

CENTRAL CORRIDOR HIGH-CAPACITY TRANSIT STUDY

Phase 1 Summary & Phase 2 Introduction Briefing

February 11, 2014

Urban Transportation Commission



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Briefing Topics

- 1) Phase 1 Evaluation Summary
- 2) Phase 2 Work Plan & Schedule
- 3) Project Purpose
- 4) Phase 2 Process
- 5) Preliminary Alternatives
- 6) Next Steps



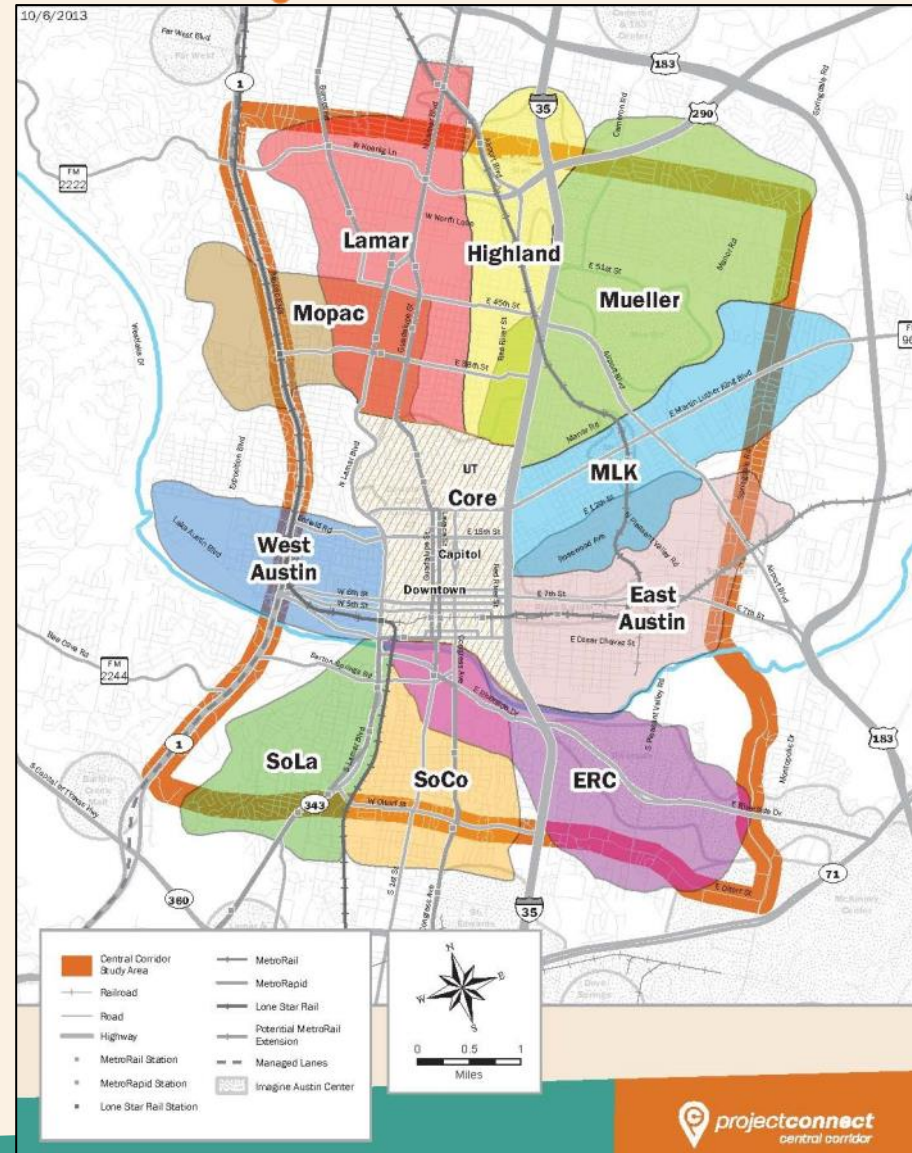
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Phase 1 Evaluation Summary

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Evaluation Approach

- 10 sub-corridors identified + Core
- Comparison of sub-corridors for high-capacity transit (HCT) suitability
- No single factor tells the whole story



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Evaluation Results

								Current Focus		Future Focus	
Project Team		CCAG		Public*		Equal Weight		Serving Criteria Only		Shaping Criteria Only	
ERC	70	ERC	58	ERC	72	ERC	60	ERC	55	ERC	57
Highland	61	Highland	58	Highland	65	Highland	57	East Austin	53	Highland	52
Lamar	53	Mueller	51	Mueller	56	Mueller	51	Lamar	53	Mueller	44
Mueller	52	Lamar	48	Lamar	51	Lamar	50	West Austin	52	Lamar	42
East Austin	50	East Austin	45	East Austin	49	East Austin	47	Highland	47	SoCo	38
SoCo	44	SoCo	41	SoCo	46	SoCo	43	Mueller	45	East Austin	34
West Austin	33	West Austin	32	West Austin	42	West Austin	32	SoCo	37	West Austin	28
MLK	27	SoLa	22	MLK	30	MLK	25	Mopac	36	SoLa	21
Mopac	27	MLK	22	Mopac	29	SoLa	22	MLK	31	MLK	18
SoLa	24	Mopac	18	SoLa	28	Mopac	21	SoLa	16	Mopac	11

Key Findings

- ERC & Highland are top performers
 - From various perspectives
- Weightings do not change the overall results
- All sub-corridors could support HCT

Evaluation scores can only be compared within each column.

