

Appendix C – Cascade Bicycle Club Recommendations

Cascade Bicycle Club Recommendations:

The following recommendations are focused on improving bicycle commuting in the Duwamish (South Park, South Downtown, Georgetown and North Tukwila). The recommendations are based on Cascade Bicycle Club's community outreach findings, previously adopted plans, interviews with stakeholders and our own field analysis and modal expertise.

General recommendations for all neighborhoods:

- A paving plan should be developed for industrial streets within the Duwamish neighborhoods that prioritizes improvements along key bicycle commute routes to support safe and desirable bicycle commuting.
- Public safety should be addressed in the four Duwamish neighborhoods along existing trails and bicycle routes through means such as increased lighting and facility maintenance, and the provision of public art installations at key locations.
- Wayfinding and educational signage and kiosks should be provided throughout the Duwamish to (1) direct bicyclists to safe bicycle routes and key destinations and (2) educate roadway users to share the road. Specific locations where signage is recommended include: at locations providing access to the 1st Ave S nonmotorized bridge facility and along shared freight, bicycle and bus corridors.
- Investigate the opportunity for the Oxbow Bridge to serve as a public nonmotorized bicycle route.
- Provide "end of trip" facilities at businesses that have expressed interest (e.g. SeaMar), such as on-site bicycle storage and showers.
- Partner with organizations like the Cascade Bicycle Club to provide bicycle commuting and education classes to the local business communities and to conduct outreach around bicycle events like Bike to Work Day.
- Identify locations and remove or cover abandoned railroad tracks along key bicycle commute routes.
- Evaluate parking management issues on key bicycle routes throughout the Duwamish neighborhoods.
- Explore opportunities to complete missing links in the existing trail network through the Duwamish.
- Explore opportunities to increase connectivity for bicyclists over or under I-5.
- Ensure drainage grates are replaced with "bicycle-friendly" grates as part of SPU's replacement program.

South Park Recommendations

Specific Recommendations:

South Park Bridge: Replace South Park Bridge including bicycle and pedestrian facilities. Bicycle lanes along bridge are recommended.

14th Ave S: Rechannelize to provide bicycle lanes along 14th Ave S, through the retail core of South Park, connecting to the planned bicycle facilities along the South Park Bridge.

Meyers Way S/Olson PI SW: Provide bicycle facilities along Meyers Way S and Olson PI SW, connecting to 1st Ave S and S Cloverdale St.

Recommendations include:

- Sharrows on Olson PI SW;
- Bicycle lanes on Meyers Way S;
- Green bike lanes at ramp entries and exits;
- In the long-term, explore opportunities for a multiuse trail in this corridor.

Des Moines Memorial Drive/14th Ave S: Continue bicycle lanes along Des Moines Memorial Drive, connecting to 14th Ave S (along overpass). Green bike lanes are recommended at ramp entries and exits.

Multiuse Trail Connection: Work with SDOT and King County Parks to identify a multiuse trail alignment through South Park, connecting the Duwamish and Green River Trail.

West Marginal PI S: Provide bicycle facilities along West Marginal PI S – this presents a key gap in the regional trail network. Sharrows are recommended in areas where right of way is constrained.

Highland Park Way: Provide bicycle lanes on Highland Park Way (restripe roadway).

1st Ave S/Michigan/East Marginal Way intersection: (see Georgetown Recommendation)

East Marginal Way: (see Georgetown Recommendation)

South Downtown (SODO) Recommendations

Specific Recommendations:

Airport Way S: Rechannelize Airport Way to support the addition of bicycle lanes. Rechannelization opportunities include: removing 1 travel lane; removing center turn lane; narrowing inside travel lanes to dedicate 4' of space for curb-side bicycle lanes.

Royal Brougham Way: Rechannelize Royal Brougham between Airport Way and 4th Ave S to extend existing bicycle lanes. This section has low traffic volumes and excess roadway capacity and can support the addition of bicycle lanes on both sides of the roadway.

Alaskan Way (north of S Spokane St):

Recommendations Include:

- Repave and restripe bicycle lane on both sides;
- Extend waterfront trail south along Alaskan Way to provide a multiuse trail that is designed to regional trail standards.

