

# Outer Powell Boulevard Conceptual Design Plan



## Final Report

**City of Portland Bureau of  
Transportation**

1120 SW Fifth Avenue  
Portland, Oregon 97204

Oregon Transportation and Growth Management Program

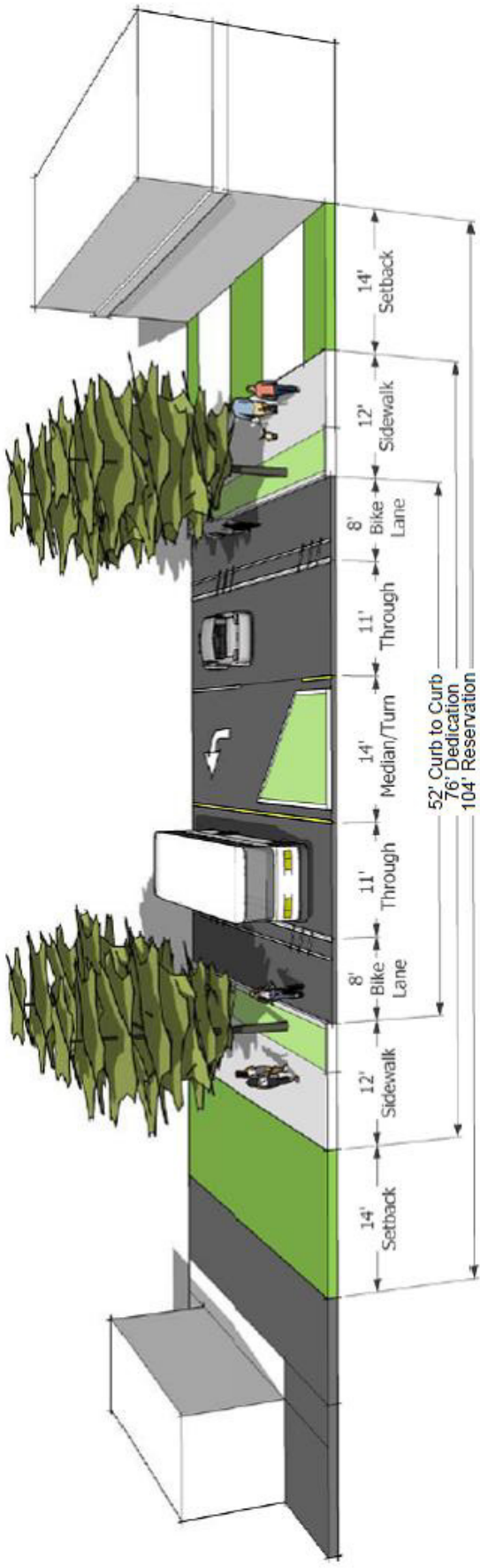
# Outer Powell Blvd. Conceptual Design Plan

## Executive Summary

- Project Limits: I-205 to SE 174<sup>th</sup>
- Goal is to provide a conceptual design plan that will accommodate the 20-year needs of motor vehicles, bicycles, pedestrians and transit
- Alternatives considered
  - 3 lane cross-section
  - 4 lane cross-section
  - 5 lane cross-section
  - Ped & bike facilities
    - 8 ft. wide bike facility
    - 12 ft. wide sidewalk corridor
      - 7 ½ ft. sidewalk zone
      - 4 ½ ft. furnishing zone
- Three-lane alternative is the recommended for adoption
  - SE 162<sup>nd</sup> to SE 174<sup>th</sup> three lane alternative is near-term recommendation for next 15 yrs.
- Conceptual Design Plan will inform both future preliminary engineering phases for public capital improvements but also private development requirements for dedication and frontage improvements

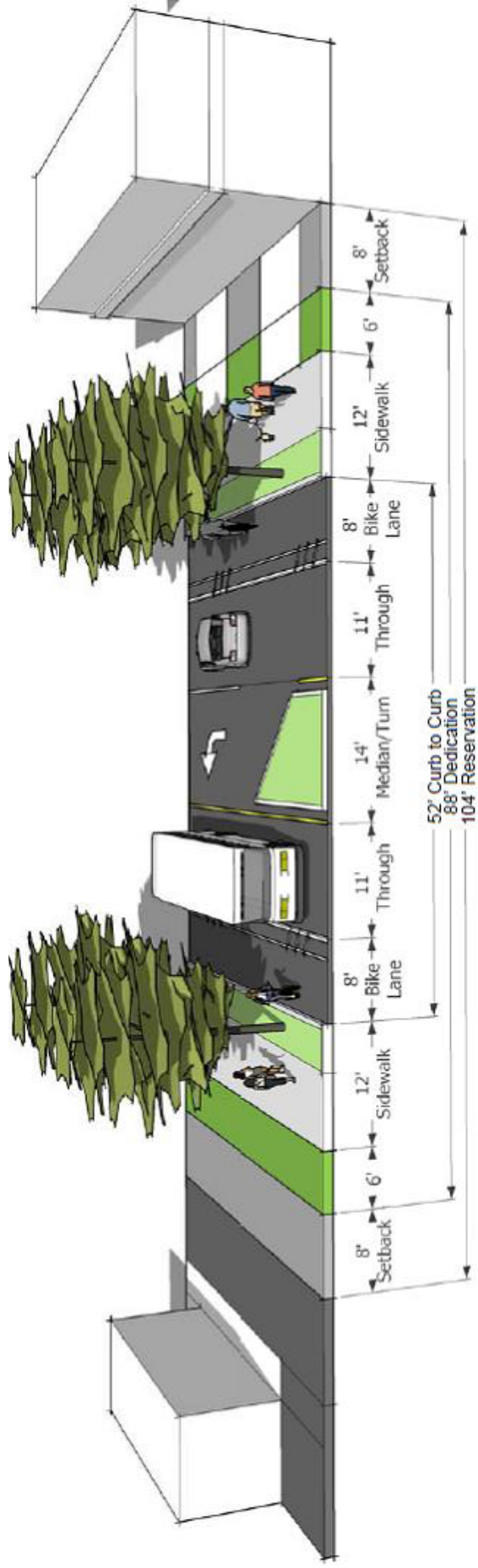
# Street Design Concept Recommendations

Street Concept Recommendation for Segments 1, 2, and 3 (SE 99th to SE 162nd)