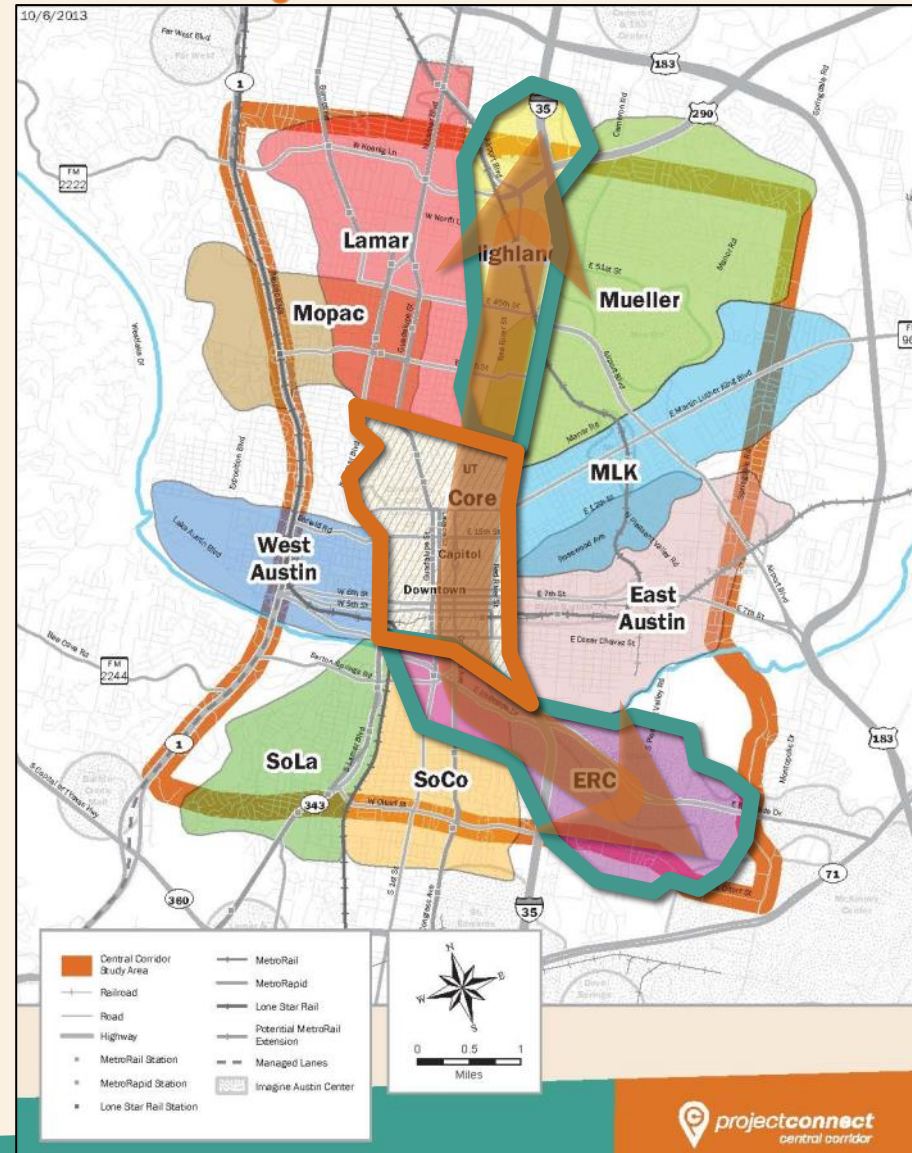
*Three public workshops input.

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Selected Central Corridor Priority Area

East Riverside & Highland

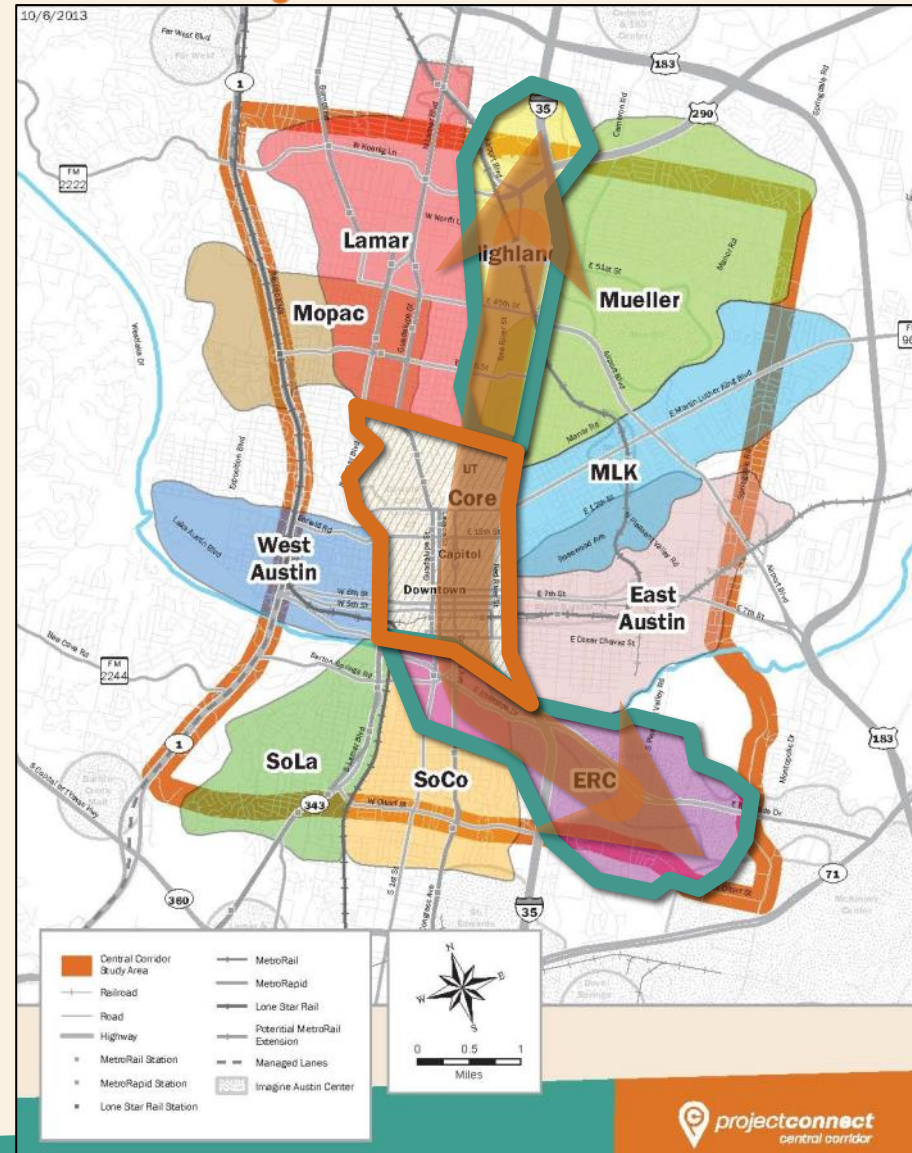
- East Riverside (ERC) and Highland are consistently in the top two
- Advance both into Phase 2
 - Develop best project
- Balanced recommendation
 - System Development
 - Shaping Characteristics
 - Serving Characteristics



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East Riverside & Highland Opportunities

