

**Board of Commissioners Special Study Session Agenda  
July 10, 2023 - 3:00 p.m.**



**Virtual Meeting Participation Information:**

Dial: 1-253-215-8782 Meeting ID No. 82024083048

Webinar link: <https://us02web.zoom.us/j/82024083048>

**Physical Meeting Location:**

Pierce Transit Training Center

3720 96<sup>th</sup> Street SW

Lakewood, WA 98499

**The Regular Board Meeting will follow this meeting at 4:00 p.m.**

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**Call to Order**

**Roll Call**

**Review and Discussion**

Preliminary and Conceptual Design Changes to the Pacific Avenue/SR-7 Bus Rapid Transit Project to Improve Cost Savings and Project Delivery to the Public

Sean Robertson  
Sr. Construction Project Manager

**Public Comment**

*Citizens wishing to provide comment on the proposed Pacific Avenue/SR-7 Bus Rapid Transit Project will be given up to three minutes to speak.*

*To request to speak virtually during public comment, please press the Raise Hand button near the bottom of your Zoom window or press \*9 on your phone. If speaking in person, please sign in at the table at the back of the room. Your name or the last four digits of your phone number will be called out when it is your turn to speak. Written comments may also be emailed to [Djacobson@piercetransit.org](mailto:Djacobson@piercetransit.org).*

**Adjournment**

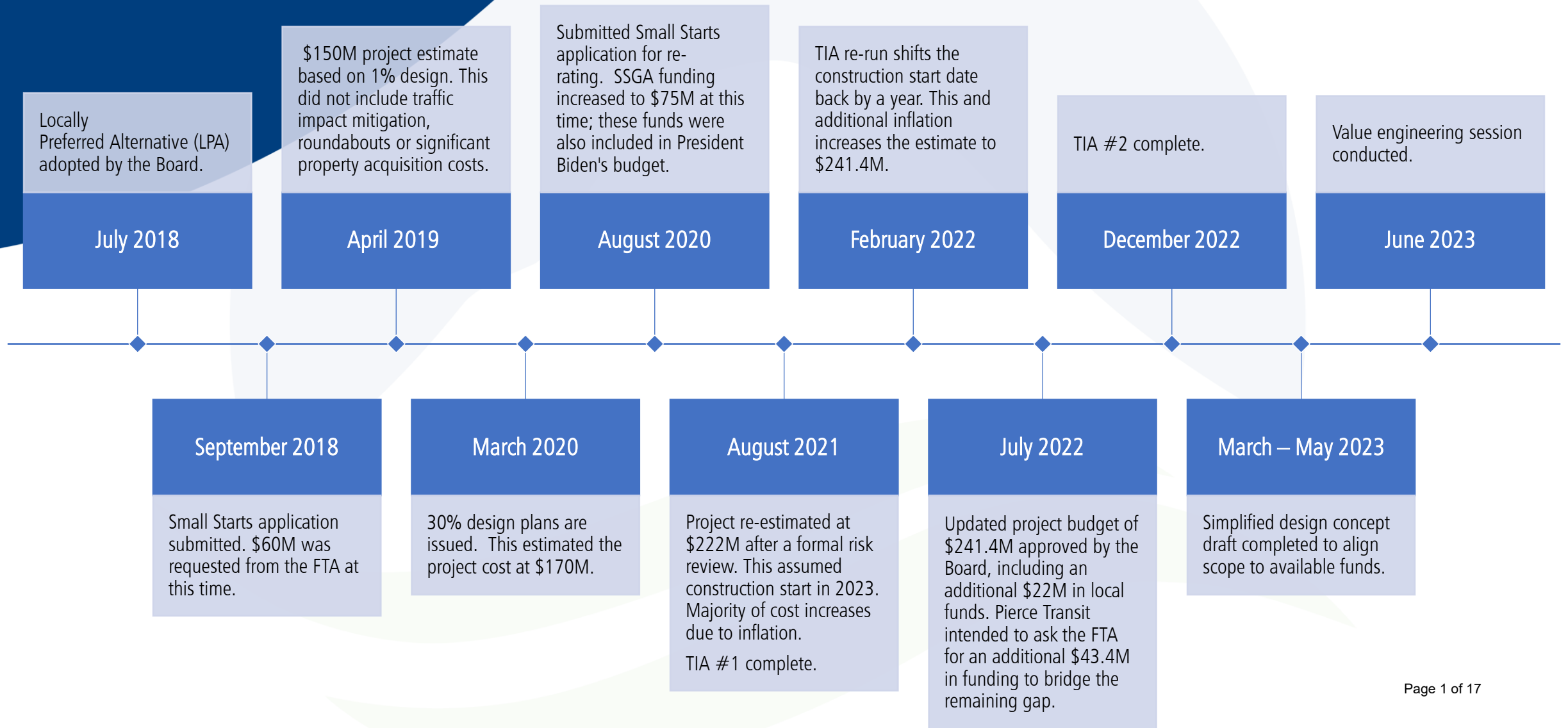
Pierce Transit does not discriminate on the basis of disability in any of its programs, activities, or services. To request this information in an alternative format or to request a reasonable accommodation, please contact the Clerk's Office at 253.581.8066, before 4:00 p.m., no later than the Thursday preceding the Board meeting.



