

Executive Committee

Workshop #3

March 11, 2021 | 9:00 – 11:00 am

1. Welcome and Introductions – Laura Hanson (UTA Project Manager)

- Laura kicked off the meeting, which is technically the first Executive Committee-only meeting, and conducted introductions. The TAC and the Executive Committee will be meeting separately from this point forward.

2. Recap from Last Meeting – Laura Hanson

- Laura provided a brief recap from last meeting where the group discussed the Purpose and Need, an overview of the evaluation process, and the initial range of alternatives (rail corridor, I-15, State/Main) and modes (commuter rail to local bus). We concluded the meeting with a pre-screening, which eliminated local bus, which doesn't meet the Purpose and Need to serve regional travel. The alternatives development will include a mix and match of corridors and modes.

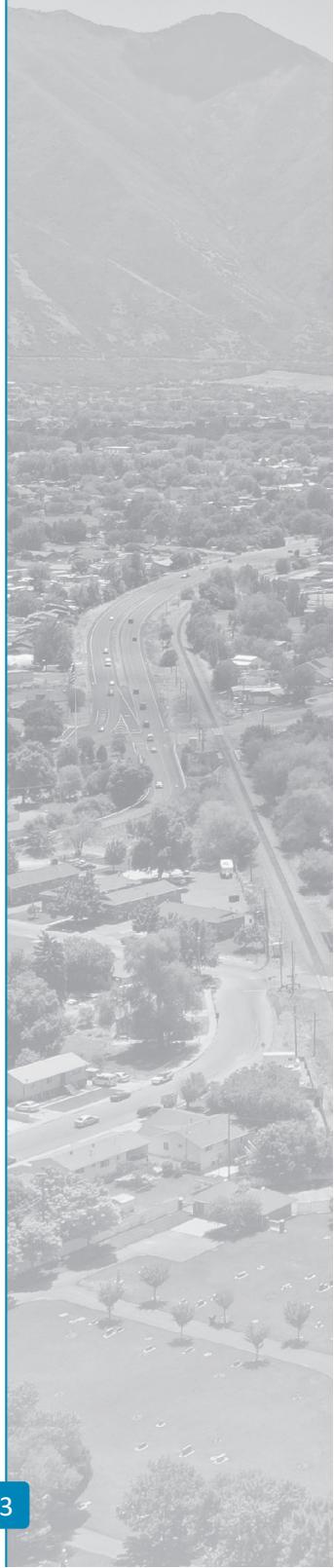
3. Transit Study Process Overview and Refresher – Claire Woodman (Parametrix)

- Claire provided an overview of the transit project development process. We are currently in the first step (Planning and Alternatives Analysis), which is a critical step to understand the project need, investigate alternatives, and identify a preferred transit alignment and mode. After this step, it will move into environmental review and preliminary engineering.

4. Initial Evaluation Workshop – Project Team

- Alternatives Overview:
 - Claire Woodman presented a high-level overview of the evaluation process (see funnel graphic). We have just completed the initial evaluation and today, will focus on the results and propose recommendations for alternatives to move into the more detailed and quantitative screening.
 - The initial evaluation includes logical combinations of three alignments and four modes, which have resulted in nine alternatives (corridor + mode). All alternatives would primarily operate in an exclusive transit alignment, except express bus (operates in mixed flow). Each would offer regional service, which includes longer stop spacing (approximately four stations through the study area).
 - Troy Fitzgerald suggested considering 1200 West in Springville that will connect Provo into Springville in the near future (local route).
 - The alternatives represent the ultimate solution that we want to see by 2050; the opportunity to phase modes exist, but that will be explored during the implementation planning phase, not the alternatives analysis phase.
 - The initial evaluation looks at a variety of criteria to understand key differences.
- Initial Results – General Observations:
 - Rail Corridor tends to be the best performing overall. I-15 has the most variability of performance by mode, and most complex to serve with fully exclusive transit. State/Main is the most difficult to serve the regional need.

- Shawn Seager (MAG) stated that this project is currently in the RTP, as a Phase 1 project. MAG is exploring funding options to get the environmental phase started immediately after this study.
- Initial Results – Corridor-Specific Observations:
 - Rail Corridor
 - Includes commuter rail, light rail, and bus rapid transit.
 - Commuter rail has the greatest ability to serve regional connections. Light rail has several operational challenges and would include lower speeds. Bus rapid transit is similar to commuter rail, with reduced performance in transit connections.
 - There are some additional cost considerations with utilizing the Rail Corridor, to be explored as the project progresses.
 - I-15
 - Includes light rail, bus rapid transit, and express bus.
 - Light rail has high transit reliability, but most costly with constructability concerns. Bus rapid transit has high transportation system impacts and constructability considerations. Express bus generally has the least impacts, but low transit reliability and potential for transit connections.
 - State/Main
 - Includes light rail, bus rapid transit, and express bus.
 - Light rail has higher transit reliability, but most costly. Bus rapid transit is a mid-range alternative, with moderate reliability and impacts. Express bus has the least overall impacts, least costs, and least economic development potential, but the greatest reduced speeds and reliability due to operating in mixed flow traffic.
 - Just because this doesn't perform well for regional high-capacity transit service doesn't mean that it might not be a good fit for other transit service types.
- Initial Results – Draft Recommendations:
 - Recommend moving commuter rail and bus rapid transit, both along the rail corridor, into more detailed evaluation. For both scenarios, explore two operational scenarios: (1) all day service and (2) AM/PM peak service.
 - Supportive of recommendation: Payson, Provo, and Springville. Laura and Claire to connect with cities that are not in attendance today.
 - Project team consulted with Bruce Cardon, UTA FrontRunner General Manager, regarding implementing another mode within the Rail Corridor right-of-way. There is not necessarily a fatal flaw, but will require some additional considerations to separate bus traffic from existing freight rail.
 - Carolyn Gonot asked if we are considering alternative train sets on the Rail Corridor (e.g., DMU/EMU, smaller train sets than full 5-car FrontRunner train). A lot of agencies are doing this for corridor extensions into growing areas. This includes the ability to convert.
 - Claire clarified that we will look at that more closely in the detailed evaluation.
 - Mary DeLoretto clarified that UTA will have more flexibility with ownership over the Sharp-Tintic corridor, but over the entire route, conflicts with freight lines will need to be worked out.



- Rob Clayton questioned the Rail Corridor commuter rail transportation system impacts rating, thinking that this option provides much greater benefits than impacts.
- Laura Hanson explained that this area will be included in the new UTA Business Plan, which is looking at how to maximize the existing FrontRunner system. FrontRunner is like the I-15 of transit and a critical backbone. How does it benefit riders and communities. What needs are outstanding for better service. Most of the corridor is single-tracked, which limits the capacity, travel times, and overall flexibility. UTA is looking at where UTA may double-track portions of the corridor.
- Jeff Acerson concurred that these two alternatives look like the best options. This corridor becomes the “transit backbone” to south Utah County.
- Other Key Takeaways:
 - Transit alternatives along State/Main should continue to be explored for more localized transit service.
 - MAG has some form of high-capacity bus planned for this corridor.
 - Express bus on I-15 could still be considered as a possible phasing element while the long-term project is being developed, funded, and constructed.
 - Shawn Seager explained that MAG has big plans for transit growth in south Utah County. We are making the plans to manage the growth that we know is coming. We are ahead of the growth that we thought we'd be at 10 years ago and expect continued acceleration in south Utah County communities.
 - Troy Fitzgerald – continues to receive requests for new development in this study area vicinity, especially along the Sharp-Tintic line.
 - Local corridor preservation is critical (Shawn Seager). Local corridor preservation funds are available through the county (via MAG). Must first exhaust local tools through development approval process.
 - MAG, UTA, and local cities should come together to discuss these options further.
 - <https://mountainland.org/corridor-preservation-program>
 - Rob Clayton reminded the group that there is a bottleneck on I-15 near Springville. No viable plan for 2050 without additional capacity elsewhere; need to implement high-capacity transit off I-15.
- Future Steps:
 - Will advance recommended alternatives into the Detailed Evaluation, which will review similar factors in greater detail with more quantitative data.
 - With a Preferred Alternative in mind, the team will strategize implementation options (phasing, technology, etc.).