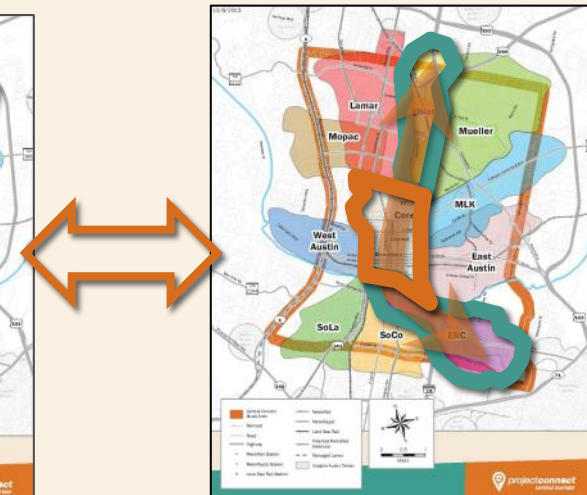
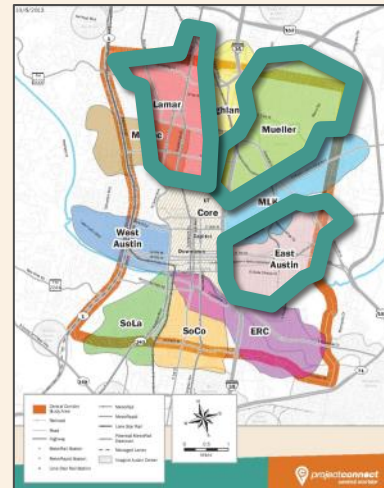
- Link East Riverside and Central Austin residential densities to:
 - Downtown employment destinations
 - New Dell Medical School and Innovation District
 - New 'heart' of UT Austin campus
 - New ACC Highland flagship campus and 80 acre TOD with UT co-enrollment program and workforce training
- Provide alternative to IH-35 congestion thru Central Austin
- Provide additional capacity across Lady Bird Lake
- Build HCT system, linking Red Line, MetroRapid, Express Bus, North Corridor Connectors, LSTAR, etc.



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Central Corridor System Planning

- Continuing system level planning during project development is critical
 - All sub-corridors could support high-capacity transit
 - Central Corridor phasing must be integrated with all system planning efforts
- Project definition is needed for Lamar, Mueller, East Austin
 - Similar to Phase 2 efforts for East Riverside & Highland*
 - Leverage future funding opportunities
 - Create project pipeline - “shovel-ready”



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CCAG Action

- Central Corridor Advisory Group (CCAG) Action on December 6, 2013
 - Endorsed project team recommendation for East Riverside and Highland Sub-Corridors
 - Recommended the project team continue critical Central Corridor system level planning and project development, with special consideration of the next tier of sub-corridors, including East Austin, Lamar, and Mueller

- Action on December 12, 2013
 - Endorsed (7-0) project team recommendation for East Riverside and Highland Sub-Corridors
 - Identify funding needs and sources to continue Central Corridor project definition and development activities in the next tier of sub-corridors
 - Continue cultivating a relationship with FTA to prepare for any future high-capacity transit investments in the Lamar sub-corridor

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Capital Metro Board Action

- Action on January 29, 2014
 - Endorsed (7-0) project team recommendation for East Riverside and Highland Sub-Corridors
 - Identify funding needs and sources to continue Central Corridor project definition and development activities in the next tier of sub-corridors
 - Continue cultivating a relationship with FTA to prepare for any future high-capacity transit investments in the Lamar sub-corridor

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Lone Star Board Executive Committee Action

- Action on February 7, 2014
 - Endorsed (4-0) project team recommendation for East Riverside and Highland Sub-Corridors
 - Identify funding needs and sources to continue Central Corridor project definition and development activities in the next tier of sub-corridors
 - Continue cultivating a relationship with FTA to prepare for any future high-capacity transit investments in the Lamar sub-corridor

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Phase 2 Work Plan & Schedule

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Phase 2 Work Plan & Schedule

Decision-Making Process

- Phase 2: Select Locally Preferred Alternative (LPA)

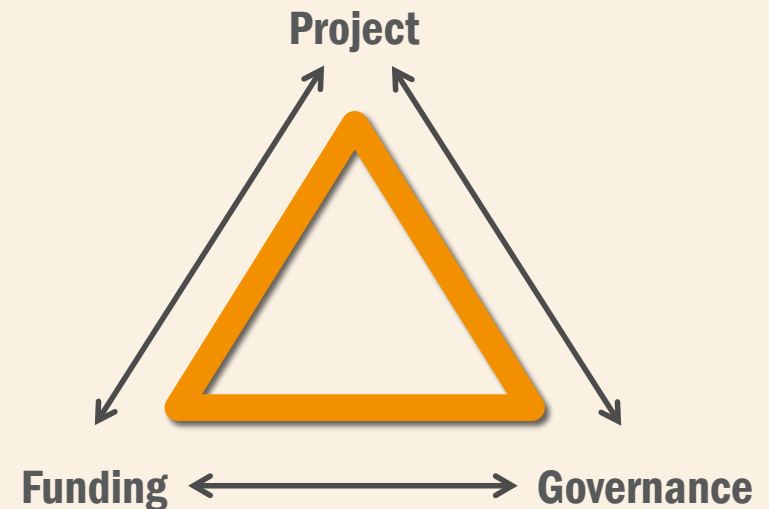
Current
Progress

Central Corridor High-Capacity Transit Study Work Plan											
				2013	2014						
				6	7	8	9	10	11	12	
				Dec	Jan	Feb	Mar	Apr	May	Jun	
Phase 2 Select Draft Locally Preferred Alternative (LPA)	Step 4: Identify Preliminary Alternatives	Task 9	Project Purpose								
		Task 10	Process – Methodology & Criteria								
		Task 11	Identify & Screen Preliminary Alternatives – Service, Mode & Alignment								
	Step 5: Define Final Alternatives	Task 12	Define Final Alternatives – Mode & Alignment								
	Step 6: Evaluate Alternatives	Task 13	Evaluate Final Alternatives								
	Step 7: Select LPA	Task 14	Select Draft Locally Preferred Alternative (LPA)								
			<i>Decision</i>								
											*

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Phase 2 Objectives

- Project Definition
 - Service, mode, alignment, stops
- Funding Plan
 - Capital and O&M costs, funding sources
 - *Within* overall Project Connect Plan
- Governance Structure (TWG)



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Project Purpose

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Project Purpose

The purpose of the next high-capacity transit project in the Central Corridor is to:

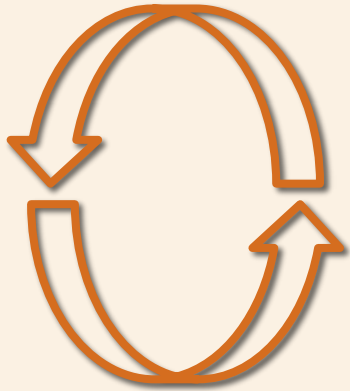
- Provide a reliable alternative to congestion
- Reinforce the success of the core through improved access and affordable mobility
- Provide connectivity to the city's and region's activity centers
- Provide a project compatible with urban physical constraints
- Serve current demands and shape future growth
- Implement an integrated high-capacity transit system
- Be competitive for FTA funding

