Rail - Doraville to Sandy Springs	6,100	2021	\$460.0	\$78.9	\$55.23	\$515.23
Commuter Rail - Atlanta to Griffin	4,800	2020	\$479.6	\$402.6	\$281.82	\$761.42
I-20 East Light Rail - Atlanta to Candler Road	17,300	2023	\$575.9	\$306.8	\$214.76	\$790.66
I-20 East / I-285 East Heavy Rail Extension - Indian Creek to Wesley Chapel	13,400	2020	\$769.0	\$64.6	\$45.22	\$814.22
Turner Field Heavy Rail Extension - Five Points / Garnett to Turner Field	1,200	2019	\$229.7	\$92.0	\$64.40	\$294.10
Clifton Corridor Heavy Rail - Lenox/Lindbergh to Emory	9,100	2022	\$1,003.8	\$313.0	\$219.10	\$1,222.90
I-20 West Heavy Rail Extension - H.E. Holmes to I-285 West	10,000	2020	\$282.1	\$18.6	\$13.02	\$295.12
Northwest Corridor Light Rail - Arts Center to Cumberland	10,600	2027	\$1,167.4	\$241.8	\$169.26	\$1,336.66
I-85 North Heavy Rail Extension - Doraville to Oakcliff Road	8,900	2019	\$183.4	\$8.2	\$5.74	\$189.14
I-85 North Light Rail - Doraville to Gwinnett Arena	13,800	2024	\$1,227.9	\$563.9	\$394.73	\$1,622.63
Atlanta Beltline Streetcar Circulator and Trail - Northeast Atlanta to Downtown via Northeast Beltline	5,600	2017	\$194.3	\$89.0	\$62.30	\$256.60
Atlanta Beltline Streetcar Circulator and Trail - South Buckhead to Midtown via Northeast Beltline	6,200	2018	\$327.3	\$123.3	\$86.31	\$413.61
Atlanta Beltline Streetcar Circulator and Trail - Southeast Atlanta to Midtown via Southeast Beltline	7,400	2018	\$353.1	\$123.3	\$86.31	\$439.41
Atlanta Beltline Streetcar Circulator and Trail - Southwest Atlanta to Midtown Circulator	10,900	2018	\$490.0	\$185.0	\$129.50	\$619.50
SR 400 Heavy Rail Extension - North Springs to Holcomb Bridge Road	11,800	2026	\$884.6	\$59.8	\$41.86	\$926.46
			\$8,628.1	\$2,670.8	\$1,869.56	\$10,497.66

## Executive Committee “Starting Point” Transit Projects for Urban Jurisdictions

Clifton Corridor Rail	\$700 million
Belt Line Rail	\$600 million
Northwest Corridor Rail to Cumberland	\$825 million
MARTA State of Good Repair	\$500 million
Restore Clayton Local Bus	\$100 million
I-85 Northeast Corridor*	\$100 million
<b>TOTAL</b>	<b>\$2.825 billion</b>
<b>GRTA Xpress**</b>	<b>\$180 million</b>

## Other Projects to Consider

North Line Corridor  
I-20 East Corridor  
Doraville to Oakcliff Extension  
Transit Systemwide Environmental Analysis  
Regional Mobility Call Center  
**Commuter Rail\*\***

*\*To begin study, planning and implementation of light rail*

*\*\* Added during Executive Committee Meeting*