East Marginal Way (see Georgetown Recommendation)

1st Ave S:

Recommendations Include:

- Provide green bike lanes at SR 99 ramp entry and exit (south of stadiums);
- Rechannelize to provide buffered bicycle lanes when opportunity presents itself (opportunities include: removing parking lane in sections, or reducing travel lanes). 1st Avenue (particularly south of S Spokane St) has excess roadway capacity and can support the addition of bicycle lanes.
- Repave 1st Ave S through Pioneer Square.

Utah Ave S:

Recommendations Include:

- Repave and remove orphan railroad tracks;
- Provide sharrows;
- Evaluate parking arrangement and management.

4th Ave S:

Recommendations Include:

- Evaluate potential to serve as north-south bicycle route through SODO;
- Provide high quality bicycle facilities, such as bicycle lanes;

- Improve nonmotorized facilities along 4th Ave S Bridge.

E3 Busway: Explore the potential to provide bicycle access and supporting bicycle facilities within the E3 Busway corridor.

SODO Trail: Evaluate the potential for right of way acquisition to extend SODO trail south from Forest St (at least to S Spokane St).

6th Ave S:

Recommendations Include:

- Repave substandard sections and provide bicycle lanes;
- Organize and manage parking space along 6th Ave S.

S Holgate St: Repave S Holgate St and provide bicycle lanes; ensure S. Holgate remains open to bicyclists and pedestrians.

S Lander St: Support Lander Street grade separation, providing bicycle lanes when the opportunity presents itself.

S Spokane St: Extend multiuse trail east from the West Seattle Bridge along S. Spokane St (S. Spokane St. Plans include a 10' sidewalk on both sides – the Seattle Bicycle Master Plan calls for a separated multi-use trail in this corridor).

Repave and remove or cover orphan railroad tracks along:

- Utah Ave S
- Colorado Ave S
- Occidental Ave S
- S. Horton St
- S. Hanford St
- 6th Ave S

Key intersection/crossing improvement locations:

- 1st Ave S & SR99 on/off ramps (consider advisory, green bike lanes)
- Royal Brougham & Pyramid Parking Lot
- Atlantic & Alaskan
- Atlantic and Utah Ave
- Alaskan Way & S Hanford
- East Marginal Way & S Spokane St
- S Spokane St & 6th Ave S

Georgetown Recommendations

Georgetown Survey Responses:

Cascade Bicycle Club's survey asked people to identify their priority north/south and east/west streets where they would like to see bicycle improvements within Georgetown. The following are listed in order of the number of responses received through the survey. Airport Way received the highest number of responses, followed by East Marginal Way and S Lucile St.

The top three **north/south** streets where people would like to see bicycle improvements are:

1. Airport Way
2. East Marginal Way
3. 4th Ave S

The top three **east/west** streets where people would like to see bicycle improvements are:

1. S Lucile St
2. S Michigan S
3. S Spokane St

Specific Recommendations:

The numbered recommendations are planned for construction by the City of Seattle in 2011 and also supported as recommendations in Cascade Bicycle Club's report. The recommendations following the numbered list are to be viewed in addition to the bicycle facilities planned for 2011.

1. Airport Way (S Lucile St to 13th Ave S): Sharrows (planned, 2011)
2. S Albro Pl/Ellis Ave S (Swift Ave S to E Marginal S): Bike lanes, both sides (planned 2011)
3. Corson Ave S (E Marginal Way S to Airport Way S): Sharrows, both sides (planned 2011)
4. E Marginal Way (Ellis Ave S to south city limit): Bike lanes, both sides (planned 2011)
5. E Marginal Way (Ellis Ave S to Corson Ave S): Sharrows, both sides (planned 2011). *Cascade Bicycle Club recommends bicycle lanes on this section.*

Airport Way (between S Albro Pl & S Massachusetts St): Rechannelize roadway to provide bicycle lanes on both sides of the roadway. In areas of constrained right of way, sharrows are recommended.

East Marginal Way (S River St to Ellis Ave S): Rechannelize roadway to provide bicycle lanes on both sides of the roadway to connect to planned

bicycle lanes on East Marginal Way between Ellis Ave S and 16th Ave S – this will provide a connection to River St and the 1st Ave S Bridge facility. A separated bicycle facility (multiuse trail, cycle track) is recommended north of S Michigan St, and in the long-term, south of S Michigan St.