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Phase 2 Process

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Evaluation Process



Identify Preliminary Alternatives

Screen Primary Alternatives

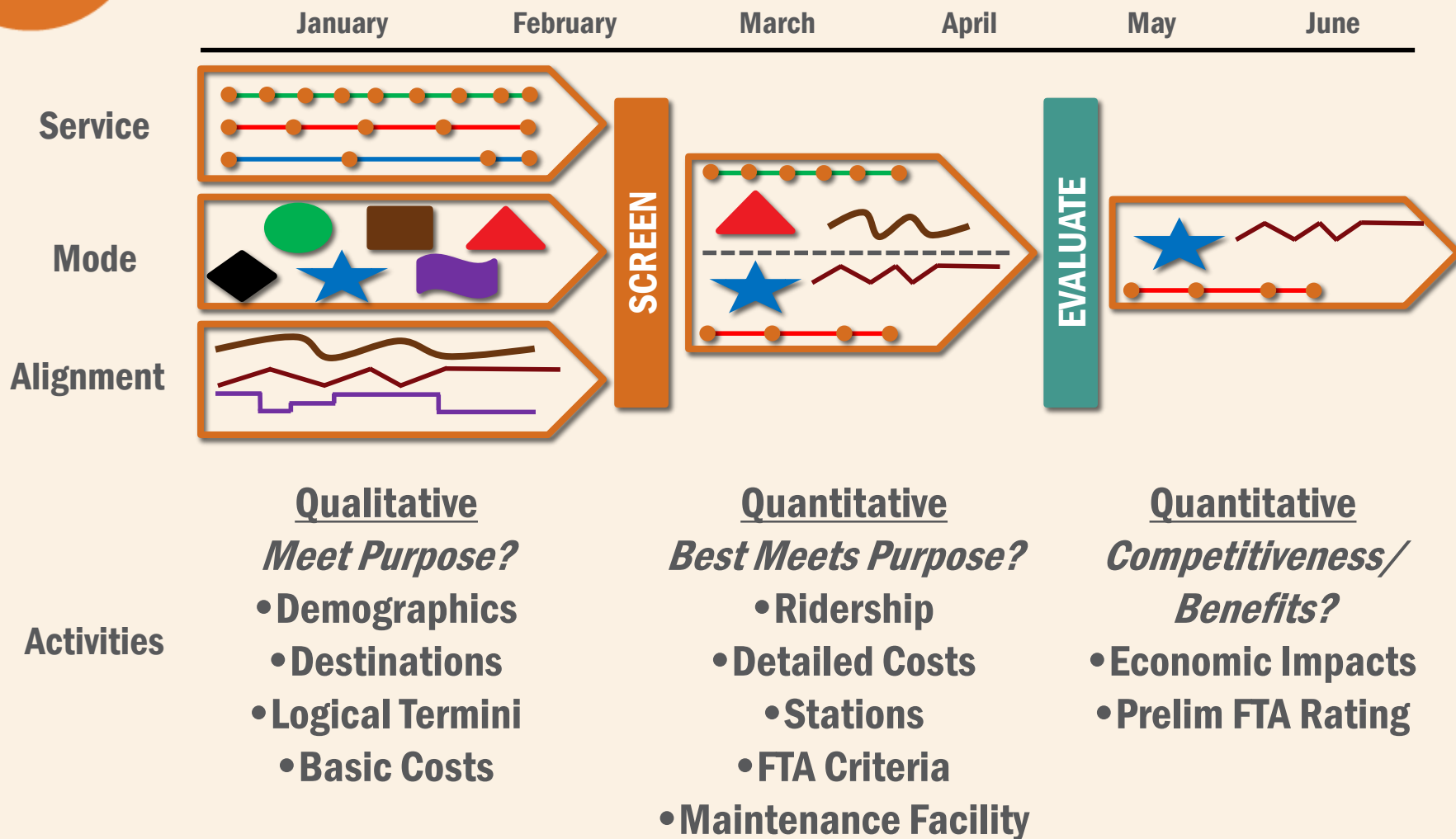
Define Final Alternatives

Evaluate Final Alternatives

Select Draft LPA

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Evaluation Process



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Preliminary Alternatives

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Multi-step Evaluation Process

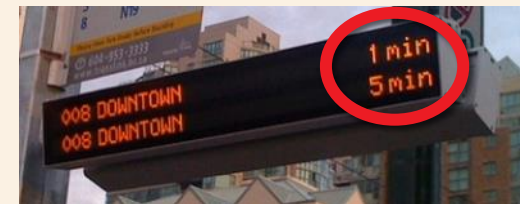
- Service Characteristics
- Mode Characteristics
- Alignment Characteristics



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Service Characteristics

- Four service characteristics to consider
 - Reliability
 - Frequency
 - Stop Spacing
 - Speed



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Service Characteristics and Considerations

Service Characteristic		Considerations
	High	Low
Reliability	High percentage use of dedicated guideway	Low percentage use of dedicated guideway
The bottom line	Higher reliability, higher capital cost	Lower reliability, lower capital cost
Frequency	High frequency of service	Low frequency of service
The bottom line	Higher operating cost, more attractive service (no need to check timetable)	Lower operating cost, less attractive service
Stop Spacing	More frequent stops	Less frequent stops
The bottom line	Better access to stations, lower operating speed	Less direct access to stations, higher operating speed
Speed	Higher speed	Lower speed
The bottom line	Less frequent stops, less walkable access to stations, more commuter-type service	More frequent stops, better walkable access to stations, more local-type service

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Service Characteristics Trade-offs

Reliability



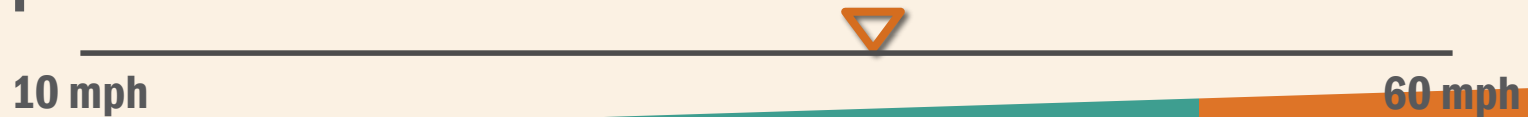
Frequency



Stop Spacing



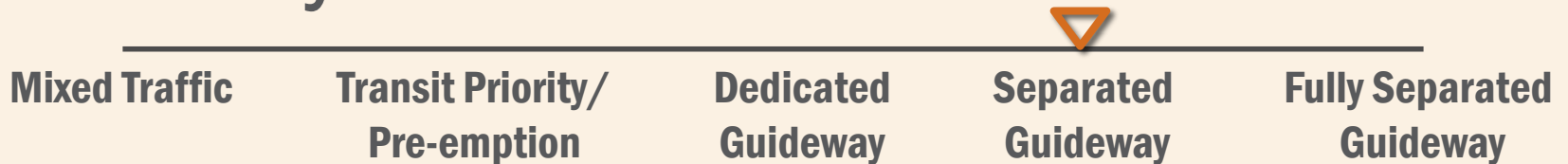
Speed



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Service Characteristics: CMTA Red Line

