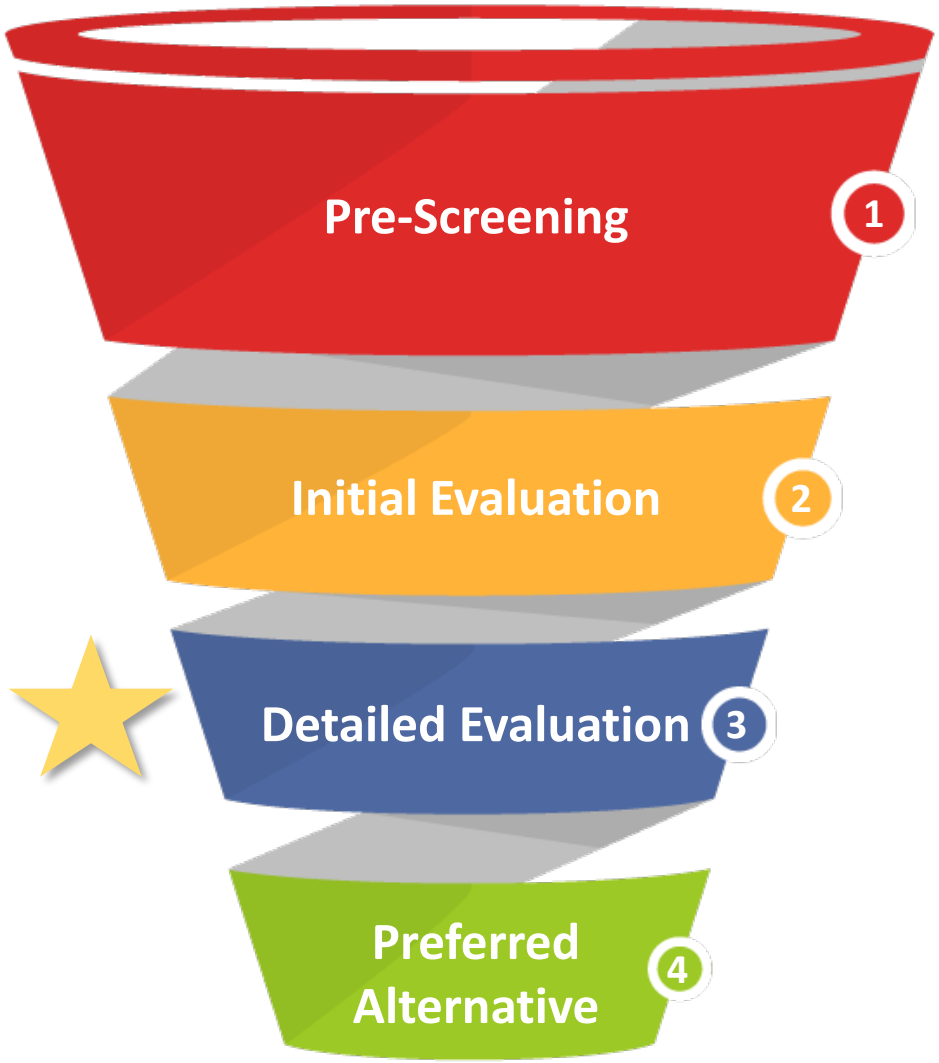
Executive Summary - Detailed Alternative Evaluation

Overview

- The South Valley Transit Study is using a multi-step alternatives evaluation process to determine the long-term preferred solution for providing expanded transit service in south Utah County, from Provo to Santaquin

- The detailed evaluation step builds on the initial (high-level) evaluation and provides more quantitative information to inform selection of a Preferred Alternative



