

# Puget Sound Gateway Program

## SR 167 Completion

Steering Committee Meeting No. 2  
May 9, 2016

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# Agenda

- Welcome & Introductions
- Travel Demand Forecasting Model
- Review of Project Needs
- Practical Solutions Approach
- Next Steps

# Legislative Direction

*In making budget allocations to the Puget Sound Gateway project, **the department shall implement the project's construction as a single corridor investment.***

***The department shall develop a coordinated corridor construction and implementation plan for SR 167 and SR 509 in collaboration with affected stakeholders.***

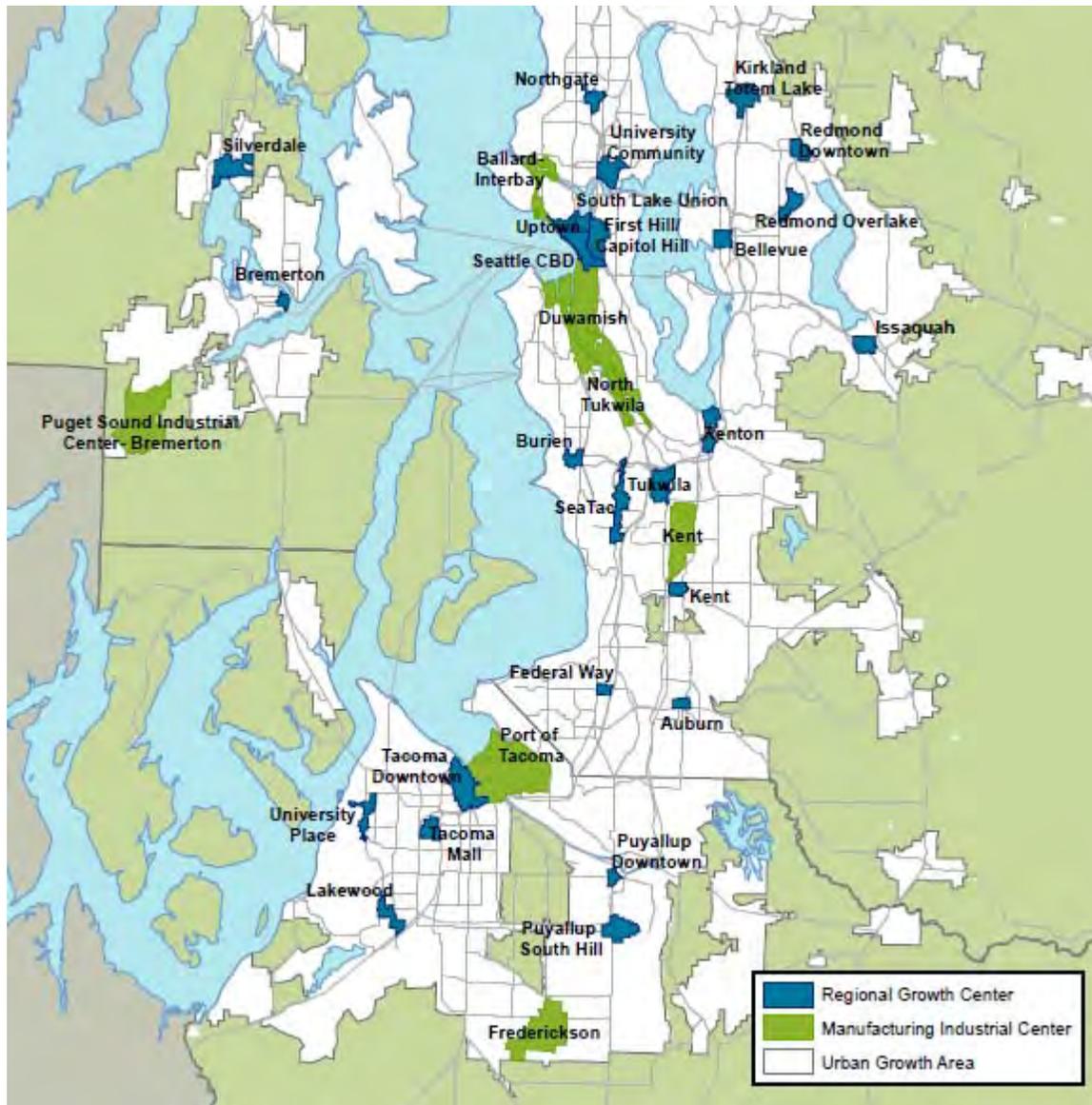
*Specific funding allocations must be based on where and when specific project segments are ready for construction to move forward and investments can be best optimized for timely project completion. Emphasis must be placed on avoiding gaps in fund expenditures for either project.*

# SR 167 Steering Committee 2016 Work Plan



# Context for the Project

- PSRC 2040
- Comprehensive Plans
- Urban and Manufacturing Industrial Centers
- Input from stakeholders



# Context for Project

- PSRC 2040
- Comprehensive Plans
- Urban and Manufacturing Industrial Centers
- Input from stakeholders
- Projected travel patterns



# Previous Traffic Forecasting

- High levels of peak period demand
- Used state-of-the-art forecasting that was available at the time (2006 PSRC)
  - Second generation tolling methodology by time of day
  - No full scale micro-simulation analysis