5. Stakeholder Engagement Update – Megan Waters (UTA) and Beau Hunter (Horrocks)

- Megan Waters presented an overview of community engagement efforts.
- The website is live and information can be found at <http://www.southvalleytransit.com>.
- UTA is obtaining a community partner to support engagement with Spanish-speaking and Latino/Hispanic community.
- Coming up next: will be seeking public feedback on the Purpose and Need and initial range of alternatives.

6. Next Steps and Workshop Wrap-up – Laura Hanson (UTA)

- Laura described next steps.
 - Begin detailed evaluation of alternatives
 - Kick off land use planning task
 - UTA has a separate grant from FTA to perform more detailed station area planning

Meeting Attendees:

Payson: Mayor Bill Wright, David Tuckett

Provo: Dixon Holmes

Salem: Ryan Selee

Spanish Fork: Seth Perrins

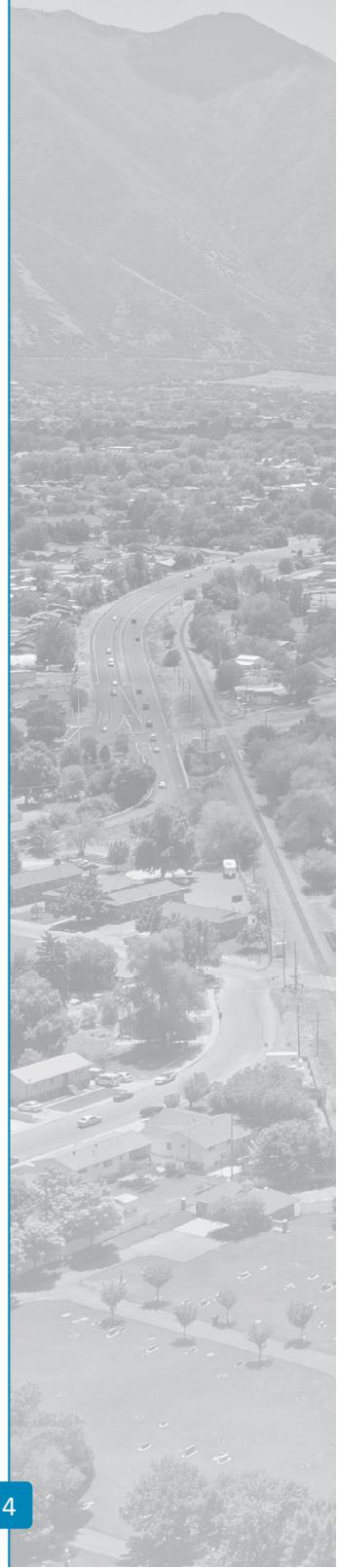
Springville: Mayor Rick Child, Troy Fitzgerald

UTA: Laura Hanson, Mary DeLoretto, Mary De La Mare-Schaefer, Trustee Jeff Acerson, Nichol Bourdeaux, Paul Drake, Carolyn Gonot, Megan Waters

UDOT: Eric Rasband, Rob Clayton

MAG: Shawn Seager, Chad Eccles, Andrew Jackson

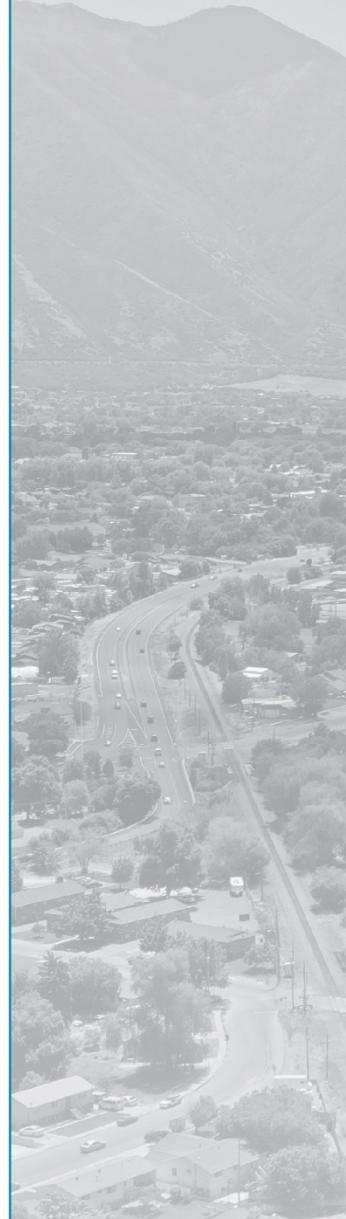
Project Team: Claire Woodman, Ian Kilpatrick, Jackie Kuechenmeister, Morgan Stumpf (Parametrix); Shane Marshall, Beau Hunter, Alexis Verson (Horrocks)



South Valley Transit Study

Executive Committee Workshop #3

March 11, 2021 | 9-11 a.m.



Welcome and Introductions

- Welcome
- Introductions
- Meeting Agenda
 - Recap and Transit Study Refresh
 - Initial Evaluation Workshop
 - Stakeholder Engagement Update
 - Next Steps and Wrap-Up

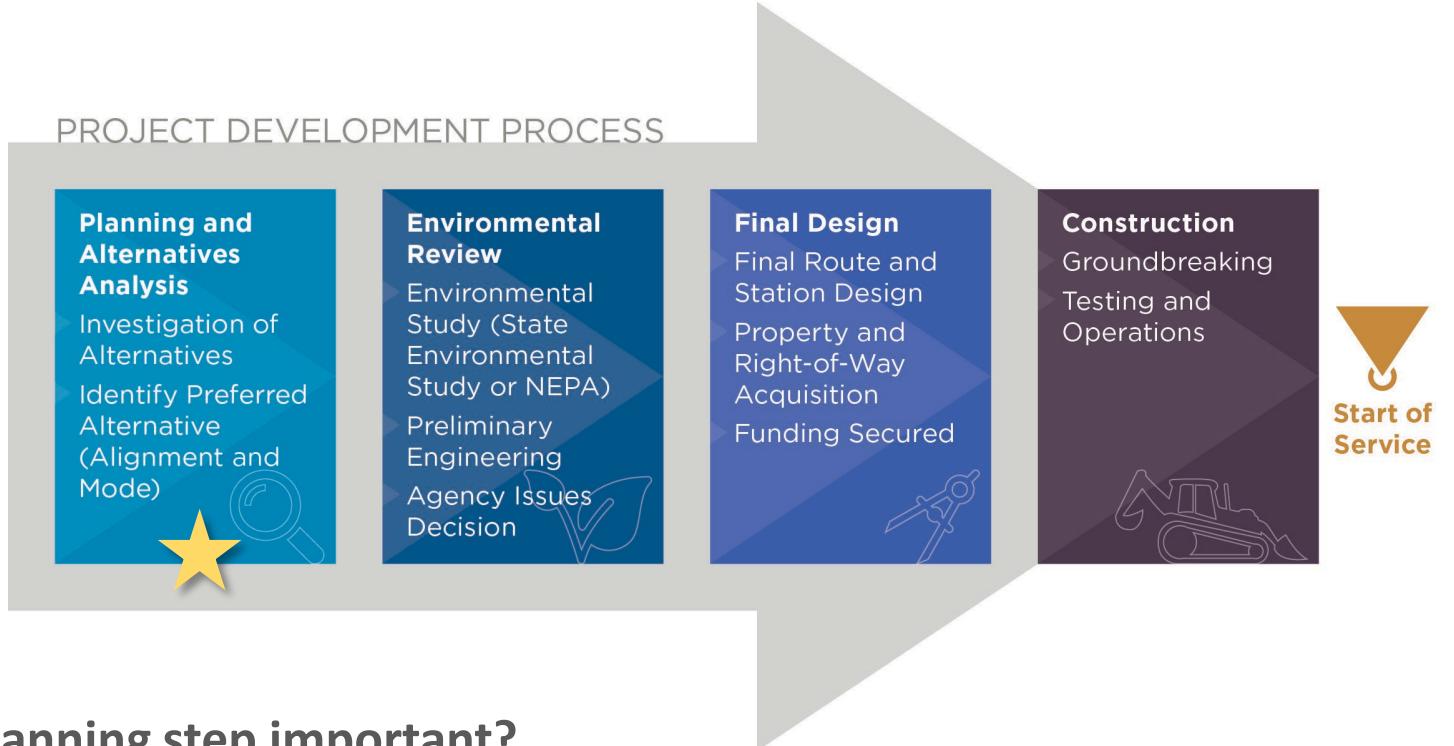


Recap From Last Meeting

- Purpose and Need
- Evaluation Process Overview
- Initial Range of Alternatives and Modes



Transit Project Development Roadmap



Why is this planning step important?

