King County

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Meeting Agenda

Transportation, Economy and Environment Committee

Councilmembers: Rod Dembowski, Chair; Claudia Balducci, Vice Chair; Jeanne Kohl-Welles, Kathy Lambert, Joe McDermott, Dave Upthegrove, Pete von Reichbauer

Staff: Mary Bourguignon, Lead Staff (206-477-0873)
Angelica Calderon, Committee Assistant (206-477-0874)

9:30 AM | **Tuesday, February 2, 2016** | **Room 1001**

Pursuant to K.C.C. 1.24.035 A. and F., this meeting is also noticed as a meeting of the Metropolitan King County Council, whose agenda is limited to the committee business. In this meeting only the rules and procedures applicable to committees apply and not those applicable to full council meetings.

1. Call to Order

2. Roll Call

To show a PDF of the written materials for an agenda item, click on the agenda item below.

3. Approval of Minutes

Minutes of January 19, 2016 meeting pp. 5-12

4. Public Comment

Consent

5. Proposed Ordinance No. 2015-0508 pp. 13-64

AN ORDINANCE approving and adopting the collective bargaining agreement negotiated by and between King County and Professional and Technical Employees, Local 17 (Transit Chiefs - Department of Transportation, Metro Transit Division) representing employees in the department of transportation; and establishing the effective date of said agreement.

Sponsors: Mr. Phillips and Mr. Dembowski

Nick Wagner, Council Staff

Sign language and communication material in alternate formats can be arranged given sufficient notice (296-1000).
TDD Number 296-1024.
ASSISTIVE LISTENING DEVICES AVAILABLE IN THE COUNCIL CHAMBERS.

6. **Proposed Motion No. 2015-0489 pp. 65-72**

A MOTION confirming the executive's appointment of Meredith Molli, who resides in council district two, to the King County agriculture commission.

Sponsors: Mr. Gossett

Mary Bourguignon, Council Staff

7. **Proposed Motion No. 2015-0460 pp. 73-80**

A MOTION confirming the executive's appointment of Shelby Jors, who resides in council district two, to the King County agriculture commission.

Sponsors: Mr. Gossett

Mary Bourguignon, Council Staff

8. **Proposed Ordinance No. 2016-0010 pp. 81-144**

AN ORDINANCE approving and adopting the collective bargaining agreement negotiated by and between King County and Technical Employees' Association (Wastewater Treatment Division, Department of Natural Resources and Parks, Supervisors and Staff) representing employees in the department of natural resources and parks; and establishing the effective date of said agreement.

Sponsors: Mr. Dembowski

Nick Wagner, Council Staff

Briefing

9. **Briefing No. 2016-B0023 pp. 145-146**

Briefing on Implementation Status and Executive Compliance with Paid Parental Leave Law

Nick Wagner, Council Staff
Whitney Abrams, Chief of Employee Engagement and Support, King County Executive Office
Denise Pruitt, Sr Human Resources Policy Advisor, Human Resources Division
Nancy Buonnano-Grennan, Director, Human Resouces Division
Megan Pedersen, Interim Director, Office of Labor Relations

10. **Briefing No. 2016-B0020 pp. 147-148**

Preview of University Link Opening and Metro Transit Restructure

Jeremy Fichter, Transportation Planner, Metro Transit

Discussion and Possible Action

11. **Proposed Motion No. 2015-0517 pp. 149-432**

A MOTION approving the Final Report on Ferry Expansion Options for Marine Division, in response to the 2015/2016 Biennial Budget Ordinance, Ordinance 17941, Section 94, Proviso P1, as amended by Ordinance 18110, Section 39, Proviso P1.

Sponsors: Mr. Dembowski

Leah Krekel-Zoppi, Council Staff

12. **Proposed Motion No. 2016-0089 pp. 433-462**

A MOTION relating to public transportation, approving a report assessing potential traffic impacts of a new bus stop on Montlake Boulevard NE and NE Pacific Place, as directed by Ordinance 18133, Section 5.

Sponsors: Mr. Dembowski

Paul Carlson, Council Staff

Contingent upon referral to the Transportation, Economy and Environment Committee

13. **Proposed Motion No. 2016-0092 pp. 463-506**

A MOTION relating to the establishment of a work plan for improving the transfer environment at locations impacted by the University Link bus integration, as directed by Ordinance 18133, Section 2.

Sponsors: Mr. Dembowski

Paul Carlson, Council Staff

Contingent upon referral to the Transportation, Economy and Environment Committee

14. **Proposed Motion No. 2016-0093 pp. 507-526**

A MOTION relating to public transportation, approving a work plan for assessing ridership impacts and customer response to the University Link bus integration, as directed by Ordinance 18133, Section 4.

Sponsors: Mr. Dembowski

Paul Carlson, Council Staff

Contingent upon referral to the Transportation, Economy and Environment Committee

15. **Proposed Ordinance No. 2016-0016 pp. 527-605**

AN ORDINANCE relating to King County's long-term combined sewer overflow plan; approving a joint project agreement with the city of Seattle for the ship canal water quality project and authorizing the King County executive to sign and fulfill the county's obligations in the agreement.

Sponsors: Mr. Dembowski

Beth Mountsier, Council Staff

Other Business

Adjournment

King County

1200 King County
Courthouse
516 Third Avenue
Seattle, WA 98104

Meeting Minutes

Transportation, Economy and Environment Committee

Councilmembers: Rod Dembowski, Chair; Claudia Balducci, Vice Chair;
Jeanne Kohl-Welles, Kathy Lambert, Joe McDermott, Dave Upthegrove, Pete von Reichbauer

Staff: Mary Bourguignon, Lead Staff (206-477-0873)
Angelica Calderon, Committee Assistant (206-477-0874)

9:30 AM | **Tuesday, January 19, 2016** | **Room 1001**

DRAFT MINUTES
REVISED

Pursuant to K.C.C. 1.24.035 A. and F., this meeting is also noticed as a meeting of the Metropolitan King County Council, whose agenda is limited to the committee business. In this meeting only the rules and procedures applicable to committees apply and not those applicable to full council meetings.

1. Call to Order

Chair Dembowski called the Transportation, Economy and Environment Committee to order at 9:37 a.m.

2. Roll Call

3. Approval of Minutes

Councilmember Upthegrove moved approval of the meeting minutes of December 1, 2015. Seeing no objections, the minutes were approved as presented.

4. Public Comment

There was no public comment.

Consent

5. Proposed Motion No. 2015-0078

A MOTION confirming the executive's appointment of Charles "Gib" Dammann, who resides in council district eight, to the King County solid waste advisory committee, filling an interested resident position.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

6. Proposed Motion No. 2015-0486

A MOTION confirming the executive's appointment of Andy Chittick, who resides in council district three, to the King County rural forest commission.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

7. Proposed Motion No. 2015-0485

A MOTION confirming the executive's appointment of Amy LaBarge, who resides in council district three, to the King County rural forest commission.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

8. Proposed Motion No. 2015-0488

A MOTION confirming the executive's appointment of Roger Calhoon, who resides in council district three, to the King County agriculture commission.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

9. Proposed Motion No. 2015-0515

A MOTION confirming the executive's appointment of Anne Becker, who resides in council district three, to the King County agriculture commission.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

10. Proposed Motion No. 2015-0019

A MOTION confirming the executive's appointment of Judy Daufney-Stenberg, who resides in council district six, to the King County transit advisory commission.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

11. Proposed Motion No. 2016-0022

A MOTION confirming Dawn Dofelmire, councilmember, city of Algona, as a member of the King County Flood Control Zone District advisory committee, representing the Sound Cities Association.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

12. Proposed Motion No. 2016-0023

A MOTION confirming Leanne Guier, councilmember, city of Pacific, as a member of the King County Flood Control Zone District advisory committee, representing the Sound Cities Association.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

13. Proposed Motion No. 2016-0024

A MOTION confirming Will Ibershof, mayor, city of Duvall, as an alternate member of the King County Flood Control Zone District advisory committee, representing the Sound Cities Association.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

14. Proposed Motion No. 2016-0043

A MOTION confirming James McNeal, councilmember, city of Bothell, as an alternate member of the King County Flood Control Zone District advisory committee, representing the Sound Cities Association.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

15. Proposed Motion No. 2016-0026

A MOTION confirming Erika Morgan, councilmember, city of Black Diamond, as a member of the King County Flood Control Zone District advisory committee, representing the Sound Cities Association.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

16. Proposed Motion No. 2016-0027

A MOTION confirming Byron Shutz, councilmember, city of Redmond, as a member of the King County Flood Control Zone District advisory committee, representing the Sound Cities Association.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

17. Proposed Motion No. 2016-0028

A MOTION confirming Jennifer Sutton, councilmember, city of Issaquah, as an alternate member of the King County Flood Control Zone District advisory committee, representing the Sound Cities Association.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

18. Proposed Motion No. 2016-0029

A MOTION confirming Jeff Wagner, councilmember, city of Covington, as an alternate member of the King County Flood Control Zone District advisory committee, representing the Sound Cities Association.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

19. Proposed Motion No. 2016-0040

A MOTION confirming Lorena Gonzalez, councilmember, city of Seattle, as a member of the King County Flood Control Zone District advisory committee.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

20. Proposed Motion No. 2015-0322

A MOTION accepting receipt of a report related to review of the solid waste interlocal agreement in accordance with the 2015/2016 Biennial Budget Ordinance, Ordinance 17941, Section 105, Proviso P1, and authorizing the release of $5,000,000.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

21. Proposed Motion No. 2015-0523

A MOTION approving a report related to King County's financial support of the King County fair operated and managed by the city of Enumclaw in accordance with the 2015/2016 Biennial Budget Ordinance, Ordinance 17941, Section 89, Proviso P2, as amended by Ordinance 18110, Section 35.

A motion was made by Councilmember Upthegrove that this Motion be Recommended Do Pass Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

Discussion and Possible Action

22. Proposed Ordinance No. 2016-0012

AN ORDINANCE amending King County stormwater and surface water management requirements to comply with state requirements for stormwater management and improve protection of water quality, aquatic resources, public health, safety and welfare; amending Ordinance 9163, Section 2, as amended, and K.C.C. 9.04.020, Ordinance 9163, Section 3, as amended and K.C.C. 9.04.030, Ordinance 2281, Section 5, as amended, and K.C.C. 9.04.050, Ordinance 2281, Section 6, as amended, and K.C.C. 9.04.070, Ordinance 4938, Section 12, as amended, and K.C.C. 9.04.140, Ordinance 10636, Section 2, as amended, and K.C.C. 9.12.005, Ordinance 10636, Section 3, as amended, and K.C.C. 9.12.015, Ordinance 10636, Section 4, as amended, and K.C.C. 9.12.025, Ordinance 10636, Section 5, as amended, and K.C.C. 9.12.035, Ordinance 10636, Section 6, as amended, and K.C.C. 9.12.045, Ordinance 10636, Section 7, as amended, and K.C.C. 9.12.050, Ordinance 10636, Section 8, as amended, and K.C.C. 9.12.060, Ordinance 10636, Section 10, as amended, and K.C.C. 9.12.080, Ordinance 15753, Section 4, and K.C.C. 14.42.030, Ordinance 11210, Section 9, and K.C.C. 21A.16.085 and Ordinance 15051, Section 234, and K.C.C. 21A.24.550, adding a new section to K.C.C. chapter 9.04, adding a new section to K.C.C. chapter 21A.06, repealing Ordinance 16392, Section 4, and K.C.C. 9.20.010, Ordinance 16392, Section 5, and K.C.C. 9.20.020, Ordinance 16392, Section 6, and K.C.C. 9.20.030 and Ordinance 16392, Section 7, and K.C.C. 9.20.040.

Erin Auzins, Council Staff, briefed the Committee on the legislation and answered questions of the members. John Taylor, Assistant Director, Water and Land Resources Division, Department of Natural Resources and Parks (DNRP), and Grover Cleveland, Business Development Manager, DNRP, also answered questions of the members.

This matter was Deferred

23. Proposed Ordinance No. 2015-0435

AN ORDINANCE relating to the Vashon-Maury Island groundwater protection committee; and amending Ordinance 14214, Section 8, as amended, and K.C.C. 9.14.070.

Erin Auzins, Council Staff, briefed the Committee on the legislation and answered questions of the members. Greg Raybourn, Vashon-Maury Island Basin Steward and staff to the Vashon-Maury Island Groundwater Protection Committee, also answered questions of the members.
Councilmember von Reichbauer moved amendment 1. The motion passed unanimously.

A motion was made by Councilmember von Reichbauer that this Ordinance be Recommended Do Pass Substitute Consent. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

24. Proposed Ordinance No. 2015-0393

AN ORDINANCE relating to the duties of the facilities management division of the department of executive services, in coordination with the department of natural resources and parks, to administer real property and real property interests obtained by the county in the course of providing services to the King County Flood Control Zone District; and amending Ordinance 12045, Section 4, as amended, and K.C.C. 4.56.060.

Erin Auzins, Council Staff, briefed the Committee on the legislation and answered questions of the members. Anthony Wright, Director, Facilities Management Division, Mark Isaacson, Director, Water and Land Resources Division (WLRD), DNRP, and Kjris Lund, Executive Director, King County Flood Control District also answered questions of the members.
Councilmember Upthegrove moved striking amendment S1. The motion passed unanimously. Councilmember Upthegrove moved title amendment T1. The motion passed unanimously.

This item was expedited to the January 25, 2016 Council Agenda.

A motion was made by Councilmember Upthegrove that this Ordinance be Passed Out of Committee Without a Recommendation. The motion carried by the following vote:

Yes: 6 - Mr. Dembowski, Ms. Lambert, Mr. McDermott, Mr. Upthegrove, Mr. von Reichbauer and Ms. Balducci

Briefing

25. Briefing No. 2016-B0008

Metro/Sound Transit Preparation for March 2016 Service Changes

Matt Hansen, Manager, Customer Communications and Services, Transit Division, Department of Transportation, and Craig Davison, Executive Director of Communications and External Affairs, Sound Transit, were present to brief the Committee with a PowerPoint Presentation and answer questions of the members.

This matter was Presented

26. Briefing No. 2016-B0009

Update on ORCA Replacement Project.

Leah Krekel-Zoppi, Council Staff, briefed the Committee and answered questions of the members. Matt Hansen, Manager, Customer Communications and Services, Transit Division, Department of Transportation, and Brittany Esdaile, Orca2 Regional Project Manager, Sound Transit, were present to brief the Committee with a PowerPoint Presentation and answer questions of the members. Victor Obeso, Deputy General Manager, Transit Division, Department of Transportation, was also present to answer questions.

This matter was Presented

27. Briefing No. 2016-B0013

Lake Geneva Lake Management District

Erin Auzins, Council Staff, briefed the Committee and answered questions of the members.

This matter was Presented

Other Business

There was no other business to come before the committee.

Adjournment

The meeting adjourned at 11:14 a.m.

Approved this _____ day of _____.

Clerk's Signature

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King County

Metropolitan King County Council
Transportation, Economy, and Environment Committee

STAFF REPORT

Agenda Item:	5	**Name:**	Nick Wagner
Proposed No.:	2015-0508	**Date:**	Feb. 2, 2016

SUBJECT

Approval of a collective bargaining agreement with the Professional and Technical Employees, Local 17, covering employees in the Department of Transportation.

SUMMARY

Proposed Ordinance 2015-0508 (Att. 1) would approve a collective bargaining (CBA) (Att. 1-A) with the Professional and Technical Employees, Local 17, covering about 100 Transit Chiefs in the Department of Transportation. As described in the Executive's transmittal letter (Att. 3), the Transit Chiefs are responsible for the first-line supervision and direction of facilities in the Operations, Vehicle Maintenance, Power and Facilities, and Rail Sections of the Transit Division. Transit Chiefs also supervise work groups of professional staff members in areas such as Service Development, Paratransit and Rideshare, and Customer Communications and Services.

The new CBA is a 28-month continuation of the current CBA, as modified by a memorandum of agreement (MOA) (Addendum B to the CBA, Att. 1-A) with the King County Coalition of Unions that the Council approved in November 2014. The new CBA covers the period from September 1, 2014, through December 31, 2016.

BACKGROUND

This bargaining unit's previous CBA expired at the end of August 2014, but its terms continued in effect pursuant to RCW 41.56.470,[1] except to the extent that they were modified by an MOA between the County and the King County Coalition of Unions that the Council approved on November 10, 2014, by Ordinance 17916. The Coalition MOA provided for cost-of-living adjustments (COLAs) of 2.00 percent for 2015 and 2.25 percent for 2016 and a $500-per-employee lump sum payment for 2014.

[1] For bargaining units that are eligible for interest arbitration under state law, as this one is, RCW 41.56.470 provides: "During the pendency of the proceedings before the arbitration panel, existing wages, hours, and other conditions of employment shall not be changed by action of either party without the consent of the other but a party may so consent without prejudice to his or her rights or position under chapter 131, Laws of 1973."

ANALYSIS

The only notable changes in the proposed new CBA are:

1. Effective Dates. The new effective dates (September 1, 2014, through December 31, 2016) (CBA Art. 23; Att. 1-A, p. 26);

2. COLAs. The changes made by the Coalition MOA that the Council approved in November 2014, as described above (e.g., 2.00% COLA for 2015; 2.25% for 2016) (CBA Art. 12, § 1 and Addendum A; Att. 1-A, pp. 14, 28).

3. Process for Filling Operating Chief Vacancies. The CBA creates a process for notifying employees of vacancies in the position of Operations Chief (CBA Art. 14, § 6; Att. 1-A, p. 21).

FISCAL IMPACT

The proposed new CBA would have no fiscal impact beyond that of the Coalition MOA. The amounts listed in the Fiscal Note (Att. 4) are attributable to the Coalition MOA, not the new CBA.

INVITED

David Levin, Labor Negotiator, King County Office of Labor Relations
Cecilia Mena, Union Representative, Professional and Technical Employees, Local 17

ATTACHMENTS

1. Proposed Ordinance 2015-0507
   Att. A (Collective Bargaining Agreement)
2. Checklist and Summary of Changes (prepared by executive staff)
3. Transmittal Letter
4. Fiscal Note

KING COUNTY

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Signature Report

November 30, 2015

Ordinance

Proposed No. 2015-0508.1 **Sponsors** Phillips

AN ORDINANCE approving and adopting the collective bargaining agreement negotiated by and between King County and Professional and Technical Employees, Local 17 (Transit Chiefs - Department of Transportation, Metro Transit Division) representing employees in the department of transportation; and establishing the effective date of said agreement.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. The collective bargaining agreement negotiated by and between King County and Professional and Technical Employees, Local 17 (Transit Chiefs - Department of Transportation, Metro Transit Division) representing employees in the department of transportation, which is Attachment A to this ordinance, is hereby approved and adopted by this reference made a part hereof.

SECTION 2. Terms and conditions of said agreement shall be effective from September 1, 2014, through and including December 31, 2016.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

_____

Larry Phillips, Chair

ATTEST:

_____

Anne Noris, Clerk of the Council

APPROVED this _____ day of _____, _____.

_____

Dow Constantine, County Executive

Attachments: A. Agreement Between King County and Professional and Technical Employees Local 17 Transit Chiefs

AGREEMENT BETWEEN
KING COUNTY
AND
PROFESSIONAL AND TECHNICAL EMPLOYEES
LOCAL 17
TRANSIT CHIEFS

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Preamble

These Articles constitute an agreement, the terms of which have been negotiated in good faith, between King County and the Professional and Technical Employees, Local 17. This Agreement will be subject to approval by Ordinance by the County Council of King County, Washington.

Purpose

The purpose of this Agreement is to promote the continued improvement of the relationship between King County, hereafter referred to as the County, and all Employees whose job classifications are listed in Addendum A represented by the Professional and Technical Employees, Local 17, hereafter referred to as the Union, and to set forth the wages, benefits and working conditions of such Employees.

In the establishment of this contract, the County and the Union are mutually committed to two fundamental goals:

1. Provide the citizens of King County with top quality transit services, products and facilities which are safe, efficient and reliable, and which have the flexibility to adapt to the changing requirements of our community.

2. Be an outstanding place for all Employees to work.

This labor agreement is intended to support these goals and to uphold and nurture the existing environment of mutual respect, collaboration and teamwork.

ARTICLE 1: UNION RECOGNITION, MEMBERSHIP AND REPRESENTATION

Section 1. Union Recognition

The County recognizes the Professional and Technical Employees, Local 17, as the exclusive bargaining representative of all Employees whose job classifications are listed in the attached Addendum A. In recognizing the Union as the exclusive bargaining representative, the County agrees to not effect any change in the wages, benefits or working conditions covered by the terms of this Agreement, except by mutual agreement with the Union.

Section 2. Union Membership

A. It is a condition of employment that, within 30 days of the effective date of this Agreement, all Employees covered by this Agreement will become and remain members in good

standing in the Union, or pay an agency fee to the Union in lieu of membership. Each Employee covered by this Agreement and hired into the bargaining unit on or after its effective date will, on the thirtieth day following the beginning of such employment, become and remain a member in good standing of the Union, or pay an agency fee to the Union in lieu of membership. Unless otherwise required to do so, non-Local 17 employees working in an acting capacity in a bargaining unit position shall not have to pay union dues unless the assignment exceeds ninety (90) days, thereafter the employee shall pay dues for the duration of the assignment.

B. An Employee who holds bona fide religious tenets or teachings that prohibit union membership or the payment of dues or initiation fees to union organizations, or for any other reason is eligible for a religious exemption under applicable law, will pay an amount of money equivalent to regular union dues and initiation fees to a charitable organization mutually agreed upon by the Employee and the Union. Such Employee will furnish the Union with written proof that such payments are being made. Disputes between an Employee and the Union over eligibility for a religious exemption will be resolved through the procedures set forth in WAC 391-95.

C. Failure by an Employee to abide by the provisions of paragraph A and B will constitute cause for discharge. If an Employee has failed to fulfill the above obligation, the Union will provide the Employee and the County with 30 days notification of the Union's intent to initiate discharge action. During this period, the Employee may make restitution of the amount, which is overdue.

D. Upon request, the County will provide the Union with a current list of all Employees in the bargaining unit. Such list will indicate the Employee's name, section and/or unit, employment status, job classification, date of hire and date of hire into his/her current classification.

E. The County will notify the Union whenever an Employee is moved into or out of a bargaining unit position. The notification will include the Employee's name, section and/or unit, employment status, job classification, date of hire and effective date of the personnel action.

Section 3. Union Dues Deduction

A. Upon receipt of written authorization individually signed by a bargaining unit Employee, the County will have deducted from the pay of such Employee the amount of dues or

agency fees as certified by the Union.

B. The Union will indemnify and hold the County harmless against any claims made and against any suit instituted against the County on account of any collection of dues for the Union. The Union agrees to refund to the County any amounts paid to it in error on account of the collection provision upon presentation of proper evidence thereof.

Section 4. Shop Stewards

The Union has the right to appoint stewards at any location where members of the bargaining unit are employed.

Section 5. Union activities and representation

An Employee who is authorized to serve as a representative of the Union may visit the work location of other Employees at reasonable times for the purpose of administering the terms of this Agreement. If the Union representative is making a worksite visit during his or her regular work hours, s/he will obtain agreement from his/her supervisor. Before visiting the work location, a Union representative must contact the supervisor or manager of that work location to insure that the worksite visit will not unduly interfere with normal operations at the worksite.

Section 6. Union Postings

The County will permit the Union to post or distribute, in Employees' work locations, announcements of meetings, election of officers, and other Union materials, provided there is sufficient space beyond what is required by the County for normal operations. Only recognized, officers, stewards and staff representatives of the Union will be entitled to post and remove Union materials, and only materials originating from the Union office and bearing the Union logo or letterhead may be posted on the Union bulletin board space.

Section 7. Retired Employees

The County and the Union recognize the benefit of rehiring retired Employees on a temporary basis into classifications in which they were previously employed consistent with Washington State Department of Retirement Services restrictions on retirees returning to work.

Section 8. Non-Discrimination

Neither party will discriminate against any Employee or applicant for employment on account

of membership or non-membership in any labor union or other employee organization.

ARTICLE 2: EQUAL EMPLOYMENT OPPORTUNITY

Neither the County nor the Union will discriminate against any individual with respect to compensation, terms, conditions, or privileges of employment because of race, color, creed, religion, national origin, age, ancestry, marital status, gender, sexual orientation or a sensory, mental or physical disability, except as otherwise provided by law.

ARTICLE 3: EMPLOYEE RIGHTS

Section 1. Review of Personnel Files

Upon request, an Employee can schedule an appointment to review his/her personnel files. An Employee may authorize his/her Union representative to obtain a copy of his/her personnel files. An Employee may also review, upon request, any files to which s/he has a legal right to access.

Section 2. Union Representation

An Employee, at his/her request, has a right to Union representation at any meeting which s/he reasonably believes may lead to disciplinary action against the Employee.

ARTICLE 4: PERFORMANCE APPRAISALS

Section 1. Performance Appraisals

Each Employee will receive regular performance appraisals.

ARTICLE 5: PROBATION

Section 1. Length of Probation

A. Upon appointment as a regular Employee to a job classification covered by this Agreement, the Employee will serve a six-month probation. An Employee returning to a job classification in which the Employee has already satisfactorily completed probation will not be required to serve a new probation unless the Employee has been out of the job classification for three or more years, or the Employee is returning to the position due to a disciplinary demotion.

B. An Employee's probation may be extended by the County, with the concurrence of the Union.

Section 2. Credit for Temporary Acting Time

If an Employee has been working in a job classification on a temporary, acting basis and is

then hired into the same position as a regular Employee, any portion of the time spent in the position in an acting capacity may, at the discretion of the County, be counted towards satisfying the Employee's required probationary period.

Section 3. Dispute resolution

A. Performance

1) The County may terminate a probationary Employee for unsatisfactory job-performance.

2) An Employee who is terminated for unsatisfactory job-performance while on probation may, within 10 days of notice of the notice of termination, request a review of the circumstances with the Supervisor of Transit Employee Relations/designee, or with the immediate supervisor of the individual who made the decision to terminate the Employee. Any failure of the County to execute this review does not constitute a harmful error in the termination nor in any way create a right to grieve or arbitrate the decision.

B. Discipline

1) An Employee on probation cannot access the grievance and arbitration provisions of Article 7.

2) An Employee who receives discipline (excluding oral reprimands) up to and including termination of employment while on probation may, within 10 days of notice of the discipline, request a review of the circumstances of the discipline with the Supervisor of Transit Employee Relations/designee, or with the immediate supervisor of the individual who made the decision to discipline the Employee. Any failure of the County to execute this review does not constitute a harmful error in the discipline nor in any way create a right to grieve or arbitrate the decision.

ARTICLE 6: DISCIPLINE

A. Employees may be disciplined for just cause.

B. King County will advise employees of Weingarten rights when called to a formal investigatory interview. Employees may request Union representation in any meeting where they reasonably believe that discipline may result.

C. Probationary employees are at-will employees.

ARTICLE 7: DISPUTE RESOLUTION PROCEDURES

Section 1. Purpose

The Union and County recognize that prompt and diligent review of Employee disputes and grievances is vital to the development and continuance of good employee relations and morale. To accomplish this objective, the Union and County will make every effort to settle disputes and grievances quickly and at the lowest possible level of supervision.

Section 2. Time limits

Time limits for the dispute resolution processes described below may be extended upon written agreement between the Union and the County. If the County fails to respond within the designated time frames, the Union may pursue the dispute to the next step of the resolution process. If the Union does not pursue the dispute to the next process within the time frames noted, it will be presumed resolved.

Section 3. Employee Responsibility

This Agreement provides an Employee with two dispute resolution options, described in Sections 4 and 5 below, so that both contractual and non-contractual issues can be effectively resolved. Prior to deciding which option to follow, the Employee will confer with his/her union representative to determine the appropriate process for the Employee's specific concern.

Section 4. Non-Contractual Dispute Resolution and Mediation

A. The intent of this provision is to provide the Employee with a formal dispute resolution process for issues for which the grievance and arbitration processes do not apply.

B. An Employee who has a non-contractual dispute is encouraged to exercise his/her rights to pursue dispute resolution and, if appropriate, mediation to resolve the dispute. To initiate this process, the Employee will request a dispute resolution meeting with his/her immediate supervisor. The Employee and his/her supervisor will then meet in an attempt to resolve the dispute. The supervisor, if requested by the Employee, will provide the Employee with a written summary of the meeting and outcome within 20 days of the meeting.

C. If the dispute remains unresolved, the Union may, within 20 days of the

Employee's receipt of the written summary, request mediation. The request for mediation will be made, in writing, to Transit Human Resources. Mediation will use a mutually acceptable mediator(s) and will be concluded within 30 days of the request for mediation.

Section 5. Contractual Disputes

A. The parties agree that an Employee may use the following grievance process only for disputes regarding the interpretation and/or application of the express written terms of this Agreement.

B. Pre-Grievance Meeting: Before an Employee may file a grievance, the Employee must, within 20 days of the act or knowledge of the act being grieved, submit to his/her supervisor a written request for a pre-grievance meeting outlining the date and specific events of concern. The Employee and his/her supervisor will meet in an attempt to resolve the issue(s) raised by the Employee. Representatives from the Union and/or the County may attend this meeting if requested. Within 20 days of receipt of the request, the supervisor will provide the Employee with a written summary of the meeting, including a statement of the outcome.

C. Step One:

1) If the Employee and his/her supervisor are unable to resolve the issue(s) to the Employee's satisfaction, the Employee may, within 20 days of receipt of the pre-grievance dispute resolution meeting summary or, if no timely summary was issued, within 20 days from the date the summary was due, present a written grievance to his/her supervisor. The grievance must include:

(a) Description of the action or alleged action which is being grieved.

(b) A copy of the Pre-grievance dispute resolution summary, if issued.

(c) Identification of the provision of this Agreement, which has been violated.

(d) The remedy being sought.

2) Upon receipt of a Step One grievance request, a Transit Manager/designee will meet with the Employee in an attempt to resolve the Employee's grievance. The County must issue a written decision to the Employee and Union within 20 days following receipt of the Step One grievance request.

D. Step Two:

1) If the Step One decision is not satisfactory to the Union or not timely issued, the Union may, within 20 days of the receipt of the Step One response or, if no timely response was issued, within 20 days from the date the response was due, submit a written request for a Step Two hearing of the grievance to Transit Human Resources.

2) Upon receipt of the Step Two grievance request, the Supervisor of Transit Employee Relations/designee and the Section Manager/designee will meet with the Employee and the Union in an attempt to resolve the Employee's grievance. The County must issue a written decision to the Employee and the Union within 20 days of receipt of the Step Two request. This decision will have the concurrence of the Director of the King County Office of Labor Relations/designee.

E. Mediation:

1) For disputes regarding the discipline of an Employee other than a suspension, demotion or discharge, Mediation is the next and final dispute resolution step. All non-disciplinary disputes and disputes regarding the suspension, demotion or discharge of an Employee may be taken to Mediation with an additional review available through arbitration, or they may be taken directly to arbitration.

2) Should the parties agree that the next appropriate step for the grievance is mediation; the Union may submit a request for mediation to Transit Human Resources. Transit Human Resources must receive such request within 20 days of receipt of the Step Two response or, if no timely response was issued, within 20 days from the date the response was due. The process will use a mutually acceptable mediator(s) and will conclude within 30 days of the agreement to pursue Grievance Mediation.

F. Arbitration:

1) All non-disciplinary disputes and disputes regarding the suspension, demotion or discharge of an Employee may be taken to arbitration if the Step Two decision is not satisfactory or not timely issued, or if the mediator is unsuccessful at resolving the dispute. To initiate the Arbitration process, the Union must submit a request for arbitration to Transit Human Resources. The request for arbitration must be received by Transit Human Resources within 20 days

of receipt of the Step Two response or, if no timely response was issued, within 20 days from the date the response was due, or, if mediation was attempted, 20 days from the date of the mediation. The County and the Union will select an impartial third party to serve as arbitrator. In the event the parties are unable to agree upon an arbitrator, then the arbitrator will be selected from a list provided by the Federal Mediation and Conciliation Services (FMCS) through a mutually acceptable process.

2) The power and authority of the arbitrator will be strictly limited to determining the meaning and interpretation of this Agreement. The arbitrator will not have the authority to modify this Agreement, nor to limit or impair any common law right of the County or the Union. The arbitrator's decision will be in accordance with federal and state laws and will be final and binding on all parties.

3) The expense of the arbitration will be borne equally by the County and the Union. The County and the Union will each bear their own expense (including attorney fees) for the preparation and presentation of the arbitration regardless of the outcome of the case.

Section 6. Unfair Labor Practices

The parties agree that 30 days prior to filing an unfair labor practice (ULP) complaint with the Public Employment Relations Commission (PERC), the complaining party will notify the other party, in writing, meet and make a good faith attempt to resolve the concerns unless the deadline for filing with PERC would otherwise pass or the complaining party is seeking a temporary restraining order (TRO) as relief for the alleged ULP. The complaining party seeking a TRO will give the other party at least 24 hours notice and promptly serve a copy of all written material on the other party prior to the TRO hearing.

ARTICLE 8: HOLIDAYS

Section 1. Approved Holidays

All Employees, except temporary Employees, will be granted the following designated holidays with pay:

New Year's Day	January 1st
Martin Luther King, Jr. Day	Third Monday in January
President's Day	Third Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4th
Labor Day	First Monday in September
Veteran's Day	November 11th
Thanksgiving Day	Fourth Thursday in November
Day after Thanksgiving	
Christmas Day	December 25th
Two Personal Holidays	

Employees will also be granted any day designated by public proclamation of the Governor of Washington State as a legal holiday. When a designated holiday occurs on a Sunday, the following Monday will be observed as the holiday. When a holiday occurs on a Saturday, the preceding Friday will be observed as the holiday.

Section 2. Personal Holidays

Eight hours of holiday time will be credited to each Employee's holiday accrual bank in the pay period that includes the first day of October and eight hours of holiday time will be credited to each Employee's holiday accrual bank in the pay period that includes the first day of November of each year.

Section 3. Work on a Holiday

An Employee who is required to work on a designated holiday will accrue eight hours of holiday time for such holiday.

Section 4. Regular Day Off on a Holiday

When a designated holiday occurs on an Employee's regular day off, eight hours of holiday time will be added to the Employee's holiday accrual bank.

Section 5. Holiday Accrual Bank

An Employee may not exceed 40 hours of holiday time, including personal holidays, in his/her Holiday Accrual Bank on the pay period that includes September 15 of each year. Any amount in excess of 40 hours on the pay period that includes September 15 shall be forfeited.

Section 6. Holiday Cash-out

No accrued holiday time will be paid in cash except in the event of an Employee's death. In such cases, all accrued holiday time will be paid to the Employee's estate.

ARTICLE 9: VACATIONS

Section 1. Accrual Rates

Regular, full-time and regular, part-time (prorated) Employees will receive vacation accrual as indicated in the following table:

Months of Service	Vacation Accrual Rate	Approximate Days Accrued Per Year (based on 2080 hours)
000 thru 060	0.0462 X Basis Hours	12
061 thru 096	0.0577 X Basis Hours	15
097 thru 120	0.0616 X Basis Hours	16
121 thru 192	0.0770 X Basis Hours	20
193 thru 204	0.0808 X Basis Hours	21
205 thru 216	0.0847 X Basis Hours	22
217 thru 228	0.0885 X Basis Hours	23
229 thru 240	0.0924 X Basis Hours	24
241 thru 252	0.0962 X Basis Hours	25
253 thru 264	0.1001 X Basis Hours	26
265 thru 276	0.1039 X Basis Hours	27
277 thru 288	0.1078 X Basis Hours	28
289 thru 300	0.1116 X Basis Hours	29
301 thru 9999999	0.1154 X Basis Hours	30

Section 2. Vacation Accrual Date

Each Employee will accrue vacation each biweekly pay period, based on County seniority. County seniority is defined as completed years of service with King County and its predecessor organizations including Metro, the City of Seattle and Metropolitan Transit.

Section 3. Work while on Vacation

No person will be permitted to work for compensation for the County in any capacity during a time when vacation is being paid.

Section 4. Disposition of Accrual

A. Upon termination, the Employee will be paid for unused vacation, up to a maximum of 480 hours.

B. In the case of separation by death, payment of unused vacation, up to a maximum of 480 hours, will be made to the Employee's estate or, in applicable cases, as provided by R.C.W. 49.48.

Section 5. Maximum Accrual

The maximum vacation which an Employee may have in his/her vacation balance on the last day of the payroll year is 480 hours. Employees must use vacation leave in excess of the maximum accrual amount on or before the last day of the pay period that includes December 31 of each year. An Employee's appointing authority may approve a temporary carryover of excess vacation leave. At the time of separation, no Employee will be paid for more than 480 hours.

Section 6. Cancellation of Vacation Due to Emergency

To avoid forfeiture of vacation as described in Section 5 above, an Employee may cash out a vacation balance in excess of 480 hours if all of the following conditions are met:

1. In July of each year, the County will notify each Employee of his/her current vacation balance. No later than August 31, each Employee who wishes to protect against forfeiture of vacation must develop a written plan for use of vacation, approved in writing by his/her supervisor, that demonstrates a vacation balance of no more than 480 hours will remain by the end of the payroll year.

2. Documented emergency circumstances in the workplace, as determined by

management, or an Employee's documented illness or injury, force the cancellation of a vacation that is set forth in an Employee's vacation plan.

3. The Employee and his/her supervisor in good faith, attempt, but fail, to reschedule and implement the cancelled vacation by the end of the payroll year.

Cash out of vacation under the conditions listed above is limited as follows:

1. Cash out may only bring an employee's vacation bank down to 480 hours; and

2. An employee may only cash out hours of planned vacation that were cancelled due to documented emergency circumstances, illness, or injury, less any vacation hours that were successfully rescheduled and taken.

An Employee who meets the criteria above may seek vacation cash out per this section or request carryover of vacation as described in Section 5, at his/her discretion. If a request for carryover is made which meets the above criteria, and is granted, the amount carried over must be included in the following year's vacation plan. Consecutive year request for payout or carry over must be reviewed and approved by the Department Director.

ARTICLE 10: SICK LEAVE

Section 1. Accrual Rate

A. Each Employee will accrue sick leave at the rate of 0.04616 hours for each hour on regular pay status. Employees shall accrue sick leave from their date of hire in a leave eligible position.

B. There is no limit to the amount of sick leave that an Employee can accrue.

Section 2. Use of Other Accrued Leave

An Employee may choose to use vacation or other accrued leave time as an extension of sick leave when sick leave has been exhausted.

Section 3. Authorized Uses

Sick leave may be used in accordance with Section 14.4.3 of the King County Personnel Guidelines, the King County Family Medical Leave Act, and applicable State and federal laws.

Section 4. Disposition of Accrual

A. Separation from King County employment, except by retirement or death, will

cancel all sick leave currently accrued to the Employee. Should an Employee resign in good standing, or be laid off, and return to the County within three years, his/her accrued sick leave will be restored.

B. An Employee who has at least five years of service and retires as a result of length of service, or who terminates by reason of death, will receive (or the Employee's estate will receive) a cash payment equal to 35% of the Employee's accrued sick leave multiplied by the Employee's salary rate in effect on the date of separation or termination.

Section 5. VEBA

VEBA benefits will be made available to this bargaining unit to the extent, terms, and duration that they are offered to this bargaining unit through the Joint Labor Management Insurance Committee.

ARTICLE 11: OTHER LEAVE BENEFITS

Section 1. Bereavement Leave

If an Employee's close relative or the close relative of the Employee's spouse/domestic partner dies, such Employee is entitled to two days off with pay for bereavement leave. An additional day will be paid when round trip travel of 200 or more miles is required. If an Employee requests more time, up to an additional three days may be used from the Employee's sick leave balance.

Section 2. Union Leave

If an Employee is elected or appointed to an office in a local of the Union which requires part or all of his/her time, the Employee will be given, with agreement of the Employee's supervisor or manager, a leave of absence without pay.

Section 3. Executive Leave

A. Employees represented by this Agreement are FLSA-exempt. However, the nature of their work sometimes requires them to be on-call for significant periods of time and to work, on an on-going basis, substantially in excess of the standard work schedule for other County employees. Therefore, each Employee will be granted five days of executive leave annually. In addition to these five days of executive leave, an Employee may be granted up to an additional five days of executive leave, when authorized in writing by his/her immediate supervisor, in recognition of the additional

on-call time, excess work and/or performance expectations required by his/her specific position.

B. Employees assigned to a swing or graveyard shift or who have significant on-call responsibilities will meet with their supervisor at the beginning of each year to discuss recognition for their additional time commitments to work. These employees and supervisors will have a discussion about the manner to recognize each employee's additional time commitments, and may include whether each employee will generally flex his/her time to roughly account for additional time commitments outside the normal work hours, complete regular shifts in addition to the extra time commitments, and the amount of variation the additional commitments require to the employee's normal schedule. Upon the completion of this discussion the employee will be granted up to an additional five days of executive leave provided for in A. above annually. The grant of these additional days of executive leave remains at the sole discretion of management. For employees granted the additional five days of executive leave who continue to have extraordinary demands on their off shift hours, flexibility with their work schedules may be granted by their immediate supervisor.

C. Semi-annually, a joint collective bargaining agreement labor-management committee will meet to review compliance with this and other collective bargaining provisions.

D. The yearly executive leave accrual will appear on the Employee's paycheck resulting from the first full pay period in January. Executive leave must be used in the payroll year granted and cannot be carried into the next payroll year or cashed out. No executive leave will be paid in cash except in the event of an Employee's death. In such cases, all unused executive leave will be paid to the Employee's estate.

Section 4. Other Leaves

Each Employee is entitled to other leave benefits as provided for in the King County Personnel Guidelines and applicable State and federal laws.

ARTICLE 12: WAGES

Section 1. Wage Rates

Effective September 1, 2014, the wage rates for Employees in the bargaining unit will be as set forth in Addendum A, attached to this Agreement.

Section 2. Wage Progression

A. If a current County Employee is hired into a bargaining unit position, that Employee will be placed at a step which provides a minimum five percent increase over the Employee's former salary, not to exceed the established top step. A Chief's initial placement onto a step on the salary schedule shall not be less than that which the employee could earn as an acting Chief or Lead in his/her previous bargaining unit. The appointing authority may place the promoted Employee at a higher step when the department director determines this action is warranted based on the criteria set forth in the King County Personnel Guidelines.

B. An Employee will progress through the steps of his/her salary range as follows:

1) An Employee shall receive a step increase six months after the date of his/her permanent appointment. Each subsequent step increase will be effective on January 1 of each following year.

C. For the duration of this Agreement an Employee who has been at the top step of his/her salary range for two years or more will be eligible annually for a merit increase of 2.5% or 5% in accordance with the King County Merit Pay Plan as revised in 2009, above the top step, under the following conditions:

1) The Employee has received a performance rating of 4.34 or higher on a scale of 5 for two or more consecutive years, or the Employee is currently receiving a merit pay step above the top step, and continues to receive a rating of 4.34 or higher on a scale of 5 on an annual basis.

2) If the Employee's performance rating falls below a 4.34 on a scale of 5 for any year, the annual merit increase will be discontinued until such time as the Employee again attains a performance rating of at least 4.34 on a scale of 5 for two consecutive years.

3) An Employee's performance rating and a decision to grant a merit increase for a rating of 4.34 or higher is not subject to the grievance and arbitration provisions of this Agreement.

Section 3. Total Compensation Agreement.

Upon full ratification of the Memorandum of Agreement titled: Addressing "Total

Compensation" Coalition Bargaining; 2015-2016 Budget; And Cost-Of-Living Wage Adjustments For King County Coalition Of Labor Unions Bargaining Unit Members 2015-2016 ("Agreement") by King County, the full terms and conditions of the Agreement are agreed to and incorporated into this Collective Bargaining Agreement, attached hereto as Addendum B.

Section 4. Acting Assignments - Salary Credit

An Employee who is acting in a position and then receives a regular appointment to the same position will have the acting time credited for purposes of salary step placement and future salary step increases in the following circumstances: (1) all time in the acting position which is contiguous with the regular appointment will be credited day-for-day, and (2) any additional time spent in the acting position that is for a continuous period of three months or more and is within the 12 month period prior to the regular appointment will also be credited day-for-day.

ARTICLE 13: BENEFITS

Section 1. Insurance Benefits

A. The County and Union currently participate in the Joint Labor Management Insurance Committee, which is comprised of representatives from the County and its labor unions. The County and Union agree to continue the Joint Labor Management Insurance Committee.

B. The County presently participates in group medical, dental, vision, life and long-term disability insurance benefit programs. These programs, and the level of County premium contributions to these programs, are determined by the Joint Labor Management Insurance Committee. The County agrees to provide the benefit programs and the level of benefits and premium contributions as determined by the Joint Labor Management Insurance Committee.

C. Full benefit coverage, as defined by the Joint Labor Management Insurance Committee, will be provided to all regular part-time (half-time or more) and regular full-time Employees.

Section 2. Insurance Benefits for Retirees

Benefit options, as defined by the Joint Labor Management Insurance Committee, will be available to retirees.

Section 3. Transit Passes

Each current and retired Employee will be provided with an annual transit pass at no cost to the Employee.

Section 4. Clothing Allowance

A. Each Vehicle Maintenance Chief and Facilities Maintenance Chief will have access to clean clothing provided by County contracted laundry services.

B. An Employee who is required to wear safety shoes as a regular part of his/her duties shall be entitled to an allowance for the purpose of purchasing work safety shoes, provided annually in a separate check not later than March of each year in the amount of $220.

C. An Employee who is required to work in inclement weather as a regular part of his/her duties will be provided an all weather coat, or equivalent, every four years.

Section 5. Accidental Death Benefit – Criminal Assault

The County provides special coverage in the event of a felonious assault. The maximum benefits payable is $50,000 for death, dismemberment, loss of sight, or permanent total disability, less any amount payable under a group life or accidental death and dismemberment policy.

Section 6. Commercial Drivers Licenses

King County shall pay for Commercial Drivers Licenses (CDL) renewals for all Chiefs who are designated as safety sensitive and who have requested and have been approved to maintain CDLs for Metro-related business. This provision applies only to renewals of CDLs and does not require King County to pay for Employees to acquire new CDLs.