PierceTransit  
***Stream***

SR-7/Pacific Avenue BRT Project  
Board of Commissioners Study Session  
July 10, 2023

# History



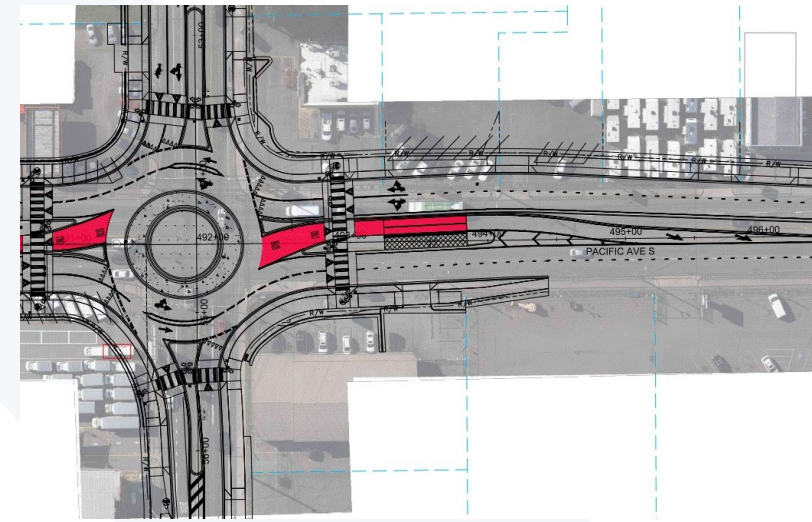
# Where We Are

- 60 percent design package submitted
- Rigorous agency participation to date
- Still lacking overall agreement and consensus with partners on the project footprint and potential mitigation
- Current design requires significant agency agreements
  - Some agreements nearing resolution while others are stalled
- Uncertainty around the type, nature, cost and extent of mitigations that may be required by local agency partners

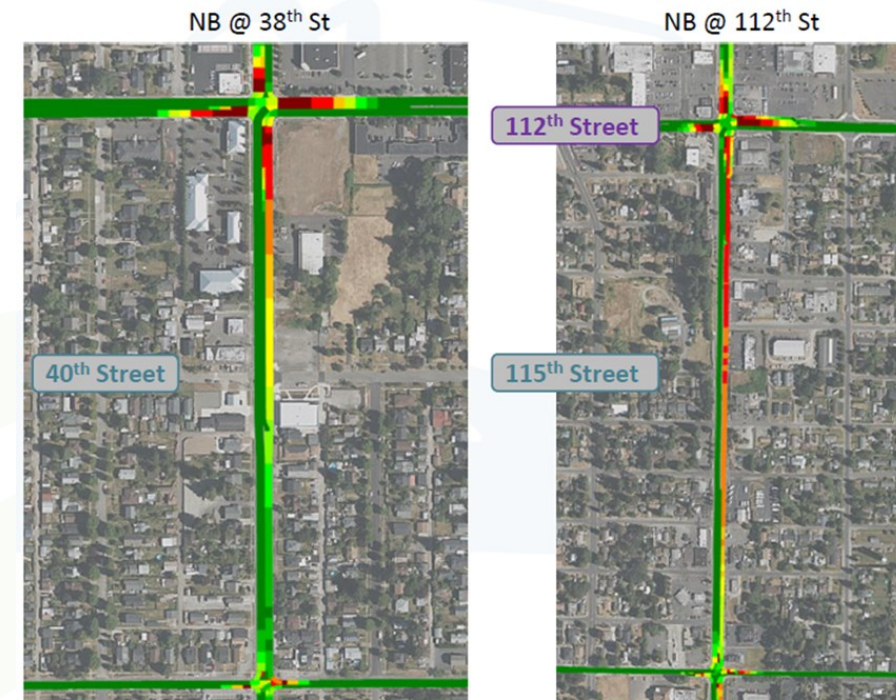


# What We Have Learned

- Modeling of current corridor conditions
- Better understanding of property impacts
- Large median stations with a wide project footprint do not fit within the existing constrained corridor environment
- WSDOT is planning a "Complete Streets" project along SR-7 north of 121st St.