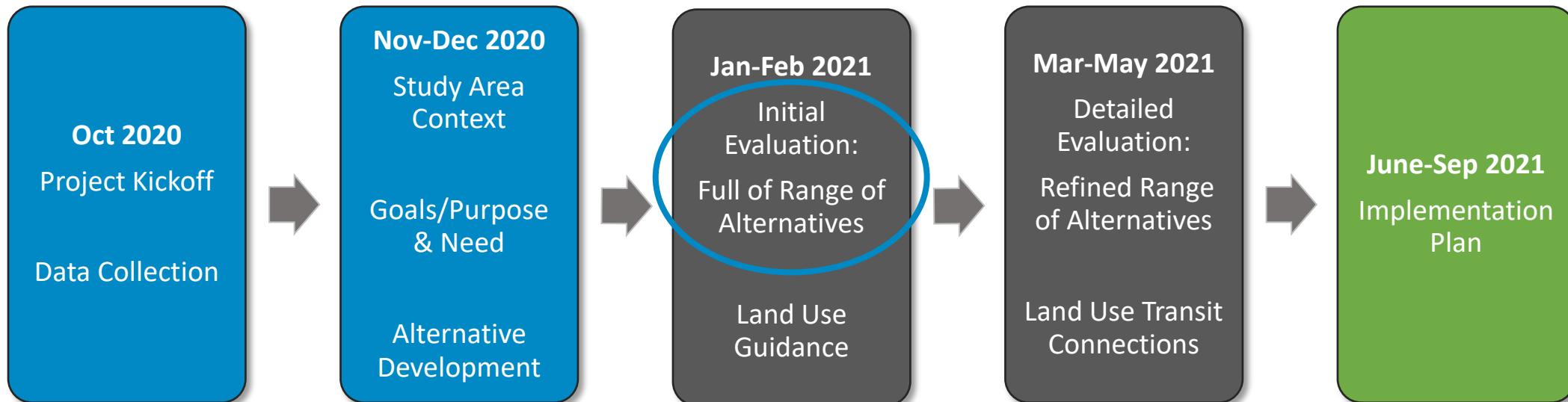
- Define the project need
- Develop alignment and transit mode decision for major capital investment
- Future phases build on this step

How is this step different than environmental review and other future steps?

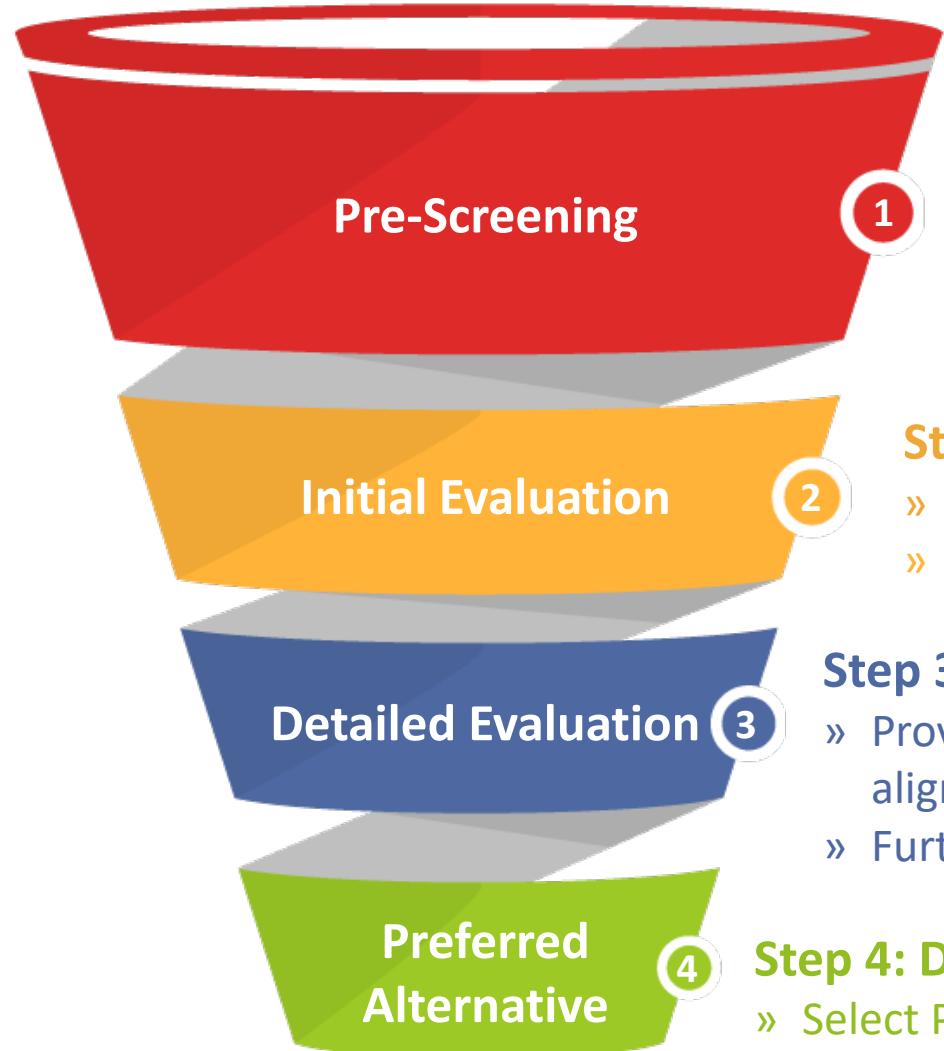
- Increasing level of detail about engineering, cost, and environmental effects with each step



Transit Study Roadmap



Alternatives Evaluation Roadmap



Step 1: Fatal flaw review

- » Review full range of corridors and modes
 - Does the corridor or mode meet the Purpose & Need?
 - Is there an obvious fatal flaw?
 - Reduce corridors and modes based on pre-screening

Step 2: Evaluate alternatives at a high-level

- » Combine remaining corridors/modes into logical alternatives
- » Reduce alternatives based on initial evaluation

Step 3: Evaluate alternatives in more detail

- » Provide greater definition (identify service assumptions, stations, alignment details)
- » Further narrowing of alternatives

