



# Interstate Bridge Replacement Program

## *High Capacity Transit Review and Approach to Develop Alternatives*

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# Presentation Structure

**1**

Review High Capacity Transit Alternatives Analysis from previous planning efforts

**2**

Review the draft approach to develop a range of alternatives for High Capacity Transit mode

**3**

Discussion and feedback

# Key Guidance and Feedback Sought

## Discussion items:

- Feedback from committee members on approach
- Are there specific expectations that should be taken into consideration as High Capacity Transit alternatives are developed and analyzed?

# Bi-State Legislative Committee Engagement Points

August  
2020

- Review High Capacity Transit alternatives analysis from previous planning efforts
- Provide feedback on approach to identify High Capacity Transit alternatives to be analyzed

Winter 2021

- Provide update and receive feedback on preliminary High Capacity Transit alternatives

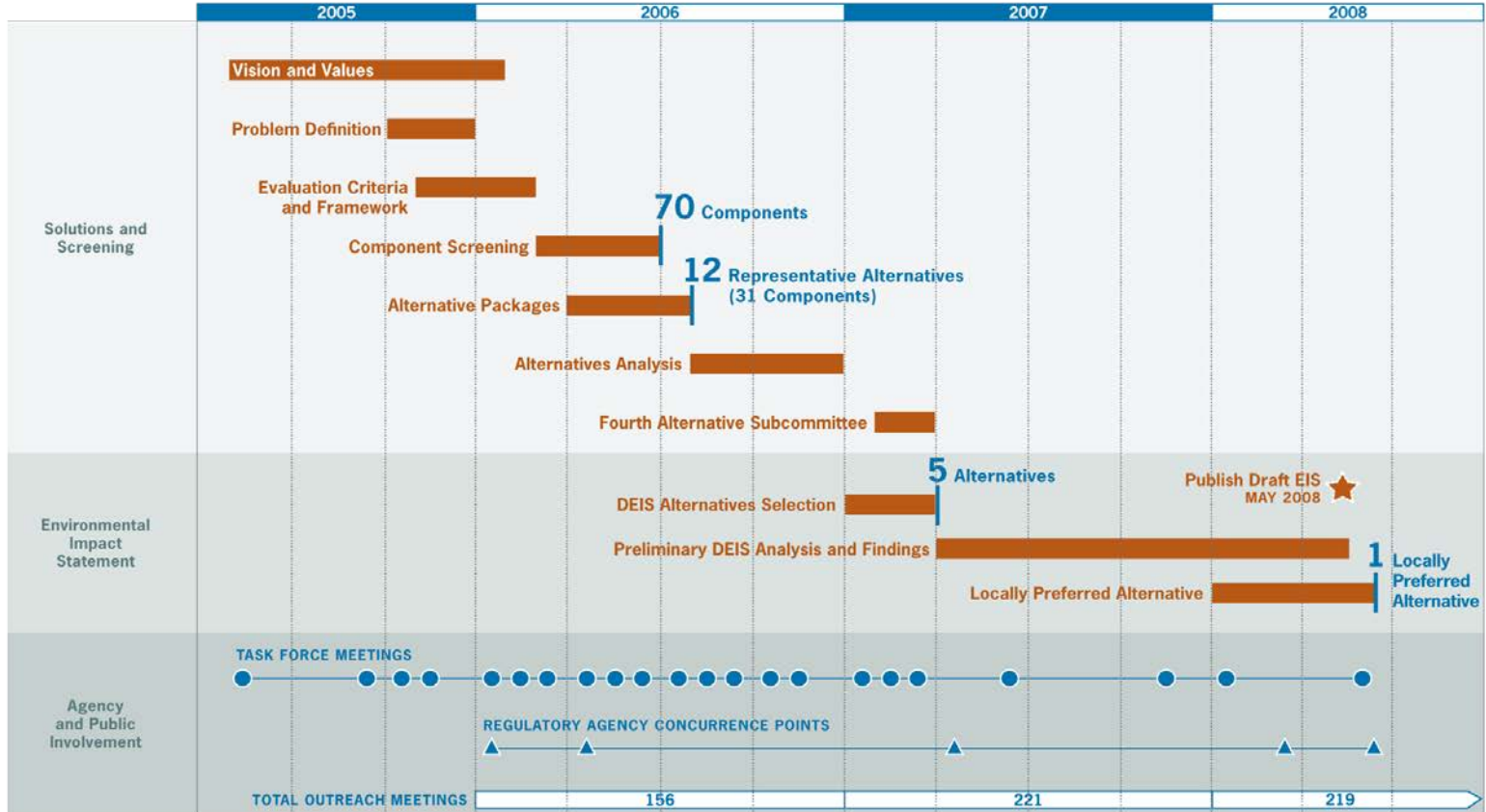
Spring 2021

- Provide guidance and direction on range of alternatives to be analyzed in the Supplemental DEIS

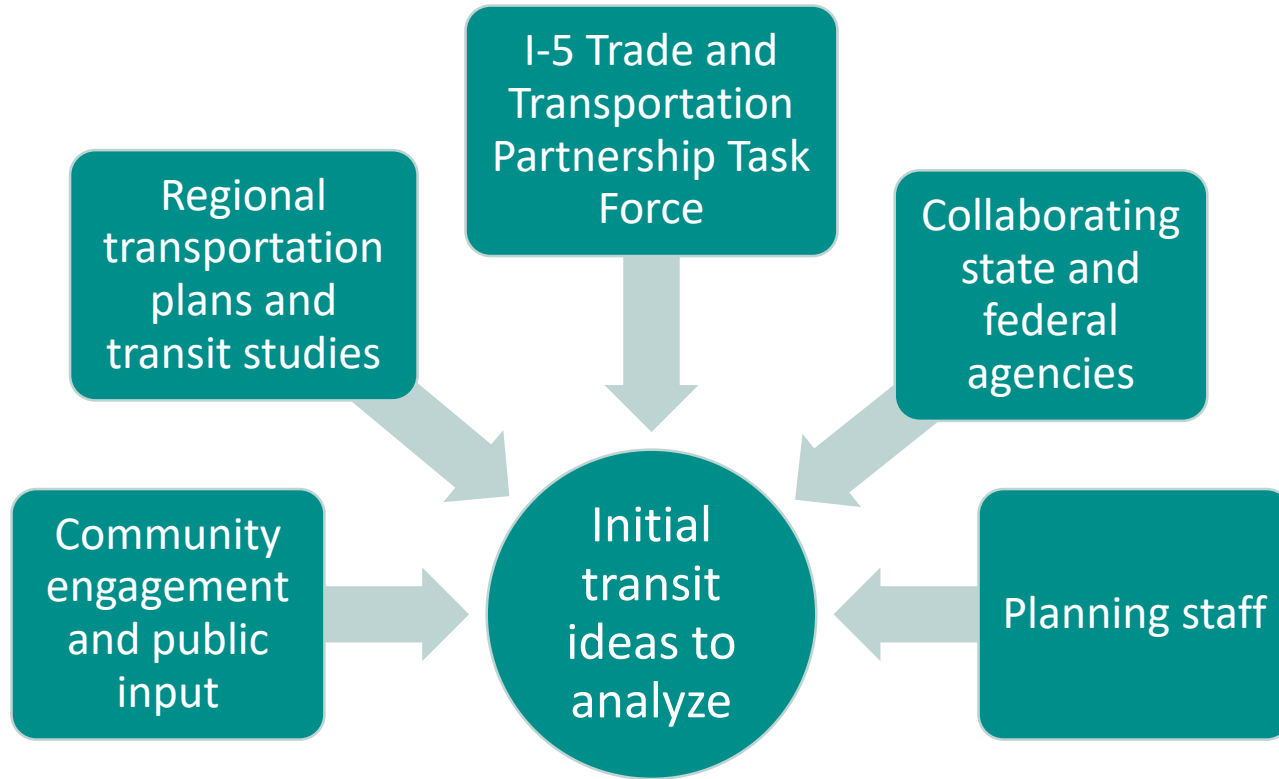


# Review High Capacity Transit Alternatives Analysis from previous planning efforts

# Project Development



# Identification of Transit Ideas



# Initial Transit Ideas Screened



- Express Bus in General Purpose Lanes
- Express Bus in Managed Lanes
- Bus Rapid Transit – Lite
- Bus Rapid Transit– Full
- Light Rail Transit
- High Speed Rail
- Monorail System
- Magnetic Levitation Railway
- Commuter Rail on BNSF Tracks
- Heavy Rail
- Streetcar
- Ferry Service
- Personal Rapid Transit
- People Mover/Automated Guideway Transit (AGT)