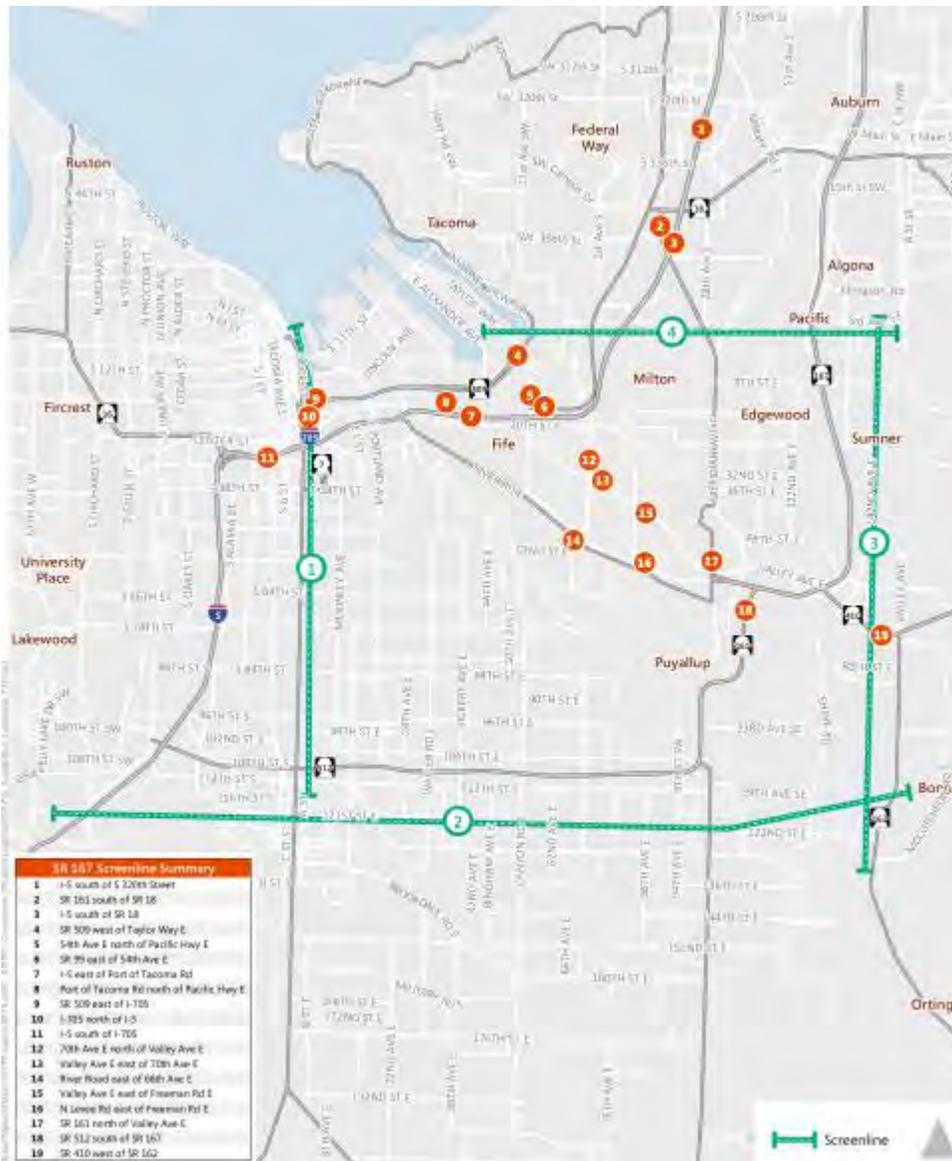
# Current Traffic Forecasting

- Still showing travel demand growth
- State-of-the-art forecasting (2015 PSRC)
  - Time of day demand
  - Newest trip generation inputs (2010)
  - Greater network and transit resolution
  - Capacity constraints reflected
- Enhanced tolling analysis
  - Legislative intent to toll

# Proposed Project Subarea



# SR 167 Traffic Forecasting Approach



## Assumed Transportation Projects

- Local agency plans
- WSDOT regional projects
- Sound Transit 3

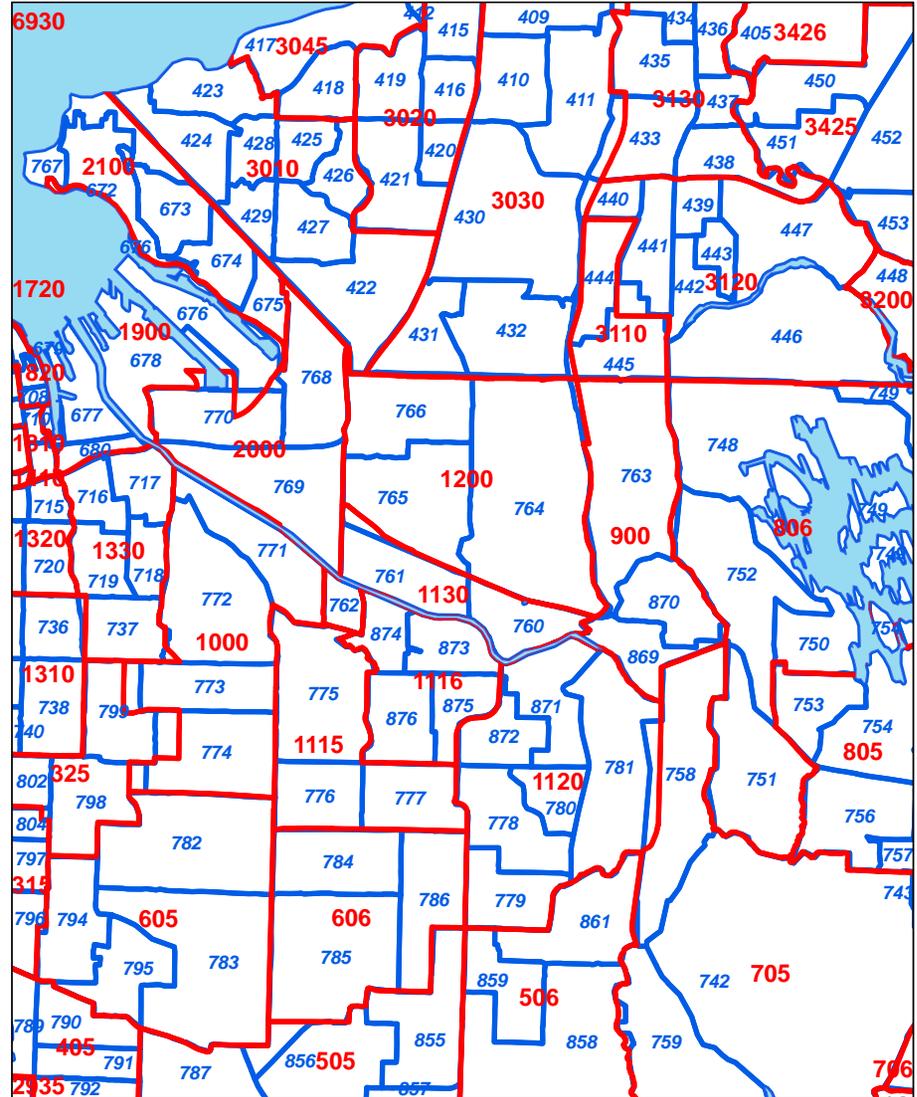
## Trucks

- Limited truck data available
- PSRC truck module (updated)
- Exploring freight flow data
- Existing truck counts (Tideflats, PSRC)
- Tacoma marine terminal truck info

# SR 167 Traffic Forecasting Approach

## Model Input (cont.)

- 2015/2025/2045
- PSRC Land Use Vision forecasts
- Area specific forecasts
  - Comprehensive Plans
  - Land use distributions



# SR 167 Traffic Forecasting Application

Data extracted from the model

- By facility and area:
  - Future year demands
  - Travel time
  - Delay

# SR 167 Traffic Forecasting Application

## Discussion

# Legislative & WSDOT Executive Order – Practical Solutions

- **WSDOT Executive Order 1096:**

- *WSDOT will design transportation infrastructure related solutions that are targeted to **address the essential needs of a project, not every need**. In doing so, designs are developed with criteria that achieve stated performance for the least cost...*

- **ESHB 2012:**

- *(1)(a) For projects identified as connecting Washington projects... The legislature encourages the department to continue to institutionalize innovation and collaboration in design and project delivery with an eye toward the most efficient use of resources. **In doing so, the legislature expects that, for some projects, costs will be reduced during the project design phase due to the application of practical design***

# Review of Project Needs

## 2006 EIS Purpose and Need:

### Purpose:

- Improve regional mobility of the transportation system to serve multimodal local and port freight movement and passenger movement between (1) the Puyallup termini of SR 167, SR 410, and SR 512 and (2) the I-5 corridor, the new SR 509 freeway, and the Port of Tacoma.