Property Impacts at 96th St. Roundabout



Base Conditions – 2030 AM

# Current Design Funding Challenge

| Current Revenue/Funding Sources                     |                      | Potential Cost Adjustments                |                      |
|---|----------------------|---|----------------------|
| FTA Small Starts (pending)                          | \$ 75,000,000        | Current project estimate (2022)           | \$241,400,400        |
| Other FTA   | \$ 14,733,652        | Estimated construction escalation         | \$ 30,000,000        |
| WA State  | \$ 26,200,275        | Estimate for City required improvements   | \$ 20,000,000        |
| Sound Transit                                       | \$ 60,000,000        | Estimate for property acquisition/cleanup | \$ 20,000,000        |
| Pierce Transit general fund                         | \$ 22,000,000        |   |                      |
| <b>Total anticipated funding for current design</b> | <b>\$197,933,927</b> | <b>Potential current design cost</b>      | <b>\$311,400,000</b> |

Potential funding gap: \$113M

Project expenses to date: ~\$31M



# **Why We Are Here**

# Charting a Path Forward

## Goals For Reimagined Design:

- Retain most important BRT features
- Maintain an FTA rating of MEDIUM or higher
- Avoid property impacts, utility moves and environmental clean-up
- Deliver service more quickly
- Achieve parity with other BRT systems in the state, including RapidRide (KCM), The Vine (C-TRAN), and Swift (CT)
- Budget target of \$187M





# Previous BRT LPA Design

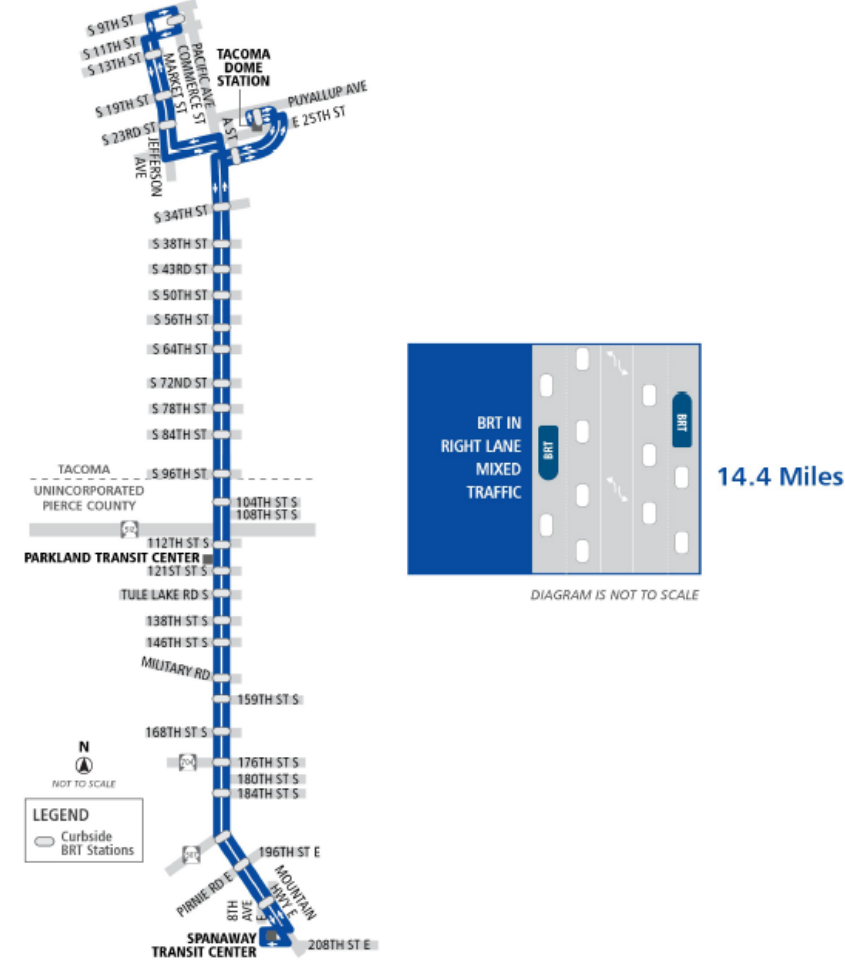
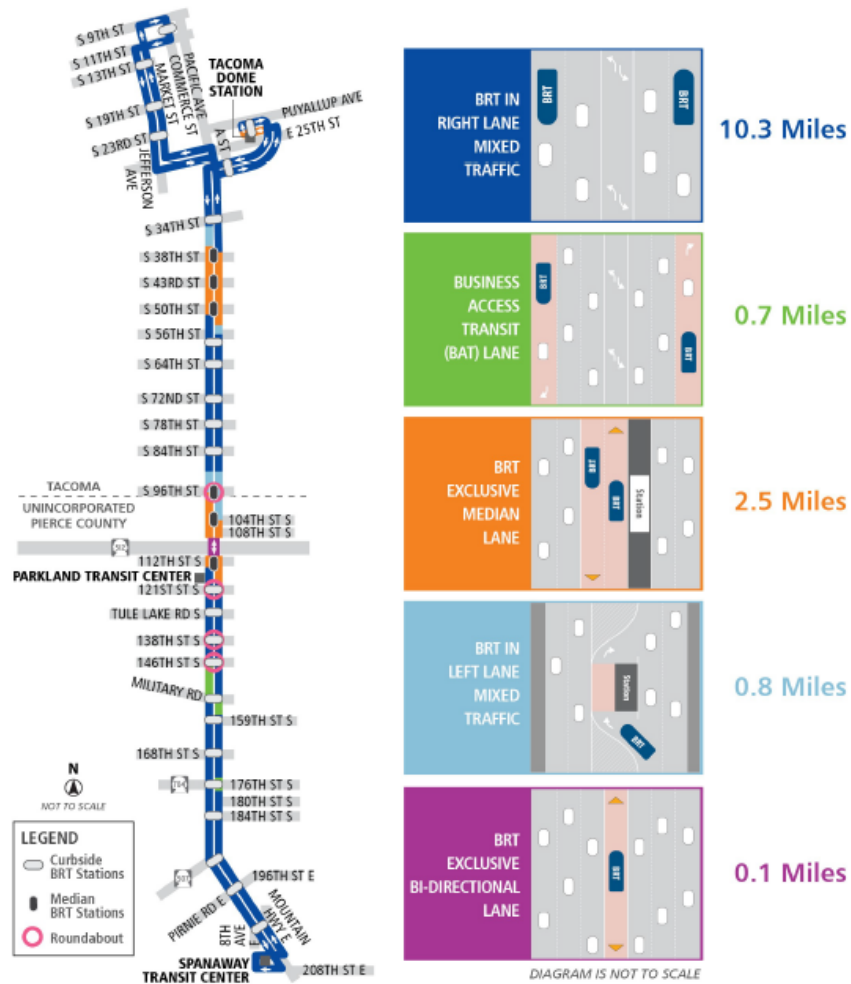
Potential cost: \$311M