# Narrowing Ideas

15

initial ideas  
screened



5

ideas for  
evaluation



Transit ideas were narrowed to 5 options for additional analysis

- Initial screening was based on the ability to meet the Purpose and Need
- *Does the option improve transit performance within the bridge influence area?*

# Transit Ideas Dismissed

- Streetcar
- High Speed Rail
- Ferry Service
- Monorail System
- Magnetic Levitation Railway
- Commuter Rail using BNSF Tracks
- Heavy Rail
- Personal Rapid Transit
- People Mover / Automated Guideway Transit (AGT)

# Reasons for Removal



The transit ideas removed failed initial screening for one or more of the following reasons:

- Does not meet Purpose and Need:
  - *Must improve transit performance within the bridge influence area*
- Unproven technologies
- Better for longer city-to-city travel
- Incompatibility with existing transit systems and investments
- Inefficient service - requires multiple transfers to complete trips

# Transit Modes Evaluated

Transit ideas that passed initial screening for further analysis:

- Express buses in I-5 general purpose lanes
- Express buses in I-5 managed lanes
- Bus Rapid Transit LITE (BRT-LITE)
- Bus Rapid Transit (BRT)
- Light Rail Transit (LRT)



# Transit Alternatives Analyzed in DEIS

HCT Mode

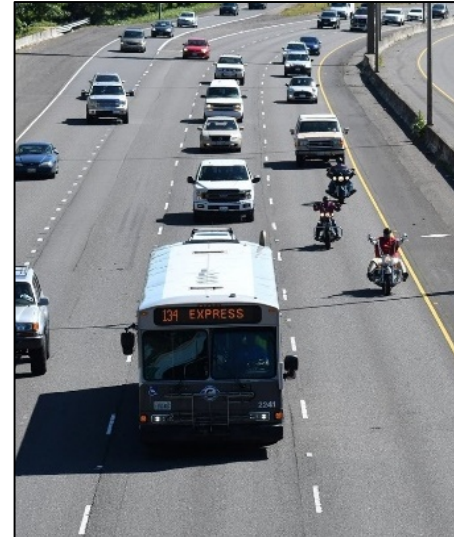
+

Express Bus

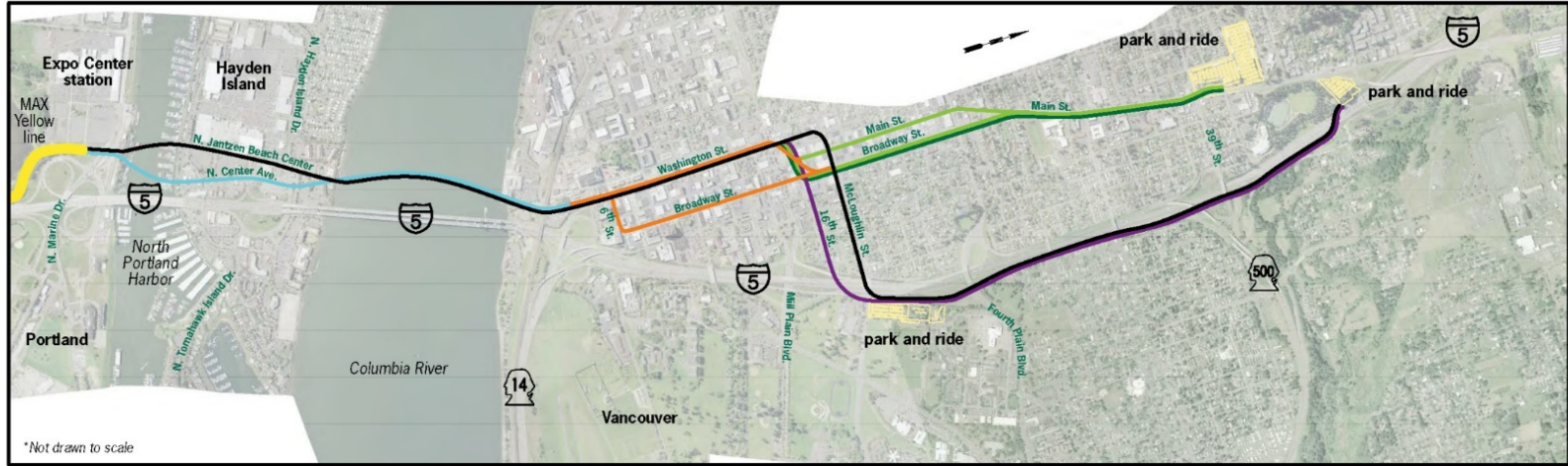
**Bus Rapid Transit**  
with complementary  
express bus service