### Need:

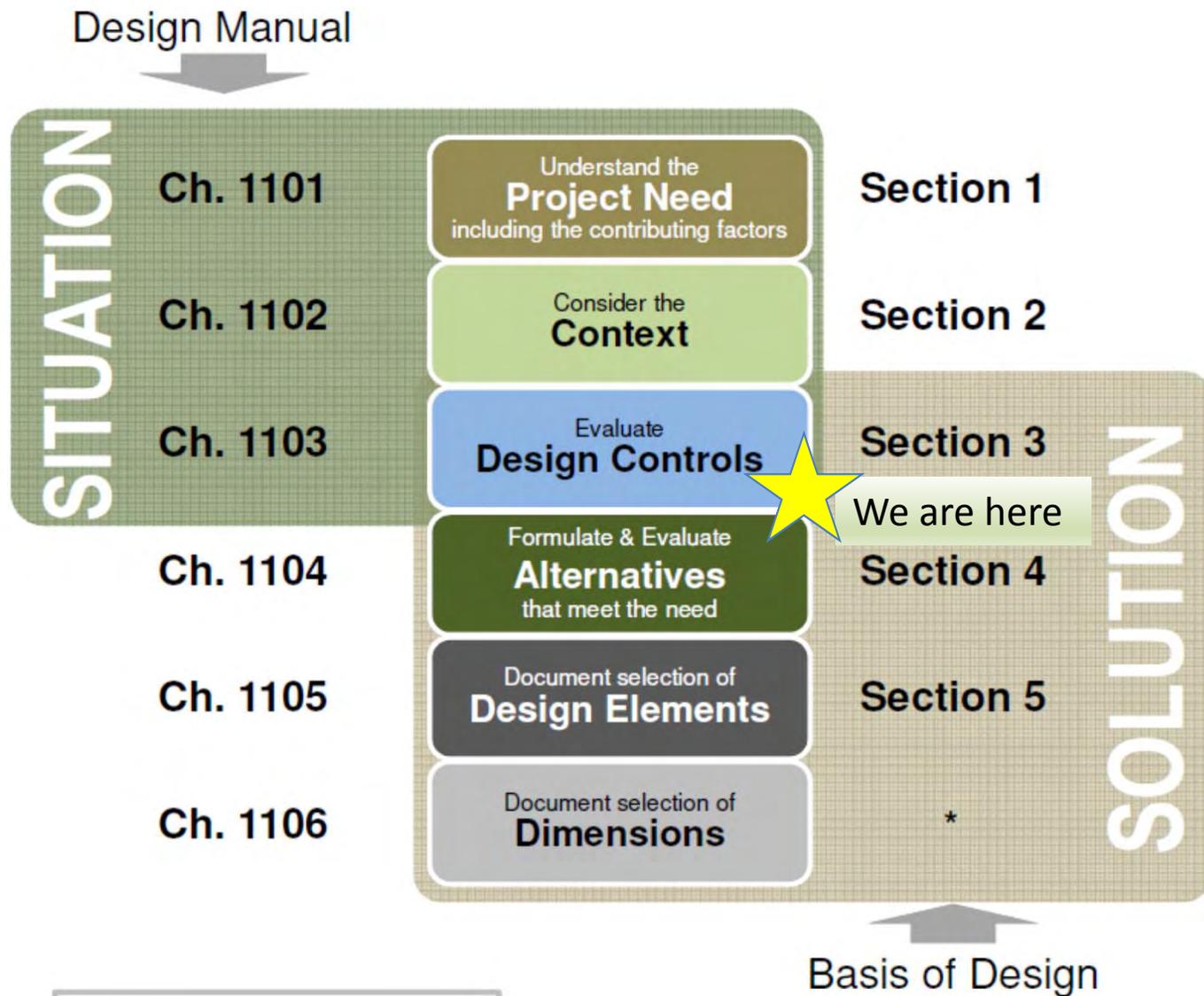
- Complete transportation system linkages, accommodate travel demand and capacity needs, and improve intermodal relationships.

# Review of Project Needs

## **2006 EIS Objectives:**

- Support local and regional comprehensive planning and development
- Relieve local congestion & improve safety
- Serve multimodal local/port freight & passenger vehicles
- Improve system continuity and regional mobility
- Improve air quality
- Design project in an environmentally responsible manner
- Provide cost-effective alternatives and solutions

# Practical Solutions Approach



# Essential Needs

| Essential Needs Meeting 1 |   | Updated Essential Needs   |
|---------------------------|---|---|
| 1                         | <ul style="list-style-type: none"> <li>Complete freeway network (close the gap)</li> </ul>  | <ul style="list-style-type: none"> <li>Complete Freeway Network / Redundancy Achieved</li> </ul>  |
| 2                         | <ul style="list-style-type: none"> <li>Improve freight travel time and reliability</li> </ul>   | <ul style="list-style-type: none"> <li>Reduce travel time between Urban Centers and Manufacturing Industrial Centers in Pierce &amp; S. King County</li> </ul>              |
| 3                         | <ul style="list-style-type: none"> <li>Improve freight travel time and reliability</li> </ul>   | <ul style="list-style-type: none"> <li>Improve travel time reliability between Urban Centers and Manufacturing Industrial Centers in Pierce &amp; S. King County</li> </ul> |
| 4                         | <ul style="list-style-type: none"> <li>Ease congestion on local streets by providing direct freeway access to Port of Tacoma</li> </ul>   | <ul style="list-style-type: none"> <li>Reduce hours of delay in the project subarea network</li> <li>Maintain or improve I-5 operations between I-705 and SR 18</li> </ul>  |
| 5                         | <ul style="list-style-type: none"> <li>Support Regional Growth Centers for Tacoma, Puyallup, Auburn &amp; Kent and Industrial Centers for Tacoma, Frederickson, Kent &amp; Sumner-Pacific (Proposed)</li> </ul> | <ul style="list-style-type: none"> <li>Improve economic vitality</li> <li>Support local and regional comprehensive land use planning and development</li> </ul>             |
| 6                         | <ul style="list-style-type: none"> <li>Improve transit operations and connections to transit</li> </ul>   | <p><i>Will be addressed by mode in the performance metrics</i></p>  |
| 7                         |   | <ul style="list-style-type: none"> <li>Reduce number of serious injury and fatal crashes</li> </ul>   |