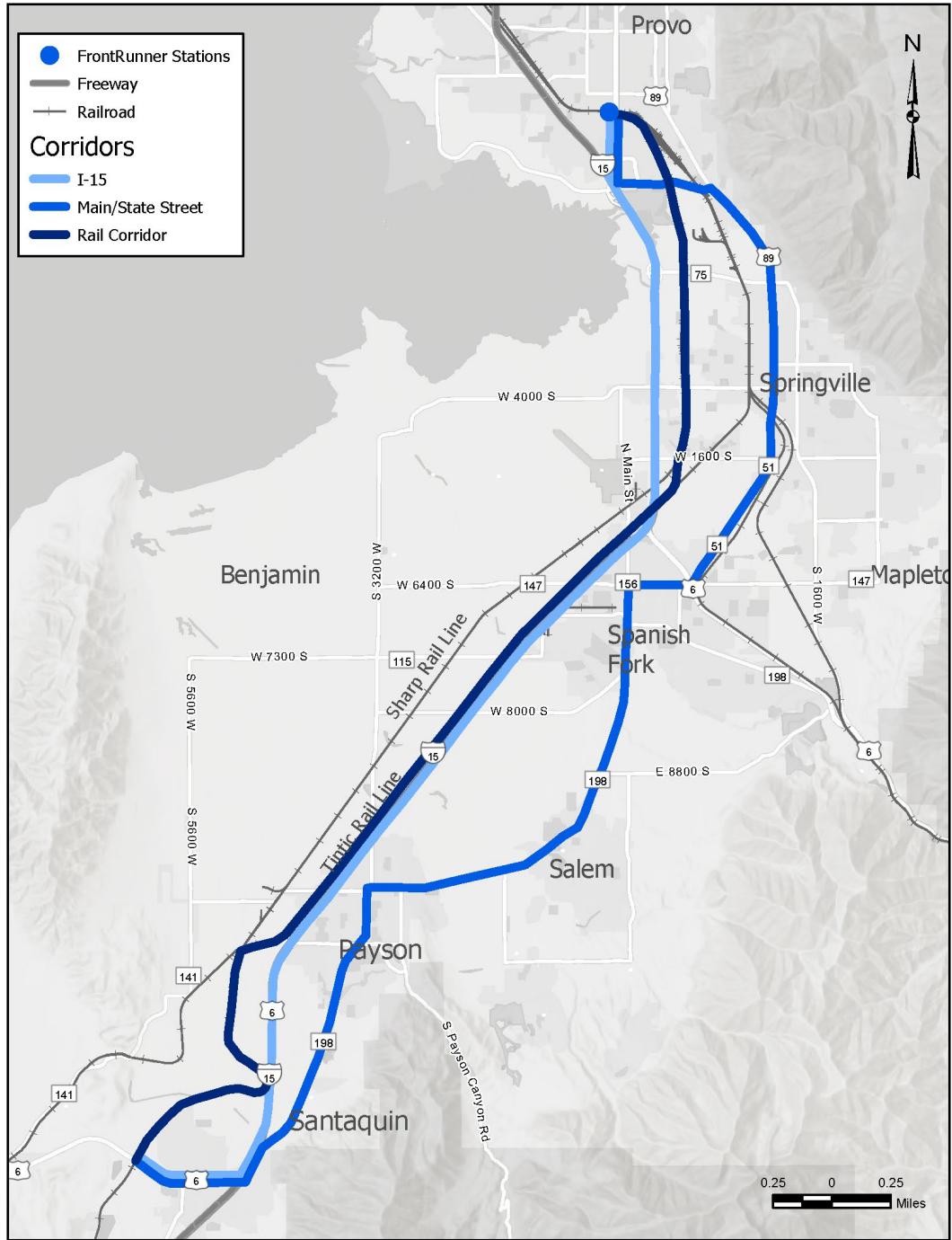
Step 4: Develop Implementation Plan

- » Select Preferred Alternative
- » Consider potential phasing options



Initial Evaluation

Transit Corridors



Initial Evaluation — Transit Modes



Initial Evaluation Alternatives



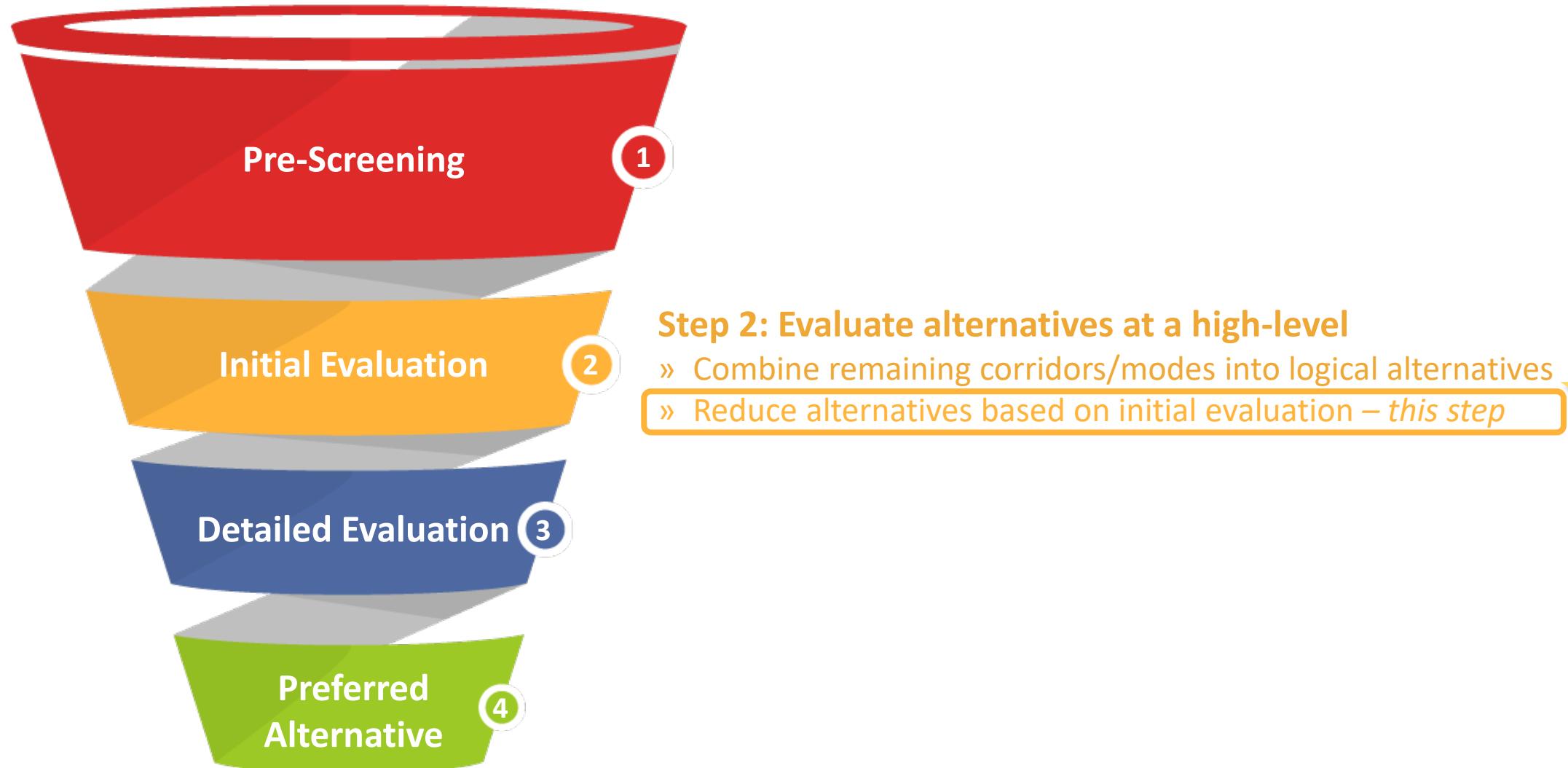
Mode	Definition	State/ Main	Rail Corridor	I-15
Commuter Rail	<ul style="list-style-type: none"> Operates in <u>exclusive</u> transit alignment Regional service with longer stop spacing (4 stations) 	No	Yes	No
Light Rail	<ul style="list-style-type: none"> Operates in <u>exclusive</u> transit alignment (shoulder-running/median on I-15 or State/Main; rail corridor ROW) Regional service with longer stop spacing (4 stations) 	Yes	Yes	Yes
Bus Rapid Transit	<ul style="list-style-type: none"> Operates in <u>exclusive</u> transit alignment on Rail Corridor Operations in ~50% exclusive alignment on I-15 and State/Main Regional service with longer stop spacing (4 stations) 	Yes	Yes	Yes
Express Bus	<ul style="list-style-type: none"> Operates in mixed flow traffic Regional service with longer stop spacing (4 stations) 	Yes	No	Yes