FTA Rating: Medium-High

# Reimagined BRT Design Concept

Estimated cost: \$187M

Estimated FTA Rating: Medium (at risk)



# Previous LPA Design

**Potential cost: \$311M**

**FTA Rating: Medium-High**

- 14.4 miles
- 3.3 miles of dedicated lanes
- 28 station pairs
- 4 roundabouts
- Transit Signal Priority (TSP)
- Connection to TDS
- Pedestrian improvements
- (17) – 60' CNG buses
- Estimated at least 317 properties affected
- Deep sewer work and environmental clean-up costs

# Reimagined Design Concept

**Estimated cost: \$187M**

**Estimated FTA Rating: Medium (at risk)**

- 14.4 miles
- No dedicated lanes
- 28 reduced scope station pairs
  - 13 stations will not have offboard payment
- Roundabouts removed
- Transit Signal Priority (TSP)
- Connection to TDS
- Pedestrian improvements reduced
- (17) – 60' CNG buses
- Estimated 67 properties affected (includes removal of 35 public parking stalls, 10 driveway closures, 13 ROW parcels, and 11 permanent utility easement parcels)
- Deep sewer work and environmental clean-up costs mitigated by station placement

# Value Engineering Session

**May 30th – June 1st**









## Goals:

- Incorporate partner input and achieve partner support
- Shared understanding of the project objectives, constraints and path forward
- Ideas to reduce cost, maximize benefits and streamline reviews, approvals and permitting
- A reliable scope, schedule and budget

## Takeaways & Outstanding Items:

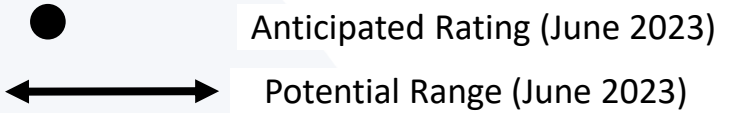
- The 121st and 138th RABs are important for WSDOT's vision of the corridor and for general purpose traffic.
- Additional accessibility improvements needed beyond initial reimagined design scope.
- A Traffic Impact Analysis is required in simplified form. An Intersection Control Analysis may be required.
- Night vs. day construction work will need to be determined.
- Station placement flexibility may be affected by request for all far-sided stops.

