Project Steering Committee Meeting #3

November 14, 2012

marta

Today's Meeting Purpose

- Project Status Update
- Major Findings & Recommendations from Fatal Flaw Analysis
- Overview of Screen 1 Analysis
  - Transit Technologies
  - Screen 1 Alternatives
  - Preliminary Findings
- Small Group Session

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Where We Are

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Connect 400 Alternatives Analysis Schedule

We are Here

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Summary of Community/Stakeholder Input

Alignments:

- GA 400 & SR 9 most appropriate for high capacity transit
- Need east-west transit service to enhance access & increase potential ridership
- Consider use of Encore Parkway to serve the west side of GA 400

Transit Technologies:

- HRT on SR 9 infeasible due to major ROW constraints & community impacts

Stations:

- Potential stations at Holcomb Bridge, North Point Mall, & Windward
  - No large park-and-ride at Holcomb Bridge
- Large park-and-ride is appropriate at the northern terminus
- Need park-and-ride lots along study area periphery

Other:

- Need improvements to the existing bus service
- Stay consistent with local & regional initiatives

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Screening Process

Technical Screening Process

Fatal Flaw Analysis **considers at a high level:**

- **Purpose & Need**
- **Constructability & right-of-way impacts**
- **Generalized Technology Assessment**

Defined alternatives (combinations of alignment & transit technology) for Screen 1

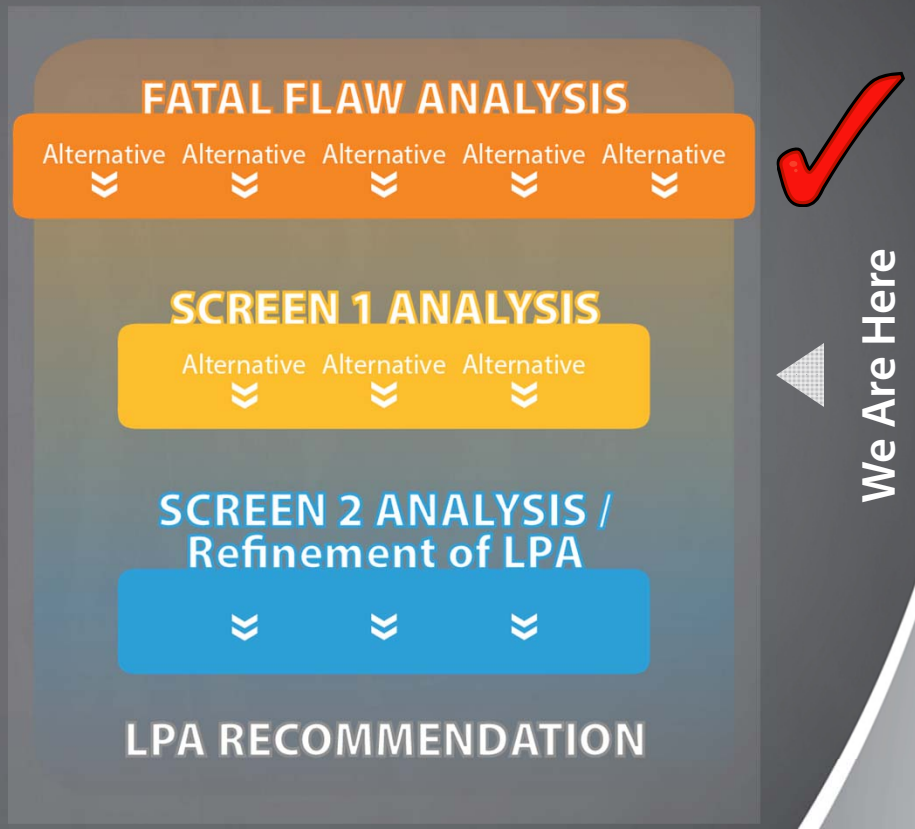
Screen 1 **applies both quantitative & qualitative evaluation criteria to reduce the number of alternatives**

Smaller set of alternatives advance into Screen 2

Screen 2 **involves a more in-depth analysis using additional performance measures**

Screen 2 identifies the LPA

MARTA Board to adopt LPA



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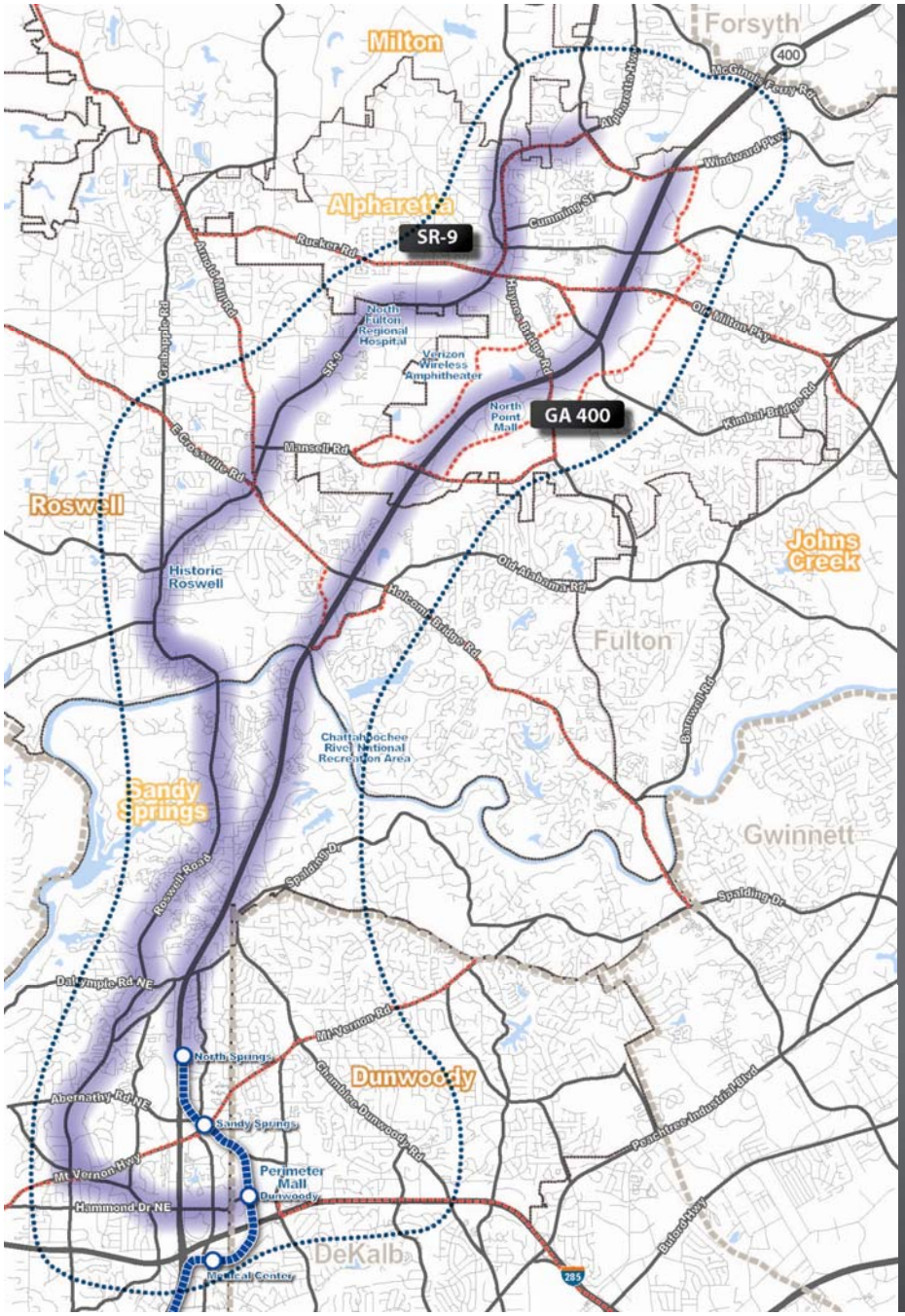