Notes:

- Alternatives represent full buildout (2050) and service from Provo to Santaquin**
- Frequency of service would be the same for all alternatives
- Regional stop spacing ~5 miles between stations



Alternatives Evaluation Roadmap





➤ Evaluation criteria:

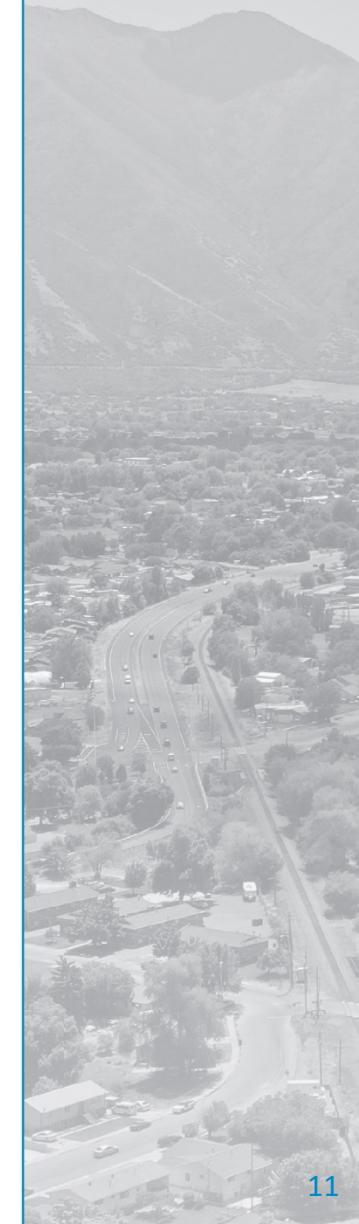
- Transit speed
- Transit reliability
- Transit connections
- Ridership potential
- Transportation system impacts
- Community compatibility
- Economic development potential
- Cost considerations
- Constructability and operational considerations
- Built and natural environmental considerations

Initial evaluation:

- ❖ Planning level analysis
- ❖ Minimal engineering

Initial evaluation criteria are:

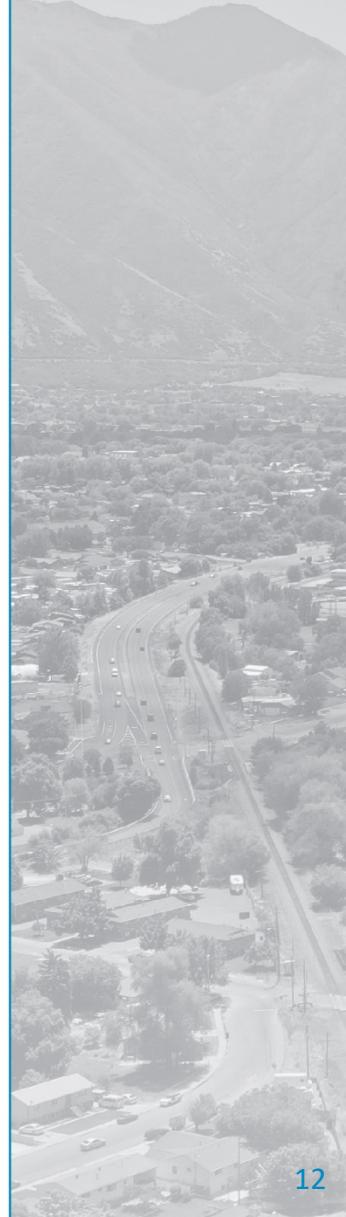
- ❖ High-level
- ❖ Largely qualitative
- ❖ Help illustrate key differences



Initial Evaluation – Workshop Overview



- General observations
- Corridor specific observations
 - Rail Corridor observations
 - I-15 observations
 - State/Main Street observations
- Questions on detailed ratings?
- **Draft recommendation for alternatives to evaluate in detail**
- Other key takeaways



➤ General Observations:

- **Rail Corridor** – Tends to be the best performing overall for most modes
- **I-15** – Has most variability of performance by mode and most challenging/complex to serve with fully exclusive transit
- **State/Main** – Overall corridor length and number of signalized intersections reduces transit performance, more challenging to serve regional need



Initial Evaluation – What did we learn?



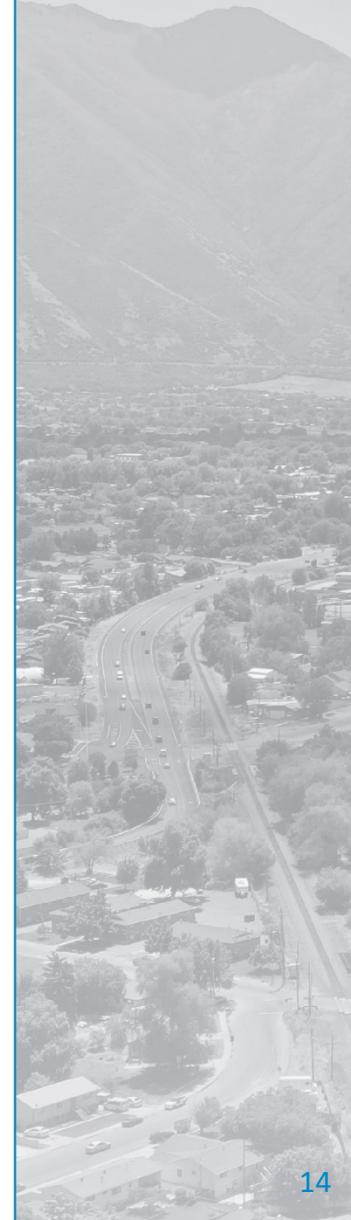
➤ Key Findings – Rail Corridor Alternatives:

- Similarities for all alternatives:
 - High performing for transit reliability, ridership, community compatibility, and economic development potential
 - Moderate performance for cost, transportation impacts, natural/built enviro considerations
- Commuter Rail
 - PROS: Better performing due to higher transit speed, transit reliability, **potential for regional connections**
 - CONS: Moderate construction complexity and transportation system impacts, more costly
- Light Rail
 - PROS: High transit reliability
 - CONS: Moderate construction complexity and system impacts, **operational challenges, lower speeds**, more costly
- Bus Rapid Transit
 - Similar to Commuter Rail except for reduced performance in transit connections

Initial Screening Criteria	Rail Corridor Commuter Rail	Rail Corridor Light Rail	Rail Corridor Bus Rapid Transit
➤Transit speed	●	○	●
➤Transit reliability	●	●	●
➤Transit connections	●	○	○
➤Transit ridership potential	●	●	●
➤Transportation system impacts	○	○	○
➤Community compatibility	●	●	●
➤Economic development potential	●	●	●
➤Capital cost considerations	○	○	○
➤Constructability or operational considerations	○	●	○
➤Natural and built environment considerations	○	○	○
➤ Project stakeholder input			
➤ Public input			

Key:

- High performance and/or low impact
- Moderate performance and/or moderate impact
- Low performance and/or high impact



Initial Evaluation – What did we learn?