# VE Takeaways Continued

|                      | Simplified Concept                   | Partner Requirements   | Discretionary Enhancements (VE Ideas)   |  |  | Potential Savings from VE   |
|----------------------|--------------------------------------|--|---|--|--|---|
|                      |                                      | Sidewalk/Curb Ramps  | 112th to 116th BAT  | 121st RAB  | 138th RAB  |   |
| <b>COST ESTIMATE</b> | \$182M + \$5M                        | +\$4M minimum  | +\$4M   | +\$4.7M<br>(+\$7M - \$2.3M RMG)  | +\$5.4M  | <ul style="list-style-type: none"> <li>• Simplify additional stations (baseline assumes 13 simplified stations)</li> <li>• Delete fiber optic system</li> <li>• Purchase some 40' buses</li> <li>• Used standardized materials on the project, e.g., shelter, railing</li> <li>• Advance utility work ahead of project</li> <li>• Reduce the amount of nightwork</li> </ul> |
| <b>TTT SAVINGS</b>   | 17 / 21 min<br>(RT, AM/PM Peak 2030) | 0  | 4.5 / 1.5 min<br>(RT, AM / PM Peak 2030)  | 0.5 min<br>(RT, PM Peak 2030)  | 1.2 min<br>(RT, PM Peak 2030)  |   |
| <b>FTA RATING</b>    | at risk                              |  (no benefit) |  (strengthens) |  (slight benefit) |  (slight benefit) |   |
| <b>SCHEDULE</b>      | RSD: Q4 2027                         |  prolonged    |  prolonged     |  prolonged        |  prolonged        |   |
| <b>RISKS</b>         | FTA Rating<br>Schedule               | + TCEs<br>+ROW Take<br>+ESA Phase II   | +10 TCEs  | +7 TCEs<br>+4 ROW Take   | +8 TCEs<br>+5 ROW Take<br>+1 ESA Phase II  |   |
| <b>BENEFITS</b>      |                                      | Increased accessibility and pedestrian/rider safety<br>Aligns with corridor vision             | Reduced RT queuing  | LOS C → LOS A (2030)<br>LOS D → LOS A (2045)   | LOS D → LOS A (2030)<br>LOS E → LOS A (2045)   |   |

# Small Starts Rating Estimation

## LEGEND



### Mobility Improvements



### Cost Effectiveness



### Congestion Relief



### Environmental Benefit – *Wide range of possible outcomes tied to anticipated ridership*



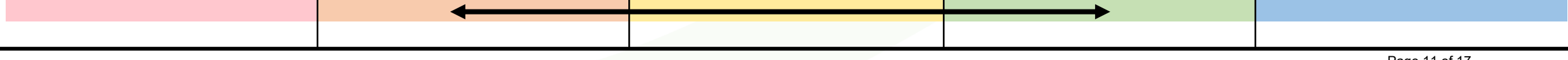
### Economic Development



### Land Use



### OVERALL PROJECET RATING – *Tied Directly to anticipated Environmental Benefit rating*





# **Interim and Contingency Planning**

# Pacific Avenue High-Capacity Transit Mode Evaluation

September 28, 2017

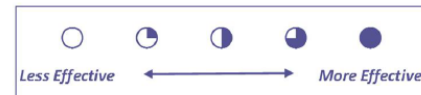
## Purpose Statement

The purpose of the Pacific Avenue S/SR 7 HCT project is to establish a north/south HCT link in the heart of Pierce County and serving Pierce Transit's busiest transit corridor. The project will:

- Increase transit ridership through enhanced transit service.
- Deliver cost-effective service that provides capacity to meet future demand.
- Promote transportation equity in the corridor by ensuring that transit service is accessible to all populations.
- Improve multi-modal access and connectivity.
- Support a regional vision for the community as documented in land use and transportation plans.
- Enhance safety and security for transit patrons and public health overall.
- Support existing economic activity and be a catalyst for sustainable economic growth and corridor redevelopment.
- Promote environmental stewardship and sustainability.