Overview of Fatal Flaw Analysis

Step 1: Technology Assessment

Heavy Rail (HRT)

Diesel Multiple Unit (DMU)

Light Rail/Streetcar (LRT/SC)

Automated Guideway Transit (AGT)

Bus Rapid Transit (BRT)

Bus

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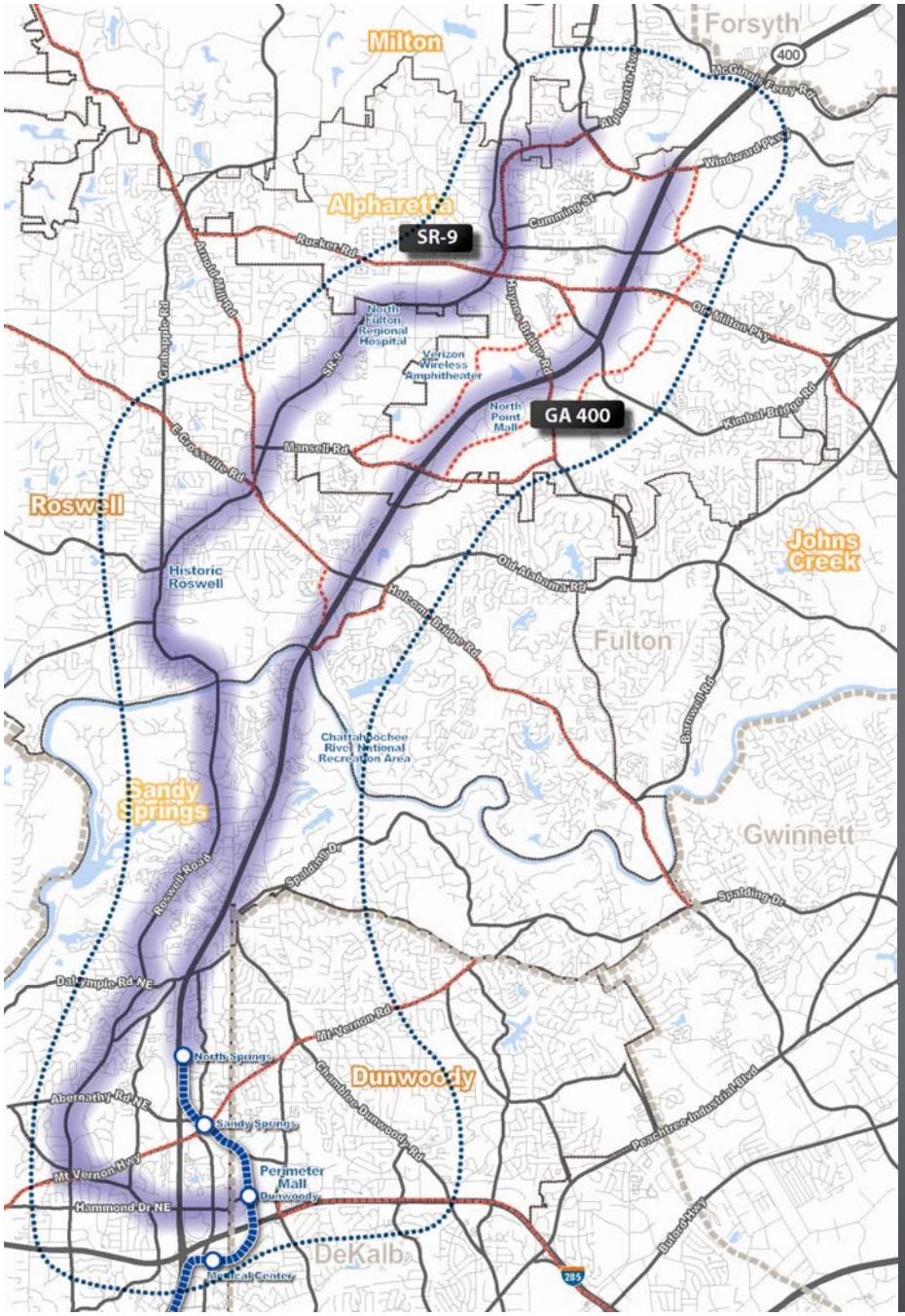
Overview of Fatal Flaw Analysis

Step 1: Technology Assessment



Heavy Rail (HRT)