ARTICLE 14: WORK ASSIGNMENTS

Section 1. Alternative Work Schedules

A. An Employee may request an alternative work schedule, which may include flexible work hours, compressed work weeks, telecommuting and/or job share arrangements. Approval for an alternative work schedule must be received from the Employee's supervisor. The decision to allow an alternative work schedule is solely within the County's discretion and approval may be revoked at any time. The Employee may also choose to return to the standard work schedule at any time.

B. If either the County or the Employee decides to cancel the Employee's alternative

work schedule, written notice must be provided to the other party at least 10 working days prior to the effective date of the cancellation, except where a written agreement provides other requirements.

Section 2. Work Outside of Classification

A. Temporary Assignments: An Employee may be assigned to a higher level classification on a temporary basis in accordance with the King County Personnel Guidelines. However, if the temporary assignment extends beyond six (6) months, the County will review with the Union the reasons why the acting assignment is still required. A review will occur every six months, for the duration of the temporary assignment, unless specifically waived by the Union.

B. Wages for Temporary Upgrades: In accordance with the King County Personnel Guidelines, an Employee who is temporarily assigned to a higher level classification will be paid at the pay step in the upgrade classification that would constitute a minimum of five percent over the Employee's regular salary, but not to exceed the top rate of the higher classification.

Section 3. Shift and Worksite Assignments

The County has the right to assign an Employee to a specific worksite and shift for demonstrable business requirements. When the County finds it necessary to make such an assignment, the County will, on request from the Union, discuss with the Union the business reasons for the assignment.

Section 4. Vehicle Maintenance Chief Assignments

A. The County has the right to remove a chief from his/her current shift and place him/her on a different shift when there are documented performance deficiencies which specifically indicate that the chief is not satisfactorily performing the duties of the shift and has not been able to bring his/her performance up to a satisfactory level within a reasonable amount of time. The County will assist the chief in his/her effort to remedy the performance deficiencies by providing training, as appropriate, and clearly defined performance criteria.

B. Filling temporary chief vacancies in Vehicle Maintenance:

1) When a temporary chief vacancy occurs at a worksite, the supervisor and chiefs at that worksite will determine how to fill the vacant shift. Temporary upgrades may then be used to fill any shifts remaining vacant.

2) If the temporary vacancy extends, or is expected to extend, beyond one year, the County will review with the Union the business reasons for the vacancy and the anticipated duration of the vacancy. Following the one-year review, if the vacancy extends beyond the previously anticipated duration, the Union may request additional reviews of the circumstances.

C. Filling permanent vacancies for Vehicle Maintenance Base Chief, Electrical Section Chief & Mechanical Rebuild Chief positions:

1) When a vehicle maintenance base chief, electrical section chief or mechanical rebuild chief position becomes permanently vacant, the Union may conduct a seniority move-up on the position, and any positions subsequently open as a result of the move-up.

(a) All vehicle maintenance base chiefs, electrical section chiefs and mechanical rebuild chiefs are eligible to participate in the move-up unless there are documented performance deficiencies which specifically indicate that the individual is not able to perform the duties of the vacant position.

(b) Administering the move-up, including notification to the Employees and maintenance of seniority, is the responsibility of the Union. Results of the move-up are not grievable.

(c) Prior to sending notification of a move-up to the Employees, the Union will notify the County of its intent to conduct a move-up.

D. Filling permanent chief vacancies in Vehicle Maintenance specialty shops:

1) This section applies to the following position titles: Chief of Material Management; Chief of Inventory Control; Chief of Body Rebuild Section; Chief of Machine Shop Section; Chief of Paint and Sign Shop; Chief of Revenue Fleet Inspection; Chief of Maintenance Training.

2) When the County is recruiting for a vehicle maintenance chief position for any of the positions listed in paragraph 1, the recruitment process will include a general announcement to all Vehicle Maintenance chiefs to encourage interested Employees to apply for the position.

3) The County will give first consideration, in seniority order, to vehicle

maintenance chiefs who have applied for the open position. Nevertheless, when filling a vacancy for a position listed in paragraph 1 above, the decision of who to hire is vested solely with the County, and the selection decision is not grievable.

E. If, after discussion with the Union, a Chief is moved pursuant to Section 3 or Section 4(A) of this Article to a position held by another Chief, the other Chief will be moved to that Chief's position until the next move-up.

Section 5. Rail Operations Chief Assignments

It is the intent of the parties that Employees will:

1) Not have less than 60 hours off during their regular days off.

2) Not have less than eight hours off between shifts.

3) Not be required to work more than sixteen hours.

If these situations occur, the parties will discuss how to resolve the problem and/or avoid a reoccurrence.

Section 6. Filling Operations Positions in Bus, Rail and Streetcar

1. When King County is going to fill a vacancy with existing Chiefs, it will solicit interest from all operations Chiefs in bus, rail, and streetcar.

2. After soliciting input form the Chiefs at the worksite, King County will determine who will fill the vacancy. This does not require King County to select from those expressing interest.

3. King County will notify the Union of any vacancy that is not filled by a Chief within 90 days.

ARTICLE 15: SUBCONTRACTING

The County agrees not to contract out work typically performed by currently employed members of the bargaining unit if the contracting of such work eliminates or reduces the normal workload of the bargaining unit. If, in order to secure funding for a specific, time-limited project, the County is required to contract all or part of the work to be performed due to limitations imposed by funding agreement, said contracting will not be considered a violation of this article. The County agrees to provide the Union, upon request, with documentation to support any contracting of work under the terms of this article.

ARTICLE 16: LAYOFF AND RECALL

Section 1. Layoff Process

A. When a reduction in force is anticipated, the County and Union will meet and jointly endeavor to find ways to minimize, or eliminate, the actual reduction of positions.

B. When a reduction of positions is required, the County and Union will meet and jointly endeavor to find ways to minimize, or eliminate, the number of Employees who must be laid off (for example: reassign Employees to vacant positions, locate temporary placement in other departments, encourage leaves of absence, allow job-sharing, etc.).

C. When the elimination of a position will result in an Employee being laid off, the Employee will be selected by inverse seniority within the layoff group, as defined in sections five and six of this article.

Section 2. Notice

When the elimination of a position will result in an Employee being laid off, the County will provide written notice to the Union and the affected Employee at least 90 calendar days prior to the effective date of the layoff.

Section 3. Recall

A. An Employee who is laid off will have general recall rights to other vacant County positions, in accordance with the King County Personnel Guidelines, for a period of two years following the Employee's layoff. In addition, the Employee will retain specific recall rights to the position from which s/he was laid off for an additional one year period following the end of the two year general recall period. During the three year specific recall period, the Employee will retain specific recall rights to the position from which s/he was laid off regardless of whether the Employee has accepted a different position within the County.

B. When the County is filling a bargaining unit position and there are laid-off Employees who have held such positions within the previous five years, the position will be offered to such Employees. If there is more than one Employee in such situation, the hiring authority will decide which Employee will be offered the position.

C. When a laid-off Employee applies for, or is referred to, a bargaining unit position

and such Employee is unsuccessful in obtaining the position, the Employee will be provided with the rationale for non-selection, interview and test scores, and any other documentation used to make the determination.

D. An Employee who is recalled from layoff will have all unpaid sick leave balances restored.

E. It is the Employee's responsibility to maintain his/her current contact information with the County.

Section 4. Outplacement Services

The County will contract with qualified firms to provide outplacement services for Employees who have been notified of their impending layoff. Each affected Employee will be allowed to access such outplacement services for a period of one year following receipt of their notice of layoff, or to a maximum expenditure of $2,500, whichever comes first.

Section 5. Layoff Seniority

A. Seniority is under the jurisdiction of the Union. All questions or grievances pertaining to seniority will be settled by the Union. Employee layoff seniority is defined by his/her most recent permanent hire date into a position within a layoff group as defined by Section 6 of this article. If two (2) Employees were hired on the same date, the Employee who has been employed by King County or its predecessor organizations, including Metro, Metropolitan Transit, and Seattle Transit for the longest continuous period of time shall have higher seniority.

B. An Employee who has obtained permanent status in any bargaining unit classification and who accepts a position in King County outside of the bargaining unit shall retain his/her layoff seniority for one year from the date of transfer.

Section 6. Layoff Groups

Layoff Groups are defined as follows:

Position Title
Chief of Base Operations
Chief of Service Quality
Chief of Transit Control Center (formerly Chief of Service Communications)
Chief of Operations Training
Chief of Mechanical Rebuild*
Chief of Machine Shop Section
Chief of Body Rebuild Section
Chief of Paint Shop
Chief of Electrical Section*
Chief of Vehicle Maintenance
Chief of Fleet Engineering
Chief of Stores
Chief of Warranty Administration
Chief of Electronics
Chief of Power
Chief of Radio Maintenance
Chief of Facilities & Maintenance
Chief of Information Production
Chief of Marketing and Promotions
Chief of Pass Sales
Chief of Business Transportation Solutions
Chief of CITRS
Chief of Customer Response
Coordinator, Rideshare Service Program
Coordinator, Vanpool Fleet
Coordinator, Customized Services
Chief of Rail Operations
Chief of Rail Vehicle Maintenance
Chief of Rail Materials Service Center
Chief of Rail Power
Chief of Rail Signals and Communication
Chief of Track & ROW
Chief of Rail Facilities
Chief of Rider Information
Chief of Streetcar

* Part of composite Chief of Vehicle Maintenance Layoff Group.

ARTICLE 17: TRAINING

Section 1. Training Opportunities

The County recognizes the benefit of training and will provide information and access to training opportunities for Employees, within budgeted appropriations. The decision to provide training opportunities will be based upon, but not limited by, the overall objectives of encouraging and motivating Employees to improve their work performance.

Section 2. Reimbursement for Training Expenses

An Employee enrolled in a degree program that the County determines to be job-related may be eligible to receive reimbursement from the County for up to 50% of this program. An Employee who takes individual classes or courses which management determines to be job-related may be eligible to receive reimbursement from the County for up to 100% of class fees or course fees. The decision to provide any reimbursement or initial course approval is solely based upon the County's discretion and is subject to financial constraints.

ARTICLE 18: DRUG FREE WORK PLACE

The Union agrees to comply with all applicable Federal, State and County regulations, ordinances and executive orders with regard to the drug free workplace.

ARTICLE 19: RIGHTS OF MANAGEMENT

Except as limited by the express written terms and conditions of this Agreement or by any practice mutually established by the County and the Union, the management and direction of the workforce are vested exclusively in the County. In areas where this Agreement is silent, the management and direction of Employees will be in accordance with King County Personnel Guidelines and other directives, policies and ordinances, as appropriate.

ARTICLE 20: LABOR-MANAGEMENT COMMITTEE

Labor-Management Committee. The Union and County agree to establish a Labor-Management Relations Committee. Such committee will meet on an ad hoc basis, no more frequently than once per month, for the purpose of discussing issues or problems which may arise in contract or policy administration. The Union Representative and the County will co-chair the meeting and determine the appropriate participants, based on the issues to be discussed.

ARTICLE 21: WORK CONTINUATION

The County and the Union agree that the public interest requires the efficient and uninterrupted performance of all County services. To this end, the Union will not cause or condone any work stoppage, including any strike, slowdown, or refusal to perform any customarily assigned duties, or other interference with County functions by Employees under this Agreement. If such interference should occur, however, the Union agrees to take immediate and appropriate steps to end such interference.

ARTICLE 22: SAVINGS, SUBORDINATION, WAIVER AND REOPENER

Section 1. Savings and Subordination

Should any part or provision of this Agreement be rendered or declared invalid because of an existing or subsequently enacted state or federal legislation or by any decree of a court of competent jurisdiction, the County and Union agree, upon notification of invalidation, to meet and negotiate those parts or provisions which are affected. The invalidation of any part of this Agreement will not, however, invalidate the remaining parts or provisions of the Agreement, which will remain in full force and effect.

Section 2. Waiver

The parties acknowledge that each has had the unlimited right within the law and the opportunity to make demands and proposals with respect to any matter deemed a proper subject for collective bargaining. The results of the exercise of that right and opportunity are set forth in this Agreement. The County and the Union, for the duration of this Agreement, each agrees to waive the right to oblige the other party to bargain with respect to any subject or matter not specifically referred to or covered in this Agreement.

ARTICLE 23: DURATION AND MODIFICATIONS

Section 1. Effective Date

This Agreement shall be effective upon conclusion of the approval process by King County Council and shall cover the period September 1, 2014 through December 31, 2016.

Section 2. Modification

For the duration of this Agreement, the County and the Union may, with mutual consent, negotiate modifications, including additions, deletions and changes, to the terms of this Agreement. No modification will become effective without a written agreement, signed by both the County and the Union, that defines the specifics of the modification.

Section 3. Negotiations for Succeeding Agreement

Negotiations for the succeeding Agreement may be initiated by either party providing to the other written notice of its intention to do so.

APPROVED this 16 day of NOVEMBER, 2015.

By: Dow Constantine

King County Executive

For Professional and Technical Employees, Local 17:

Joseph L. McGee
Executive Director

Cecilia Mena
Union Representative

Alfred Azen
Bargaining Team Member

Donald Brewer
Bargaining Team Member

Michael Erickson
Bargaining Team Member

John Marcell
Bargaining Team Member

Barry Samet
Bargaining Team Member

cba Code: 042 Union Code(s): C3

ADDENDUM A

Professional and Technical Employees

Local 17

Transit Division – Chiefs

Effective September 1, 2014

Job Class Code	PeopleSoft Job Code	Classification Title	Pay Range	Steps
2231000	223650	Transit Chief - Customer Services	68	1-2-3-4-5 *
8730100	874010	Transit Chief - Facility Maintenance	68	1-2-3-4-5 *
2222200	203101	Transit Chief - Marketing and Service Information	68	1-2-3-4-5 *
8730200	874020	Transit Chief - Operations	68	1-2-3-4-5 *
8730600	874060	Transit Chief - Power Distribution	68 +11%	1-2-3-4-5 *
8320100	833301	Transit Chief - Radio Maintenance	68	1-2-3-4-5 *
8730300	874030	Transit Chief - Rail Operations	68	1-2-3-4-5 *
8730700	874070	Transit Chief - Rail Traction Power	68 +11%	1-2-3-4-5 *
8730800	874080	Transit Chief - Rail Vehicle Maintenance	68	1-2-3-4-5 *
8730400	874040	Transit Chief - Railway, Signals and Facilities	68	1-2-3-4-5 *
2815500	283250	Transit Chief - Rideshare Operations	68	1-2-3-4-5 *
8730500	874050	Transit Chief - Vehicle Maintenance	68	1-2-3-4-5 *
*These Steps equate to Steps 2-4-6-8-10 on the King County FLSA Exempt "Squared" Pay Schedule				

ADDENDUM B

MEMORANDUM OF AGREEMENT
BY AND BETWEEN
KING COUNTY AND
THE UNDERSIGNED UNIONS

ADDRESSING "TOTAL COMPENSATION" COALITION BARGAINING; 2015-2016 BUDGET; AND COST-OF-LIVING WAGE ADJUSTMENTS FOR KING COUNTY COALITION OF LABOR UNIONS BARGAINING UNIT MEMBERS 2015-2016

Introduction:

King County and the Coalition of King County Labor Unions have a longstanding history of working collaboratively to address the many serious challenges faced by King County over the past two decades.

The partnership between King County and the Coalition of King County Labor Unions has resulted in several Agreements over the years intended to preserve the high quality and diversity of services offered to the public, to preserve positions held by the county's high quality employees, to standardize pay ranges and practices in King County and to reorganize county functions to bring greater efficiencies to King County government.

Agreements between King County and the Coalition of King County Labor Unions have included agreements allowing unpaid furloughs, agreements supporting a Lean process and implementation of Lean proposals, agreements standardizing certain classification and compensation processes, agreements that make efficient use of county resources by bargaining many labor issues in countywide coalitions, agreements establishing effective use of Labor Management Committees across King County to facilitate frequent and transparent information sharing and discussion and agreements such as the zero ("0") cost-of-living adjustment (COLA) Agreement intended to address the county's budget crisis at the height of the great recession.

The parties have also worked together in Olympia and elsewhere in attempting to secure additional funding options for King County services. The parties continue to engage in solution-based discussions aimed at addressing funding shortages for various public services.

The parties have an interest in continuing their longstanding history of working collaboratively to meet the serious challenges facing King County and its employees, and have bargained in good faith to address the interests of the parties as they relate to economic issues. The County continues to face serious fiscal challenges due to a longstanding structural imbalance between non-discretionary expenditure growth rates and revenue growth rates restricted by state law; and in 2015-2016 expects to eliminate hundreds of positions due to the loss of state and federal funds and to budget cuts to several departments. This Agreement meets the interests of the parties and advances the goals of the King County Strategic Plan by demonstrating "sound financial management" as well as by recognizing King County employees, the county's "most valued resource," in working with King County to meet the challenges that will be presented during the term of this Agreement.

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ADDENDUM B

Agreement:

NOW THEREFORE, the undersigned Union and King County agree as follows.

January 1, 2015 Cost-of-Living Adjustment contract rollovers and re-openers

1. Effective January 1, 2015, employees covered by this Agreement and employed in 2015 will receive a 2% Cost-of-Living Wage Adjustment;

2. All other compensation elements ("wages, premiums, incentives, and other monetary payments; and all forms of leave and benefits") of current collective bargaining agreements (CBAs) are "rolled over" and neither increased nor decreased through 2016; provided, however, that where the County and a union were already in the process of collective bargaining with respect to certain elements of "Total Compensation" prior to June 27, 2014, there may be increases or decreases in certain elements of "Total Compensation" in those collective bargaining agreements. Additionally, the Coalition "Administrative Support" Memorandum of Agreement (attached as Addendum A) is also effective 2015-2016 and expires January 31, 2016;

3. All compensation elements of CBAs shall be opened on January 1, 2015, or later, as requested by the County, for the purpose of bargaining in union coalition a "Total Compensation" agreement that will be effective January 1, 2017 or later, as agreed to by the parties. "Total Compensation" elements are wages, premiums, incentives, and other monetary payments; and all forms of leave and benefits. The parties agree to bargain, to the extent required by law, the effects of any newly created job classifications and other organizational changes. Discussion during re-opener will include these "Total Compensation" elements as well as county initiatives that include but are not limited to "Employer of the Future" and "Standards." It is noted that the Joint Labor Management Insurance Committee (JLMIC) Agreement covering benefits (part of "Total Compensation") is already opened in 2016 and nothing in this Agreement is intended to change the terms of that Agreement.

January 1, 2016 Cost-of-Living Adjustment contract rollovers and re-openers

1. Effective January 1, 2016, employees covered by this Agreement and employed in 2016 will receive a 2.25% Cost-of-Living Wage Adjustment;

2. Consistent with #2 for 2015 above, all compensation elements of CBA "rolled over" and neither increased nor decreased through 2016; provided, however, that where the County and a union were already in the process of collective bargaining with respect to certain elements of "Total Compensation" prior to June 27, 2014, there may be increases or decreases in certain elements of "Total Compensation" in those collective bargaining agreements. Additionally, the Coalition "Administrative Support" Memorandum of Agreement (attached as Addendum A) is also effective 2015-2016 and expires January 31, 2016;

3. Re-openers consistent with #3 for 2015 above.

Lump Sum Coalition Participation Premium Payment

On or before December 31, 2014, a flat lump sum Coalition Participation Premium payment of $500.00 per employee will be paid to bargaining unit members who are employed by King County on June 27, 2014, and whose bargaining units ratify this agreement on or before

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ADDENDUM B

August 15, 2014. This payment is in consideration of the agreement by participating unions to bargain economic issues with King County as a coalition rather than as individual bargaining units, resulting in process efficiencies and savings in administrative costs for King County. Additionally, this payment is in consideration for the agreement by participating unions to open all compensation elements of CBAs on January 1, 2015 or later, at the request of King County, for the purpose of bargaining a "Total Compensation" agreement in coalition. "Total Compensation" elements are defined earlier in this Memorandum of Agreement.

Changes to King County Family and Medical Leave

The parties agree to a change in practice that will run King County Family Medical Leave (KCFML) and Family Medical Leave Act (FMLA) *concurrently*, rather than consecutively. This change is contingent upon the necessary King County Code change/policy being adopted by the King County Council and then implemented for non-represented King County employees. This agreement does not prohibit the use of KCFML intermittent leave after 12 weeks. The agreed upon change will not be implemented for represented employees before July 1, 2015. The parties agree to work together to identify the King County Code language changes necessary to implement this change. As with all decision making in King County, the Equity and Social Justice Ordinance (#16948) will be applied.

It is further agreed that:

1. The COLA increases and lump sum payments outlined in this Agreement establish no precedent with respect to future payments to King County employees;

2. The parties acknowledge that all parties have fulfilled their obligations to engage in collective bargaining over the subjects contained in this Agreement;

3. The parties acknowledge that this Agreement is subject to approval by the King County Council and ratification by the membership of the aforementioned Unions;

4. Any dispute regarding the interpretation and/or application of this Agreement shall be handled pursuant to the terms of the applicable Union's grievance procedure, provided that if more than one bargaining unit has the same or similar dispute, the grievances shall be consolidated; and

5. The parties agree that this Memorandum of Agreement is contingent upon ratification by the King County Council, and shall be effective once fully ratified by King County (having already been ratified by the undersigned Unions) through December 31, 2016.

For King County:

P. Cole-Tindall — 8-22-14

Patti Cole-Tindall, Director — Date
Office of Labor Relations
King County Executive Office

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ADDENDUM B

MEMORANDUM OF AGREEMENT
BY AND BETWEEN
KING COUNTY AND
THE UNDERSIGNED UNIONS

ADDRESSING "TOTAL COMPENSATION" COALITION BARGAINING; 2015-2016 BUDGET; AND COST-OF-LIVING WAGE ADJUSTMENTS FOR KING COUNTY COALITION OF LABOR UNIONS BARGAINING UNIT MEMBERS 2015-2016

Labor Organization: Professional and Technical Employees, Local 17

Ratified by the Members covered by the Contracts listed below:

cba code	Labor Organization	Contract
050	PTE, Local 17	Court Reporters - Superior Court
040	PTE, Local 17	Departments: Executive Services, Natural Resources & Parks, Permitting & Environmental Review, Transportation
060	PTE, Local 17	Departments: Public Health, Community & Human Services
048	PTE, Local 17	Information Technology
055	PTE, Local 17	Office of Emergency Management, Department of Executive Services; Emergency Management Program Manager
043	PTE, Local 17	Professional & Technical, Interest Arbitration - Department of Transportation, Metro Transit Division
046	PTE, Local 17	Professional & Technical - Department of Transportation
066	PTE, Local 17	Section Managers - Departments: Natural Resources & Parks, Permitting & Environmental Review, Transportation
065	PTE, Local 17	Supervisors - Departments: Executive Services (Facilities Management Division), Natural Resources & Parks, Transportation
047	PTE, Local 17	Transit Administrative Support
042	PTE, Local 17	Transit Chiefs - Department of Transportation, Metro Transit Division
044	PTE, Local 17	Transit Supervisors - Department of Transportation, Metro Transit Division

For Professional and Technical Employees, Local 17:

Joseph L. McGee
Executive Director

8/20/14
Date

ADDENDUM B
ADDENDUM A

MEMORANDUM OF AGREEMENT

BY AND BETWEEN

KING COUNTY

AND

COALITION OF LABOR UNIONS

REPRESENTING

KING COUNTY ADMINISTRATIVE SUPPORT CLASSIFICATIONS

Subject: Coalition bargaining for employees in specified administrative support classifications

WHEREAS, King County and the undersigned labor unions representing certain administrative support classifications ("the Coalition") have agreed to bargain wages for those classifications in a coalition so that any agreements reached would be binding on all parties to the negotiations and would satisfy all bargaining obligations between the parties with respect to wages for the duration agreed to by the parties in such an agreement; and

WHEREAS, King County and the Coalition have reached an agreement on wages, pursuant to the terms set forth herein, and therefore have fully satisfied their bargaining obligations on the issue of wages for the duration of this Agreement;

Now THEREFORE, the parties have agreed as follows:

1. The terms set forth in this Agreement shall apply to all positions which are in the following classifications and which are currently represented by any of the undersigned bargaining units:

Fiscal Specialist 1 – 4
Administrative Specialist 1 – 4
Customer Service Specialist 1 – 4
Technical Information Processing Specialist 1 – 4
Administrative Office Assistant
Public Health Administrative Support Supervisor
Administrative Staff Assistant

The positions referenced herein shall be referred to as "Coalition Administrative Support Positions" and shall not include positions covered by bargaining units eligible for interest arbitration.

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ADDENDUM B
ADDENDUM A

2. Beginning on January 1, 2012, regular employees in Coalition Administrative Support Positions shall receive a wage increase of 1.5% above Step 10 upon completing 15 years service with King County, and a 3.0% increase (not cumulative with the 1.5% increase after 15 years) above Step 10 upon completing 20 years service with King County; provided, however, that the employee is eligible for the above Step 10 premium only if he/she receives at least a 3.25 rating on the prior year's performance evaluation. For purposes of this provision, years of service shall be based on the employee's Adjusted Service Date as that term is defined in the King County Personnel Guidelines. The requirement that the employee earn at least a 3.25 rating on the performance evaluation shall be waived for any year in which the employee did not receive a performance evaluation prior to the start of the calendar year. There shall be no limit or quota on the number of employees eligible to receive this wage premium above Step 10.

3. This Agreement fully satisfies the parties' bargaining obligations with respect to wages for any and all Coalition Administrative Support Positions through December 31, 2013. The parties have agreed to bargain a successor agreement on wages in coalition utilizing the same process as was agreed to in these negotiations (see September 30, 2008 "Ground Rules for King County Administrative Support Coalition Bargaining" (attached hereto as Exhibit A)) with the additional agreement that any market surveys conducted for those negotiations will be based on the following list of jurisdictions:

1. Snohomish County
2. Pierce County
3. City of Seattle
4. City of Bellevue
5. City of Tacoma
6. City of Everett
7. City of Redmond
8. City of Renton
9. City of Kent
10. Port of Seattle

4. It is the parties' intent to not simultaneously provide employees with both: a) the wage premiums referenced in Paragraph 2 of this Agreement, and b) an above-top-step merit premium program. Therefore, employees in bargaining units which have eligibility for above-top-step merit pay are not eligible for premium under Paragraph 2 of this Agreement; however, such bargaining units may elect to forgo above-top-step merit for their members who are part of this coalition in order for those members to be eligible for the premium under Paragraph 2 of this Agreement. This provision would give employees who are covered by these administrative support coalition negotiations the option of: a) continuing to receive above-top-step merit pay they have access to under their respective bargaining unit's existing collective bargaining agreement, or b) receiving the wage premium under Paragraph 2 of this Agreement. Such employees must elect their preferred option as a group as part of these negotiations, and must indicate their selection within 60 days of execution of this Agreement, and that selection will remain in effect for the duration of this Agreement.

ADDENDUM B
ADDENDUM A

5. This Agreement applies to positions in the classifications referenced above (Paragraph 1) covered by the following collective bargaining agreements:

Union	Contract	cba Code
International Brotherhood of Teamsters Local 117	Professional & Technical and Administrative Employees	154
International Brotherhood of Teamsters Local 117	Wastewater Treatment Division, Professional & Technical and Administrative Support - Department of Natural Resources and Parks	156
Joint Crafts Council, Construction Crafts	Appendix K: Departments: Executive Services (Facilities Management; Records, Elections & Licensing Services), Natural Resources & Parks, Transportation	350
Office & Professional Employees International Union, Local 8	Department of Assessments	035
Office & Professional Employees International Union, Local 8	Departments: Public Health (Division of Alcohol, Tobacco and Other Drugs Prevention), Community and Human Services (Mental Health, Chemical Abuse and Dependency Services Division)	038
Professional and Technical Employees, Local 17	Professional and Technical - Department of Transportation	046
Professional and Technical Employees, Local 17	Departments: Development and Environmental Services, Executive Services, Natural Resources and Parks, Transportation	040
Professional and Technical Employees, Local 17	Departments: Public Health, Community and Human Services	060
Public Safety Employees Union	Non-Commissioned - Department of Adult and Juvenile Detention	191
Public Safety Employees Union	Non-Commissioned - King County Sheriff's Office	193
Technical Employees Association	Wastewater Treatment Division, Department of Natural Resources and Parks, Staff	428
Washington State Council of County and City Employees, Council 2, Local 2084-SC	Superior Court - Staff (Wages Only)	273
Washington State Council of County and City Employees, Council 2, Local 2084SC-S	Superior Court - Supervisors (Wages Only)	274
Washington State Council of County and City Employees, Council 2, Local 21AD	Department of Adult and Juvenile Detention	080
Washington State Council of County and City Employees, Council 2, Local 1652	Medical Examiner - Department of Public Health	260
Washington State Council of County and City Employees, Council 2, Local 1652M	WorkSource - Department of Community and Human Services	263
Washington State Council of County and City Employees, Council 2, Local 1652R	Industrial and Hazardous Waste	275

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ADDENDUM B
ADDENDUM A

6. This Agreement shall remain in effect through December 31, 2013.

For International Brotherhood of Teamsters Local 117:

Tracey A. Thompson, Secretary-Treasurer — Date: 4/25/11

For Office & Professional Employees International Union, Local 8:

Amanda Saylor, Union Representative — Date: 4/25/11

For Professional and Technical Employees, Local 17:

Behnaz Nelson, Union Representative — Date: 4/26/11

Janet Parks, Union Representative — Date: 4/25/11

For Public Safety Employees Union:

Dustin Frederick, Business Manager — Date: 4/25/11

For Technical Employees Association:

Ade Franklin, President — Date: 4.27.11

For Washington State Council of County and City Employees, Council 2:

Diana Prenguber, Staff Representative — Date: 4-25-11

For King County:

James J. Johnson, Labor Negotiator III — Date: 4/28/11

ADDENDUM B
ADDENDUM A
EXHIBIT A

GROUND RULES FOR KING COUNTY ADMINISTRATIVE SUPPORT COALITION BARGAINING

1. **Authority of the Coalition.** The parties agree that the Union coalition is speaking with one voice, and that the parties are engaged in coalition bargaining rather than coordinated bargaining. To that end, each of the unions party to coalition bargaining agree that they will be bound by the results of the coalition bargaining, and that their authority will be limited by the Union coalition's lead negotiator. Each of the unions further agree that the County's participation in coalition bargaining fulfills the County's statutory obligation to bargain regarding the issues within the scope of this coalition bargaining while the parties are engage in this coalition bargaining and for the duration of any agreement reached. The coalition has agreed that for ratification purposes, the Unions will conduct a pooled vote with one employee, one vote, with all votes consolidated and the result determined by a simple majority.

2. **Authority of the County.** The parties agree that the County is speaking with one voice, and the parties are engaged in coalition bargaining rather than coordinated bargaining. The County's interest in coalition bargaining stems from its effort to maintain a consistent compensation structure for administrative staff across Departments. The County as a whole, and each of its departments, will be bound by any agreement reached in this process.

3. **Status of Contracts.** The status of contracts will not affect a union's participation in this process, nor will it affect the other provisions of this agreement. The parties are agreeing to reopen all contracts for the purpose of negotiating compensation relating to the specified administrative support classifications.

4. **Scope of Topic.** The scope of the discussions will be to negotiate wage rates for the classifications at issue. The parties may agree to address additional issues in the course of this bargaining.

5. **Scope of Classifications.** Administrative Support classifications, including the following:

   Fiscal Specialist 1-4
   Administrative Specialist 1-4
   Customers Service Specialist 1-4
   Technical Information Processing Specialist 1-4
   Administrative Office Assistant
   Medical Application Specialist (Health)
   Administrative Specialist Supervisor (Health)
   Administrative Staff Assistant
   ~~(Application Worker/ Social Services Specialist)~~

   and any other classification that the parties may agree to include during the course of negotiations.

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ADDENDUM B
ADDENDUM A

6. **Scope of Bargaining Units Included.** The bargaining units as defined in Addendum A to this agreement are included in this coalition bargaining.

7. **Negotiation Process.**

   A. Lead Negotiators. The lead negotiator for the County will be the Manager of Labor Relations or such other negotiator as may be appointed by the County. The lead negotiator for the Coalition will be the General Counsel for Teamsters Local 117 or such other negotiator as may be appointed by the Coalition. Only the lead negotiator will have the authority to bind the party that they represent.

   B. Table Composition. Each party will name a fixed set of participants in the negotiation. Others may be permitted to participate as subject matter experts but not as members of each negotiating team. The unions agree to name no more than two (2) employee representatives per union; provided that Local 17 may appoint four (4) employee representatives. The County agrees to provide release time to participate in negotiation provided that such release time does not interfere with the operations of the County. In such event, the parties will discuss alternatives to address the issue.

   C. Dates. The lead negotiator for each party shall set a complete set of negotiating dates beginning in January, 2009, and concluding by April 15, 2009.

   D. Location. Bargaining sessions will be held at downtown County facilities.

8. **Communication.** The expectation is that the parties will bargain at the table rather than in the workplace. Prior to issuing written communications with County employees or Union members regarding the substance of these negotiations, a party intending to issue such a communication will provide the other party with prior notice of that communication and will attempt to resolve any issues regarding the content of the communication prior to publication. The parties retain the right to communicate with their constituencies in non-written form. However, consistent with the spirit of this commitment, the parties will respect the concept of prior notice outlined in this paragraph.

9. **Mediation and Fact Finding.** If the parties fail to reach agreement, the parties will simultaneously (1) request the assistance of an impartial third party selected by the parties; if the parties cannot reach agreement, then the mediator will be selected through the Public Employment Relations Commission to mediate the negotiations; and (2) appoint a neutral fact-finder pursuant to the selection process below. The mediation will be scheduled ahead of the fact finding hearing. The fact-finder shall be charged to make non-binding recommendations to the parties as to the terms of an agreement regarding wage rates for the classifications at issue. The fact-finder shall consider the market position of the classifications and the economic circumstances of the employer in making his or her recommendations. The fact-finding will be concluded no later than sixty (60) days after the conclusion of mediation with the recommendation to each party. The cost of the fact-finder shall be borne equally by the parties.

   a. **Selection.** The parties will attempt to mutually agree on a fact-finder. Absent such agreement, the parties will request a panel from the Public Employment Relations Commission and will select a fact finder through mutual striking.
   b. **Hearing.** The hearing procedure shall be determined by the fact finder but shall be conducted fairly and expeditiously.
   c. **Recommendation.** Prior to issuing a formal recommendation, the fact finder will meet informally with the parties to inform them of his or her findings. Thereafter, the parties will have one week to attempt to reach an agreement. If the parties are unable to reach agreement the fact finder shall issue his or her decision.

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ADDENDUM B
ADDENDUM A

10. **Return to Individual Bargaining.** After the issuance of the recommendation, the parties may return to mediation or otherwise attempt to resolve the agreement. If the parties fail to agree after the fact finding process, the coalition process will be concluded and the parties will return to bargaining their individual contracts. The parties understand that such bargaining will begin fresh, and the positions taken in this coalition bargaining will not be applicable to that bargaining.

Dated this 30th day of September, 2008.

KING COUNTY

Elizabeth Ford, Labor Relations Manager

TEAMSTERS LOCAL UNION NO. 117

Spencer Nathan Thal, General Counsel

IFPTE, LOCAL 17

Behnaz Nelson, Union Representative

TECHNICAL EMPLOYEES ASSOCIATION

Roger Browne, President

IFPTE, LOCAL 17

Janet Parks, Union Representative

WSCCCE, Council 2

Diana Prenguber, Staff Representative

OPEIU, LOCAL 8

Shannon Halme, Union Representative

PUBLIC SAFETY EMPLOYEES UNION 519

Dustin Frederick, Business Manager

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King County

Checklist and Summary of Changes for the attached Collective Bargaining Agreement

Name of Agreement
Professional and Technical Employees, Local 17 (Transit Chiefs - Department of Transportation, Metro Transit Division)
Labor Negotiator
David Levin

Prosecuting Attorney's Review	***Yes***
Legislative Review Form; Motion or Ordinance	***Yes***
Executive Letter	***Yes***
Fiscal Note	***Yes***
Six Point Summary	***Yes***
King County Council Adopted Labor Policies Consistency	***Yes***
Ordinance	***Yes***
Original Signed Agreement(s)	***Yes***
Does transmittal include MOU/MOA?	***N/A***

Six Point Summary of changes to the attached agreement:
1. Changes to effective dates.
2. Changes that incorporate previously agreed to language (included but not limited to updates relating to payroll practices and systems, recognition language, addendums and names of parties).
3. Changes that reflect the terms of the "Total Compensation" Coalition memorandum of agreement, ratified by King County Council Ordinance 17916.
4. Added language that creates a process for notifying employees of Operations Chief vacancies.
5.
6.

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ATTACHMENT 3

November 10, 2015

The Honorable Larry Phillips
Chair, King County Council
Room 1200
C O U R T H O U S E

Dear Councilmember Phillips:

The enclosed ordinance, if approved, will ratify the Professional and Technical Employees, Local 17 (Transit Chiefs) collective bargaining agreement (CBA) for the period of September 1, 2014, through December 31, 2016, which will enable King County to provide quality transit service to the public. This agreement covers approximately 110 employees in the Department of Transportation.

Transit Chiefs are responsible for the first line supervision and direction of facilities in the Operations, Vehicle Maintenance, Power and Facilities, and Rail Sections of the Transit Division. Transit Chiefs also supervise work groups of professional staff members in areas such as Service Development; Paratransit and Rideshare; and Customer Communications and Services.

The employees in this bargaining unit supervise the employees who directly provide transit services to the public. They supervise employees at the transit bases throughout the County and provide guidance and expertise to the functions of the Metro Transit Division that are housed in King Street Center.

This agreement is for a "rollover," or extension, of the current CBA, with one substantive addition. Changes to the existing CBA are limited to the following:

a) Changes to effective dates.
b) Changes that incorporate previously agreed to language (including but not limited to updates relating to payroll practices and systems, recognition language, addendums and names of parties).
c) Changes that reflect the terms of the "Total Compensation" Coalition memorandum of agreement, ratified by King County Council on November 10, 2014, by Ordinance 17916.
d) A process for notifying and soliciting interest from Transit Chiefs about vacancies in the Operations Chief position.

The employees in this bargaining unit, on a day to day basis and through long term projects, work to improve the efficiency of the Metro Transit Division's operations. In their roles as Chiefs at the transit bases and as the supervisors of work groups in the fields of service development; sales and customer services; power and facilities; rail; and paratransit and rideshare, Transit Chiefs are tasked with finding innovative and efficient ways of delivering transit services to the public.

This agreement furthers the goals of the County's Strategic Plan including the following areas:

- Service Excellence: will help ensure a continuity of Transit services that are responsive to community needs.
- Quality Workforce: by ensuring fair wages and benefits in order to recruit and retain good employees.
- Economic Growth and Built Environment: a well run transit system helps link our communities.

The settlement reached is a product of good faith collective bargaining between King County and the Union. The agreement compares favorably with other settlements and is within our capacity to finance. This agreement has been reviewed by the Office of the Prosecuting Attorney, Civil Division.

Thank you for your consideration of this ordinance.

If you have questions, please contact Gerry Topping, Interim Director, Office of Labor Relations, at 206-263-8653.

Sincerely,

Dow Constantine
King County Executive

Enclosures

cc: King County Councilmembers
ATTN: Carolyn Busch, Chief of Staff
Anne Noris, Clerk of the Council
Carrie S. Cihak, Chief of Policy Development, King County Executive Office
Dwight Dively, Director, Office of Performance, Strategy and Budget
Gerry Topping, Interim Director, Office of Labor Relations

FISCAL NOTE

ATTACHMENT 4

Ordinance/Motion No.	Collective Bargaining Agreement	
Title:	Professional and Technical Employees, Local 17 (Transit Chiefs - Department of Transportation, Metro Transit Division)	
Effective Date:	1/1/2015	
Affected Agency and/or Agencies:	Transit	
Note Prepared by:	Matthew McCoy, Labor Relations Analyst, Office of Labor Relations	**Phone:** 263-1966
Note Reviewed by:	Helene Ellickson, County Executive Assistant III	**Phone:** 263-9691

Supplemental Required? **NO** [X] **YES** [ ]

AGREEMENT SUMMARY

Contract Duration: 9/1/14 to 12/31/16

Contract Covered by COLA Coalition MOA?	**Contract Changes?**
[X] **Yes**	[X] **Non-Economic Changes**
[ ] **No**	[ ] **Rollover w/Add'l Economic Changes**

ADDITIONAL EXPENDITURES FROM:

Fund Title	Fund Code	Department	2015 (Costs, if any, above Coalition COLA)	2016 (Costs, if any, above Coalition COLA)
Public Trans Op	464	DOT	$ 0	$ 0
TOTAL: Increase FM previous year			***$ 0***	***$ 0***
TOTAL: Cumulative			***$ 0***	***$ 0***

ADDITIONAL EXPENDITURES BY CATEGORY:

Expense Type	Department	2015 (Costs, if any, above Coalition COLA)	2016 (Costs, if any, above Coalition COLA)
Salaries			
OT			
PERS & FICA			
TOTAL: Increase FM previous year		***$ 0***	***$ 0***
TOTAL: Cumulative		***$ 0***	***$ 0***

FISCAL NOTE

ATTACHMENT 4

Ordinance/Motion No.	Collective Bargaining Agreement	
Title:	Professional and Technical Employees, Local 17 (Transit Chiefs - Department of Transportation, Metro Transit Division)	
Effective Date:	1/1/2015	
Affected Agency and/or Agencies:	Transit	
Note Prepared by:	Matthew McCoy, Labor Relations Analyst, Office of Labor Relations	**Phone:** 263-1966
Note Reviewed by: Supplemental Required? NO [X] YES [ ]	Helene Ellickson, County Executive Assistant III	**Phone:** 263-9691

AGREEMENT COSTS PREVIOUSLY INCLUDED IN TOTAL COMPENSATION ORDINANCE 17916

EXPENDITURES FROM:

Fund Title	Fund Code	Department	2015	2016
Public Trans Op	464	DOT	$ 290,217	$ 333,024
TOTAL: Increase FM previous year			***$ 290,217***	***$ 333,024***
TOTAL: Cumulative			***$ 290,217***	***$ 623,241***

EXPENDITURES BY CATEGORY:

Expense Type	2014 Annualized Base	2014 Lump Sum	2015	2016
Salaries	$ 12,211,453	$ 51,500	$ 244,229	$ 280,253
OT	$ 0		$ 0	$ 0
PERS & FICA	$ 2,299,417	$ 9,697	$ 45,988	$ 52,771
Total	***$ 14,510,870***	***$ 61,197***		
TOTAL: Increase FM previous year			***$ 290,217***	***$ 333,024***
TOTAL: Cumulative			***$ 290,217***	***$ 623,241***

ASSUMPTIONS:

Assumptions used in estimating expenditures include:

1. **Wage Adjustments:**
   - **COLA:** 2015: +2.00% Flat; 2016: +2.25% Flat
   - 2.25% for 2016
   - 2015 & 2016 COLA passed by Council under Total Comp MOA Ordinance 17916
   - **Lump Sum Payment:** $500/employee paid in 2014 under Ordinance 17916.
3. **Other Wage-Related Factors:**
   - **Step Increase Movement:**
   - **PERS/FICA:** 18.83%
   - **Overtime:**
4. **Additional Cost Factors:** None

King County

Metropolitan King County Council
Transportation, Economy and Environment Committee

STAFF REPORT

Agenda Item:	6	**Name:**	Mary Bourguignon
Proposed No.:	2015-0489	**Date:**	January 19, 2016

SUBJECT

Proposed Motion 2015-0489 would confirm the appointment of Meredith Molli, who resides in Council District 2, to the King County Agriculture Commission, for the remainder of a three-year term to expire on February 28, 2018.

BACKGROUND

The Agriculture Commission was created in 1994[1] to serve as a forum for farmers to provide input on land use decisions, policies and regulations affecting commercial agriculture. The Commission's mission is to "actively influence regional policy to preserve and enhance agricultural land; support and promote a viable agricultural community; and educate the public about the benefits of local agricultural products."

The Commission consists of 15 volunteer members, of which eight must be producers engaged in the business of producing an agricultural commodity for market in commercial quantities. Members serve three-year terms.

King County Code 2.40.040 outlines the duties of the Agriculture Commission, which is asked to advise the Council and Executive on agricultural policies and programs, including, but not limited to:

- Existing and proposed legislation and regulations affecting commercial agriculture;
- Land use issues that affect agriculture;
- Ways to maintain, enhance and promote agriculture and agricultural products in the region; and
- Livestock regulation implementation and monitoring.

Highlights of the Commission's activities over the least year included reviewing and providing recommendations on the integration of agricultural improvements into the Farm Fish Flood process; reviewing the sale of the Tall Chief property; and continuing its oversight of the Farm Link and Puget Sound Fresh programs.

[1] Ordinance 11417

APPOINTEE INFORMATION

Meredith Molli is a resident of District 2. She is the owner of Goose and Gander Farm and La Medusa Restaurant. In that capacity, she is a farmer, chef and restaurant owner, who notes, "I have made my entire life about food and the local economy."

Ms. Molli goes on to note that she has a "unique perspective into what it takes to run both a farm and local food business in King County, the obstacles small business owners face in marketing products locally and financing growth, and a special motivation to help improve the regional policies that affect all small businesses in King County."

ATTACHMENTS

1. Proposed Motion 2015-0489 (attachments available upon request)
2. Agriculture Commission Profile
3. Transmittal Letter

Pursuant to K.C.C.3.04.110, which allows for confidentiality, the required Financial Disclosure Statements have been distributed to Councilmembers only.

KING COUNTY

Signature Report

January 29, 2016

Motion

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Proposed No. 2015-0489.1 **Sponsors** Gossett

A MOTION confirming the executive's appointment of Meredith Molli, who resides in council district two, to the King County agriculture commission.

BE IT MOVED by the Council of King County:

The county executive's appointment of Meredith Molli, who resides in council district two, to the King County agriculture commission, for the remainder of a three-year

term to expire on February 28, 2018, is hereby confirmed.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

_____

J. Joseph McDermott, Chair

ATTEST:

_____

Anne Noris, Clerk of the Council

APPROVED this _____ day of _____, _____.