# Contextual Needs

| Contextual Needs Meeting 1 |   | Updated Contextual Needs   |
|----------------------------|---|--|
| 1                          | <ul style="list-style-type: none"> <li>Support local and regional comprehensive planning and economic development</li> </ul>  | <i>Moved to Essential Needs (part of economic vitality)</i>  |
| 2                          | <ul style="list-style-type: none"> <li>Improve access to Tacoma, 2<sup>nd</sup> largest city in Puget Sound, Pierce County's civic, cultural, and economic hub</li> </ul> | <i>Moved to Essential Needs (part of travel time and reliability)</i>  |
| 3                          | <ul style="list-style-type: none"> <li>Improve connectivity across the Puyallup/White River Valley in support of distribution centers</li> </ul>                          | <i>Moved to Essential Needs (part of urban centers concept)</i>  |
| 4                          |   | <ul style="list-style-type: none"> <li>Reduce the number of serious injury and fatal crashes on local arterials</li> </ul> |
| 5                          | <ul style="list-style-type: none"> <li>Decrease demand on local arterials, decreasing delay and increasing safety</li> </ul>  | <i>Moved to Essential Needs (part of reduce hours of delay in the subarea network)</i>                                     |

# Contextual Needs - Continued

| Contextual Needs Meeting 1 |   | Updated Contextual Needs  |
|----------------------------|---|---|
| 6                          | <ul style="list-style-type: none"> <li>• Improve ability to get products from Eastern Washington to the Port of Tacoma</li> </ul> | <i>Moved to Essential Needs (part of travel time reliability)</i>   |
| 7                          | <ul style="list-style-type: none"> <li>• Provide pedestrian connectivity</li> <li>• Provide bicycle connectivity</li> </ul>       | <ul style="list-style-type: none"> <li>• Reduce pedestrian vehicle exposure</li> <li>• Continuity and consistency of pedestrian and bicycle facilities</li> </ul> |
| 8                          |   | <ul style="list-style-type: none"> <li>• Maintains forward compatibility with EIS</li> </ul>  |
| 9                          |   | <ul style="list-style-type: none"> <li>• Reduce right of way impact</li> </ul>  |
| 10                         |   | <ul style="list-style-type: none"> <li>• Reduce area of impact to sensitive areas</li> </ul>  |
| 11                         |   | <ul style="list-style-type: none"> <li>• Compatibility with Sound Transit ST3</li> </ul>  |

# Scenario Comparison Table – SR 167

| Performance Category               | Baseline Performance Metrics   |                      |      |   |                     |                      |  |               |                     |   |                   | Contextual Performance Metrics |  |                 |      | Cost  |       |       |   |  |  |   |  |  |
|------------------------------------|--|----------------------|------|---|---------------------|----------------------|--|---------------|---------------------|---|-------------------|--------------------------------|--|-----------------|------|---|-------|-------|---|--|--|---|--|--|
|                                    | Mobility   |                      |      |   |                     |                      |  |               |                     |   | Economic Vitality | Safety                         | Safety   | Active Mobility |      |   | Env't | Other |   |  |  |   |  |  |
|                                    | Freight - Transport  | Freight - Deliveries | Auto | Transit - Bus   | Freight - Transport | Freight - Deliveries | Auto   | Transit - Bus | Freight - Transport | Freight - Deliveries                              | Auto              | Transit - Bus                  |  | Ped             | Bike |   | Ped   | Bike  |   |  |  |   |  |  |
| Performance METRIC                 | Travel Time<br>Reduce travel time between Urban Centers, and Manufacturing/Industrial Centers in Pierce & S. King County |                      |      | Travel Time Reliability<br>Improve travel time reliability between Urban Centers, and Manufacturing/Industrial Centers in Pierce & S. King County |                     |                      | Complete Freeway Network / Redundancy Achieved |               |                     | Delay<br>Reduce hours of delay in subarea network |                   |                                | I-5 Performance<br>Maintain or Improve I-5 Operations between I-705 and SR 167 |                 |      | Economic Benefit<br>Improve economic vitality |       |       | Local and Regional Comprehensive Plan<br>Support local and regional comprehensive land use planning and development |  |  | Safety<br># of Serious Injury and Fatal Crashes (I-5 & SR 167 & SR 509) |  |  |
| SCENARIO                           |  |                      |      |   |                     |                      |  |               |                     |   |                   |                                |  |                 |      |   |       |       |   |  |  |   |  |  |
| No Build                           |  |                      |      |   |                     |                      |  |               |                     |   |                   |                                |  |                 |      |   |       |       |   |  |  |   |  |  |
| Scenario 1 - Closing the Gap       |  |                      |      |   |                     |                      |  |               |                     |   |                   |                                |  |                 |      |   |       |       |   |  |  |   |  |  |
| Scenario 2 - Moderate Connectivity |  |                      |      |   |                     |                      |  |               |                     |   |                   |                                |  |                 |      |   |       |       |   |  |  |   |  |  |
| Scenario 3 - Gateway               |  |                      |      |   |                     |                      |  |               |                     |   |                   |                                |  |                 |      |   |       |       |   |  |  |   |  |  |
| Scenario 4 - Full Connectivity     |  |                      |      |   |                     |                      |  |               |                     |   |                   |                                |  |                 |      |   |       |       |   |  |  |   |  |  |
| Scenario 5 - Full Build Out        |  |                      |      |   |                     |                      |  |               |                     |   |                   |                                |  |                 |      |   |       |       |   |  |  |   |  |  |

