



# Welcome & Introduction



## TRANSIT PROJECT DELIVERY ASSESSMENT



### Georgia Regional Transportation Authority

Kirk Fjelstul • Deputy Executive Director

Roger Henze, AICP • Principle Project Manager



### Hatch Mott MacDonald

G. Mark Hitchcock III, PE • Project Manager





# AGENDA



9:00 AM Welcome & Introduction



9:15 AM Study Overview

9:45 AM Preliminary Phase



10:00 AM Break

10:15 AM Preliminary Phase Discussion



11:00 AM Next Steps

11:15 AM Closing Remarks



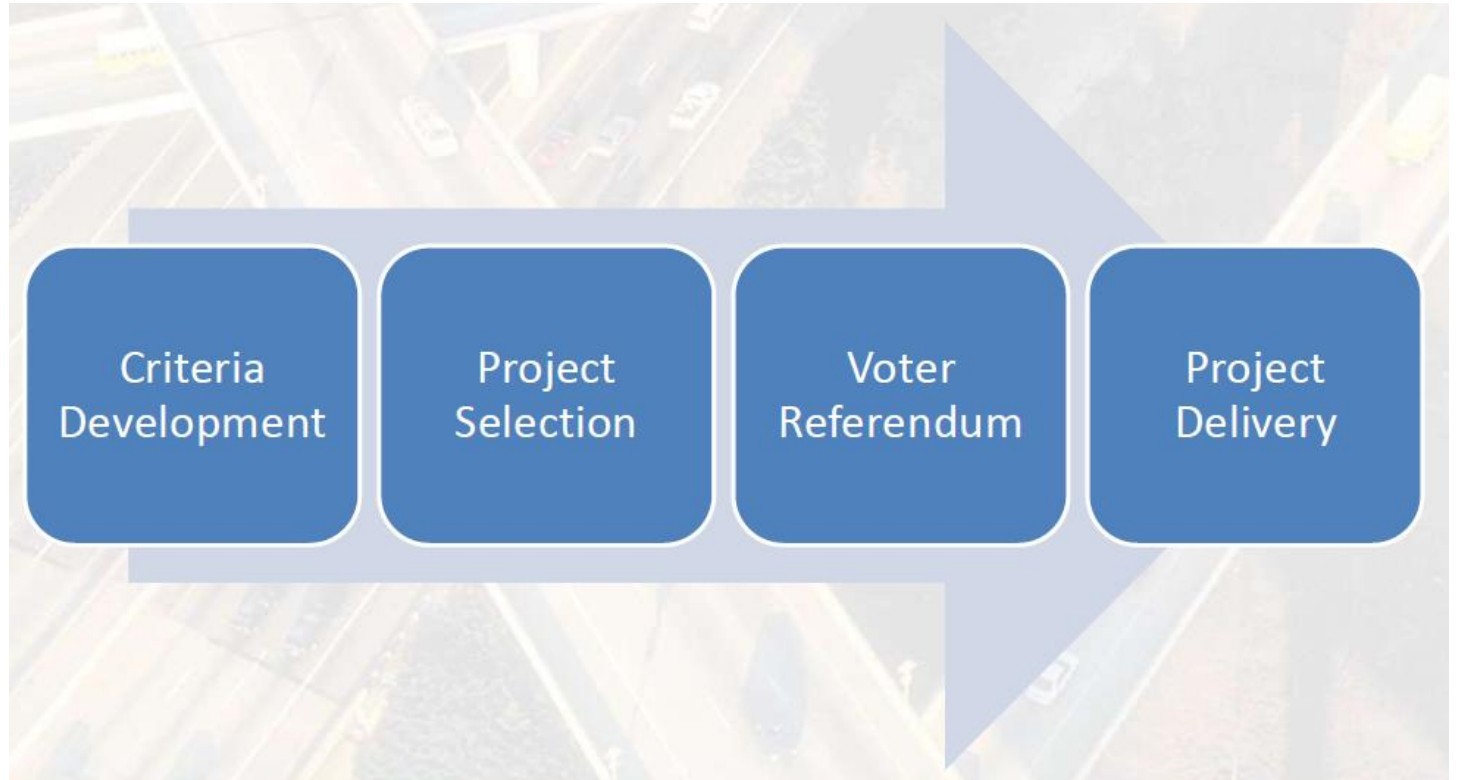
# HB 277 Background



- HB 277 – 1% sales tax for 10 years for transportation.
- ARC – ten county region referendum with vote in Summer 2012.
- Most modes allowed including Transit, plus operations.