_____

Dow Constantine, County Executive

Attachments: A. Application, B. Financial Disclosure Statement, C. Board Profile, D. Appointment Letter

KING COUNTY AGRICULTURE COMMISSION

ATTACHMENT C

DATE: September 2015
TOTAL NUMBER OF MEMBERS: 15
LENGTH OF TERM: 3-Years

* ***King County seeks to create an inclusive and accessible process for individuals who wish to serve on a King County board or commission. We strive to ensure that King County boards and commissions are representative of the communities we serve.***

BOARD MEMBERS APPOINTED

Pos.	Name	KC Dist	Background and/or Representing	Date 1st Appt	Term Expires	Term #
1	Larry Pickering	3	Lease farm for produce	10/09/06	2/28/15	2/Full
2	George Irwin	9	Cattle	3/14/02	2/28/15	1 Partial /2 Full
3	Amy Holmes	8	Vashon, New Farm, Business/Finance, Policy/Regulatory, Fruit CSA	9/18/15	2/28/17	1 Partial
4	Shelby Jors	2	Business/Finance, Grocery, Policy/Regulatory, Produce Buyer	9/18/15	2/28/16	1 Partial
5	Nancy Hutto	3	Honey	4/09/04	2/28/14	1 Partial / 2 Full
6	Leigh Newman-Bell	4	Farmers Market, Bilingual, Works with Hmong Farmers, Pike Place Market	9/18/15	2/28/17	1 Partial
7	Bruce Elliott	5	Lower Green APD, Policy/Regulatory, Farm Bureau Beef Cattle	9/18/15	2/28/16	1 Partial
8	Anne Becker	3	Snoqualmie APD, Dairy, 21 Acres, Processing, Policy/Regulatory, Cheese	9/18/15	2/28/17	1 Partial
9	Leann Krainick	9	Dairy, Large Farm, Business/Finance, Processing, Policy/Regulatory, Farmers Market, Fluid Milk and Compost.	9/18/15	2/28/18	1 Full
10	Robert Tidball	7	Berries	4/09/04	2/28/14	3 Full
11	Eldon Murray	7	Beef Cattle, Policy/Regulatory, Drainage	9/30/11	2/28/17	2 Full
12	Siri Erickson-Brown	2	Vegetables, Policy/Regulatory, Business/Finance, Farmers Markets	9/30/11	2/28/16	1 Partial / 1 Full
13	Meredith Molli	2	Snoqualmie APD, New Farm, Business/Finance, Restaurant, Farmers Market, Vegetables	9/18/15	2/28/18	1 Full
14	Robert Vos	7		10/09/06	2/28/13	1 Partial / 1 Full
15	Roger Calhoon	3	Sammamish APD, New Farm, Business/Finance, Processing, Policy/Regulatory, Agritourism	9/18/15	2/28/17	1 Partial

Form revised: 05/24/2013

APPOINTED, NOT YET CONFIRMED

Pos.	Name	KC Dist	Background and/or Representing	Date 1st Appt	Term Expires	Term #
3	Amy Holmes	8	Vashon, New Farm, Business/Finance, Policy/Regulatory, Fruit CSA	9/18/15	2/28/17	1 Partial
4	Shelby Jors	2	Business/Finance, Grocery, Policy/Regulatory, Produce Buyer	9/18/15	2/28/16	1 Partial
6	Leigh Newman-Bell	4	Farmers Market, Bilingual, Works with Hmong Farmers, Pike Place Market	9/18/15	2/28/17	1 Partial
7	Bruce Elliott	5	Lower Green APD, Policy/Regulatory, Farm Bureau Beef Cattle	9/18/15	2/28/16	1 Partial
8	Anne Becker	3	Snoqualmie APD, Dairy, 21 Acres, Processing, Policy/Regulatory, Cheese	9/18/15	2/28/17	1 Partial
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Form revised: 05/24/2013

King County

Dow Constantine
King County Executive
401 Fifth Avenue, Suite 800
Seattle, WA 98104-1818
206-263-9600 Fax 206-296-0194
TTY Relay: 711
www.kingcounty.gov

September 18, 2015

The Honorable Larry Phillips
Chair, King County Council
Room 1200
C O U R T H O U S E

Dear Councilmember Phillips:

Enclosed for consideration and approval by the King County Council is a motion confirming the appointment of Meredith Molli, who resides in council district two, to the King County Agriculture Commission.

The appointment of Ms. Molli is for the remainder of a three-year term expiring February 28, 2018. Her application, Code of Ethics Financial Disclosure Statement, current board profile and appointment letter are enclosed for your information. This appointment request supports the King County Strategic Plan goal of public engagement by expanding opportunities to seek input, listen and respond to residents.

If you have any questions about this appointment, please have your staff call Rick Ybarra, liaison for boards & commissions, at 206-263-9651.

Sincerely,

Dow Constantine
King County Executive

Enclosures

King County Councilmembers
ATTN: Carolyn Busch, Chief of Staff
Anne Noris, Clerk of the Council
Carrie S. Cihak, Chief of Policy Development, King County Executive Office
Rick Ybarra, Liaison for Boards & Commissions
Patrice Barrentine, Staff Liaison
Meredith Molli

King County is an Equal Opportunity/Affirmative Action Employer and complies with the Americans with Disabilities Act

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King County

Metropolitan King County Council
Transportation, Economy and Environment Committee

STAFF REPORT

Agenda Item:	7	**Name:**	Mary Bourguignon
Proposed No.:	2015-0460	**Date:**	January 19, 2016

SUBJECT

Proposed Motion 2015-0460 would confirm the appointment of Shelby Jors, who resides in Council District 2, to the King County Agriculture Commission, for a partial term to expire on February 28, 2016.

BACKGROUND

The Agriculture Commission was created in 1994[1] to serve as a forum for farmers to provide input on land use decisions, policies and regulations affecting commercial agriculture. The Commission's mission is to "actively influence regional policy to preserve and enhance agricultural land; support and promote a viable agricultural community; and educate the public about the benefits of local agricultural products."

The Commission consists of 15 volunteer members, of which eight must be producers engaged in the business of producing an agricultural commodity for market in commercial quantities. Members serve three-year terms.

King County Code 2.40.040 outlines the duties of the Agriculture Commission, which is asked to advise the Council and Executive on agricultural policies and programs, including, but not limited to:

- Existing and proposed legislation and regulations affecting commercial agriculture;
- Land use issues that affect agriculture;
- Ways to maintain, enhance and promote agriculture and agricultural products in the region; and
- Livestock regulation implementation and monitoring.

Highlights of the Commission's activities over the least year included reviewing and providing recommendations on the integration of agricultural improvements into the Farm Fish Flood process; reviewing the sale of the Tall Chief property; and continuing its oversight of the Farm Link and Puget Sound Fresh programs.

[1] Ordinance 11417

APPOINTEE INFORMATION

Shelby Jors is a resident of District 2 and the Produce Manager of the Central Co-op. Ms. Jors has a degree in Biology with a concentration in Conservation and Ecology from Boston University.

ATTACHMENTS

1. Proposed Motion 2015-0460 (attachments available upon request)
2. Agriculture Commission Profile
3. Transmittal Letter

Pursuant to K.C.C.3.04.110, which allows for confidentiality, the required Financial Disclosure Statements have been distributed to Councilmembers only.

KING COUNTY

Signature Report

January 29, 2016

Motion

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Proposed No. 2015-0460.1 **Sponsors** Gossett

A MOTION confirming the executive's appointment of Shelby Jors, who resides in council district two, to the King County agriculture commission.

BE IT MOVED by the Council of King County:

The county executive's appointment of Shelby Jors, who resides in council district two, to the King County agriculture commission, for a partial term to expire on February

28, 2016, is hereby confirmed.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

_____

J. Joseph McDermott, Chair

ATTEST:

_____

Anne Noris, Clerk of the Council

APPROVED this _____ day of _____, _____.

_____

Dow Constantine, County Executive

Attachments: A. Application, B. Financial Disclosure Statement, C. Board Profile, D. Appointment Letter

KING COUNTY AGRICULTURE COMMISSION

ATTACHMENT C

DATE: September 2015
TOTAL NUMBER OF MEMBERS: 15
LENGTH OF TERM: 3-Years

* ***King County seeks to create an inclusive and accessible process for individuals who wish to serve on a King County board or commission. We strive to ensure that King County boards and commissions are representative of the communities we serve.***

BOARD MEMBERS APPOINTED

Pos.	Name	KC Dist	Background and/or Representing	Date 1st Appt	Term Expires	Term #
1	Larry Pickering	3	Lease farm for produce	10/09/06	2/28/15	2/Full
2	George Irwin	9	Cattle	3/14/02	2/28/15	1 Partial /2 Full
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Form revised: 05/24/2013

APPOINTED, NOT YET CONFIRMED

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Form revised: 05/24/2013

King County

Dow Constantine
King County Executive
401 Fifth Avenue, Suite 800
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206-263-9600 Fax 206-296-0194
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September 18, 2015

The Honorable Larry Phillips
Chair, King County Council
Room 1200
C O U R T H O U S E

Dear Councilmember Phillips:

Enclosed for consideration and approval by the King County Council is a motion confirming the appointment of Shelby Jors, who resides in council district two, to the King County Agriculture Commission.

The appointment of Ms. Jors is for a partial term expiring February 28, 2016. Her application, Code of Ethics Financial Disclosure Statement, current board profile and appointment letter are enclosed for your information. This appointment request supports the King County Strategic Plan goal of public engagement by expanding opportunities to seek input, listen and respond to residents.

If you have any questions about this appointment, please have your staff call Rick Ybarra, liaison for boards & commissions, at 206-263-9651.

Sincerely,

Dow Constantine
King County Executive

Enclosures

King County Councilmembers
ATTN: Carolyn Busch, Chief of Staff
Anne Noris, Clerk of the Council
Carrie S. Cihak, Chief of Policy Development, King County Executive Office
Rick Ybarra, Liaison for Boards & Commissions
Patrice Barrentine, Staff Liaison
Shelby Jors

King County is an Equal Opportunity/Affirmative Action Employer and complies with the Americans with Disabilities Act

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King County

Metropolitan King County Council
Transportation, Economy, and Environment Committee

STAFF REPORT

Agenda Item:	8	Name:	Nick Wagner
Proposed No.:	2016-0010	Date:	Feb. 2, 2016

SUBJECT

Approval of a collective bargaining agreement with the Technical Employees' Association, covering employees in the Department of Natural Resources and Parks.

SUMMARY

Proposed Ordinance 2016-0010 (Att. 1) would approve a collective bargaining (CBA) (Att. 1-A) with the Technical Employees' Association (TEA) covering about 225 supervisors and staff in the Wastewater Treatment Division (WTD) of the Department of Natural Resources and Parks (DNRP).[1] As described in the Executive's transmittal letter (Att. 3), these employees provide technical services related to the planning, design, engineering, and construction of King County's wastewater treatment facilities.

The new CBA is a two-year continuation of the current CBA with the changes described below. The new CBA covers the period from January 1, 2015, through December 31, 2016.

BACKGROUND

This bargaining unit's previous CBA expired at the end of December 2014, but its terms continued in effect pursuant to RCW 41.56.123(1).[2]

ANALYSIS

The only noteworthy changes in the proposed new CBA are:

1. Effective Dates. The CBA has new effective dates (January 1, 2015, through December 31, 2016) (CBA Art. 25; Att. 1-A, p. 47);

[1] The supervisors are in a bargaining unit separate from the staff whom they supervise, but both are represented by TEA, and both bargaining units are covered by the proposed new CBA.
[2] RCW 41.56.123(1) provides: "After the termination date of a collective bargaining agreement, all of the terms and conditions specified in the collective bargaining agreement shall remain in effect until the effective date of a subsequent agreement, not to exceed one year from the termination date stated in the agreement. Thereafter, the employer may unilaterally implement according to law."

2. COLAs. The CBA provides for cost-of-living adjustments in the same amounts that were agreed to with the King County Coalition of Unions, which the Council approved in November 2014 by Ordinance 17916 (2.00% COLA for 2015; 2.25% for 2016) (CBA § 18.2; Att. 1-A, p. 36).

3. Modification and Clarification of the Bargaining Units. The CBA includes minor modifications and clarifications of the classifications included in the two covered bargaining units (CBA § 2.1, App. A; Att. 1-A, pp. 3, 48-49).

4. Use of Benefit Time. The CBA would allow bargaining unit members who are retiring or otherwise leaving county employment to use up to 480 hours of approved Benefit Time[3] if they provide an irrevocable notice of resignation at least six months before their last day of work (CBA § 6.5; Att. 1-A, p. 8). This is designed to enable county managers to make plans for replacing the resigning employees or reallocating their work.

5. Conversion of Accrued Hours between Benefit Time and Extended Sick Leave. The CBA would provide two opportunities for covered employees to convert up to 40 hours (up to a total of 80 hours) of Benefit Time to Extended Sick Leave or vice versa (CBA § 6.7; Att. 1-A, pp. 9-10).

6. Compensation for Being Licensed as Architect. The CBA would extend to architects the $50 per month compensation for having a current professional license and the additional $50 per month if the license is directly applicable to their employment (CBA § 18.5.2; Att. 1-A, pp. 36-37). The previous CBA had limited the compensation to licenses for civil, mechanical, electrical, chemical, environmental, sanitary, and structural engineering.

7. Compensation for Additional Certifications. The CBA would add several new certifications to those for which an employee is entitled to receive $50 per month compensation per certification (up to a maximum of $100 per month) if the certification is in a discipline that is directly applicable to the individual's employment (CBA § 18.5.3; Att. 1-A, pp. 37-38).

8. Clarification of Standard for Receiving Above-Top-Step Merit Pay. The CBA would make clear that a merit score of 4.25 will be considered "outstanding" for the purpose of receiving above-top-step merit pay. This is intended to be the same as the standard for non-represented employees under the Executive Branch Performance Appraisal and Merit Pay System Manual.

FISCAL IMPACT

The proposed new CBA would have no substantial fiscal impact beyond that of the COLAs. The amounts listed in the Fiscal Note (Att. 4) are attributable to the COLAs. As noted in the Fiscal Note, the costs associated with the increase in licensing fee

[3] Benefit Time takes the place of vacation, holidays, and sick leave. Benefit Time is used in conjunction with Extended Sick Leave.

reimbursement and in the number of certifications eligible for professional designation pay are expected to be minimal.

INVITED

Jim Johnson, Labor Negotiator, King County Office of Labor Relations
John Phillips, President, Technical Employees' Association

ATTACHMENTS

1. Proposed Ordinance 2016-0010
   Att. A (Collective Bargaining Agreement)
2. Checklist and Summary of Changes (prepared by executive staff)
3. Transmittal Letter
4. Fiscal Note

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KING COUNTY

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Signature Report

January 27, 2016

Ordinance

Proposed No. 2016-0010.1 **Sponsors** Dembowski

AN ORDINANCE approving and adopting the collective bargaining agreement negotiated by and between King County and Technical Employees' Association (Wastewater Treatment Division, Department of Natural Resources and Parks, Supervisors and Staff) representing employees in the department of natural resources and parks; and establishing the effective date of said agreement.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. The collective bargaining agreement negotiated by and between King County and Technical Employees' Association (Wastewater Treatment Division, Department of Natural Resources and Parks, Supervisors and Staff) representing employees in the department of natural resources and parks, which is Attachment A to this ordinance, is hereby approved and adopted by this reference made a part hereof.

SECTION 2. Terms and conditions of said agreement shall be effective from January 1, 2015, through and including December 31, 2016.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

_____

Larry Phillips, Chair

ATTEST:

_____

Anne Noris, Clerk of the Council

APPROVED this _____ day of _____, _____.

_____

Dow Constantine, County Executive

Attachments: A. Agreement between King County and Technical Employees' Association

AGREEMENT BETWEEN
KING COUNTY
AND
TECHNICAL EMPLOYEES' ASSOCIATION
Department of Natural Resources & Parks - Supervisors and Staff

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AGREEMENT BETWEEN
KING COUNTY
AND
TECHNICAL EMPLOYEES' ASSOCIATION
Department of Natural Resources & Parks - Supervisors and Staff

PREAMBLE

This Agreement is the result of good faith negotiations between King County ("County") and the Technical Employees' Association, ("the Association" or "TEA"). This relationship is a partnership based on mutual interests, respect and trust. These Articles constitute an Agreement between the County and TEA, comprised of all employees in the Supervisor and Staff bargaining units.

This document establishes a framework within which the County and the Association can achieve our joint mission to efficiently and effectively plan, design, construct and operate the public's wastewater treatment system while providing a high quality work environment. Both parties agree that this Agreement allows for the flexibility needed to further the goals of: improving the work environment, ensuring economic feasibility of the Wastewater Treatment Division, providing a compensation package that is competitive with the best in the wastewater treatment industry, generating gains in efficiency and effectiveness, and attracting and retaining outstanding employees.

The County and the Association recognize that the workplace is changing in an effort to improve the delivery of services. The County and the Association also agree that improvement in the workplace is an evolutionary process that requires the long-term commitment of both parties. The elements of workplace improvement such as the Continuous Improvement, LEAN, Equity and Social Justice, business planning, organizational changes and performance measurement should be viewed as a system.

In support of practices that reflect our commitment to shared values, the County and the Association should:

- Trust each other,
- Listen and respond to public/customer concerns,

- Respect people,
- Promote a diverse workforce,
- Take responsible risks,
- Behave the way we say we do,
- Give and get reliable business information,
- Work to improve our technical excellence and teamwork,
- Foster a labor/management partnership based on shared interests,
- Collaborate in building an ongoing labor/management relationship based on open communications, mutual trust, and respect, and
- Enjoy challenges, work, and humor.

The TEA-Management Committee was created as an informal forum to support ongoing changes and continuous improvements in the workplace. Issues are to be discussed in a collaborative manner.

To accommodate this process, the role of the TEA-Management Committee (TMC) is to deal jointly with areas of mutual interest to all parties, to move all parties toward a shared vision of a productive work place, and to oversee the tasks called for in the labor agreement.

ARTICLE 1: PURPOSE

1.1 Purpose. The purpose of this Agreement is to set forth in writing the negotiated wages, hours and working conditions for those employees who are covered by this Agreement.

1.2 Maintenance of Working Conditions. The County recognizes its obligation to negotiate wages, hours and working conditions with TEA.

1.3 Application of Personnel Guidelines. As set forth in this section, the 2005 King County Personnel Guidelines shall apply to members of this bargaining unit where this Agreement is silent or ambiguous. The 2005 Personnel Guidelines (except those identified in Appendix B to have no application) shall replace any pre-existing practice between the parties, provided that nothing in those Guidelines will be interpreted or applied to circumvent the parties' collective bargaining obligations. However, should any genuine established practice arise subsequent to July 1, 2005, and such practice conflicts with the terms of the 2005 Personnel Guidelines (and it pertains to a matter on which the

Agreement is either silent or ambiguous), then the practice shall govern. Should the Guidelines be invoked to interpret the contract, the arbitrator reserves the right to determine what weight should be given along side those other interpretive factors that an arbitrator might conclude appropriate.

Except as expressly noted, definitions in the Personnel Guidelines shall apply to the interpretation of the Personnel Guidelines only.

ARTICLE 2: ASSOCIATION RECOGNITION AND MEMBERSHIP

2.1 Recognition. The County recognizes the Association as the exclusive bargaining representative of all employees in two separate bargaining units. The staff unit being comprised of all full-time and regular part-time non-supervisory employees in the Project Planning and Delivery, Resource Recovery, Brightwater, and Environmental and Community Services sections of the Wastewater Treatment Division of the King County Department of Natural Resources and Parks, excluding supervisors, confidential employees, managers, employees in the Industrial Waste unit of the Environmental and Community Services Section, administrative employees, and all other employees of the employer. Another bargaining unit being comprised of all full-time and regular part-time supervisory employees in the Project Planning and Delivery, Resource Recovery, Brightwater and Environmental and Community Services sections of the Wastewater Treatment Division of the King County Department of Natural Resources and Parks, excluding non-supervisory employees, confidential employees, managers, and all other employees of the employer.

2.2 Association Membership. All employees covered by this Agreement shall, as a condition of continued employment, within thirty days after TEA's signing this Agreement, either (1) pay TEA the regular initiation fee and regular monthly dues uniformly required of members, or (2) pay an amount established by TEA as Agency Fees not to exceed regular dues and fees uniformly required of members. All regular, term-limited temporary and temporary employees covered under this Agreement who are hired on or after TEA's signing of the Agreement shall, as a condition of continued employment, within thirty days following the starting date of their employment, either (1) pay TEA the regular initiation fee and regular monthly dues uniformly required of members, or (2) pay an amount established by TEA as Agency Fees not to exceed regular dues and fees uniformly required of members.

Failure by an employee to satisfy the above paragraph of this section shall constitute just cause for dismissal provided TEA notifies the County and the affected employee of its intent to seek dismissal of the affected employee within thirty (30) days of making a request for dismissal. At the expiration of thirty days notice, TEA may request dismissal in writing. Discharge must occur within thirty (30) days of such request.

2.3 Religious Exemption. If an employee can substantiate, in accordance with existing law, bona fide religious beliefs or tenets which prohibit the employee from paying dues or otherwise contributing to a labor organization, such employee shall notify the County and TEA of his or her objection to membership in TEA, and shall pay an amount equivalent to regular union dues and initiation fees to a non-religious charitable organization mutually agreed upon by the employee affected and TEA. If the employee and TEA do not reach agreement on such matter, the Public Employees Relations Commission shall designate the charitable organization.

2.4 Dues Deduction Procedure. The County shall deduct regular monthly dues and initiation fees from the employee's paycheck when authorized in writing by the employee. The deductions will be transferred to TEA monthly. TEA shall refund any amounts paid to it in error upon presentation of proper evidence thereof. TEA will indemnify, defend, and hold the County harmless against any claims made and any suit instituted against the County on account of the application of any provision of this article as it relates to the collection of TEA dues and assessments. The County shall notify TEA of changes in employment status on a monthly basis.

ARTICLE 3: RIGHTS OF MANAGEMENT

The management of the County and the direction of the work force are vested exclusively in the County, except as may be limited by the express written terms of this Agreement.

ARTICLE 4: WAIVER AND COMPLETE AGREEMENT

4.1 Waiver.

A. The Agreement expressed herein in writing constitutes the entire Agreement between the parties and no express or implied or oral statements shall add to or supersede any of its provisions.

B. The parties acknowledge that during the negotiations which resulted in this

Agreement, each had the unlimited right and opportunity to make demands and proposals with respect to any subject or matter appropriate for collective bargaining, and that the understanding and agreements arrived at by the parties after the exercise of that right and opportunity are set forth in this Agreement. Therefore, the County and TEA, for the life of this Agreement, each voluntarily and unqualifiedly waive the right and each agrees that the other shall not be obligated to bargain collectively with respect to any subject or matter, even though such subjects or matters may not have been within the knowledge of contemplation of either or both of the parties at the time that they negotiated or signed this Agreement.

4.2 Modification. Should the parties agree to amend or supplement the terms of this Agreement, such amendments or supplements shall be in writing. No binding agreements, including but not limited to memorandums of understanding, side letters, etc., involving the day-to-day administration of the collective bargaining agreement or the bargaining relationships will be entered into with the bargaining representative without the authorization of the King County Labor Relations Director or his/her designee.

ARTICLE 5: EMPLOYEE RIGHTS

5.1 Personnel Files.

A. The employee and/or an Association representative may examine the employee's personnel files if the employee so authorizes in writing. Material placed into the employee's files relating to job performance or personal character shall be provided to the employee prior to placement in the file. The employee may challenge the propriety of including it in the files. If, after discussion, the County retains the material in the file, the employee shall have the right to insert contrary documentation into the file.

B. Unauthorized persons shall not have access to employee files or other personal data relating to the employee. The Department Director/designee will determine staff authorized for access to personnel files maintained in the Department of Natural Resources and Parks. This does not limit the Union's statutory right to request information pursuant to its statutory right to request collective bargaining information. All persons with the exception of WTD, King County Labor Relations personnel, Department of Executive Services, and Prosecuting Attorney staff shall record

access to employee files.

C. The only personnel files will be the Department personnel file and the Section personnel file. Additionally, supervisors may keep a "working file" which may be used for the purpose of developing an annual evaluation. Such materials will be purged from this working file when the evaluation is finalized. Notes taken for such purposes may be added to the personnel file.

D. Written warnings and/or reprimands shall remain in the employee's personnel file for a maximum of three (3) years except where there is a reoccurrence of a similar nature. Suspensions or demotions may be removed from the employee's personnel file after five (5) years upon request of the employee and approval of the Division Director.

5.2 Right to Representation. An employee, at his/her request, has a right to Union representation at any meeting which s/he reasonably believes may lead to disciplinary action against the employee. If the employee requests TEA representation in such a matter, the employee will be provided with reasonable time to arrange for TEA representation. The parties acknowledge that in certain instances a reasonable time may be as little as the same day.

5.3 Seniority List. The County will supply the Association with a seniority list twice a year upon written request. Requests are to be directed to the Wastewater Treatment Division's Human Resources Manager. The list will include each TEA employee's name, job classification number, classification title, section, and seniority data.

Seniority for all purposes of this Contract shall be calculated as a person's continuous length of service in a Wastewater bargaining unit represented by TEA from April 13, 2001. Employees with the same WTD TEA seniority shall be subject to a tiebreaker, which shall be the employee's King County/Metro adjusted service date. The "adjusted service date" means the most recent date of hire into a regular position, as backdated for any prior eligible service that ended no more than two years before reemployment and is adjusted (postdated) for unpaid leaves of absence, including unpaid family leave, that exceed thirty (30) calendar days. In this context, eligible service means employment in a regular position; however, if an employee moves from a term-limited temporary position into a regular position with no break in service, employment in the term-limited temporary position will be included when establishing the adjusted service date. Breaks in the continuous length of service shall be

calculated in the same manner as the adjusted service date. Seniority will be posted in years, months and days.

5.4 Supervision and Evaluations. Employees will be supervised and evaluated by the supervisor of the work group responsible for establishing the performance expectations, deliverables, and assignments for the majority of the employee's workload.

ARTICLE 6: BENEFIT TIME

6.1 General Description

The benefit program has two elements to it: one is Benefit Time (BT) and the other is Extended Sick Leave (ESL). Both programs are built on the accrual rate table set forth in Section 6.6. This program recognizes the need for scheduled time away from the job (vacation and holidays) for personal reasons and for occasions when the employee must be away because of illness or injury. Benefit Time is administered with the understanding that: a) BT is intended to constitute wages earned for services rendered, and b) because business needs may constrain employees' ability to utilize leave, the Collective Bargaining Agreement provides for a yearly cash conversion of up to forty hours (40) hours of Benefit Time. Full-time regular, part-time regular, provisional, probationary and term-limited temporary employees shall receive the leave benefits provided in this Article.

6.2 Definitions

All BT and ESL time is based on a two thousand eighty (2,080) hour year. Benefit Time (BT) is the bank of time accrued for use during scheduled paid time off, including holidays, and unscheduled paid time off (excluding bereavement leave and jury duty) to include the first two (2) consecutive days of unscheduled illness for employees and their dependents.

Extended Sick Leave (ESL) is the bank of time accrued for use during all paid nonscheduled illness exceeding two (2) consecutive scheduled workdays for employees and their dependents, as well as for pre-scheduled sick leave. Sick leave is considered scheduled if the employee has requested leave using an Absence Request Form or email to the supervisor or his/her designee before the end of the workday prior to the leave.

Employees may donate BT and ESL to another employee in accordance with Section 7.2.

6.3 Principles

A. The Benefit Time program is intended to provide a productive workplace where employees are encouraged to be healthy and regularly be at work.

B. Operational efficiency is increased by the responsible management of the benefit time usage.

6.4 Absence

Employees are expected to schedule BT as far in advance as possible to facilitate workload planning. Employees are expected to notify the Employer each day of any unscheduled absence. If the reason for unscheduled absence is for illness in excess of two (2) consecutive days, the employee shall be paid from their accrued ESL bank beginning with the third (3rd) day. However, all BT and ESL time shall be coordinated with, and supplementary to, Workers' Compensation.

Hourly employees who become ill or who are injured while at work shall apply the applicable accrued Benefit Time or Extended Sick Leave for that portion of the shift that they are unable to complete. This day will be considered the first day of unscheduled absence in case of illness when determining the activation of payment of Extended Sick Leave time. Hourly employees may use accrued benefit time in increments of one-half (1/2) hour if approved by the supervisor.

FLSA exempt employees use accrued BT and ESL in increments of not less than one regular work day. FLSA exempt employees who are absent for part of a work day will not be required to charge such absences against any accrued leave balances nor will the employee's pay be reduced.

Employees unable to work because of any other personal emergency shall be eligible to use BT for any unworked but scheduled hours upon approval by the supervisor.

Benefit Time (BT) and Extended Sick Leave (ESL) will be paid only to the extent that BT and ESL hours have been accrued by the employee in the pay period immediately preceding the absence.

6.5 Absence

Benefit Time Usage for Retiring or Separating Employees – Not withstanding other protected leave usage, bargaining unit members who retire or separate with an irrevocable notice of resignation a minimum of six (6) months prior to their last day worked at the County (exclusive of the Benefit Time Usage) may use up to 480 hours of approved Benefit Time.

6.6 Benefit Time Accrual and Extended Sick Leave Accrual

Benefit Time accrual shall be as follows:

	Accrual Rates		
Years of Employment	**Annual**	**Bi-weekly**	**Hourly**
Less than 5 years	232	8.923	0.1115
5 years but less than 8 years	256	9.846	0.1231
8 years but less than 10 years	264	10.154	0.1269
10 years but less than 16 years	296	11.385	0.1423
16 years but less than 17 years	304	11.692	0.1462
17 years but less than 18 years	312	12.000	0.1500
18 years but less than 19 years	320	12.308	0.1538
19 years but less than 20 years	328	12.615	0.1577
20 years but less than 21 years	336	12.923	0.1615
21 years but less than 22 years	344	13.231	0.1654
22 years but less than 23 years	352	13.538	0.1692
23 years but less than 24 years	360	13.846	0.1731
24 years but less than 25 years	368	14.154	0.1769
More than 25 years of service	376	14.462	0.1808

Annual and bi-weekly totals in the above table are approximations and may vary slightly based on the hourly rate. Extended Sick Leave accrual shall accumulate for all employees on the basis of fifty-six (56) hours per year (0.0269 hours per hour). All leave accruals will be prorated for regular part-time employees on the percentage of full-time worked.

The hourly accrual rates indicated in this article shall not be construed to mean that FLSA exempt employees receive compensation based on number of hours worked.

6.7 Benefit Time and Extended Sick Leave Accumulation and Conversion

The maximum accumulated carryover of Benefit Time from the pay period ending before

April 1st of one calendar year to the next shall be six hundred (600) hours (prorated for part-time employees on the percentage of full-time worked). Employees with at least four hundred and eighty (480) hours at that time shall have the option to convert up to forty (40) hours to cash, down to a balance of four hundred and eighty (480) hours. Accumulated hours beyond 600 (or prorated for part-time) will be forfeited in the payroll period that contains April 1.

There shall be no limit on the amount of Extended Sick Leave (ESL) accrued.

Upon implementation of this agreement employees may convert up to forty (40) hours from their extended sick leave balance into benefit time or from benefit time to extended sick leave. On the pay period including April 1st 2016 employees may convert up to forty (40) hours from their extended sick leave balance into benefit time or from benefit time to extended sick leave. Conversions will be done on an hour-for-hour basis.

6.8 Upon Retirement or Death

Upon retirement from the County or death, an employee or their beneficiary shall be paid for up to four-hundred eighty (480) hours of accrued benefit time (BT) at one-hundred percent (100%) and for all accrued Extended Sick Leave (ESL) at thirty-five percent (35%).

6.9 Upon Separation

Employees shall be paid for accrued Benefit Time to their date of separation if they have successfully completed their first six (6) months of County service in a paid leave eligible position up to 480 hours maximum and any remainder shall be forfeit and not be paid. Payment shall be made at the employee's rate of pay in effect upon the date of leaving County employment less mandatory withholdings. If employees leave prior to successful completion of the first six (6) months of County service, they shall forfeit and not be paid for accrued Benefit Time.

Separation from employment except by reason of retirement, death, layoff, or non-disciplinary medical reasons will cancel all Extended Sick Leave accrued to the paid leave eligible employee as of the date of separation. Should a regular career service employee resign in good standing, be laid off or separated for non-disciplinary medical reasons and return to County employment within two (2) years, his/her accrued Extended Sick Leave will be restored.

6.10 Holidays

All work performed on the following holidays by hourly employees shall be approved in advance by the supervisor and paid at the rate of one and one-half (1-1/2) times the employee's hourly rate of pay for all hours worked:

- New Year's Day
- Martin Luther King Jr.'s Birthday
- Washington's Birthday (also known as President's Day)
- Memorial Day
- Independence Day
- Labor Day
- Veteran's Day
- Thanksgiving Day
- Day after Thanksgiving Day
- Christmas Day

Holidays will be on the day King County observes the holiday. Employees will use accrued Benefit Time, compensatory time, or Executive Leave in the amount of the regularly scheduled workday in order to receive compensation for the holiday. Holiday time must be used no later than the following pay period.

An employee who does not have sufficient accrued leave will not be paid for the holiday, unless as above, an hourly employee works on the holiday with the approval of his supervisor. Employees on alternate work schedules without sufficient BT to be paid for the holiday may, with the approval of their supervisor, adjust their work schedules in order to have the holiday fall on a regular day off.

ARTICLE 7: LEAVE DONATIONS AND GENERAL LEAVES

7.1 Full-time regular, part-time regular, provisional, probationary and term-limited temporary employees shall receive the leave benefits provided in this Article.

7.2 Donation of Leaves. Donation of benefit time hours and donation of extended sick leave hours shall be as provided herein. However, should King County formally change its policies

regarding donation of leave, the parties agree that either party may open this contract within 60 days for the purpose of negotiation over these subjects.

A. Benefit Time hours:

1. Approval Required. An employee eligible for paid leave may donate a portion of his/her accrued benefit time to another employee eligible for leave benefits. Such donation will occur upon written request to and approval of the donating and receiving employee's department director(s)/designee, except that requests for benefit time donation made for the purposes of supplementing the extended sick leave benefits of the receiving employee will not be denied unless approval would result in a departmental hardship for the receiving department.

2. Limitations. The number of hours donated will not exceed the donor's accrued benefit time as of the date of the request. No donation of benefit time will be permitted where it would cause the employee receiving the transfer to exceed his/her maximum benefit time.

3. Use of Donated Leave. Donated hours accrue to the donee's leave bank and do not expire or return to the donor once accrued. Donated benefit time leave hours will be excluded from cashout provisions contained in Article 6. For purposes of this Article, the first hours used by an employee will be accrued benefit time hours.

B. Extended Sick Leave hours:

1. Written Notice Required. An employee eligible for paid leave may donate a portion of his/her accrued extended sick leave to another employee eligible for leave benefits upon written notice to the donating and receiving employee's department director(s)/designee(s).

2. Minimum Leave Balance Required (Donor). No donation will be permitted unless the donating employee's extended sick leave accrual balance immediately subsequent to the donation is one hundred (100) hours or more. No employee may donate more than twenty-five (25) hours of his/her accrued sick leave in a calendar year.

3. Use of Donated Leave. Donated hours accrue to the donee's extended sick leave bank and do not expire or return to the donor once accrued. Donated extended sick leave hours will be excluded from the extended sick leave cashout provisions contained in Article 6. For purposes of this Article, the first hours used by an employee will be accrued extended sick leave

hours.

4. No Solicitation. All donations of leave made under this Article are strictly voluntary. An employee is prohibited from soliciting, offering or receiving monetary or any other compensation or benefits in exchange for donating leave hours.

5. Conversion Rate. All leave hours donated will be converted to a dollar value based on the donor's regular hourly rate at the time of donation. Such dollar value will then be divided by the receiving employee's regular hourly rate to determine the actual number of hours received.

7.3 Leave - Organ Donors. The manager/designee shall allow all employees eligible for paid leave benefits who are voluntarily participating as donors in life-giving or life-saving procedures such as, but not limited to, bone marrow transplants, kidney transplants, or blood transfusions to take five (5) days paid leave, which shall not be charged to benefit time or extended sick leave, provided that:

A. The employee gives the manager/designee reasonable advance notice of the need to take time off from work for the donation of bone marrow, a kidney, or other organs or tissue where there is reasonable expectation that the employee's failure to donate may result in serious illness, injury, pain or the eventual death of the identified recipient.

B. The employee provides written proof from an accredited medical institution, organization or individual as to the need for the employee to donate bone marrow, a kidney, or other organs or tissue or to participate in any other medical procedure where the participation of the donor is unique or critical to a successful outcome.

Time off from work for the purpose set out above in excess of five (5) working days will be subject to the terms of this Agreement.

7.4 Leave of Absence without Pay. If a leave of absence is taken in conjunction with a workers' compensation claim, no authorization for the leave is required. All other leaves of absence without pay are administered as follows:

A. An employee eligible for leave benefits may take a leave of absence without pay for less than 30 days if authorized in writing by the employee's appointing authority. Leaves of absence without pay taken for medical or family reasons are also governed by Section 7.10 of this

Article.

B. An employee eligible for leave benefits may take a leave of absence without pay for more than 30 calendar days if authorized in writing by the employee's appointing authority and the Director. Leaves of absence without pay taken for medical or family reasons are also governed by Section 7.10 of this Article.

C. Leaves of absence without pay will be for periods not to exceed one year. However, the Human Resources Division Director may, in special circumstances, grant an extension beyond one year.

D. An employee who is on a leave of absence without pay will not accrue benefit time or extended sick leave. An employee who is on a leave of absence without pay in excess of 30 days will not accrue seniority while on leave. In addition, leaves of absence in excess of 30 days, except for family or medical leave (Section 7.10), or military leave (Section 7.5) will result in the loss of paid health and other insured benefits.

E. If a leave of absence without pay was granted to an employee for the purpose of recovering health, the appointing authority will require the employee to submit a physician's statement concerning the employee's ability to resume duties before allowing the employee to return to work.

F. An employee who is on a leave of absence without pay may return from the leave before its expiration date if the employee provides the appointing authority with a written request to that effect at least fifteen (15) days before resuming duties.

G. Failure to return to work by the expiration date of a leave of absence may be cause for removal and result in termination of the employee from County service.

H. A leave of absence without pay may be revoked by the appointing authority if the appointing authority learns that the leave of absence was requested and granted under false pretenses, or that the need for such leave of absence has ceased to exist.

I. When a leave of absence without pay is used in conjunction with paid leave time, the paid leave time must be used first.

J. Employees who wish to complete educational programs may request a leave of

absence without pay for this purpose.

7.5 Military Leave of Absence. An employee who is a member of the Washington National Guard or any organized reserve of the Armed Forces of the United States who is ordered to be on active training duty shall be allowed military leave in accordance with state and federal law. In accordance with state law, such employees who are ordered to be on active training duty shall be allowed up to twenty-one (21) work days of paid military leave per year (October 1st - September 30th). The employee must present orders for active duty or training duty to his or her Section Manager prior to taking leave. The employee may receive military leave for weekend reservist duty.

7.6 Military Pay & Benefits Continuation. If an employee is called to involuntary active duty, she/he may be eligible for health benefit continuation and pay supplementation in accordance with County policy at the time the individual is called to active duty.

7.7 Jury Duty. If an employee eligible for leave is called for jury duty, then the employee will be entitled to regular pay for all workdays that the employee misses due to jury duty. The employee should deposit his or her jury duty fees, excluding mileage, with the Finance and Business Operations Division of the Department of Executive Services. Employees must contact their supervisor when dismissed from jury duty during regularly scheduled working hours and may be required to report back to work.

7.8 School Volunteer Leave. An employee may use up to three (3) days of extended sick leave per year for volunteering at the employee's children's school. The employee must obtain approval in advance from the employee's appointing authority.

7.9 Bereavement Leave. All employees eligible for leave benefits are entitled to three (3) paid days per occurrence of bereavement leave due to the death of an immediate family member. For purposes of this section, "immediate family" is defined as follows:

Children; children of spouse or domestic partner; parents; parents of spouse or domestic partner; siblings; siblings of spouse or domestic partner; grandchildren; grandchildren of spouse or domestic partner; grandparents; grandparents of spouse or domestic partner; spouse or domestic partner.

Holidays designated pursuant to the County Code, or regular days off falling within the

prescribed period of absence will not be charged against bereavement pay entitlement.

Employees who have exhausted their bereavement leave shall be entitled to use extended sick leave in the amount of three days for each instance of death when death occurs to a member of the employee's immediate family.

In the cases of family death where no extended sick leave benefit is authorized or exists, an employee may be granted use of benefit time or leave without pay.

7.10 King County Family and Medical Leave (KCFML).

A. KCFML may be taken for an employee's own serious health condition; to care for a family member (defined as the employee's spouse or domestic partner, the employee's son or daughter, a son or daughter of the employee's spouse or domestic partner, the parent of the employee, employee's spouse or domestic partner or an individual who stands or stood in loco parentis to the employee, the employee's spouse or domestic partner) who has a serious health condition; or for the birth and care of a newborn or newly adopted child or placement of a foster child.

B. To be eligible for KCFML to care for a family member other than the employee's child, an employee must have been employed by the County for twelve (12) months at any time or more and worked a minimum of 910 hours (35 hour employee) or 1040 hours (40 hour employee) in the preceding twelve (12) months (paid leaves such as benefit time and extended sick leave are not considered hours worked).

C. An employee may take a total of up to eighteen (18) work weeks unpaid leave for his or her own serious health condition and for family medical reasons, combined, within a rolling twelve-month period. The leave may be continuous, which is consecutive days or weeks, or intermittent, which is taken in whole or partial days as needed.

1. For purposes of this benefit, a rolling twelve-month period is measured backward from the date an employee uses any of his or her eighteen (18) week KCFML entitlement. For instance, each time an employee takes family and medical leave the remaining entitlement would be any balance of the eighteen (18) weeks which have not been used during the immediately preceding twelve (12) months. For example, if an employee has taken eight (8) weeks of leave during the past twelve (12) months, an additional ten (10) weeks could be taken. If an employee used four

(4) weeks beginning February 1, 2002, six (6) weeks beginning June 1, 2002, and eight (8) weeks beginning December 1, 2002, the employee would not be entitled to any additional leave until February 1, 2003. However, beginning on February 1, 2003, the employee would be entitled to four (4) weeks of leave, on June 1, the employee would be entitled to an additional six (6) weeks, etc.

2. If the leave is taken for birth or adoption of a child, or placement of a foster child, and both parents are employed by King County, the aggregate total taken by both employees shall be eighteen (18) weeks.

D. Intermittent leave is subject to the following conditions:

1. When leave is taken after the birth or placement of a child for adoption or foster care, an employee may take leave intermittently or on a reduced leave schedule only if authorized by the employee's appointing authority.

2. An employee may take leave intermittently or on a reduced leave schedule when medically necessary due to a serious health condition of the employee or a family member of the employee; and

3. If an employee requests intermittent leave or leave on a reduced leave schedule that is foreseeable based on planned medical treatment, the appointing authority may require the employee to transfer temporarily to an available alternative position for which the employee is qualified and that has equivalent pay and benefits and that better accommodates recurring periods of leave than the regular position of the employee.

E. Prior to using family or medical leave, any accrued compensatory time must be exhausted. The employee may choose to either use it as time off or receive a lump sum cashout. The employee must exhaust all accrued Extended Sick Leave prior to using unpaid leave for the employee's own health condition. For a leave for family reasons, the employee shall choose at the beginning of the leave whether it will be paid or unpaid; when an employee chooses to take paid leave for family reasons, the employee may reserve up to eighty (80) hours of accrued Extended Sick Leave.

F. The County shall continue its contribution toward health care benefits (medical, dental, vision) during any unpaid leave taken as KCFML. An employee may elect to self pay for

other insured benefits.

G. An employee who returns from KCFML within the time provided in this section is entitled, subject to bona fide layoff provisions, to:

1. The same position he or she held when the leave commenced; or
2. A position with equivalent status, benefits, pay and other terms and conditions of employment; and
3. The same seniority accrued before the date on which the leave commenced.

H. Failure to return to work by the expiration date of a leave of absence may be cause for removal and result in termination of the employee from County service.

I. Use of accrued leave in conjunction with a family or medical leave shall be as provided in the County's Personnel Guidelines.

J. For purposes of this section, donated leave shall be considered unpaid leave in so far as it shall run after the use of accrued leave, and concurrently with the eighteen (18) work week family and medical leave entitlement. To the extent possible, donated leave must be used prior to going to a non-pay status. Further, use of donated leave after the eighteen (18) week entitlement has been exhausted will not extend the job protection rights described herein.

7.11 To the extent that the Washington State Family Care Act provides a greater benefit than the provisions of this Agreement, the Washington State law will apply.

7.12 Executive Leave. Employees covered by this Agreement who are employed in a bona fide executive, administrative or professional capacity and are in turn exempt from overtime payments under the Federal Fair Labor Standards Act will be eligible for up to ten (10) days of Executive Leave per year pursuant to County policy and are expected to work the hours necessary to satisfactorily perform their jobs; provided, however, all such employees will receive a minimum amount of Executive Leave per year, as follows:

A. Employees in an exempt position on January 1st of each year will receive three (3) days of Executive Leave per year, to accrue on January 1st.

B. Employees hired, transferred or promoted from a non-exempt position into an exempt position during the course of the calendar year shall be entitled to a minimum amount of

Executive Leave, granted upon placement in the exempt position, according to the following schedule:

1. Before April 30th: Three (3) days;
2. Between May 1 and August 31: Two (2) days;
3. September 1st or after: One (1) day.

C. Non-exempt employees assigned to special duty in an exempt position for a period of six (6) months or longer will be entitled to one (1) day of executive leave for each four (4) months of assignment duration during a calendar year; provided, that the employee must serve a full thirty (30) days in the assignment for the month to be counted. Executive leave in such case will be granted at the beginning of the assignment based upon the expected duration, and increased as necessary if the original assignment is extended.