➤ Key Findings – I-15 Corridor Alternatives:

- Similarities for all alternatives:
 - High ridership, low community compatibility, high transportation system impacts
- Light Rail
 - PROS: **High transit reliability**; moderate transit connection potential
 - CONS: Moderate speeds; **most costly** and challenging construction and operation elements, and high transportation system impacts
- Bus Rapid Transit
 - PROS: High transit speed, low natural/built impacts
 - CONS: In general, moderate performance for several measures; high transportation system impacts and challenging construction elements
 - **Note rating change from materials sent**
- Express Bus
 - PROS: High transit speeds, low cost, **low construction/operational impacts, lower overall impacts**
 - CONS: **Low transit reliability, low potential for transit connections**

Initial Screening Criteria	I-15 Light Rail	I-15 Bus Rapid Transit	I-15 Express Bus
➤ Transit speed	Yellow	Green	Green
➤ Transit reliability	Green	Yellow	Red
➤ Transit connections	Yellow	Yellow	Red
➤ Transit ridership potential	Green	Green	Green
➤ Transportation system impacts	Red	Red	Red
➤ Community compatibility	Red	Red	Red
➤ Economic development potential	Red	Yellow	Red
➤ Capital cost considerations	Red	Yellow	Green
➤ Constructability or operational considerations	Red	Red	Green
➤ Natural and built environment considerations	Yellow	Green	Green
➤ Project stakeholder input			
➤ Public input			

Key:

- High performance and/or low impact
- Moderate performance and/or moderate impact
- Low performance and/or high impact



Initial Evaluation – What did we learn?



➤ Key Findings – Main/State Street Corridor Alternatives:

- Similarities for all alternatives
 - Low transit speed, high ridership potential, high transportation impacts, and low community compatibility
- Light Rail
 - PROS: **High transit reliability, potential for regional connections**, moderate economic development potential
 - CONS: Construction complexity and transportation system impacts, **most costly**
- Bus Rapid Transit
 - PROS: Moderate reliability, economic development potential, and moderate impacts to natural/built environment
 - CONS: Construction complexity and transportation system impacts, more costly
- Express Bus
 - PROS: **Reduced overall impacts and no construction/operational challenges, less costly**
 - CONS: **Reduced transit speed and reliability, transit connections potential, economic development potential**

Initial Screening Criteria	State/Main Light Rail	State/Main Bus Rapid Transit	State/Main Express Bus
➤Transit speed	●	●	●
➤Transit reliability	●	●	●
➤Transit connections	●	●	●
➤Transit ridership potential	●	●	●
➤Transportation system impacts	●	●	●
➤Community compatibility	●	●	●
➤Economic development potential	●	●	●
➤Capital cost considerations	●	●	●
➤Constructability or operational considerations	●	●	●
➤Natural and built environment considerations	●	●	●
➤ Project stakeholder input			
➤ Public input			

Key:

- High performance and/or low impact
- Moderate performance and/or moderate impact
- Low performance and/or high impact



Initial Evaluation – What did we learn?



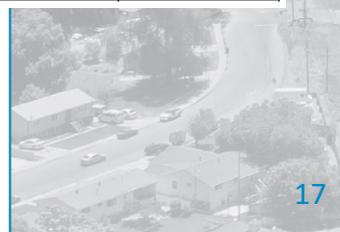
Summary

- Rail Corridor – Commuter Rail
 - Higher performing
- Rail Corridor – Light Rail
 - Moderate performing
- Rail Corridor – BRT
 - Higher performing
- I-15 – Light Rail
 - Lower performing
- I-15 – BRT
 - Moderate/lower performing
- I-15 – Express Bus
 - Mixed performance (tradeoffs)
- State/Main – Light Rail
 - Lower performing
- State/Main – BRT
 - Lower performing
- State/Main – Express Bus
 - Mixed performance (tradeoffs)

Initial Screening Criteria	Rail Corridor Commuter Rail	Rail Corridor Light Rail	Rail Corridor Bus Rapid Transit	I-15 Light Rail	I-15 Bus Rapid Transit	I-15 Express Bus	State/Main Light Rail	State/Main Bus Rapid Transit	State/Main Express Bus
➤ Transit speed	●	○	●	○	●	●	○	○	○
➤ Transit reliability	●	●	●	●	○	○	●	○	○
➤ Transit connections	●	○	○	○	○	○	○	○	○
➤ Transit ridership potential	●	●	●	●	●	●	●	●	●
➤ Transportation system impacts	○	○	○	●	●	●	●	●	●
➤ Community compatibility	●	●	●	●	●	●	●	●	●
➤ Economic development potential	●	●	●	●	○	●	○	○	●
➤ Capital cost considerations	○	○	○	●	○	●	●	○	●
➤ Constructability or operational considerations	○	●	○	●	●	●	●	●	●
➤ Natural and built environment considerations	○	○	○	○	●	●	●	○	●
➤ Project stakeholder input ➤ Public input									

Key:

- High performance and/or low impact
- Moderate performance and/or moderate impact
- Low performance and/or high impact



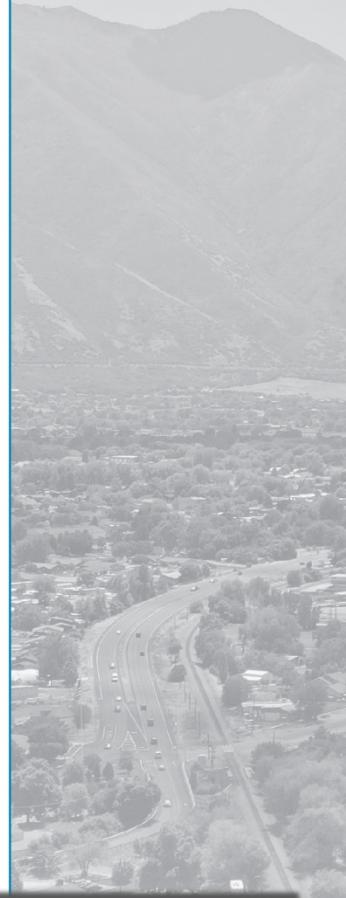
Initial Evaluation – Recommendation



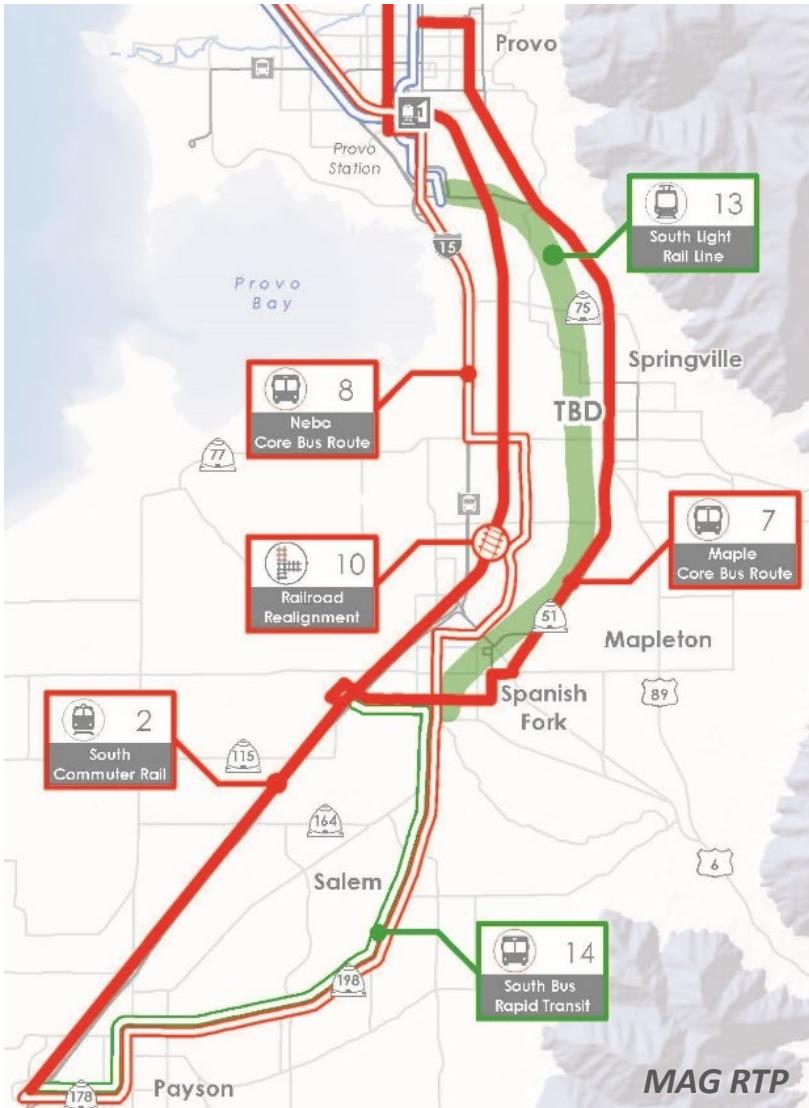
Initial Screening Criteria	Rail Corridor Commuter Rail	Rail Corridor Light Rail	Rail Corridor Bus Rapid Transit	I-15 Light Rail	I-15 Bus Rapid Transit	I-15 Express Bus	State/Main Light Rail	State/Main Bus Rapid Transit	State/Main Express Bus
➤ Transit speed	●	○	●	○	●	●	●	●	●
➤ Transit reliability	●	●	●	●	○	●	●	○	●
➤ Transit connections	●	○	○	○	○	●	○	○	●
➤ Transit ridership potential	●	●	●	●	●	●	●	●	●
➤ Transportation system impacts	○	○	○	●	●	●	●	●	●
➤ Community compatibility	●	●	●	●	●	●	●	●	●
➤ Economic development potential	●	●	●	●	○	●	○	○	●
➤ Capital cost considerations	○	○	○	●	○	●	●	○	●
➤ Constructability or operational considerations	○	●	○	●	●	●	●	●	●
➤ Natural and built environment considerations	○	○	○	○	●	●	●	○	●
➤ Project stakeholder input									
➤ Public input									

