High-Capacity Transit in the Treasure Valley…

What Would it Take?

January 26, 2021
Virtual Meeting
Study Objectives

- Update the 2009 Treasure Valley High Capacity Transit Study
- Confirmation of a range of public transportation choices for improvement of communities mobility and accessibility within the Treasure Valley
- Identify the demographic changes in the Treasure Valley that impact the transportation system and help confirm the need for future investments
  - A forecasted 70% population increase from 2010 to 2040
  - A projected 420,000 Treasure Valley jobs by 2040
  - Travel time from Caldwell to downtown Boise of 70 minutes by 2040
What is High-Capacity Transit (HCT)?

- Faster than a local bus
- Carries more people than a local bus
- Improved service and amenities

Light rail
Commuter rail
Bus rapid transit
Project Study Area
Transit Alternatives

Bus Rapid Transit (BRT) - Mixed Traffic

- Operates in mixed traffic lanes.
- Priority or queue bypass lanes at points of congestion.
- Unique stops including shelters.
- Special branding of the buses/signage.
- Wider station spacing than local bus service.
- Least cost of the options.
Transit Alternatives

Bus Rapid Transit (BRT) - Exclusive

- Utilizes an exclusive running way.
- Intended to speed operations and provide a more competitive travel time.
- Wider station spacing with special signaling at key intersections.
- More substantial stations.
- Specially branded and often larger buses.
- The cost would be higher than the BRT Mixed Traffic option but less than any of the light rail alternatives.
Transit Alternatives

Light Rail Transit (LRT)

- Electrically powered transit.
- Exclusive right-of-way for greater speeds and a more reliable service.
- Stations are more robust than bus modes and with wider spacing.
- Crossings of streets and arterials require positive protection.
- Either single vehicle configurations or multiple units.
- Will cost more to implement due to the exclusive operating environment.
Transit Alternatives

Commuter / Regional Passenger Rail

- Offers higher speeds and passenger capacities.
- Can be focused on peak period hours with limited off-peak services.
- Many operations are within existing freight rail environments.
- Station spacing is much wider.
- Overall capital cost is typically less than a new fixed rail alignment.
- Utilizes a variety of vehicle types.
Transit Mode Comparisons

<table>
<thead>
<tr>
<th>Transit Speed / Reliability</th>
<th>Right-of-Way Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slowest</td>
<td>Fully Dedicated Guideway</td>
</tr>
<tr>
<td></td>
<td>Partially Dedicated Guideway / Priority Treatment in Mixed Traffic</td>
</tr>
<tr>
<td></td>
<td>Priority Treatment in Mixed Traffic</td>
</tr>
<tr>
<td></td>
<td>Mixed Traffic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REGIONAL</th>
<th>LOCAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuter Rail</td>
<td>Light Rail</td>
</tr>
<tr>
<td>Bus Rapid Transit</td>
<td>Frequent Service</td>
</tr>
<tr>
<td>Other Regional Services</td>
<td>Local Bus &amp; Shuttle</td>
</tr>
</tbody>
</table>
Candidate Routes
Routes & Mode Alternatives

- Fairview Avenue / Cherry Lane
  - BRT - Mixed Traffic
  - BRT - Exclusive
  - Light Rail

- Franklin Road
  - BRT - Mixed Traffic
  - BRT - Exclusive
  - Light Rail

- Boise Cutoff
  - BRT - Exclusive
  - Light Rail
  - Commuter Rail

- I-84 / I-184
  - BRT - Mixed Traffic
  - BRT - Exclusive
Project Goals

- **Goal 1** – Improve Transit Connectivity
- **Goal 2** – Improve Transit Mobility
- **Goal 3** – Manage Travel Demand
- **Goal 4** – Support Transportation and Land Use Plans
- **Goal 5** – Financial Feasibility
Goal 2 – Improve Transit Mobility

