

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

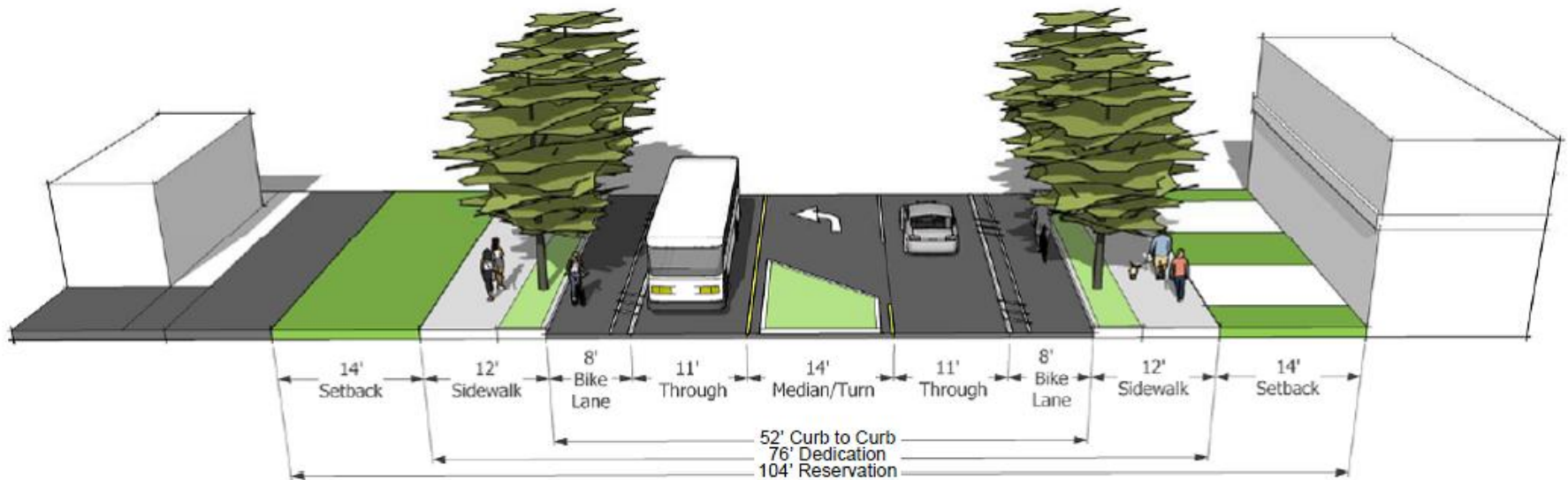
Outer Powell Blvd. Conceptual Design Plan

Executive Summary

- Project Limits: 99th to SE 174th SE Powell Blvd. is a State Highway, construction to be funded by ODOT
- 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 162nd to SE 174th 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