**Performance Trade-Offs Discussion and Recommended Preferred Scenario**

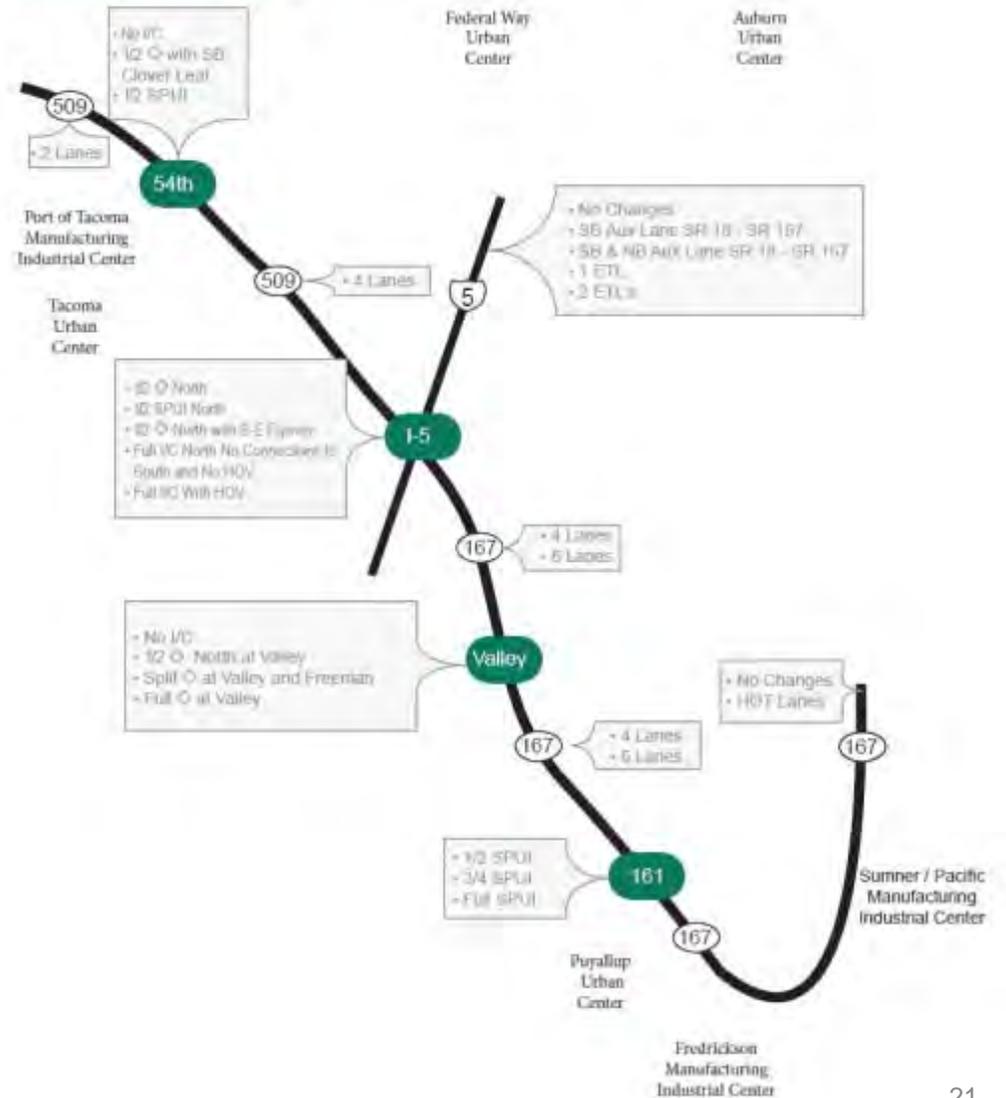
Score (relative to other scenarios):  
 ++ Optimal Performance  
 + Benefit  
 o Neutral  
 - Impact  
 - Deteriorates Performance

**Safety Performance**  
 Note: Practical design will not compromise safety, even if your project isn't specifically a safety project. This is consistent with the Strategic Safety Plan - Target Zero.  
 The intent here is to understand the degree that multimodal safety is addressed. In some cases, after considering the performance trade-offs, a neutral score may be appropriate. However, additional countermeasures or treatments additive to the base scenarios may be considered to improve the performance scores.