Figure 2: Results of Modal Evaluation

| Purpose and Need Goals        |  | No Build (Current Service) | Enhanced Bus | Bus Rapid Transit | Streetcar  | Light Rail Transit |
|-------------------------------|--|----------------------------|--------------|-------------------|------------|--------------------|
| 1                             | The project will increase transit ridership by reducing transit travel time, improving trip reliability, increasing service frequency, and enhancing transit's comfort, convenience and image. | 1                          | 3            | 4                 | 4          | 5                  |
| 2                             | The project will provide cost-effective transit service in the Study Corridor.   | 4                          | 4            | 4                 | 2          | 1                  |
| 3                             | The project will increase transit capacity to meet current and projected transit travel demand.  | 1                          | 3            | 4                 | 4          | 5                  |
| 4                             | The transit service will be accessible to all populations, including minorities, people with low income levels, and those that are transit dependent.  | 5                          | 5            | 4                 | 4          | 3                  |
| 5                             | The project will promote environmental stewardship and sustainability by reducing greenhouse gas emissions and supporting smart growth.  | 1                          | 3            | 4                 | 5          | 5                  |
| 6                             | The project will improve access to the Study Corridor transit service for pedestrians and bicyclists.  | 1                          | 3            | 4                 | 4          | 3                  |
| 7                             | The project will provide improved connections with other local or regional travel modes.   | 1                          | 3            | 5                 | 5          | 4                  |
| 8                             | The project will have a high likelihood of funding through identified grant programs and new funding sources.  | 1                          | 2            | 4                 | 3          | 2                  |
| 9                             | Enhance safety and security for transit patrons and public health overall.   | 1                          | 3            | 4                 | 4          | 4                  |
| 10                            | The project will support planned local and regional growth and corridor revitalization efforts   | 2                          | 3            | 4                 | 4          | 5                  |
| 11                            | The project will be consistent with adopted local and regional transportation plans.   | 1                          | 4            | 5                 | 1          | 1                  |
| 12                            | The project will minimize adverse impacts to other travel modes and adjacent property.   | 5                          | 5            | 3                 | 2          | 2                  |
| <b>Total Score:</b>           |  | <b>24</b>                  | <b>41</b>    | <b>49</b>         | <b>42</b>  | <b>40</b>          |
| <b>Average Score by Goal:</b> |  | <b>2.1</b>                 | <b>3.4</b>   | <b>4.1</b>        | <b>3.5</b> | <b>3.3</b>         |



Note: Average score calculated by assigning numerical values as follows: 1 = 1 point; 2 = 2 points; 3 = 3 points; 4 = 4 points; 5 = 5 points.

# Partner Transportation Plan Review

**GOAL LU-13** Prioritize the expansion of infrastructure in Centers and Corridors.

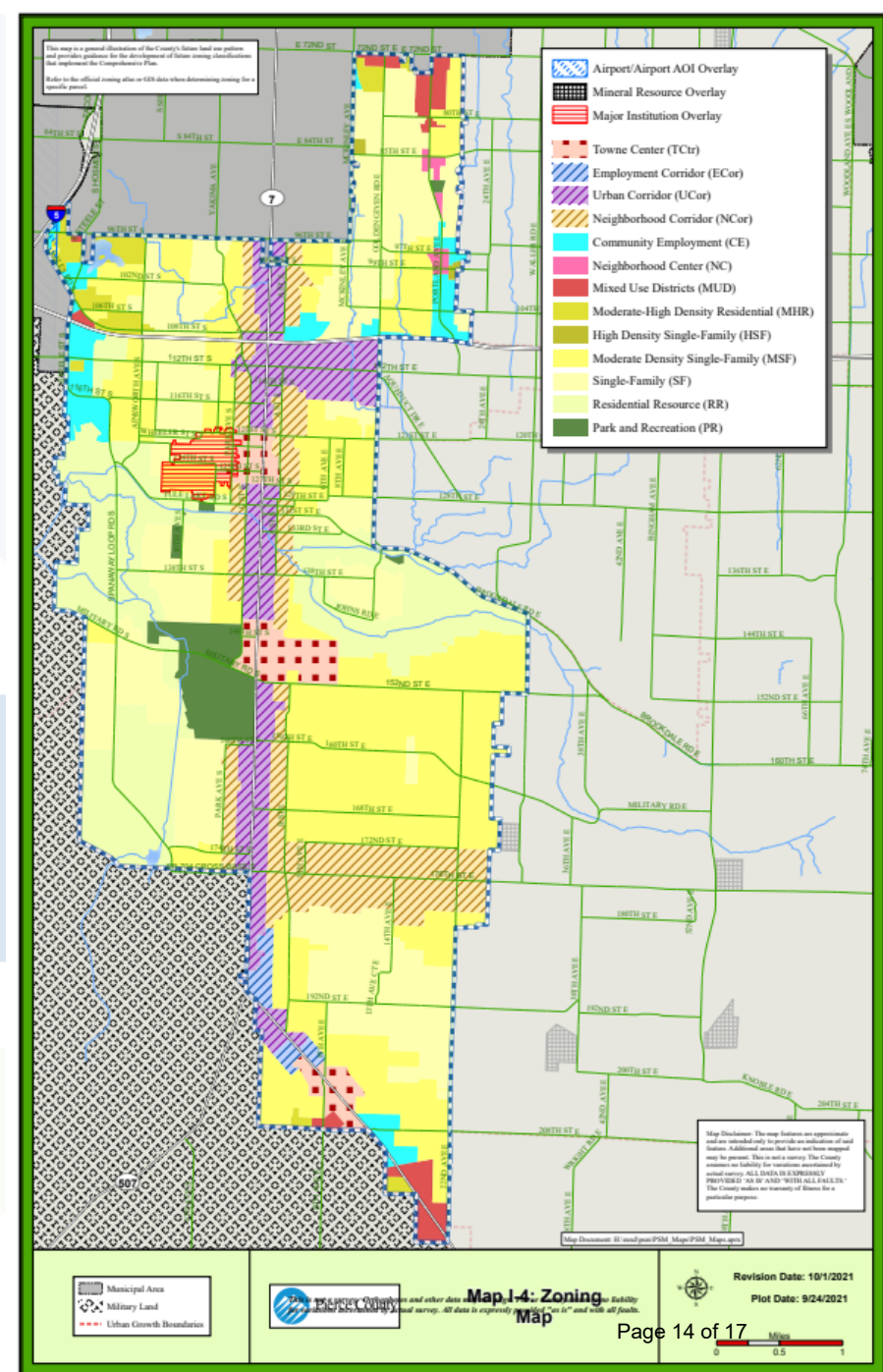
- LU-13.1** Towne Centers, Urban and Neighborhood Corridors, and Employment Corridors located along fully funded High-Capacity Transit Routes are the highest priority.
- LU-13.2** Towne Centers, Urban and Neighborhood Corridors, and Employment Corridors located along planned High-Capacity Transit Routes are the second highest priority.
- LU-13.3** Towne Centers, Urban and Neighborhood Corridors, and Employment Corridors located outside of funded or planned High-Capacity Transit Routes are the third highest priority.