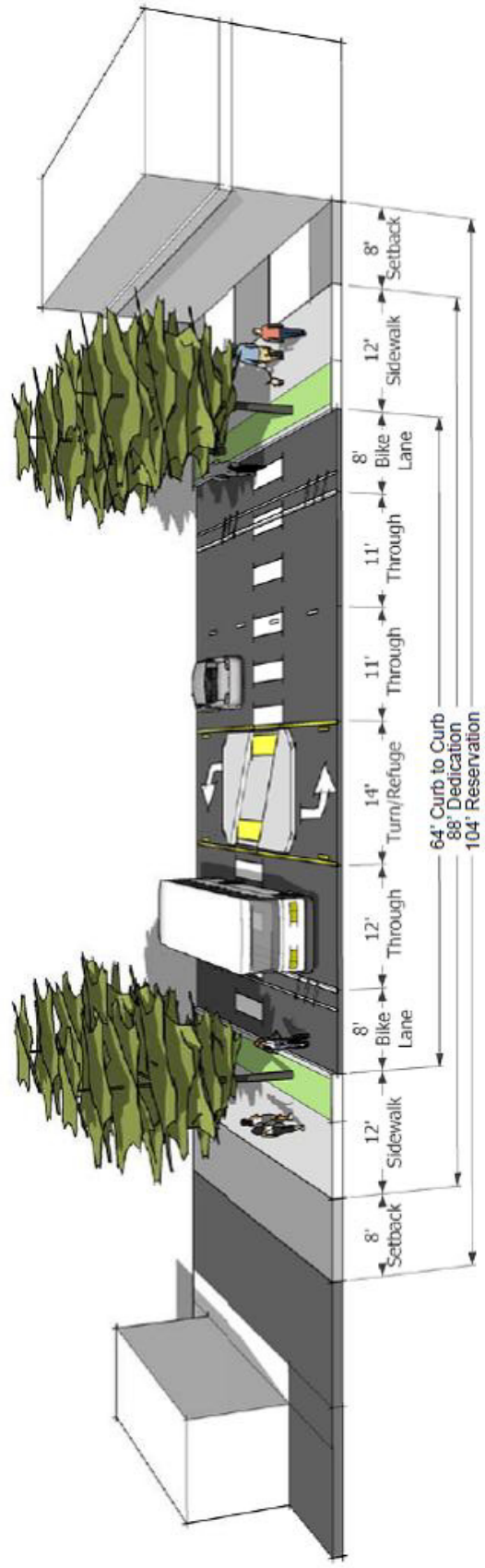
- 52' roadway improvement section with 3 traffic lane
- 1 traffic lane each direction plus center turn lane and/or median
- 76' right-of-way dedication
- 104' reservation with a 14' building setback on each side
- Includes sidewalks and bike lanes

Near-Term Street Concept Recommendation for Segment 4 (SE 162nd – SE 174th)



- 52' roadway improvement section with 3 traffic lanes
- 1 traffic lane each direction plus center turn lane and/or median
- Current 4-lane segments will be retained
- 88' right-of-way dedication
- 104' reservation with an 8' building setback on each side
- Includes sidewalks and bike lanes

Potential Long-Term Street Concept Recommendation for Segment 4 (SE 162nd – SE 174th)

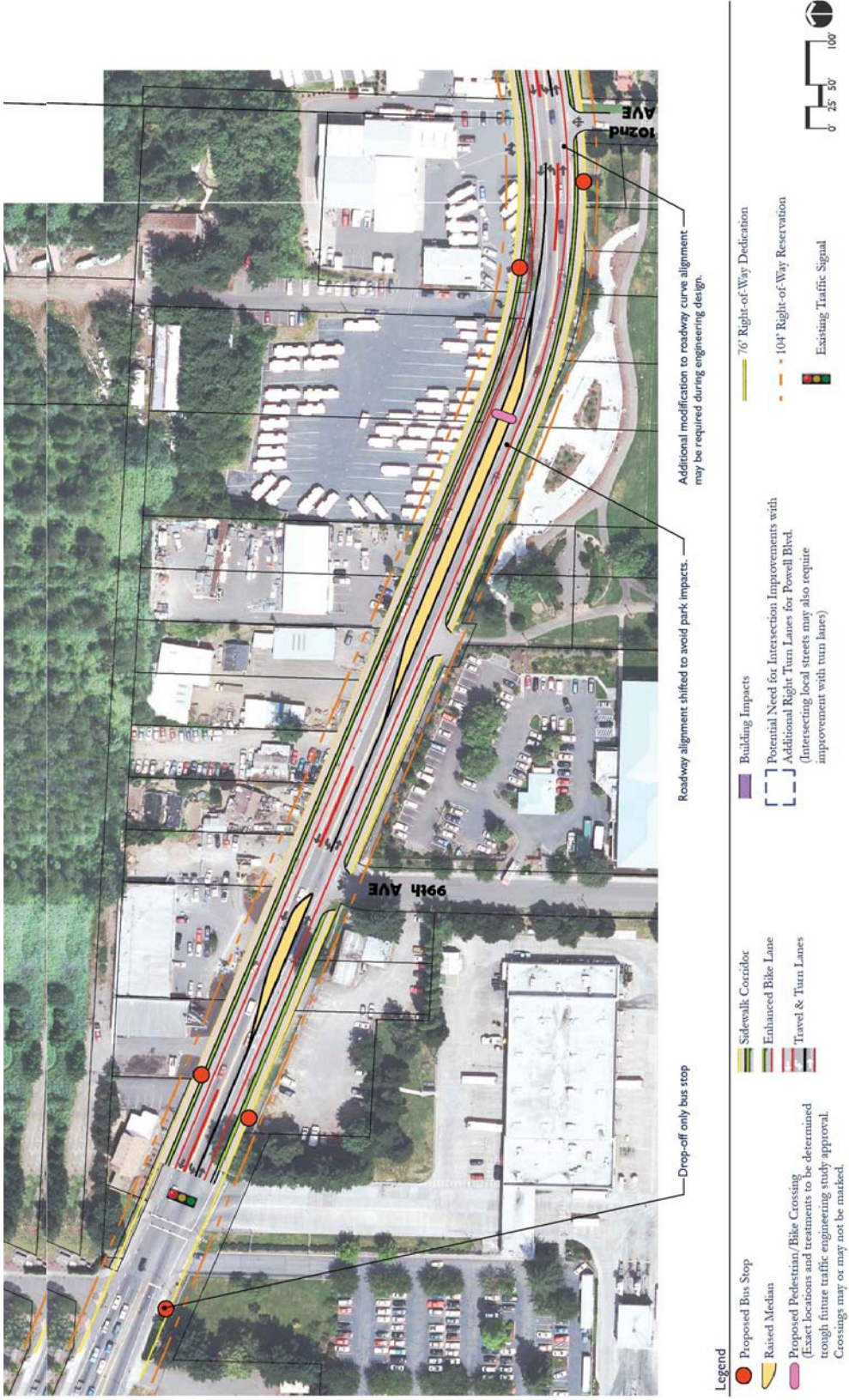


The above cross-section is a working illustration for a long-term option that will be further refined during the project development phase in the future. The intent is to establish setbacks and right-of-way reservation based on information available at the time of this plan.