# HB 277 Four Phases of Plan





# HB 277 Process & Schedule



- **Unconstrained Example Investment List**
  - Solicit Projects from Local Jurisdictions, Local and Regional Plans (all submittals due March 30, 2011)
  - Unconstrained Example Investment List developed (late spring/early summer)
- **Constrained Draft Investment List**
  - Executive Committee and Director of Planning collaborate to develop constrained list (June-August 2011)
  - Executive Committee submits constrained list to Roundtable (August 15, 2011)
  - Roundtable finalizes constrained list (August -October 2011)
- **Constrained Final Investment List**
  - Roundtable will approve by October 15, 2011
- **Public Referendum**
  - Public education effort (November 2011-June 2012)
  - July 2012 Regional Referendum



# Sample HB 277 Criteria



- Outcomes
  - Transportation projects *delivered* on time and on budget
- Principles
  - Focus on *deliverability*
  - Encourage effective multimodal solutions
  - Strong public support
  - Produce results for the citizens



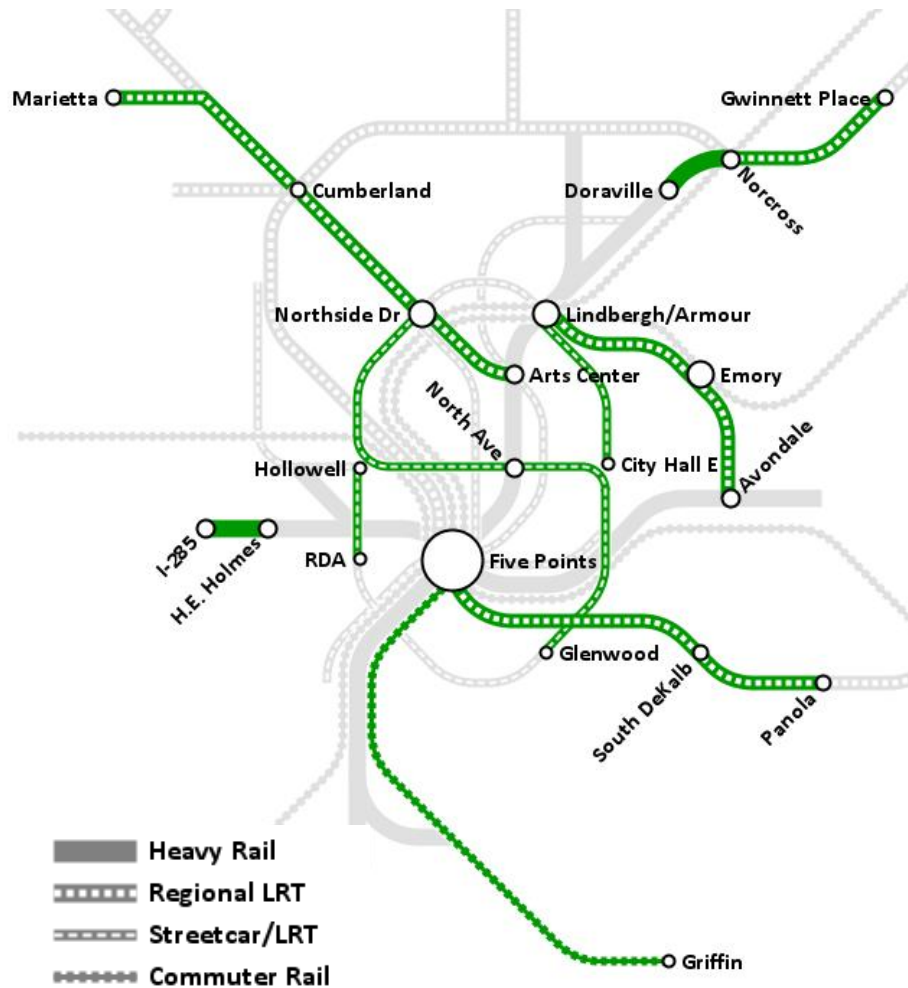
## Appendix A: Illustrative Investment Guidelines