**GOAL T-16** Encourage and cooperate with transit agencies to provide services that meet the needs of residents.

- T-16.1** Coordinate with transit agencies to increase the number of routes and frequency, as funding becomes available, especially to underserved areas and designated centers within the unincorporated area.
- T-16.2** Cooperate with transit agencies in the location of transit centers, park and ride lots, rail stations, and bus stops.

**Services include (T-16):**

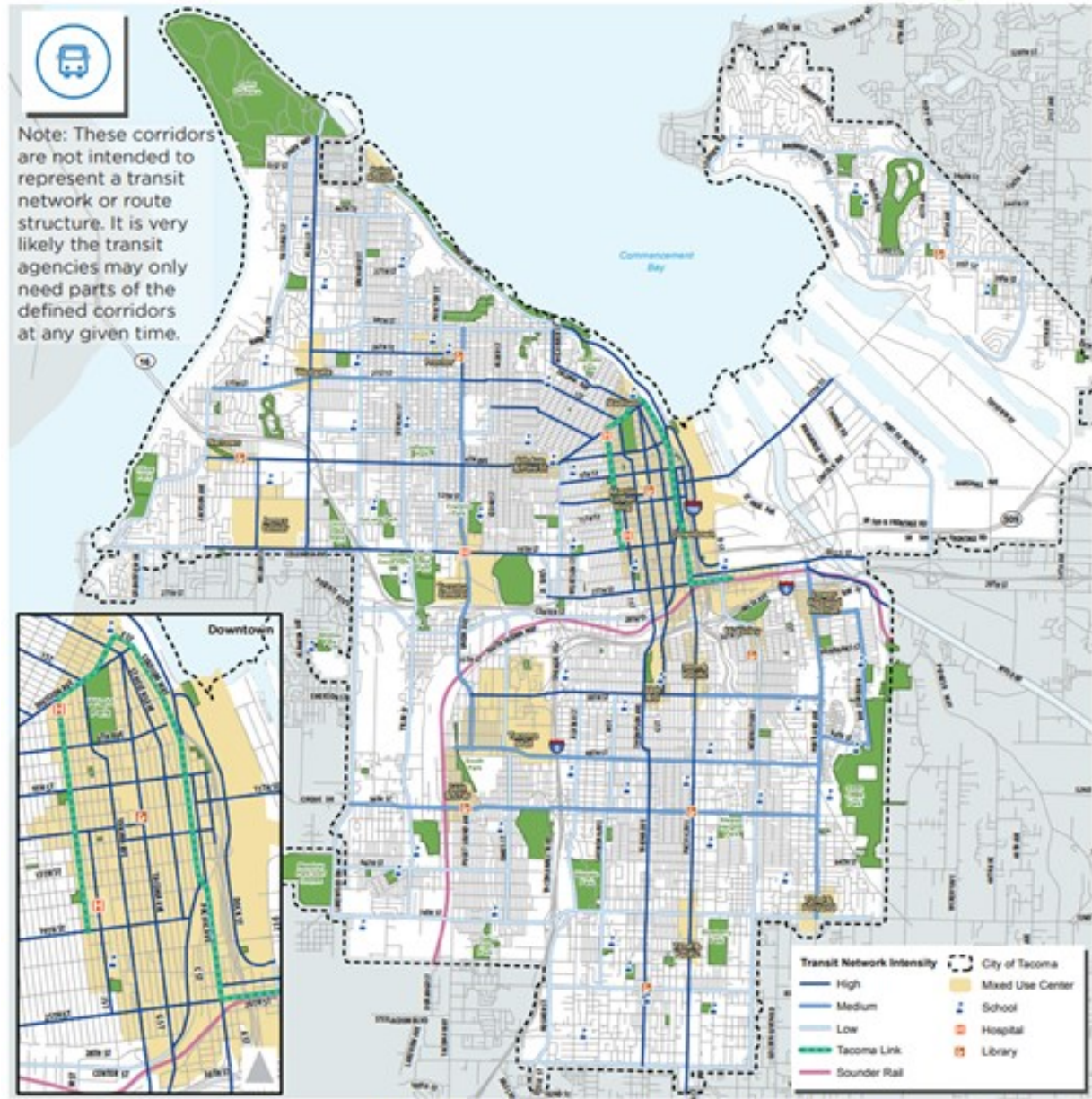
- Fixed route transit
- Rail
- Shuttles
- Tourism-related service