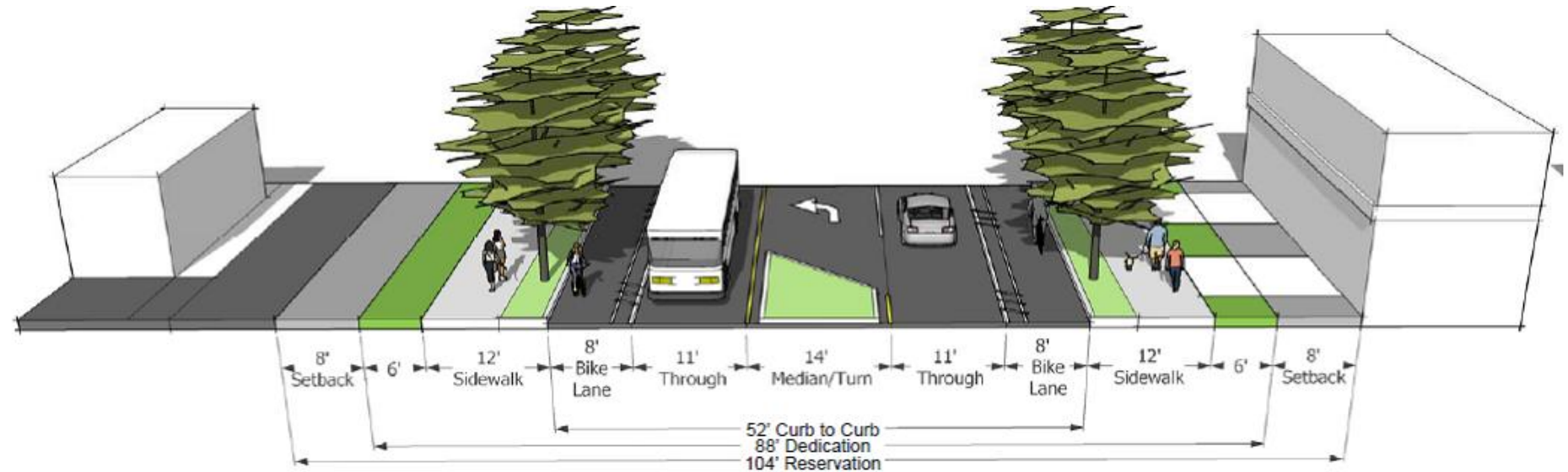
Street Design Concept Recommendations

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



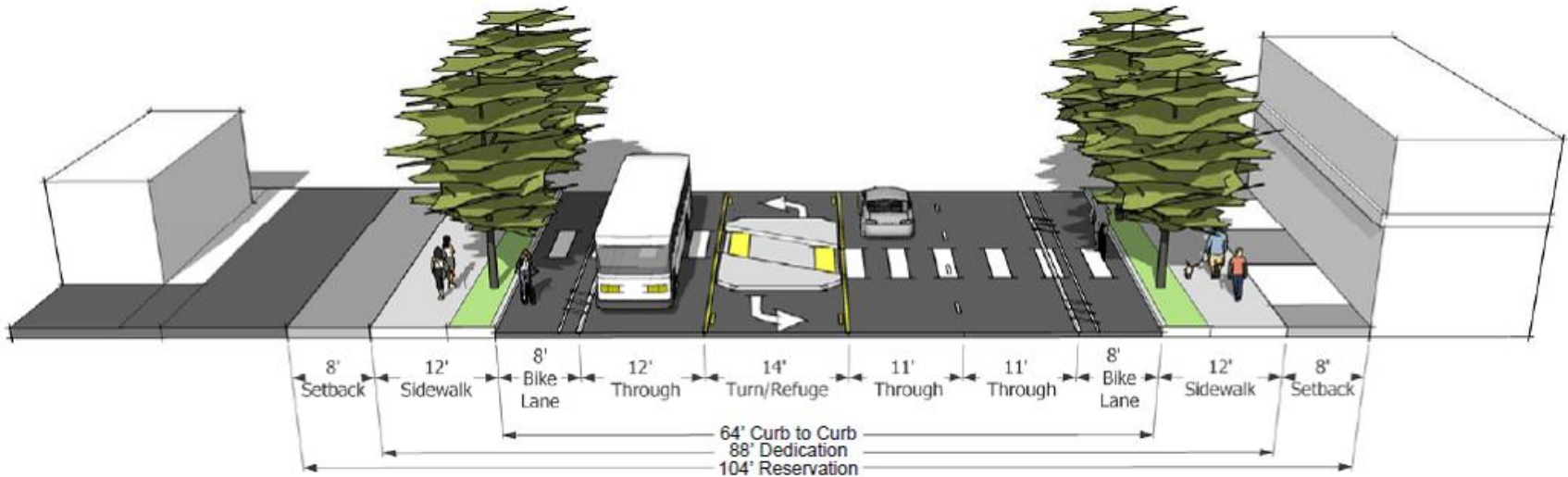
- 52' roadway improvement section with 3 traffic lane
- 1 traffic lane each direction plus center turn lane and/or median
- 76' right-of-way dedication
- 104' reservation with a 14' building setback on each side
- Includes sidewalks and bike lanes