Program Areas	Investment Guidelines (%)	Illustrative Estimate Over 10 Years Based on Draft Economic Projections (\$)
Roadway Capital	20% - 50%	\$1.5 - \$3.7 Billion
Roadway & Bridge Maintenance (Asset Management)	0% - 10%	\$0 - \$740 Million
Safety & Traffic Operations	5% - 15%	\$37 Million - \$1.1 Billion
Freight & Logistics	0% - 5%	\$0 - \$370 Million
Aviation	0% - 5%	\$0 - \$370 Million
Bicycle & Pedestrian	1% - 5%	\$74 - \$370 Million
<b>Transit Capital</b>	<b>10% - 40%</b>	<b>\$74 Million - \$3.0 Billion</b>
Transit Operations & Maintenance	5% - 20%	\$37 Million - \$1.5 Billion



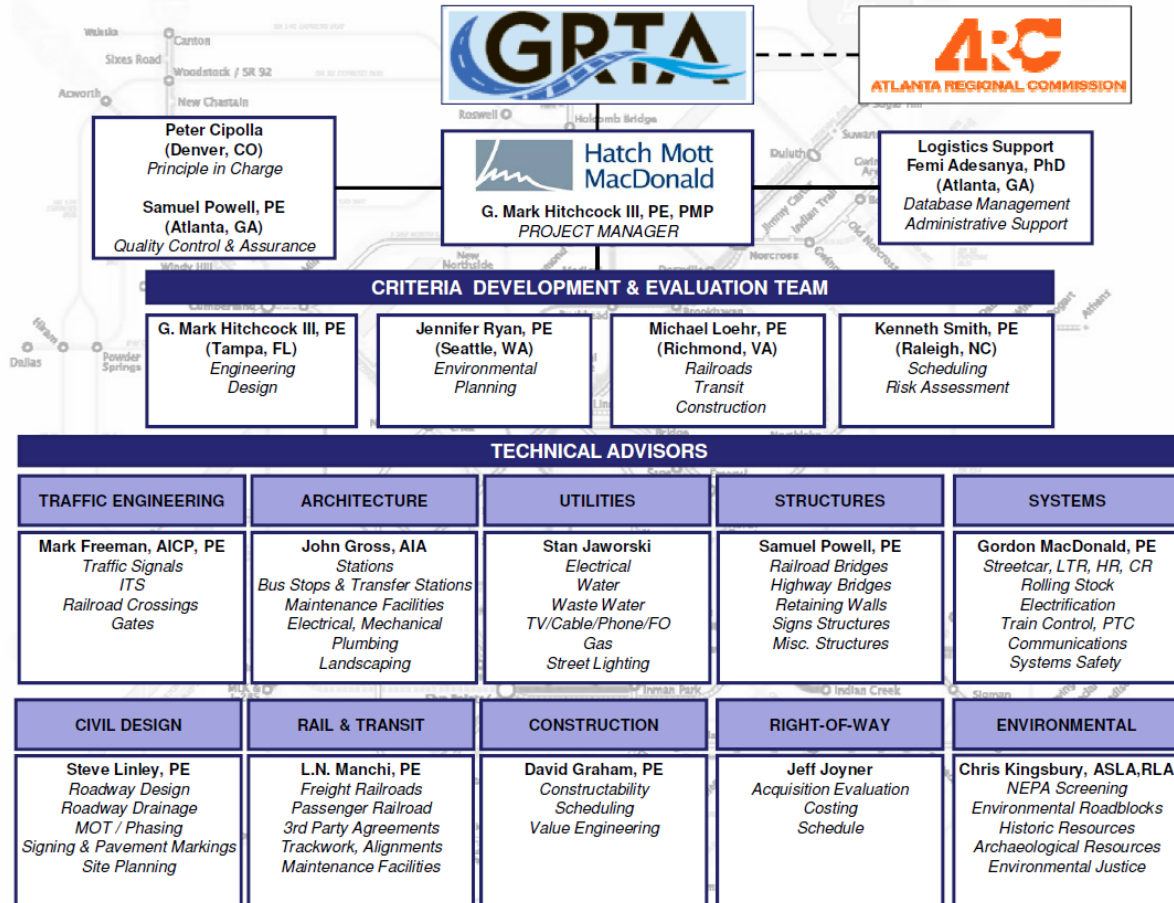
# RTC Staff Concept for TIA-2010 Unconstrained List Constructability Analysis