**Light Rail Transit**  
with complementary  
express bus service





# Transit Alignment Choices





## LEGEND





### HAYDEN ISLAND TO DOWNTOWN VANCOUVER

-  **Along I-5, Replacement Downstream Bridge**  
Travel along I-5 near N. Center Avenue to connect with new bridge west of existing bridge.
-  **N. Jantzen Beach Center, Replacement Downstream Bridge (Representative Alignment)**  
Travel beside Jantzen Beach SuperCenter to connect with new bridge west of existing bridge.

### DOWNTOWN VANCOUVER TO 16TH STREET/MCLOUGHLIN

-  **Broadway-Washington**  
Northbound transit on Broadway and Southbound transit on Washington.
-  **Washington Two-way (Representative Alignment)**  
Northbound and southbound transit on Washington Street.

### NORTH OF DOWNTOWN VANCOUVER

-  **Broadway Two-way North**  
On Broadway Street from McLoughlin to Main Street. Continues on Main Street to park and ride at 39<sup>th</sup> Street.
-  **Broadway-Main**  
Northbound transit on Broadway Street and southbound transit on Main Street from McLoughlin to 29<sup>th</sup> Street. Two-way on Main Street from 29<sup>th</sup> Street to park and ride at 39<sup>th</sup> Street.
-  **16th St., Along I-5**  
Two-way transit travels on 16<sup>th</sup> Street to eastside of I-5. Travels from Clark College, along I-5, to park and ride near Kiggins Bowl.
-  **McLoughlin, Along I-5 (Representative Alignment)**  
Two-way transit travels on McLoughlin to east side of I-5. Travels from Clark College along I-5 to park and ride near Kiggins Bowl.



# High Capacity Transit Mode Choice

## Bus Rapid Transit



- Longer buses carry up to 91 people
- Dedicated bus lanes across the bridge and within BIA avoid congestion
- Stations have platforms, shelters and ticket vending machines

## Light Rail



- Two-car trains carry up to 266 people
- Tracks designated for light rail use only
- Stations have platforms, shelters and ticket vending machines

# Comparing Modes - Bus Rapid Transit

## PROS:

- Significantly increases transit use
- Any bus can use the exclusive guideway
- Lower capital cost HCT alternative
- Supports local and regional transportation plans in OR and WA

## CONS:

- Highest HCT operating cost
- Bus access to downtown Portland is constrained
- Requires a transfer to LRT
- Decreased reliability due to operations in I-5 lanes south of the bridge





# Comparing Modes – Light Rail Transit

## PROS:

- Significantly increases transit use
- Highest passenger capacity
- Highest travel time reliability
- Takes advantage of existing LRT infrastructure
- One-seat ride from Vancouver to Portland
- Lowest HCT operating cost
- Best supports local and regional plans