7.13 Administrative Leave With Pay. If the department director determines that circumstances exist that make the immediate removal of an employee from the workplace to be in the best interests of the county, an employee may be placed on administrative leave with pay for up to 30 calendar days. Such leave is not disciplinary, and is not subject to appeal. If the need for administrative leave exceeds 30 calendar days, the department director must receive approval from the Human Resources division director for an extension. All extension requests and approvals must be in writing prior to the end of the approved period. The Human Resources division director may grant an extension for an additional 30 calendar days (60 days total). The County Administrative Officer must approve any further extensions of administrative leave with pay. Administrative leave with pay will not normally exceed 90 calendar days.

7.14 Federal FMLA (Federal Family and Medical Leave Act):

A. An employee who has been employed by the county for twelve months or more and has worked a minimum of 1,250 hours in the preceding twelve months (paid leaves such as benefit time and extended sick leave are not considered hours worked), may be eligible for leave under the FMLA.

B. The following are qualifying reasons for federal FMLA leave:

1. The birth or adoption of the employee's child, or placement of the

employee's foster child;

2. The employee's serious health condition;

3. The employee's spouse's, parent's, son's or daughter's serious health condition.

C. All requests for FMLA require certification to be submitted with the request.

D. An employee is entitled to up to twelve weeks of FMLA leave in a rolling twelve-month period.

1. If the leave is taken for birth or adoption of a child, or placement of a foster child, and both parents are employed by King County, the aggregate total leave taken by both employees shall be twelve weeks.

2. For purposes of this subsection, a rolling twelve-month period is measured backward from the date an employee uses any FMLA leave. For instance, each time an employee takes family or medical leave, the remaining leave entitlement would be any balance of the twelve weeks which have not been used during the immediately preceding twelve months.

3. When leave is taken after the birth or placement of a child for adoption or foster care, an employee may take leave intermittently or on a reduced leave schedule only if authorized by the employee's appointing authority;

4. An employee may take leave intermittently or on a reduced schedule when medically necessary due to a serious health condition of the employee or a family member of the employee. When intermittent leave is needed to care for an immediate family member or the employee's own illness, and is for planned medical treatment, the employee must try to schedule treatment so as not to unduly disrupt the department's operation; and

5. If an employee requests intermittent leave or leave on a reduced leave schedule, the appointing authority may require the employee to transfer temporarily to an available alternative position for which the employee is qualified and that has equivalent pay and benefits and that better accommodates recurring periods of leave than the regular position of the employee.

E. Leave taken for any of the qualifying reasons must be recorded as FMLA leave, whether or not requested by the employee.

F. FMLA qualified leave shall run concurrent with use of Extended Sick Leave, Benefit Time, unpaid KCFML leave, light duty assignment due to a disabling injury or illness, and/or workers' compensation time loss benefits.

G. An employee who has exhausted his or her Extended Sick Leave may use accrued Benefit Time during an FMLA qualified leave if approved.

H. An employee who returns from FMLA leave within the time provided in this section is entitled, subject to bona fide layoff provisions, to:

1. The same position he or she held when the leave commenced; or

2. A position with equivalent benefits, pay and other terms and conditions of employment; and

3. The same seniority accrued before the date on which the leave commenced.

I. In order for the leave to be qualified and counted toward the employee's FMLA entitlement, the request/provisional designation may be initiated by the employee, the employee's supervisor, Human Resources, division director, or department director.

J. Employee responsibilities include:

1. Submit FMLA leave request form 30 days in advance of the leave, if possible, or as soon as the need for the leave is known, or no later than 2 business days following the employee's return to work;

2. Submit a certification form within 15 business days to his or her supervisor or human resources. This certification must be from a healthcare provider or court order as appropriate. Recertification may be requested every 30 days during the FMLA absence.

K. The county shall continue its contribution toward health care benefits (medical, dental, vision) during any unpaid leave taken as FMLA. An employee may elect to self pay for other insured benefits.

7.15 Additional Leave: If state or federal law provides additional leave benefits that an employee is entitled to by the terms of such laws, the employee shall be entitled to take those leaves as well.

ARTICLE 8: HOURS OF WORK AND OVERTIME

8.1 Regular Schedule. Regular work shifts for full-time employees are eight (8) hours per day (exclusive of the meal period) for five (5) days per week, with Saturday and Sunday generally the days off. FLSA exempt employees are required to work the hours needed to perform their duties and will receive their normal rate of pay for the workweek regardless of whether they are on a standard or alternative work schedule.

Alternative Work Schedules. A full-time employee may request, a four (4) day, forty (40) hour work week, a nine (9) day, eighty (80) hour bi-weekly work schedule, or other alternative schedule in order to support the County Commute Trip Reduction program. Employees will submit written requests for alternative work schedule approval to the Section Manager/designee. Requests will be evaluated and approved or denied relative to the business needs of the organization, and must be reviewed at least annually. In administering any such alternative work schedule, the following working conditions shall prevail:

A. Employee participation shall be on a voluntary basis unless the Section Manager determines that an alternative schedule is essential to the business needs of the organization. The establishment of and approval for alternative work schedule is vested solely within the purview of the County and may be changed from time to time. Such changes will normally require at least two (2) weeks notice to the employee.

B. Section 6.9 sets forth terms regarding holidays and alternate work schedules.

C. If multiple employees in a work group desire an alternative work schedule with the same days off, the County may, upon written notice to TEA, subject requests for alternative schedules to a bidding process, with priority given to employees in order of decreasing seniority.

D. Employees who currently work on an alternative work schedule shall be permitted to retain that work schedule, subject to the management approval requirements in Section A.

8.2 Overtime.

A. Except as otherwise provided in this Article, FLSA Non-exempt employees shall be paid at an overtime rate of time and one-half (1-1/2) their regular rate of pay for all hours compensated in excess of forty (40) hours per week.

B. Overtime work shall require the prior approval of the employee's Section Manager/designee.

C. Benefit Time and worked hours on a holiday (which are paid at 1.5 times the regular rate) shall not be combined to equal greater than the employee's normally scheduled workday for the purposes of determining compensated hours in the workweek for overtime purposes.

8.3 Compensatory Time. A non-exempt employee may request, and with approval of the Section Manager, may receive time off in lieu of overtime pay. Such time shall be earned on a time and one-half (1-1/2) basis as provided under this Article. In accordance with the law the employee must initiate all requests for compensatory time off in lieu of overtime pay, and compensatory time accumulations will be governed by King County policy. Any unused compensatory time will be cashed out on the last payroll of the year.

8.4 Benefits for Employees Held Over. Employees asked to work beyond their normally scheduled shift may use a County telephone to notify home when travel plans have changed. Employees working two (2) consecutive hours of unscheduled overtime immediately following the employee's regularly scheduled workday will be eligible to receive a meal expense reimbursement up to six dollars. This provision only applies when employees are not informed of the need for overtime in advance of the start of their shift. Employees must submit meal receipts to their supervisor to receive reimbursement.

8.5 Call Back. A non-exempt employee covered by this Agreement who is not on standby and is called to duty after completion of his or her regular shift or workweek, not contiguous with the employee's next regular shift shall be granted a minimum of four (4) hours pay at the time and one-half (1-1/2) rate of pay. Paid status will begin upon arrival at the work location, and will terminate at the completion of required work. In the event this overtime work is accomplished prior to the normal working hours and the employee subsequently works his or her regular shift, pay for the regular shift shall be at the employee's straight time rate.

8.6 Definition of Call Back. A Call Back shall be defined as a circumstance where an employee has left the work premises at the completion of his or her regular work shift and is required to report to duty prior to the start of his or her next regularly scheduled work shift. An employee who

is called back to report to work before the commencement of his or her regular work shift shall be compensated in accordance with the Call Back provisions of this Collective Bargaining Agreement. An individual on standby pay is not eligible for call back pay.

8.7 Telecommuting. TEA and the County mutually recognize the importance of regularly reporting to the assigned work site for the purposes of accomplishing work, however, consistent with past practice, an employee may occasionally request, and a supervisor may occasionally approve, an alternative telecommuting work schedule for a limited period of time for the purpose of accommodating and balancing the individual needs of an employee and the business needs of the organization. Additionally, employees are covered by the King County Telecommuting Policy (PER 18-4 (AEP)), and any amendments thereto.

8.8 Home Free Guarantee. The County will operate a program to provide employees with a free ride home, by taxi, if on a given day the employee has commuted to work by bus, carpool, vanpool, bike or walking on the day of the trip and has an emergency that day which requires the employee to leave work at other than the employee's regularly scheduled quit time. Determination of what constitutes a qualified emergency will be made at each worksite by the employee designated by the County. Employees can exercise their home free guarantee a maximum of eight (8) times per calendar year.

ARTICLE 9: LAYOFF, RECALL AND TRANSFER

9.1 Layoff. In the event of a reduction in force due to lack of work or lack of funds, layoffs will be conducted at the division level (WTD). The WTD Director (or designee) will provide written notification to the individual(s) whose position(s) is/are being eliminated. Prior to instituting layoff notification(s), all temporary, term-limited-temporary (TLT) and probationary employees within the skill area affected by the primary layoff (e.g. structural, mechanical, electrical, etc.) shall be released; provided, however, that WTD may retain a limited number of TLT employees during layoffs when there exists a legitimate business need to do so (e.g., the TLT is working on a project which is expected to be completed within four months of the date the layoff takes effect, the TLT possesses or the project requires unique skills and/or experience within the broader skill area, the project involves extensive communication and relationship with community members, etc.).

9.2 Bumping. A regular career service employee who has completed a probationary period so notified may accept layoff or elect to bump an employee with less seniority covered by this Agreement, as provided within this Section; provided, however, that a TLT employee who has been retained through layoff pursuant to Article 9.1 shall not be bumped. An employee will have five (5) work days from the time of written notification of layoff to provide written response to the County of his/her intent to exercise his/her bumping rights. An employee will forfeit his/her bumping rights if his/her written response is not submitted within five (5) days or the County has not accepted a late filing of the response. The County will, if it determines that there are warranting circumstances, accept a late filed response from an employee. Late response from those employees who could not be notified of a reduction in force due to leave, absence, or long-term vacation, etc., will be accepted.

Should the County accept the late filing, the resultant adversely affected employee(s) may not grieve such decision. Also, such acceptance of a late filing will not result in the re-administration of the bumping process.

An employee notified of layoff and each subsequently displaced employee may select any one of the following alternatives rather than accepting layoff:

A. Bump within the WTD Division to displace the least senior employee in his/her same classification for which s/he is qualified;

B. Bump the least senior employee within the WTD Division in a lower paying classification in his/her same classification series for which s/he is qualified;

C. Bump the least senior employee within the WTD Division in a lower paying classification outside of his/her current classification series that s/he has previously served a probationary period or had probation waived by the County and for which s/he is qualified;

D. Bump the least senior employee within the WTD Division in a lateral classification (one that has the same top rate of pay) for which s/he is qualified and has previously served a probationary period or had probation waived by the County.

9.3 Transfer. In lieu of laying off a regular career service employee, the director of the Department of Executive Services (DES) or designee may reassign such employee to a comparable, vacant position, when the director of DES determines such reassignment to be in the best interest of

the County.

9.4 Recall Rights. A regular career service employee who is laid off will have recall rights to his/her previous position for two (2) years from the date of layoff. An employee retains his/her recall rights if he/she accepts a lesser position with the County. An employee who is laid off shall forfeit his/her recall rights if he/she refuses a recall to a comparable position.

9.5 Notice of Recall. A regular career service employee will have ten (10) days from the date the notice of recall is sent by certified mail in which to notify the County of whether he/she will accept the position. The County will consider the employee's failure to notify the County within ten (10) days of refusal, however, if the County determines that there are warranting circumstances, it may accept a late notice from an employee. Notices will be in writing. It is the employee's responsibility to keep the County informed of his/her current address.

9.6 Reinstatement. A regular career service employee recalled within two (2) years from the time of layoff will have any forfeited extended sick leave accruals and seniority restored and adjusted for the period of layoff, and benefit time accrual rate restored.

ARTICLE 10: DISCIPLINE

10.1 Just Cause Standard. No career service employee shall be disciplined or discharged except for just cause. Probationary and temporary employees are employed at will and may be disciplined and discharged at any time by the County. Probationary and temporary employees may not grieve or in any way appeal discipline or discharge under this Agreement.

Term-limited employees are not subject to the just cause requirement but will be granted due process as defined in this section. Before being disciplined or discharged, except where the action is taken for budgetary or operational reasons, TLTs shall be provided a due process review. Not less than two (2) working days before the review, the employee shall be advised of the intended action and shall be provided notice of the allegations and all documentation relating to the allegations. TLTs shall be entitled to union representation at the review, which shall be held with the decision-maker.

10.2 Probationary Period for New employees. New employees shall be subject to a six (6) month probationary period. Employees who have been assigned to a position as an acting or TLT shall be provided credit for such time toward this period at the discretion of the appointing authority.

A probationary period may be extended beyond six (6) months but no more than twelve (12) months upon agreement of the County, the employee, and TEA. A new employee shall receive a one-step pay increase upon successful completion of the probationary period, unless the employee is already at the top step (Step 10) of the wage range.

10.3 Trial Service Period upon Promotion, Reclassification, Transfer or Demotion.

Career Service bargaining unit employees promoted, reclassified or transferred to a new position in the bargaining unit shall be subject to a six (6) month trial service period in the new position. Employees who have been performing the work of the new position in an acting capacity, or as the result of a reclassification, may be provided credit for such time toward this period at the discretion of the appointing authority. An employee successfully completing a trial service period may be eligible for a one step pay increase at the discretion of the hiring authority.

An employee who does not successfully complete the trial service period in a position to which the employee has been promoted, transferred or reclassified may be restored to the employee's former position, former salary, and all other benefits to which the employee would have been entitled if the promotion, transfer or reclassification had not occurred. Provided further, there are no reversion rights if discharged for cause. Reversion will occur if the former position is still vacant (has not been offered and accepted by an applicant), and the position still exists. If the former position is unavailable, the individual will be offered any vacant WTD TEA represented position for which they are qualified. If they accept a lower range position, they will have recall rights to the next available position of the range they had at the time of the initial transfer for a period of up to two years. If no vacancy exists, the employee shall be separated from employment and shall be eligible for recall to any of the positions specified in this section for a period of up to two years. If they refuse to accept a position of equal range and similar duties (to the position initially vacated) for which they are qualified, they will be discharged without recall rights. An employee not successfully completing a trial service period upon voluntary or involuntary demotion will be separated from employment with no reversion or recall rights.

10.4 Disciplinary Action. Disciplinary action may include but not be limited to a written reprimand, suspension without pay, involuntary demotion, withholding of a step increase, reduction

of a pay step, and discharge. The type and level of disciplinary action issued will be determined by the County based on the nature and severity of the behavior and/or performance deficiency that led to the disciplinary action. The suspension without pay of an employee who is exempt under the Fair Labor Standards Act may only be in full week increments unless the infraction is for the violation of a major safety rule. Counseling whether verbal or written, is not considered discipline and is not subject to the grievance procedure of this Agreement.

A. Verbal and Written Counseling. Instances of prior counseling shall not be used as a resolved disciplinary action for purposes of future disciplinary actions. However, instances of prior counseling may be used as prior notice to the employee and may be taken into account accordingly for subsequent disciplinary actions. Additionally, employees may provide a written response to any counseling maintained in the employee's personnel file, and said response shall be maintained in the employee's personnel file as well.

10.5 Cause for Disciplinary Action.

An employee may be disciplined for any of the following causes, or for any other justifiable cause:

- Dishonesty, including but not limited to dishonesty in securing appointment
- Gross misconduct
- Incompetence
- Inefficiency
- Unauthorized absence, including patterns of continual tardiness
- Neglect of duty
- Insubordination
- Consumption of or being under the influence of alcohol or other drugs while on duty
- Conviction of a crime
- Disorderly conduct while on duty
- Negligent, reckless or knowing damage to or waste of public property
- Violation of any of the provisions of applicable federal or state law relating to

political activities

- Negligent, reckless or knowing violation of any of the provisions of the personnel guidelines or this Agreement.
- Violation of any lawful order, directive, or policy of a superior, including but not limited to the Executive, department directors and division managers, or a violation of the Employee Code of Ethics.

ARTICLE 11: CONFLICT RESOLUTION

The County and TEA commit to addressing and resolving issues in a fair and responsible manner and to use conflict resolution methods when appropriate. The County and TEA's relationship depends on mutual respect and trust built upon the ability to recognize the individual employee's value to the County and the employee's investment in the County. Early and informal resolution of disagreements and workplace problems will enhance the productivity and quality of the workplace. It shall be a goal of the County and TEA employees to enter the dispute resolution process before a problem arises to the level of a disciplinary matter or grievance. The steps TEA recommends in conflict resolution are awareness, acceptance, and action, using pre-designated colleagues in the roles of natural facilitators to teach, lead and coach. Under no circumstances shall the initiation of the conflict resolution procedure serve to waive any of the timelines set forth in the Grievance Procedure provisions set forth in Article 12 below, unless by mutual agreement of TEA and the County.

ARTICLE 12: GRIEVANCE PROCEDURE

12.1 Nature of the Procedure. Any dispute between the County and TEA or between the County and any employee covered by this Agreement concerning the interpretation, application, claim of breach or violation of the express terms of this Agreement shall be deemed a grievance.

Every effort will be made to settle grievances at the lowest possible level of supervision with the understanding grievances will be filed at the step in which there is authority to adjudicate, provided the immediate supervisor is notified. Employees will be unimpeded and free from restraint, interference, coercion, discrimination, or reprisal in seeking adjudication of their grievance. The conflict resolution procedure described in Article 11 of this agreement is also an encouraged method for resolving problems.

Grievances shall be heard during normal County working hours unless stipulated otherwise by the parties. Employees involved in such grievance meetings during their normal County working hours shall be allowed to do so without suffering a loss in pay.

Any time limits stipulated in the grievance procedure may be extended for stated periods of time by the appropriate parties by mutual agreement in writing.

12.2 Grievance Steps. A grievance in the interest of a majority of the employees in a bargaining unit shall be reduced to writing by TEA and may, at its discretion be introduced at Step 2 of the grievance procedure and be processed within twenty-one (21) calendar days of the alleged violation or knowledge of the alleged violation.

A grievance shall be processed in accordance with the following procedure:

Step 1: A grievance shall be submitted in writing by TEA or the employee within twenty-one (21) calendar days of the alleged contract violation or within (21) calendar days of knowledge of the alleged violation to the grieving employee's immediate supervisor. The grievance shall include a description of the incident, identification of the provisions of the Agreement that apply (subject to refinement), the remedy sought, and the date the incident occurred. The immediate supervisor should arrange a meeting with TEA to resolve the grievance. The employee may elect to attend. The parties agree to make every effort to settle the grievance at this stage promptly. The immediate supervisor(s) shall answer the grievance in writing within fourteen (14) calendar days of receiving the written grievance.

Step 2: If the grievance is not resolved as provided in Step 1 above, it shall be forwarded in writing to the Section Manager within ten (10) calendar days of the Step 1 written response. The manager shall convene a meeting with TEA within ten (10) calendar days after receipt of the grievance. The meeting shall include the aggrieved employee (at their option). The manager must reply in writing to TEA within ten (10) calendar days after the grievance meeting. The Section Manager will consult with WTD HR and the King County Labor Relations Director/designee and provide copies of all written grievances and responses to the WTD HR and the King County Labor Relations Director/designee. If the grievance is not pursued to the next higher level within ten (10) calendar days of the issuance of the Step 2 decision (or the date the decision is due) it shall be

presumed resolved.

Step 3. If the grievance is not resolved as provided in Step 2 above, it shall be forwarded in writing to the Labor Relations Director or designee within ten (10) calendar days of the Step 2 written response (or the date the response was due). The grievance statement must include a brief description of the events that are the basis of the grievance, the provisions of this Agreement that the employee believes have been violated, and the requested remedy. All requested letters, memoranda and other written materials previously considered at Step 1 and 2 shall be made available for the review and consideration of the Labor Relations Director or designee. He/she shall make his/her written decision available within twenty (20) calendar days of receipt of the grievance; copies will be provided to the employee, the Union representative, and the employee's Division Director or designee, WTD Human Resources. If the grievance is not pursued to the next higher level within thirty (30) calendar days of the issuance of the Step 3 decision (or the date the response was due) it shall be presumed resolved.

If the County and TEA have been unable to resolve the grievance, the TEA may request mediation or arbitration and will have thirty (30) calendar days to formalize this request in writing to the Labor Relations Director or Designee who will provide a copy to WTD HR.

Step 4: Mediation - If the parties mutually agree to mediation, the County and Association will have thirty (30) calendar days from the mediation request date to schedule a mediation date. The County and the Association shall mutually agree upon a mediator. The decision reached in mediation shall be binding on the parties and, unless specifically agreed otherwise, not form a precedent with WTD for similar issues. If resolution is not reached in mediation, issues may be referred to arbitration, if it concerns the proper application or interpretation of the agreement.

The County and the Association shall each bear the cost of its own presentation and shall bear equally the fees and cost of the mediator.

The Association will have thirty (30) calendar days from the conclusion of mediation to make a written request for arbitration to the King County Office of Labor Relations who will provide a copy to WTD HR.

Step 5: Arbitration - If the grievance is not settled at Step 1, 2, 3 4, either of the signatory parties to this Agreement may submit the grievance to binding arbitration.

After the Demand for Arbitration is filed, the County and TEA will meet to select, by mutual agreement, an arbitrator. If the parties are unable to arrive at an agreement, either party may petition for a list of nine (9) arbitrators from the Public Employment Relations Commission (PERC) after which an arbitrator shall be selected by the alternate striking of names, with the first strike to be determined by the flip of a coin.

12.3 Arbitrator's Authority. In connection with any arbitration proceeding held pursuant to this Agreement, it is understood as follows:

1. The arbitrator shall have no power to render a decision that will add to, subtract from, alter, change, or modify the terms of this Agreement, and their power shall be limited to the interpretation or application of the express terms of this Agreement, and all other matters shall be excluded from arbitration.

2. The decision of the arbitrator shall be final, conclusive and binding upon the County, TEA, and the employee involved.

3. The cost of the arbitrator shall be borne equally by the County and TEA, and each party shall bear the cost of presenting its own case. Each party shall bear the cost of its own attorney's fees regardless of the outcome of the arbitration.

4. The arbitrator's decision shall be made in writing and shall be issued to the parties within thirty (30) days after the case is submitted to the arbitrator.

ARTICLE 13: NON-DISCRIMINATION

The County or the Association shall not unlawfully discriminate against any employee with respect to compensation, terms, conditions or privileges of employment because of race, color, creed, religion, national origin, age, sex, sexual orientation, marital status, physical, mental or sensory disability, or union activities. Employees may process a grievance dealing with unlawful discrimination to Step 3 of the grievance procedure as described in Article 12. Failing to reach a settlement, employees may take the issues under this Article to the appropriate agency for adjudication.

ARTICLE 14: WORK STOPPAGES AND EMPLOYER PROTECTION

14.1 No Work Stoppages. The County and the Association agree that the public interest

requires efficient and uninterrupted performance of County services and to this end pledge their best efforts to avoid or eliminate any conduct contrary to this objective. Specifically, the Association shall not cause or condone any work stoppage, including any strike, slowdown, or refusal to perform any customarily assigned duties, sick leave absence which is not bona fide, or other interference with County functions by employees under this Agreement and, should same occur, the Association agrees to take appropriate steps to end such interference. Any concerted action by employees shall be deemed a work stoppage if any of the above activities occurs.

14.2 Association's Responsibilities. Upon notification in writing by the County to the Association that any of its members are engaged in such work stoppage, the Association shall direct each of its members to cease such stoppage and provide the County with a copy of such order. In addition, if requested by the County, a responsible official of the Association shall publicly order such employees to cease engaging in such a work stoppage.

ARTICLE 15: PART-TIME AND TEMPORARY EMPLOYMENT

15.1 Part-Time Employees. The Section Manager/designee may approve an employee's request for a part-time schedule. Such approval is conditional on the County's determination of its business needs, and may be rescinded at any time due to changing business needs. The County shall normally provide a part-time employee at least two (2) weeks notice of any necessary change to the employee's part-time status.

All regular part-time employees scheduled for one-half time or more shall receive full medical benefits and privileges and prorated leave benefits. For hourly employees (i.e., employees not exempt from the overtime provisions of the FLSA), any hours worked in excess of the part-time employee's approved schedule up to forty (40) hours per week shall be paid at the straight time rate. Compensation for hours paid in excess of forty (40) hours per week for non-exempt part-time employees shall be in accordance with Article 8.

15.2 Part-time FLSA Exempt Employees. Part-time regular employees are those employees who work at least half-time but less than full-time in a calendar year. The following applies to part-time regular employees who are in job classifications that have been designated as FLSA Exempt:

- Part-time regular employees are treated for all purposes including compensation consistent with the FLSA designation of their job classification.
- Part-time regular FLSA exempt employees have their workload expectations and pay established relative to a full-time position.
- In accordance with the Executive Policy PER 8-1-2 (AEP), with approval of the HRD Director, an employee who would otherwise be exempt from the FLSA may be compensated on an FLSA non-exempt basis when the department director determines that this method is in the best interests of the department.
- Part-time regular FLSA exempt positions may be approved by hiring authorities on the following bases, in which both the pay level and workload expectations are established relative to a full-time equivalent (FTE) position:
  - 0.5 FTE (20 hours per workweek)
  - 0.6 FTE (24 hours per workweek)
  - 0.75 FTE (30 hours per workweek)
  - 0.8 FTE (32 hours per workweek)
  - 0.9 FTE (36 hours per workweek)

15.3 Temporary Employees. Term-Limited Temporary employees who have served at least one (1) year with WTD shall be eligible to compete as internal candidates for full-time career service positions represented by TEA. Term-Limited Temporary employees shall be eligible to request a part-time schedule in accordance with Article 15.1 above.

ARTICLE 16: TIME, SPACE AND PROPERTY

16.1 Workplace Access. TEA representatives may, after notifying the appropriate Section Manager in charge, visit the work location of employees covered by this Agreement at any reasonable time for the purpose of investigating grievances. Such representative shall limit his or her activities during such investigations to matters relating to this Agreement.

16.2 Facilities. County space and facilities may be used by the Association for the purposes of administering the terms of this agreement so long as it does not interfere with the normal operations of the work site.

16.3 Release Time. The County agrees to recognize up to eight (8) employees appointed and identified by TEA as representatives. When contract administration business is conducted during working hours, these employees are responsible for coordinating in advance with their Section Manager or designee so as to not negatively impact Section workload. Contract administration includes Weingarten hearings, formal and informal grievances, mediation hearings and other meetings (excluding arbitrations), and similar contract related work with Section Managers and Division Management. TEA meetings that do not include Section Managers or Division Management will be conducted during non-working hours, meal periods or break periods. Release time for contract negotiation sessions between the County and TEA will be limited to up to a total of four (4) persons for the two (2) bargaining units.

16.4 Bulletin Boards. The County shall provide bulletin board space for the use of TEA in areas accessible to the members of the bargaining units. Only recognized officers and staff representatives of TEA will be entitled to post and remove TEA materials, and only materials originating from and identified as official TEA documents with a TEA signature, logo, or appropriate stamp may be posted on the TEA bulletin board space.

16.5 Equipment Use. The County recognizes that County business will include certain activities relating to contract administration. Employees who are designated by TEA as representatives may make limited use of County telephones, FAX machines, copiers and similar equipment for the purpose of contract administration. As an example, a few copies made occasionally would be limited use of the copier, not copies for the entire bargaining unit or sections thereof. Similarly, use of the FAX, computer, and telephone would be on an occasional as needed basis and not on a routine basis and not for communications broadcast to large numbers of employees. In addition, such employee representatives may use the County electronic email system for communications related to contract administration provided that the use is limited to use which is brief in duration and accumulation, and which does not interfere with or impair the conduct of other official County business.

ARTICLE 17: SAVINGS CLAUSE

Should any part hereof or any provision in this Agreement be rendered or declared invalid by

reason of any existing or subsequently enacted legislation or by any decree of a court of competent jurisdiction, such invalidation of such part or portion of this Agreement shall not invalidate the remaining portions hereof; provided, however, upon such invalidation the parties agree to meet within thirty (30) calendar days and negotiate such parts or provisions affected. The remaining parts or provisions of this Agreement shall remain in full force and effect.

ARTICLE 18: WAGE RATES

18.1 Pay Ranges. Pay ranges for each classification are set forth in Appendix A.

18.2 Cost of Living Allowance.

The wage rate for 2015 shall be increased by two percent (2%) and the wage rate for 2016 shall be increased by 2.25%.

18.3 Normal Withholding. All payments made pursuant to this Agreement shall be subject to regular and legally required withholding. This will include deductions for purposes of the Public Employment Retirement System (PERS). King County shall be responsible to the Department of Retirement Systems (DRS) for payment of PERS contributions. Each individual shall be responsible to King County for repayment of the employee's share of their PERS contribution. Each individual shall have the PERS employee obligation deducted from any retroactive payment check.

18.4 Implementation Schedule. The County will implement any pay increases set forth in this Agreement as soon as practicable and consistent with all applicable laws.

18.5 Professional Registration and Certification Pay.

18.5.1 Introduction. To encourage professional development and to ensure the employment of qualified personnel in appropriate classifications, compensation for professional licenses and certifications will be provided in accordance with this article. Such compensation shall be paid to those employees who have obtained professional licenses and certifications or completed further education or paid for memberships in organizations that are directly applicable to their employment.

18.5.2 Professional Licenses. Employees who have one or more current Washington State professional licenses in the branches of Architect, Civil, Mechanical, Electrical, Chemical, Environmental, Sanitary, or Structural shall be paid fifty ($50) dollars per month. If the

professional license is directly applicable to their employment, they will receive an additional fifty ($50) dollars per month.

18.5.3 Certifications and Professional Designations.

A. Within the terms of this Agreement, certifications include the following:

- ACI American Concrete Institute Concrete Construction Special Inspector (CM Classification Only)
- AWS American Welding Society Certified Welding Inspector (CM Classification Only)
- IAEI International Association of Electrical Inspectors Master Electrical Inspector (CM Classification Only)
- Crane Institute of America Certified Overhead Crane Inspector Certificate (CM Classification Only)
- NACE National Association of Corrosion Engineers (CM Classification Only) or one of the following: Steel Structures Painting Council (SSPC), Protective Coating Inspector (PCI) or Concrete Coating Inspector (CCI) certifications. CCI and PCI are designations for special inspectors.
- RCI Roof Consultant Institute Registered Roof Observer (RRO) or Registered Roof Consultant (RRC)
- Association of Energy Engineers (AEE) Certified Energy Managers (CEM)
- American Institute of Certified Planners
- CMI Construction Manager
- Certified Public Accountant
- Hazardous Waste Certification HAZWOPER (when required by the job)
- One of: International Right of Way Association-SR/WA, R/W-AC, EC, NAC, RAC, AMC (Real Property Agent, Environmental Programs Managing Supervisor, and WQPPM Classifications Only)
- One of: National Association of Independent Fee Appraisers-IFA, IFAS, IFAA, IFAC (Real Property Agent, Environmental Programs Managing Supervisor, and WQPPM Classifications Only)
- One of: Project Management Institute Certification (PMP, PMR)
- ICC Underground Storage Tank Installation/Retrofitting Certification
- Washington State Associate Brokers License (Real Property Agent, Environmental Programs Managing Supervisor, and WQPPM Classifications Only)

- Washington State Bar Association
- Washington State Certified Real Estate Appraiser (Real Property Agent, Environmental Programs Managing Supervisor, and WQPPM Classifications Only)
- One of: Journey Electrician or Master Electrician or Electrical Administrator (CM Classification Only)
- One of: AHERA Asbestos Building Inspector or EPA Lead Inspector (CM Classification Only)
- Wastewater Treatment Operator
- One of: SAVE International (AVS, VMP, CVS)
- One of: AACE International (CCC™/CCE™, CCT™, EVP™, and PSP™)
- Classical RCM or RCM 2 Facilitator
- Certified Maintenance and Reliability Professional (SMRP)
- Certified Professional in Erosion and Sediment Control
- Green Building Certification Institute (GBCI) LEED AP

B. During the term of this Agreement, additional certifications may be added by mutual agreement of the parties to this contract.

C. All employees who have one or more valid certifications as described in Section 18.5.3(A) above in a discipline directly applicable to their employment, shall be paid an additional fifty ($50) dollars per month per certification up to a maximum of one hundred ($100) dollars per month. Employees must provide at least bi-annual documentation of a certification to receive compensation, or annually if certification requires annual renewal. Membership in an organization does not qualify an employee for compensation.

18.6 Professional Memberships, Licenses and Examination Reimbursements.

Employees are encouraged to join professional organizations for the purpose of further professional development. The employer recognizes the value of professional affiliation and agrees to reimburse up to $500 annually for approved individual professional memberships, licenses and/or examinations that are related to the employee's position. An employee should discuss their desired memberships with their supervisor and/or WTD Human Resources to clarify whether it is an approved organization. Organizations or associations that issue the certifications/designations noted

in 18.5.3 are approved, but as stated below, other restrictions may apply.

A. Employees may seek approval for reimbursement using the newly established process (form submission to supervisor for routing and approval). An employee may belong to more than one organization, but total reimbursements will not exceed the annual maximum, as stated above.

In situations when multiple employees want to join the same organization, management may approve an agency level membership or limit the number of individual memberships where benefits can be shared among employees. Membership dues covering a period of greater than 12 months will be prorated, but shall not exceed the annual cap.

B. Employees may seek reimbursement for professional exams that are relevant to the employee's position and duties. Employees may only seek reimbursement for a particular exam once during that year. The maximum reimbursement is limited to the amount stated above for any combination of memberships and/or exams.

18.7 Pay on Completing Probation. Newly hired employees (i.e., not including promotions or trial service situations) shall receive a one step increase upon satisfactory completion of the probationary period.

18.8 Pay on Promotion. An employee who is promoted will be placed either in the first step of the new salary range or at the step which is the equivalent of two steps (approximately five percent) more than the employee's former salary step, whichever is greater, but not to exceed the top step of the new range except as provided for below.

If the former salary step includes an above step-ten amount as a result of an incentive increase, the employee's new salary is based upon the above step-ten amount, provided that if such increase results in a salary that is above the top step of the new range (not to exceed 5% above the top step) the salary will be reduced to the top step at the end of the merit period unless the employee re-qualifies for an above-step-10 merit award.

When a promotion results from other than a reclassification, the appointing authority may place the promoted employee at any higher step in the salary range when the department director determines this action is warranted based on the criteria set forth in this Agreement and/or Personnel

Guidelines as applicable, provided funds are available in the agency.

18.9 Advancement Through Pay Range. Career Service employees who are not on probation shall advance through the applicable pay range at two step increments, up to step 10, provided the employee does not receive an annual performance evaluation with an overall rating below satisfactory. Advancement beyond the top of the pay range, or above-top-step merit pay, shall be in accordance with King County's Merit Pay Manual, except where such sources conflict with this Agreement or with any established past practice between the parties. A Merit Score of 4.25 will be considered "Outstanding" in accordance the King County's Merit Pay Manual and this Agreement.

Advancement through the new pay range for term-limited temporary employees shall be in accordance with the King County HRD August 2003 TLT Procedures, except where such sources conflict with this Agreement or with any established past practice between the parties.

18.10 Standby Pay. Non-exempt employees assigned to standby duty with a pager or phone will receive 10 % of their base wage rate for each hour that they are assigned to respond to a call outside their normally scheduled work hours. To qualify for the payment, employees must be in a condition ready and able to report to work while assigned to respond to the call. If the employee reports to work, the employee will be paid at the regular rate and will not receive standby pay during that time. Exempt employees shall not be eligible for standby pay.

18.11 Night Differential. Non-exempt employees assigned to work at night for periods longer than two weeks will be entitled to a shift premium of 5% of their regular rate of pay for each hour worked between 8 pm and 4 am. Exempt employees shall not be eligible for night shift differential.

ARTICLE 19: CONTRACTING OUT

The County shall first consider TEA employees to perform all work, regardless of the size of the contract, and shall not contract out work that is performed and consistent with work covered by members of the Association if the contracting of such work eliminates represented positions. In the case of circumstances that are beyond the control of the County that could not reasonably have been foreseen, and for projects that the County is not reasonably able to provide the necessary tools, employees, or equipment to perform work in a timely and cost effective manner, the County shall be

allowed to enter into temporary contract arrangements. Prior to a layoff for lack of work, the County and the Association will enter into a dialogue with the objective of avoiding the layoff. The County will recall work assigned to consultants in order to avoid the layoff if 1) the work can be done by TEA employees and 2) the recall can be done in a manner that does not compromise quality, schedule and the overall business needs of the body of work or the project being recalled.

ARTICLE 20: SAFETY STANDARDS

The County and its employees value a safe working environment and recognize their mutual obligation to maintain safety standards. The County shall adopt and enforce a program in accordance with applicable state and federal laws and regulations. The County may create and enforce safety standards above those required by law, provided that nothing in this Article waives TEA's rights to collectively bargain. The County shall supply and maintain safety-related items and equipment as required by law or Department or Division policy or directive.

ARTICLE 21: SPECIAL CONDITIONS

21.1 Authorized Leave Due to Inclement Weather or Safety Concerns.

A. Administrative offices and operations of the County will remain open during inclement weather unless directed otherwise by the Executive or respective department director. Department directors should make every reasonable effort to contact the Executive or Deputy County Executive prior to closing a department, facility or office.

B. Where a department director officially closes operations in his/her department because of adverse weather conditions, or orders employees to leave the premises because of safety concerns, all non-essential employees who are scheduled to work will be paid for the normally scheduled workday. This applies to affected overtime exempt as well as hourly employees.

1. Employees who previously requested and have been approved for time off (e.g., benefit time or extended sick leave, compensatory time-off, leaves of absence) will have hours deducted from their accruals as approved.

2. Temporary (other than provisional, probationary, and term-limited temporary) and part-time employees will be paid for hours actually worked.

3. Essential employees who are scheduled to work but do not because of

adverse weather conditions may use accrued benefit time or comp time (hourly employees), or accrued benefit time or executive leave (FLSA exempt employees), or the time will be charged as leave-without-pay for the scheduled work day. A department director or designee shall make the determination as to which employees are essential and, consequently, which employees are required to report for work despite emergency conditions.

C. Where a department, office or facility remains open but weather conditions prevent an employee from reporting to work, the following will apply:

1. The employee will notify his or her supervisor as soon as possible.

2. The employee may request, and the Section Manager/designee may approve, the use of compensatory time, benefit time, or leave without pay to cover absences due to inclement weather. Extended sick leave may not be used to cover absences due to inclement weather.

21.2 Automobile Reimbursement. No employee shall be required as a condition of employment to provide a personal automobile for use on County business. Any use of a personal automobile for County business shall be mutually agreed to by the County and the employee and shall be reimbursed at the rate established by the Internal Revenue Service.

21.3 Transit Passes. All employees covered under this Agreement shall receive an annual transit pass entitling the holder to ride without payment of fare on public transportation operated under the County's authority. In addition, such employees shall be entitled to use the transit pass to ride without payment of fare on public transportation services operated by or under the authority of Sound Transit, Pierce Transit, Kitsap Transit, and Community Transit, subject to agreements with such agencies as may be entered into by the County Executive.

21.4 Defense and Indemnification. Whenever an employee is named as a defendant in a civil action arising out of the performance of the employee's duties and is acting within the scope of employment, the County shall, at the written request of the employee, furnish counsel (or, solely at the County's discretion, reimburse the employee the cost of their private counsel) to represent the employee to a final determination of the action, without cost to the employee, and indemnify the employee from any damages arising from such action or proceeding as consistent with the County Code, chapter 2.21.

ARTICLE 22: RETIREMENT

All eligible employees shall be covered by the Public Employee Retirement System.

ARTICLE 23: PERSONNEL ACTIONS

23.1 Job Postings. The County and the Association agree to develop and maintain a promotional system that will allow employees to be promoted to job classifications within employees' own bargaining unit depending on their demonstrated skills, knowledge, and the availability of higher level work and funding. The benefits to the employees and the organization include the following:

- Increases efficiency and effectiveness by retaining trained and qualified employees
- Promotes a productive, high quality work environment
- Provides employees with career growth opportunities within the Wastewater Treatment Division
- Enhances employee morale

The County and the Association have the following shared interests for filling vacancies of positions represented by the Association:

- Hiring the most qualified candidate to fill the position
- A quick and fair process
- Promoting from within

Management will determine staffing requirements based on an analysis of the business needs. When new positions are created or vacant positions are to be filled, employees represented by the Association will be notified via email. Employees shall complete and submit all requested application materials by the required application deadline.

Vacancies may be advertised simultaneously to the employees represented by the Association and those outside the Association in the interest of efficiency. Application materials will be reviewed to identify those bargaining unit candidates who meet the minimum qualifications of the positions based on the "qualifications" and "special necessary requirements" listed on the job bulletin. The highly qualified candidates are those who meet the "highly desirable" and/or "desirable" qualifications listed on the job bulletin. From this group, management will interview a minimum of

three (3) highly qualified candidates before considering outside candidates. If there are fewer than three (3) highly qualified candidates represented by the Association, management may also consider the outside candidates. The most qualified candidate will be selected.

An employment list which has been created for one or more vacancies may be used multiple times within six months of its initial creation. Otherwise, a previous employment list may not be reused for future vacancies.

23.2 Work out of Classification

A. General. Employees are to be properly paid for their assigned body of work, except in the case of incidental assignment as described below. No employee may assume the duties of a higher paid position without formal assignment, except in a bona fide emergency. Employees are not entitled to classification changes or compensation for work that is not assigned.

B. Incidental Assignment. Nothing in this article shall limit management from assigning an employee incidental work outside of the employee's current classification; such incidental work assignment shall not constitute the basis for an out-of-class assignment.

C. Special Duty Assignment. Employees may be assigned work out of their regular classification on a temporary basis by Special Duty Assignment. Special Duty assignments may be filled for no more than one year without a process that includes solicitation of interest and selection based upon job-related criteria. Restrictions on the length of the assignment are governed by County policy and the Personnel Guidelines. If this assigned work is to a lower classification, the employee will receive his/her normal rate of pay. Compensation for such special duty assignment shall begin on the day identified in the written assignment.

D. Pay on Special Duty

a. Pay for a special duty assignment shall be to the first step of the pay range of the existing higher-level job classification or to a pay step in the existing higher classification that provides at least the equivalent of two steps (approximately 5 percent) increase over the employee's current rate of pay, whichever is greater.

b. Special duty compensation may not exceed the top step of the new range unless the employee was receiving above-Step-10 merit pay. In those instances, the pay may exceed

the maximum of the new pay range by no more than five percent and shall continue only as long as the merit pay would have remained in effect.

c. When the special duty assignment is completed, the employee's pay shall revert to the pay rate the employee would have received if the employee had not been assigned to special duty.

d. Special duty pay shall not be considered part of an employee's base pay rate for purposes of placement within a pay range as a result of promotion or reclassification.

23.3 Accretion of duties and Reclassification. Incidental assignments can have the cumulative effect of creating out-of-classification work by accretion when assigned work out of the employee's current classification becomes the preponderance of the work performed by the employee. Under these circumstances, employees may request the Human Resources Director (or designee) to review their job duties to determine if the duties and responsibilities performed by the employee are more accurately described in another, more appropriate, job classification.

A. County Classification Review Procedure. Employees will submit their request for reclassification by completing a Position Description Questionnaire and forwarding it to the WTD Human Resources Service Delivery Manager (SDM), who will forward it to the supervisor for review and comment. After the supervisor has reviewed and commented it will be submitted to the section manager and the division director before being returned to the WTD SDM for finalization. Once the PDQ has been finalized, it will be delivered to King County Human Resources Division for a classification analyst to review the request according to their policies and procedures and notify the employee of their findings when the review is completed.

B. Effective Date. The effective date of reclassification under this article will be 30 days from the initial submission of a fully completed PDQ to WTD SDM, or the date of the completed Supervisor review, whichever is less (incomplete PDQ's will not be considered as received if the WTD HR analyst returns the PDQ to the employee for further completion).

C. Classification and Compensation. Classification and compensation shall be in accordance with this Agreement. If a reclassification results in assignment to a higher paid classification, then the employee shall receive at least step one of the new pay range or two steps

above the employee's current rate of pay, whichever is highest.

D. Appeal. The County and the Union agree that disputes relating to the classification of a position will be submitted to the Division Director/designee of Human Resources Department of Executive Services for reconsideration. If the Union disagrees with the Division Director's/designee's decision it may, within thirty (30) days, submit the issue to a neutral third party. The neutral party will be selected in accordance with the grievance procedure in this Agreement. The decision of the neutral party shall be binding upon all parties. The classification issue (other than jurisdictional and pay-related) shall be presented to the neutral party and will not be subject to the King County Personnel Board or binding arbitration.

ARTICLE 24: BENEFIT PLAN

24.1 The County presently participates in group medical, dental and life insurance programs. The County agrees to maintain the level of benefits as currently provided by these plans and pay premiums as currently practiced, during the life of this Agreement unless modified by the Joint Labor Management Insurance Committee.

24.2 The County agrees to continue the Joint Labor Management Insurance Committee comprised of representatives from the County and its labor unions. The function of the Committee shall be to review, study and make recommendations relative to existing medical, dental and life insurance programs.

24.3 The Union and County agree to incorporate changes to employee insurance benefits which the County may implement as a result of the agreement of the Joint Labor Management Insurance Committee referenced in Section 24.2 above.

ARTICLE 25: DURATION

This Agreement shall become effective upon full and final ratification and approval by all formal requisite means by the Metropolitan King County Council and the King County Executive and shall be in effect from January 1, 2015 until December 31, 2016.

APPROVED this 10 day of DECEMBER, 2015.