3 Detailed Evaluation – **Alternatives**

SOUTH VALLEY TRANSIT STUDY

Commuter Rail

Bus Rapid Transit

Bus Rapid Transit Design Option

Commuter Rail and Bus Rapid Transit share same alignment/station locations

Bus Rapid Transit Design Option developed to reduce costs and impacts

3 Detailed Evaluation – What did we learn?

Quantitative Overview

Detailed Screening Measure	Commuter Rail Operational Scenario A- High frequency	Commuter rail Operational Scenario B- AM/PM peak only	BRT Operational Scenario A- High frequency	BRT Operational Scenario B- AM/PM peak only	BRT Design Option Operational Scenario A- High frequency	BRT Design Option Operational Scenario B- AM/PM peak only
Regional transit travel times	Santaquin to FR Provo: 30 minutes Santaquin to FR Lehi: 58 minutes	Santaquin to FR Provo: 30 minutes Santaquin to FR Lehi: 73 minutes	Santaquin to FR Provo: 29 minutes Santaquin to FR Lehi: 73 minutes	Santaquin to FR Provo: 29 minutes Santaquin to FR Lehi: 73 minutes	Santaquin to FR Provo: 35 minutes Santaquin to FR Lehi: 78 minutes	Santaquin to FR Provo: 35 minutes Santaquin to FR Lehi: 78 minutes
Transit reliability	100% of transit operates in exclusive guideway	100% of transit operates in exclusive guideway	100% of transit operates in exclusive guideway	100% of transit operates in exclusive guideway	58% of transit operates in exclusive guideway	58% of transit operates in exclusive guideway
Transit ridership (2050) Assumes modeled land uses	Daily boardings (2050) • Provo - 6,039 • Springville - 1,969 • Spanish Fork - 1,394 • Payson - 723 • Santaquin - 658 • **Total (w/o Provo) – 4,744**	Daily boardings (2050) • Provo – 6,691 • Springville – 633 • Spanish Fork – 387 • Payson – 166 • Santaquin – 300 • **Total (w/o Provo) – 1,486**	Daily boardings (2050) • Provo – 6,428 • Springville – 420 • Spanish Fork – 293 • Payson – 143 • Santaquin – 233 • **Total (w/o Provo) – 1,089**	Daily boardings (2050) • Provo – 6,051 • Springville – 271 • Spanish Fork – 200 • Payson – 108 • Santaquin – 159 • **Total (w/o Provo) – 738**	Daily boardings (2050) • Provo – 5,750 • Springville – 124 • Spanish Fork – 187 • Payson – 100 • Santaquin – 132 • **Total (w/o Provo) – 543**	Daily boardings (2050) • Provo – 5,591 • Springville – 80 • Spanish Fork – 129 • Payson – 75 • Santaquin – 90 • **Total (w/o Provo) – 375**
Capital cost (2026 dollars) (Rough order of magnitude cost includes estimated construction, right-of-way, station program, and vehicle fleet costs)	• $800 M – 1.1 B (Provo to Santaquin) • $550 – 750 M (Provo to Payson)	• $800 M – 1.1 B (Provo to Santaquin) • $500 – 750 M (Provo to Payson)	• $1.1 – 1.5 B (Provo to Santaquin) • $650 – 900 M (Provo to Payson)	• $1.1 – 1.5 B (Provo to Santaquin) • $650 – 900 M (Provo to Payson)	• $400 – 550 M (Provo to Santaquin) • $300 – 400 M (Provo to Payson)	• $350 – 500 M (Provo to Santaquin) • $250 – 300 M (Provo to Payson)
Annual O&M estimate (2026 dollar/year)	• $13.5 M/yr (Provo to Santaquin) • $8.1 M/yr (Provo to Payson)	• $3.5 M/yr (Provo to Santaquin) • $2.1 M/yr (Provo to Payson)	• $3.7 M/yr (Provo to Santaquin) • $2.2 M/yr (Provo to Payson)	• $1.2 M/yr (Provo to Santaquin) • $0.7 M/yr (Provo to Payson)	• $3.9 M/yr (Provo to Santaquin) • $2.4 M/yr (Provo to Payson)	• $1.2 M/yr (Provo to Santaquin) • $0.7 M/yr (Provo to Payson)
Return on investment (cost/rider)	• Lowest cost per rider of all alternatives (Provo to Santaquin) • Provo to Payson segment improves ROI performance by ~30%	• 2x higher CRT Scenario A (Provo to Santaquin) • Provo to Payson segment improves ROI performance by ~35%	• 4x higher CRT Scenario A (Provo to Santaquin) • Provo to Payson segment improves ROI performance by ~40%	• 5x higher CRT Scenario A (Provo to Santaquin) • Provo to Payson segment improves ROI performance by ~40%	• 4x higher CRT Scenario A (Provo to Santaquin) • Provo to Payson segment improves ROI performance by ~20%	• 3.5x higher CRT Scenario A (Provo to Santaquin) • Provo to Payson segment improves ROI performance by ~20%