6th Ave S (between Industrial Way & Lander St):

Recommendations Include:

- Provide bicycle lanes on both sides of the street where right of way allows;
- Bicycle lanes or sharrows are appropriate north of S Lander St;
- 6th Ave S should be repaved to provide safe bicycle infrastructure.

1st Ave S (between Lucile & S Spokane St): Rechannelize roadway to provide bicycle lanes. This section of 1st Ave S has excess roadway capacity that could be allocated to provide a higher-level bicycle facility, such as a buffered bicycle lane (currently, sharrows exist).

Corson St (between Airport & East Marginal Way): In addition to the sharrows planned for Corson St between East Marginal Way and Airport Way, improvements should be made at conflict points along Corson between Michigan St & Airport Way. For example, a green bike lane is recommended along Corson where bicyclists merge with the I-5 off-ramp.

Industrial Way: Provide bicycle lanes in both directions.

S Lucile St (between Airport Way and E Marginal Way):

Recommendations Include:

- Provide bicycle lanes between Airport Way & 4th Ave S;
- Provide sharrows between 4th Ave S & East Marginal Way.

Michigan St: Bicycle infrastructure improvements are recommended along Michigan St, particularly at the approach to the intersection with East Marginal Way, including additional signage to facilitate a safer transition to the 1st Ave S Bridge.

Vale St/ S Harney St: Provide sharrows on both streets.

Key Intersection Improvements:

Michigan/EMW & 1st Ave S Bridge: Provide a separate bicycle-activated signal and phase at the intersection for bicyclists traveling west from Michigan through the intersection. This will allow bicyclists to safely navigate the intersection without needing to merge over two lanes. This should be coupled with a bicycle lane along Michigan and through the intersection, guiding bicyclists to and ultimately through the intersection and to the trail. This treatment has been used in Portland at a similar intersection (2 right-turn lanes accessing freeway on-ramps).

Additional Recommendations Include:

- Improve signage connecting to and from the 1st Ave S Bridge facility
- Study alternatives to provide dedicated bicycle facilities along S Michigan St and E Marginal Way to provide bicycle access to the 1st Ave S Bridge

Corson & Michigan/Bailey: Provide a green bike lane or advisory bike lane at merging points.

Lucile St & Airport Way:

Recommendations Include:

- Provide bicycle facilities along the approaches to this intersection;
- Provide a stop sign for vehicles turning onto Lucile from southbound Airport Way (free right turn location).

Additional Georgetown Recommendations:

Connection over/under I-5 near S Industrial Way, connecting to Beacon Hill and the Chief Sealth Trail: Provide over/underpass to improve connectivity between Southeast Seattle and Georgetown/SODO

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Potential Multiuse Trail Opportunities:

- East Marginal Way, north of Michigan St;
- South side of Argo Rail Yard;
- WSDOT properties connecting Corson to River St.

North Tukwila Recommendations:

Specific Recommendations:

The following list of recommendations provides detail on specific opportunities for improving bicycle commuting and bicycle safety along key routes and at key locations in North Tukwila. While there were some deviations from current plans in terms of the recommended facility type (for example, we recommend buffered bicycle lanes on East Marginal rather than conventional bicycle lanes), overall, Cascade Bicycle Club's recommendations support the recommendations identified in previous plans for North Tukwila.

East Marginal Way:

Recommendation 1 (near-term): Provide dedicated bicycle facilities between S 128th and the Seattle border. Recommended bicycle facilities on this section include cycle tracks or buffered bicycle lanes with painted bike lanes at key conflict points. Opportunities for installing bicycle lanes include:

- B.A.R to S 90th: Remove 1 southbound lane (to provide cycle tracks or buffered bicycle lanes)
- S 90th to 81st – if ADT is too high to remove 1 SB or NB lane, evaluate turn lane necessity. Potential exists to remove turn lane to provide bicycle facilities on both sides (turn pockets would remain)
- S 81st St north: remove 1 southbound lane

Recommendation 2 (long-term): Remove inactive rail line to install a separated multi-use trail on the west side of EMW, connecting to the GRT

Airport Way (Boeing Access Road to planned bicycle facilities in Seattle):