## CONS:

- Highest capital cost of HCT alternates
- Less flexibility than bus modes



# Locally Preferred Alternative

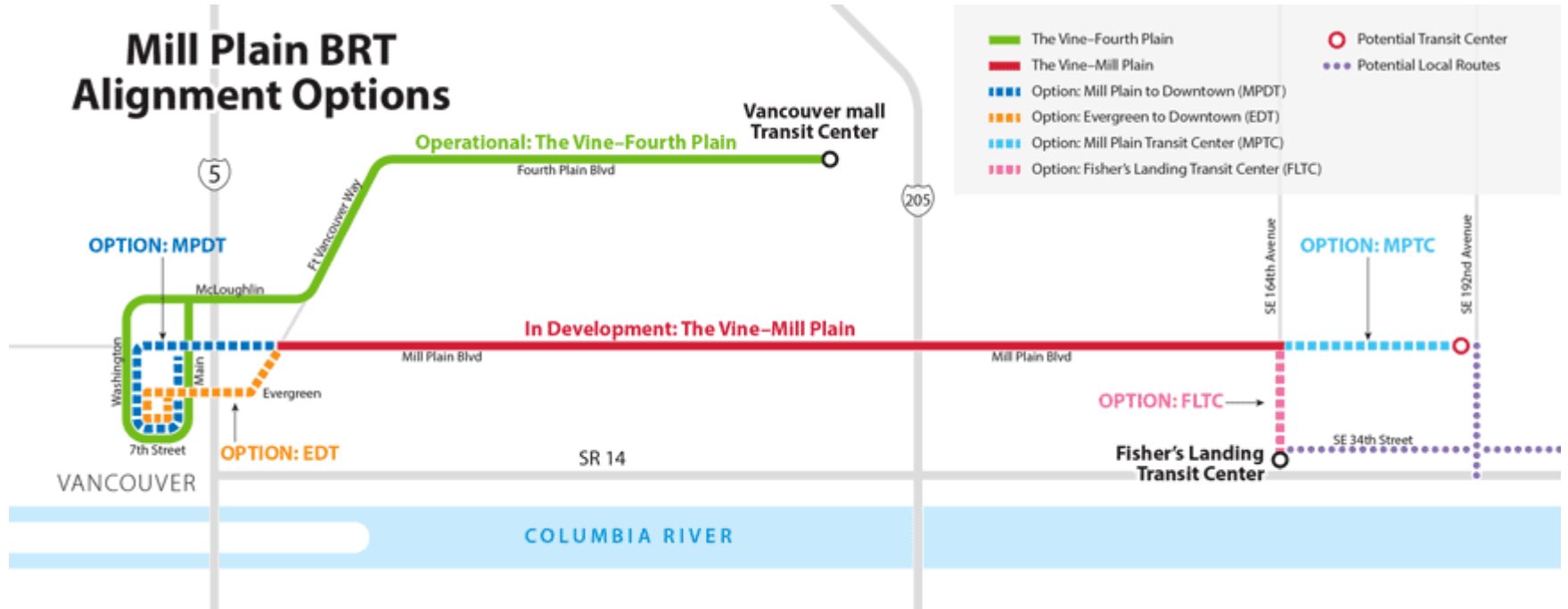


- Replacement I-5 bridge
    - 3 through lanes & up to 3 auxiliary lanes
  - Light rail transit to Clark College
  - Highway and pedestrian/bike improvements
- 
- *Adopted by the CRC Task Force by a 37-2 vote on June 24, 2008*
  - *Endorsed by project stakeholders: ODOT, WSDOT, RTC, Metro, C-TRAN, TriMet*

