Streetcar Spot Enhancements

How SDOT is Improving Bicycle Experience

Seattle Bicycle Advisory Board
Daniel Osterhage
02/05/20

City of Seattle

Our vision, mission, and core values

Vision: Seattle is a thriving equitable community powered by dependable transportation

Mission: to deliver a transportation system that provides safe and affordable access to places and opportunities

Committed to **6 core values**:

- Equity
- Safety
- Mobility
- Sustainability
- Livability
- Excellence

Overview

Background

Enhancement Areas

Next Steps and Updates

Background: Literature

Bicycle and streetcar interaction issues

Crashes involving streetcar tracks are underreported

People who bike have a higher risk of crashes at complex intersections and roads

Background: International Design Guidelines

- Separate cycling facilities
- Run streetcar tracks in the center or left of street
- Facilitate turns through bike facilities
- Provide clear wayfinding and education
- Consider people who bike in tandem with streetcar planning

Overview

Background

Enhancement Areas

Next Steps and Updates

Enhancement Areas

1. 12th Ave S and E Yesler Way Two Stage Left Turn
2. 12th Ave S and E Yesler Way Bus Stop Enhancements
3. 10th Ave S and E Yesler Way Bus Stop Enhancements

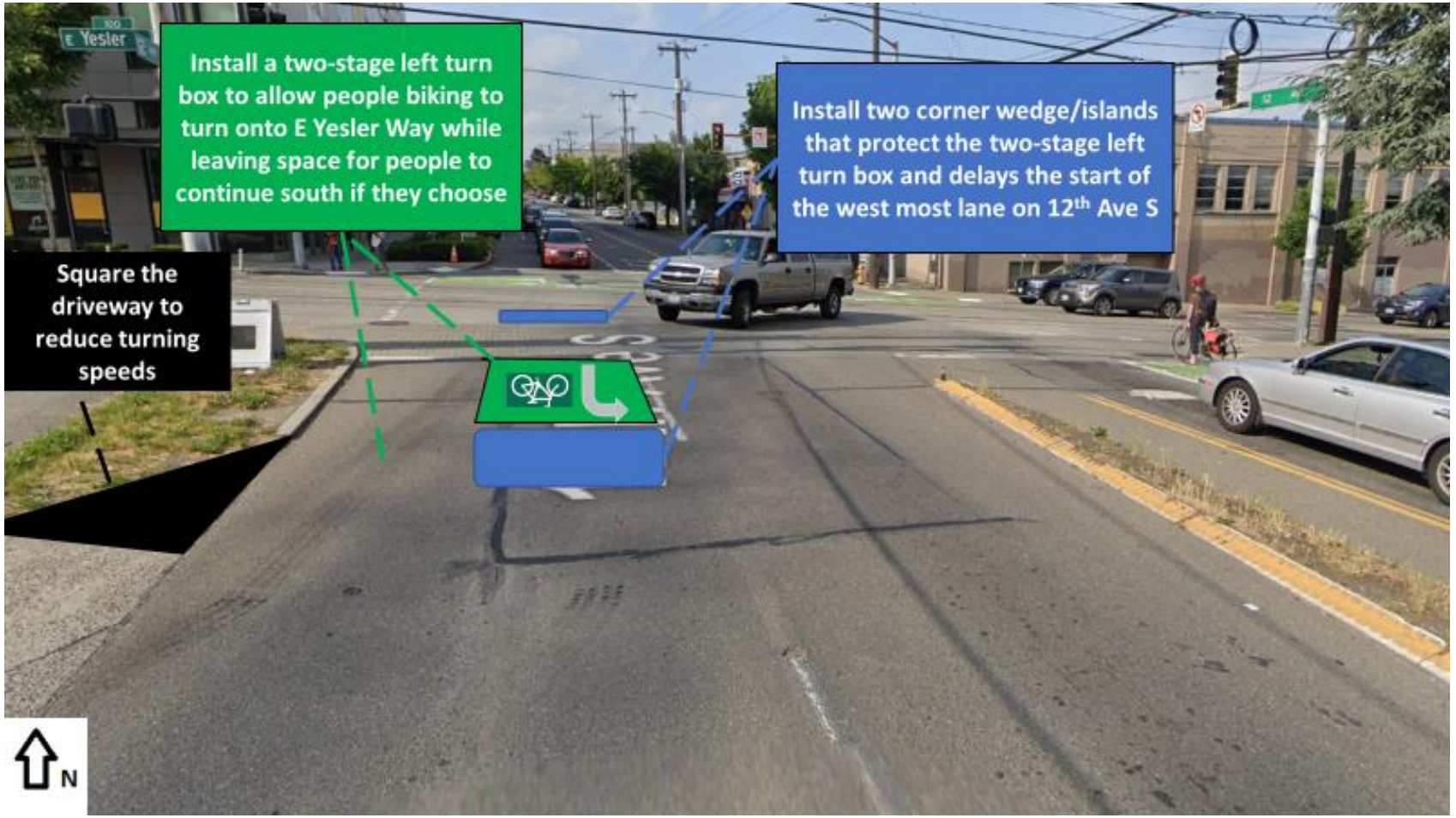
12th Ave S and E Yesler Way Enhancements