By: Dow Constantine

King County Executive

For the Association:

John Phillips, President
Technical Employees' Association

APPENDIX A
WAGE ADDENDUM

cba Code: 459 **Union Code: W3**

Supervisors Unit			
Job Class Code	**PeopleSoft Job Code**	**Classification**	**Range***
5401100	540202	Environmental Programs Managing Supervisor	73
7119500	710402	Project Control Engineer Supervisor	73
7160600	712802	Wastewater Capital Projects Managing Supervisor	74
7117600	715602	Wastewater Construction Management VI	74
7116600	714102	Wastewater Engineer Supervisor	74

*** All salary ranges are on the King County "Squared" Salary Schedule.**

cba Code: 459 **Union Code: W4**

Staff Unit			
Job Class Code	**PeopleSoft Job Code**	**Classification**	**Range***
2810200	281307	Administrator II	56
2810300	281402	Administrator III	63
2131100	214109	Business and Finance Officer I	53
2131200	214213	Business and Finance Officer II	58
2131300	214308	Business and Finance Officer III	62
2215100	223802	Contract Specialist I	56
2215200	223902	Contract Specialist II	61
4300100	431208	Customer Service Specialist I	32
4300200	431312	Customer Service Specialist II	36
7118100	716002	Designer I	43
7118200	716102	Designer II	47
7118300	716202	Designer III	52
7118400	716303	Designer IV	55
7118500	716402	Designer V	59
7118600	716502	Designer VI	63
7119100	717002	Project Control Engineer I	54
7119200	717102	Project Control Engineer II	59

Staff Unit			
Job Class Code	**PeopleSoft Job Code**	**Classification**	**Range***
7119300	717202	Project Control Engineer III	63
7119400	710303	Project Control Engineer IV	67
2441100	243110	Project/Program Manager I	53
2441200	243212	Project/Program Manager II	58
2441300	243312	Project/Program Manager III	63
2441400	243404	Project/Program Manager IV	68
2634100	264802	Real Property Agent I	49
2634200	264902	Real Property Agent II	55
2634300	265002	Real Property Agent III	61
2634400	265102	Real Property Agent IV	67
2243100	225303	Records Management Specialist	46
7160100	712302	Wastewater Capital Project Manager I	56
7160200	712402	Wastewater Capital Project Manager II	61
7160300	712502	Wastewater Capital Project Manager III	68
7160400	712602	Wastewater Capital Project Manager IV	71
7117100	715102	Wastewater Construction Management I	53
7117200	715202	Wastewater Construction Management II	58
7117300	715302	Wastewater Construction Management III	63
7117400	715402	Wastewater Construction Management IV	67
7117500	715502	Wastewater Construction Management V	70
7117600	715603	Wastewater Construction Management VI	73
7116200	713702	Wastewater Engineer - Entry	59
7116300	713802	Wastewater Engineer - Journey	63
7116500	714002	Wastewater Engineer - Principal	70
7116400	713902	Wastewater Engineer - Senior	67
7116600	714103	Wastewater Engineer VI	73
1075200	108903	Water Pollution Control Maintenance Manager	75
2430100	242102	Water Quality Planner/Project Manager I	53
2430200	242205	Water Quality Planner/Project Manager II	58
2430300	242305	Water Quality Planner/Project Manager III	63
2430400	242404	Water Quality Planner/Project Manager IV	68

*** All salary ranges are on the King County "Squared" Salary Schedule.**

APPENDIX B

Pursuant to Section 1.3 of this Agreement, the parties agree that the following provisions of the King County Personnel Guidelines (2005) are preempted by the terms of this Agreement:

Preamble/Disclaimer

Section 1.3

Chapter 4

Chapter 5

Sections 6.5, 6.6, 6.9, and 6.13 - 6.15

Chapter 9

Sections 11.1, 11.2, and 11.4

Sections 12.3 - 12.5

Sections 14.1, 14.2, 14.3, 14.4-14.6, 14.9 - 14.13, and 14.15.

Section 15.3

Chapter 16

Chapter 17

Chapter 18

Section 19.4

Chapter 22

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King County

Checklist and Summary of Changes for the attached Collective Bargaining Agreement

Name of Agreement
Technical Employees' Association (Wastewater Treatment Division, Department of Natural Resources and Parks, Supervisors and Staff)
Labor Negotiator
James J. Johnson

Prosecuting Attorney's Review	***Yes***
Legislative Review Form; Motion or Ordinance	***Yes***
Executive Letter	***Yes***
Fiscal Note	***Yes***
Six Point Summary	***Yes***
King County Council Adopted Labor Policies Consistency	***Yes***
Ordinance	***Yes***
Original Signed Agreement(s)	***Yes***
Does transmittal include MOU/MOA?	***N/A***

Six Point Summary of changes to the attached agreement:
1. Wage rates adjusted in 2015 by 2% and in 2016 by 2.25%.
2. Minor changes to Certification Premiums and Professional Reimbursements.
3. Elimination of Salary Study, Mediation and Fact-Finding provision.
4. Continuation of Extended Sick Leave conversion to Benefit Time.
5. New provision allowing Benefit Time Usage for retiring or separating bargaining unit employee who provides the County a six month notice.
6. Movement to County standard for above top step merit pay eligibility.

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ATTACHMENT 3

November 23, 2015

The Honorable Larry Phillips
Chair, King County Council
Room 1200
C O U R T H O U S E

Dear Councilmember Phillips:

The enclosed ordinance, if approved, will ratify the Technical Employees' Association (Wastewater Treatment Division, Supervisors and Staff) collective bargaining agreement for the period of January 1, 2015, through December 31, 2016, which will enable King County to continue to provide quality wastewater treatment services to the public in the Department of Natural Resources and Parks. This agreement covers approximately 225 employees.

The employees in these bargaining units provide the technical skills related to the planning, design, engineering and construction of King County's wastewater treatment services. King County's facilities are the most sophisticated wastewater treatment facilities in the northwest region of the United States and our facilities provide wastewater treatment services to the largest population in the region.

The wage settlement for these bargaining units provides cost-of-living adjustments (COLA) that are consistent with the standard County provisions agreed to by the majority of our labor organizations. Commencing in 2015 and continuing into 2016, the employees will receive the new standard County COLA.

This agreement furthers the goals of the County's Strategic Plan including the following areas:

- Service Excellence: Will help ensure wastewater treatment services to the largest population in the region.
- Financial Stewardship: Allowing opportunity, through aligned expiration dates, for coalition bargaining relating to King County initiatives that include but are not limited to "Employer of the Future" and "Standards."
- Quality Workforce: By ensuring fair wages and benefits in order to recruit and retain good employees.
- Economic Growth and Built Environment: Protecting and improving water quality.

The settlement reached is a product of good faith collective bargaining between King County and the Union. The agreement compares favorably with other settlements and is within our capacity to finance. This agreement has been reviewed by the Office of the Prosecuting Attorney, Civil Division.

If you have questions, please contact Gerry Topping, Interim Director, Office of Labor Relations, at 206-263-8653.

Sincerely,

Dow Constantine
King County Executive

Enclosures

cc: King County Councilmembers
ATTN: Carolyn Busch, Chief of Staff
Anne Noris, Clerk of the Council
Carrie S. Cihak, Chief of Policy Development, King County Executive Office
Dwight Dively, Director, Office of Performance, Strategy and Budget
Gerry Topping, Interim Director, Office of Labor Relations

FISCAL NOTE

ATTACHMENT 4

Ordinance/Motion No.	Collective Bargaining Agreement	
Title:	Technical Employees Association (Wastewater Treatment Division, Staff and Supervisors - Department of Natural Resources and Parks)	
Effective Date:	1/1/2015	
Affected Agencies:	Wastewater Treatment Division, DNRP	
Note Prepared by:	Matthew McCoy, Labor Relations Analyst, Office of Labor Relations	**Phone:** 263-1966
Department Sign Off:	Tim Aratani, Wastewater Treatment Division, Finance Manager	**Phone:** 477-5351
Note Reviewed by: Supplemental Required? NO [X] YES [ ]	John Walsh, Budget Analyst	**Phone:** 263-9695

EXPENDITURES FROM:

Fund Title	Fund Code	Department	2015	2016		
WTD	461	DNRP	$ 532,391	$ 610,919		
TOTAL: Increase FM previous year			***$ 532,391***	***$ 610,919***		
TOTAL: Cumulative			***$ 532,391***	***$ 1,143,310***		

EXPENDITURE BY CATEGORIES:

Expense Type	Fund Code	Dept	2014 Base	2015 Retro	2016		
Salaries			$ 22,071,166	$ 441,423	$ 506,533		
OT			$ 330,202	$ 6,604	$ 7,578		
PERS & FICA			$ 4,218,179	$ 84,364	$ 96,808		
Total			***$ 26,619,547***				
TOTAL: Increase FM previous year				***$ 532,391***	***$ 610,919***		
TOTAL: Cumulative				***$ 532,391***	***$ 1,143,310***		

ASSUMPTIONS:

Assumptions used in estimating expenditure include:

1. **Contract Period(s):** 1/1/2015 – 12/31/2016
2. **Wage Adjustments & Effective Dates:**
   - **COLA:** 2.00% for 2015; 2.25% for 2016
   - **Other:**
   - **Retro/Lump Sum Payment:** Assume all of 2015 is retro pay ($532,391)
3. **Other Wage-Related Factors:**
   - **Step Increase Movement:**
   - **PERS/FICA:** 18.83%
   - **Overtime:**
4. **Other Cost Factors:** A change in license fee reimbursement and in the number of certifications eligible for professional designation pay. These costs are expected to be minimal.

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King County

Transportation, Economy and Environment Committee

February 2, 2016

Agenda Item No. 9
Briefing No. 2016-B0023

Briefing on Implementation Status and Executive Compliance with Paid Parental Leave Law

Materials for this item will be available at the meeting

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King County

Transportation, Economy and Environment Committee

February 2, 2016

Agenda Item No. 10
Briefing No. 2016-B0020

Preview of University Link opening and Metro Transit Restructure

Materials for this item will be available at the meeting.

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King County

Metropolitan King County Council
Transportation, Economy and Environment Committee

STAFF REPORT

Agenda Item:	11	**Name:**	Leah Krekel-Zoppi
Proposed No.:	2015-0517	**Date:**	February 2, 2016

SUBJECT

Proposed Motion 2015-0517 would approve the Final Report on Ferry Expansion Options in response to a proviso in the 2015/2016 Budget.

SUMMARY

King County operates two water taxi routes, one between West Seattle and Downtown Seattle, and another between Vashon Island and Downtown Seattle. King County ferry service is funded by a countywide property tax levy, fares, and federal and state grants. In the 2015/2016 Biennial Budget, the Council approved a proviso requiring an interim and a final report on ferry expansion options. The interim report was approved by the Council on September 8, 2015 (Motion 14421). Proposed Motion 2015-0517 would approve the Final Report on Ferry Expansion Options.

The final report identified 37 potential route combinations serving 18 potential terminal locations in Bellevue, Des Moines, Kenmore, Kirkland and Seattle (including Ballard, the University of Washington, Pier 50, Fremont and South Lake Union). Three routes were identified for further consideration, based on overall time competitiveness compared to other modes of travel and the cost of operation:

- Kenmore to University of Washington,
- Kirkland to University of Washington, and
- Ballard to Downtown Seattle.

The report estimates operating and capital costs associated with these potential routes, and describes community outreach and feedback about the three potential ferry expansion routes.

If the Council approves this report, the next steps would be consideration by the County on whether an expansion of King County ferry service should occur and which potential route or routes should move forward for additional analysis and consideration. This consideration could occur during review and adoption of the 2017/2018 Biennial Budget and the 2017 ferry levy.

BACKGROUND

The Marine Division of the King County Department of Transportation provides waterborne public transportation services, transporting 467,119 passengers in 2014 on two routes. Those routes serve:

- **Vashon Island – Downtown Seattle Water Taxi** providing three morning and three afternoon trips during the commute periods; and

- **West Seattle – Downtown Seattle Water Taxi** providing seasonal (commute and non-commute) service April through October and commute service November through March.

Waterborne transit operations and funding in King County

In 1997, King County began operating seasonal water taxi service between West Seattle and Downtown.

In 2003, responding to a reduction in funding for its network of passenger-only ferries, the Washington State Legislature made statutory changes to facilitate passenger-only ferry service by transit agencies and county ferry districts. The legislature made further local government passenger-only ferry statutory changes in 2006, establishing a passenger ferry account to be used for operating and capital grants for ferry systems.

The King County Ferry District (KCFD) was established by the King County Council on April 30, 2007 (Ordinance 15739 as authorized by RCW 36.54.110). The KCFD passed a 2008 countywide property tax levy of 5.5 cents per $1,000 assessed value (FD2007-06) to support an operations and finance plan to address Vashon ferry service, the Elliott Bay Water Taxi, a Lake Washington demonstration route, funding for studies of other routes, and shuttle routes and landside facilities.

The KCFD assumed in-house operations from the State of Washington for the Vashon Island to Downtown Seattle passenger-only ferry service in 2009 and began in-house year-round operations of the West Seattle to Downtown Seattle water taxi in 2010.

In 2009, in response to the recession, the KCFD reduced the 2010 property tax levy to 1/3 cent per $1,000 assessed value to provide property tax relief, and cancelled ferry route expansion planning, using the accrued fund balance for those purposes to continue existing service. The KCFD has renewed that levy rate each subsequent year. Since 2010, the Ferry District has had an annual deficit between operating revenues and costs, and has been relying on fund balance and grant funds[1] to fill the gap. The KCFD is projected to run out of fund balance by 2017.

In 2014, the State Legislature[2] authorized counties with a population of over one million to have their county legislative authority assume the rights, powers, functions, and

[1] Grants have funded 70 percent of the Marine Division's capital projects.
[2] 36.54RCW

obligations of ferry districts. In November 2014, the King County Council adopted Ordinance 17935 assuming governance of the KCFD.

History of Ferry Expansion Considerations

Ordinance 15739 creating the King County Ferry District stated that:

> *The intent of creating the ferry district is to provide passenger-only ferry service to various parts of the county, including, but not limited to, potential routes serving Vashon Island, West Seattle, Des Moines, Downtown Seattle, North Bay, Magnolia, Shilshole, Shoreline, Lake Union, North Renton, the University of Washington, Kenmore and Kirkland. Depending upon the results of a potential feasibility study for South Puget Sound passenger-only ferry service, additional locations that could be served include Gig Harbor, Tacoma and Des Moines.*

King County and the region have undertaken numerous studies of waterborne transit. In 2005, the county produced the Waterborne Transit Policy Study, which identified the conditions and circumstances under which it may be appropriate for King County to invest or participate in waterborne transit. The report considered potential operating approaches ranging from private operation, public-private partnership, county-owned contracted operation, and in-house operation. It also analyzed eight sample routes serving Vashon Island, Elliott Bay, Lake Union, and Lake Washington.

In 2008, the Puget Sound Regional Council (PSRC) produced the Puget Sound Regional Passenger-Only Ferry Study. The study evaluated the viability of 33 passenger-only ferry routes within the Central Puget Sound region, including routes identified as possible pilot routes by the KCFD. That study evaluated many of the route options considered in the current report, including the Ballard, Kenmore, and Kirkland routes.

In 2009, King County produced the King County Ferry District Demonstration Project report with the intention of selecting three to four demonstration routes to begin service in 2010. The report was intended to screen for pilot routes that could be implemented within a year, focusing on environmental and land use considerations at terminal locations and near-term ridership estimates. This report also included evaluation of the Ballard, Kenmore, and Kirkland routes considered in the current report.

In November 2009, work on the demonstration routes was suspended and the KCFD property tax levy was reduced in response to the recession.

On November 3, 2014, in order to guide water taxi service delivery over the next three to five years, the KCFD approved the 2014-2018 Strategic Plan for water taxi service (FD2014-05). Key strategies of the plan included achieving financial stability and exploring growth and partnership opportunities. Considerations identified within these strategies included:

- Using existing councilmanic property tax levy authority to fund desired level of service (pg. 6).

- Updating the study for expanding route options, creating criteria to choose the most viable options and updating the study to determine feasible routes (pg. 8).

In the 2015-2016 budget, the King County Council included a proviso requiring a report on ferry expansion opportunities in King County. Proviso P1 Section 94 stated:

> *Of this appropriation, $150,000 shall not be expended or encumbered until the executive transmits both an interim and a final report on ferry expansion options and motions that approve the reports and the motions are passed by the council. The motions shall reference the subject matter, the proviso's ordinance, ordinance section and proviso number in both the title and body of the motion.*
>
> *The reports shall include, but not be limited to, an assessment of passenger only ferry expansion options, consistent with the ferry district's strategic plan, that builds on new transit options that are projected to be delivered through Sound Transit's University Link and other funded regional transit expansions being delivered in the next decade. This assessment should include assessments of facilities, service options and cost estimates for both capital and operations and community interest and readiness. The interim report shall summarize the work and results to date.*
>
> *The executive must file the interim report and motion required by this proviso by July 31, 2015, and the final report and motion required by this proviso by September 30, 2015, in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copy to all councilmembers, the council chief of staff, the policy staff director and the lead staff for the transportation, economy and environment committee, or its successor.*

Proposed Motion 2015-0517 would approve the Final Report on Ferry Expansion Options in response to P1 Sec. 94.

Summary of the Final Report on Ferry Expansion Options

<u>Scope</u>

The report is intended to assess the viability and feasibility of passenger-only ferry expansion options in Puget Sound and Lake Washington. It assumed service characteristics similar to the existing Vashon Island service, with limited peak commuter service operated only in the morning and afternoon on weekdays.

The report identified 37 potential route combinations and then did a preliminary evaluation of time competitiveness, resulting in 11 routes remaining. Those 11 routes were reduced to seven based on terminal location and transit connections. The remaining seven routes were evaluated based on projected farebox recovery rates. That analysis identified three routes for further consideration. The report then evaluated implementation requirements, such as vessels, terminal improvements, and maintenance needs; and next steps, such as agency coordination and environmental permitting, for these routes.

The report also lists regional transportation improvements planned or under consideration to evaluate potential terminal locations that will be well served by existing or new high capacity transit (HCT), or have limited HCT connections.

Routes Identified for Consideration[3]

- Three terminal locations in Kenmore connecting to Bellevue and five terminal locations in Seattle.
- Renton to Bellevue and five terminal locations in Seattle.
- Two terminal locations in Kirkland to five terminal locations in Seattle.
- Bellevue to five terminal locations in Seattle.
- Des Moines to Downtown Seattle.
- Two terminal locations in Ballard to Downtown Seattle and South Lake Union.
- The potential for a terminal location in Fremont.

Route Evaluation

The 37 potential route combinations were first screened for travel time competitiveness compared to other available transit options. Routes with a more than a 40 minute round trip differential compared to available transit were eliminated from further consideration. Next the remaining seven routes were evaluated for ridership forecasts and operating costs in order to calculate farebox recovery, using existing water taxi fare policies. Routes not projected to achieve ten percent farebox recovery at startup and 25 percent farebox recovery at maturity (ten years after startup) were then eliminated, leaving three routes for further consideration.

Routes Identified for Further Consideration

The three routes proposed for further consideration are:

- Kenmore (Log Boom Park) to University of Washington (Waterfront Activity Center)
- Kirkland (Marina Park) to University of Washington (Waterfront Activity Center)
- Ballard (Shilshole Marina) to Downtown Seattle (Pier 50).

Kenmore to University of Washington

The Kenmore to University of Washington (UW) route is projected to take an hour and 49 minutes round trip, 24 percent slower than transit between Kenmore and Downtown Seattle[4], and is projected to have a farebox recovery ratio of 28 percent at route maturity.

The Log Boom Park terminal location in Kenmore is on the Kenmore waterfront. This terminal would have no onsite parking, other than a small parking lot for passenger drop off and pick up. The report assumes shuttle service to the terminal from the Kenmore Park and Ride, a four minute ride. The terminal is also accessible by the Burke Gilman

[3] A visual representation of the 37 potential route combinations is on page 3 of the Final Report on Ferry Expansion Options.
[4] Compared to water taxi service transferring to Link light rail to reach Downtown Seattle.

Trail. The City of Kenmore is very supportive of having a water taxi terminal in their community and sent two letters of support[5]. They identified Lakepointe as a potential long term water taxi terminal location and supported Log Boom Park as an interim terminal location.

The University of Washington Waterfront Activities Center terminal location is on the south end of campus near Husky Stadium. The area is well-served by connecting transit and is a six minute walk from the University of Washington light rail station. Walk times between the terminal and campus job sites range from five to 25 minutes. The Burke-Gilman Trail is a quarter mile away. No on-site parking would be available. The University of Washington provided a letter expressing a number of concerns that would need to be addressed in order to use this terminal location[6]. Specific concerns included:

- Impact on and conflicts with UW's rowing program serving 150-300 daily rowers.
- Coordination of design with the University Landscape Architect.
- Prevention of public vehicle access to the dock area.
- Addition of a pedestrian connection to the Sound Transit station, and concerns about steep grades and pedestrian safety in parking lots between the two locations.
- Provision of a direct pedestrian and bicycle connection along an improved 2.1 mile waterfront trail to the UW Medical Center.
- Coordination with the recreational small boat operations at the Waterfront Activity Center (WAC).
- Rebuilt WAC docks would need to accommodate existing small boat and boat moorage in additional to water taxis.
- Negotiation of a temporary license for water taxi use of UW property.
- Request to consider expanding service for Husky football games.
- Request for consideration of connecting service to UW Bothell via the Kenmore dock.
- Concern about increase in U-PASS contract costs without increasing trip reduction (due to a shift of U-PASS users from lower cost bus transit service to higher cost water taxi service), and request for a commitment to minimize this financial risk.
- Maintaining good relations with other waterfront users neighboring UW.

Kirkland to University of Washington

The Kirkland to University of Washington ferry route is expected to have a round trip length of an hour and 36 minutes, 12 to 24 percent slower than transit alternatives, and is projected to have a farebox recovery rate of 31.4 percent at route maturity.

The Kirkland Marina Park terminal location is located in the Kirkland Central Business District. There would be no onsite parking at this location although there are nearby commercial parking lots. It's an eight minute walk from the Kirkland Transit Center which is well-served by transit. Shuttle service was not initially assumed in the interim

[5] Final Report on Ferry Expansion Options, pages 230-233
[6] Final Report on Ferry Expansion Options, pages 227-229

report, but was added to the final report in response to city and County Council interest. Since the interim report, the City of Kirkland has expressed interest in the potential of passenger ferry service from this location. They also expressed concerns about parking scarcity near the marina and requested inclusion of shuttle service and identified that existing dock conditions, current leases by other commercial entities, and winter seasonal wind and wave action may require additional capital improvements.

See the section above for a discussion of the University of Washington terminal location.

Ballard to Downtown Seattle

The Ballard to Downtown ferry route is expected to have a round trip length of an hour and 18 minutes, 38 percent slower than available transit options, and is projected to have a farebox recovery rate of 31.5 percent.

The Shilshole Bay Marina terminal location in Ballard is located about 1.5 miles away from the Ballard commercial center and industrial jobs along the waterfront. The interim report assumes onsite parking at the Ballard terminal. The location is also near the Burke-Gilman Trail. The location does not have transit access and the street network provides limited points of access to the terminal. If parking is not available at this location, this potential expansion route may no longer be feasible, according to the report. Minor capital improvements would be needed at this location. The Port of Seattle expressed positive interest in ferry service at this location if a few concerns could be addressed, and indicated a willingness to consider use of parking by ferry passengers. Specific Port of Seattle concerns included:

- Conflicts with seasonal marina traffic.
- Management of parking.
- Consideration of more central dock location within marina.

The City of Seattle expressed potential concerns about transit access to the terminal, parking availability, and increased roadway traffic volumes. Expedia, which is planning to move to the former Amgen campus in Interbay, expressed support for an additional stop along this route on or near their campus.

The Pier 50 terminal location in Downtown Seattle is located near the south end of downtown Seattle and serves as the terminal location for King County's existing water taxi services. Downtown Seattle is the largest employment center in the region, and a great number of those jobs are accessible by a short walk or bus ride from this terminal location. Transit connections are also available for surrounding job sites such as South Lake Union and First Hill/Capitol Hill.

<u>Routes Not Recommended for Further Consideration</u>

A number of routes serving alternative terminal locations in communities were eliminated due to travel time differentials or because of the existence of a superior terminal location nearby. Of the routes that met the travel time differential screening

criteria, the following were eliminated based on projected farebox recovery ratios below 25 percent at route maturity:

- Kenmore to Bellevue
- Renton to Bellevue
- Bellevue to UW
- Des Moines to Downtown Seattle

Due to a combination of low projected ridership and high projected operating costs mostly associated with the need to provide shuttle service at several of these locations, these routes are projected to have farebox recovery ratios ranging from 6.6 percent to 18.7 percent at route maturity.

Implementation Requirements

The routes proposed for further consideration would each require the purchase or lease of a 150-passenger or less vessel capable of sustaining a cruising speed of 35 knots. They would also require terminal improvements ranging from potentially minor at Shilshole, Kirkland Marina, and Log Boom, to extensive at the University of Washington (UW) Waterfront Activity Center where the gangway and float would need to be completely replaced with a new structure. Pier 50 would require no additional capital improvements to accommodate an expansion route. Total capital cost[7] estimates (assuming a vessel acquisition) are as follows:

- Kemore to UW: $9.14 million
- Kirkland to UW: $8.61 million
- Ballard to Downtown Seattle: $5.36 million

Each terminal location, with the exception of Pier 50, would require environmental permitting, design, and construction prior to beginning service. Table 1 shows the breakdown of terminal improvement infrastructure costs as components of the total capital cost estimates shown above.

Table 1. Expansion terminal capital cost estimates

Expansion terminal capital projects	Estimated cost
University of Washington Terminal	$3,225,000
Kenmore Terminal	$909,000
Kirkland Terminal	$381,000
Ballard Terminal	$364,000

Table 2 below shows the estimated annual operating costs of each expansion route.

[7] Route capital costs include vessel purchase and identified terminal improvements at both route landing sites.

Table 2. Expansion route operating cost estimates

Expansion route	Est. operating costs
Kenmore to UW	$1,920,000
Kirkland to UW	$1,660,000
Ballard to Downtown	$1,520,000

Equity and Social Justice

The report used concepts and metrics from the 2015 Determinants of Equity Report to determine densities of Equity of Social Justice (ESJ) populations within the water taxi ridership capture area. High ESJ densities were found in the ridership capture areas for Renton and Des Moines routes. These routes were eliminated from further consideration under the evaluation criteria described above. The report states that ESJ communities that would be served by these potential routes either currently or will have better transit alternatives available on a service and cost basis compared to the service levels and passenger costs assumed on the ferry expansion routes under consideration.

Updated in Final Report

The final report was updated to reflect Councilmember and jurisdiction feedback and questions in response to the interim report. Those updates are catalogued in Appendix F. Significant changes include the addition of Appendix H describing ferry market advantages and disadvantages, consideration of Lakepointe as a future Kenmore terminal location, the addition of Kirkland shuttle service, and the addition of Appendix G describing work underway to consider passenger ferry service between Kitsap County and Seattle. Additionally, capital costs and farebox recovery ratios were updated with recent information in the final report, but the numbers did not differ significantly from what was presented in the interim report.

ANALYSIS

Organization of Analysis

The analysis section of this staff report is organized around raising issues of consideration related to further pursuit of the ferry passenger expansion options provided in the final report. The areas of consideration include:

- Ferry market comparison
- Operating costs and farebox recovery
- Capital costs and environmental impacts
- System integration
- Community outreach
- Financial planning

Consistency with Proviso Requirements

The proviso required “an assessment of passenger-only ferry expansion options, consistent with the ferry district's strategic plan that builds on new transit options that are projected to be delivered through Sound Transit's University Link and other funded

regional transit expansions being delivered in the next decade." The assessment was to evaluate facilities and service options. It was also to include capital and operations cost estimates and an assessment of community interest and readiness. The final report appears to satisfy the proviso requirements.

Ferry Market Considerations

The ferry expansion routes identified for further study are currently served by existing Metro and Sound Transit bus service. According to Appendix F of the report, water taxi service provides the following advantages compared to alternative transportation modes:

- Increased reliability and predictability of travel times,
- A seat for every passenger,
- Increased passenger comfort and appeal (scenery, spaciousness, restrooms, open air potential), and
- More affordable trip costs compared to personal vehicles.

It is also important to consider travel time, frequency, and cost comparisons to existing and planned transit options, as these are considered the primary factors commuters use to make travel mode decisions, according to the consultants for the report.

Table 3 provides such a comparison under 2015 conditions. It should be noted that bus travel times will likely increase over time as population and employment growth increases congestion. The shaded boxes indicate areas of competitive advantage between the two options.

Table 3. Ferry expansion route transit market comparison[8]

Kenmore to UW	**Travel Time**	**Frequency**	**Fare**
Bus transit	36-41 minutes	All day, 30 minute	$3.25
Ferry expansion route	38 minutes[9]	Peak, 60 minute	$5.25
Kenmore to Downtown[10]	**Travel Time**	**Frequency**	**Fare**
Bus transit	39-44 minutes	All day, 30 minute	$2.50
Ferry expansion route	55 minutes	Peak, 60 minute	$5.25
Kirkland to UW	**Travel Time**	**Frequency**	**Fare**
Bus transit	28-45 minutes	Peak, 25 minute	$3.25
Ferry expansion route	33 minutes	Peak, 60 minute	$5.25
Kirkland to Downtown	**Travel Time**	**Frequency**	**Fare**
Bus transit	34-45 minutes	All day, 8-15 min.	$3.25
Ferry expansion route	50 minutes	Peak, 60 minute	$5.25
Ballard to Downtown	**Travel Time**	**Frequency**	**Fare**
Bus transit	21-28 minutes	Peak, 20-30 min.	$2.75
Ferry expansion route	39 minutes[11]	Peak, 60 minute	$5.25

[8] Data derived from King County Final Report on Ferry Expansion Options Appendix B. Bus frequencies derived from transit route schedules on King County Metro and Sound Transit websites.
[9] Includes six minute walk from Ferry Terminal to UW Station.
[10] Transferring to Link light rail at the University of Washington station.

Under current conditions, bus transit is predicted to have a comparative advantage in all categories except travel time between Kenmore and Kirkland to University of Washington during the evening commute. However, increasing highway congestion and water taxi advantages such as reliability and passenger experience may balance out the mode choices for some riders.

Operating Cost and Farebox Recovery Considerations

Cost per Rider

The operating cost estimates provided in the interim report use King County's 2014 financial data and include administrative costs[12], labor, and maintenance costs. All routes include fixed costs of $1.35 million and vary based on fuel (length and number of trips) and shuttle costs.

Table 4: Comparison of ferry route cost per passenger[13]

Route	2015 Total Passengers	2025 Total Passengers
Vashon Island to Downtown	184,457	213,858
West Seattle to Downtown	282,662	317,035
Ballard to Downtown	59,433	107,175
Kenmore to UW	57,148	119,210
Kirkland to UW	56,666	115,625
Route	**2015 Total Annual Operating Costs**	**2025 Total Annual Operating Costs**
Vashon Island to Downtown	$1,704,797	$2,366,131
West Seattle to Downtown*	$3,486,120	$4,809,572
Ballard to Downtown	$1,520,659	$2,119,923
Kenmore to UW*	$1,918,247	$2,652,115
Kirkland to UW*	$1,656,647	$2,296,339
Route	**2015 Cost Per Rider**	**2025 Cost Per Rider**
Vashon Island to Downtown	$9.24	$11.06
West Seattle to Downtown*	$12.33	$15.17
Ballard to Downtown	$25.59	$19.78
Kenmore to UW*	$33.57	$22.25
Kirkland to UW*	$29.24	$19.86

*shuttle costs included

This comparison shows that estimated operating costs for potential expansion routes are comparable to the operating costs for the Vashon Water Taxi routes, which operates the same number of trips. Due to somewhat lower projected ridership than current water taxi service, particularly at startup but also at route maturity, the cost per

[11] Includes 15 minute walk from Pier 50 to Downtown worksites.
[12] The Marine Division states that additional administrative staff would not be required if one additional water taxi route were added, so operating cost estimates include 1/3 of administrative costs, dispersing the administrative costs among three routes.
[13] Data provided by the Marine Division

rider for expansion service is projected to be 130 to 202 percent higher than the average cost per rider of current service at startup, and 51 to 70 percent higher than the average cost per rider of current service at route maturity in 2025.

For context, Table 5 shows a comparison of costs per rider for various King County transit options.

Table 5. Transit mode cost per rider comparison

Transit mode	Cost per rider
Metro buses 2014[14]	$4.27
Sound Transit Link light rail 2014[15]	$5.51
Sound Transit Sounder Commuter Rail 2014[16]	$11.93
KC water taxis 2015	$11.11

Farebox Recovery

A comparison of projected farebox recovery rates shown in Table 6 suggests that, at route maturity, the potential expansion routes would have farebox recovery rates comparable to (Ballard to Downtown and Kirkland to UW) or 3.5 percent below (Kenmore to UW) that of the current water taxi service.

Table 6. Comparison of projected farebox recovery at route maturity

Route	Year	Farebox recovery
Existing KC water taxi service	**2014**	**31.5%**
Ballard to Downtown	2025	31.5%
Kenmore to UW	2025	28.0%
Kirkland to UW	2025	31.4%

Ridership Projections

Ridership projections play an important role in the determining the cost per passenger and farebox recovery rate estimates provided above. It should be noted that the ridership projections provided in the report are estimates rather than known values. The ridership projections were developed using a market analysis approach that involved Puget Sound Regional Council's travel demand model and the experience of the West Seattle Water Taxi. A number of studies evaluating passenger-only ferry expansion routes have been undertaken within the past decade, and with the exception of the Kirkland to UW route, the ridership projections in the current report are 35 percent to 96 percent higher than projections from previous ferry expansion studies. The estimates are based on somewhat varying methodologies and differing service levels. According to the Marine Division, the differences between ridership projections can be accounted for by methodology differences and historical and anticipated increases in transit

[14] King County Metro Transit 2014 Strategic Plan Progress Report, page 29
http://metro.kingcounty.gov/am/reports/2014/metro-2014-strategic-plan-progress-report.pdf
[15] 2014 Sound Transit Annual Report, page 47
http://www.soundtransit.org/sites/default/files/20150827_2014annualreport.pdf
[16] 2014 Sound Transit Annual Report, page 47

ridership, and existing water taxi service has exceeded ridership projections from these previous studies.[17]

Capital Costs and Environmental Impact Considerations

Capital Costs

The potential ferry expansion routes would have significant startup capital costs and environmental impacts, with the estimated capital costs and timeframe for each route shown in Table 7 below. The longer timeframe and greater costs for the UW routes reflect the significant in-water infrastructure work needed at the UW terminal location and the environmental review and mitigation that would be necessary to complete that work.

Table 7. Estimated startup capital costs[18] and timeframe

Route	Capital costs	Construction timeframe
Ballard to Downtown	$5.36 million	9 months
Kenmore to UW	$9.14 million	3.25 years
Kirkland to UW	$8.61 million	3.25 years

The estimated capital costs provided in the report include infrastructure and vessel costs and are preliminary, high-level cost estimates developed by the consulting engineers using current and previous project knowledge. According to the consultants, the conceptual level cost estimates for in-water improvements at the UW WAC were based on recently completed cost estimates for the Colman Dock Pier 50 terminal replacement project. Cost estimates for the minor dock modifications needed at the Kenmore, Kirkland, and Ballard terminals were based on cost information collected from suppliers and manufacturers. The costs include 15-30 percent for environmental costs (updated from the interim report), 15 percent design costs, and a 30 percent contingency due to the conceptual level of cost estimates.[19]

Based on jurisdiction comments after the interim report, it was determined that structural assessments are needed at the Kenmore and Kirkland terminals. If these structural assessments uncover additional capital improvement needs, design and construction costs for these terminal locations would increase over the cost estimates provided in the report.

Vessel costs account for an estimated $5 million of each expansion route startup cost because the Marine Division has determined that a new vessel would likely need to be purchased to accommodate the speed and passenger requirements of the expansion routes. The Marine Division's recently retired leased vessel, the Spirit of Kingston, and other potential leased vessels do not meet these requirements, according to the discussion in Appendix F of the report.

[17] More discussion on this topic can be found in the September 1, 2015 staff report for the Interim Ferry Report.
[18] Route capital costs include vessel purchase and identified terminal improvements at both route landing sites.
[19] Final Report on Ferry Expansion Options, Appendix D

Environmental Impacts

Terminal infrastructure improvements would have environmental impacts that would need to be reviewed and potentially mitigated in a permitting and environmental review process. According to the report, the in-water infrastructure at the terminal locations at Kenmore and Kirkland would require an inspection to determine their structural integrity, which could result in the need for in-water construction not identified in the report. The UW terminal location requires substantial in-water construction. Mitigation requirements for the new in-water infrastructure could include habitat mitigation and Tribal Usual and Accustomed fishing rights, according to Appendix D of the report. According to the Marine Division, the Lake Washington routes may also raise concerns about wake wash and shore erosion that may need to be evaluated in the environmental review process.

System Integration Considerations

In reviewing the interim ferry report, Councilmembers and impacted jurisdictions requested that the Marine Division consider suggestions for addressing several system integration issues in the final report. Table 8 shows those issues, requests, and the response included in the final report.

Table 8. System integration issues evaluated in final report

Issue	Request	Response
Lack of parking at Log Boom Park Kenmore terminal location	Consider Lakepointe as a future Kenmore terminal location	While Lakepointe is seen as the preferred Kenmore terminal location, its uncertain development schedule resulted in Log Boom Park being identified as the most suitable current location.
Constrained parking near Marina Park Kirkland terminal location	Shuttle service in Kirkland	A circulator shuttle was added to the proposed service, increasing projected operating costs by $140,000 annually.
Bike and pedestrian access and lack of shelter at the Marina Park Kirkland terminal location	Consider bike and pedestrian and shelter improvements at Marina Park	No improvements proposed as the Marine Division considers existing conditions as sufficient.

Community Outreach Considerations

Community outreach and support are important considerations in evaluating potential ferry expansion options. For example, operating King County's existing water taxi service involves use agreements with the State of Washington and City of Seattle for use of terminal locations. Terminal improvements have required close collaboration and permitting approval from these agencies, and replacement of the Seattle Ferry Terminal at Pier 50 is a joint capital project between King County and the state. Similar use agreements, approvals, and potential partnerships would be needed from the

jurisdictions who own the terminal locations for potential expansion routes. Outreach with the public is important for identifying potential issues with expansion route options and determining the level of support for potential service.

The Marine Division has contacted leadership from the jurisdictions where ferry expansion terminals could be located and has received responses varying from positive to expression of concerns as described above in the background section. Additional outreach between the Marine Division and impacted jurisdictions have occurred since the interim report resulting in the following additional feedback:

- Information about conditions impacting potential ferry ridership in Kenmore, including approval of transit oriented development adding over 300 housing units and investments in transit lanes and pedestrian facilities near the Kenmore water taxi terminals.
- Support from Kenmore for Lakepointe as a terminal location and Log Boom Park as an interim terminal location.
- Support from Expedia for an additional water taxi stop serving the future Expedia campus in Interbay on the Ballard to Downtown ferry route.
- Support from Kirkland for consideration of the Kirkland to UW ferry route, with comments about the parking scarcity and potential for additional capital improvements needed at Marina Park to accommodate ferry service.

Though jurisdiction outreach has progressed, questions remain as to whether ferry operations would be authorized by jurisdictions with concerns, and at what cost and under what terms. The report does not address public comments from residents and businesses surrounding terminal locations as community outreach has not yet taken place.

Financial Planning Considerations

If the County wishes to move forward with one or more ferry expansion options, detailed financial plan costs would need to be determined and funding sources would need to be identified. Currently, the Marine Division's existing funding through a property tax levy of $.003 per $1,000 is not enough to sustain existing service levels beyond 2016. A proposal for funding King County's water taxi service for the next two years is currently being developed as part of the Executive's proposed 2017/2018 Budget for the Marine Division.

Table 9 provides preliminary order-of-magnitude estimates of the annual levy rates that would provide funding to expand ferry service. These estimates are based on Council staff's calculations using the operating and capital costs provided in the final report, and are not based on a detailed financial plan, which is still under development by the Marine Division. These calculations assume debt financing of capital improvement costs (20 year bonds with level annual repayments), establishment of a vessel replacement fund, and an operating reserve equivalent to 45 days of operating expenses. The Lake Washington and All scenarios do not account for the increase in administrative costs that may be necessary for an expansion larger than one route.

Table 9. Preliminary levy rate estimates for ferry expansion options

Levy component	Incremental annual cost	Total annual cost	Incremental levy rate increase	Total levy rate (per $1000)	Cost on $500,000 home
2008 levy	-	-	-	**$0.055**	$27.50
2016 levy	-	-	-	**$0.003**	$1.50
Maintain existing service	-	$6,683,532	-	**$0.019**	$9.55
Ballard	$2,585,204	$9,268,736	$0.007	**$0.026**	$13.24
Kenmore	$3,350,584	$10,034,116	$0.010	**$0.029**	$14.33
Kirkland	$3,011,734	$9,695,266	$0.009	**$0.028**	$13.85
Lake Washington	$6,090,209	$12,773,741	$0.017	**$0.036**	$18.25
All	$8,675,413	$15,358,944	$0.025	**$0.044**	$21.94

According to the calculations shown in Table 9, an estimated increase of approximately $0.016 per $1,000 assessed value would be needed to maintain King County existing water taxi service in 2017, and an additional estimated increase of $0.007 to $0.010 would be needed to add one of the expansion options evaluated in the report. Adding both Lake Washington routes or all three expansion routes would require an additional estimated rate increase of $.0.017 to $0.025. The total estimated levy rate needed to fund these expansion options range from $0.026 to $0.044 per $1,000 assessed value.

ATTACHMENTS

1. Proposed Motion 2015-0517 (and its attachments)
2. Transmittal Letter

INVITED

- Paul Brodeur, Marine Division Director
- Bill Greene, Department of Transportation Chief Financial Officer
- Evelyn Wise, Marine Division Finance and Administration Manager
- Stephanie Pure, Department of Transportation Intergovernmental Relations

KING COUNTY

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Signature Report

January 29, 2016

Motion

Proposed No. 2015-0517.1 **Sponsors** Dembowski

A MOTION approving the Final Report on Ferry Expansion Options for Marine Division, in response to the 2015/2016 Biennial Budget Ordinance, Ordinance 17941, Section 94, Proviso P1, as amended by Ordinance 18110, Section 39, Proviso P1.

WHEREAS, the 2015/2016 Biennial Budget Ordinance, Ordinance 17941, Section 94, Proviso P1, states that $150,000 of the appropriation for the marine division shall not be expended or encumbered until the executive transmits both an interim and a final report on ferry expansion options for the marine division and motions approving the reports are passed by the council, and

WHEREAS, the King County council passed Motion 14421 approving the interim report on ferry expansion options for marine division, and

WHEREAS, the King County council adopted Ordinance 18110, Section 39, which amended the date the final report must be filed, changing it from September 30, 2015, to November 25, 2015, and

WHEREAS, the King County executive hereby transmits to the council the final report on ferry expansion options for marine division and by this motion seeks approval of the final report, and

WHEREAS, the report is submitted by the marine division to fulfill the second reporting proviso obligation;

NOW, THEREFORE, BE IT MOVED by the Council of King County:

The Final Report on Ferry Expansion Options for Marine Division, Attachment A to this motion, is hereby approved.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

_____

J. Joseph McDermott, Chair

ATTEST:

_____

Anne Noris, Clerk of the Council

APPROVED this _____ day of _____, _____.

_____

Dow Constantine, County Executive

Attachments: A. Final Report on Ferry Expansion Options for Marine Division

ATTACHMENT A

King County Water Taxi

FINAL REPORT ON FERRY EXPANSION OPTIONS FOR MARINE DIVISION

PREPARED FOR KING COUNTY MARINE DIVISION
BY KPFF CONSULTING ENGINEERS
WITH BERK CONSULTING, INC.
NOVEMBER 25, 2015

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FINAL SUMMARY REPORT
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EXECUTIVE SUMMARY

INTRODUCTION

The purpose of this study is to assess the viability and feasibility of passenger-only ferry service expansion options in Puget Sound and Lake Washington. It was developed in response to a proviso in the 2015-2016 King County adopted budget.

EVALUATION METHODOLOGY

The methodology for this assessment builds upon work completed to date, with a focus on analyzing implementation of regular, year-round, commuter-based King County Water Taxi (KCWT) service at start-up and route maturity. The analysis is based on a three-step evaluation method.

The first step of the analysis identified 36 potential route combinations for analysis. The second step was to evaluate route time competitiveness to other transit options, with the third step to analyze operational cost and potential revenue generation at a start-up condition (2015), as well as a mature route condition (2025). A thorough ridership analysis was completed to inform revenue projections for each route. Operational costs were estimated using actual operating costs. Existing fare policy guidelines and standard county escalation factors were used to project mature route service costs and revenues.

SERVICE ASSUMPTIONS AND CHARACTERISTICS

The service level assumed for these expansion routes is similar to the existing Vashon Island route, which focuses on the AM and PM peak commuter hour ridership with no midday, extended evening or weekend service.

One important assumption in this report is the need for high-speed vessels (35 knots[1]), necessary for the routes to be time competitive with other transportation options. Vessel type is expected to be a 150-passenger (or less) vessel that is capable of meeting the speed requirements of each route, being highly maneuverable, and based on the ridership levels projected as part of this analysis in start-up and mature route conditions.

ROUTE EVALUATION

The route evaluation is comprised of two primary evaluation criteria leading to an identification of potential water taxi expansion routes. These criteria include overall time competitiveness (as compared to the other modes of travel) and net operating cost/required operating subsidy, which is determined by forecasting ridership and estimating fare revenue and then comparing projected fare revenue to operational costs, calculated as farebox recovery for each route.

Time Competitiveness

The time competitiveness was evaluated against the alternative transit mode commute times. Any route with a round-trip travel time differential of 40 minutes or less was considered time competitive and moved on to the next step in the analysis.

Generally, the water taxi is a longer trip than the competing modes of travel studied in this report (bus, light rail, and personal vehicles). The study identified that personal vehicle travel is generally faster than the water taxi but significantly more expensive with fuel costs, vehicle wear and tear, tolls and parking in downtown Seattle, which can range from $10 to $30 a day. Transit and personal vehicle also experience more variability in travel times as they are subject to roadway congestion on arterials and highways.