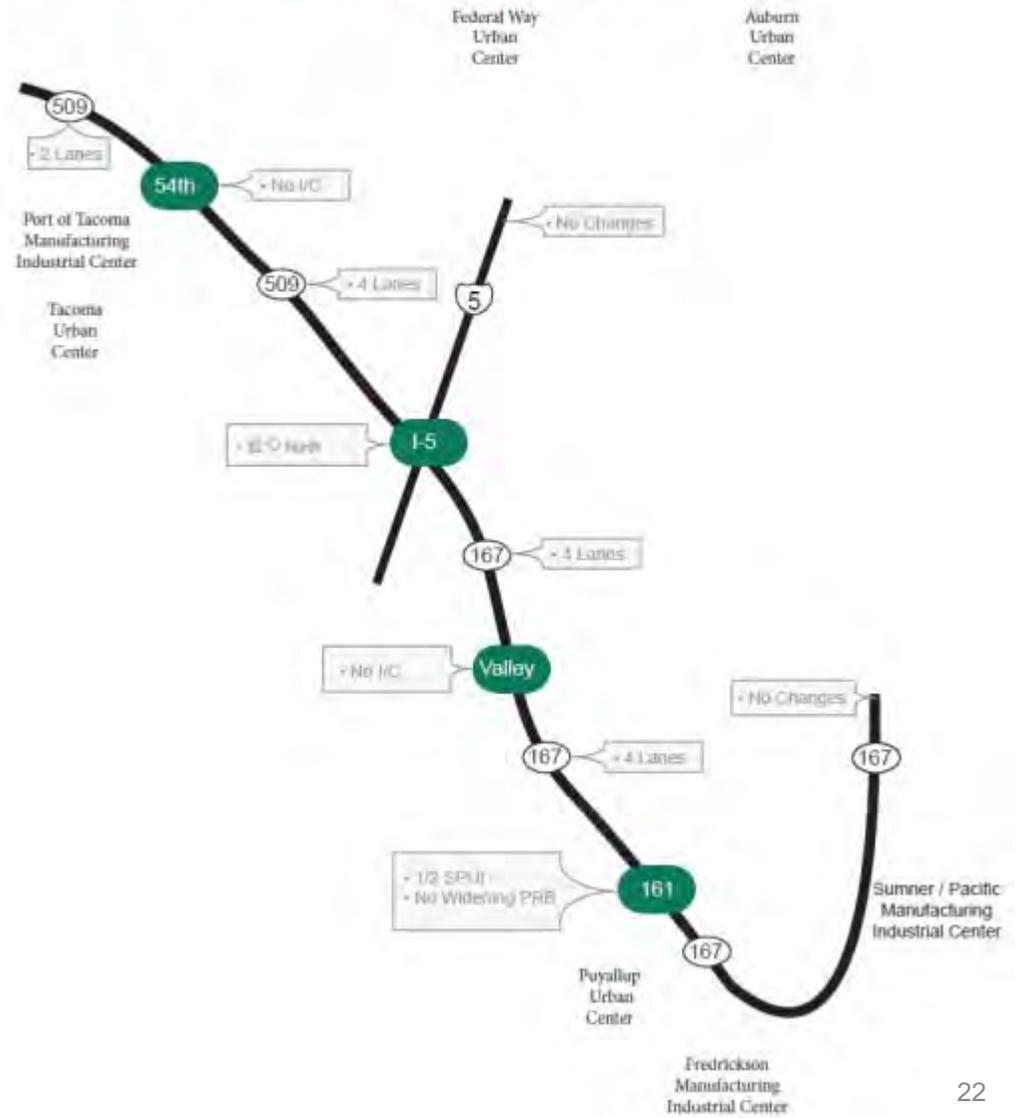
# Developing Scenarios

## SR 167 Completion Project Scenarios 1-5



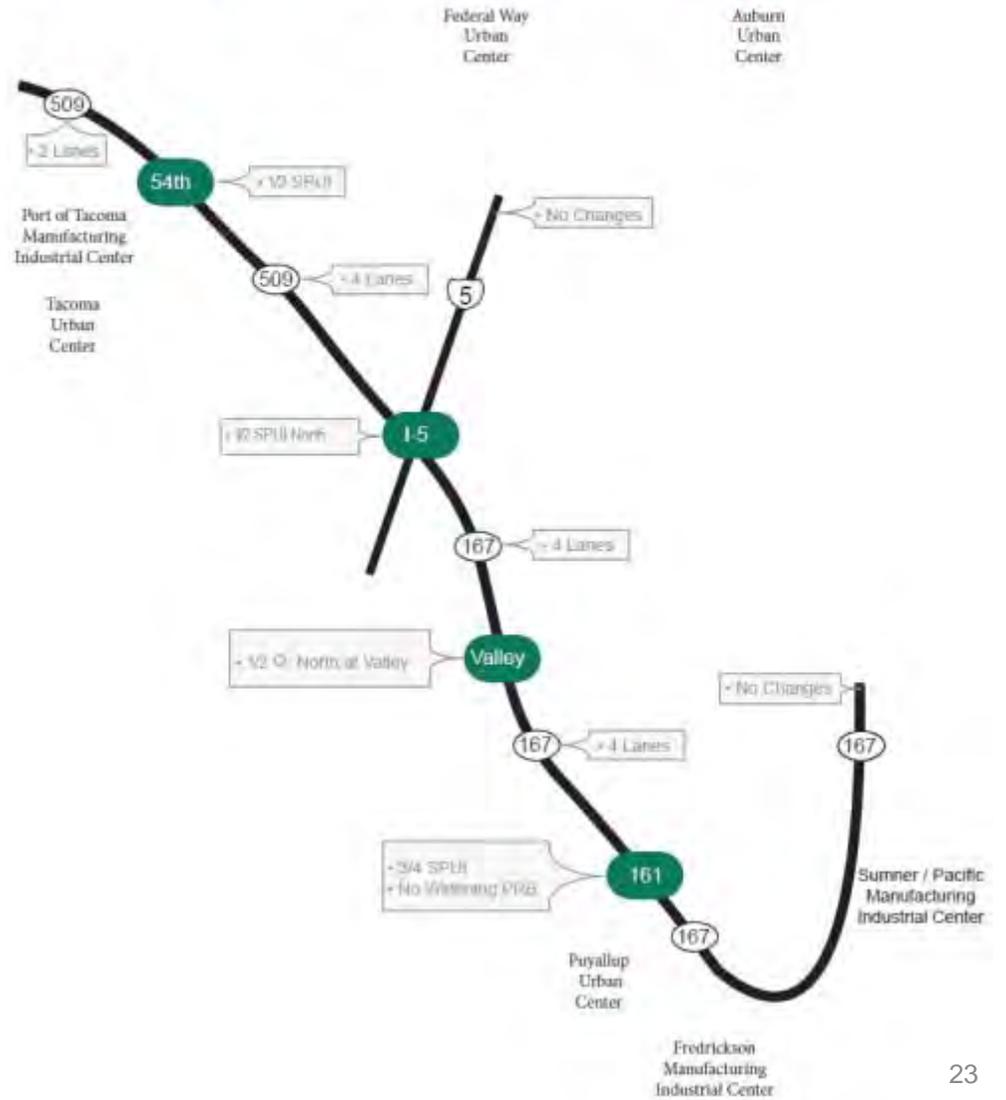
# Developing Scenarios

## SR 167 Completion Project Scenario 1: Closing the Gap



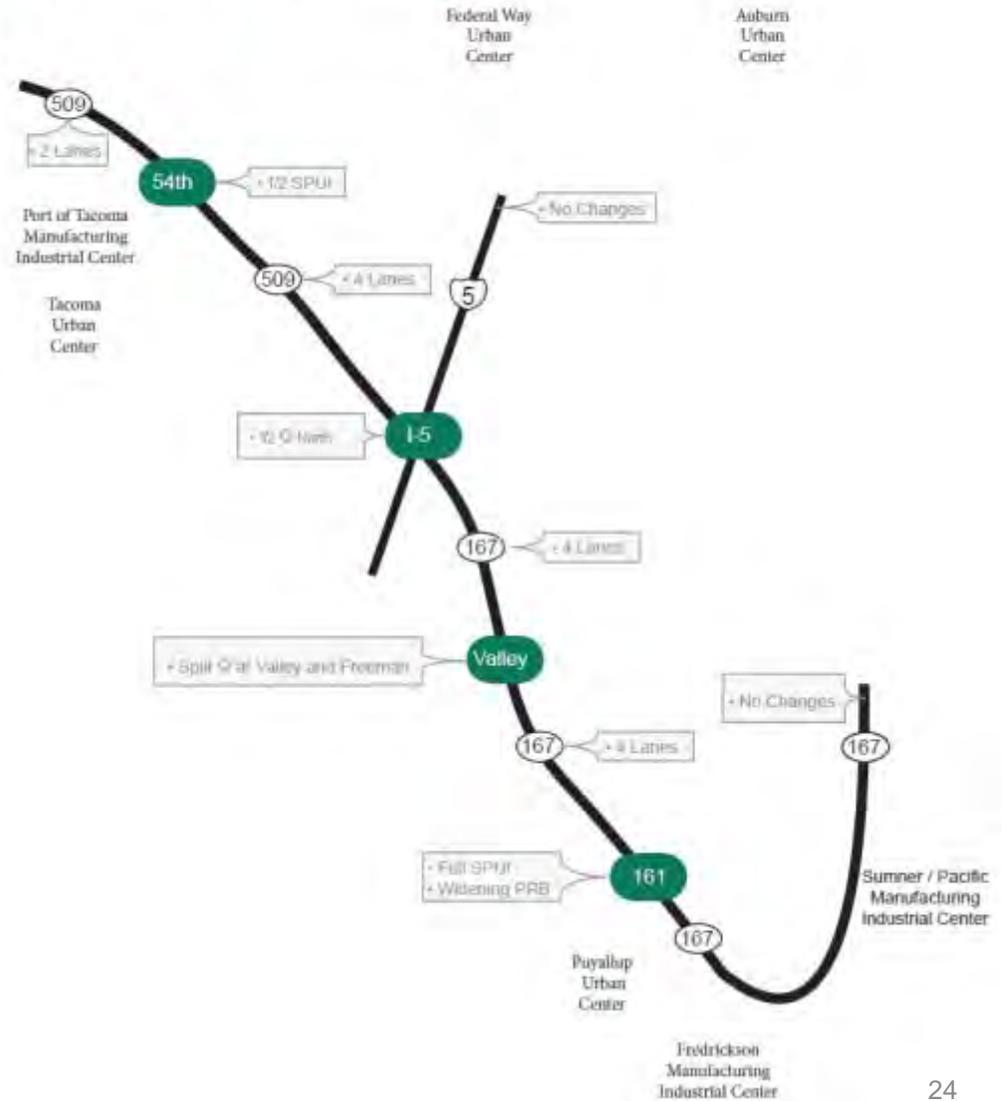