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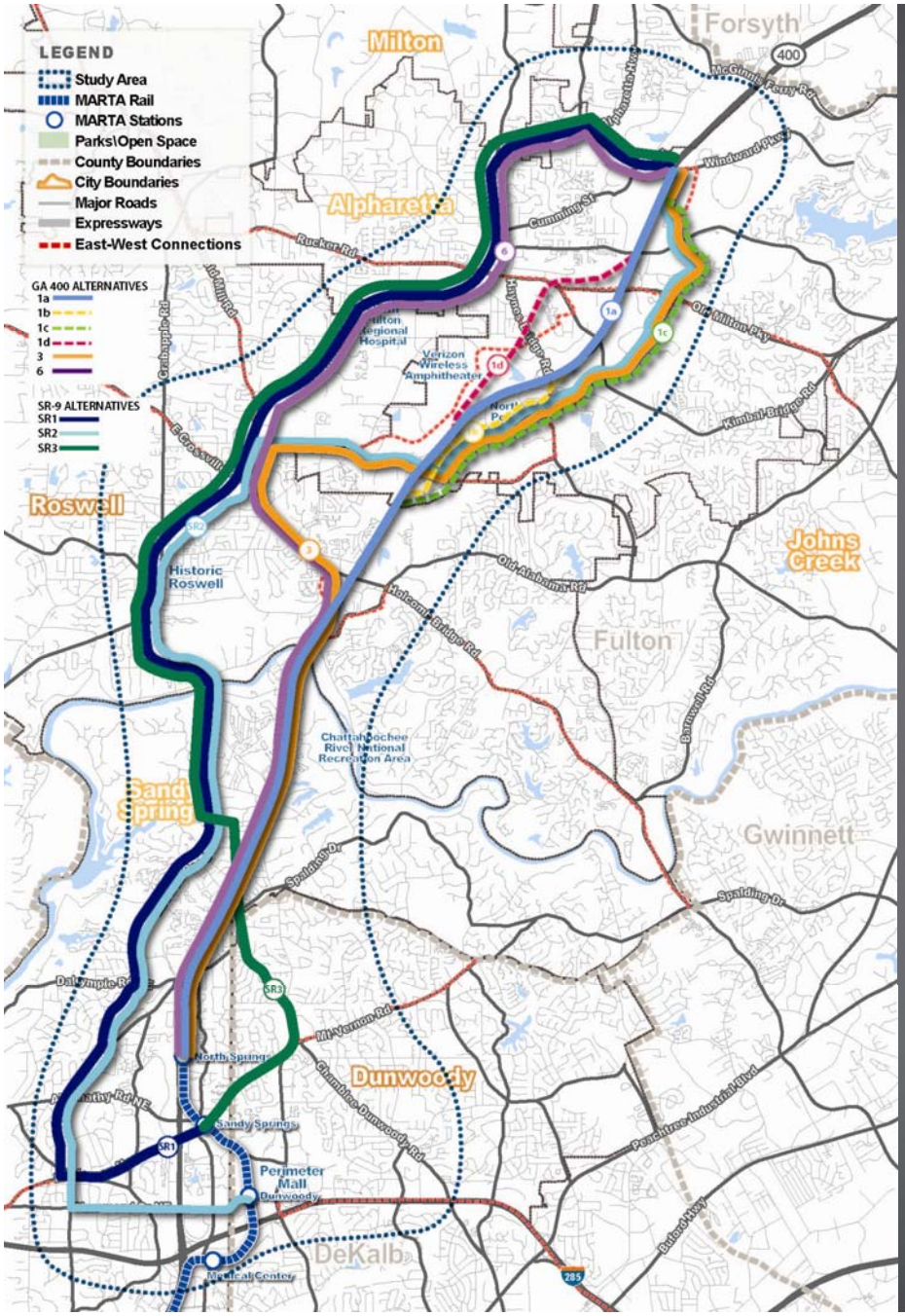

Overview of Fatal Flaw Analysis

Step 2: Universe of Alternatives

- 3 modes + 9 alignments / GA 400 & SR 9

Heavy Rail (HRT)

Light Rail/Streetcar (LRT/SC)

Bus Rapid Transit (BRT)

- GA 400 – 1 (A, B, C, D)
- GA 400 – 3
- GA 400 - 6
- SR 9 – 1
- SR 9 – 2
- SR 9 – 3

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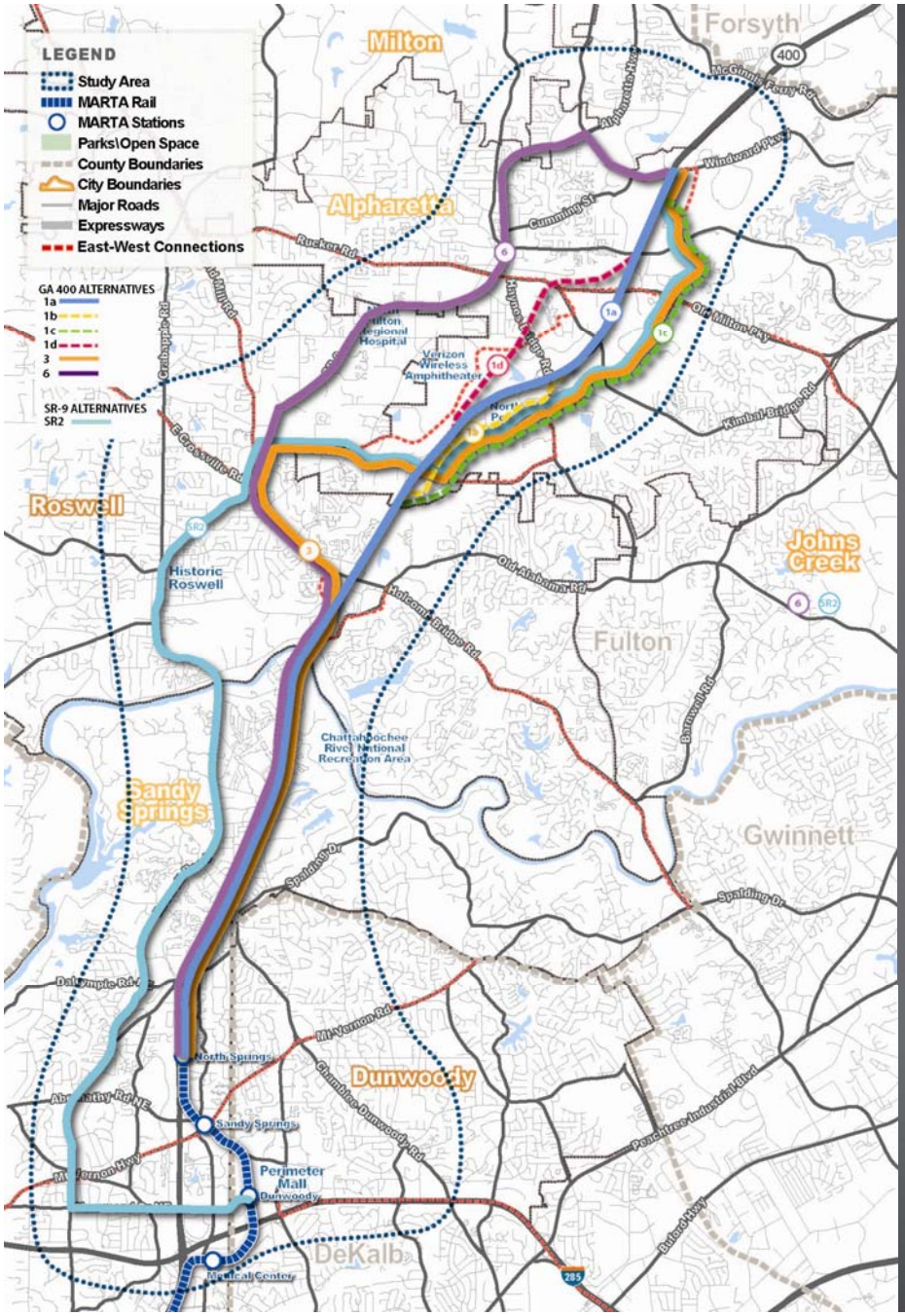