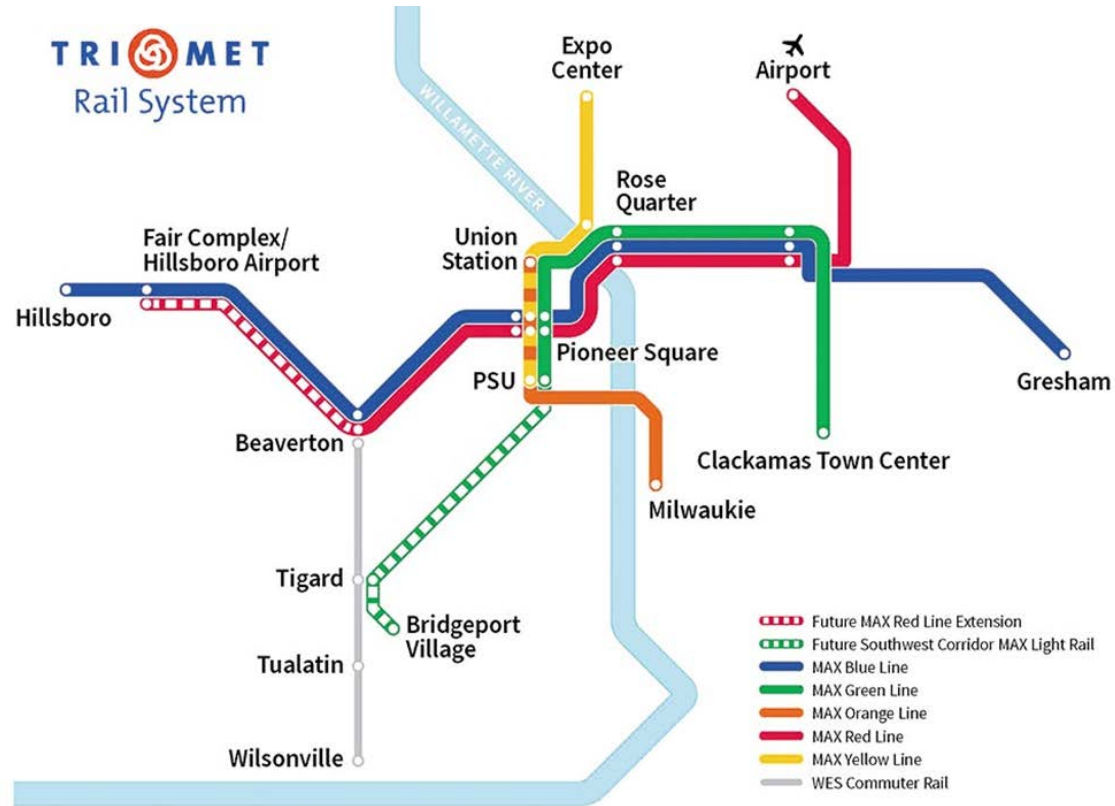


## Approach to develop HCT alternatives

# Changes in Transit System – C-TRAN Vine BRT



# Changes in Transit System – TriMet Expansion



# Conceptual HCT Alternative Development Approach



*High Capacity Transit alternatives will be developed and analyzed with guidance from bi-state legislative committee members, advisory groups, and the public*

- Program work will utilize:
  - Transparent, data-driven process with extensive opportunities for meaningful community engagement
  - Previous planning work that supports efficient decision-making to the extent feasible and within current context

# Conceptual HCT Alternative Development Approach



Determine range of High Capacity Transit alternatives that meet Purpose and Need

- Consider changes in regional transit system and future system plans
- Identify new technologies since previous alternatives analysis
- Identify potential alignment options, station locations, terminus, park and rides necessary to serve transit markets

# Conceptual HCT Alternative Development Approach



Conduct modelling for alternatives identified to determine:

- Traffic forecasting
- Anticipated transit ridership



# Conceptual HCT Alternative Development Approach



Identify and analyze the potential impacts for each alternative as part of the Supplemental DEIS:

- *Environmental*
- *Right of way*
- *Neighborhood/community impacts*
- *Financial – Operational/capital costs...*
  - *Analyze potential transit funding sources (ie: FTA Small Starts/New Starts)*

# Conceptual HCT Alternative Development Approach



Evaluate each alternative with screening criteria developed using the program Vision & Values:

- Identify quantifiable performance measures
- Collect data to analyze range of alternatives based on screening criteria

# Conceptual HCT Alternative Development Approach



Select HCT mode that best meets the IBR Purpose and Need / Vision and Values:

- HCT mode will be selected with guidance from bi-state legislative committee and advisory groups using a transparent, data-driven process that includes extensive community engagement
- Selected HCT mode will be further analyzed and documented in Supplemental FEIS and Record of Decision

# Conceptual HCT Alternative Development Approach



After the preferred High Capacity Transit alternative is identified, additional work will include:

- Advance development to final design
- Proceed with process to secure funding for transit



## DISCUSSION:

- Feedback on approach
- Are there specific expectations that should be taken into consideration as High Capacity Transit alternatives are developed and analyzed?



Questions?