# Developing Scenarios

## SR 167 Completion Project Scenario 2: Moderate Connectivity



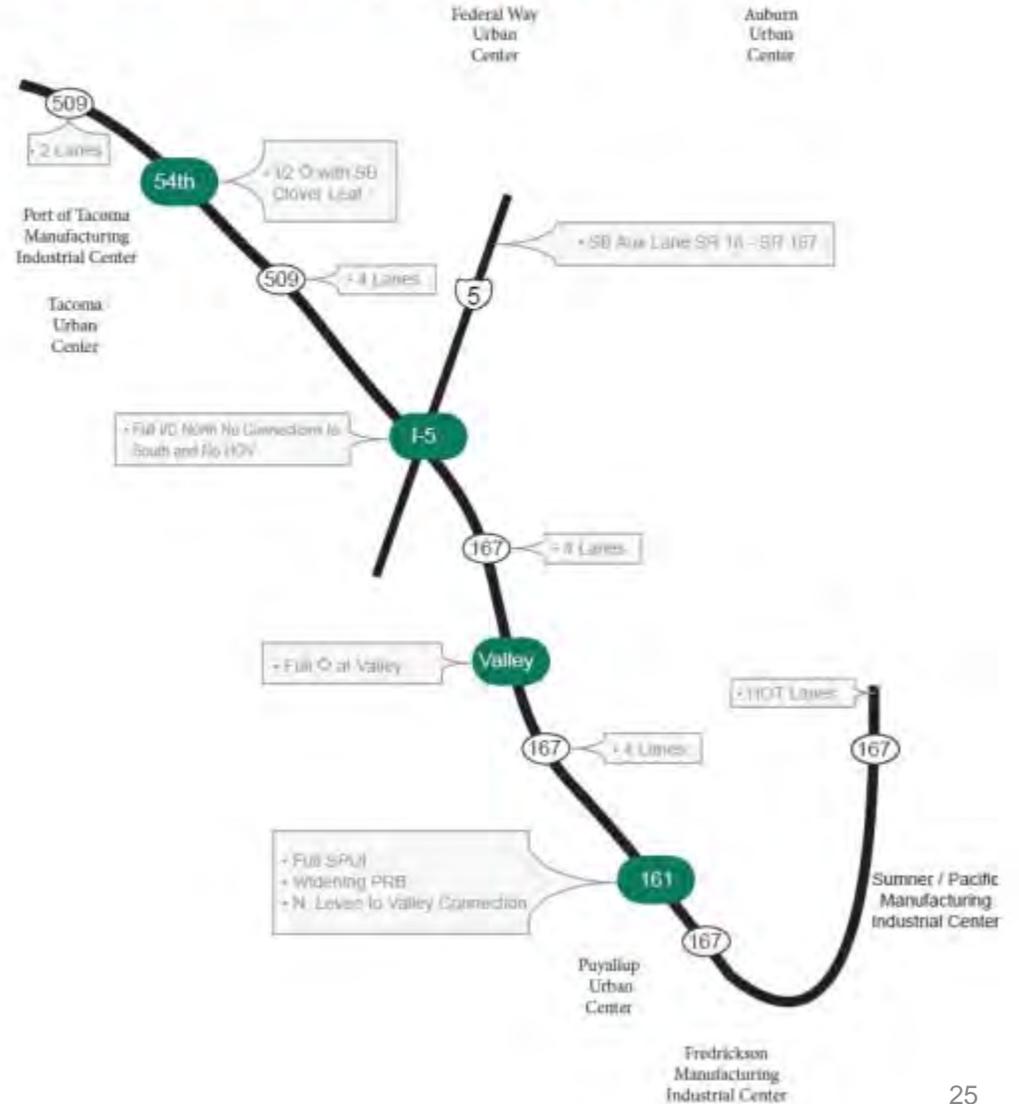
# Developing Scenarios

## SR 167 Completion Project Scenario 3: Gateway



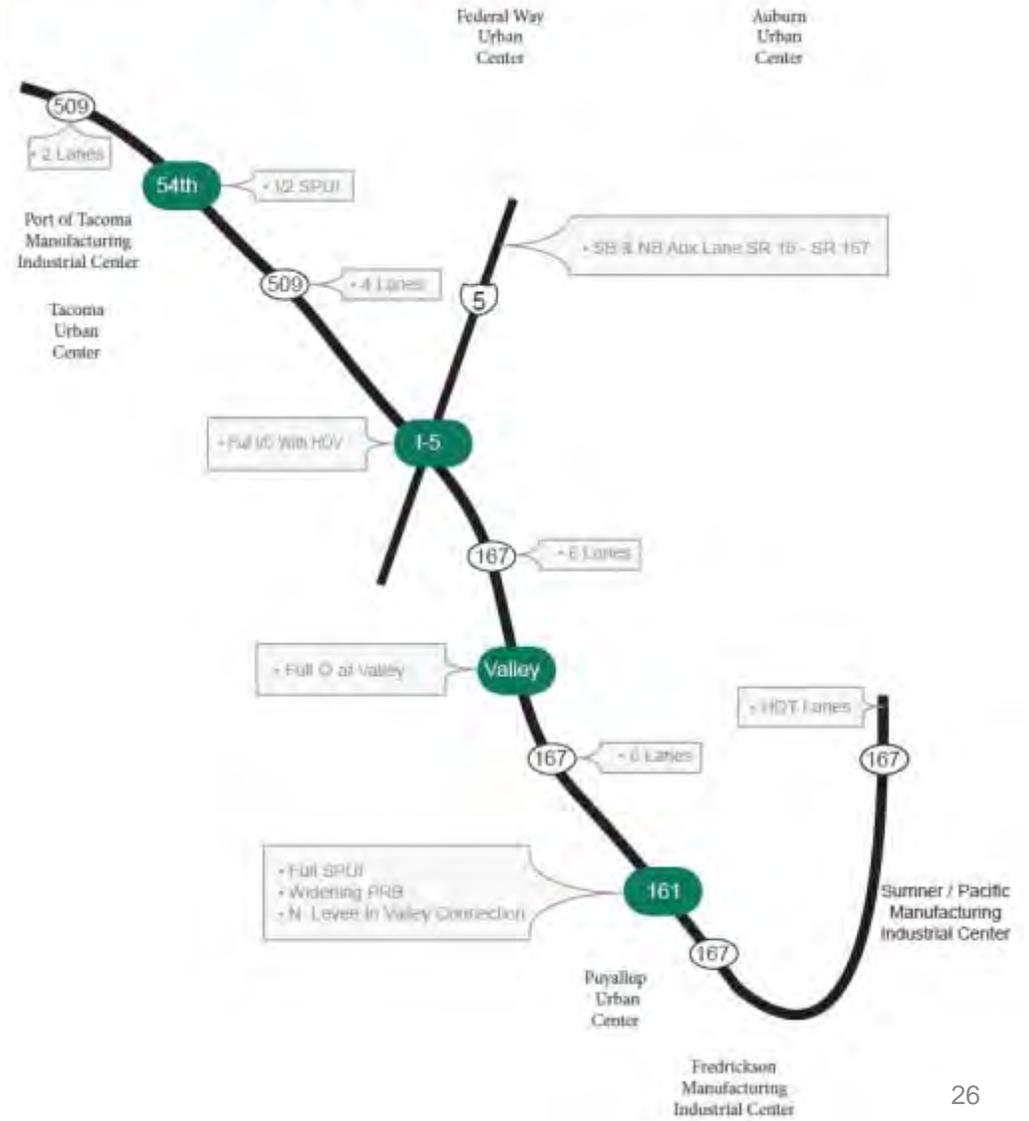