Overview of Fatal Flaw Analysis

Step 1: Technology Assessment

- Independent review of 6 modes
- Most appropriate - Bus Rapid Transit (BRT); Light Rail/Streetcar (LRT/SC); Heavy Rail (HRT)

Step 2: Universe of Alternatives

- 3 modes + 9 alignments along GA 400 & SR 9

Step 3: Fatal Flaw Analysis

- Reduce ‘universe’ to a smaller set for Screen 1
- High-level based on purpose/need & constructability

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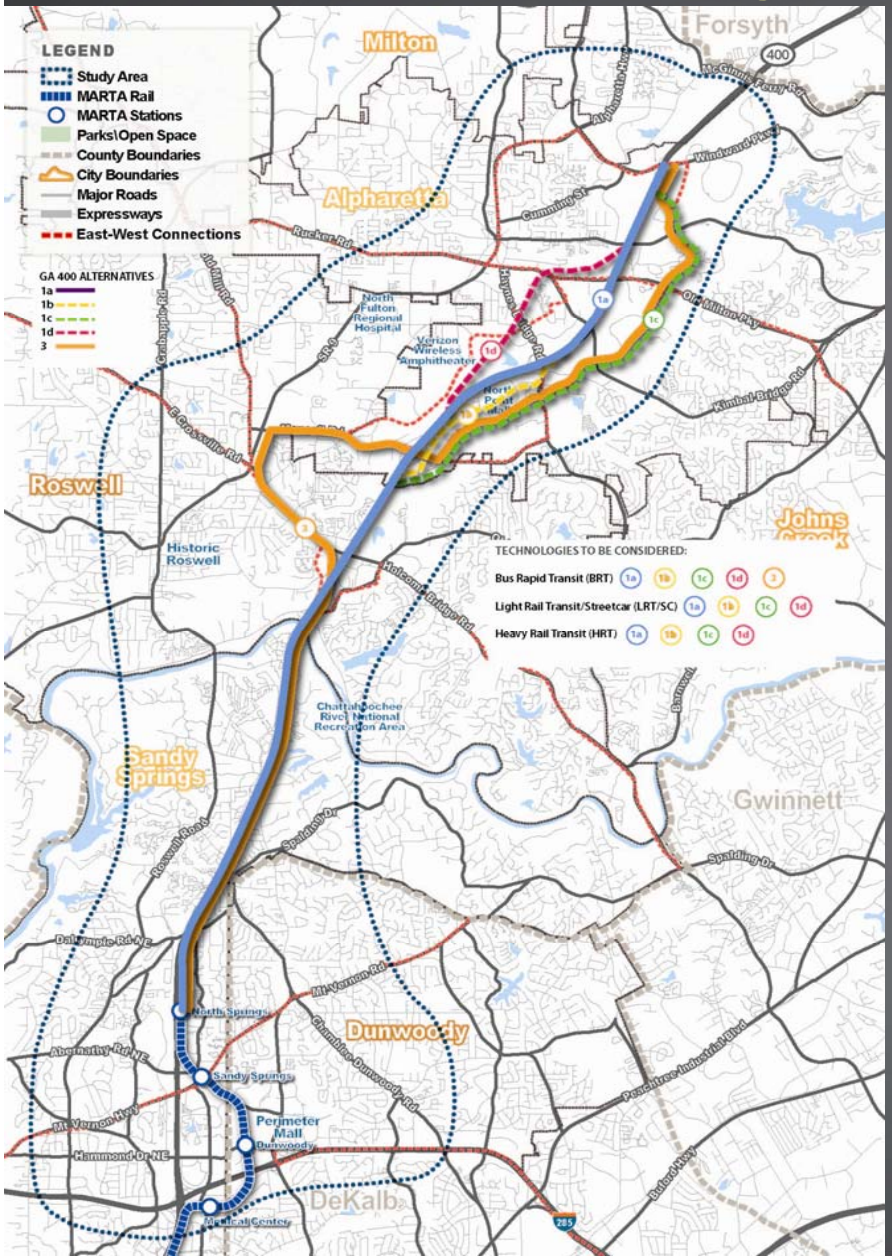
Fatal Flaw Analysis Matrix