The time competitiveness evaluation resulted in 11 of the 36 routes maintaining the 40 minutes or less total round-trip time differential. Those 11 routes were narrowed to seven as the University of Washington-Waterfront Activity Center (UW WAC) was identified as the west Lake Washington hub due to its location, destination draw and ability of passengers to make connections to other modes (Link light rail, bus, and regional trails).

[1] A knot is a unit of speed equivalent to one nautical mile per hour (or 1.15 miles per hour), used especially of ships, aircraft, and winds.

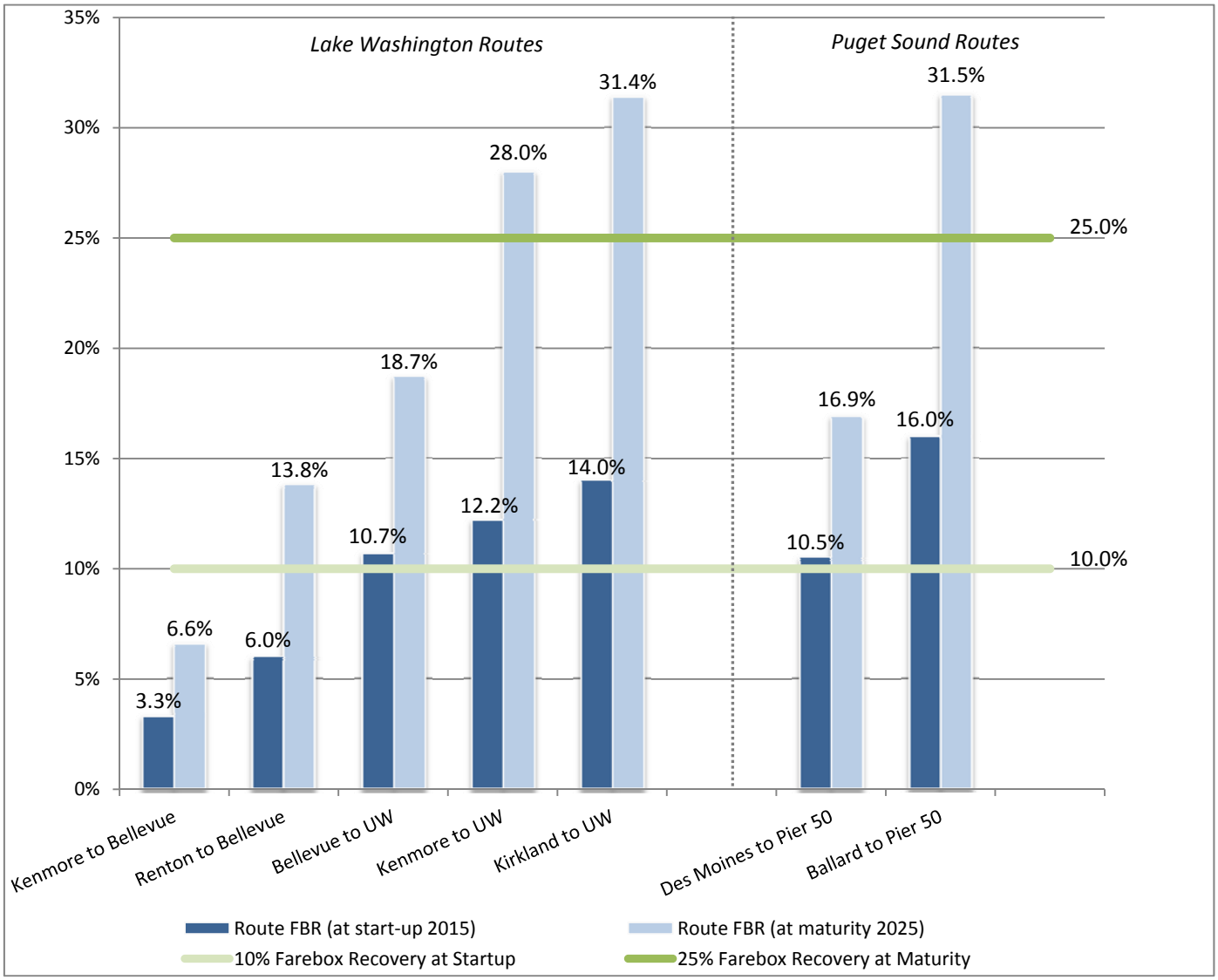
Cost of Operation

The next step in the analysis was to look at the net cost of operating each new route. Each route was measured at a start-up condition (2015) and a mature condition (2025).

Generally, each new proposed route has a similar operating cost, with the exception of fuel and shuttle costs, which vary by route.

When the data was compiled, natural breaks in the data were apparent in the 2015 farebox recovery rates. Two routes, during startup conditions had farebox recovery rates lower than 10 percent – and were eliminated from further analysis. For a mature route condition in 2025, a farebox recovery rate of 25 percent (established in King County policy) was used as the evaluation criteria. Three of the remaining routes met this criterion and are proposed for further consideration. Refer to Figure EX-1.

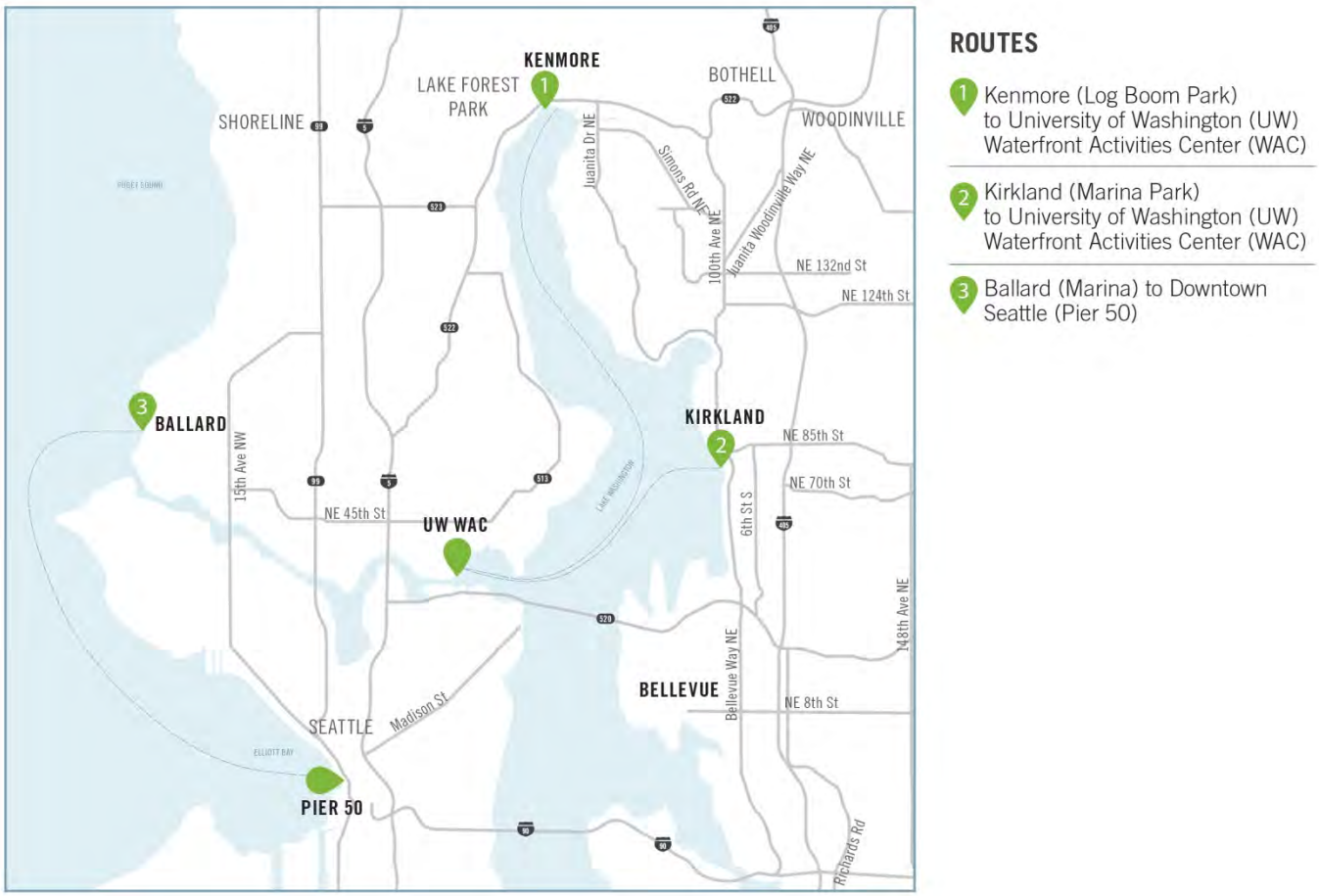
Figure EX-1: Farebox Recovery Projections by Route



The three routes which met the evaluation criteria and are proposed for further consideration include the following (please refer to Figure EX-2):

- Kenmore to University of Washington (Waterfront Activity Center)
- Kirkland to University of Washington (Waterfront Activity Center)
- Ballard to Downtown Seattle (Pier 50)

Figure EX-2: Routes Proposed for Further Consideration



IMPLEMENTATION REQUIREMENTS

Implementation requirements include the capital improvements needed to launch and maintain service, which include new vessel, terminal infrastructure, parking, and upland improvements. The UW WAC terminal would require the most improvements, including a new in-water facility and upland improvements. All other terminals, including Kenmore, Kirkland, Ballard and Downtown Seattle (Pier 50) would require minimal in-water and upland improvements as current infrastructure is in place. The Kenmore and Kirkland routes would utilize a shuttle service as an alternative to bringing passengers to the terminal.

AGENCY/JURISDICTION OUTREACH

Communication with potential terminal location jurisdictions and transportation planning agencies has occurred throughout this work to inform agencies on the purpose and evaluation process of this report, and most importantly to understand key issues or obstacles that are present or perceived. Planning to implement a new water taxi route would require substantial additional coordination to develop interagency agreements to address operational needs or address other obstacles identified.

EQUITY AND SOCIAL JUSTICE (ESJ)

Equity and social justice implications were evaluated using a three-step approach. Evaluation of data identifying ESJ populations in proximity to the routes studied indicates that existing and proposed transit alternatives are more convenient (time competitive) and have lower fares than what new water taxi service would offer.

NEXT STEPS

The next step for the Ferry Expansion Options report, after it is submitted to the King County Council in late November 2015, is review, input and action by the King County Council that is expected to occur starting early spring 2016. The King County Executive may also use this report in his consideration on providing direction to the King County DOT, Marine Division as to whether an expansion of the existing KCWT service should be included in future biennium budget development.

INTRODUCTION/BACKGROUND

INTRODUCTION

The purpose of this study is to assess the viability and feasibility of passenger-only ferry service expansion options in Puget Sound and Lake Washington. It was developed in response to a proviso in the 2015-2016 King County adopted budget that stated, in part:

> *Of this appropriation, $150,000 shall not be expended or encumbered until the executive transmits both an interim and a final report on ferry expansion options and motions that approve the reports and the motions are passed by the council. The motions shall reference the subject matter, the proviso's ordinance, section and proviso number in both the title and body of the motion.*
>
> *The reports shall include, but not be limited to, an assessment of passenger only ferry expansion options, consistent with the ferry district's strategic plan, that builds on new transit options that are projected to be delivered through Sound Transit's University Link and other funded regional transit expansions being delivered in the next decade.*
>
> *This assessment should include assessments of facilities, service options and cost estimates for both capital and operations and community interest and readiness. The interim report shall summarize the work and results to date.*[2]

BACKGROUND

In 1994, King County began operating demonstration Water Taxi service to West Seattle during the summer season (April-October). The King County Ferry District (KCFD) was formed in 2007 under authority granted by the Washington State Legislature in 2006[3] and was authorized to implement a property tax levy. In 2008, the KCFD contracted with the King County Department of Transportation's newly created Marine Division to operate service on the West Seattle and Vashon Island passenger-only ferry routes. Service on both routes has been operating year-round since 2010.

The State approved business plan for the KCFD included provision of passenger-only ferry service with growth over time. In mid-2009, an addendum to the interlocal agreement between the KCFD and King County Marine Division (KCMD) was adopted and authorized the KCMD to study 20 demonstration passenger-ferry routes and to plan for the rollout of five routes to be approved by the KCFD. Routes on Puget Sound and Lake Washington were analyzed with a focus on short-term, seasonal service requiring relatively little capital investment. The evaluation reviewed route options, estimated ridership, assessed infrastructure needs and community readiness/willingness to participate. In late 2009, in response to the economic recession, the KCFD directed the demonstration route study to be shelved and reduced the property tax levy beginning in 2010.

In spring 2014, the state passed legislation[4] authorizing the County to adopt an ordinance to assume the "rights, powers, functions, and obligations" of the KCFD. The King County Council, in a move to increase efficiency in the administration of Water Taxi service for the county, assumed the "rights, powers, functions, and obligations" of the KCFD[5] effective January 1, 2015.

In their new oversight role, the County Council directed the KCMD to revisit the 2009 study and expand the analysis to incorporate potential new long-term, passenger-only route service expansion opportunities, as outlined in the King County Ferry District Strategic Plan.

[2] King County Ordinance 17941 Section 94, P1, as amended by King County Ordinance 18110 section 39, P1
[3] Engrossed Senate Substitute Bill 6787
[4] Substitute Senate Bill 6216
[5] King County Ordinance 17935

King County Ferry District Strategic Plan Excerpt:

> *"**Determine feasible routes for expansion of passenger-only service within King County.** The Demonstration Route Study from 2009 identified several potential new routes for expansion. However, the study needs to be updated and refined given changes in the regional economy and new factors. For example, the opening of the University of Washington light-rail connection starting in 2016 may make north Lake Washington routes, such as Kenmore to the University or Kirkland to the University more feasible. The route study should be updated prior to long-term funding decisions in order for any potential new routes or service to be considered as part of the District's future financial needs."*

The focus of this study is to:

- Summarize and build upon work completed to date;
- Analyze the impact of new transit options projected to be delivered in the region in the next decade (Sound Transit light rail, highway modifications, tolling, etc.); and
- Assess facilities, service options and cost estimates for both capital and operations along with community interest and readiness.

The approach for this study is outlined below, which builds upon work completed to date and, analyzes implementation of regular, year-round, commuter-based King County Water Taxi (KCWT) service at start-up and route maturity.

This final report has been edited to address comments received by the King County Council's Transportation, Environment and Economy Committee. A full outline of topics/questions with their responses can be found in Appendix F of this document.

EVALUATION METHODOLOGY

The evaluation was conducted using a three step process. Each step in the process served to gather and/or evaluate information and eliminate potential expansion routes. Figure 1 graphically depicts the general project approach.

First step: **Identify potential routes.** This was done by drawing from past work along with input from water-side cities/communities possibly served by new service. Data was gathered from the existing and expected future local and regional transit systems to understand where transit connections would be best-suited for ferry service.

Second step: **Evaluate route time competitiveness.** Compare potential future water taxi routes to other modes of transportation (bus, express bus, light rail and personal vehicles).

Third step: Analyze ridership and farebox recovery. Those potential routes with the strongest time competitiveness were then analyzed for ridership potential in a start-up and mature service condition. The ridership data was used to estimate potential revenue, which when compared to projected operating costs led to the calculation of farebox recovery. Farebox recovery (FBR) was the final evaluation criteria. Routes were examined based on a start-up and mature route FBR.

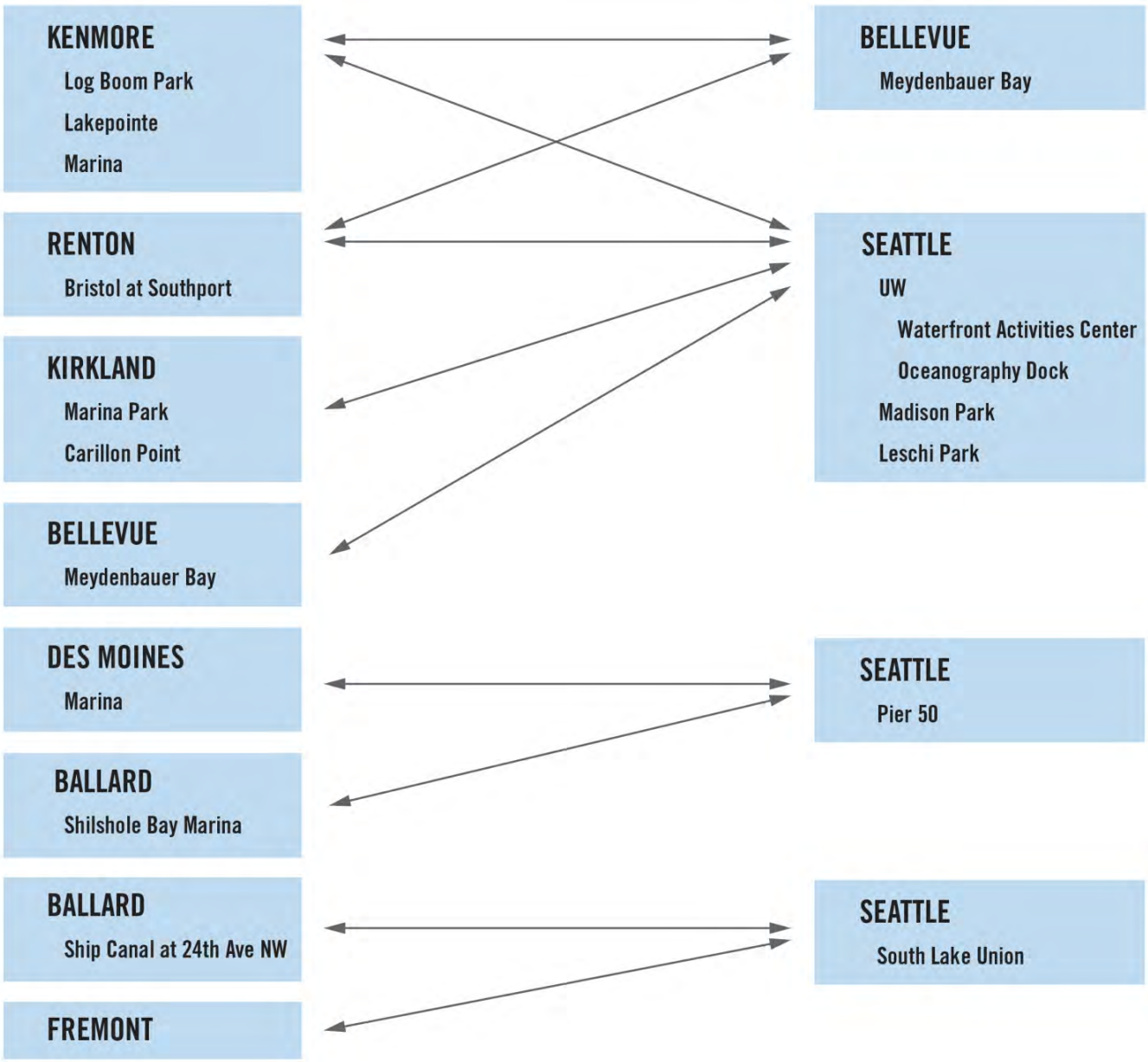
Figure 1: Evaluation Methodology Diagram

ROUTES IDENTIFIED FOR CONSIDERATION

FOCUS: Build upon work-to-date and identify routes to be considered in analysis.

Potential terminal locations were identified by the project team, building upon past work, updating for current conditions and input from waterfront cities/communities/agencies. The project team reached out to those cities/communities identified, as well as other known interested parties, to provide an opportunity to participate in identifying routes and provide feedback on potential terminals. Figure 2 lists the terminals identified for further analysis and consideration, which include 36 potential route combinations.

Figure 2: Terminal Locations Considered

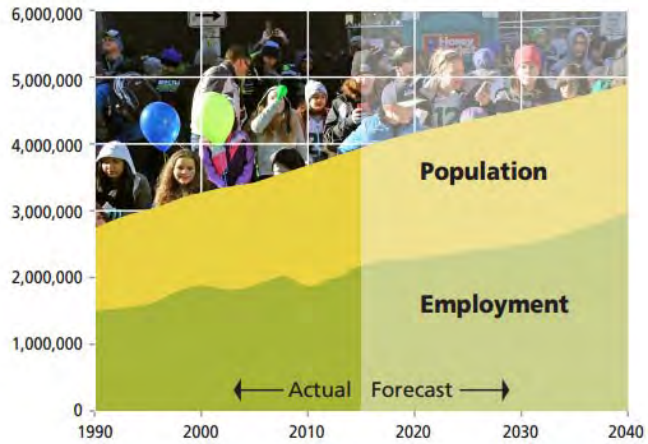


REGIONAL TRANSPORTATION PROJECTS

FOCUS: Analyzes the impact of new transportation options projected to be delivered in the region in the next decade (Sound Transit light rail, new highways, tolling, etc.)

The Central Puget Sound region and King County is rapidly growing in both population and employment. This growth will put additional travel demands on the existing transportation system which is already experiencing high levels of congestion during the AM and PM peak periods. The KCWT is one mode of public transportation, integrated with the public transit network, working to relieve congestion pressure within the region and provide alternatives for commuters. Figure 3 illustrates the linear climb in population and employment projected over the next 25 years, which will have an impact on transportation systems in the region.

Figure 3: Expected Growth in Employment and Population



Source: "Status Report on the Region's Transportation System and Plans to Improve it," Puget Sound Regional Council, April 2015.

Cities, counties, state, local and regional transit agencies, and the Puget Sound Regional Council (PSRC) have been and will continue to collaborate on the long-range transportation vision for our region. Currently, King County Metro, Sound Transit, Washington State Department of Transportation and the City of Seattle are in the process of studying, developing and updating their long range plans scheduled for completion over the next several years.

During the 2015 Legislative session, Sound Transit and Kitsap Transit were given new local options to seek additional funding. Sound Transit was authorized to seek voter approval for additional funding that would enable a Sound Transit 3 (ST3) program of improvements; ST3 is expected to be on the November 2016 ballot. Sound Transit is currently working with the community, transit agencies and other stakeholders to develop the package of improvements to be included in the ST3 proposal. Kitsap Transit was given the authority to form a new Passenger Only Ferry Service District inside their boundaries. It is expected that Kitsap Transit will take steps on whether or not to move forward with a ballot measure in 2016.

Transportation Activities between 2009 and Current Study

Since the previous study of demonstration routes completed in 2009, there have been multiple changes to the region's transportation system that will have influence on the viability of new water taxi routes. These changes include:

- Implementation of Bus Rapid Transit by King County Metro (six RapidRide lines) and Community Transit (SWIFT).
- The Great Recession which led to reduction in Sales Tax revenues and service cuts by transit agencies throughout the Puget Sound region. Since the end of the Great Recession, the economy has slowly started to recover, and higher sales tax revenues have enabled the restoration of some of the service hours cut.
- Approval by voters in the City of Seattle in the fall of 2014 to increase transit service within the City by approximately15 percent.

Additionally, the state (WSDOT) began construction on the I-90 High Occupancy Vehicle (HOV) lane improvements and the Alaskan Way Viaduct Replacement Project. WSDOT also implemented the SR 167 High Occupancy Toll (HOT) lanes in 2008, on SR 520 in 2011, and at the end of September 2015 implemented Express Toll Lanes on I-405 between Bellevue and Lynnwood.

Transportation Improvements within the 10-year Planning Horizon

The following list includes current and potential transportation projects in the 10-year planning horizon that may have an impact on potential water taxi routes outlined in the previous section. These include Lake Washington routes and routes on Puget Sound from Ballard and Des Moines. Figure 4 identifies the improvement projects along with the potential water taxi routes.

Regional Transportation Projects in Design/Construction (funded)[6]:

- University Link Extension (2016)
- South 200th Link Extension (2016)
- East Link Extension (2023)
- Federal Way Link Extension (2023)
- Northgate Link Extension (2021)
- Lynnwood Link Extension (2023)
- SR 520 widening and bridge replacement between Seattle and Eastside (2017)
- I-90 two-way HOV project between Bellevue and Seattle (2017)
- I-405 widening and HOT lanes from Bellevue to Lynnwood (2015)
- SR 99 Viaduct Replacement (2018)

The following list is meant to provide a broader context of other regional planning efforts that are being worked on as part of the ST3 funding package. However, these projects are currently unfunded and would not be completed until well after the 10 year planning horizon (2025).

Potential ST3 Projects (currently unfunded):

- Light rail extension from Downtown to Ballard
- Light rail extension from Downtown Seattle to West Seattle/Burien
- Light rail extension from Burien to Lynnwood
- HCT corridor from Downtown along Madison Street
- SR-522 BRT
- HCT along 145th Street to SR 522
- HCT along I-405 from Lynnwood to SeaTac

The list of funded regional transportation improvement projects provided a perspective from which to view and analyze the opportunities and challenges of future water taxi routes, in both route time competitiveness and ridership demand. This analysis will be discussed in more detail in the following section, Route Evaluation.

Given this inventory of regional transportation improvements, some general findings regarding connectivity and competitiveness of potential terminal locations are as follows:

Well served by existing or new HCT:

- City of Bellevue (bus and light rail)
- City of Renton (express bus)
- City of Kirkland (bus)
- UW Waterfront Activity Center (bus and light rail)
- South Lake Union (street car, bus)
- Ballard/24th Street (express bus)
- Des Moines area (light rail — in 2016)

Limited modal connections and/or HCT:

- City of Kenmore
- Leschi Park (circuitous transit route due to geography)
- Madison Park (limited down to water, new HCT connections proposed at Madison and 23rd Avenue).
- UW Oceanography Dock (indirect connections to HCT and Link light rail options for water taxi users to reach Downtown Seattle.)
- Ballard – Shilshole Marina (marina disconnected from HTC and bus service)
- Des Moines Marina (Link light rail options are widely available for Des Moines commuters; however the Marina is somewhat isolated with limited connections.)

Figure 4 provides an overview of improvement projects within the 10-year planning horizon, along with the locations of potential water taxi routes.

[6] Dates in parentheses are expected completion dates.

For the complete analysis of existing current and long-range transportation planning and improvement efforts within King County, please refer to Appendix A.

Figure 4: Regional Transportation Projects Map

ROUTE EVALUATION

FOCUS: Analyze how new water taxi routes compare to other modes, how many will use the service and how much will it cost to operate. Assess service options and operating costs.

The route evaluation is comprised of two major criteria, which leads to a final identification of potential routes to pursue as expanded water taxi service. These criteria include overall time competitiveness (as compared to other modes of travel) and cost of operation, which is determined through the identification of projected revenue and operational costs

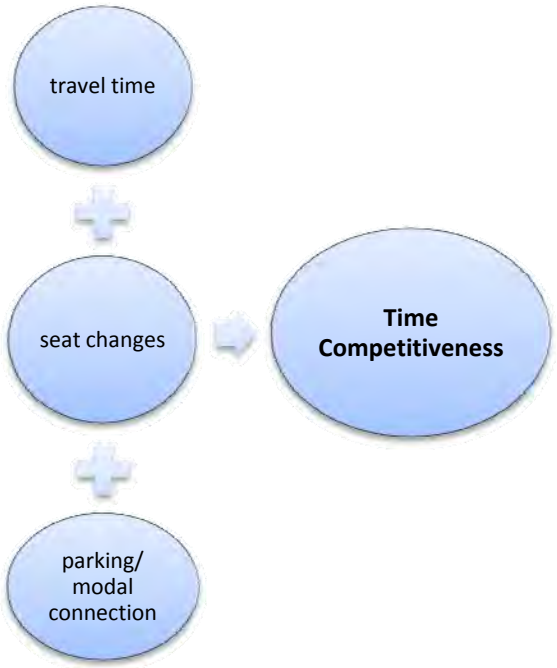
ROUTE TIME COMPETITIVENESS

Many factors contribute to the transportation mode choice of commuters; with some of the most important being total commute time, connections to other modes, predictability of travel, and cost.

Approach

What contributes to one site being more competitive than another are factors such as: surrounding land uses, pedestrian accessibility, multi-modal connectivity, parking availability and cost. Time competitiveness can be determined by evaluating: travel time, parking availability/modal connections, and convenience of travel (i.e. amount of transfers to another mode). Figure 5 depicts the relationship of these three elements, all contributing to the time competitiveness of a route.

Figure 5: Route Time Competitiveness Components



Current commute times, miles traveled during commutes, and seat changes were calculated using King County Metro and Google Map data. For comparison purposes, water taxi routes were based on a 35 knot[7] vessel cruising speed. An inventory of the King County Metro Park and Rides within the vicinity of the potential terminal location was determined and time competitiveness was calculated from the locations. Fares were based on the 2015 KCWT Vashon ORCA[8] fare of $4.75 and the seat changes were assumed to begin once the commuter arrived at the nearest park and ride. Onsite parking was assumed at Lakepointe in Kenmore, Shilshole Marina in Ballard, Southport in Renton, and at the City of Des Moines Marina.

Land use compatibility was determined by reviewing local jurisdiction planning documents, such as local zoning, shoreline and comprehensive plan designations to see if the use was allowable. The full list of assumptions and backup data can be found in Appendix B.

Once the data was gathered, time competitiveness and commute trip cost was compared to transit (light rail, transit or a combination) and personal vehicle commute times.

Evaluation Criteria

Route time competitiveness was evaluated against transit commute times. While estimated travel times for personal vehicle commutes were gathered, this data was not used as an evaluation criterion. Any route with a round-trip travel time differential of 40 minutes or less was considered time competitive. A 40 minute round-trip time differential was chosen due the enhanced experience of riding a water taxi, reliable travel times, an available seat, on-board restrooms, and great scenic views.

[7] A knot is a unit of speed equivalent to one nautical mile per hour, used especially for ships, aircraft, and winds.
[8] The ORCA card is a contactless, stored value smart card used for payment of public transport fares in the Puget Sound.

Findings

Findings of the route time competitiveness analysis can be classified into four major areas:

- Time competitiveness
- Cost competitiveness
- Parking
- Land use compatibility

Generally, the water taxi is a longer trip than the competing modes of travel studied in this report. Personal vehicle travel is generally faster but significantly more expensive with fuel costs, vehicle wear and tear, tolls and parking in downtown Seattle that can range from $10 to $30 a day. Transit and personal vehicle also experience more variability in travel times as they are subject to roadway congestion on arterials and highway. The current water taxi service has an approximately 97 percent scheduled on-time departure and arrivals and is not impacted by roadway congestion. Water taxi service can offer enhanced amenities above other modes of travel, which include an available seat, restrooms, scenic trip, WiFi, reliable service, and emergency response capabilities.

The time competitiveness evaluation resulted in 11 routes maintaining the 40 minutes or less total round-trip time differential. Those 11 routes were narrowed to seven as the University of Washington Waterfront Activity Center was identified as the west Lake Washington hub due to location, destination draw and ability of passengers to make connections to other modes (Link light rail, bus, and regional trails). It should be noted that an alternate site in Kenmore is also under consideration. The Lakepointe site is under private ownership with redevelopment plans currently underway. The schedule for redevelopment is unknown. This site, once developed, will provide superior multi-modal access and it is recommended that parking be provided at this site to enhance water taxi ridership appeal. At this time the Log Boom Park site has been identified in the analysis as the preferred near-term alternative, however engagement with the Lakepointe development regarding the future of a water taxi terminal on this site is recommended.

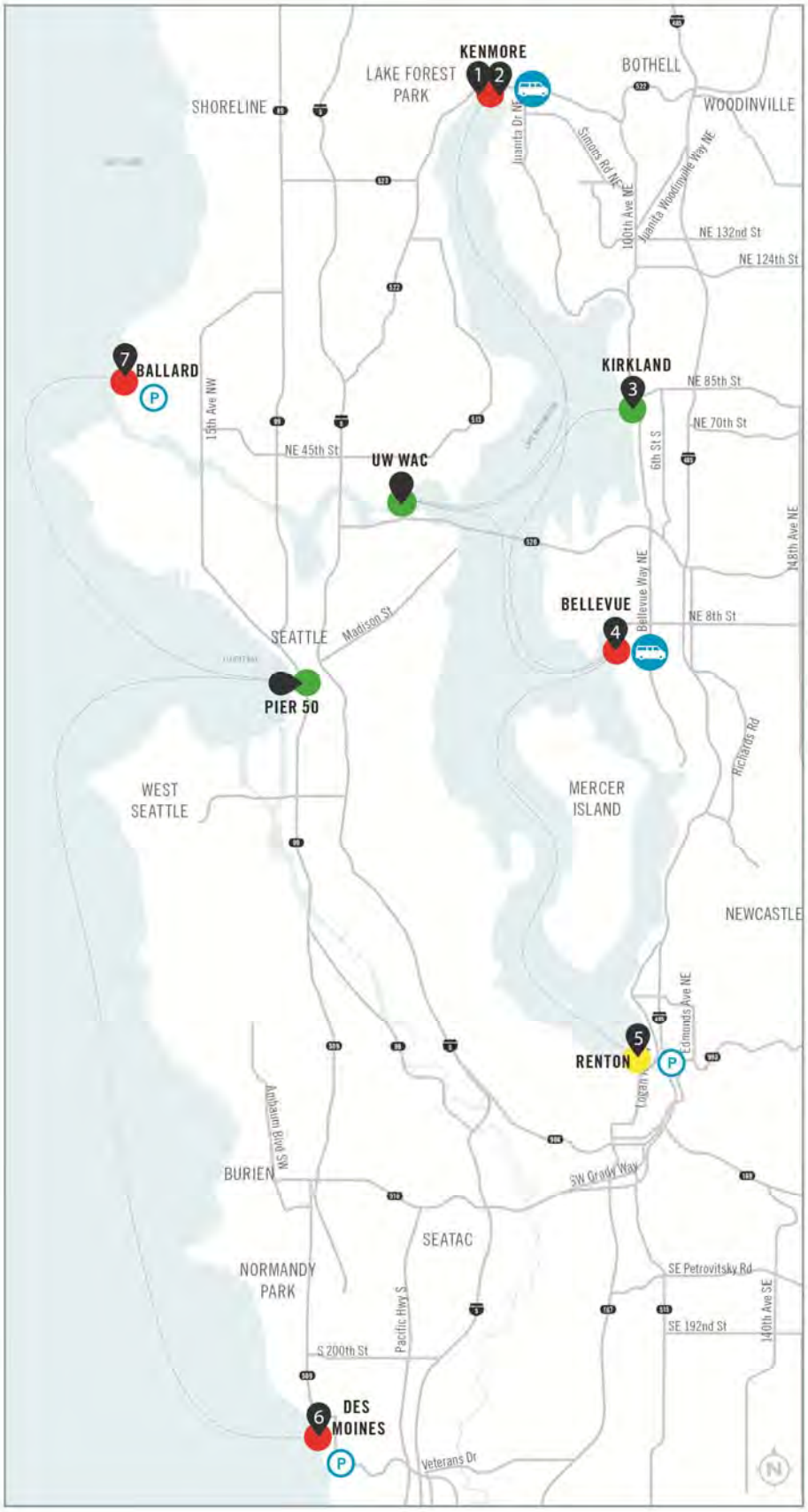
Table 1 below and Figure 6, on the following page, identify the seven routes that met the route time competitiveness criteria.

Table 1: Route Time Competitiveness Factors and Evaluation

Route	KCWT/Transit RT Time Differential (min)	Transit/Pedestrian Connections	Parking Availability & Shuttle Requirements
Kenmore (Log Boom Park) to UW WAC	26 min	• Good connections at UW WAC • Moderate connections at Kenmore	Shuttle Required at Kenmore
Kenmore (Log Boom Park) to Bellevue	16 min	• Poor connections at Kenmore • Poor connections at Bellevue	Shuttle Required at both Kenmore and Bellevue
Kirkland (Marina) to UW WAC	21 min	• Good connections at Kirkland • Good connections at UW WAC	No Shuttle Required*
Bellevue to UW WAC	38 min	• Good connections at UW WAC • Poor connections at Bellevue	Shuttle Required at Bellevue
Renton to Bellevue	13 min	• Moderate connections at Renton • Poor connections at Bellevue	Shuttle Required at Bellevue
Des Moines to Downtown Seattle (Pier 50)	39 min	• Poor connections at Des Moines Marina • Good connections at Downtown Seattle (Pier 50)	Parking Assumed at Des Moines Marina
Ballard to Downtown Seattle (Pier 50)	29 min	• Poor connections at Ballard • Good connections at Downtown Seattle (Pier 50)	Parking Assumed at Ballard (Shilshole Bay Marina)

Note: the time differentials represented in the table above do not represent an even split among AM and PM commute periods. As with current and expected future traffic patterns, the evening commute experiences longer delays than the AM commute.
*While a shuttle for the Kirkland route was not identified as a requirement in the initial analysis, operational costs are included in the later analysis due to request by the City for a circulator shuttle service to alleviate existing and anticipated parking congestion in downtown Kirkland.

Figure 6: Summary of Findings for Routes for Further Analysis



LEGEND

- Potential Landing Sites
- Parking at Terminal Assumed
- Shuttle to Serve Terminal Assumed
- Good Pedestrian/transit Connections
- Moderate Pedestrian/transit Connections
- Poor Pedestrian/transit Connections

Routes	Round-trip Time Differential*
1 Kenmore** (Log Boom Park) to UW WAC	+26
2 Kenmore** (Log Boom Park) to Bellevue Marina	+16
3 Kirkland (Marina Park) to UW WAC	+21
4 Bellevue (Marina) to UW WAC	+38
5 Renton to Bellevue (Marina)	+13
6 Des Moines (Marina) to Pier 50	+39
7 Ballard (Marina) to Pier 50	+29

* Total Round-trip Time Differential Between Water Taxi Route and Transit

** The Kenmore Lakepointe site shares very similar time differentials to that of Log Boom Park. However, the Lakepointe site includes the assumption of parking at the terminal and would not require a shuttle (and its associated costs).

Note: While a dedicated Shuttle was not assumed at UW WAC, there may be opportunities to partner with the UW to provide enhanced circulation and access to the Water Taxi Terminal

NET OPERATING COSTS

The next phase of the route evaluation was to project the net operating cost for each expansion route. Each route was measured at a start-up condition (2015) and a mature condition (2025).

In order to analyze the cost of operating an additional water taxi route, cost of operation and potential revenue were calculated. These operation and revenue figures were based on a new service scenario with an operating profile like the existing Vashon Island Water Taxi service. The focus is on providing commute service during the morning and evening commute periods on weekdays only. The potential service would provide three morning peak round-trips and three evening peak round-trips. The recommended routes would operate at a cruising speed of 35 knots.

Operating Costs

Operating costs were calculated for a route start-up condition using 2014 Marine Division actual costs, as well as a mature condition, which used standard County escalation factors for the 10-year planning horizon. The King County Marine Division has validated all costs. Refinements in the projected operating costs have been captured in this final report and present a negligible change as presented in the interim report.

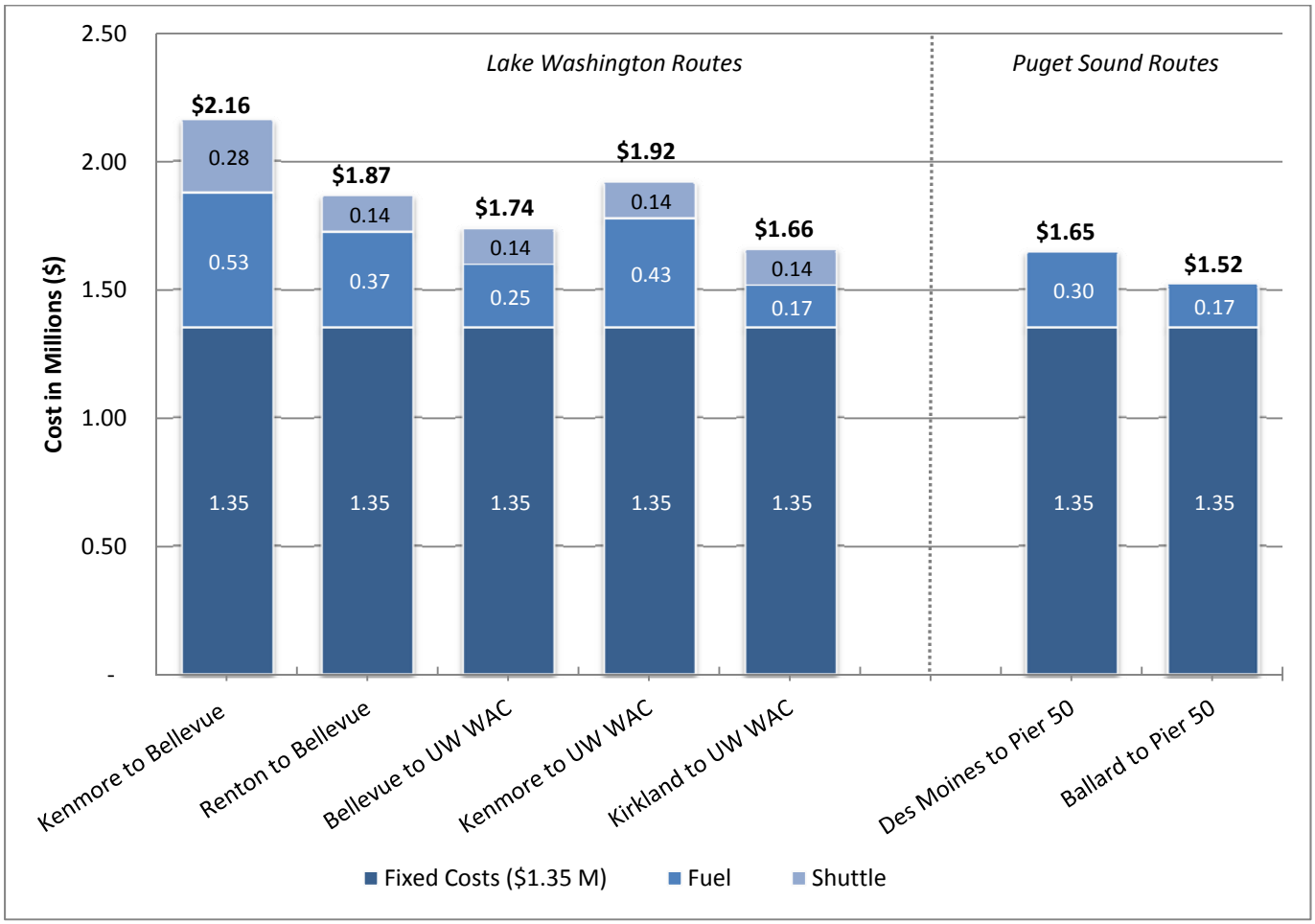
Operating expenses include route-specific costs, such as crew labor, fuel, and shuttle costs, as well as a portion of the division's shared costs, which include maintenance, shoreside and terminal costs, management and support and county central rate costs. The operating costs do not include vessel lease costs for a new route because it is unknown whether a vessel would be leased or purchased to meet the needs of the route. Vessel infrastructure is captured in capital costs. This is further explained in the Implementation Requirements section under Vessel Requirements.

The cost estimates for a new route use the existing Vashon route as a model for maintenance and labor costs due to its being a year-round commuter service. Fuel costs are calculated based on specific route length and estimated fuel consumption rates and shuttle costs are estimated based on existing shuttle service in West Seattle. The shared costs are apportioned based on the operating hours of each route.

It is assumed that adding a third route to the system would not increase the management and administrative shared costs. This assumption would need to be validated once a route was determined and the specific needs of the route were identified. Any expansion of more than one route over current operations would require the addition of maintenance and administrative shared costs.

Each new proposed route shares a similar operating cost, with the exception of fuel and shuttle costs, which vary by route. The operating costs for each potential route are shown in Figure 7. This figure illustrates the differences in the variable costs of fuel and shuttle along with the fixed costs associated with a new route, which includes all shared expenses and the crew labor.

Figure 7: Projected 2015 Operating Costs per Route



Note: Fixed costs outlined above include: labor, maintenance and management/administrative costs.

Revenue

Start-up service year (2015) route revenue was calculated by multiplying the current Vashon ORCA fare by projected ridership. A fare realization factor of 86% was applied to the calculated route revenue to account for the actual apportioned revenues received, reduced fares and non-paying customers. The 2025 revenues were determined by multiplying projected ridership by the 2025 fares (which were escalated from 2015 using existing fare policy guidelines). The fare realization factor was also applied to the 2025 calculated fare revenue.

Assumed one-way fares for new routes included: $4.75 for the start-up condition (the 2014/2015 ORCA fare for the Vashon route), as well as a projected ORCA fare of $7.25 (assuming current policy of a $0.50 increase every other year) for route maturity in 2025.

Ridership demand was calculated by reviewing commute characteristics of populations within the vicinity of the potential water taxi landing sites. Along with population information, ridership forecasts were developed by reviewing existing and future planned public transit options, route time competitiveness, travel demand models from PSRC, and past West Seattle Water Taxi commute ridership[9] growth patterns. Physical barriers to access the terminals were also considered, including traffic congestion, parking availability and accessibility for pedestrians and cyclists. The

[9] West Seattle winter, commute-only service was used as a baseline for ridership projections due to the geographic similarities of potential service expansion routes, with alternative modes of transportation competing for commuter ridership. The Vashon route, while similar in service schedule, requires ferry travel to get on/off the island and therefore, is not as representative as West Seattle.

ridership demand model assumed a higher capture rate, or ridership growth in its first 10 years of service, with capture rates leveling off in the 2025 mature service condition. This was based on the experience in West Seattle, where ridership has grown over the years as people change their mode of travel due to service reliability, awareness and satisfaction.

Ridership demand for potential new routes was fairly consistent across the board for 2015 ridership. It is in the growth, or lack thereof, from 2015 to 2025 that sets some routes apart. This is mostly due to the transit improvements and enhanced options commuters have with light rail coming to Des Moines and Bellevue. Additionally, the access barriers in the Bellevue location, such as steep grades, distance from the employment center and disconnection from other transit modes hinder strong ridership growth, especially when there are more accessible commuter options. Table 2 below illustrates one-way trips by route in a start-up condition (2015) and in a mature service condition (2025).

