Alternatives Analysis for Relocation of Transit Hub in Muldoon Area of Anchorage, Alaska

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Albuquerque, NM
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KINNEY ENGINEERING, LLC
Outline

- Issues and Recent Changes
- Short Term Solution
- Evaluation Criteria
- Long Term Alternatives
- What is Next
Issues and Recent Changes
Muldoon Transit Hub 2014-15

Muldoon Road, between Debarr Road and 12th Court
Crossing Muldoon (east-west)

Number of Pedestrians Crossing

Time of Day
Short Term Solution
Short Term Solution
Long Term Solution
Evaluation Criteria for Long Term Solution

6 Criteria

- Potential for conflicts with other vehicles
- Patron transfers
- Patron comfort and safety
- Bus travel time
- Flexibility in scheduling
- Construction and right-of-way costs
Criteria 1: Potential for Conflicts with Other Vehicles

- Type of stops
- Proximity to nearest signal
- Location of driveways
Criteria 2: Patron Transfer

- Out-of-direction travel
- Signal delay
- Traffic volume and speed
Criteria 3: Patron Comfort and Safety

- Traffic volume and speed
  - Adjacent streets
Criteria 4: Bus Travel Time

- Operating costs
- Travel time
  - Deadheading (traveling without patrons)
  - Unsignalized left turn turning movement delay
Criteria 5: Flexibility in Scheduling

- Number of bus bays
- Interlining (changing routes)
Criteria 6: Construction and Right-of-way Costs

- One time cost
Pull Out Stops on Creekside Center Drive
## Pull Out Stops on Creekside Center Drive

<table>
<thead>
<tr>
<th>Conflicts with other vehicles</th>
<th>Patron transfers</th>
<th>Patron comfort and safety</th>
<th>Bus travel time</th>
<th>Flexibility for bus scheduling</th>
<th>Estimated construction and right-of-way costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower volume road</td>
<td>Lower volume and lower speed road</td>
<td>Lower volume</td>
<td>Almost the same as existing</td>
<td>Only improves scheduling flexibility if roundabout is built at 10th Avenue</td>
<td>$1.3 million ($2.8 million with roundabout)</td>
</tr>
</tbody>
</table>

|  +  |  +  |  +  |  +  |  0/+  |  0/+  |
Combined Off-Street/Pull-Out Hub
## Combined Off-Street/On-Street Hub

<table>
<thead>
<tr>
<th>Conflicts with other vehicles</th>
<th>Patron transfers</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Fewer conflicts on off-street. More conflicts downstream end of hub</td>
<td>All stops in one location</td>
<td>Slightly more comfortable than existing</td>
<td>Travel times generally longer than existing, many buses make left turn at unsignalized driveway</td>
<td>Most</td>
<td>$2.0 million</td>
</tr>
</tbody>
</table>

| 0 | + | + | - | + | + |
Potential Off-Street Hubs
# Potential Off-Street Hubs

<table>
<thead>
<tr>
<th>Conflicts with other vehicles</th>
<th>Patron transfers</th>
<th>Patron comfort and safety</th>
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<th>Flexibility for bus scheduling</th>
<th>Estimated construction and right-of-way costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely separated from other traffic</td>
<td>All stops in one location</td>
<td>More comfortable</td>
<td>Depends on specific location</td>
<td>Most</td>
<td>$2.0 to $13.0 million, depending on location</td>
</tr>
<tr>
<td>-/+</td>
<td>+</td>
<td>+</td>
<td>-/+</td>
<td>+</td>
<td>-/+</td>
</tr>
</tbody>
</table>
## Alternative Comparison

<table>
<thead>
<tr>
<th></th>
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<th>Flexibility for bus scheduling</th>
<th>Estimated construction and right-of-way costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pull-out stops on Creekside Center Drive</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0/+</td>
<td>0/+</td>
</tr>
<tr>
<td>Combined off-street and pull-out hub</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Off-Street Hub</td>
<td>-/+</td>
<td>+</td>
<td>+</td>
<td>-/+</td>
<td>+</td>
<td>-/+</td>
</tr>
</tbody>
</table>
Next Steps

- Anchorage Talks Transit - Visioning Exercise
Thank You