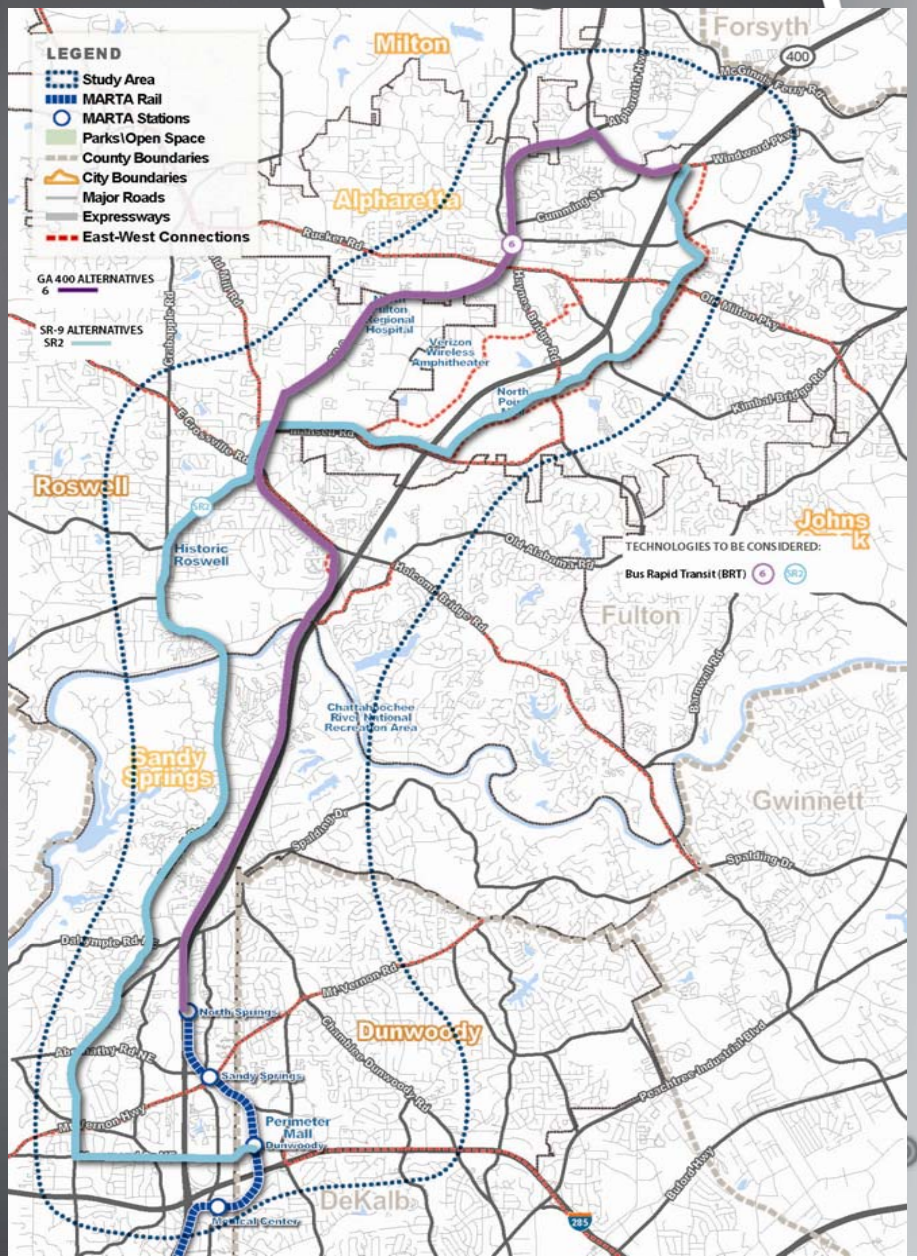
Corridor	Name	Alignment	Technology	Purpose and Need: High Capacity Transit	Purpose and Need: Transit Access	Constructibility: Engineering Constraints/ Costs	Constructibility: Potential Community Impact	Fatal Flaw Results	Alternatives Advancing to Screen 1	Rationale for Elimination and/or Modification
GA 400	GA 400-1	North Springs MARTA Station - GA 400 - Windward Parkway	BRT	2	1	1	2	6	Yes	
			LRT/SC	2	1	0	2	5	Yes	
			HR	2	1	0	2	5	Yes	
	GA 400-2	North Springs MARTA Station - GA 400 - Mansell Road - North Point Parkway - Haynes Bridge Road - GA 400 - Windward Parkway	BRT	2	1	1	1	5	No	Eliminated due to considerable redundancy in alignment. Will be combined with GA 400-1 and regarded as a potential alignment variation for further analysis under Screen 1.
			LRT/SC	2	1	0	0	3	No	
			HRT	2	1	0	2	5	No	
	GA 400-3	North Springs MARTA Station - GA 400 - SR 140 - SR 9 - Mansell Road - North Point Parkway - Windward Parkway	BRT	1	1	1	1	4	Yes	
			LRT/SC	1	1	1	0	3	No	
	GA 400-4	North Springs MARTA Station - GA 400 - SR 140	BRT	2	0	2	2	6	No	Eliminated due to redundancy in alignment. Will be incorporated into GA 400-1 for further analysis under Screen 1. Will be considered during the phasing/implementation plan.
			LRT/SC	2	0	2	2	6	No	
			HRT	2	0	2	2	6	No	
	GA 400-5	North Springs MARTA Station - GA 400 - Mansell Road - North Point Parkway - Windward Parkway	BRT	2	1	1	1	5	No	Eliminated due to considerable redundancy in alignment. Will be combined with GA 400-1 and regarded as a potential alignment variation for further analysis under Screen 1.
			LRT/SC	2	1	0	0	3	No	
			HRT	2	1	0	2	5	No	
	GA 400-6	North Springs MARTA Station - GA 400 - SR 140 - SR 9 - Windward Parkway	BRT	1	1	1	1	4	Yes	
			LRT/SC	1	1	0	0	2	No	
SR 9	SR 9 -1	Sandy Springs MARTA Station - Mt Vernon Highway - SR 9 - Windward Parkway	BRT	1	2	1	0	4	No	Eliminated due to significant impacts to established residential neighborhoods on 2-lane Mt. Vernon Highway.
			LRT/SC	1	2	0	0	3	No	
	SR 9 -2	Dunwoody MARTA Station - Hammond Drive- SR 9 - Mansell Road - North Point Parkway - Windward Parkway	BRT	1	2	1	0	4	Yes	
			LRT/SC	1	2	0	0	3	No	
	SR 9 -3	Sandy Springs MARTA Station - Mt Vernon Highway - Chamblee Dunwoody Road - Pitts Road - SR 9 - Windward Parkway	BRT	1	2	1	0	4	No	Eliminated due to significant Impacts to established residential neighborhoods on various 2-lane roadways through City of Dunwoody.
			LRT/SC	1	2	0	0	3	No	

Rating Scheme: 2 High; 1 Medium; 0 Low. Threshold Score 4.

Alternatives to move forward to Screen 1

Fatal Flaw Analysis Recommendations





Screen 1 Analysis

Introduction/Overview of Screen 1

- **Applicable qualitative & quantitative measures to address goals and objectives of AA**
  - Mobility
  - Accessibility & Connectivity
  - Land Use & Development
  - Potential for TOD
  - Costs
  - Environmental Quality
  - Community Impacts
- **Data & tools used**
  - U.S. Census & ARC 2040 Socioeconomic Forecasts
  - Geographic Information System (GIS)
  - Adopted Local Land Use Plans
  - Order of Magnitude Transit Unit Costs
  - Department of Natural Resources
  - Fulton County Parcel Data

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Screen 1 Alternatives

Screen 1 Transit Technologies

Transit Technologies considered for Georgia 400*

	Heavy Rail	Light Rail/Streetcar	Bus Rapid Transit
WHAT IS IT?	High-speed rail cars powered by electric fixed guideway.	Rail cars powered by overhead catenaries.	Enhanced bus using technology to improve speed and reliability
WHERE DOES IT GO?	Typically used to travel to and from urban locations.	Typically used to travel to and from urban locations.	Typically used to travel to and from urban locations.
WHAT IS CONTEXT? / HOW OFTEN DOES IT STOP?	Corridor with concentrated urban centers	Corridor with concentrated urban centers and/or suburban centers	Corridor with dispersed suburban and urban centers
WHAT IS THE MAXIMUM CAPACITY OF THE TRAIN OR BUS?	800 - 1,400 passengers (8-car train)	200 - 500 passengers (single streetcar or 2-car light rail)	45 - 150 passengers
HOW FAST DOES IT GO? *(AVERAGE SPEED)*	0 5 15 20 25 30 35 40 45 50 55 60 65 70 75 35-50 mph	0 5 15 20 25 30 35 40 45 50 55 60 65 70 75 10 - 30 mph	0 5 15 20 25 30 35 40 45 50 55 60 65 70 75 15-30 mph
WHAT ARE THE BALLPARK CAPITAL COSTS? *(MIILIONS/MILE)*	$200-$600	$80-$300	$10-$120
WHAT DOES IT LOOK LIKE?			
WHERE CAN I SEE IT?	Atlanta, Georgia; New York City, New York; Washington, D.C.	Phoenix, Arizona; Dallas, Texas; Charlotte, North Carolina; Portland, Oregon	Boston, Massachusetts; Cleveland, Ohio; Pittsburgh, Pennsylvania

* Other technologies considered included: diesel multiple unit, automated fixed guideway, and bus. These technologies where eliminated in the Fatal Flaw Analysis and outlined in the Technology Assessment Document (see website).