- Problem:
  - People biking southbound on 12th Ave S have difficulty turning left onto E Yesler Way to enter the eastbound Yesler bike facility.
- Solution:
  - Install a two-stage left turn box on the SW corner of the intersection
  - Install two corner wedge/islands to protect the box
- Status: Planned for 2020

Traveling southbound on 12th Ave

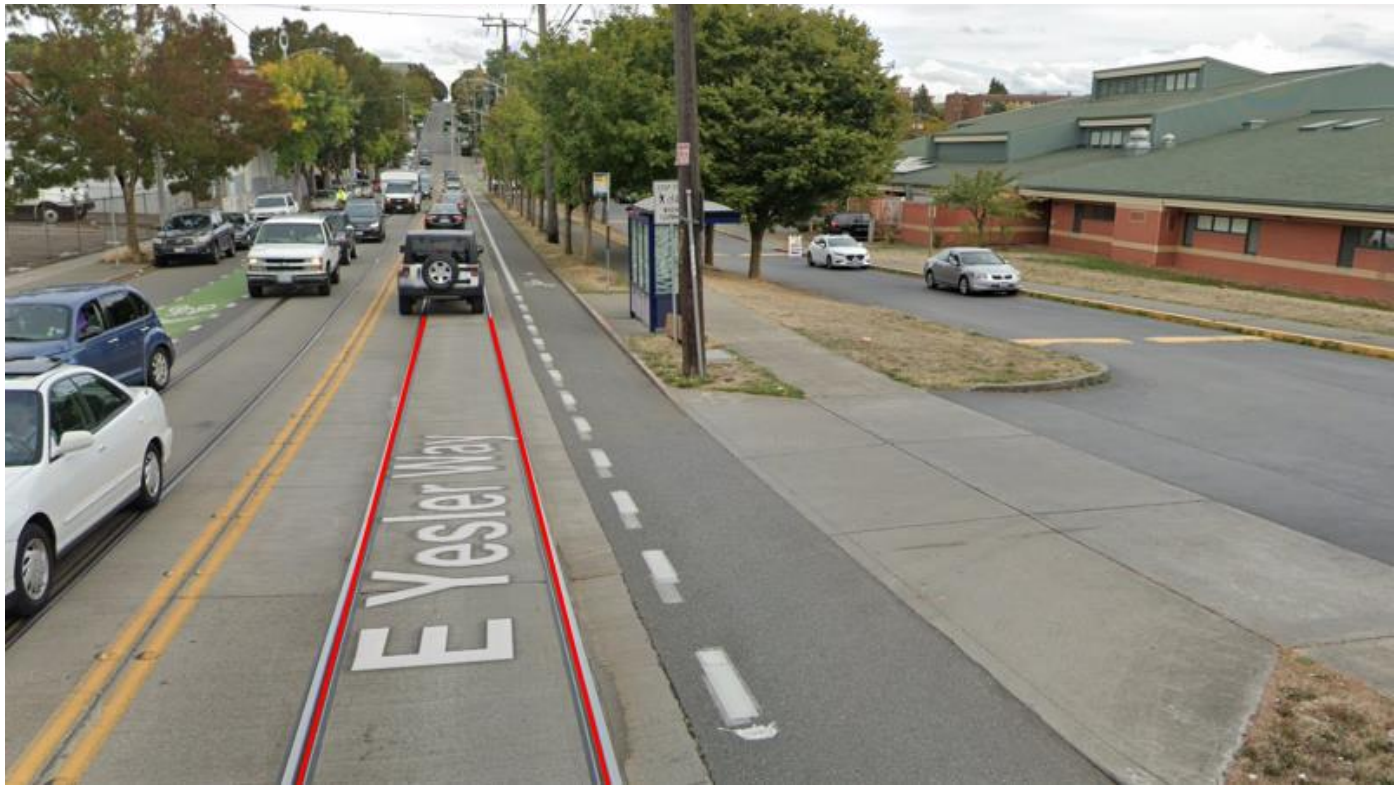
Current left turn option traveling southbound on 12th Ave approaching E Yesler Way