- Five Points to South DeKalb (LRT)
- South DeKalb to Panola (LRT)
- Lindbergh to Emory (HRT or LRT)
- Emory to Decatur (LRT)
- Doraville to Norcross (HRT or LRT)
- Norcross to Gwinnett Place (LRT)
- MMPT to Griffin (Commuter Rail)
- MARTA West Line Extension (HRT)
- Cumberland to Marietta (LRT)
- Cumberland to Northside Dr. (LRT)
- Northside to Arts Center (LRT)
- Glenwood to North Ave MARTA (LRT/Streetcar)
- Northside to North Ave MARTA (LRT/Streetcar)
- Hollowell to R.D. Abernathy (LRT/Streetcar)
- City Hall East to Armour (LRT/Streetcar)



# Project Delivery Team





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- Project Goals & Objectives
- Project Schedule
- Project Sponsor Engagement
- Project Work Products



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# Study Overview



## Project Goals & Objectives

- Assess **Major Transit Capital Projects** with *potential schedule risk* for delivery within the HB 277 schedule.



# Study Overview



## Project Schedule

- Preliminary Phase • April 22
- Final Phase • May 14
- Detailed Analysis & Draft Report • June 1

## Project Sponsor Engagement

- Draft Risk Criterion Presentation • March 24
- Sponsor Interviews • April 6-8
- Project Clarification Workshop • April 20
- Final Risk Criterion Presentation • May 3
- Detailed Project Analysis Screening • TBA (May 12)

# Study Overview



## Project Work Products

- Draft & Final Report
- Programmatic Project Schedule(s)
- Project Risk Profile(s)

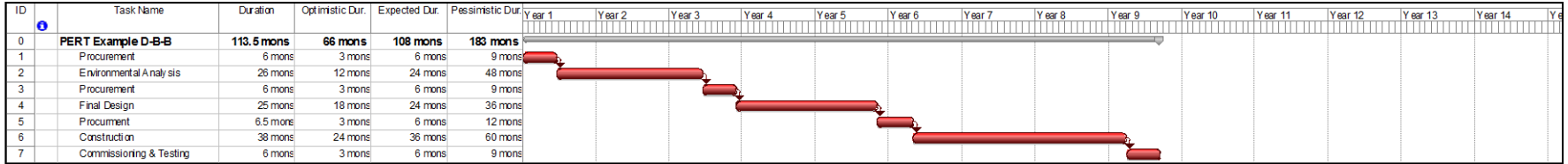
Risk Factor Rating						
		Severity of the Delivery Risk				
		1	2	3	4	5
Likelihood of a Delivery Risk	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5