Reliability



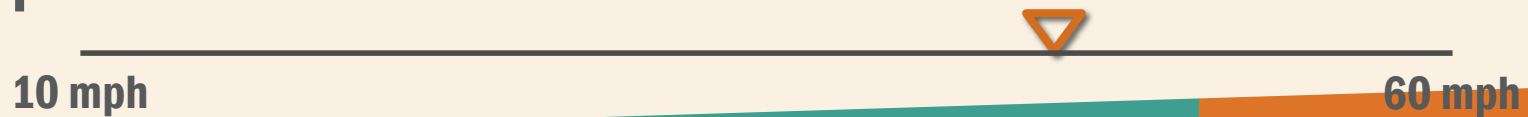
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Stop Spacing



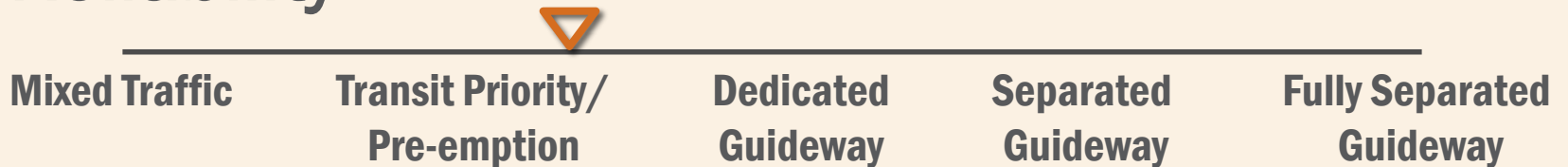
Speed



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Service Characteristics: MetroRapid

Reliability



Frequency



Stop Spacing



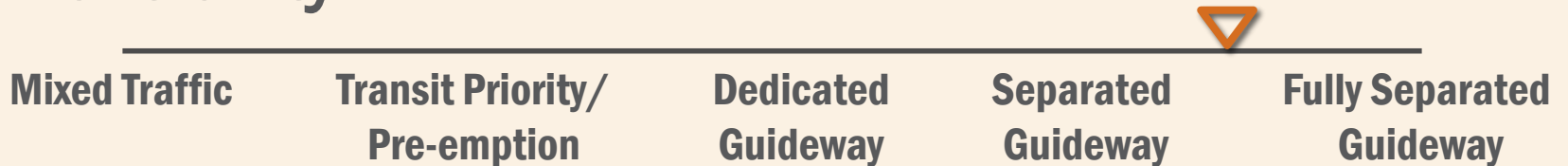
Speed



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Service Characteristics: DART Light Rail

Reliability



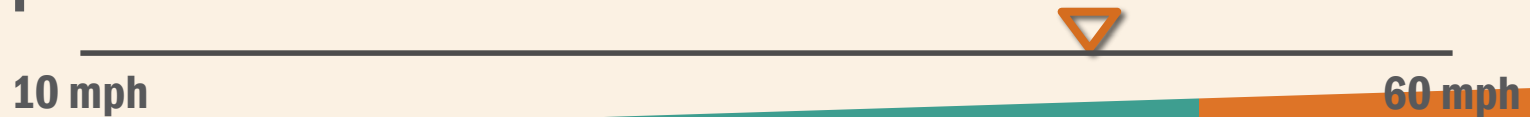
Frequency



Stop Spacing



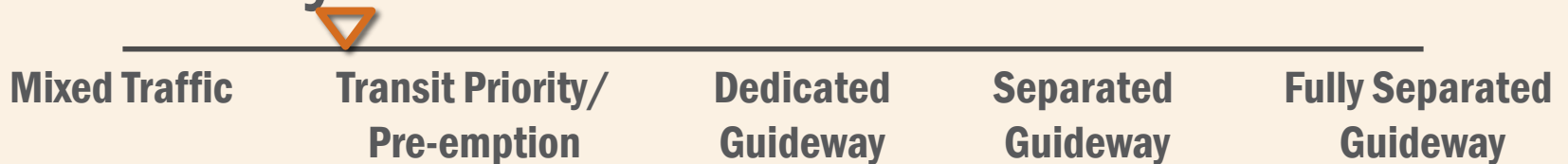
Speed



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Service Characteristics: Portland Streetcar

Reliability



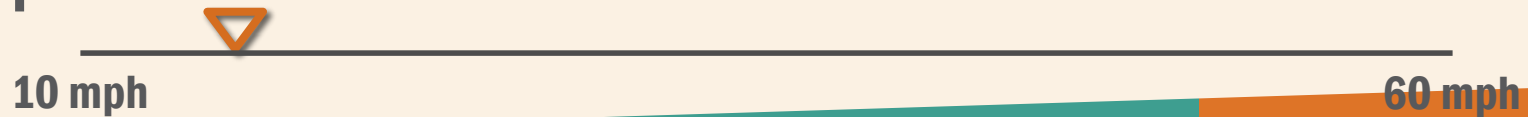
Frequency



Stop Spacing



Speed



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Mode Screening Criteria

- Service Profile
- Technical
 - Demand
 - Technology
 - Guideway
 - Energy Source
 - Compatibility



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Mode Characteristics and Considerations

Mode Characteristic	Range of Considerations	
Demand	Higher demand requires larger, additional vehicles	Lower demand requires smaller, fewer vehicles
The bottom line	Higher capital costs; lower O&M cost per passenger	Lower capital costs; higher O&M cost per passenger
Technology	Proven technology used in numerous urban settings nationwide.	Newer technology that does not have proven application.
The bottom line	Ability to draw on others' experiences, potentially lower cost	Unproven technologies have unforeseen costs
Guideway	Dedicated guideway completely separate from auto, bicycle and pedestrian flow.	No dedicated guideway, and no separation from auto, bicycle and pedestrian flow.
The bottom line	Higher cost, more reliability, "insulated" from congestion	Lower cost, less reliability, shares lanes with automobiles and susceptible to congestion
Energy Source	Electric vehicles do not pollute along the route, can use renewable sources for generation, and is quieter.	Diesel or gas-powered vehicle pollutes along the route, use a non-renewable source of energy, and is louder, yet can be more flexible.
The bottom line	Less pollution along the route, quieter, requires more infrastructure along the route	More pollution along the route, louder, requires less intensive infrastructure along the route
Compatibility	Highly compatible	Less compatible
The bottom line	Has frequent stops in urban settings and slightly higher speeds in less urban settings; potentially higher cost	Has less flexibility and potentially lower cost

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Preliminary Mode Alternatives

High-Speed Rail (rendering)



MagLev



Heavy Rail



Commuter Rail



LRT



Streetcar



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Preliminary Mode Alternatives

Gondola (Aerial Cable Propelled)



Automated Guideway



Monorail



BRT – dedicated ROW



BRT – limited ROW



Local Bus



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Preliminary Mode Alternatives