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



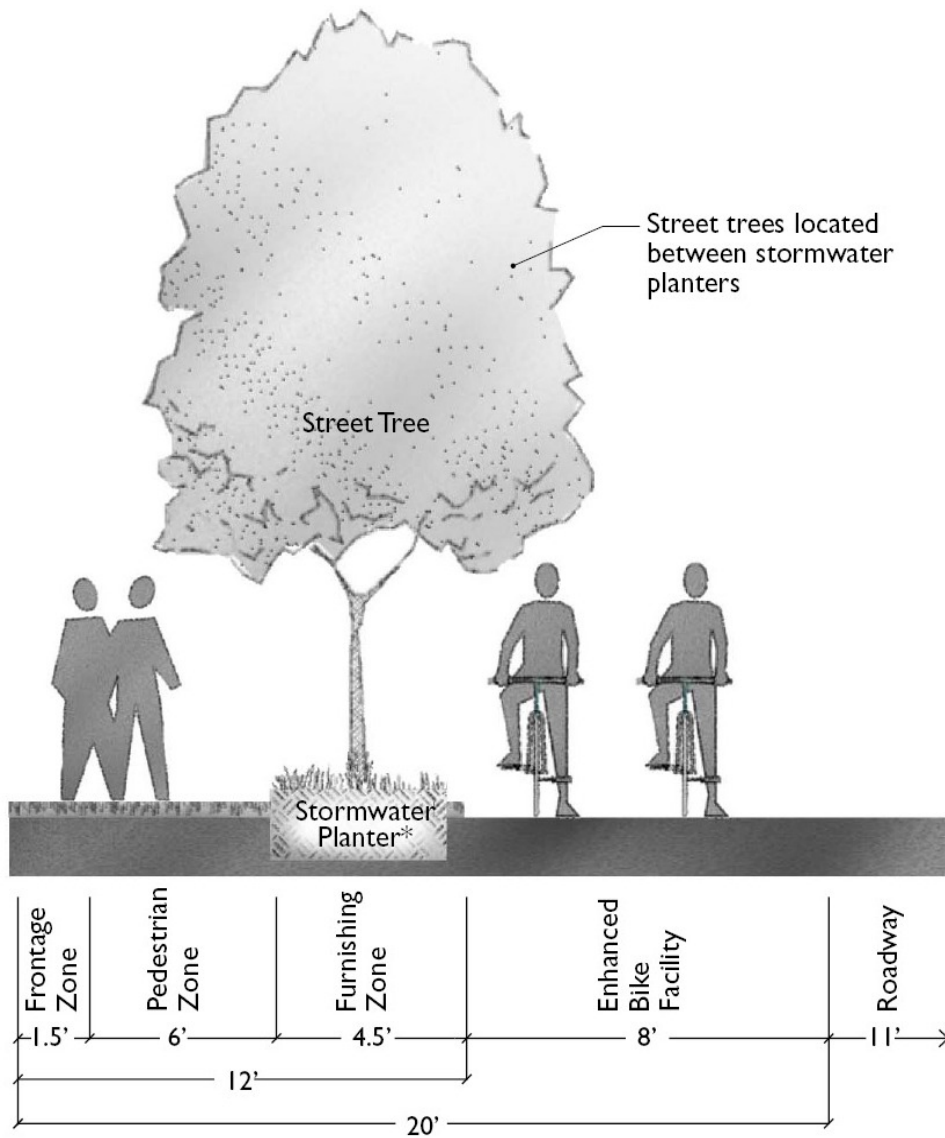
- 52' roadway improvement section with 3 traffic lanes
- 1 traffic lane each direction plus center turn lane and/or median
- Current 4-lane segments will be retained
- 88' right-of-way dedication
- 104' reservation with an 8' building setback on each side
- Includes sidewalks and bike lanes