Minimize transit travel time between major origins/destinations

2035 HCT In-Vehicle Transit Travel Time by Alternative Caldwell to Main Street Station in Downtown Boise

- I-84
- Franklin
- Fairview/Cherry
- Boise Cutoff

Faster Slower

BRT - Mixed
BRT - Exclusive
Light rail
Commuter rail
Goal 3 – Manage Travel Demand

*Improve transit mode share*

2035 Average Weekday Ridership by Alternative

- **I-84**
  - BRT - Mixed
  - BRT - Exclusive
  - Light rail
  - Commuter rail

- **Franklin**
  - BRT - Mixed
  - BRT - Exclusive
  - Light rail
  - Commuter rail

- **Fairview/Cherry**
  - BRT - Mixed
  - BRT - Exclusive
  - Light rail
  - Commuter rail

- **Boise Cutoff**
  - BRT - Mixed
  - BRT - Exclusive
  - Light rail
  - Commuter rail

Lower ridership: Goal 3 – Manage Travel Demand

Higher ridership: Goal 3 – Manage Travel Demand
Goal 5 – Financial Feasibility

Develop HCT concepts potentially funded using a mix of federal, state, and local funds

Order-of-Magnitude HCT Capital Cost by Alternative

- I-84
- Franklin
- Fairview/Cherry
- Boise Cutoff

Lower cost

Higher cost

- BRT - Mixed
- BRT - Exclusive
- Light rail
- Commuter rail
# Evaluation Summary

| 1.1 | Central Business District Connection | CR requires a transfer, BRT-MIX is in mixed traffic |
| 1.2 | Residential - Employment Connection | a function of frequency of stops and general alignment access |
| 1.3 | Residential - Activity Center Connection | a function of frequency of stops and alignment type/location |
| 2.1 | Dedicated Transit ROW | degree of separation from traffic and traffic levels |
| 2.2 | Transfer Opportunities with Future Bus System | function of stop locations, ease of transfer and local service interface |
| 2.3 | Minimize Transit Travel Time | frequency of stops, interface with traffic and degree of separation |
| 3.1 | Improve Transit Mode Share | based on 2009 ridership estimates |
| 3.2 | Good Walk and Bike Access | availability and ease of station access and station frequency |
| 3.3 | P&R with Good Auto Access | anticipated ease/difficulty in providing auto access |
| 3.4 | Minimize Impacts to Traffic Operations | separated alignment best, mixed traffic has the most interface with traffic |
| 4.1 | Transit Improvements Consistent with Plans | I-84 not planned for HCT, other corridors identified for some level of increased transit |
| 4.2 | Opportunities for TOD | frequent rail transit rated highest, freeway an access issue |
| 5.1 | Funding Potentials | assume FTA funds, high cost modest ridership an issue |
| 5.2 | Cost Effectiveness | capital and operational cost per rider |

<table>
<thead>
<tr>
<th>Boise Cutoff</th>
<th>Fairview/Cherry</th>
<th>Franklin</th>
<th>I-84</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR</td>
<td>LRT</td>
<td>BRT-EX</td>
<td>LRT</td>
</tr>
<tr>
<td>5</td>
<td>Most Compatible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>☐</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compatibility Rating</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Compatible</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Least Compatible</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

16
RECOMMENDATIONS & NEXT STEPS
Short Term / Next Steps
Setting The Stage For A HCT Future

- Update the ridership projections
- Initiate discussions with the Federal Transit Administration (FTA)
- Develop thresholds / triggers for initiating next level of corridor work
- Explore the concept of bus-on-shoulders with ITD as a BRT – Mixed Traffic solution
- Consider phased implementation of the HCT alternatives
- Initiate discussions on potential funding sources
Intermediate Term

A Narrowing Of The HCT Alternatives

- Initiate a Process to Reduce the Range of HCT Alternatives
- Identify additional desired information
- Understand the experiences of similar regions
- Initiate a robust community discussion
Long Term
Retain HCT Designations On Four Corridors

- Boise Cutoff
- Franklin Road
- Fairview Avenue
- I-84 / I-184
Questions & Answers