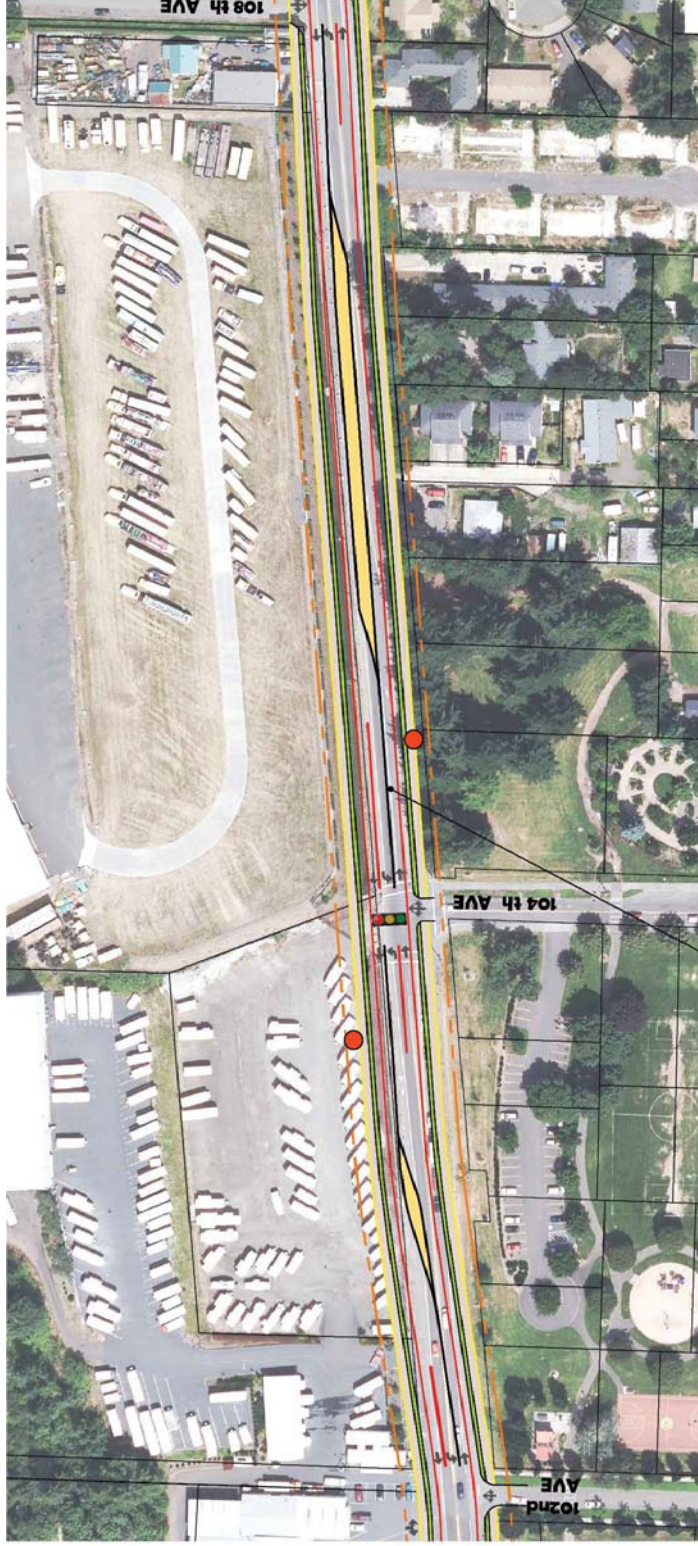
- 64' roadway improvement section with 4 lanes
- 2 travel lanes of eastbound traffic, 1 travel lane of westbound traffic, and 1 center turn and/or median lane, plus a right turn lane for the westbound approach to SE 162nd Ave.
- 88' right-of-way dedication
- 104' reservation which includes an 8' building setback on each side
- Includes sidewalk and bike lanes

# Corridor Improvement Maps

The following illustrations depict the multi-modal transportation improvements planned for each of the project segments.



# Recommended transportation improvements from SE 102nd to SE 108th Ave



Roadway alignment shifted to avoid park and tree impacts.  
Additional alignment may occur during engineering design.

## Legend

Proposed Bus Stop

Raised Median

Proposed Pedestrian/Bike Crossing  
(Exact locations and treatments to be determined through future traffic engineering study approval. Crossings may or may not be marked.)

Sidewalk Corridor

Enhanced Bike Lane

Travel & Turn Lanes

Building Impacts

Potential Need for Intersection Improvements with Additional Right Turn Lanes for Powell Blvd.  
(Intersecting local streets may also require improvement with turn lanes)