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



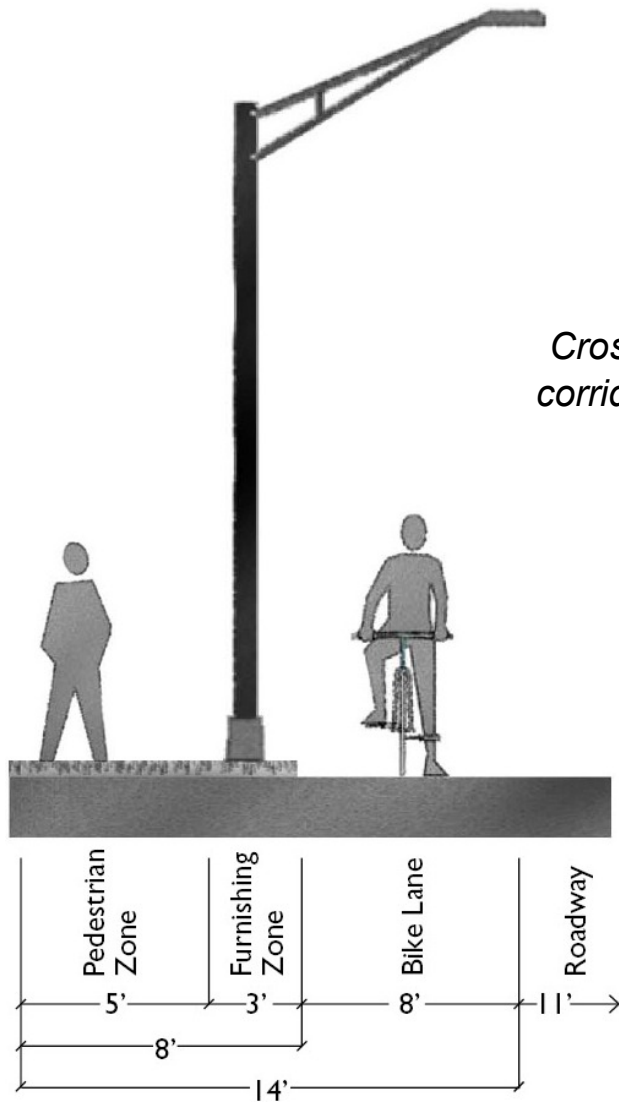
The above cross-section is a working illustration for a long-term option that will be further refined during the project development phase in the future. The intent is to establish setbacks and right-of-way reservation based on information available at the time of this plan.

- 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



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.

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

Implementation Strategy

Benchmarks for Transitions from Near Term to Long Term

- Consider new information from future RTP updates
- Monitor traffic at key intersections along SE Powell
- Respond to a high capacity transit plan for Powell-Division corridor
- Evaluate changes in traffic patterns from arterial projects outside Portland
- Any new plan will address the same project evaluation criteria
- Plan recommendations shall remain in effect for 10-15 years

Near-Term Project Priority Improvements

- Safety projects for all modes including left turn lane access
- Pedestrian and bicycle system gaps along SE Powell
- Pedestrian crossing improvements and access to transit
- Improvements for faster and more reliable transit
- System management improvements, e.g. upgraded signals

Additional Considerations for Project Development

- Reduction of the design speed east of SE 136th Avenue to 35 mph
- Address difficult turning movements for school buses
- Avoid impacts to large trees and significant buildings
- Avoid impacts to Ed Benedict Park
- Minimize impacts to businesses across from Ed Benedict Park

Options for Minimizing Impacts

- Employ constrained corridor designs
- Shifting the centerline alignment or taking equally from both sides
- Expand equal width for each side of street
- Reduce length or width of center medians
- Explore alternative driveway locations
- Explore alternative bus stops locations and pedestrian crossings
- Explore a common pedestrian facility serving corridor and park
- Recognize that USDOT Section 4(f) statute will apply

Integration into Local Plans

- Street design classification change from Regional Corridor to Community Corridor
- Freight classification change from Major Truck Street to Truck Access Street
- Traffic classification change of SE 174th from Neigh. Collector to District Collector
- Update the Master Street Plan map
- Update the TSP project list with descriptions and estimated costs