** High level estimates based on other cities and previous studies

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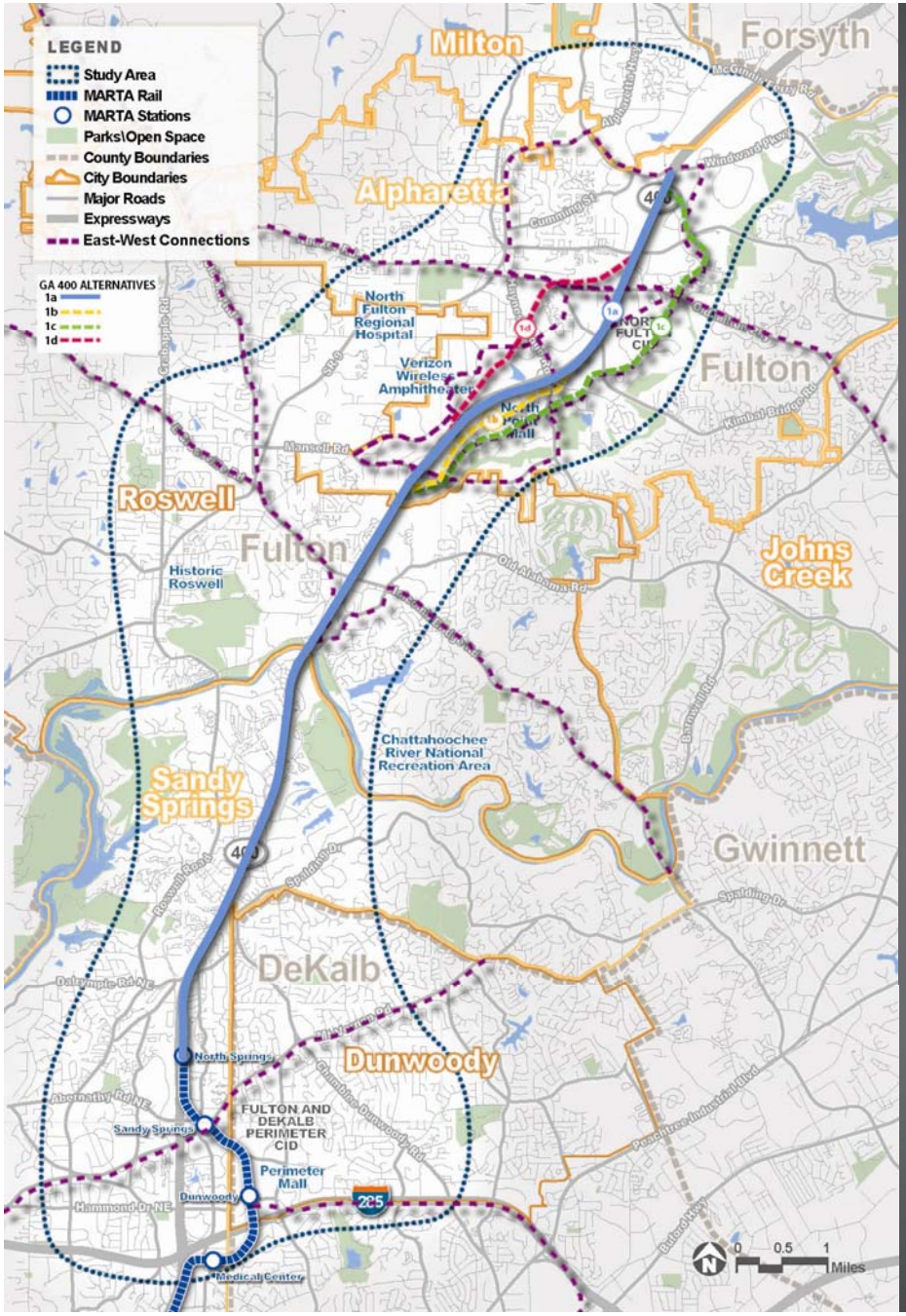

GA 400 – 1 (A, B, C, D)

- **Alignment:**
  - 11.9 to 12.7 miles long
  - North Springs Station - GA 400 - Windward
- **Mode:**
  - BRT
  - LRT/SC
  - HRT
- **Key Assumptions:**
  - Use of GDOT Transit ROW*
  - Most direct route
  - High construction costs
  - Fewer community impacts

*GDOT ROW availability on GA 400 to be determined based on Managed Lanes

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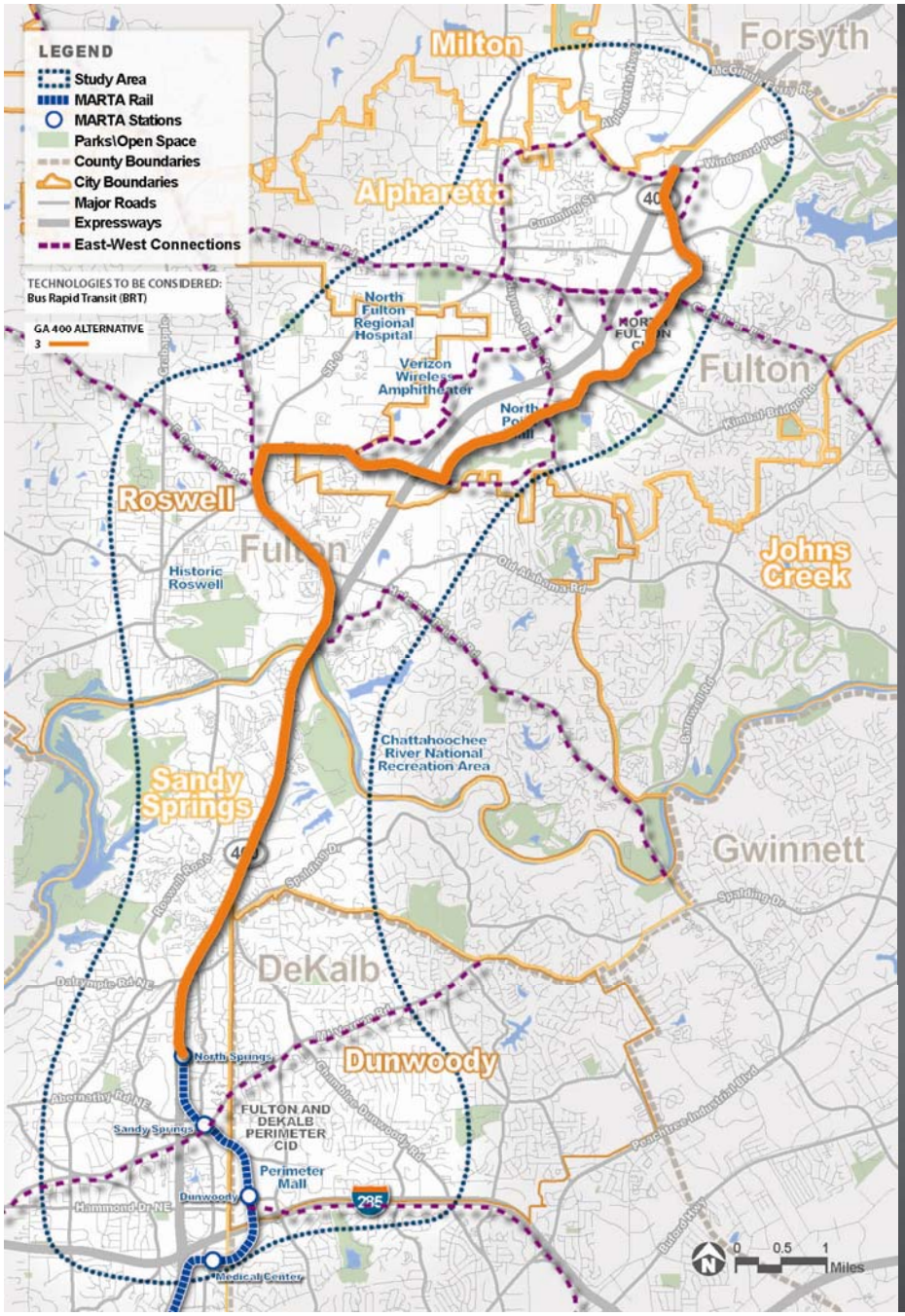