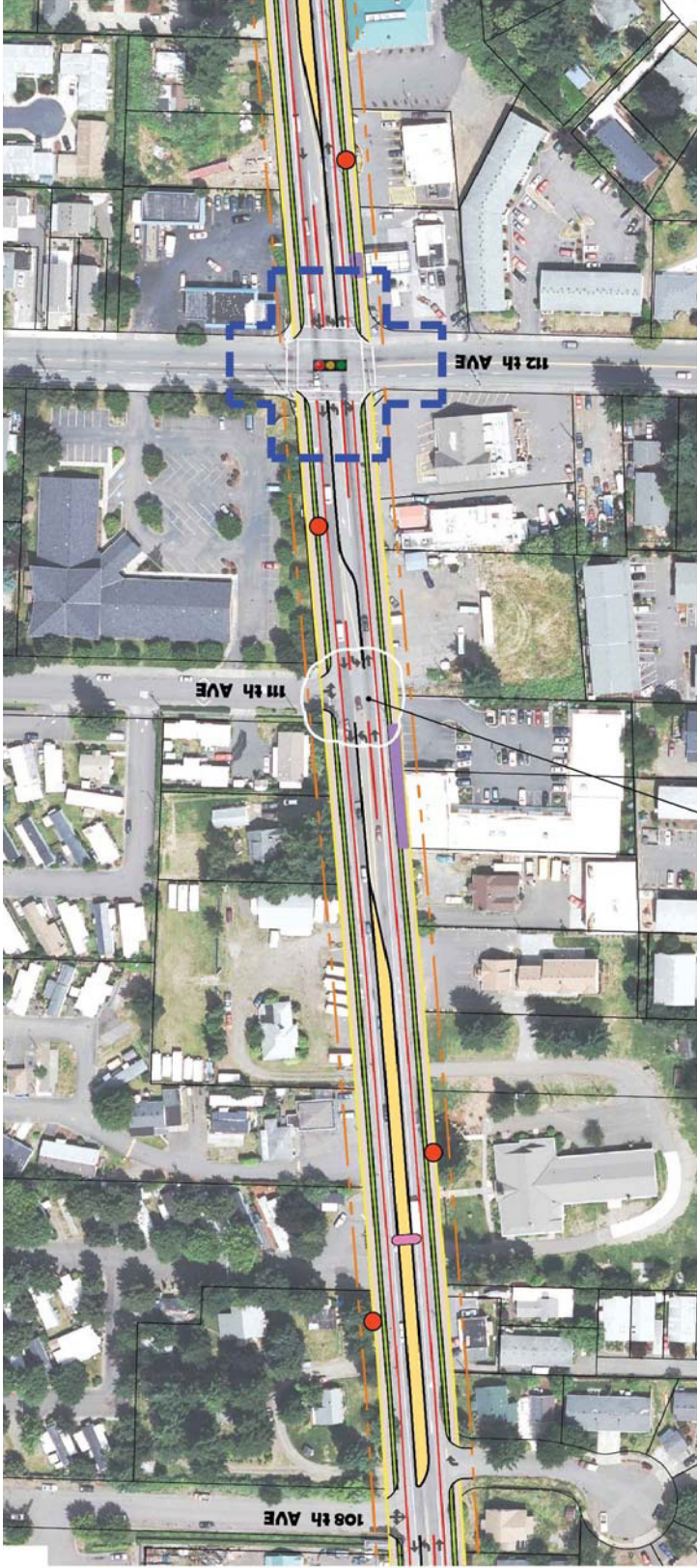
76' Right-of-Way Dedication

104' Right-of-Way Reservation












Existing Traffic Signal



# Recommended transportation improvements from SE 108th Ave to approximately SE 113th



## Legend

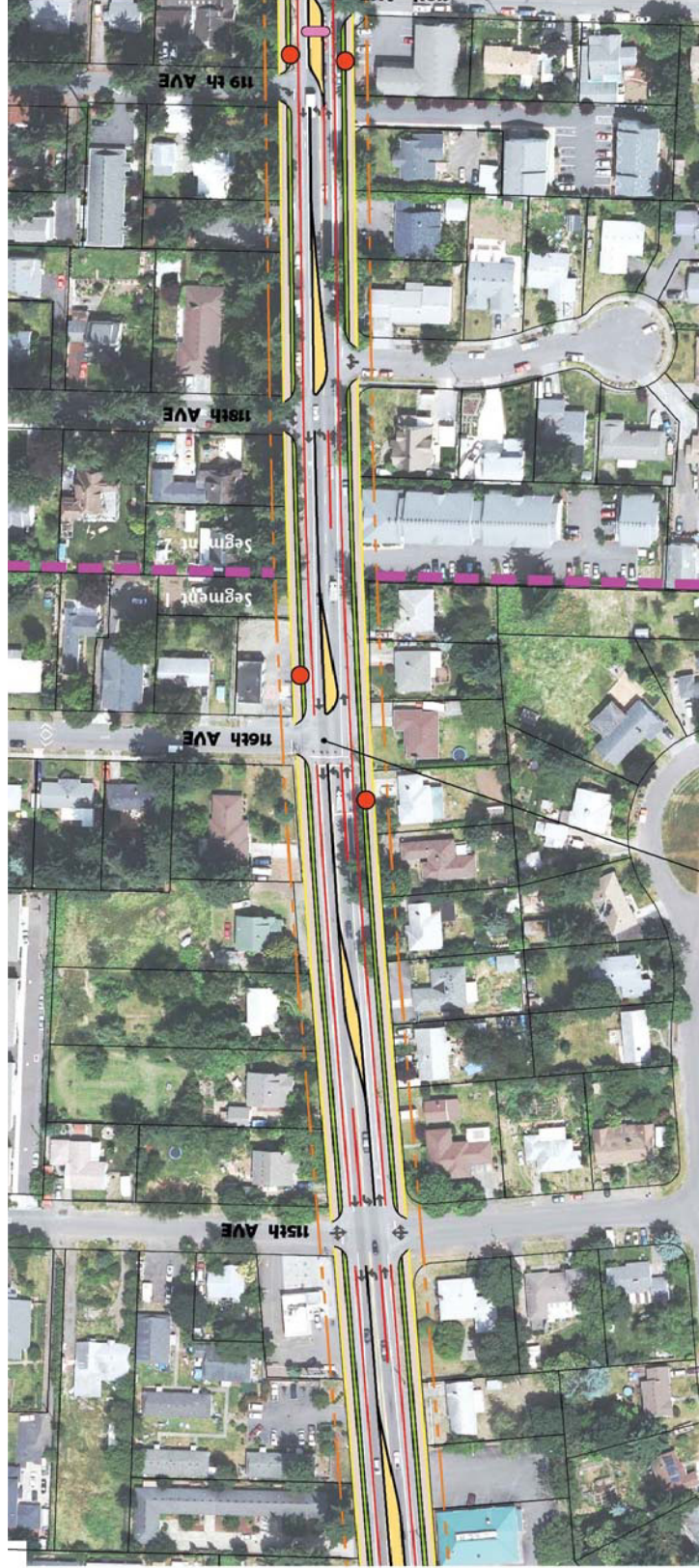
-  Proposed Bus Stop
-  Raised Median
-  Proposed Pedestrian/Bike Crossing  
(Exact locations and treatments to be determined through future traffic engineering study approval. Crossings may or may not be marked.)
-  Sidewalk Corridor
-  Enhanced Bike Lane
-  Travel & Turn Lanes
-  Building Impacts
-  Potential Need for Intersection Improvements with Additional Right Turn Lanes for Powell Blvd.  
(Intersecting local streets may also require improvement with turn lanes)
-  Existing Traffic Signal
-  76' Right-of-Way Dedication
-  104' Right-of-Way Reservation



Evaluate safety and operational factors of left turns at 111th avenue.