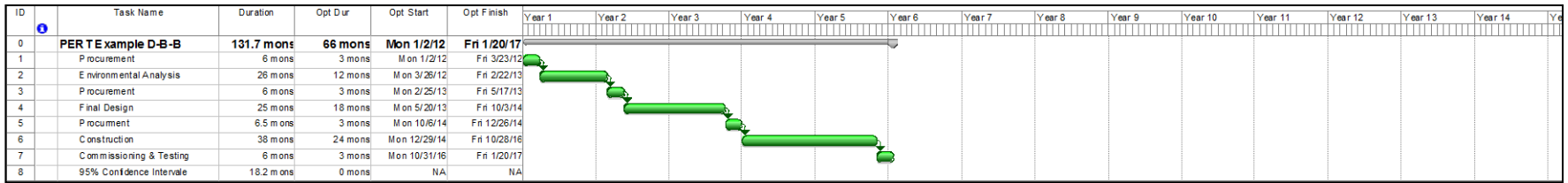
# Programmatic Project Schedule

## PERT Example D-B-B

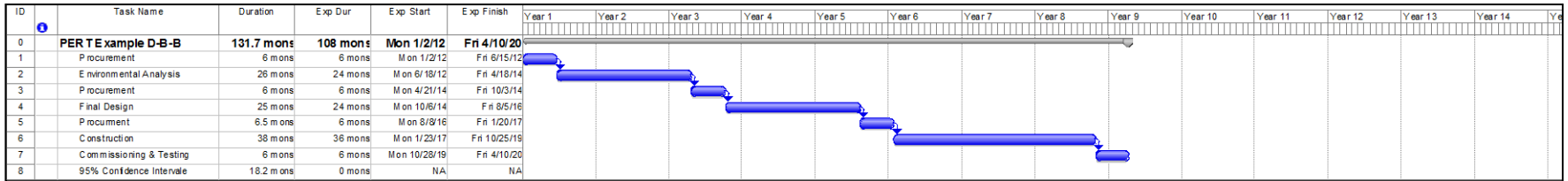
PLANNED



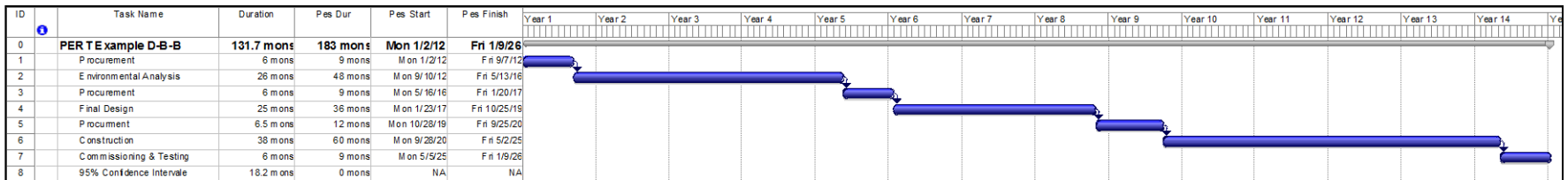
OPTIMISTIC



EXPECTED



PESSIMISTIC

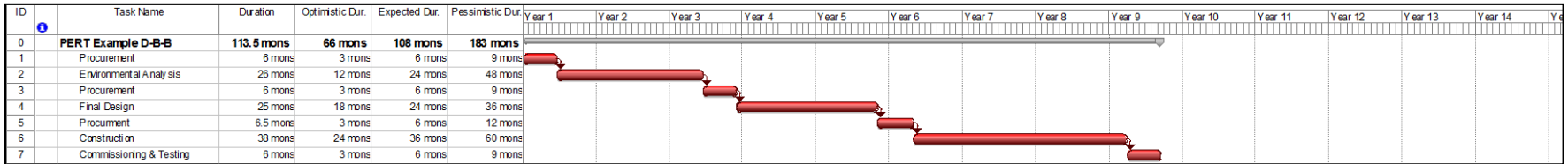




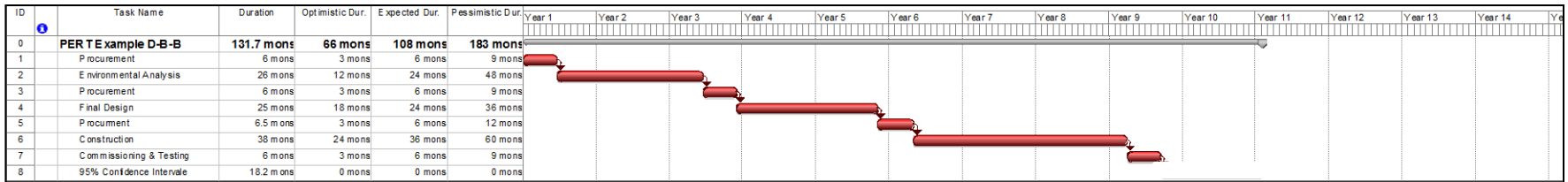
# Project Risk Profile

## PERT Example D-B-B

PLANNED



PUBLISHED



TASK	DURATION	A	B	C	$\sigma = (A-C)/6$	$\sigma^2$
		OPTIMISTIC	EXPECTED	PESSIMISTIC	SIGMA	VARIANCE
<b>PERT Example D-B-B</b>	<b>113.5 Months</b>	<b>66.0 Months</b>	<b>108.0 Months</b>	<b>183.0 Months</b>	<b>19.5 Months</b>	<b>380.3 Months</b>
Procurement	6.0 Months	3.0 Months	6.0 Months	9.0 Months	1.0 Months	1.0 Months
Environmental Analysis	26.0 Months	12.0 Months	24.0 Months	48.0 Months	6.0 Months	36.0 Months
Procurement	6.0 Months	3.0 Months	6.0 Months	9.0 Months	1.0 Months	1.0 Months
Final Design	25.0 Months	18.0 Months	24.0 Months	36.0 Months	3.0 Months	9.0 Months
Procurement	6.5 Months	3.0 Months	6.0 Months	12.0 Months	1.5 Months	2.3 Months
Construction	38.0 Months	24.0 Months	36.0 Months	60.0 Months	6.0 Months	36.0 Months
Commissioning & Testing	6.0 Months	3.0 Months	6.0 Months	9.0 Months	1.0 Months	1.0 Months
					<b>Sum</b>	<b>86.3 Months</b>
				<b>Confidence Interval</b>	<b>Sigma</b> $\sqrt{\sum \sigma^2}$	<b>9.3 Months</b>
				94.0%	1.00	9.3 Months
				97.5%	1.96	18.2 Months
				99.5%	2.56	23.8 Months



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**9:45 AM Preliminary Phase**

- Programmatic Review Process Flow Chart
- Schedule Risk Worksheet
- Draft Project Delivery Risk Evaluation Methodology