Urban Rail



Transit on Express Lanes



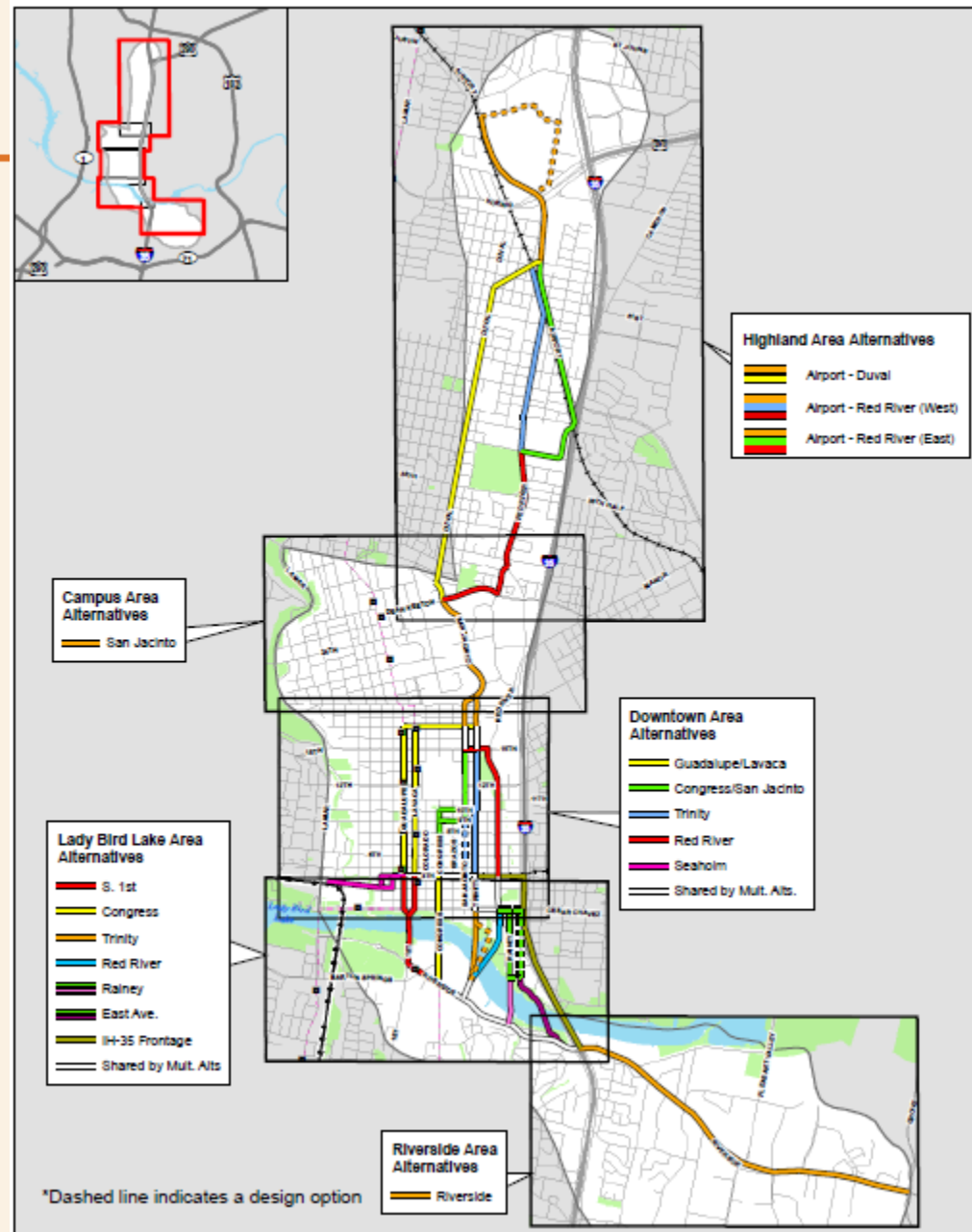
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Alignment Screening Criteria

- Service Profile
- Right-of-Way
- Grade
- Block lengths
- Street geometry
- Pedestrian/traffic interface
- Access (driveways)
- Other transit service

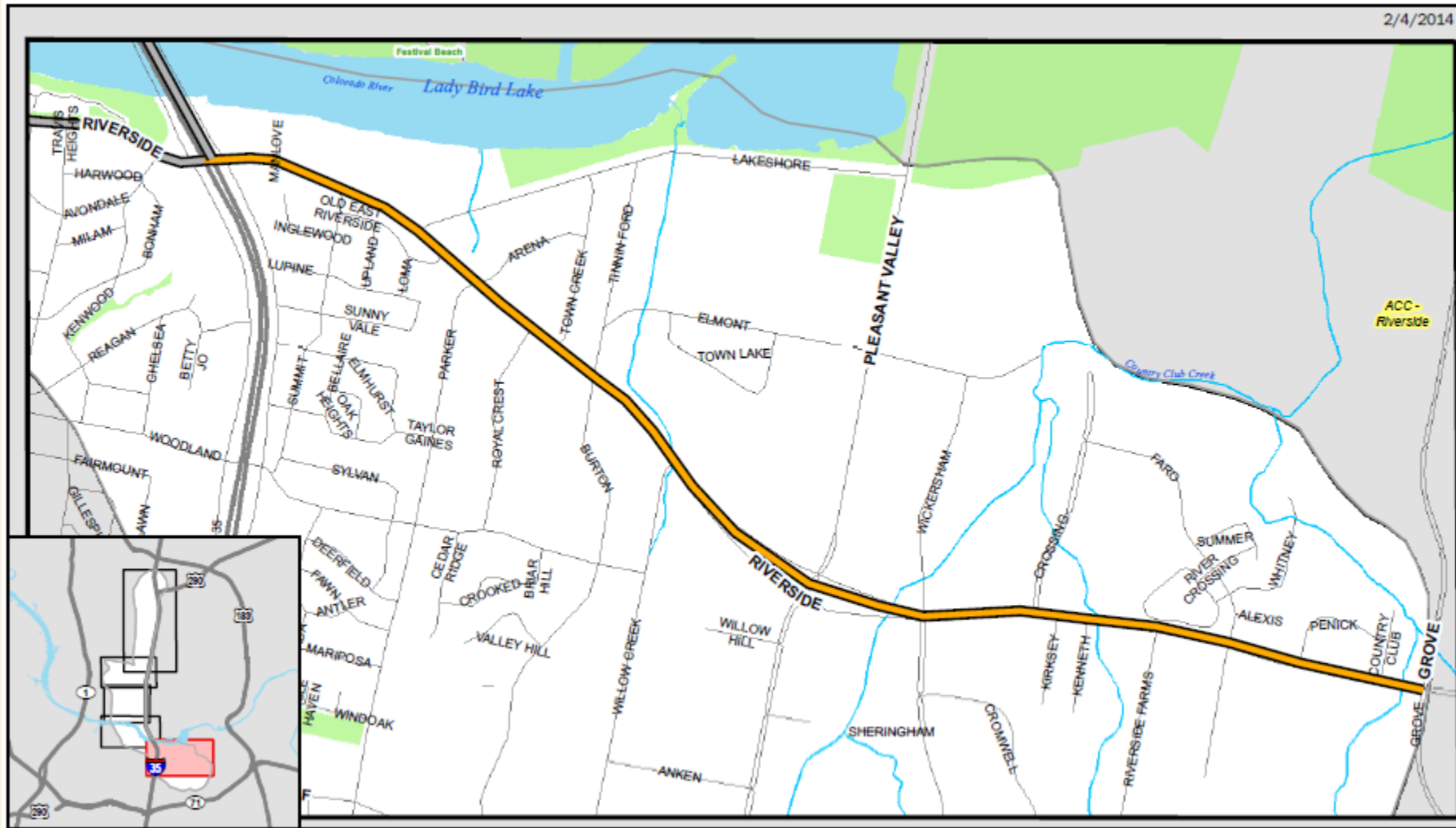
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Preliminary Alignment Alternatives