12th Ave S and E Yesler Way Enhancements



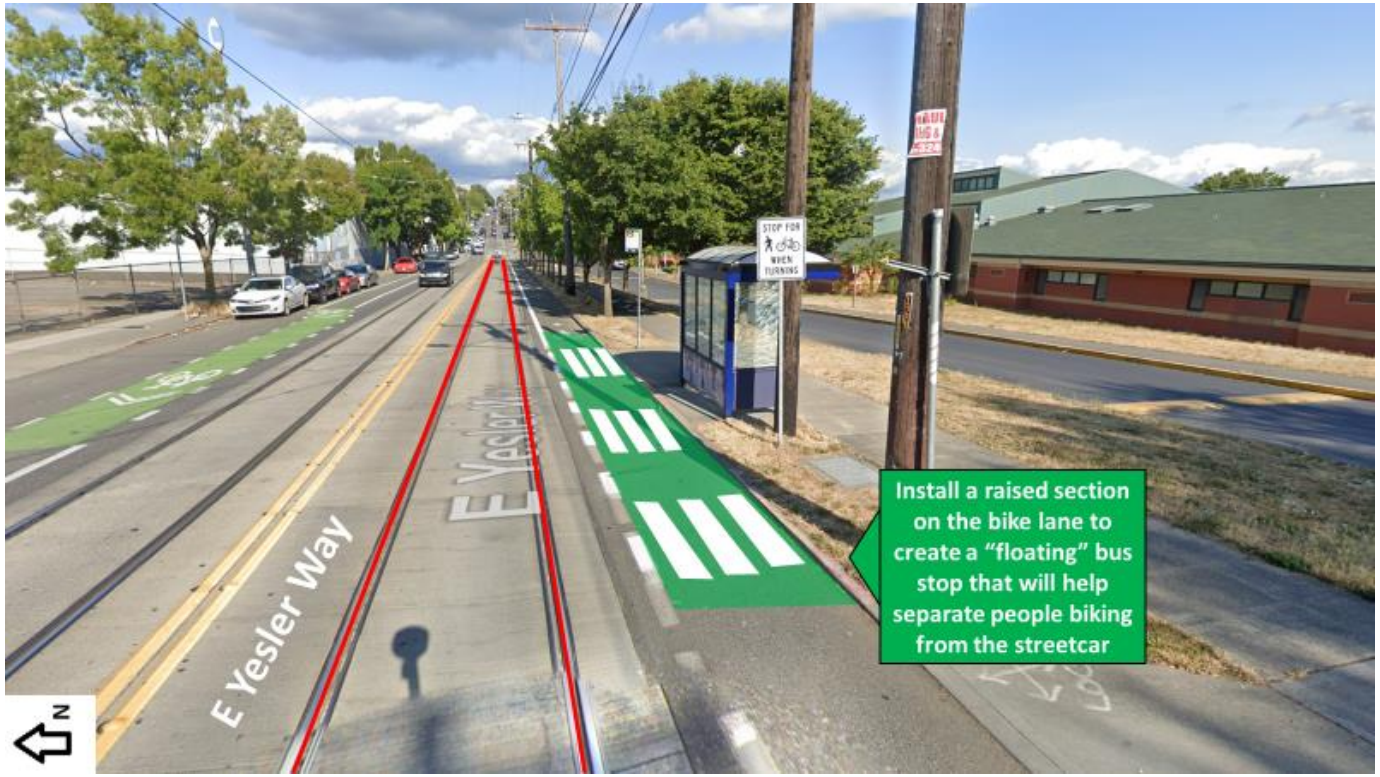
12th Ave S and E Yesler Way Bus Stop Enhancements

- Problem:
  - Currently, when the bus stops people biking might choose to pass the bus on the left which puts them in conflict with the streetcar tracks at a dangers angle.
- Solution:
  - Install a "floating" bus stop to help keep people biking separated from the streetcar tracks.
- Status: Planned for 2020



Traveling eastbound on E Yesler Way

12th Ave S and E Yesler Way Bus Stop Enhancements



Concept "Floating" Bus Stop on E Yesler Way

Existing "Floating" Bus Stop on NE 65th St

12th Ave S and E Yesler Way Bus Stop Enhancements

- Problem:
  - People biking could reenter the on-street bike facility too quickly placing them in conflict with the streetcar tracks.
- Solution:
  - Straighten the angle people biking reenter the facility and install "tough curbing" to lessen potential conflict with the streetcar tracks.
- Status: Planned for 2020