# Recommended transportation improvements from approximately SE 112th and SE 119th Ave

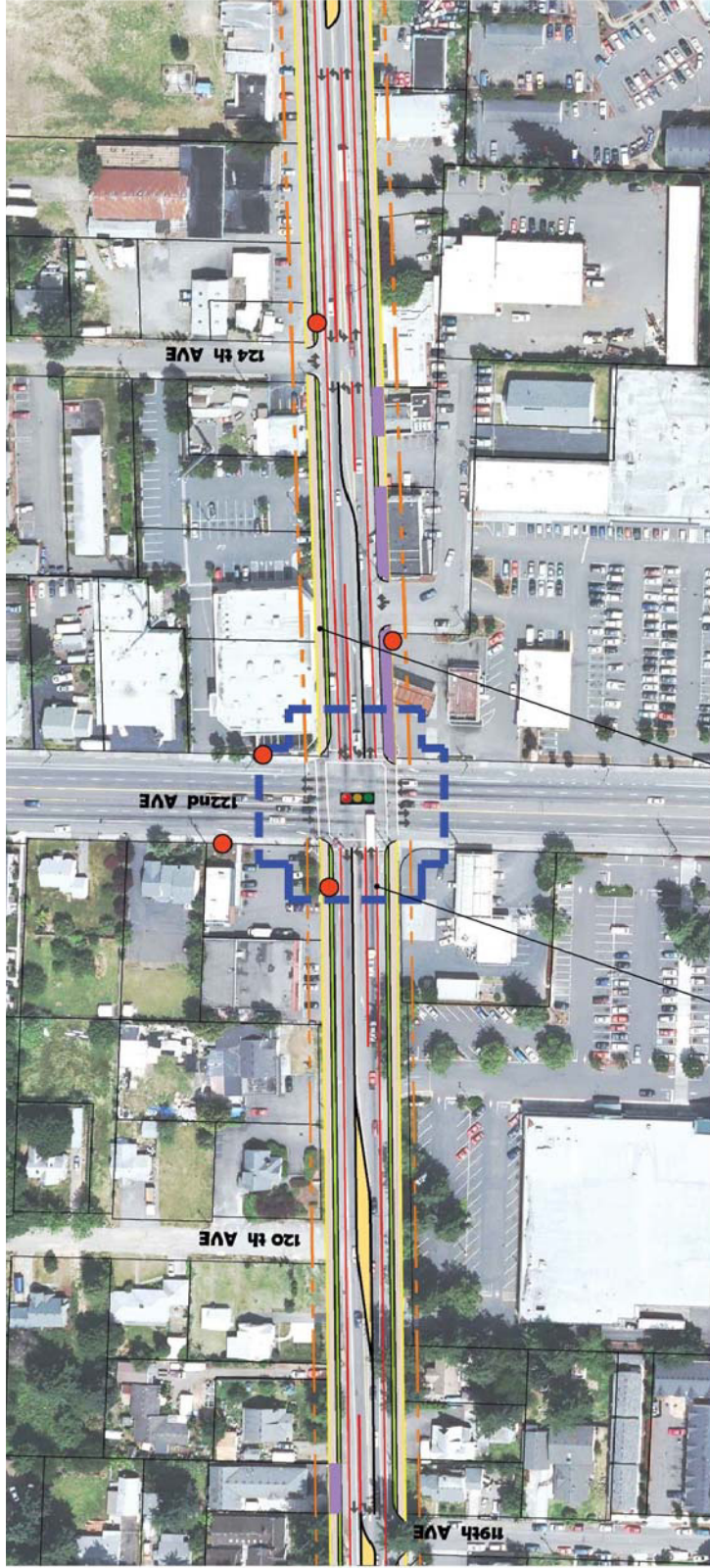


## Legend

- Proposed Bus Stop
- Raised Median
- Proposed Pedestrian/Bike Crossing  
(Exact locations and treatments to be determined through future traffic engineering study approval. Crossings may or may not be marked.)
- Sidewalk Corridor
- Enhanced Bike Lane
- Travel & Turn Lanes
- Building Impacts
- Potential Need for Intersection Improvements with Additional Right-Turn Lanes for Powell Blvd.  
(Intersecting local streets may also require improvement with turn lanes)
- 76' Right-of-Way Dedication
- 104' Right-of-Way Reservation
- Existing Traffic Signal

Existing signalized pedestrian crossing

# Recommended transportation improvements from SE 119th Ave to SE 125th PI



## Legend

Proposed Bus Stop

Raised Median

Proposed Pedestrian/Bike Crossing  
(Exact locations and treatments to be determined through future traffic engineering study approval. Crossings may or may not be marked.)

Sidewalk Corridor

Enhanced Bike Lane

Travel & Turn Lanes

Building Impacts

Potential Need for Intersection Improvements with Additional Right Turn Lanes for Powell Blvd.  
(Intersecting local streets may also require improvement with turn lanes)

Roadway alignment should avoid building impacts at Walgreens

Evaluate benefits of transit queue by-pass

76' Right-of-Way Dedication

104' Right-of-Way Reservation












Existing Traffic Signal



# Recommended transportation improvements from SE 125th Pl to SE 131st Ave

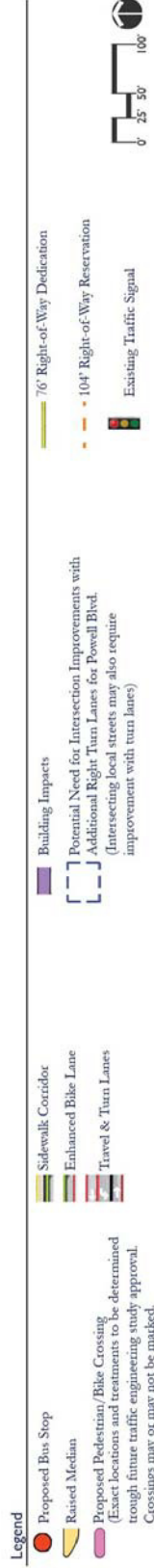


## Legend

-  Proposed Bus Stop
-  Raised Median
-  Proposed Pedestrian/Bike Crossing  
(Exact locations and treatments to be determined through future traffic engineering study approval. Crossings may or may not be marked.)
-  Sidewalk Corridor
-  Enhanced Bike Lane
-  Travel & Turn Lanes
-  Building Impacts
-  Potential Need for Intersection Improvements with Additional Right-Turn Lanes for Powell Blvd.  
(Intersecting local streets may also require improvement with turn lanes)
-  76' Right-of-Way Dedication
-  104' Right-of-Way Reservation
-  Existing Traffic Signal



# Recommended transportation improvements from SE 131st Ave to approximately SE 137th



# Recommended transportation improvements from approximately SE 137th to SE 143rd Ave



Continue to evaluate the need for turn restrictions at this intersection

## Legend

- Proposed Bus Stop
- Raised Median
- Proposed Pedestrian/Bike Crossing (Exact locations and treatments to be determined through future traffic engineering study approval. Crossings may or may not be marked.)