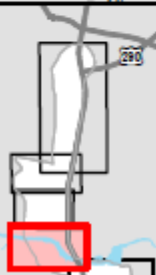


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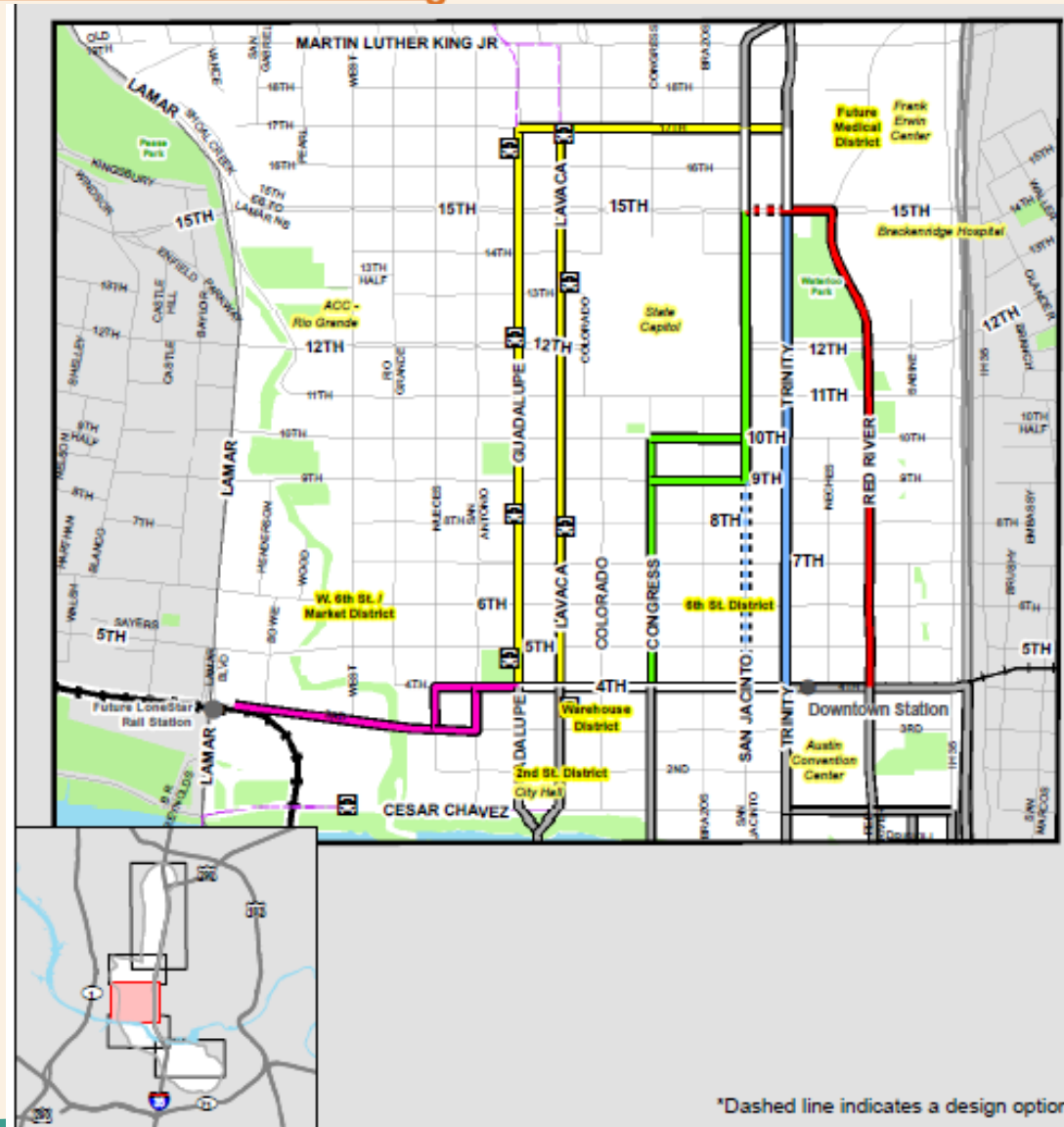
Preliminary Alignment Alternatives: East Riverside