GA 400 – 3

- **Alignment:**
  - 15.1 miles long
  - North Springs Station - GA 400 - SR 140 - SR 9 - Mansell - North Point - Windward
- **Mode:**
  - BRT
- **Key Assumptions:**
  - Use of GDOT Transit ROW*
  - Dedicated lanes where feasible on arterials
  - Congestion on SR 140
  - Grade issues on Mansell crossing GA 400

*GDOT ROW availability on GA 400 to be determined based on Managed Lanes

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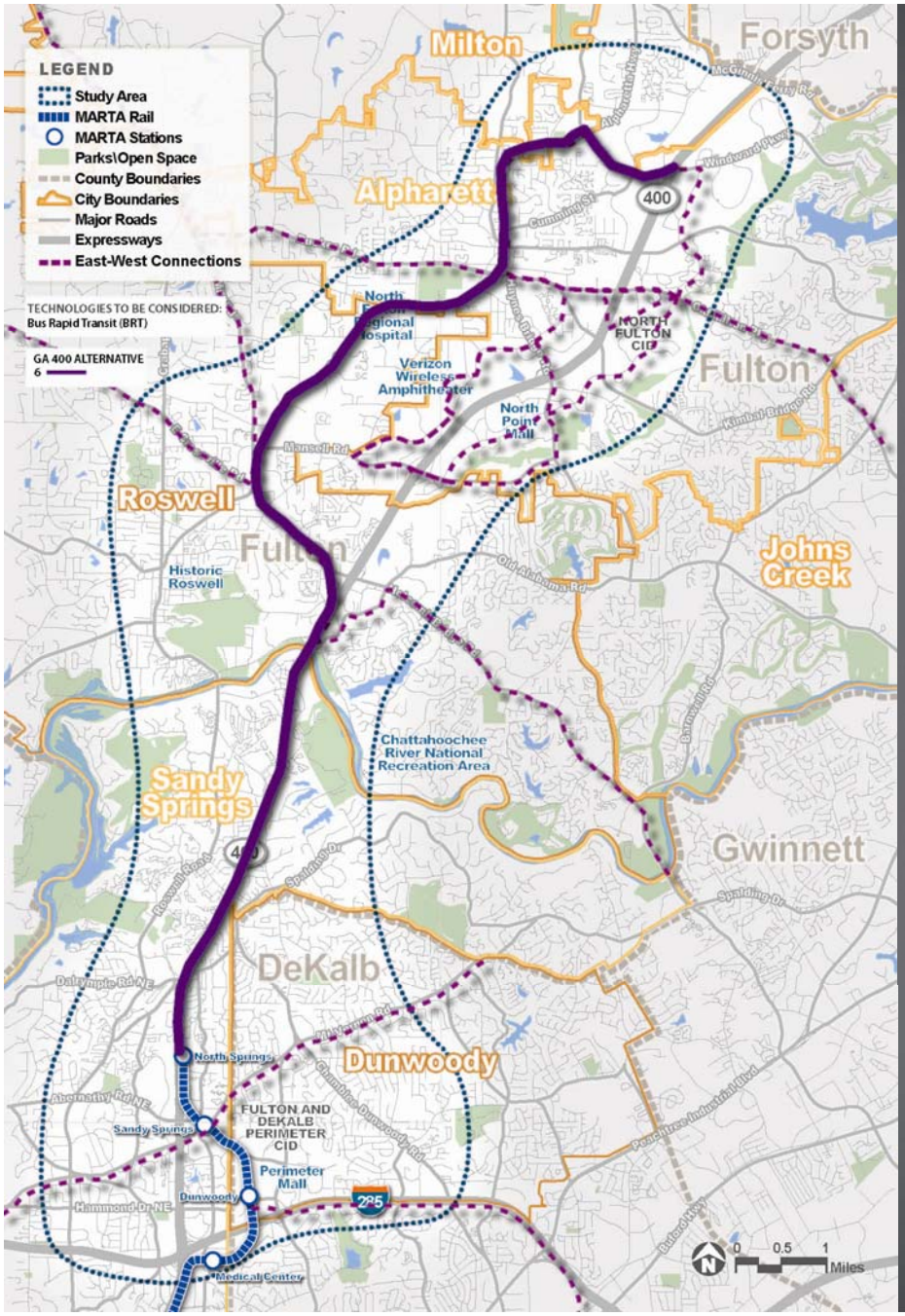
GA 400 TRANSIT INITIATIVE



GA 400 – 6

- **Alignment:**
  - 14.7 miles long
  - North Springs Station - GA 400 - SR 140 - SR 9 - Windward
- **Mode:**
  - BRT
- **Key Assumptions:**
  - Use of GDOT Transit ROW*
  - Dedicated lanes where feasible on arterials
  - Grade/Topography/ Roadway alignment & ROW issues on SR 9