- Sidewalk Corridor
- Enhanced Bike Lane
- Travel & Turn Lanes

- Building Impacts
- Potential Need for Intersection Improvements with Additional Right-Turn Lanes for Powell Blvd. (Intersecting local streets may also require improvement with turn lanes)

- 7' Right-of-Way Dedication
- 10' Right-of-Way Reservation
- Existing Traffic Signal



# Recommended transportation improvements from SE 143rd to SE 148th Ave

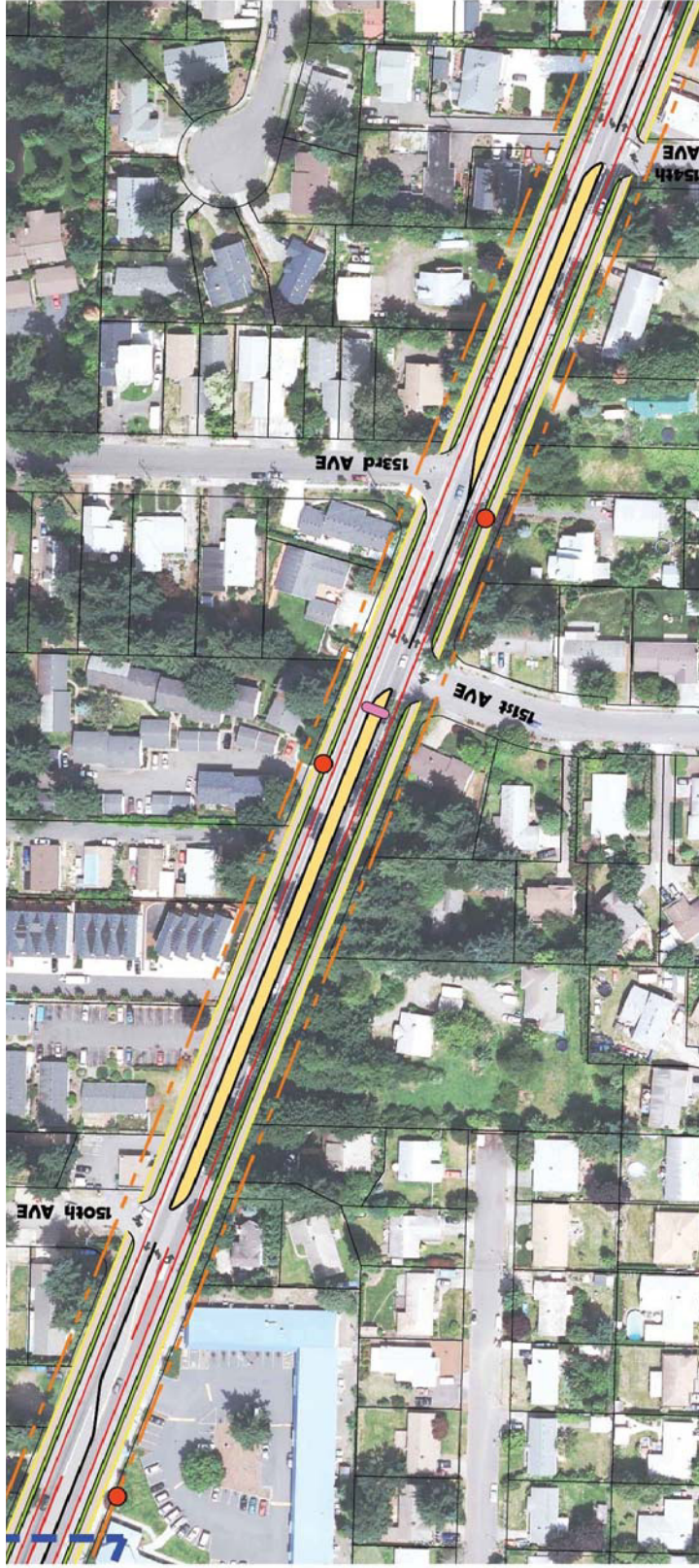


Concerns about this specific crossing include sight lines around the curve and high traffic speeds

- Legend**
- Proposed Bus Stop
  - ▭ Raised Median
  - ▭ Proposed Pedestrian/Bike Crossing (Exact locations and treatments to be determined through future traffic engineering study approval. Crossings may or may not be marked.)
  - ▭ Sidewalk Corridor
  - ▭ Enhanced Bike Lane
  - ▭ Travel & Turn Lanes
  - ▭ Building Impacts
  - ▭ Potential Need for Intersection Improvements with Additional Right Turn Lanes for Powell Blvd. (Intersecting local streets may also require improvement with turn lanes)
  - ▭ 76' Right-of-Way Dedication
  - ▭ 104' Right-of-Way Reservation
  - ▭ Existing Traffic Signal



# Recommended transportation improvements from SE 148th to SE 154th Ave



# Recommended transportation improvements from SE 154th to approximately SE 161st



## Legend

- Proposed Bus Stop
- Raised Median
- Proposed Pedestrian/Bike Crossing  
(Exact locations and treatments to be determined through future traffic engineering study approval. Crossings may or may not be marked.)
- Building Impacts  
Potential Need for Intersection Improvements with Additional Right Turn Lanes for Powell Blvd.  
(Intersecting local streets may also require improvement with turn lanes)
- Sidewalk Corridor
- Enhanced Bike Lane
- Travel & Turn Lanes
- 70' Right-of-Way Dedication
- 104' Right-of-Way Reservation
- Existing Traffic Signal