- Rechannelize Airport Way to provide buffered bicycle lanes or cycle tracks on both sides of the roadway (existing traffic volumes support roadway rechannelization). Given the limited number of driveways and intersections along this stretch of Airport Way, a cycle track would be a desirable facility type.
- In addition, widen the existing pathway on the west side of Airport Way/north side of B.A.R. to facilitate a safer connection between Airport Way and East Marginal Way (along Boeing Access Road) support a 12' multi-use trail (from EMW to Airport to Norfolk)
- Provide painted bike lanes at merge areas (Boeing Access Road and Airport Way)

W Marginal Place: Continue Green River Trail north connecting to South Park

- Trail alignment recommended on the east side of W Marginal PI, with a minimum width of 14 feet
- **Near term:** Improvements needed at existing trail terminus, including signage and paving at entrance. If construction of multi-use trail is determined a long-term project, sharrows along West Marginal Way may be an appropriate facility during the interim.

Railroad Ave: Provide sharrows and bicycle signage along Railroad Ave. Provide bicycle access from S 56th St.

Tukwila International Blvd:

- **Long-term:** Green River Trail should be extended on the east side of the waterway, along TIB and East Marginal Way
- **Near –Term:** Rechanelize roadway to provide buffered bicycle lanes on both sides of the roadway between B.A.R and the S 130th St.
- Rechanelization opportunities include removing one NB or SB lane or removing turn lane and providing turn pockets
- Painted bike lanes are recommended at SR 599 on and off-ramps
- Provide signage directing to GRT
- Address access management issues (between Boeing Access Rd. and S 112th St); parking encroaching sidewalk

42nd Ave S (Macadam – S 115th St):

- Install traffic calming measures
- **Preferred:** Provide bicycle lanes on both sides of the roadway
- If right of way is constrained, provide sharrows and signage

40TH Ave S/ 42nd Ave S (East Marginal Way – S 144th St):

- Continue bicycle lanes from S 128th to 40th Ave S
- Install sharrows and traffic calming measures along 40th Ave S (potential for bicycle boulevard)

Green River Trail: Extend Green River Trail north along W Marginal PI and along the east side of the Duwamish Waterway (providing a connection to Seattle and ultimately downtown Seattle)

- Remove sand bags from trail in the near term to provide access to this section of the trail through Tukwila. *Please note: the trail closure is not located within North Tukwila, however the impacts of this closure extend to North Tukwila commuters (and commuters throughout south King County).*
- Improve bicycle access from GRT to 42nd Ave S Bridge (paved trail entrance)

- Complete trail gap east of 42nd Ave S. In the near-term, work with proper owners to provide sharrows and/or signage along trail gap east of 42nd Ave S (along Access Roadway – privately owned)
- Install wayfinding signage at key locations throughout N. Tukwila directing to GRT
- Discourage unintended trail use near Starfire (soccer fans sitting on the trail during games)
- Provide additional signage where trail intersects driveways, unsignalized and signalized intersections. For example, where the trail intersects an unsignalized intersection or commercial driveway, a “Trail X-ing” sign might be used.

Norfolk (Airport Way and East Marginal Way): Rechannelize to provide 6’ bicycle lanes on both sides of roadway (existing: four travel lanes, low traffic volumes)

Boeing Access Road – S Ryan Way:

- Widen existing pathway on the north side of S Boeing Access Rd to provide a multiuse trail connection between East Marginal Way and Airport Way
- Install buffered bicycle lanes on both sides of Boeing Access Road along with signage and green bike lanes at merge areas.
- Bike lanes should extend along from EMW to Ryan Way to 51st.
- In the future, a multiuse trail corridor adjacent to Sound Transit’s light rail alignment (or in close proximity to Boeing Access Road) should be explored to provide a bypass option for pedestrians and bicyclists using the Boeing Access Roadway corridor

S 102nd St:

- Work with Boeing to support bicycle access along S 102nd St
- Reconstruct shoulders to support bike lanes on both sides
- **Near-term:** Provide sharrows on both sides of the 102nd Bridge
- **Long-term:** Provide a grade-separated bicycle and pedestrian path on the north side of 102nd: connecting to East Marginal Way (will require reconstruction of the 102nd bridge to support a grade-separated path)

S 112th St:

- Restripe to provide 5’ bicycle lanes on both sides
- Construct sidewalk
- Install bicycle Wayfinding directing cyclists to Green River Trail

- Ensure signal loop detectors are calibrated to sense bicycles (EMW and TIB)

S 115th St: With low traffic volumes, S 115th can serve as a bicycle boulevard or neighborhood greenway, connecting from East Marginal Way to the Allentown neighborhood.