*GDOT ROW availability on GA 400 to be determined based on Managed Lanes

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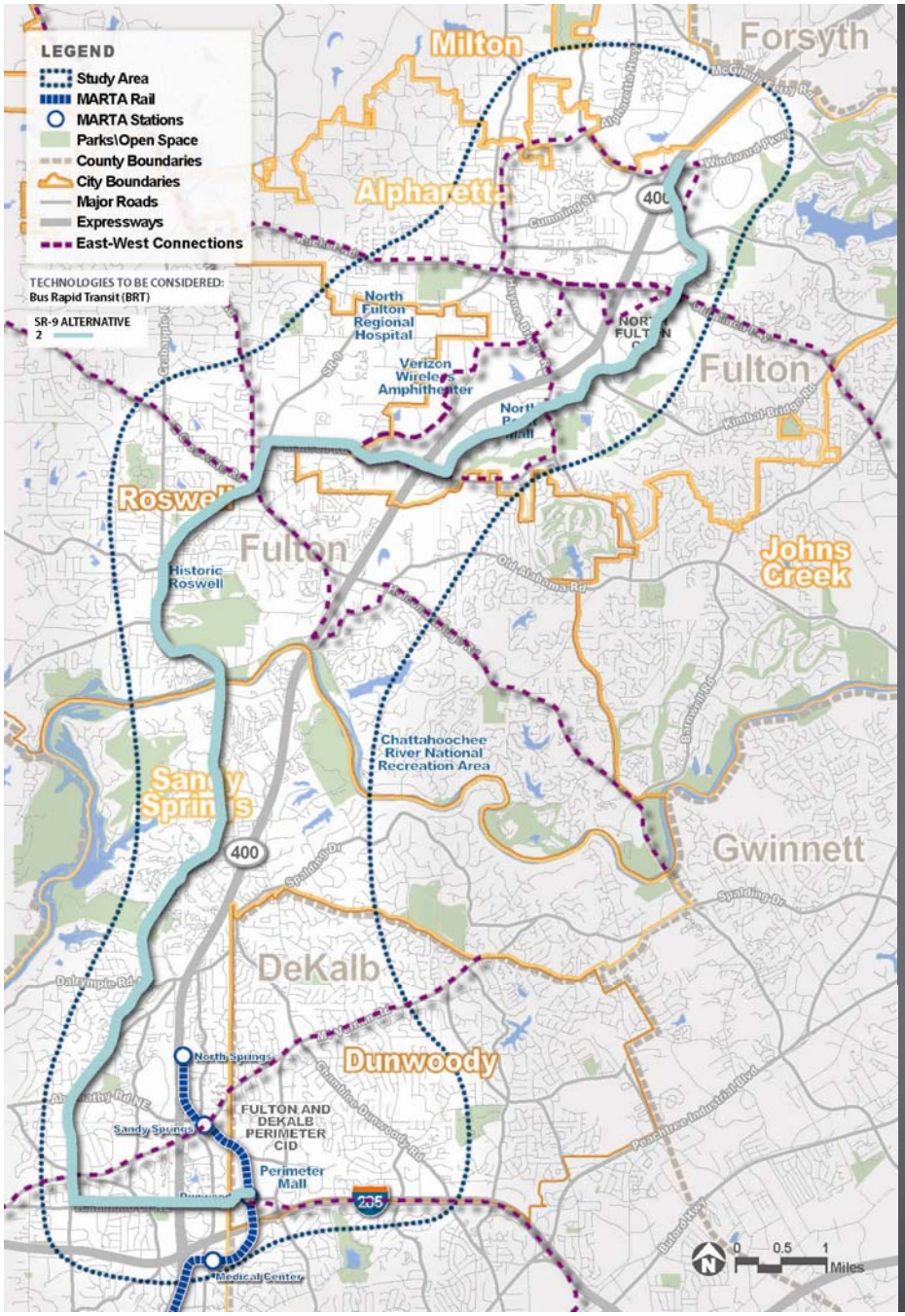

SR 9 – 2

- **Alignment:**
  - 19.6 miles long
  - Dunwoody Station - Hammond - SR 9 - Mansell - North Point Pkwy – Windward
- **Mode:**
  - BRT
- **Key Assumptions:**
  - Dedicated lanes where feasible on arterials
  - Grade/Topography/ Roadway alignment & ROW issues on SR 9
  - Consistent with proposed BRT on Hammond

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Preliminary Screen 1 Findings

Criteria	Measures	GA 400-1 (A-B-C-D)			GA 400-3 BRT	GA 400-6 BRT	SR 9-2 BRT
		HRT	LRT	BRT			
Mobility	Impacts to roadway capacity	> 1 mile	> 1 mile	> 1 mile	2 – 3 miles	4 – 6 miles	9 – 11 miles
Access & Connectivity (*within 10 minutes walking or driving to stations)	Projected population, households, employment *	To Be Determined after PSC					
	Major activity centers *						
	Low-income, minority, elderly and zero-car populations*						
	Interface with existing & future transit service						
Land Use & Development	Consistency with local and regional plans						
Potential for TOD (*within ½ mile of stations)	Projected population and employment densities*						
	Transit-supportive future land uses and zoning*						
Costs	Annual O&M ($ million)	$15 – 20 M	$8 – 10 M	$4 – 6 M	$4 – 6 M	$4 – 6 M	$4 – 6 M
	Construction Capital	~$1.9 B	~$2.0 B	~$35 M	~$36 M	~$37 M	$~40 M
Environmental Quality	Potential impacts to wetlands	3 – 20 acres	3 – 20 Acres	3 – 20 Acres	15 – 20 acres	1 – 3 acres	18 – 20 acres
Community Impacts	Potential community impacts	600-750 parcels 300-400 acres	600-750 parcels 300-400 acres	600-750 parcels 300-400 acres	~ 700 parcels ~ 400 acres	~ 900 parcels ~ 450 acres	~ 1050 parcels ~ 450 acres

What We Have Learned So Far…

- ROW along SR-9 will present cost and travel time challenges
- Alignments outside of GA 400 ROW may potentially impact more of the community
- Moderate potential impact to environmental features for all alignments
- HRT and LRT will have highest capital costs

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Small Group Exercise

- Confirm Proposed Alignment Alternatives-add/delete/refine
- Identify Station Locations for Each Alternative
- List up to 3 opportunities/constraints associated with each station location

Moving Forward

Next Steps

- Incorporate PSC Input into Station Area Development
- Finalize Screen 1 Analysis
- Public Outreach - December
  - Present findings from Screen 1
  - Gain consensus on alternatives for Screen 2
  - Facebook updates and quiz

ProProfs Quiz Maker

Take Quizzes › Connect 400 › **Question 1 / 7**

Connect 400

Question 1 / 7

What is the prupose for this project?

A. ◯ Improve Mobility and Access

B. ◯ Support Land Use and Economic Development Planning

C. ◯ Provide Cost-Effective Transit Service

D. ◯ Minimize Environmental Impacts

E. ◯ All of the above

Next

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