# Recommended transportation improvements from approximately SE 161st to SE Naegeli Dr

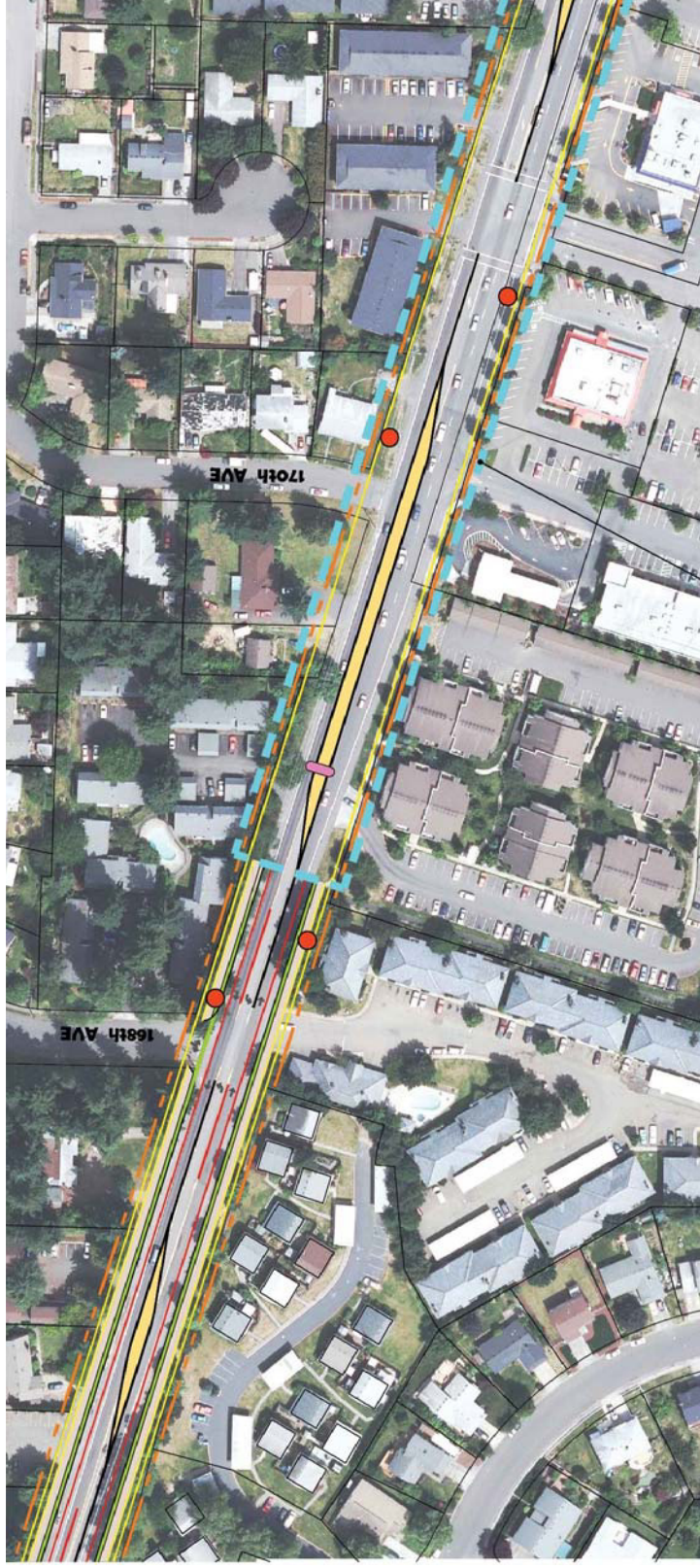


**Legend**

- Proposed Bus Stop
- Raised Median
- Proposed Pedestrian/Bike Crossing  
(Exact locations and treatments to be determined through future traffic engineering study approval. Crossings may or may not be marked.)
- Sidewalk Corridor
- Enhanced Bike Lane
- Travel & Turn Lanes
- Building Impacts
- Potential Need for Intersection Improvements with Additional Right-Turn Lanes for Powell Blvd.  
(Intersecting local streets may also require improvement with turn lanes)
- 88' Right-of-Way Dedication
- 104' Right-of-Way Reservation
- Existing Traffic Signal

0 25' 50' 100'

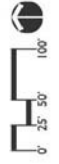
# Recommended transportation improvements from SE Naegeli Dr to approximately SE 172nd



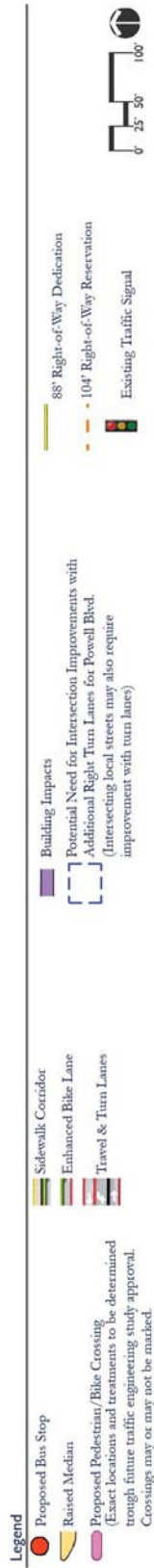
Existing 4-lane roadway to remain as part of near term improvements.