3 Detailed Evaluation – **What did we learn?**

SOUTH VALLEY TRANSIT STUDY

Similarities:

Commuter Rail & BRT

- Transit reliability
- Transportation system impacts
- Land use compatibility
- TOD potential – same stations
- Natural/built environmental impacts

Differences:

Commuter Rail

- Regional travel times
- Ridership
- Capital costs
- O&M costs
- Return on investment
- Construction complexity

BRT

- Regional travel times
- Ridership
- Capital costs
- O&M costs
- Return on investment
- Construction complexity

3 Detailed Evaluation – **What did we learn?**

SOUTH VALLEY TRANSIT STUDY

➢How is the BRT Design Option different?

- **Improves performance by:**
  - Reducing capital costs
  - Reducing O&M cost
  - Reducing natural/built environment impacts
  - Reducing construction complexity
- **Reduces performance by:**
  - Increasing travel times
  - Reducing ridership
  - Less land use compatibility
  - Reducing TOD potential
  - Higher return on investment

3 Detailed Evaluation – **Operational Scenarios**

SOUTH VALLEY TRANSIT STUDY

➢Why were operations considered?

- Understand influence of service frequency on ridership
- Understand implications of annual operating costs

➢Two Operational "Bookends"

- Scenario A: High Frequency
  - 30-min peak/60-min off peak to match FrontRunner frequency
  - Commuter rail would not transfer in Provo, BRT would transfer due to mode change
- Scenario B: AM/PM Peak
  - AM/PM Peak Service (4 trips/hour)

Differences between A & B

Reducing transit frequency (Scenario A) :

- **Reduces O&M cost**
  - O&M Cost
- **Reduces performance in:**
  - Ridership
  - Return on investment
- **Similarities:**
  - Travel times
  - Capital Costs
  - Land Use Compatibility
  - TOD potential
  - Construction Complexity

3 Detailed Evaluation – **What did we learn?**

SOUTH VALLEY TRANSIT STUDY

Phasing and Implementation Considerations (1 of 2)

Commuter Rail

- **Less flexibility for phased implementation**
  - Must be implemented from north to south
  - Requires fully exclusive operations
- Start with regional express bus, phase to commuter rail as funding available and ridership established
  - BRT not recommended as a phasing step
- Could operate as a shuttle and phased into interlined FrontRunner service as demand warrants
- Less flexibility to add additional stations
- Limitations to serving desired stations until supporting infrastructure and land use is in place (highway and roadway connections)

Bus Rapid Transit

- **Greatest flexibility for phased implementation**
  - BRT can operate in a various environments, fully exclusive to mixed flow if ROW and/or funding is limited or if other constraints are present
- Start with regional express bus, phase to BRT as funding available and ridership established
- Greater flexibility to add additional stations, though may reduce efficiency
- Greater flexibility to serve desired stations while supporting investments are implemented (highway and roadway connections)

3 Detailed Evaluation – **What did we learn?**

SOUTH VALLEY TRANSIT STUDY

Phasing and Implementation Considerations (2 of 2)

- Provo to Payson is key segment
  - Reduces cost (capital and O&M)
  - Improves return on investment
  - Reduces natural and built environment impacts
- Payson to Santaquin
  - Focus on identification and preservation of right-of-way
  - Evaluate agricultural considerations and impacts
  - Express bus service connecting Santaquin to project

3 Detailed Evaluation – **Public Input**

To date:

- 255 comments
- 5700+ webpage views

Events attended:

- Bike to Work Day (Provo)
- Art City Days (Springville)
- Freedom Festival (Provo)
- Fiesta Days (Spanish Fork)
- Utah County Fair (Spanish Fork)
- Orchard Days (Santaquin)
- Farmer's Market (Provo)
- Festival Latinoamericano (Provo)

3 Detailed Evaluation – **Public Input**

What did we hear?

- Support for frequent, reliable (transit priority and exclusivity where possible), and affordable service.
- Want to see high quality development at station areas, including business and commercial opportunities, in addition to housing.
- Strong support for FrontRunner to serve the coming growth and commuting needs; support for all stations (Springville, Payson, Spanish Fork, and Santaquin).
- Need more localized service (providing more frequent service to existing development on the east side of I-15) via local bus, express bus, or BRT to serve additional destinations and also connecting into future FrontRunner service.
- Support for BRT/express bus/local use to complement FrontRunner.
- Opposition for transit in south Utah County was expressed. Primarily that it isn't needed, no one will use it, waste of money, and don't trust UTA.