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# Preliminary Phase

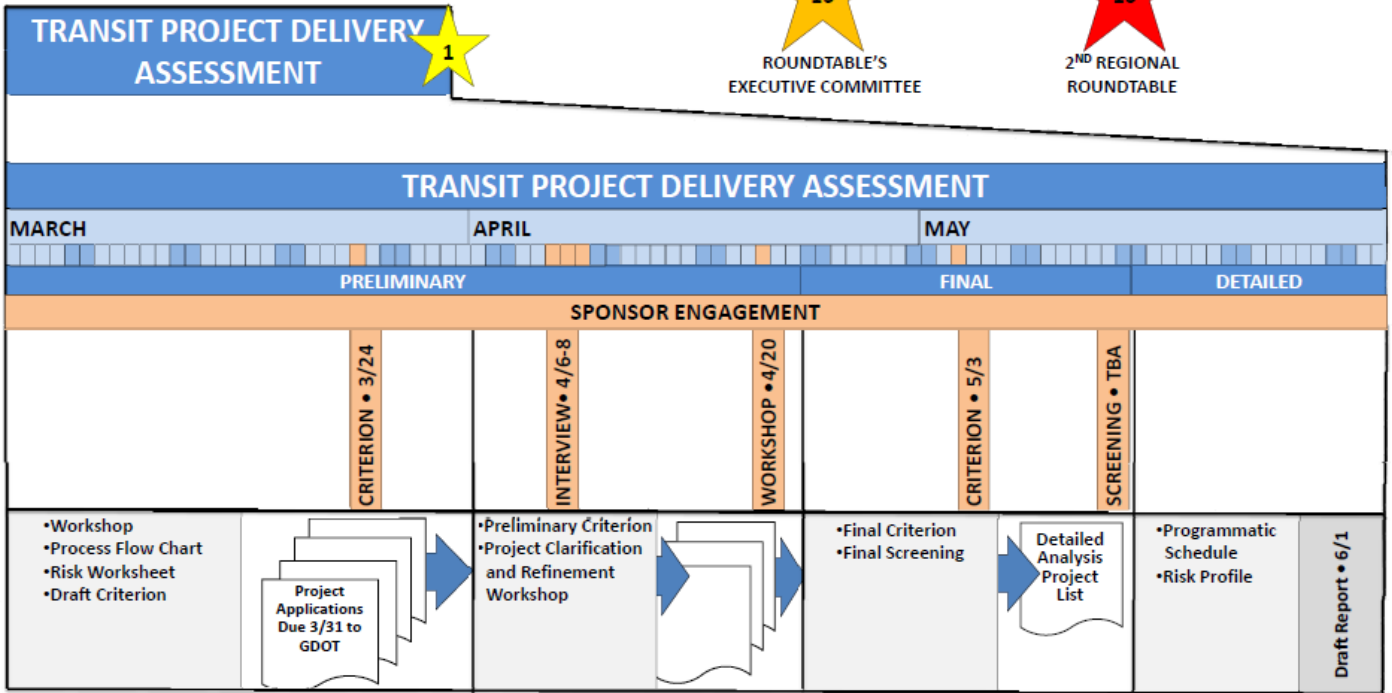


## PROGRAMMATIC REVIEW PROCESS FLOW CHART



Transportation Investment Act of 2010 • Stage 2: Creation of Districts' Investment Lists O.C.G.A. 48-8-243(b)  
2011

MARCH   APRIL   MAY   JUNE   JULY   AUG   SEPT   OCT   NOV   DEC



Contact: Roger Henze, AICP • Georgia Regional Transportation Authority • (404) 463-3094 • [menze@grta.org](mailto:menze@grta.org)



# Preliminary Phase



- Schedule Risk Worksheet
- Draft Project Delivery Risk Evaluation Methodology



# Schedule Risk Worksheet



1. General Characteristics
2. Procurement & Agreements
3. Planning & Environmental
4. Final Design
5. Right-of-Way
6. Construction
7. Commissioning & Testing

# General Characteristics



- Does the project cross jurisdictional boundaries?
- Single project or multiple phases?



# Procurement & Agreements



- Federal Funding (New Starts)
- Project Delivery Method
- Cost Estimates Development
- Early Action Items / Owner Furnished Materials
- Contract Packaging

# Planning & Environmental



- Federal Funds – Federal Sponsor and type of NEPA Document
- Non-Federal Funds – type of Environmental Document
- Specific Environmental Issues already known
- Permitting Requirements or Issues
- Public Acceptance or Resistance

# Final Design



- Design Standards
- Design Codes
- Interoperability
- Significant Facilities
- Permits
- Plan Reviews

# Right-of-Way



- Right of Way Acquisition Management Plan
- Highway Rights of Way
- Utility Rights of Way
- Environmental Issues



# Construction



- Schedule Issues
- Permitting Issues
- Agreements



# Commissioning & Testing



- Commissioning Plan
- Operator / Operations
- Third Party Responsibilities



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# Next Steps



Project Application submittals to GDOT • March 31

Sponsor Interviews • April 6-8



Project Clarification & Refinement Workshop • April 20

Final Project Delivery Risk Evaluation Methodology • May 3



Project Identification for Detailed Analysis • TBA (May 12)

Detailed Analysis & Draft Report • June 1



# Sponsor Interviews



- Project Presentation
  - PowerPoint, Maps, Boards, other documents, no fixed approach
  - Describe project in greater detail
  - Highlight issues that impact deliverability / schedule risk worksheet
- Begin a dialog between sponsor and evaluation team, focus on creating a better understanding of the various schedule risks and potential mitigation strategies.
- Honest and Open Communications

# Sponsor Interviews



- Interview Schedule for Projects
- April 6-8 in 2 hour blocks
- Sponsors encouraged to indicate a preference on sign-up sheet.
- Aggregate sponsor of multiple projects into a several continuous blocks, if required.
- Facilitate scheduling co-sponsors for individual projects, if required.



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