# Developing Scenarios

## SR 167 Completion Project Scenario 4: Full Connectivity

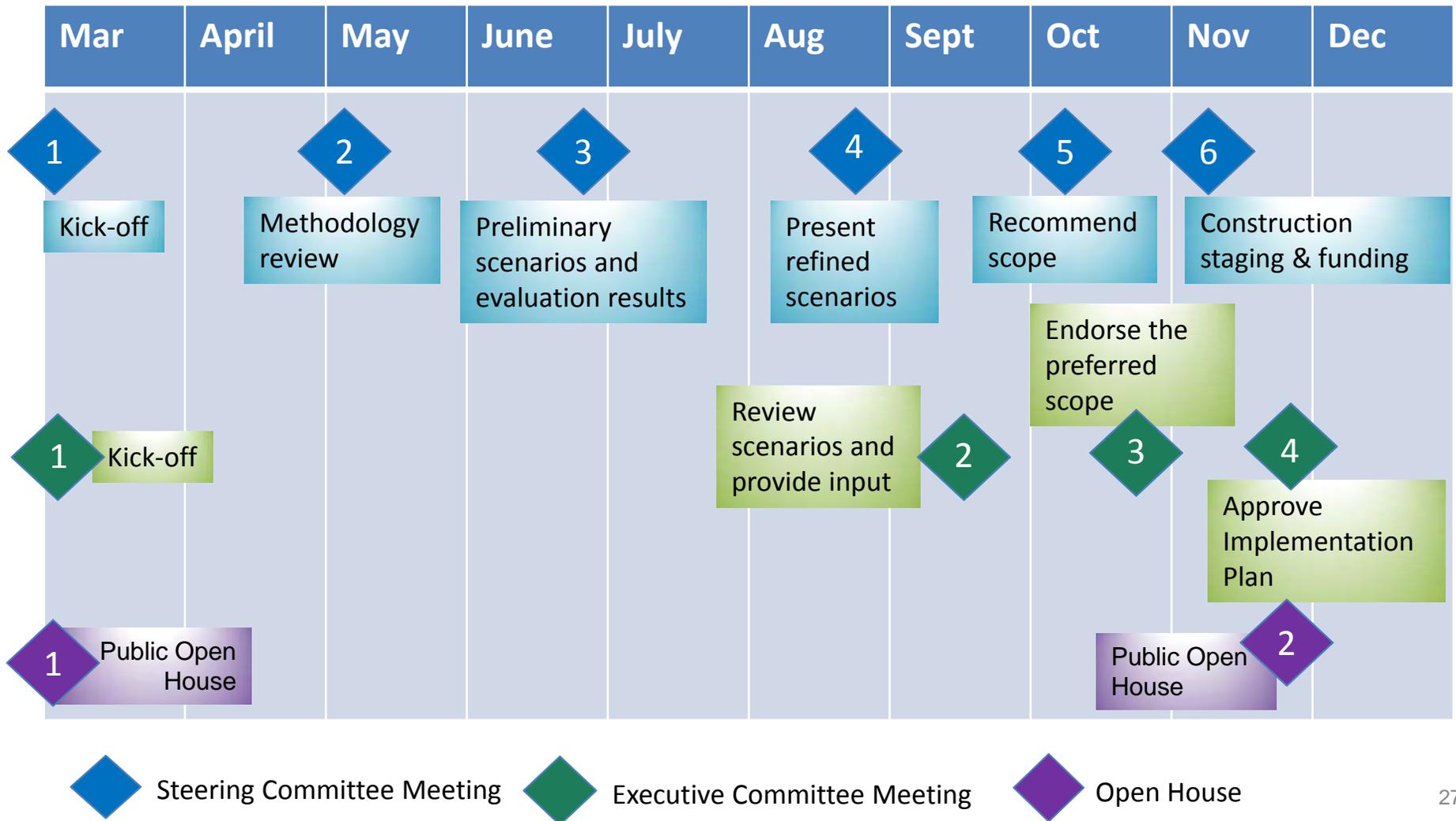


# Developing Scenarios

## SR 167 Completion Project Scenario 5: Full Build Out



# Project Schedule (SR 167)



## More information:

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