- Traffic calming, sharrows and signage are recommended along S 115th St.

S 124th St: Organize right of way to provide dedicated and consistent space for bicyclists

- If right of way allows, provide 5' bicycle lanes on both sides
- If right of way is constrained, provide sharrows and bicycle signage

S 56th St: Provide traffic calming and signage to establish a bicycle boulevard along S 56th St, providing a residential connection to the Green River Trail and Railroad Ave. Bicyclists should be given access to Railroad Ave (the road is currently blocked for all users from 56th Ave S). Continue bicycle boulevard/signed route through Allentown neighborhood (suggested routes below)

S 19th St Pedestrian Bridge: Improve signage and access for bicyclists using the S 19th St Pedestrian Bridge. This should serve as an access route to the Green River Trail.

Multiuse Trail Opportunity:

As recommended in the Walk and Roll plan, the proposed trail connection between S 115th St along the western edge of the future Duwamish Riverbend Hill Park up to Boeing Access Road and Airport Way would provide a much-needed trail bypass route to the complex intersection of Boeing Access Road and East Marginal Way.

Potential Bicycle Boulevard Opportunities:

- 56th St → Railroad Ave → 50th PI S → S 125th St → 46th Ave S → 44th PI S → 44th Ave S/S 116th → S 115th ST
- 56th St → Railroad Ave → 50th PI S → 124th St → 42nd Ave S → 19th St Ped Bridge → GRT

Key Intersection Improvements:

EMW/TIB and Boeing Access Road: Provide dedicated bicycle infrastructure at all approaches to intersection (see recommendations for TIB, EMW and Boeing

Access Road). This will require a rechannelization at the intersection, potentially reducing travel lanes to support the addition of bicycle facilities. Reduce potential conflicts by restricting certain turn movements (specifically U-turn from northbound TIB to southbound EMW). Provide crosswalks and yield signage at all crossing locations. Provide green painted bike lanes and instructional signage at merge areas.

Railroad Ave & S 56th St: Provide bicycle access to Railroad Ave from S 56th St

14th Ave S/Des Moines Memorial Drive & W Marginal PI: Continue the multiuse trail through this intersection (on east side) into Downtown South Park (to provide access for southbound bicyclists). In the interim, until the full trail can be constructed, a continuation of the 2-way sidepath facility (existing on 14th Ave S) is recommended to connect to W Marginal PI. Alternatively, a signed route through the properties to the east of 14th Ave S/Des Moines Memorial Drive should be provided.

102nd & Green River Trail/W Marginal PI

- Install bicycle push button
- Provide bicycle wayfinding signage
- Allow bicycle access along 102nd

Terminus of Green River Trail (north of 102nd St)

- Provide trail signage
- Continue multi-use trail north (in the meantime, pave trail entrance)

Interurban S/GRT & S 56th St

- Provide dedicated left-turn phase to reduce left-hook potential (trail-crossing)
- Provide signage above left-turn arrow indicating trail crossing

Vicinity of East Marginal Way & 116th St: Improve Green River Trail Access at this location (signage, improved trail entrance on SE and SW side). Curb cut needed on SW side of EMW.

Entrance/Exit to Green River Trail (north of BECU): Work with property owner to relocate parking spaces blocking the entrance/exit to the Green River Trail [wheel stops have since been removed, however painted parking spaces still need to be removed]

Additional North Tukwila Recommendations:

- Dedicate a neighborhood greenway route (bicycle boulevard) through the Allentown neighborhood

- Provide wayfinding signage at key locations, directing cyclists to existing trails and key destinations like the Link light rail station. Examples of key locations for signage include: International Blvd S & 112th St and East Marginal Way & S 112th St
- Improve trail intersections to facilitate safe bicycle navigation. For instance, provide a protected left turn signal at the intersection of Interurban Ave S and 56th Ave S (Green River Trail crossing)
- Provide bicycle signal detection at traffic signals with a bicycle marking at the location where cyclists should align their bike
- Enforce parking restrictions along bicycle and pedestrian ways
- Provide regular maintenance along existing (and future) multiuse trails and bicycle facilities – improve sightlines at trail/driveway crossings
- Work with Metro to provide bicycle access on deadheading buses to Metro South Base