Table 2: Projected Ridership in 2015 and 2025

Route	2015 Annual Ridership	2025 Annual Ridership
Kenmore to UW WAC	57,148	119,210
Kirkland to UW WAC	56,666	115,625
Ballard to Downtown Seattle (Pier 50)	59,433	107,175
Bellevue to UW WAC	45,579	72,357
Des Moines to Downtown Seattle (Pier 50)	42,473	61,998
Renton to Bellevue	27,433	56,986
Kenmore to Bellevue	17,640	31,347

Farebox Recovery Calculation

Farebox recovery is the percentage of operating expenses that are covered by passenger fares. It is calculated by dividing total fare revenue by total operating expenses. Those operating costs not covered by farebox revenues must be subsidized with tax revenues.

Projected route revenues and operating costs were used to calculate farebox recovery for each route individually and were then aggregated with KCWT existing routes to obtain a system-wide farebox recovery rate.

When the data was compiled, natural breaks were apparent in the 2015 farebox recovery rates resulting in two routes with farebox recovery rates lower than 10 percent. Those routes were eliminated from further analysis (Kenmore and Renton to Bellevue). For the mature service condition (2025), the farebox recovery rate target of 25 percent is projected to be achieved by three of the routes remaining from the initial screening processes. It is these three routes that are proposed for further consideration.

As part of the analysis, system-wide farebox recovery was also calculated to include a three-route system. This would include the existing West Seattle and Vashon Island routes along with one new route. Using this calculation all routes met or exceeded a system-wide farebox recovery of 25 percent upon route maturity in 2025. The complete ridership analysis and backup data for operational costs and farebox recovery can be found in Appendix C.

Figure 8 on the following page illustrates the farebox recovery calculation by route at start-up (2015) and route maturity (2025).

FINDINGS/ROUTES CONSIDERED FOR FURTHER EVALUATION

Based on the methodology outlined above, three routes met the evaluation criteria of route time competitiveness and farebox recovery. The difference between the three routes that met the criteria and the four routes that did not is significant, as illustrated in Figure 8 on the following page.

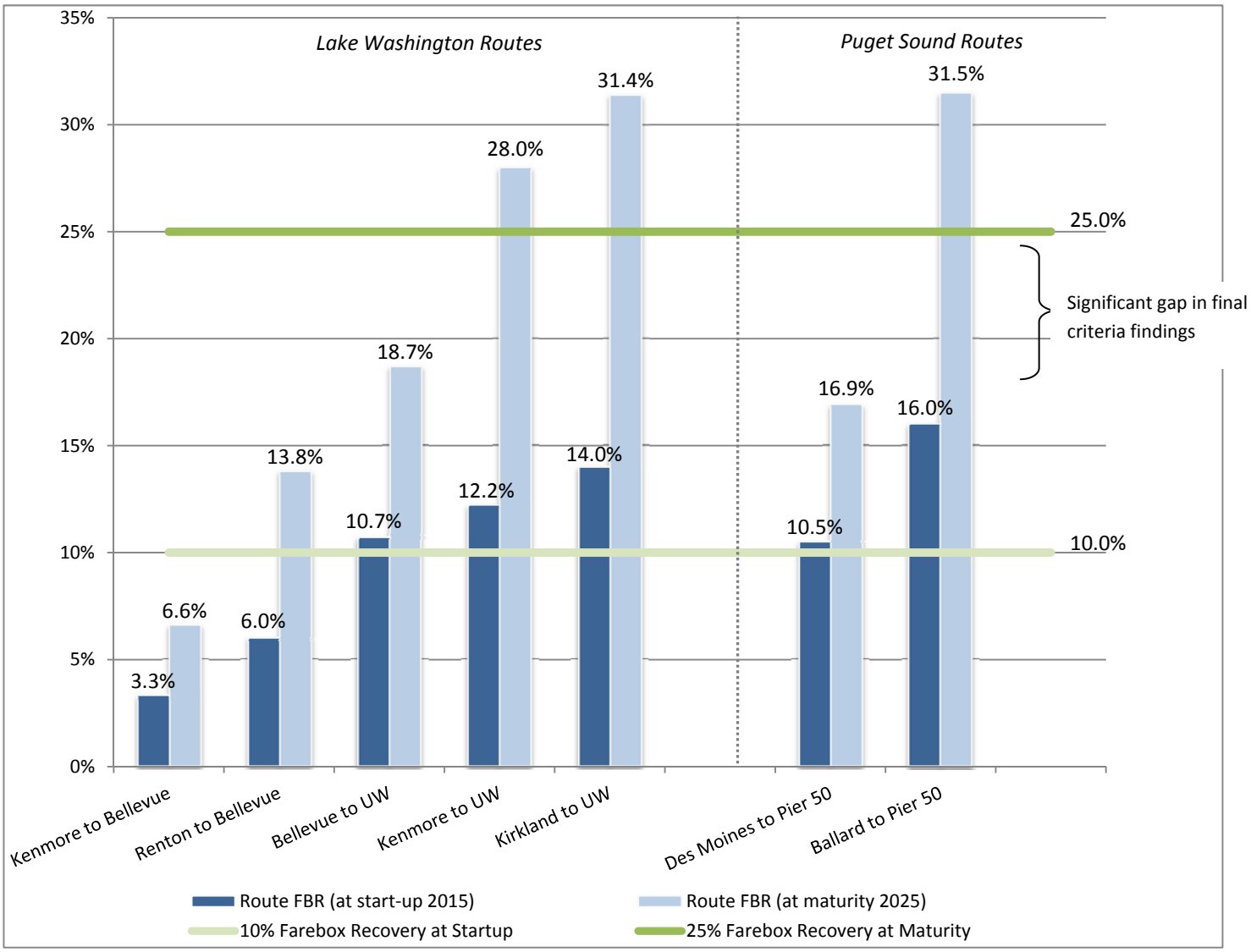
Lake Washington Routes:

- Kenmore (Log Boom Park) to UW WAC
- Kirkland (Marina Park) to UW WAC

Puget Sound Route:

- Ballard (Shilshole Marina) to Downtown Seattle (Pier 50)

Figure 8: Farebox Recovery Projections by Route



IMPLEMENTATION REQUIREMENTS

FOCUS: Assess facilities and capital costs.

Passenger-only ferries have specific terminal and vessel requirements with desired characteristics. It is important for passengers to easily find the queuing areas and to safely load and unload the vessels. Based on ridership projections, a 150-passenger vessel (or less) is recommended for each route. Each terminal location for the final recommended proposed routes would require infrastructure improvements with varying capital costs.

PASSENGER-ONLY PROGRAMMING REQUIREMENTS

Typical programming requirements for water taxi service include:

- Vessels with appropriate speed and adequate capacity for passengers and bicycles
- In-water elements for mooring vessels with an adequate float and gangway to safely load and unload passengers, utilities for maintenance, and securing the vessel
- Upland improvements: signage and wayfinding measures to direct passengers, sufficient lighting, ADA accessible pathways, covered waiting areas, utility connections, and ticket vending machines

Figure 9 below illustrates the operations at the existing Water Taxi terminal hub in Seattle, serving the West Seattle and Vashon routes.

Figure 9: KCWT Downtown Seattle (Pier 50) Operations

Source: King County Marine Division

INFRASTRUCTURE IMPROVEMENTS PROPOSED

All proposed terminal locations, with the exception of Downtown Seattle (Pier 50), an existing Water Taxi terminal, would require in or over-water and upland improvements to begin service. The Ballard location has sufficient in-water infrastructure and would only require minor improvements including fenders, fixed ramps, transfer spans, and cleats to begin service. Kenmore and Kirkland have existing in-water infrastructure, but would require a structural inspection to determine the condition of the in-water infrastructure prior to implementation. UW WAC, would need a new float, gangway, and uplands improvements.

Upland improvements at all locations would include signage and wayfinding, ticket vending machines, improved lighting, utility connections and security elements. UW WAC would require improvements to the walkway and the addition of a shelter. Shelters at the other terminal locations would have to be discussed with the local agency and are not seen as a requirement for service. Figures 10 through 13 provide an aerial overview of each terminal location along with the recommended infrastructure improvements for each site.

Permitting would be required for each terminal location. The UW WAC is currently the only known location in need of in-water work. Kirkland and/or Kenmore could require in-water work depending on the results of the underwater inspection. The permitting effort required for terminal improvements includes federal, state and local construction permitting.

Figure 10: UW WAC Proposed Infrastructure Improvements

- In-water work required: New float, gangway, piles, fenders, cleats, fixed ramp and transfer span
- Upland work: ADA walkway, shelter, signage/wayfinding, ticket vending machines, lighting, security elements (including cameras)

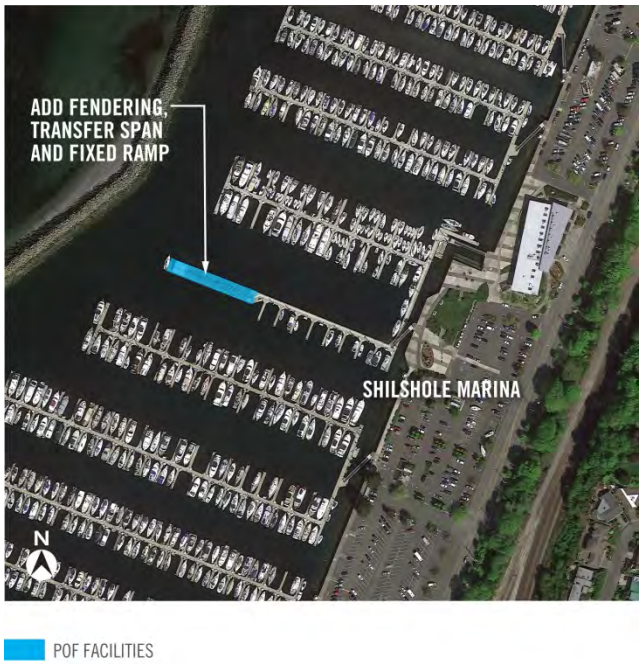
Figure 11: Kirkland Proposed Infrastructure Improvements

- In-water work required: Fenders, fixed ramp and transfer span
- Upland work: Signage/wayfinding, ticket vending machines, security elements (including cameras), and utility connections

Figure 12: Kenmore Proposed Infrastructure Improvements

- In-water work required: Fenders, cleats, fixed ramp and transfer span
- Upland work: Signage/wayfinding, ticket vending machines, lighting, security elements (including cameras), and utility connections

Figure 13: Ballard Proposed Infrastructure Improvements



- In-water work required: Fenders, fixed ramp and transfer span
- Upland work: Signage/wayfinding, ticket vending machines, security elements (including cameras), and utility connections

VESSEL REQUIREMENTS

Based on the ridership projections, a 150-passenger vessel (or less) that can sustain 35-knot cruising speeds is recommended. KCMD could lease a 150-passenger vessel or purchase a new or used vessel. It is likely a new vessel would be required due to the service speed requirements and the unavailability of such a vessel on the rental or used market.

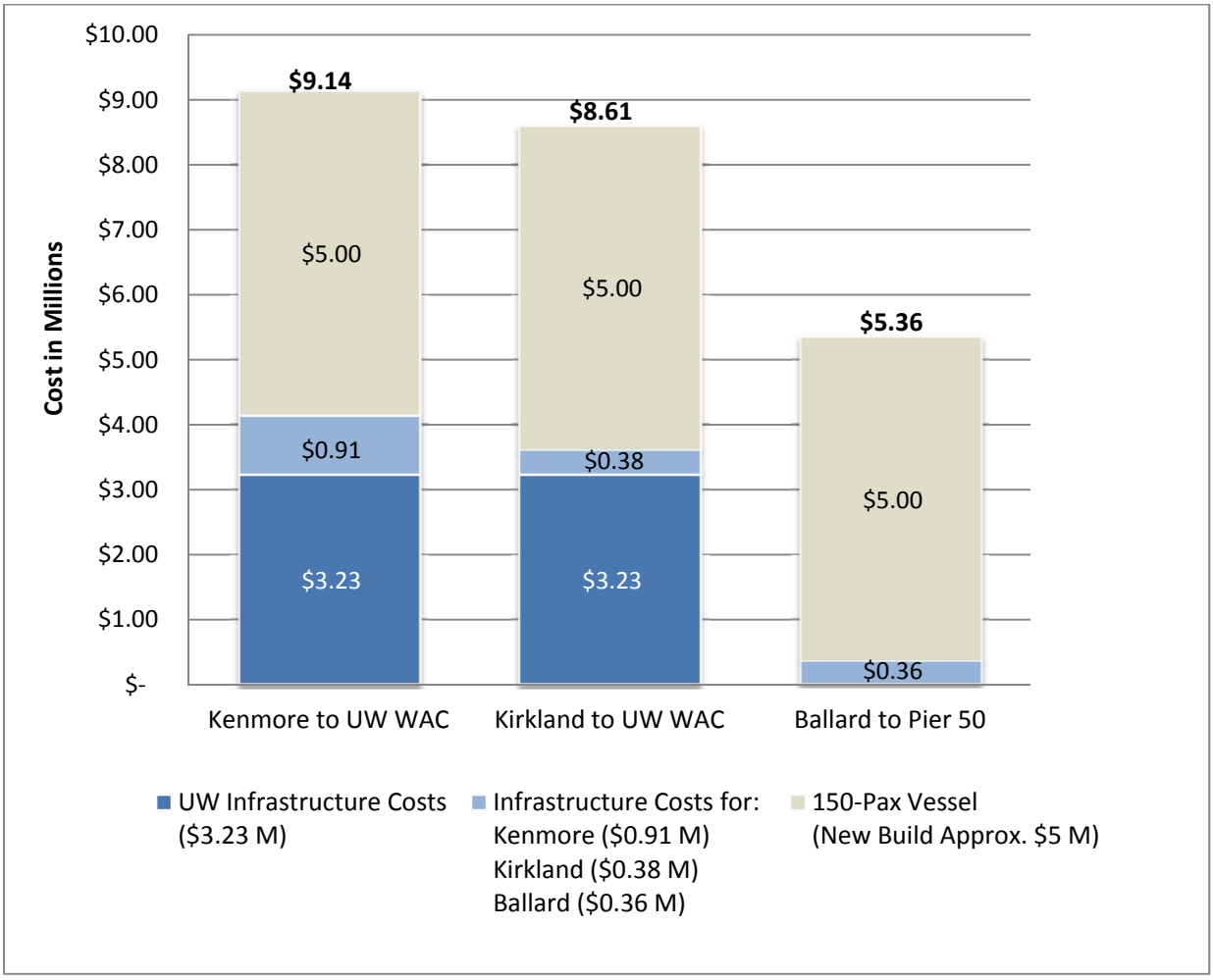
ESTIMATED CAPITAL COSTS

Capital cost estimates were based on high-level infrastructure requirements and would be refined further in a next steps design effort. With only minor improvements needed, the Ballard to Downtown Seattle (Pier 50) route would be the least expensive to implement, while the Kirkland to UW WAC and Kenmore to UW WAC have a fairly similar capital cost due to the extensive improvements needed at the UW WAC shared by both routes.

While there are options for vessel acquisition, such as lease, purchase used or commission new, it is anticipated a new design/build vessel would be required. However, if there is an existing vessel on the market that meets the route profile criteria, it could be leased at an expected 2015 annual cost of approximately $420,000. Existing KCMD back-up assets, such as the Spirit of Kingston do not meet the operating requirements for these proposed routes. Costs to purchase a vessel vary based on purchasing a new or used vessel, and the condition of the vessel. For this body of work, the higher cost is assumed, which includes commissioning the building of a new vessel at an estimated $5 million. This vessel acquisition cost is assumed in estimated capital costs for each route.

Figure 14 below indicates the total capital costs for each route.

Figure 14: Estimated Start-up Capital Costs for Water Taxi Improvements



Note: The Ballard to Downtown Seattle (Pier 50) costs do not include improvements to UW WAC, as this terminal is not part of the proposed route.

MAINTENANCE, TIE-UP AND FUELING ASSUMPTIONS

KCMD currently performs daily maintenance activities at their maintenance barge located at Pier 48 in Downtown Seattle. This facility could be utilized for daily maintenance activities required for the Ballard to Downtown Seattle (Pier 50) route. For the Lake Washington routes, a daily maintenance and tie-up strategy would need to be developed. For all routes, intermediate maintenance, that may take several days or longer, can be achieved at the KCMD maintenance barge, while heavy maintenance could be performed through existing King County contracts with local shipyards.

Fueling is available at multiple locations on Lake Washington and Lake Union to serve the Water Taxi's proposed lake routes. For the Ballard route, fueling could occur at Harbor Island, where the current Water Taxi fleet fuel.

IMPLEMENTATION SCHEDULE

Assuming city/community and agency partnership, each terminal location would require environmental permitting, design, and construction of the improvements prior to beginning a new water taxi service. Environmental permitting would be required at each terminal location. The Ballard to Downtown Seattle (Pier 50) route would require the shortest time to begin service with minor infrastructure improvements required at the Shilshole Marina terminal. The Kenmore to UW WAC and Kirkland to UW WAC routes would require the most extensive permitting, design and construction effort due to the requirement of new in-water infrastructure, including a new float, gangway, and uplands improvements at UW WAC terminal.

The full analysis on capital costs and infrastructure recommendations can be found in Appendix D. POF programming needs can be found in Appendix A.

AGENCY/JURISDICTION OUTREACH

FOCUS: Assess community interest and readiness.

EXTERNAL COMMUNICATION TO DATE

Coordination with agencies/jurisdictions has occurred throughout the project. At project commencement, interest and information was sought from waterfront cities/communities on Lake Washington, as well as City of Seattle, Port of Seattle and City of Des Moines for the potential routes on the Puget Sound. In the data gathering phase of the project, site visits were made to each terminal location identified for analysis.

Throughout the remainder of the project, meetings and telephone conversations occurred to inform the agencies/jurisdictions of the study and to better understand the questions or concerns that surround having water taxi service in their community.

Table 3 on the following page outlines known key agency issues regarding future water taxi service in the three routes identified in this analysis. A complete log of agency coordination to date can be found in Appendix E. A formal letter of support has been provided by the City of Kenmore and Expedia, who is moving their company campus to the Seattle waterfront along the Ballard to Pier 50 proposed water taxi route.

In coordination with the transmittal of the interim report to the King County Council, all communities and agencies initially reached and those whom have been communicated with throughout the project have been updated on the interim report findings with community specific information and explanations for routes which did not make it through the analysis.

In coordination with the transmittal of the final report to the King County Council, the communities and agencies will be sent a copy of the final report.

Table 3: Agency Coordination Key Issues Matrix

Agency/Jurisdiction	Key Issues/Comments Identified
City of Kenmore (Kenmore to UW WAC)	• Pedestrian connectivity • Sees as great benefit to the community • Supportive of land use policies • Access to Log Boom Park terminal is currently being upgraded
City of Kirkland (Kirkland to UW WAC)	• Increase in roadway congestion in downtown Kirkland and parking availability • Sees as benefit to a growing downtown core • Access to POF terminal • Supportive of land use policies
University of Washington (Kenmore to UW WAC) (Kirkland to UW WAC)	• Potential conflict with UW rowing program practice schedule • Coordination with the University's landscape architect • Pedestrian connections from POF terminal to Light Rail Station and UW Medical Center • Coordinate operations with the WAC • Expressed interest in expanded game day service • Look at potential connections to University of Washington, Bothell Campus • Increase in UPass cost for higher priced service mode choice • Public outreach
Port of Seattle (Ballard to Pier 50)	• Conflicts with seasonal marina traffic • Parking to be managed • Potential positive synergistic relationship by offering service/opportunities for their customers and businesses on-site
City of Seattle (Ballard to Pier 50)	• Transit access to POF terminal in Shilshole • Parking availability • Increase roadway traffic volumes

INTERNAL COORDINATION

Due to the fact the KCMD and Metro Transit are both located within the King County Department of Transportation there are opportunities to create connections between bus and POF service for our customers. Metro is currently in the process of updating their long-range plan and this document will provide input into future coordination efforts for how each can support each other by way of scheduling and service.

EQUITY AND SOCIAL JUSTICE CONSIDERATIONS

"King County's Equity and Social Justice work is grounded in our 2010 'fair and just' ordinance, which requires us to intentionally consider equity and integrate it into our decisions and policies, our county practices and our engagement with communities. The ordinance also lays out definitions, structure and systems of accountability."[10]

The Marine Division is committed to equity and the application of Equity and Social Justice (ESJ) principles in the operation and management of passenger-only ferry service. In 2015, the Marine Division, in collaboration with King County Metro introduced low-income fares on its existing routes through the ORCA Lift program. As the division delivers new water taxi vessels, much thought and work has gone into their design and construction incorporating accessibility features. This study provides an opportunity to integrate ESJ in the consideration and selection of new water taxi service expansion options.

[10]From the King County Equity and Social Justice Annual Report – November 2014

The report utilized a three-step evaluation process in considering water taxi service expansion options. Potential routes were identified for consideration and route time competitiveness with other public transportation options was calculated. This work was followed by the calculation of revenue potential, through ridership analysis, and operating costs. This process identified farebox recovery yielding three potential routes for further consideration – each with significantly higher ratings than the other routes considered.

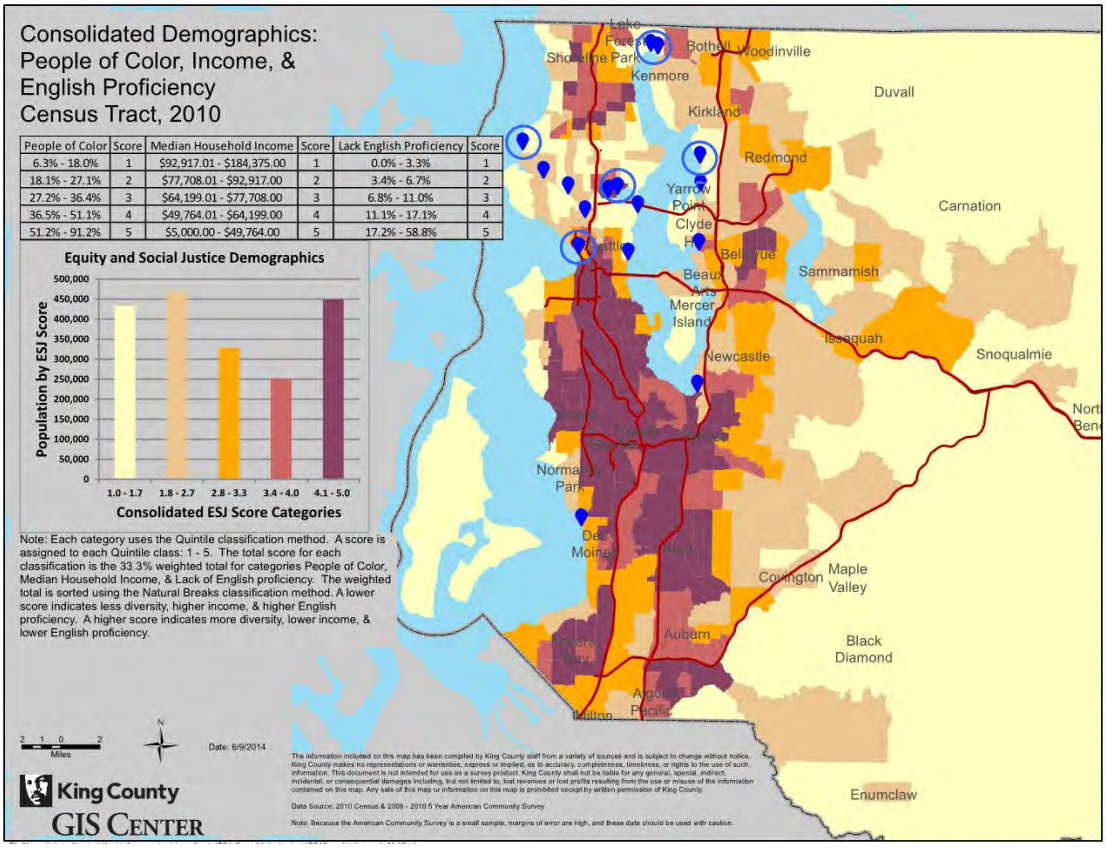
Using the concepts and metrics from the 2015 Determinants of Equity Report, a consolidated measure combining median household income, English proficiency, the incident rate of people of color was overlaid on a map showing possible shore-side (terminal) locations for routes considered (refer to Figure 15). Using this map, densities of ESJ populations within the water taxi ridership capture area are readily apparent. The terminals first considered in route competitiveness analysis are identified with blue place markers; those terminal locations of routes recommended for further study are identified with a blue circle.

High ESJ densities are found around the identified commuter departure terminals and their associated capture areas of Renton and Des Moines. Under the first step of evaluation, five route combinations were analyzed from Renton and one from Des Moines. One of the routes from Renton and the route from Des Moines met the evaluation criteria of time competitiveness. These moved on to the next step in the analysis, which included ridership demand and cost analysis. These two routes are part of the thirty-six routes originally identified and also a portion of the seven routes carried for further evaluation.

As detailed in the report, the time competitive routes from Renton and Des Moines were then eliminated in the last step in the evaluation process due to the low ridership demand forecasted, which had a direct impact on the net cost of operation evaluation criteria.

The study shows that ESJ communities in proximity to routes included in this study currently have and will have (after implementation of Link light rail service expansion) better transit alternatives available (on a service and cost basis) than the routes and service assumptions identified for future water taxi service. Fare rates are another consideration. The Metro low income fare of $1.50 compares favorably to the KCWT low income fare of $3.75 (for Vashon route).

Figure 15: Relationship of Route Locations Considered and Consolidated Equity and Social Justice Scores by Census Tracts



Source: King County Office of Performance, Strategy & Budget

NEXT STEPS

This final report is intended to provide the foundation for the next steps in identifying long-term expansion route opportunities. The next steps for the concept of expansion of the KCMD Water taxi service include:

- Review, input and action on this report by the King County Council, anticipated in the spring of 2016.
- Consideration by the King County Executive and the King County Council on if the expansion of the existing KCWT service should occur and if so which potential expansion route(s) to move forward for additional analysis and consideration.
    - Additional analysis and consideration would entail: planning, environmental analysis, coordination with local agencies, design work, lease arrangements, identifying and pursuing grant funding and development of an implementation plan.

Appendix A

King County Water Taxi

TASK 1: BASELINE STUDY AND ROUTE IDENTIFICATION

Final Report on Ferry Expansion Options for Marine Division

PREPARED FOR KING COUNTY MARINE DIVISION
BY KPFF CONSULTING ENGINEERS
OCTOBER 30, 2015

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Attachments

Attachment A: King County Transportation Project Map
Attachment B: King County Transportation Project Schedules

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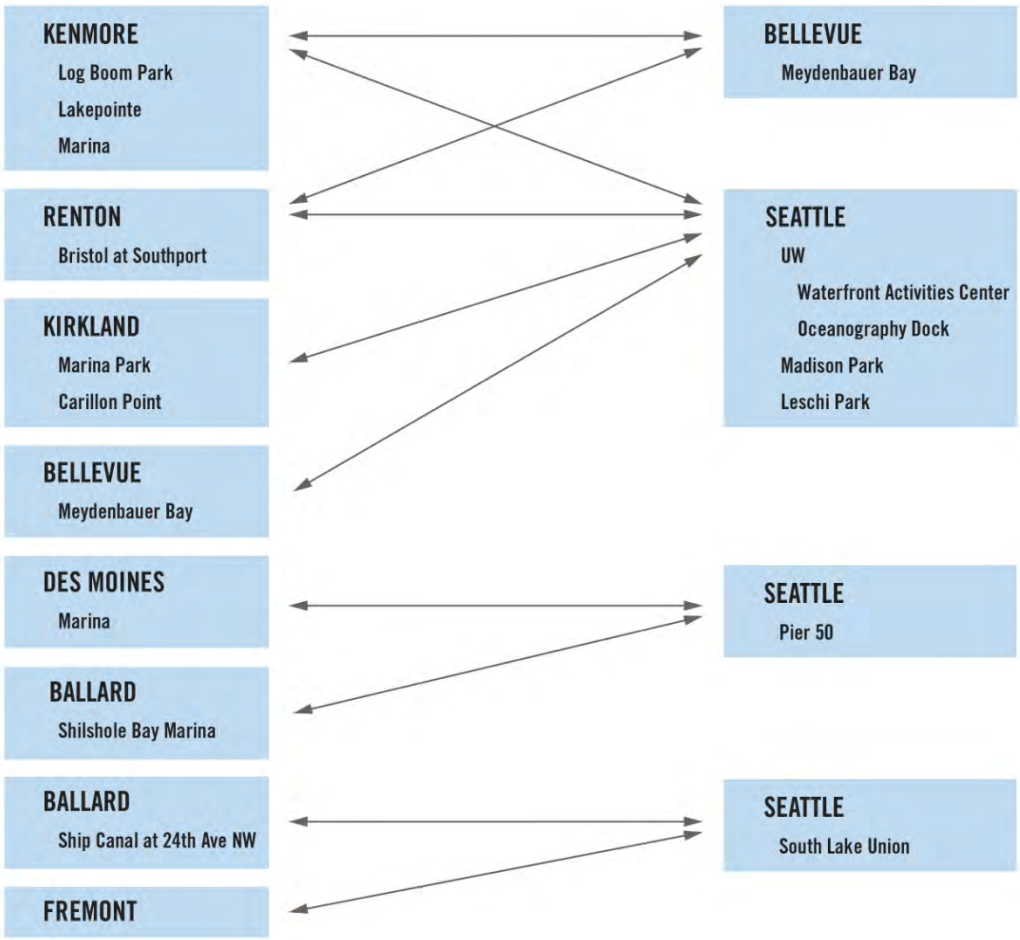
1. Introduction

The goals of this report are to identify routes for review in the Ferry Expansion Options Report for the King County Marine Division, develop a transportation project baseline within King County through review of transportation projects occurring within a10-year planning horizon, and outline the typical passenger-only ferry programming requirements.

2. Terminal Locations Considered for Review

Potential terminal locations were identified by the project team based on the previous Demonstration Route project report. The project team reached out to those communities identified as well as other known interested parties to seek additional input and to add or replace any locations based on the information provided. Figure 1 identifies the potential terminal locations and route combinations considered.

Figure 1: Initial King County Water Taxi Routes Considered



3. Transportation Baseline Study

The purpose of this memo is to identify current, planned (funded) and potential (planned and not yet funded) transit service expansions, and infrastructure improvements which make up the planned transportation network in King County. Outlining and mapping the existing and planned regional transportation network will aid in the future effort to identify potential KCWT service expansion opportunities and challenges.

Regional growth projections are forecasting a 42% increase in population in King County by 2040,[1] which will increase traffic congestion and pressure on our public transit systems. Transit agencies with service within King County are actively working to increase passenger capacity of public transit.

The King County Water Taxi (KCWT) is just one mode of transit offered in our region, with current service from West Seattle and Vashon Island to downtown Seattle. KCWT plays a vital role in the region's transportation network by improving multi-modal connections, relieving capacity pressures from other modes and, in some cases, providing a more direct route. The KCWT could provide further capacity through the expansion of the passenger-only ferry (POF) service where feasible.

The major transportation agencies in the region include King County (Metro and the Marine Division), Sound Transit, Washington State Department of Transportation (WSDOT), and Seattle Department of Transportation (SDOT). Additionally, the Puget Sound Regional Council (PSRC) is a metropolitan planning organization that conducts research to inform policy decisions and provides guidance and leadership as it relates to regional growth and management strategies to local agencies.

In 2009, the PSRC prepared a Vision 2040 report that established long-range planning goals for the Puget Sound region. Vision 2040 reviews growth patterns and sets guidelines for communities in Puget Sound to encourage sustainable development. Additionally, the report establishes regional growth centers and sets targets for growth capacity within these areas that include Metropolitan Cities, Core Cities, and Larger Cities.[2] The following cities are located within the KCWT potential service area and are targeted to accommodate the stated growth in population and employment:

- Metropolitan Cities: Seattle and Bellevue – 32% of the population growth and 42% of employment growth.
- Core Cities: Kirkland and Renton – 22% of the population growth and 29% of employment growth.
- Larger Cities: Kenmore and Des Moines – 14% of population growth and 12% of employment growth.

In conjunction with Vision 2040, PSRC developed Transportation 2040 that provides a framework for long-range planning in the region and includes methods of integrating POF service and as a regional transportation action.[3,4] Transportation 2040 established goals and guidelines to develop stronger intermodal connections and increase high capacity transit (transit systems carrying high volumes of people) within areas designated as Metropolitan Cities and Core Cities.

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[1] *Vision 2040,* PSRC, December 2009, 19.

[2] *Vision 2040,* PSRC, December 2009, 20-22.

[3] *Vision 2040,* PSRC, December 2009, 87.

[4] *Transportation 2010,* PSRC, May 2010, 80-82.

Through PSRC establishing regional growth areas and subsequent growth strategies, transit agencies can use this information to guide long range transportation planning efforts. The following includes a list of the major transit agencies and the status of their long range planning efforts:

- PSRC will be engaging in an effort to update the Transportation 2040 document that will focus on increasing transit connections and include POF service. The report is anticipated for completion in 2018.
- King County Metro recently began the process of updating their long range plan with a 25 year planning horizon that is due for completion in December 2016.
- Sound Transit updated their long range plan in December 2014 that shapes the Sound Transit Ballot Measure 3 (ST3) that, if approved, secures funding for transportation projects. ST3 is anticipated to be considered by voters in November 2016.
- In 2012, SDOT prepared a Transit Master Plan providing a framework for long-range transportation planning through 2030. SDOT will be updating their Transportation Strategic Plan in coordination with the Comprehensive Plan update prepared by Seattle Department of Planning and Development in 2015 that includes a Transportation component.
- WSDOT transportation planning focuses on reducing congestion on state highways. In 2006, WSDOT prepared the Washington Transportation Plan 2007-2026 that focused on the budget challenges and statewide transportation goals. Each transportation project and program is individually evaluated. These projects have a direct effect on transportation patterns for King County.

Three agencies, King County Metro, Sound Transit, and SDOT have an integrated relationship for projects associated with each mode of transportation including bus, streetcar, and light-rail within the City of Seattle. While all agencies contribute to funding of transit projects, SDOT and King County typically own the respective transit system, Sound Transit constructs the project, and King County Metro is contracted to operate and maintain the system.[5] However, Sound Transit maintains the Link light rail. Based on the integrated relationship of these three agencies, long-range planning requires close collaboration throughout the planning process.

King County Marine Division who operates the KCWT plays an important role to increasing public transit capacity in King County. To determine where a new KCWT route might be viable, many factors must be considered including capacity of existing transit options and road systems, projected population growth, and accessibility to other forms of transit. Reviewing the long range planning documents and identifying planned projects of other transit agencies provides the information necessary for initial review of potential new routes. Viability of a new KCWT route is dependent on the capability of a KCWT to provide more direct service where other transit options might be lacking. Figure 1 provides a list of potential viable routes under review.

The following section summarizes the planning process, current, planned and potential projects, and projects under construction for each transit agency within King County. This information is graphically represented in Attachment A that includes a transportation planning map indicating key transportation projects along with the potential KCWT routes considered within King County. Attachment B includes a schedule for each transportation agency's planning documents and major transit improvement projects.

[5] *Regional Transit Task Force Final Report and Recommendations,* King County Metro, October 2010, 3.

FINDINGS

King County Metro (bus, including RapidRide)

King County owns and operates regular fixed-bus service, including Bus Rapid Transit (RapidRide), a variety of vanpool and rideshare services, paratransit services, and many park and rides around the region. Additionally, through agreements with other transit agencies, King County Metro operates the Sound Transit Regional Express bus service, Link light rail, and SDOT's South Lake Union Streetcar.[6] In collaboration with Sound Transit, King County Metro is in the process of updating their Long Range Plan to develop a vision and to set targets for the King County transportation systems over the next 25 years.

In 2014, Metro updated the Strategic Plan and Service Guidelines that prioritizes investments for transit projects. The Strategic Plan and Service Guidelines establish goals, identify areas of increased efficiency, provide performance measures, and set service level targets for Metro service. Along with increasing efficiency on regular bus routes, the Strategic Plan and Service Guidelines also recommend focusing investments and improvements on RapidRide corridors that have the highest potential for ridership and can accommodate high bus volumes. There are currently six RapidRide corridors within King County that served over 10 million riders in 2013.[7]

King County Metro and Sound Transit operate 130 park-and-rides within King County with capacity for over 25,000 vehicles.[8] These facilities provide access to transit and improve transportation connections. Many of the park-and-ride facilities are at capacity and the PSRC 2030 Update recommended increasing capacity to approximately 69,290 stalls to meet projected demand in 2030.[9]

Sound Transit (Link light rail, express bus service, commuter rail)

As a regional transit authority, Sound Transit provides multiple high capacity transit (HCT) services in Puget Sound including the Link light-rail system, high capacity bus rapid transit (BRT) and commuter rail. Sound Transit completed the update to their long-range plan in 2014 which establishes a basis for upcoming ballot measures. The Sound Transit Board approved the Updated Long-Range Plan in December 2014 and gave direction to prepare for the development of the ST3 to secure funding for project development.

Currently, the Board is reviewing projects included in the Updated Long-Range Plan to determine which projects will be included in the ST3. Projects included in ST3 will be identified through public outreach and additional review during 2015 and 2016 to be included on the November 2016 ballot.

Projects Planned/Funded or Under Construction (letter references in parenthesis correspond to routes identified in the Transportation Project Map in Attachment A):

- University Link Extension: Connecting light rail from Downtown Seattle to the University of Washington. The project is scheduled to begin operation in 2016. (A)
- East Link Extension: Extending light rail from Downtown Seattle across Lake Washington to Bellevue and Redmond. The project completion is projected for 2023. (B)

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[6] *King County 2013-2014 Transportation Budget,* King County F-136.

[7] *Key Data: 10-Year Summary,* King County Metro Transit, https://docs.google.com/spreadsheets/d/1Qyj31NiW1kc30GX9PCNrmnAn_EEmPn8WaUB_NMkYCQE/pubhtml

[8] *Transit Integration Report: Getting There Together,* Sound Transit and King County Metro, September 2014.

[9] *Destination 2030 Update,* PSRC, April 2007, iv.

- South 200th Link Extension: Extend light rail from SeaTac to South 200th Street, anticipated completion in 2016. (C)

- Federal Way Link Extension: Extend light rail from South 200th Street in SeaTac to Kent/Des Moines anticipated completion in 2023. (D)

- Northgate Link Extension and Lynnwood Extension: Extending light rail from the University District and Roosevelt to Northgate. Project completion is anticipated for 2021. Extending from Northgate to Lynnwood anticipated in 2023 (E)

Potential Projects Considered for ST3[10]*:*

- Light rail extension from Downtown to Ballard connecting to the University District (F)

- Light rail to Downtown Seattle to West Seattle/Burien (G)

- HCT from Burien to Lynnwood, likely BRT (H)

- HCT corridor (specifically BRT) from Downtown Seattle along Madison Street (I)

- HCT corridor (specifically BRT) from SR 522 to SR 520 via Totem Lake Urban Center and South Kirkland Park-and-Ride (J)

- HCT corridor (specifically BRT) along 145th Street from I-5 to SR 522, and HCT corridor from I-5 to SR 522 (K)

Seattle Department of Transportation

Seattle Department of Transportation (SDOT) works closely with King County Metro and Sound Transit to collaborate on transportation improvements in the City of Seattle through funding opportunities and integrating planning efforts. SDOT owns the Seattle Streetcar with routes along South Lake Union to downtown Seattle and First Hill to Pioneer Square. However, operations for service are contracted to King County Metro. The 2012 Transportation Master Plan outlines the department's involvement in transportation improvements including short-term and long term goals, funding opportunities, and performance measures for improvements. Key recommended improvements identified in the SDOT plan include:

Projects Planned/Funded or Under Construction:

- Madison Street BRT corridor from 23rd Avenue west to downtown Seattle terminating at Colman Dock. (M)

Potential Projects:

- HCT from South Lake Union to Roosevelt via the University District (N)

Washington State Department of Transportation (roadway improvements and tolling)

Washington State Department of Transportation (WSDOT) transportation projects are focused on state highways which play a major role in regional transportation and directly affect transit systems in King

[10] *Regional Transit Long-Range Plan Update Final Supplemental Environmental Impact Statement, Chapter 2 Alternatives Considered*, Sound Transit, November 2014, 2-24 and 2-25.

County. WSDOT has engaged in a number of projects to reduce congestion in the region. The PSRC Transportation Vision 2040 recommended moving toward a user-based funding approach which includes tolling. WSDOT implemented the first high occupancy toll (HOT) lane program on State Route (SR) 167 in 2008 as a pilot program and it currently remains. HOT lanes are dedicated lanes where vehicles are charged a dynamic toll rate that varies with congestion. Additionally, tolling began on all lanes of the SR 520 Bridge in December 2011.

Potential Projects (currently in the environmental review process):

- I-5 Express HOT Lane Tolling (O)
    - Currently in environmental review.

Projects Planned/Funded or Under Construction:

- SR 520 Bridge Replacement (P)
    - Currently a toll bridge.
    - New bridge includes a bike and HOV lane.
    - Final completion of the bridge is anticipated for 2017.
- I-90 Two-Way Transit and HOV Operations between Bellevue and Seattle (Q)
    - Adds two-lane center roadway for buses, carpools, and vanpools.
    - Construction to start early 2015.
    - Anticipated completion in mid-2017.
    - Project prepares the center roadway for the East Link light-rail extension.
- I-405 Widening and HOT lanes from Bellevue to Lynnwood (R)
    - Opened September 2015
    - Dual express toll lane system from Bellevue to Bothell/Woodinville.
    - Existing carpool lane from SR 522 to I-5 converted to express toll lane or HOT lane.
- Alaskan Way (SR 99) Viaduct Replacement Project (S)
    - Demolition of Alaskan Way Viaduct and construction of a tunnel.
    - Anticipated construction completion in 2018
    - Tolling to begin 2018.

CONCLUSIONS

There are multiple transportation projects and transportation planning efforts currently underway within King County, each with similar goals of easing congestion and improving mobility in the region. The projects identified in the transportation planning documents reviewed include the following:

- Modifications to existing road infrastructure:
    - Roadway widening for increased capacity or HOV/HTC dedicated lanes
    - Variable tolling
- New HCT service:
    - BRT and express bus service
    - Light rail extensions and connections

While these efforts have the capacity to enhance the transportation network, there are many connections that simply cannot be made due to the geography of the region. Transportation infrastructure is constrained by the natural features of the region, which include the water bodies of Puget Sound, Lake Washington and Lake Union. By adding POF service within these water bodies, communities can benefit from enhanced mode choice and connectivity.

Through review of the planning documents referenced in this memo, which have been graphically depicted on the Transportation Map in Attachment A, the following initial observations include:

General:

- Transportation projects are focused on improving connections from the east side of Lake Washington to Seattle as well as connecting cities along the I-405 corridor.
- Potential projects that do not currently have funding may not receive funding to be studied; or if funding is received, it is unlikely these projects would be operational within this 10-year planning horizon.

Initial observations for each potential KCWT terminal location are included in Table 1 that provides a matrix of potential upland opportunities and challenges for each site. This list is draft in nature and by no means represents a comprehensive comparison. This comparison represents observed opportunities and challenges as it relates to the transportation planning and infrastructure projects identified in this memo.

Table 1: Initial Opportunities and Challenges for each Potential Terminal Location

Terminal Location	Opportunities	Challenges
(1) Log Boom Park (Kenmore)	Terminal locations are served by HCT concentrated along SR 522 and a POF could be used as an alternative to utilizing SR 522.	
(2) Lakepointe (Kenmore)	Terminal locations are served by HCT concentrated along SR 522 and a POF could be used as an alternative to utilizing SR 522.	
(3) Marina Park (Kirkland)	Marina Park is adjacent to the downtown Kirkland commercial core that could be a recreational destination.	Kirkland terminal sites are already served by existing HCT and are in close proximity to additional HCT along I-405; therefore, it could be challenging for POF service to be viable. Additionally, existing high capacity parking areas near bus connections could make it difficult for the POF to be viable.
(4) Carillon Point (Kirkland)	Ample parking opportunities.	Kirkland terminal sites are already served by existing HCT and are in close proximity to additional HCT along I-405; therefore, it could be challenging for POF service to be viable. Additionally, existing high capacity parking areas near bus connections could make it difficult for the POF to be viable.
(5) Meydenbauer Bay (Bellevue)	Bellevue has many existing and planned transportation options connecting to the downtown Bellevue Transit Center; however, the Meydenbauer Beach Park is within one-mile of the downtown Bellevue core and POF service could provide recreational POF service to reach this destination.	Bellevue has many existing and planned transportation options connecting to the downtown Bellevue Transit Center which is just over a mile walking distance to the potential POF terminal.
(6) Bristol at Southport (Renton)	Renton is served by HCT that connects to Link light rail near SeaTac; however, a POF could be a more direct transportation option to downtown Seattle.	
(7) Leschi Public Float (Seattle)	There are no HCT connections planned for Leschi; however, a shuttle service could improve connections and a central location from east Lake Washington terminal locations to downtown Seattle.	There are no HCT connections planned for Leschi; therefore, connections to downtown Seattle could be difficult.
(8) Madison Street Dock (Seattle)	The long term plans do not include a HCT connection to Madison Park; however, interagency coordination efforts could improve this connection and allow Madison Park to become a multi-modal connection hub for POF and bus service.	The long term plans do not include a HCT connection to Madison Park that might make connections to downtown Seattle difficult.

Terminal Location	Opportunities	Challenges
(9) UW Waterfront Activities Center (Seattle)	The UW Waterfront Activities Center will be well connected to other modes of transportation and could serve as a transportation hub for POF connections.	
(10) Oceanography Dock (Seattle)	The Oceanography Dock will be well connected to other modes of transportation and could serve as a transportation hub for POF connections.	Walking route is indirect to the light rail station.
(11) South Lake Union (Seattle)		There are multiple transportation options in downtown Seattle that would reduce the viability of routes within Lake Union. Additionally, the speed restrictions make a water taxi a slower option.
(12) Fremont (Seattle – Exact Location undetermined)		There are multiple transportation options in downtown Seattle that would reduce the viability of routes within Lake Union. Additionally, the speed restrictions make a water taxi a slower option.
(13) Ship Canal at 24th Ave NW (Seattle)		There are multiple transportation options in downtown Seattle that would reduce the viability of routes within Lake Union.
(14) Shilshole Bay Marina (Seattle)	Ballard from Shilshole Bay is not planned to be served by other HCT modes and could be a viable mode of transportation with the lack of HCT connections.	
(15) Downtown Seattle (Pier 50)	In operation	In operation
(16) Des Moines Marina (Des Moines)		Because light rail will be located in close proximity to Des Moines, a POF may not be viable. Also, The City of Des Moines has voiced concern over POF parking at the marina.