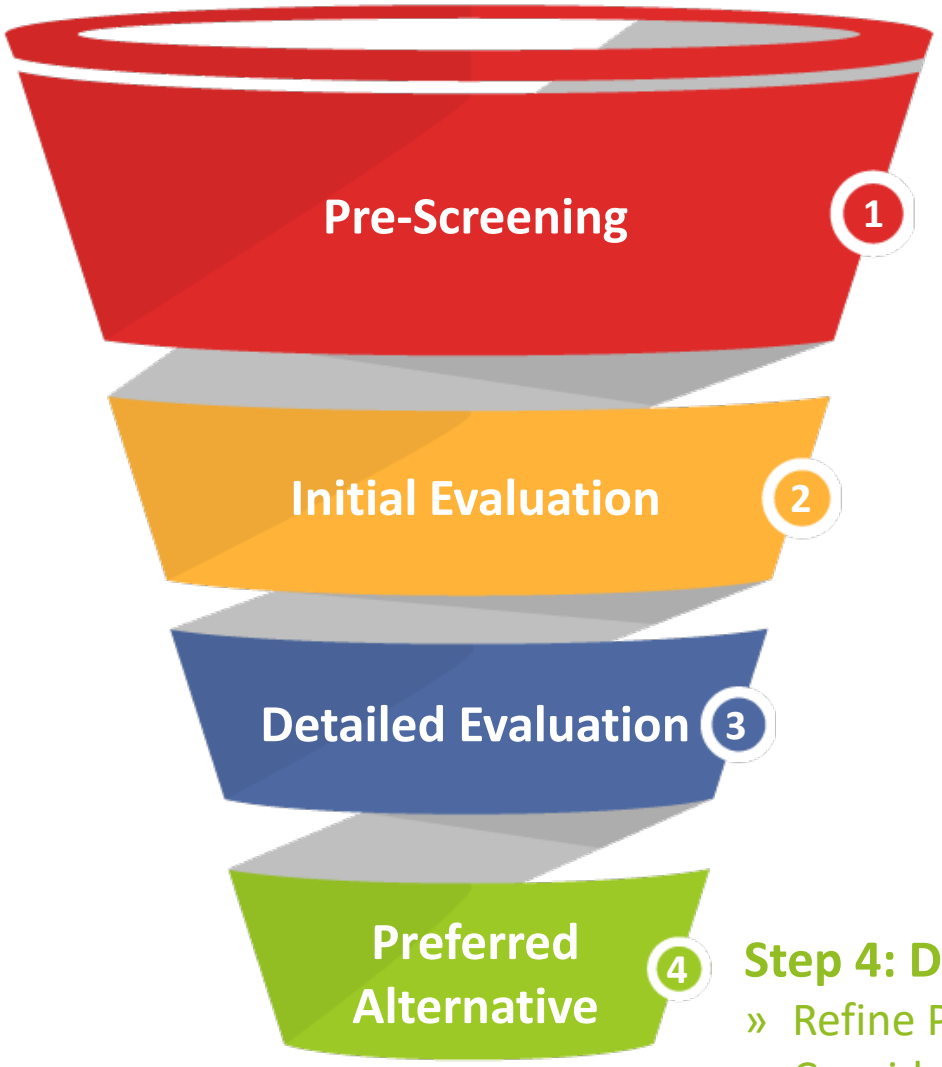
3 Detailed Evaluation – **Recommendation**

SOUTH VALLEY TRANSIT STUDY

➢ *Proposed* Preferred Alternative Recommendation (2050)

- **Commuter Rail** – Provo to Payson
  - Explore different operational scenario(s) to reduce O&M costs while maintaining high levels of ridership (focus on commuter trips)
- **Express Bus Service** – Payson to Santaquin
  - Explore corridor preservation opportunities along potential future commuter rail alignment and at future station location

Alternatives Evaluation Roadmap – Next Steps



Step 4: Develop Implementation Plan

- Refine Preferred Alternative
- Consider potential phasing options
- Coordinate with UTA's FrontRunner Forward Program