Recommendation: Move the following alternatives into detailed evaluation

- ❖ Rail Corridor – Commuter Rail
- ❖ Rail Corridor – BRT
- ❖ For both alternatives, consider two operational scenarios, example: 1) all day service 2) AM/PM peak service

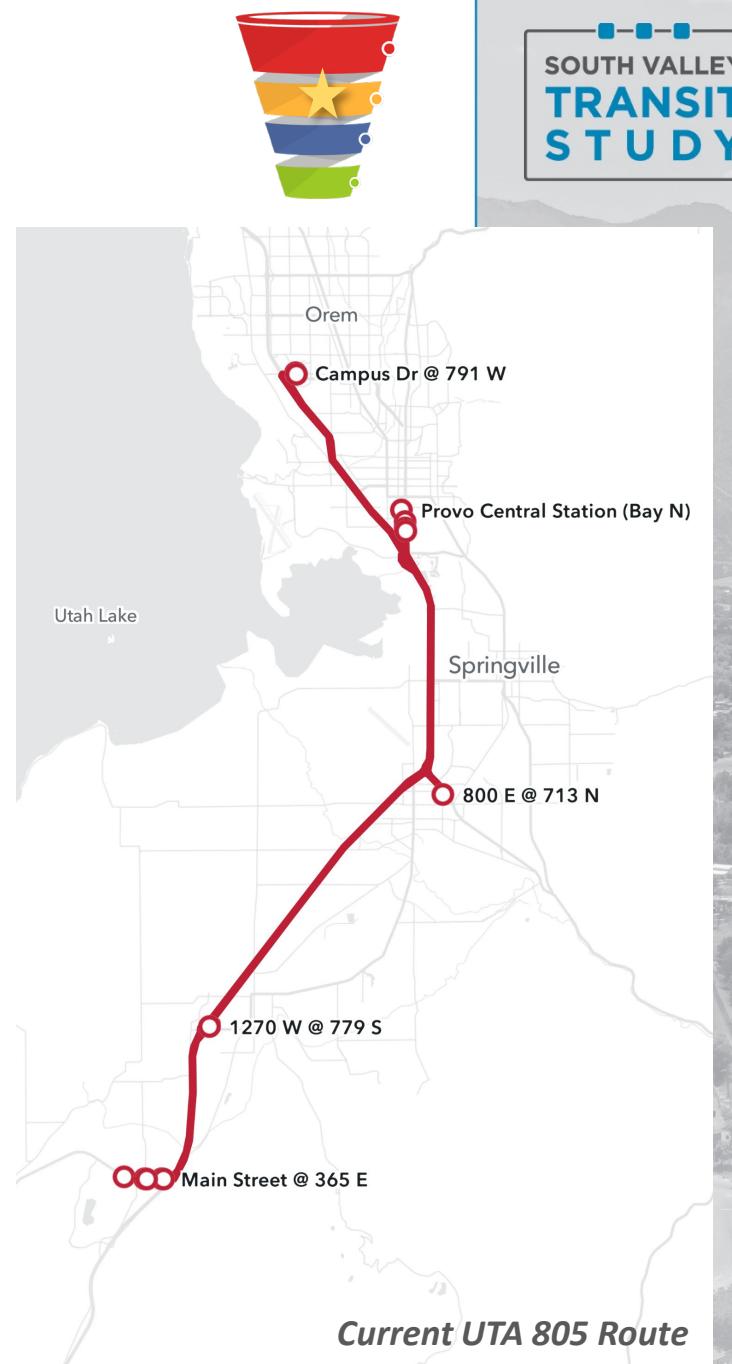


Initial Evaluation – Other Findings

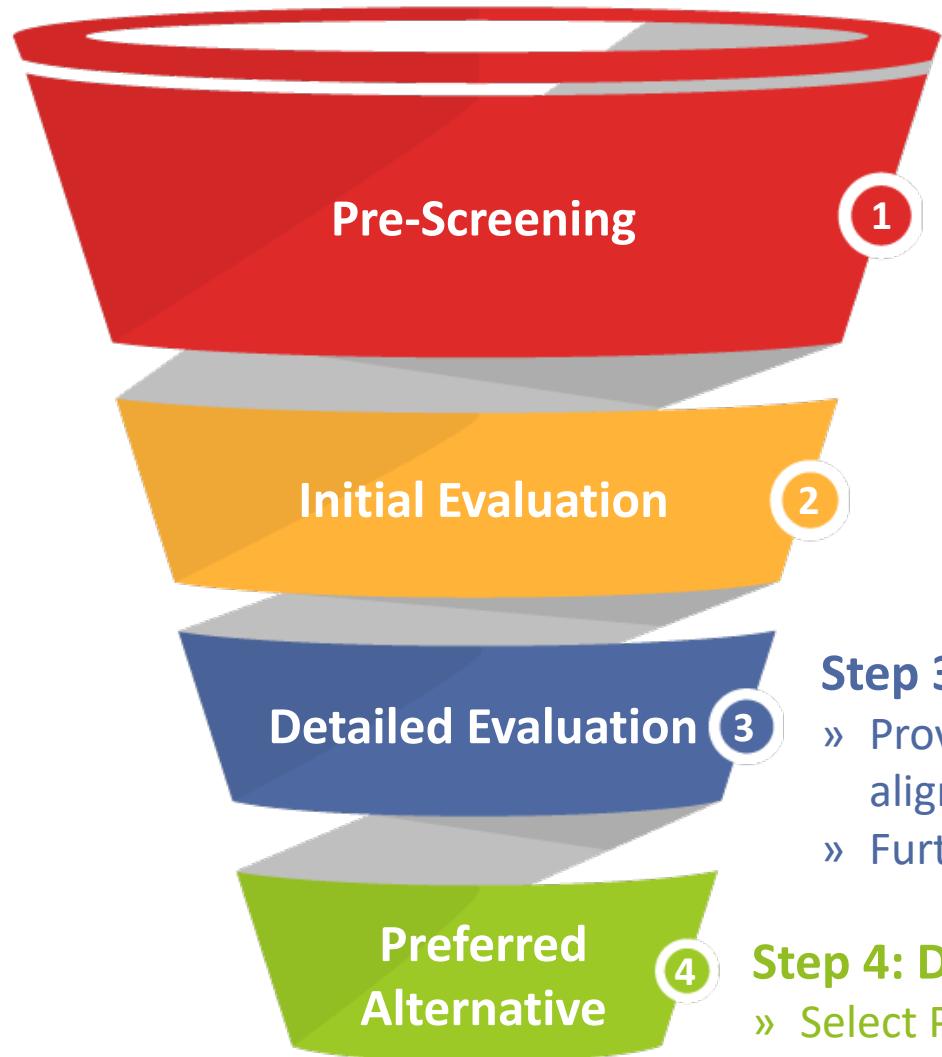


➤ Other key takeaways

- **Transit Alternatives along the State/Main corridor should continue to be explored** for more localized service, just doesn't meet this project's Purpose and Need
- **Express Bus on I-15 could still be considered as a possible phasing element** while the long-term project is being developed, funded, and constructed



Alternatives Evaluation Roadmap – Future Steps



Step 3: Evaluate alternatives in more detail

- » Provide greater definition (identify service assumptions, stations, alignment details)
- » Further narrowing of alternatives

Step 4: Develop Implementation Plan

- » Select Preferred Alternative
- » Consider potential phasing options



Detailed Evaluation – how to decide?