TRANSIT PRIORITY NETWORK



TRANSIT INTENSITY LEVELS

|                    | HIGH CAPACITY  | URBAN  | COLLECTOR AND NEIGHBORHOOD |
|--------------------|--|--|----------------------------|
| MAP COLOR          | DARK BLUE  | MEDIUM BLUE  | LIGHT BLUE                 |
| Peak Frequency     | 10 min or better   | 11 to 15 minutes   | 16 or more minutes         |
| Off Peak Frequency | 15 min or better   | 16 to 30 minutes   | 31-60 minutes              |
| Appropriate Modes  | Street Running<br>Light Rail<br>(e.g., Tacoma Link)<br><br>Streetcar<br>(e.g., Seattle South Lake Union)<br><br>Bus Rapid Transit (e.g., Community Transit Swift or Eugene EmX)<br><br>Arterial Rapid Bus<br>(e.g., King County Metro RapidRide) | Bus Rapid Transit<br>(e.g., Community Transit Swift or Eugene EmX)<br><br>Arterial Rapid Bus<br>(e.g., King County Metro RapidRide)<br><br>Arterial Bus<br>(e.g., Pierce Transit Route 1)<br><br>Local Bus | Local Bus                  |

Transit Intensity Levels

Streets highlighted in dark blue are **High Capacity corridors** and would support the highest level of transit intensity. The transit technology used to operate this level of intensity could be either bus or rail, and appropriate modes include street running light rail, urban streetcar, bus rapid transit, and arterial rapid bus.

# Pacific Avenue Enhanced Bus Options

Annual Service Hours  
Annual Cost  
Buses Needed  
Operators Needed  
Buses per Hour (incl. Rt. 1)

|                              | 10-minute Frequency | 15-minute Frequency | 20-minute Frequency |
|------------------------------|---------------------|---------------------|---------------------|
| Annual Service Hours         | 23,000              | 16,000              | 12,000              |
| Annual Cost                  | \$4.4 M             | \$3.0 M             | \$2.3 M             |
| Buses Needed                 | 15                  | 10                  | 8                   |
| Operators Needed             | 14                  | 10                  | 8                   |
| Buses per Hour (incl. Rt. 1) | 12                  | 10                  | 7                   |

- Immediate relief for overcapacity corridor & Route 1 riders
- Phased approach supporting riders and community
- Can reengage a new BRT effort in out year to transition corridor further
- Spanaway Transit Center to Tacoma Dome Station
- Connections to local and regional services at east/west corridors
- Timed Sounder connections
- Overlay with existing Route 1
- Peak commute-hour service – weekday mornings & afternoons
- Stops at 14 major bus stops – **saves 14+ mins travel time**
- Uses existing bus stops; all will have shelters (2 require upgrade)
- Utilizes existing 40 ft fleet
- Target December 17, 2023, service change to begin service





# **Recommendation & Discussion**