Preliminary Alignment Alternatives: Lady Bird Lake

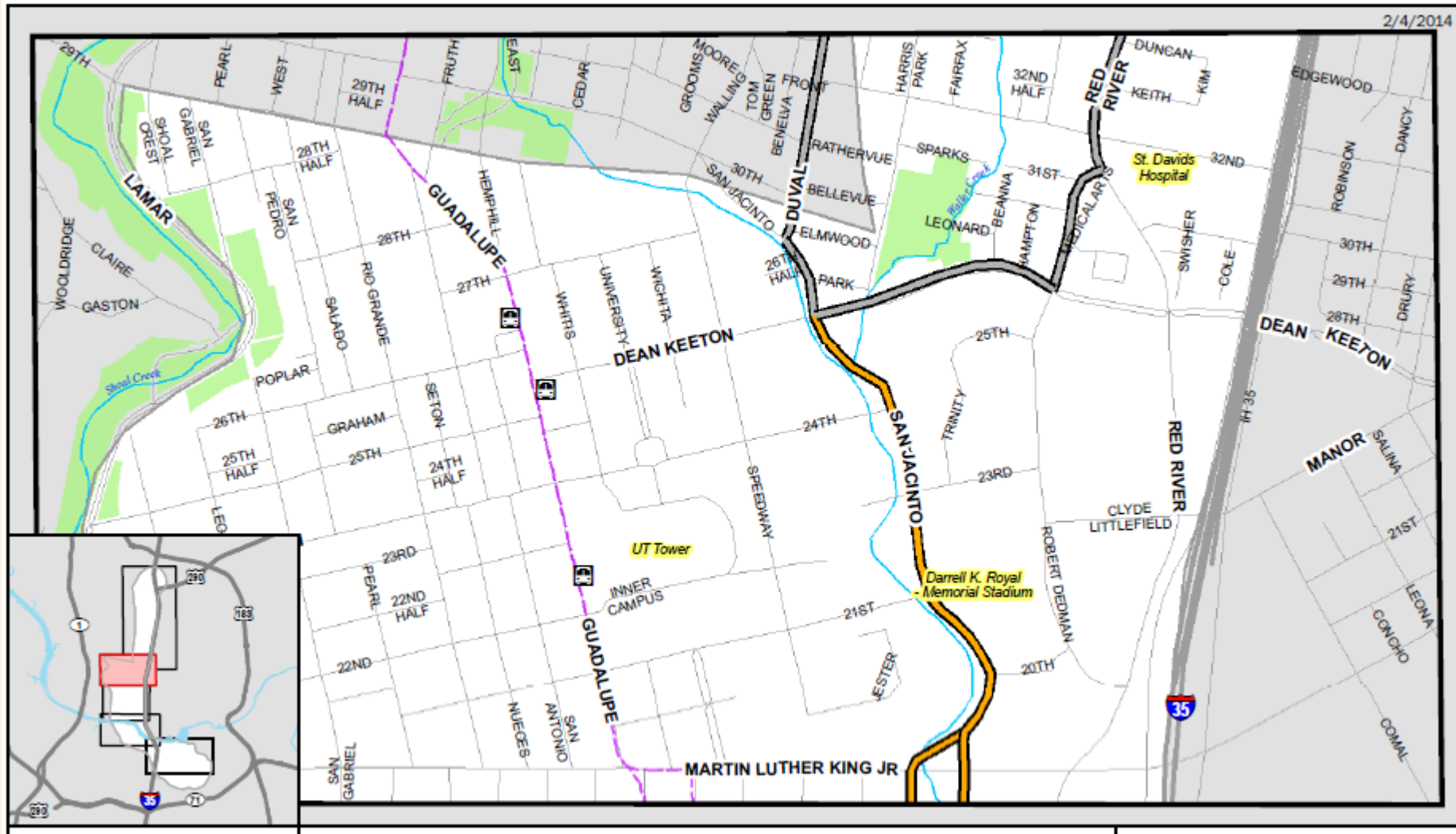


Preliminary Alignment Alternatives: Downtown

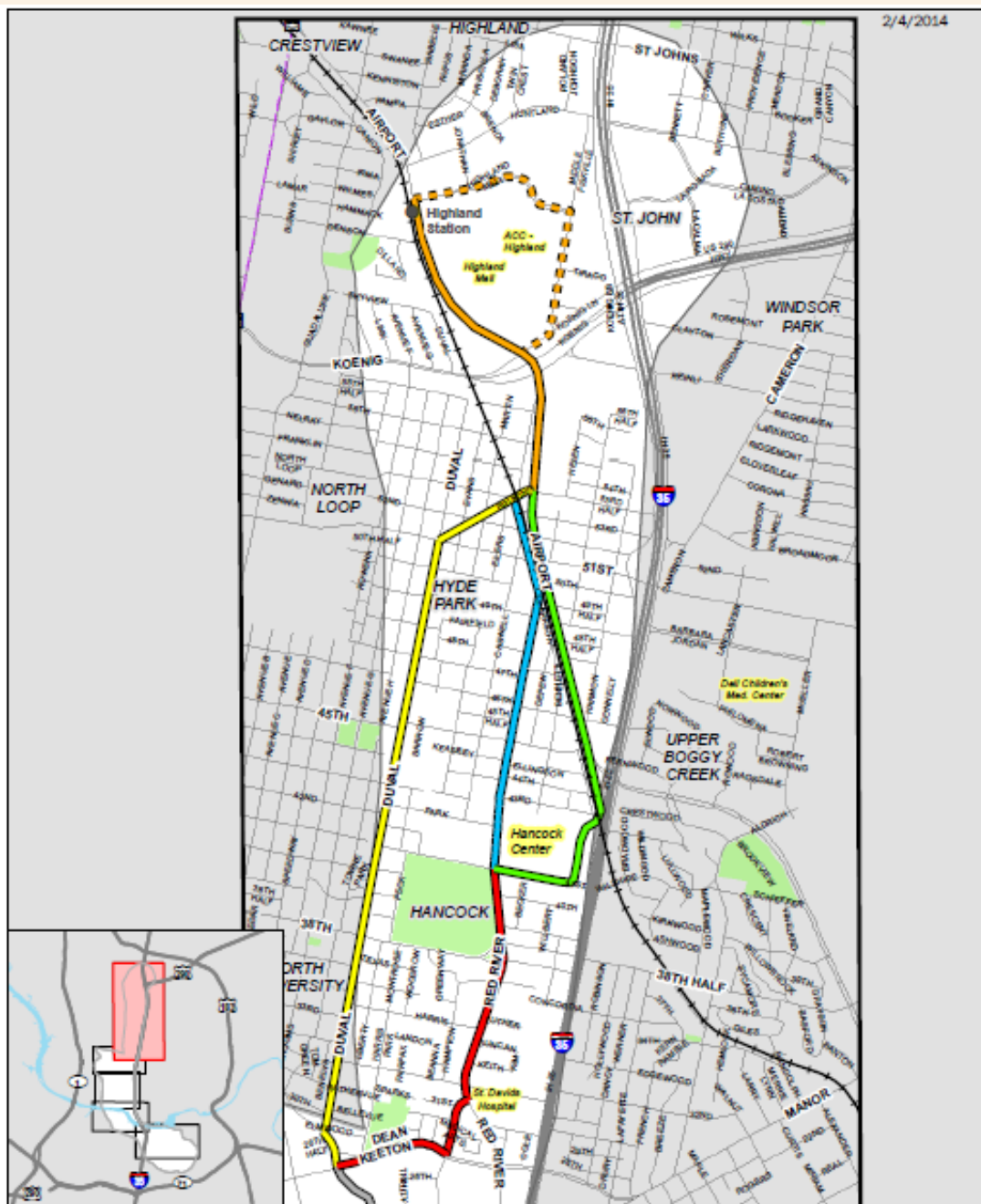


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Preliminary Alignment Alternatives: UT Campus



Preliminary Alignment Alternatives: Highland



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Central Corridor Next Steps

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Next Steps

- Identify a service profile
- Develop screening criteria
- Collect input on preliminary modes and alignments
- Screen preliminary alternatives
- Launch online input tool
- CCAG #9 February 21st



THANK YOU

More Information:

Project Connect &
Central Corridor HCT Study

projectconnect.com