➤ Potential evaluation criteria:

- Transit travel times
- Transit reliability
- Transit connections
- **Transit ridership and transit trips**
- Station area accessibility
- Transportation impacts
- **Transit-supportive zoning**
- Development/redevelopment potential
- **Equity and access to opportunity**
- Capital cost estimate
- O&M cost estimate
- Constructability considerations
- Operational considerations
- Environmental considerations
- **Phase and implementation considerations**



Detailed evaluation:

- ❖ Conceptual engineering and cost estimating
- ❖ Ridership forecasting using model

Detailed evaluation criteria are:

- ❖ In-depth
- ❖ More quantitative
- ❖ Diving into greater detail

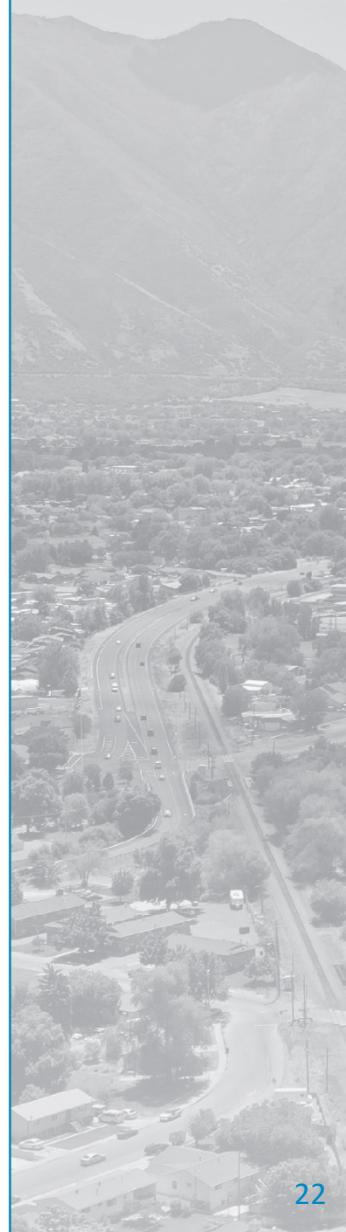


Implementation – how do we implement the Preferred Alternative?



Based on additional analysis of ...

- » Ridership (model runs by 2030, 2040, 2050, and by geographic extent of service)
- » Cost (capital and O&M)
- » Readiness of development/land use and associated infrastructure projects (i.e. future interchanges)
- » Other key differentiating factors from detailed evaluation



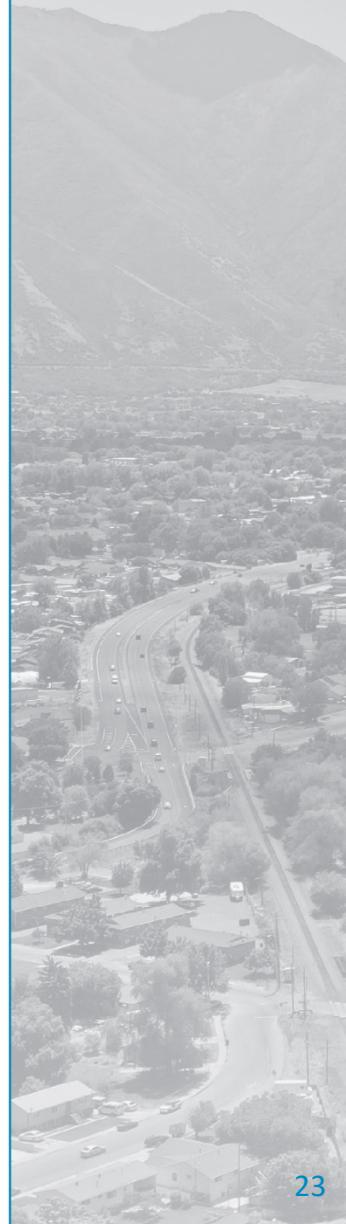
Implementation Options – *Example*



Implementation Options for *Example* Preferred Alternative:

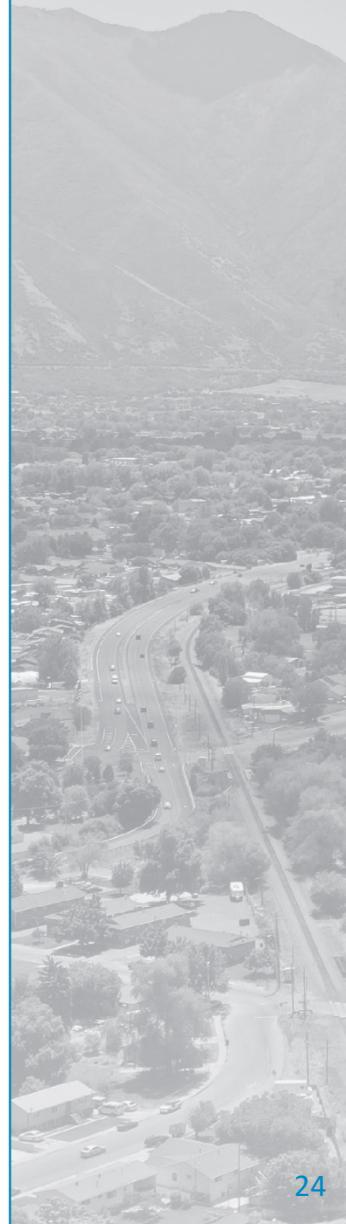
No phasing	<ul style="list-style-type: none"> Full Commuter Rail buildout by 20XX
Geographic or Timing Phasing	<ul style="list-style-type: none"> Extend Commuter Rail to Springville in 20XX Extend Commuter Rail to Spanish Fork/Payson in 20YY Extend Commuter Rail to Santaquin by 20ZZ
Phasing of Modes	<ul style="list-style-type: none"> Expand express bus service frequency + create permanence in identified station areas by 20XX Provide full dedicated lanes for buses by 20YY Full Commuter Rail buildout by 20ZZ
Mix and Match of Above	

EXAMPLE	Frequency Assumptions	Operational Assumptions	Stations
Alternative Commuter Rail 1 • Commuter rail operating in exclusive facility	All day service – 30 min peak, 60 min off peak	One-seat ride	1, 2, 3, 4



Stakeholder Engagement Update

- Specific engagement: community-specific approaches have been planned
 - Will partner with cities to implement customized approaches (based on feedback)
- Promoting Engagement
 - Promo content to share with each partnering organization and city to post and promote SVTS with community
- Underrepresented communities – community partner to support engagement with Spanish-speaking and Latino/Hispanic community
- Coming up: public feedback on Purpose & Need and Initial Range of Alternatives through website



Next Steps and Workshop Wrap-up

- Begin Detailed Evaluation of Alternatives
 - March through May

- Kicking off land use planning task
 - Mid April combined workshop
 - Project team sent out email about general availability