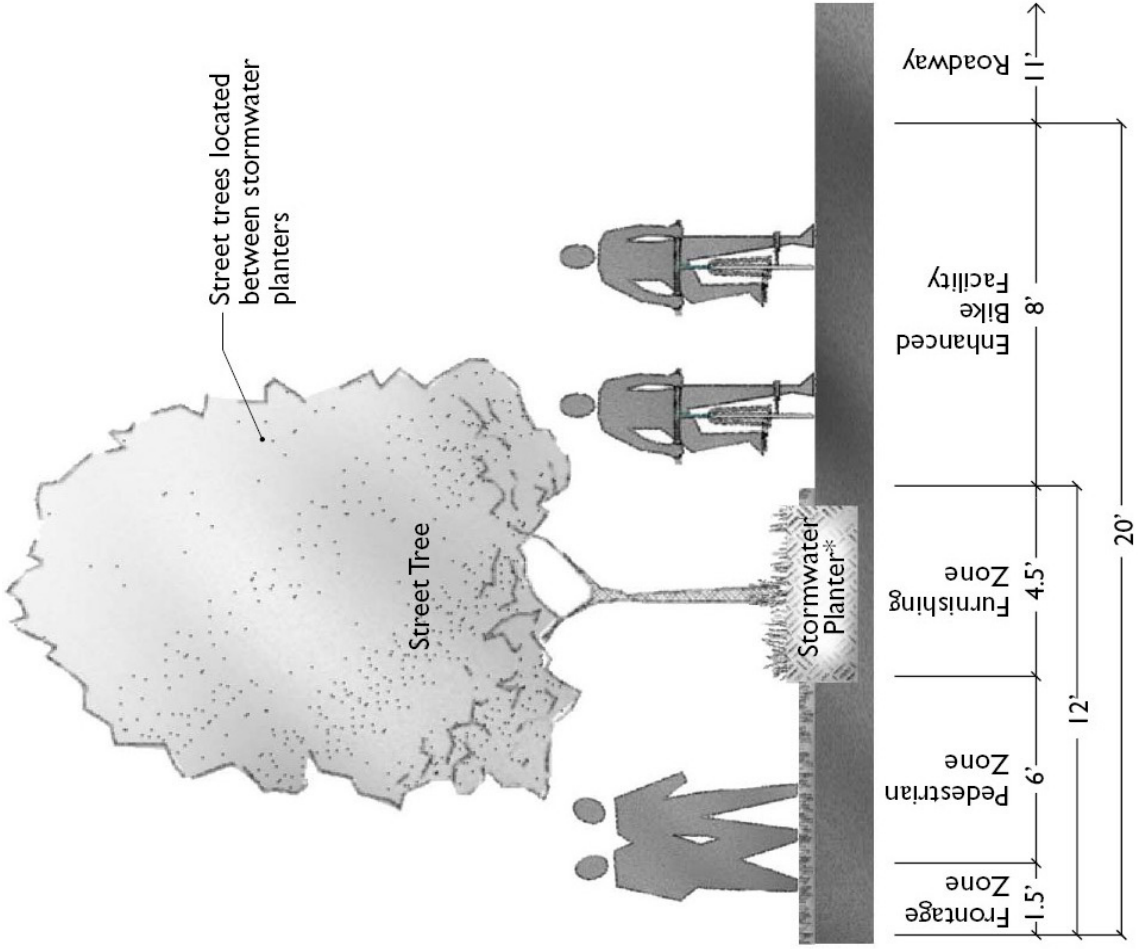
## Legend

- Proposed Bus Stop
- Raised Median
- Proposed Pedestrian/Bike Crossing  
(Exact locations and treatments to be determined through future traffic engineering study approval. Crossings may or may not be marked.)
- Sidewalk Corridor
- Enhanced Bike Lane
- Travel & Turn Lanes
- Building Impacts
- Potential Need for Intersection Improvements with Additional Right Turn Lanes for Powell Blvd.  
(Intersecting local streets may also require improvement with turn lanes)
- Existing Traffic Signal
- 88' Right-of-Way Dedication
- 104' Right-of-Way Reservation



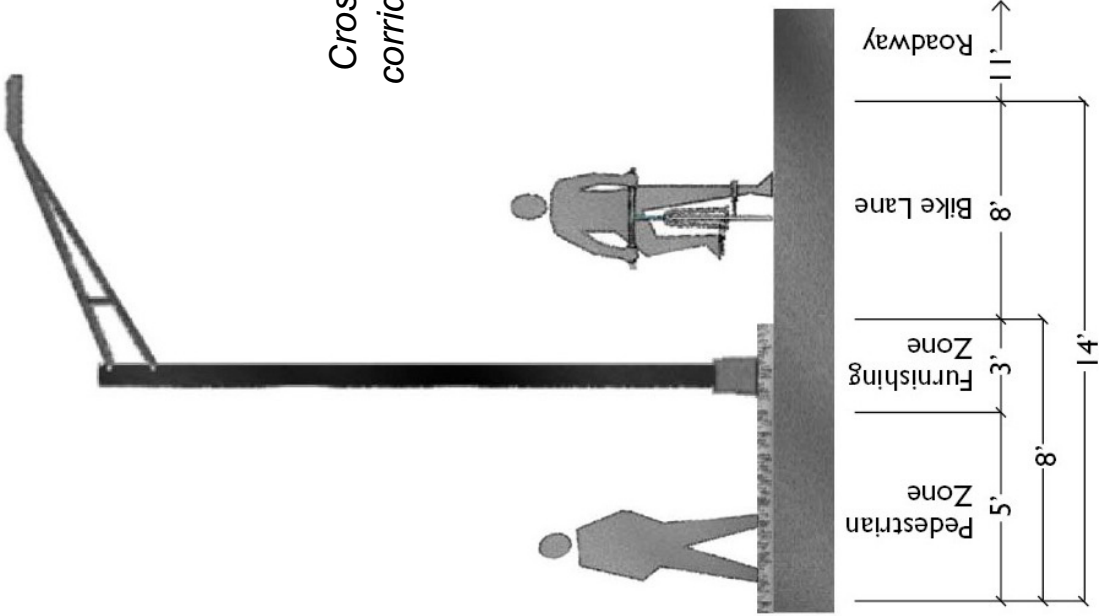
# Recommended transportation improvements from approximately SE 172nd to City Limits





Cross-section of enhanced pedestrian and bicycle facilities

*Cross-section of pedestrian and bicycle facilities in a constrained corridor*



## Costs

The table below provides estimated total costs provided by ODOT for the 3-lane, 4-lane, and 5 lane alternatives using the “enhanced” design features for each of the project segments. These costs were prepared for the purpose of developing rough estimates to compare full build alternatives considered during this plan process. These costs estimates are based on general unit costs for both roadway improvements and right-of-way. These costs and the alternative cross-section may be used as the basis for estimated project cost for future addition to Portland’s Transportation System Plan (TSP).

Estimated Total Costs for Improvements			
<i>Project Segment</i>	<i>3-Lane</i>	<i>4-Lane</i>	<i>5-Lane</i>
Segment 1: I-205 to SE 116 <sup>th</sup> Ave	\$16,802,789	\$ 25,626,035	\$36,943,711
Segment 2: SE 116 <sup>th</sup> Ave to SE 136 <sup>th</sup> Ave	\$19,768,416	\$25,626,035	\$36,943,711
Segment 3a: SE 136 <sup>th</sup> Ave to SE 148 <sup>th</sup> Ave	\$8,847,302	\$15,659,861	\$20,385,050
Segment 3b: SE 148 <sup>th</sup> Ave to SE 162 <sup>nd</sup> Ave	\$11,539,615	\$17,279,437	\$23,766,094
Segment 4: SE 162 <sup>nd</sup> Ave to SE 174 <sup>th</sup> Ave	\$9,553,453	\$14,111,626	\$20,605,671
<b>Total</b>	<b>\$66,551,572</b>	<b>\$98,302,993</b>	<b>\$138,644,238</b>