Eastbound bike lane on E Yesler Way

10th Ave S and E Yesler Way Bus Stop Enhancements

Overview

Background

Enhancement Areas

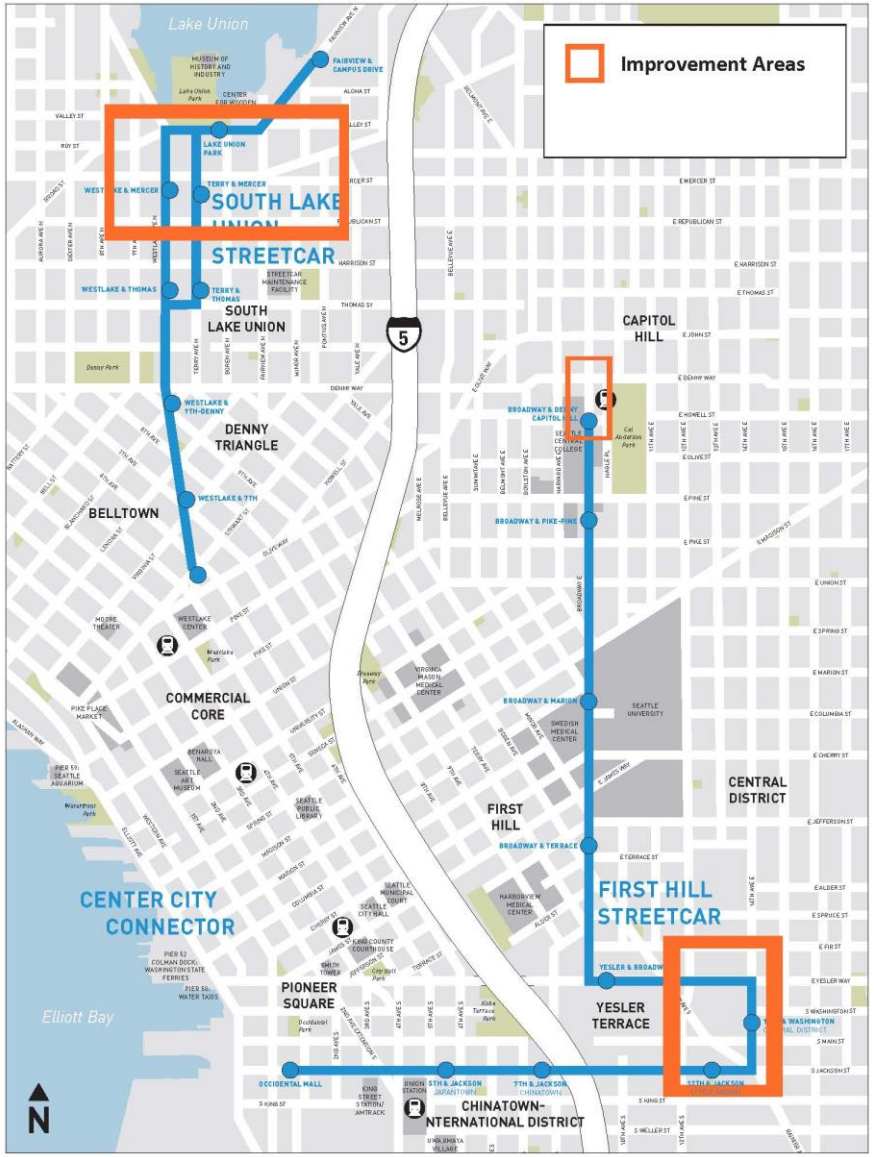
Next Steps and Updates

Next steps

Action	Date
Conduct Outreach	Current-Project Completion
Send to Design	Feb 2020
Construct Enhancements	Completed by the end of 2020

Update on Other Enhancement Areas

- South Lake Union
- Broadway and E Denny Way
- E Yesler Way and 14th Ave S



Questions?

Daniel.osterhage@seattle.gov | (206)684-4384

www.seattle.gov/transportation/projects-and-programs/programs/transit-program/spot-improvements

www.seattle.gov/transportation





References

- Alta Planning + Design (2008). *BICYCLE INTERACTIONS AND STREETCARS: Lessons Learned and Recommendations*. [online] Available at: https://altaplanning.com/wp-content/uploads/Bicycle_Streetcar_Memo_ALTA.pdf.
- Chen, P. (2019). *Built environment factors in explaining the automobile-involved bicycle crash frequencies: A spatial statistic approach*.
- Kondo, M., Morrison, C., Guerra, E., Kaufman, E. and Wiebe, D. (2018). Where do bike lanes work best? A Bayesian spatial model of bicycle lanes and bicycle crashes. *Safety Science*, 103, pp.225-233.
- SDOT, DKS and Toole Design (2019). *Streetcar & Bicycle Safety: Potential treatments*. Seattle.
- Vandenbulcke, G., Thomas, I. and Int Panis, L. (2019). *Predicting cycling accident risk in Brussels: A spatial case–control approach*.