Open House: Ron Russell Middle School

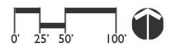
Corridor Improvement Maps

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

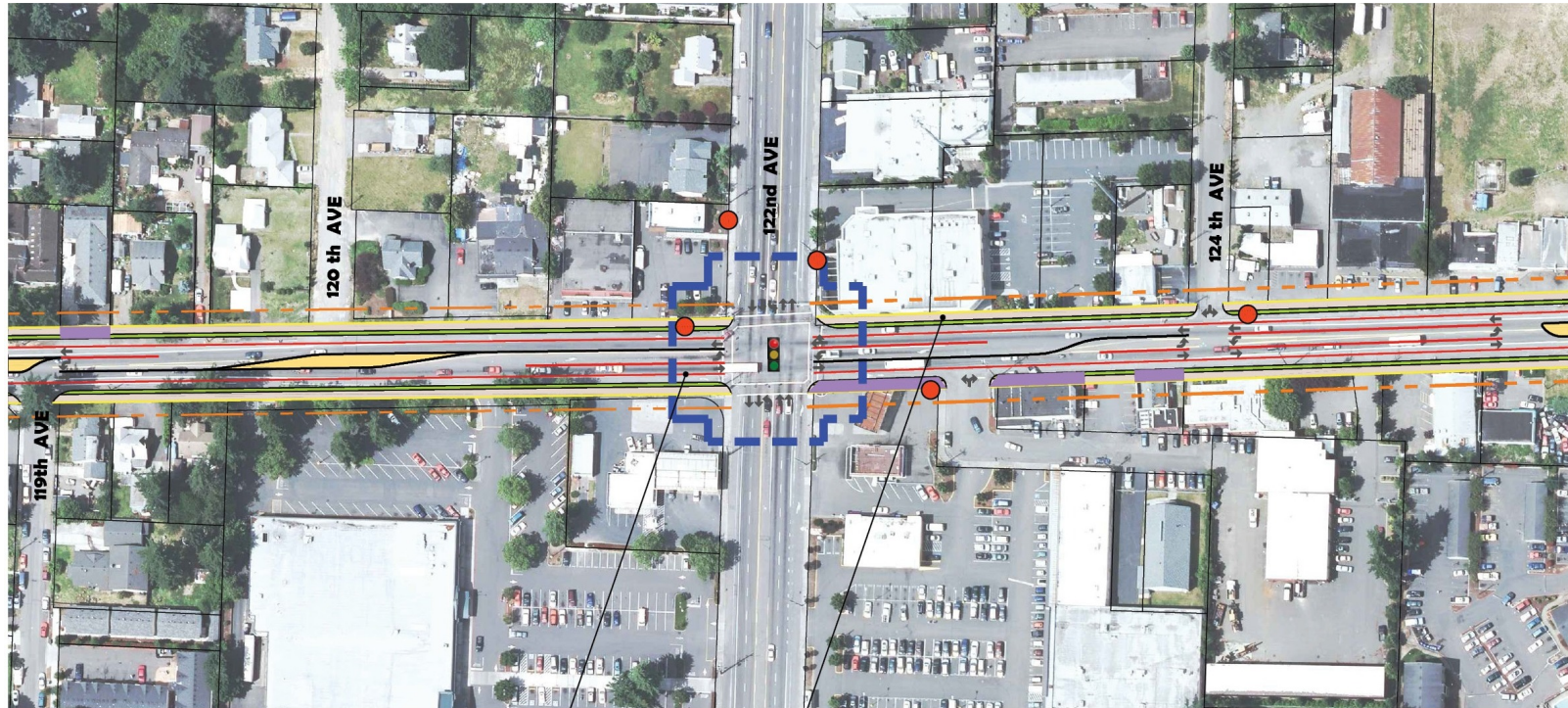


Legend

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



Recommended transportation improvements from SE 119th Ave to SE 125th Pl



Evaluate benefits of transit queue by-pass

Roadway alignment should avoid building impacts at Walgreens

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