4. Passenger Only Ferry Programming Elements

Passenger Only Ferry (POF) transportation is distinct, requiring carefully planned infrastructure and facilities to operate effectively and attract ridership. Programming criteria for the required infrastructure can be broken down into location elements, terminal facility elements, and vessel characteristics.

LOCATION ELEMENTS

Determining the appropriate location for new POF service requires thorough analysis of many factors including passenger and vessel accessibility to the terminal locations, travel time, and availability of existing infrastructure or constructing new terminal facilities that will attract passengers. Ultimately ridership will determine the viability of POF service, and planning terminal locations and facilities that will draw passengers is critical to a successful POF service.

Connectivity and Accessibility

When taking public transportation, most passengers prefer faster travel times and fewer transfers between transit modes to reach their destination. Therefore, it is advantageous for POF to offer direct service to employment hubs and/or an area with multiple modal connections (bus, light rail, bike paths, etc.) that will make the trip time competitive with many transportation options to a final destination. Coordinating with other transit agencies to improve connections to POF terminal facilities could improve modal connections. Additionally, integrating fare collection systems between transportation modes make these transfers easier and potentially more cost effective for passengers. The One Regional Card for All (ORCA) card provides seamless transfers for passengers between King County Metro and Sound Transit Link light rail and express bus service, as well as the King County Water Taxi West Seattle and Vashon Island to downtown Seattle routes.

Parking availability at or nearby the terminal is a key component to attracting passengers. Offering on-site parking at the terminal location would be the best way to attract riders. If this kind of parking is not available at the terminal, local parking facilities such as park and rides and shared parking such as church parking lots could be utilized. If sharing with a bus park and ride facility, providing designated POF parking could attract ridership. Whether designated parking is provided or not, a shuttle service to serve the shared park and ride facilities and transport riders to the waterfront to meet the water taxi would be required in many cases. The shuttle service should be aligned with the POF schedule to improve passenger accessibility.

Information

Providing passengers with easy access to information regarding the POF service can attract passengers by reducing anxiety of what to expect in their trip. Clear website information and mobile applications provide passengers with current POF schedules, rider information (including terminal locations and amenities), service interruptions and more.

Navigational Considerations

For commuting passengers, travel time is an important consideration when deciding which public transportation they will use. To be competitive with other modes of transportation, POF commuter routes must consider the most efficient path to reach the destination. It is important to identify and consider navigational challenges including slow-down areas and in-water impediments that restrict the vessel speed and slow down the route. Vessel congestion and water recreational activities vary within each body of water, with many in King

County that are frequently congested with vessels, float planes, kayakers, crew and paddle boarders, or are restricted to low speeds in locations of high congestion and near residences.

Land Use Compatibility and Availability

Future POF terminals should be compatible with surrounding land uses. This compatibility is partly related to the modal connections as described above, but also the surrounding land uses. Many terminal facility sites are located on public property including parks with existing docks. Terminal facility sites located on private property are typically adjacent to commercial uses including retail. Locating terminal facilities within parks and commercial areas is consistent with POF operations since these areas are destinations with better modal connections compared to residential and industrial areas.

Condition of Infrastructure and Improvements

Terminal infrastructures, both in water and out of water, are expensive assets. Identified locations for future POF service should leverage existing infrastructure where possible to lower initial investment costs. Most landing sites proposed have existing in-water infrastructure in place that would require modifications to be ADA compliant and operational. The exception would be the Kenmore Lakepointe site that would require new in-water and upland terminal facilities.

Providing terminal facility amenities can also attract passengers. Upland infrastructure including weather protection shelters with seating, ticket vending machines (TVMs), restrooms, and informational booths should be considered at each terminal facility location. Appropriately placed wayfinding elements are critical to guiding passengers to the POF terminal and continuing to their destination.

It is important passengers feel safe and secure arriving at the terminal, boarding and riding the vessel, as well as departing the vessel. Upland safety improvements include providing adequate lighting, proper siting of amenities, and monitoring the site for safety. Additionally, clear safety instructions onboard the vessel allows passengers to trust the crew has safety procedures under control.

Environmental Impacts

Environmental impacts associated with future terminal locations should be minimized as much as possible. This minimization can be achieved by utilizing existing in-water infrastructure when applicable or minimizing and avoiding impacts to environmentally sensitive areas with new infrastructure. Early coordination in the conceptual planning phase with the federal, state, and local agencies allow for anticipation of environmental requirements. During the conceptual design phase, environmental permitting requirements would identify potential environmental impacts and require impact minimization elements.

TERMINAL FACILITY ELEMENTS

Program requirements for a future POF facility include amenities that make the site accessible, functional, and enjoyable for riders. These amenities may include both in-water and upland improvements, enhancing the passenger experience and service functions, while working within the constraints of the sites.

- Float to accommodate berthing vessels with side loading.
- Gangway and float to accommodate passenger loading and unloading with a minimum width of 12 feet for two-way passenger traffic.

- Sufficient area for placement of approximately 2-foot by 2-foot TVMs. These TVMs are solar-powered and equipped with cellular communications; therefore hard-wired power and communications are not required.

- A location with communications and power will be needed to store the portable fare transaction processors (handheld ORCA readers).

- A location will also be required to retrieve and store cash (if an accepted form of payment) from the portable fare boxes. This would require a vault at one of the terminals, located in the agent's office. This would likely be required regardless of whether or not a contracted service is utilized.

- Trash and recycling receptacles.

- Pedestrian and bicycle accessible walkways, approximately 12 feet wide to accommodate loading and unloading of passengers.

- Drop-off location for transit and personal vehicles should be located as close as possible to water taxi passenger loading.

- Loading ramps, communication, electrical gates and lighting are required at each slip. Potable water, sewage pump out, and shore power would be required at tie-up locations only.

- Meet secure facility recommendations, which includes delineation between public space and authorized personnel space (partitions or gates), adequate lighting, security cameras and storage facilities for crew belongings are also required.

VESSEL CHARACTERISTICS

The size of the vessels is determined on ridership demand (capacity requirements) and service schedule (speed requirements). Other vessel design elements for consideration should be configuration and relationship to loading facilities, fuel consumption, ride quality, wake wash and general passenger amenities provided.

Configuration and Relationship to Loading Facilities

Doors and queuing should be arranged to allow for terminal turnaround, including passenger unloading and loading, to occur in seven minutes or less for a full load in both directions. This is the typical turn-around time currently achieved by the King County Water Taxi. Aisle widths, door widths, number of embarkation stations, passenger routes, and seats per row should be designed to optimize passenger flow for new vessels.

Vessel draft and freeboard are also a consideration on the relationship to loading facilities/infrastructure such as a pier, dock or float. The two water bodies in the study will have different needs due to their differing water level characteristics. The median low low water (MLLW) for Lake Washington is controlled by the Army Corps of Engineers and has minimal variation, whereas the Puget Sound can see a tidal range of more than 16 feet.

Fuel Consumption

To minimize overall operating costs, it is recommended that fuel efficient vessels be used wherever possible. However, there is often a tradeoff between vessel speed and vessel size and weight with fuel efficiency. Longer routes may require higher, less efficient speeds to meet schedule or in some cases lower speeds due to required slow downs, like in the Montlake Cut.

Ride Quality / Schedule Reliability

Weather conditions in central Puget Sound can often present challenges for smaller vessels. During winter storms, wind waves can approach 3 feet, with sustained winds exceeding 30 knots and gusts up to 50 knots.

Under these conditions, the vessels cannot maintain their calm water speed and must slow down, thus affecting schedule reliability. In severe weather, some vessels will not be able to operate. Conditions on Lake Washington are quite different than Puget Sound, however wind waves can be experienced in severe conditions. This kind of weather would likely impact operations.

Passenger Amenities

The following passenger amenities are outlined below in order of documented current King County Water Taxi rider preferences:

- Comfortable seating/Elbow Room
- Outdoor Seating
- Food/Beverages
- Wi-Fi
- Bike Racks

Additional design elements to consider:

- Electrical Outlets
- Tables
- Bathroom facilities should be available for both crew and passengers, on-shore where possible, and on the vessels.

Wake Wash / Wake Energy

Wake wash energy is likely not too much concern on most of the routes as the majority of the transit is primarily in open water. However, the majority of the lakefront is comprised of residential uses that may have concerns about impact to their property. Wake wash/energy issues will mainly affect the routes during the maneuvering portions of the run. Wake wash is managed in the Montlake cut area through regulated slowdowns (no wake zones).

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Attachment A

King County Transportation Project Map

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LEGEND

- Tolling Areas
- Potential Tolling Areas
- Existing Light Rail
- Planned/Funded/Under Construction Light Rail Extensions
- Potential Light Rail Extensions
- Existing High-Capacity Transit (HCT) Corridors
- Planned/Funded/Under Construction HCT Corridors
- Potential HCT Corridors
- Planned/Funded/Under Construction Roadway Projects
- Projects Described in Transportation Infrastructure Memo
- Potential Landing Sites

SITES

1 Log Boom Park (Kenmore)
2 Lakepointe (Kenmore)
3 Marina Park (Kirkland)
4 Carillion Point (Kirkland)
5 Maydenbauer Bay Marina (Bellevue)
6 Bristol at Southport (Renton)
7 Leschi Public Float (Seattle)
8 Madison Street Dock (Seattle)
9 UW Waterfront Activities Center (Seattle)
10 Oceanography Dock (Seattle)
11 South Lake Union (Seattle)
12 Fremont (Seattle - Exact Location TBD)
13 Ship Canal at 24th Ave NW (Seattle)
14 Shilshole Bay Marina (Seattle)
15 Pier 50 (Seattle)
16 Des Moines Marina (Des Moines)

NOTES: (1) Depicts projects within a 10-year planning horizon; (2) HCT includes express bus and bus rapid transit

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Attachment B

King County Transportation Project Schedules

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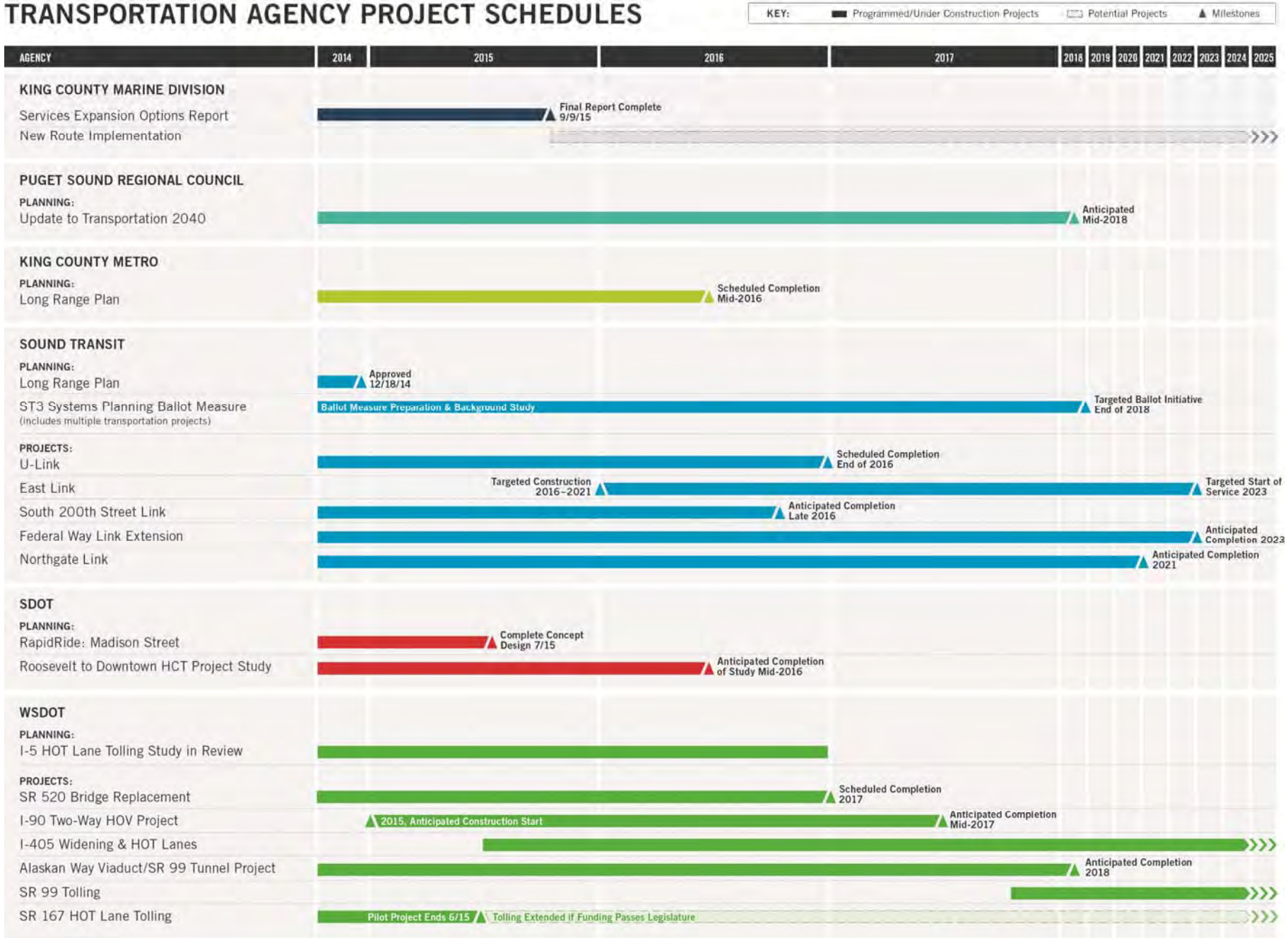
TRANSPORTATION AGENCY PROJECT SCHEDULES



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Appendix B

TASK 2: ROUTE PROFILES

Final Report on Ferry Expansion Options for Marine Division

PREPARED FOR KING COUNTY MARINE DIVISION
BY KPFF CONSULTING ENGINEERS
OCTOBER 30, 2015

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Attachment E – Route Competitiveness and Accessibility Data

Attachment F – Landing Site Assessments

Attachment G – Park and Ride Locations

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1. Introduction

The purpose of this report is to outline the specific route profiles for each proposed route identified in the Task 1 Baseline Study and Route Identification Report and to identify the methodology and assumptions used to build these profiles. The ultimate goal of this analysis is to use the route profiles to assess which potential routes will move on for further analysis such as ridership demand and infrastructure needs.

The route profiles will include:

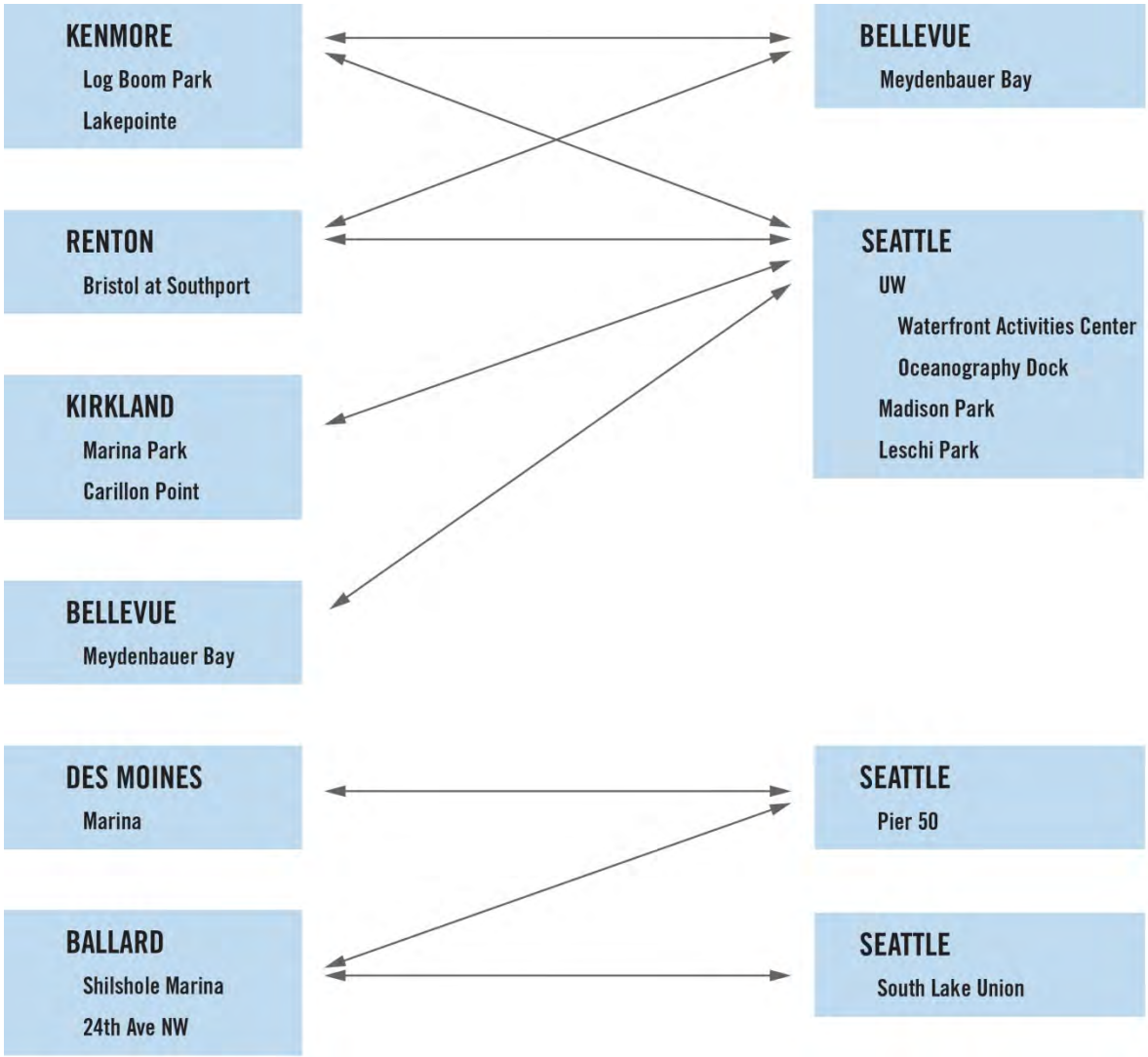
- Travel time and cost for
    - Passenger-only ferry (POF) service
    - Existing public transit service options[1] (bus, streetcar, Link light rail or a combination)
    - Personal vehicle trips
- Convenience factors, such as walking distance, potential shuttle needs and number of transfers required
- Land use compatibility of a water taxi terminal use with local regulations.

Figure 1 outlines the route profiles that have been evaluated, as identified in Appendix A: Task 1 Baseline Study and Route Identification. It should be noted that while the figure identified the landside terminal locations for a proposed water taxi service, final destination for passengers were all assumed to be Downtown Seattle.

While the Task 1 report identified that terminal locations in Fremont were to be explored, adequate facilities could not be identified and no wake and speed restrictions in Lake Union reduce the competitiveness of the ferry compared to other modes; therefore, a Fremont landing site was not carried forward for further analysis. Additionally, Kenmore suggested the Harbor Village Marina as a potential landing site; however, based on the site inspection, the existing facilities would not be adequate for POF service due to accessibility issues and it was not included in this analysis. Additionally, Kirkland City officials mentioned the 2nd Avenue Dock within Marina Park as an option; however, this dock is further away from the transit hub in downtown Kirkland making it less accessible. Therefore, this dock was not considered further in this analysis.

[1] Vanpool is another public transit option offered by King County. This mode of transportation was not identified in the competitive route profiles as the schedules are hard to compare to a scheduled service.

Figure 1: Potential KCWT Routes



2. Methodology

General route profile characteristics were evaluated by gathering the following information:

- POF route distances and travel times
- Travel times of other modes of transportation (bus, Link light rail, personal vehicle) from departure terminal to Downtown Seattle
- Required seat changes between modes
- Fares by mode
- Parking availability and accessibility at the terminal and/or potential shuttle requirements

For accurate comparisons between POF routes and current modes of transportation, assumptions were made for destination locations and commute periods[2]. The approach for gathering this data is described in summary below. For a comprehensive list of assumptions developed for this analysis, please refer to Attachment A.

Passenger Only Ferry Route Distances and Travel Times

POF headways or routes were determined to be the fastest, most direct route. Captains with experience navigating Puget Sound and Lake Washington provided insight to determine optimal routes and maneuvering time requirements. Travel time was calculated for four (4) cruising speeds including 28, 30, 35, and 38 knots and accounted for slow down zones (at 7 knots) at landing approach, under bridge crossings and other mandated slowdown zones. The 35 knot speed was chosen for comparison in the alternative mode time competitiveness analysis. This speed is higher than current King County Water Taxi operations, however consistent with speeds Kitsap Transit has used with its demonstration service from Bremerton to Downtown Seattle (Pier 50). This higher speed is required to make the mode competitive. It should be noted that all POF travel times include some form of transit once a landing site has been reached, except for two of the routes, from Des Moines and Ballard which arrive into Pier 50 in downtown Seattle. POF travel times are identified in Attachment C.

Travel Times of Competitive Modes

Currently, commuters travel to and from their destination via personal vehicle or public transit including Metro buses, Sound Transit Express buses, Link light rail, or a combination of modes. Transit route travel times were collected from the King County Metro trip planner and personal vehicular travel times were estimated using an average weekday peak period commute timeframe from Google Maps.

Many commuters traveling from the east side of Lake Washington to the central business district of Seattle park their vehicles at established park and rides and continue to Seattle via public transit.

Required Seat Changes

Seat changes are identified as a movement from one mode to another. In this analysis, the first seat change counted occurs after arrival at the park and ride, transit center or shuttle location pick-up. Walking times were calculated for all POF trips, either from a drop–off location to the POF queue at the pier or from the POF landing site to the next mode of transportation. For every route, the POF mode of travel requires at least two (2) seat changes.

Fares by Mode

Current fares were used to identify total cost per trip via other modes. Potential POF routes used the proposed 2015 King County Water Taxi ORCA fare of $4.75 for the Vashon Island Route. Costs for personal vehicle trips were calculated using the 2015 IRS Mileage Rate ($0.575) that includes fuel, wear and tear costs, and 2015 tolling rates.

[2] Commute period is identified as 8:00 am arrival in downtown Seattle and departure time of 5:00 pm.

Parking, Accessibility and Shuttle Requirements

Site visits were conducted at each identified terminal location to evaluate the current condition of in-water and upland infrastructure, as well as, to understand the accessibility and parking conditions at the site. Attachment F includes a profile for the current condition of each landing site.

On-site parking was assumed for the locations listed below. It should be noted that parking agreements have not been made with the local jurisdictions (where applicable) and in fact, some have expressed concern over shared parking in these locations. Parking was assumed for route competitiveness and, if parking is not possible, these routes may not meet time competitiveness measures.

- Renton (in the new Southport development currently under construction and located south of the existing dock. The development includes a 334,791sf hotel with 350 rooms; 724,520 square feet of Class "A" office space and 2,121 structured parking spaces[3].)
- Ballard (within the Shilshole Marina parking)
- Des Moines (within Des Moines Marina parking)

Where on-site parking was not assumed, the nearest park and ride of over 50 vehicles was used to calculate total trip time. This assumption was used in order to cut down on potential shuttle transit time from small park and ride to small park and ride to pick up passengers. Transit Centers with no parking were assumed in the urban areas of Downtown Kirkland and Bellevue. The Kirkland transit center is a short walk (approximately five minutes) to the landing site and it is assumed a shuttle would be provided to and from the Bellevue Transit Center to the landing site.

3. Elimination Criteria

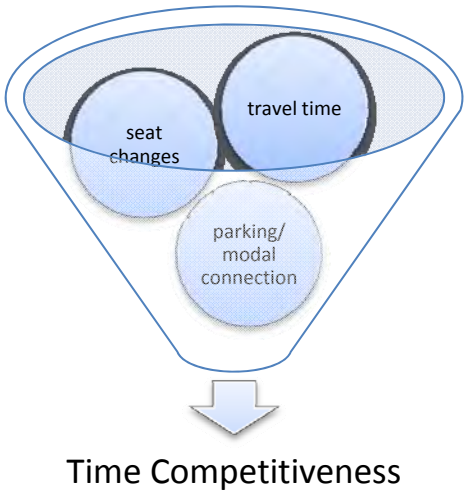
The initial scope of work identified three distinct elimination criteria: time competitiveness, convenience (seat changes) and parking/modal connections.

However, through our analysis; it became clear that convenience factors and parking/modal connections played an important role in the overall time competitiveness of a route. Therefore, rather than the criteria being three separate factors, two of the factors really determined why or why not a route was more time competitive than another. Figure 2 indicates how the three components contribute to the evaluation of time competitiveness.

For this analysis, time competitiveness is defined as equal to or less than a 40 minute total round-trip delta between a POF and the alternate mode of transportation.

[3] Renton Southport Development Information. http://www.secodev.com/

Figure 2: Elimination Criteria



4. Findings

There are four key overall findings that are identified in this analysis. These include:

- Time Competitiveness
- Cost Competitiveness
- Parking Assumptions
- Land Use Compatibility

Time Competitiveness

Overall, the time competitiveness analysis concluded that no proposed POF route would have a better total round-trip time than the competing modes in 2015 (bus, Link light rail or personal vehicle). In most cases, a personal vehicle is the fastest mode of transportation as of 2015. However, it should be noted that while average travel times identify the personal vehicle as the quickest form of transportation, this mode is often the most variable and unpredictable with accidents, special events and weather heavily contributing to vastly varying travel times which can double or triple the average trip time. Additionally, delay is only increasing on our region's highway systems. A 2013-2014 Puget Sound Regional Council study indicated that delay on our regions highways increased 25 percent from 2013 to 2014[4]. It is expected that this delay will continue to grow as our economy and population grow.

POF travel does not have the kind of variability in travel times as the personal vehicle, or even bus transit as travel on the water provides flexibility to go around a potential hazard. Severe weather can pose some delays for water travel; however those are rare and not expected for the Lake Washington routes specifically.

[4] PSRC, "Stuck in Traffic: 2015 Report" presentation, 3/16/15.

The following sites identified in Table 1 meet the evaluation criteria for travel time competitiveness (identified as being no more than 40 minute longer than the round-trip transit time) for each route. This table identifies round trip time differential for POF vs. transit mode of travel, as well as, the total round trip commute time. The most time savings was found on the north/south routes from Renton to Bellevue and Kenmore to Bellevue, which uses the I-405 corridor as the alternative. The routes that just make the cut include Des Moines to Downtown Seattle (Pier 50) and Bellevue to Madison and UW WAC.

Please refer to Attachment C for more detailed information regarding trip time competitiveness calculations, including AM and PM on-way trip times and associated trip time comparisons.

Table 1: Round-Trip Time Differential

Route	Round-Trip Time Differential *(POF vs Transit)*	POF Total Round-Trip Time
Kenmore to UW WAC	26 Minutes	1 Hour 49 Minutes
Kenmore to Bellevue*	16 Minutes	1 Hour 39 Minutes
Kirkland to UW WAC	17 Minutes	1 Hour 36 Minutes
Kirkland to Madison	30 Minutes	1 Hour 45 Minutes
Kirkland to Leschi	27 Minutes	1 Hour 46 Minutes
Bellevue* to UW WAC	38 Minutes	1 Hour 43 Minutes
Bellevue* to Madison	38 Minutes	1 Hour 43 Minutes
Bellevue* to Leschi	33 Minutes	1 Hour 38 Minutes
Renton to Bellevue*	13 Minutes	1 Hour 16 Minutes
Des Moines to Downtown Seattle (Pier 50)	39 Minutes	1 Hour 41 Minutes
Ballard to Downtown Seattle (Pier 50)	29 Minutes	1 Hour 18 Minutes

Note: POF total round-tip time includes shuttle ride to the departure terminal (if needed), POF sailing and connection to arrival business district (Seattle or Bellevue) through transit or shuttle and the trip back to the original departure terminal.

The UW WAC landing site provides the most advantageous connection to the new UW Link light rail station with only a short 6-minute walk from the landing site to the UW Link light rail station. This connection makes this landing site the optimal site for a west side connection. Therefore, Leschi and Madison were eliminated from further analysis.

Log Boom Park in Kenmore was chosen over Lakepointe as the Kenmore terminal location due to the fact that Lakepointe is privately owned and timeframe for redevelopment of the site is currently unknown. However, the Lakepointe development site could be a long-term option for a future Water Taxi terminal location.

In Kirkland, Marina Park provides more connections to residential density, employment and transit connections (KC Metro Routes: 234, 235, 236, 238, 245, 248, 255 and ST 540) than the potential terminal at Carillon Point (served by KC Metro Routes 234 and 235) and therefore, Carillon Point was eliminated from further analysis. Additionally, a shuttle was not considered when calculating time differentials with other modes of transit; but based on discussions with City of Kirkland officials (refer to Attachment E), a shuttle was included as part of the operating costs identified in Attachment D.

Cost Competitiveness

In addition to the unpredictability of personal vehicle trip time, this mode is also the most expensive option for the rider, ranging from $2.50 to $11.91 one-way in gas, tolls, wear and tear, as well as, an additional $15 to $30 for all-day parking downtown. While a POF fare would be more expensive than the bus or light rail transit mode, it would be far less than driving and parking a personal vehicle in the City. As a passenger, the bus is the least expensive of the three modes. Table 2 provides the approximate costs for each commute tip by mode.

Table 2: One-Way Rider Cost by Mode

Proposed Route	POF (2016)	Transit (2015)	Personal Vehicle* (2015)
Kenmore to UW WAC	$5.25	$2.50	$8.11
Kenmore to Bellevue	$5.25	$2.75	$7.99
Kirkland (Marina) to UW WAC	$5.25	$3.25	$11.91
Kirkland (Carillon) to UW WAC	$5.25	$3.25	$8.98
Bellevue to UW WAC	$5.25	$2.50	$10.13
Renton to UW WAC	$5.25	$3.25	$10.18
Renton to Bellevue	$5.25	$2.50	$6.10
Des Moines to Downtown Seattle (Pier 50)	$5.25	$3.25	$9.78
Ballard to Downtown Seattle (Pier 50)	$5.25	$2.75	$3.22

**Note: Does not include downtown Seattle parking costs, which can range from $15.00 to $30.00 per day.*

Parking Assumptions

Parking availability is hard to come by at most of the terminal locations. The only sites which have some level of on-site parking opportunity are the future Lakepointe development in Kenmore, the future hotel/restaurant/office development in Renton, the Shilshole Marina owned by the Port of Seattle, and the Des Moines Marina, owned by the City of Des Moines. The Lakepointe development site could be viable long-term location for a Water Taxi; however, with the current master plan for the site under development, and will require years for development. Therefore, the Lakepointe site is not included for further analysis in this report and would require additional analysis to pursue. The Port of Seattle was contacted for parking availability at Shilshole and was open to considering parking for Water Taxi passengers. The City of Des Moines has concerns about shared parking at the marina with their current community events that utilize that space, as well as potential redevelopment of the site.

Park and rides in the vicinity of the terminal locations currently reach capacity; therefore available parking would be a challenge at most of the terminal locations.

As mentioned in the methodology, parking was assumed at several terminal locations for route competitiveness. If parking is not possible at these locations where parking is assumed on-site (Renton,

Ballard and Des Moines), time competitiveness will likely not be met. Refer to Attachment G for a map of existing park and ride locations.

Land Use Compatibility

Most land use plans do not specifically identify a POF facility as a planned use; however, most regulations allow for commercial transportation uses. POF terminal facilities are water dependant uses that are restricted by federal, state, and local land use and environmental regulations. Generally, all sites proposed for further analysis have water transportation compatible surrounding uses.

While jurisdictions have been notified of this work, specific conversations about proposed improvements have not yet been vetted or approved. Generally most agencies have shown support for the service. It is understood that land use processes locally, as well as, federal and state environmental review would occur prior to infrastructure construction occurs and service is provided.

5. Routes for Further Analysis

Routes identified for further ridership demand analysis include:

1. Kenmore[5] (Log Boom Park) to UW WAC

   Log Boom Park in Kenmore is located along the Burke Gilman trail and nearby the Kenmore City center. The City continues to be very interested in future water taxi service to their jurisdiction. This route is very time competitive due to the congestion on highways 522 and I-5. Additionally, a connection to UW provides a direct destination connection, as well as a connecting location to Downtown Seattle to the south and north after Link Light rail expansion. This route provides a 26 minute round trip total trip time differential from the transit mode alternative and a 23 minute differential from a personal vehicle mode.

2. Kenmore (Log Boom Park) to Bellevue (Marina)

   Log Boom Park in Kenmore is located along the Burke Gilman trail and nearby the Kenmore City center. The City continues to be very interested in future water taxi service to their jurisdiction. This route is very time competitive due to the congestion on highways 522 and the 405 corridor. Future tolling on 405 provides additional unknowns about increase in corridor congestion. The connection at Bellevue Marina, however is comprised of a very steep slope down to the waterfront which could prove challenging for both pedestrians and shuttles. The City of Bellevue Comprehensive Plan is prioritizing improvements to the pedestrian connections from downtown Bellevue to Meydenbauer Bay. This route is the second most competitive of those analyzed at a 16 minute total round-trip time differential from the transit mode alternative and a 25 minute differential from a personal vehicle mode.

[5] The Lakepointe site is under private ownership with redevelopment plans currently underway. The schedule for redevelopment is unknown. This site, once developed, will provide superior multi-modal access and it is recommended that parking be provided at this site to enhance water taxi ridership appeal.

3. Kirkland (Marina Park) to UW WAC

   Kirkland Marina Park is located in the heart of downtown Kirkland. The Marina is just two blocks away from the Kirkland Transit Center. This route is very competitive of those analyzed, with a 17 minute round- trip time differential from the transit mode alternative, however a 46 minute differential from a personal vehicle mode. This comparison to the personal vehicle travel times could become more competitive when tolling is implemented on I-90 and traffic balances out between the two toll roads.

4. Bellevue (Marina) to UW WAC

   As mentioned in item #2 above, the Bellevue terminal location presents many challenges for pedestrians. While this route met the time competitiveness evaluation criteria (at a 38 minute differential), it is noted that the current plans to extend light rail to downtown Bellevue will provide an even more competitive mode of travel with connection to downtown Seattle, University of Washington and SeaTac Airport. This route has a 38 minute round- trip time differential from the transit mode alternative and a 56 minute differential from a personal vehicle mode.

5. Renton to Bellevue (Marina)

   The terminal site in Renton is located on private property owned by SECO Development Group. The Bristol at Southport is a luxury apartment complex which is located adjacent to the dock. The neighboring property is also owned by SECO and is currently being developed with a new hotel and office space. This route is very time competitive due to the congestion on the 405 corridor. Future tolling on 405 provides additional unknowns about increases in corridor congestion. The connection at Bellevue Marina, however is comprised by a very steep slope down to the waterfront which could prove challenging for both pedestrians and shuttles. This route is the most competitive of those analyzed at a 13 minute round-trip time differential from the transit mode and a 12 minute differential from a personal vehicle mode.

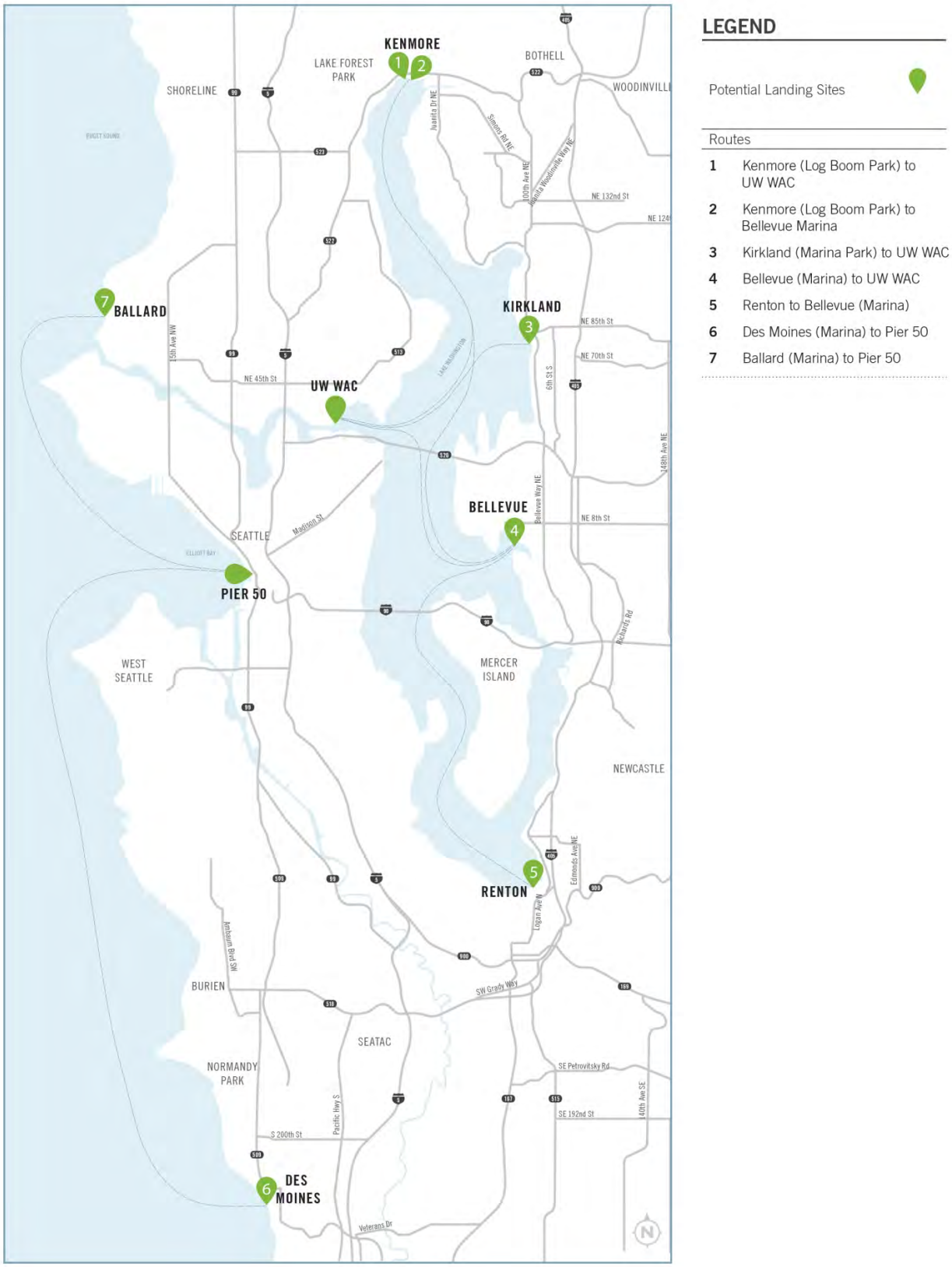
6. Des Moines (Marina) to Downtown Seattle (Pier 50)

   The terminal site in Des Moines is located in the Des Moines Marina. As mentioned previously in this report, parking was assumed on-site in order to make this a competitive route. If parking is not available on-site, this route would have a fatal flaw. While the travel time competitiveness was compared to current transit routes, Des Moines will have a Link light rail connection in 2023. Downtown Seattle (Pier 50) is the current Water Taxi terminal and has good pedestrian connections to surrounding employment and the Transit Tunnel. This route has a 39 minute round-trip time differential from the transit mode alternative and a 30 minute differential from a personal vehicle mode.

7. Ballard (Marina) to Downtown Seattle (Pier 50)

   The terminal site in Ballard is located in the Shilshole Bay Marina. Much like Des Moines, parking was assumed on-site in order to make this a competitive route. If parking is not available on-site, this route would have a fatal flaw as transit and pedestrian access to the Marina are very challenging. Pier 50 in Seattle is the current Water Taxi terminal and has good pedestrian connections to surrounding employment and the Transit Tunnel. This route has a 29 minute round- trip time differential from the transit mode alternative and a 34 minute differential from a personal vehicle mode.

Figure 3: Routes for Future Analysis



Attachment A

Assumptions

Travel Times:

- Loading and unloading of passengers will take a total of 7 minutes. That includes 4 minutes to load and 3 minutes to unload.
- Maneuvering time baseline is set to 1.5 minutes. This baseline is modified when identified that more or less time is needed by experienced KCMD Captains.
- POF travel times factored in walk time to the landing site and from the landing site to connecting transit. For example, there is a 3 minute walk from the drop-off location at the Kenmore Log Boom Park parking area to queuing. Similarly, a 6 minute walk time was calculated for the connection from UW Waterfront Activities Center (WAC) to the UW Link light rail station.
- Downtown Seattle destination/central business district can be defined as University Street Station at University Street and 3rd Avenue.
- The central business district of Bellevue defined as the Bellevue Transit Center at 108th Ave NE and NE 6th St.
- Commute periods: arrival at destination at 8:00 AM and departure time at 5:00 PM
- Vehicle and transit trips were calculated from the same point, either transit center or nearest park and ride with capacity of greater than 50 cars, unless on-site parking was assumed.
- Based on information received from Sound Transit, travel time between the UW Link light rail station and University Street Station is estimated to be approximately 10 minutes.
- Public transit travel times were calculated using Metro trip planner, which relies on transit schedules—planned for average delay, however does not take into account above average delay or special event delay.
- Personal vehicle trips were calculated at approximately 7:30 AM and 5:00 PM Tuesday through Thursday, with times (which include traffic) averaged over a two week period using Google Maps travel time.
- Total trip travel times by mode where calculated using whole trip mode time from first point (transit center, park and ride or terminal) to downtown Seattle at 3rd Avenue and University. (i.e. shuttle to POF terminal, walk from drop off to queue, POF crossing, walk time to from POF terminal to transit connection, transit crossing.) “Just in time: departure of water taxi with no wait time on the dock was assumed.

Seat Changes or Transfers:

- Arrival to the first point in the commute was not considered a seat change (i.e. car or walk from home to transit center, park and ride or terminal)
- Driving a personal vehicle was not considered a seat change.
- Taking a shuttle to the POF terminal was considered one seat change.

Fares:

- Current 2015 Metro and Sound Transit fares were used to calculate transit mode cost.
- The highest fare in the transit trip was used for the max fare for the one-way trip.
- The 2016 KCWT Vashon Route fare ($5.25) was used as a placeholder to calculate potential POF fare.
- The 2015 IRS Standard Mileage Rate ($0.575) was used to calculate operating costs for personal vehicle mode of travel.
- 2015 peak toll rates were applied to trips across State Route 520.
- Parking fees were not included in trip calculation, which can range from $15.00 to $30.00 for 8 hours of peak period parking.

Parking Availability:

- Parking capacity at the terminal was evaluated during the site inspections and information received from agencies.
- On-site parking was assumed at Des Moines, Ballard, Lakepointe and Renton.

Shuttle Requirements:

- Park and rides within ¼-mile of the terminal were considered walkable and therefore would not require shuttle service.
- Terminals without parking available onsite or without a park and ride within ¼-mile of the site required a shuttle.
- When needed, shuttle travel time was calculated from the nearest park and ride (Kenmore) or transit center (Bellevue) to the landing site.
- Shuttle drop-off would occur at nearest possible point to the POF dock.
- Upon request, a one route shuttle serving downtown Kirkland will be assumed in the operating cost analysis in Task 3. A shuttle was not part of the time competitiveness or ridership analysis.

Attachment B

Site Evaluation Matrix

Route	Ownership	Time Competitive	Departure Site Access	Destination Transit/Ped Connections	Parking/Shuttle Needs	Other/Notes
Kenmore (Log Boom Park) to UW WAC	Public	●	◓	●	@ Nearest Park and Ride, Shuttle needed	Route moving forward in analysis
Kenmore (Log Boom Park) to UW Oceanography	Public	○	◓	○	@ Nearest Park and Ride, Shuttle needed	Is not time competitive, therefore eliminated
Kenmore (Log Boom Park) to Madison	Public	○	◓	◓	@ Nearest Park and Ride, Shuttle needed	Is not time competitive, therefore eliminated
Kenmore (Log Boom Park) to Leschi	Public	○	◓	◓	@ Nearest Park and Ride, Shuttle needed	Is not time competitive, therefore eliminated
Kenmore (Log Boom Park) to Bellevue	Public	●	◓	◓	@ Nearest Park and Ride, Shuttle needed	Route moving forward in analysis
Kenmore (Lakepointe) to UW WAC	Private (development timeframe unknown)	●	N/A	●	Parking is a possibility on-site as a part of site redevelopment	Development timeframe unknown, therefore eliminated. Log Boom is carried forward as Kenmore site
Kenmore (Lakepointe) to UW Oceanography	Private (development timeframe unknown)	●	N/A	○	Parking is a possibility on-site as a part of site redevelopment	Eliminated due to superior connection (due to light rail) at UW WAC
Kenmore (Lakepointe) to Madison	Private (development timeframe unknown)	●	N/A	◓	Parking is a possibility on-site as a part of site redevelopment	Eliminated due to superior connection at UW WAC
KEY		● Yes/Good	◓ Moderate	○ No/Poor		

Route	Ownership	Time Competitive	Departure Site Access	Destination Transit/Ped Connections	Parking/Shuttle Needs	Other/Notes
Kenmore (Lakepointe) to Leschi	Private (development timeframe unknown)	●	N/A	◓	Parking is a possibility on-site as a part of site redevelopment	Eliminated due to superior connection at UW WAC
Kenmore (Lakepointe) to Bellevue	Private (development timeframe unknown)	●	N/A	◓	Parking is a possibility on-site as a part of site redevelopment	Development timeframe unknown, therefore eliminated. Log Boom is carried forward as Kenmore site
Kirkland (Marina Park) to UW WAC	Public	●	●	●	No parking available Shuttle per Outreach	Route moving forward in analysis
Kirkland (Marina Park) to UW Oceanography	Public	●	●	○	No parking available No shuttle needed	Walking route is indirect to the Link light rail station.
Kirkland (Marina Park) to Madison	Public	●	●	◓	No parking available No shuttle needed	Eliminated due to superior connection at UW WAC
Kirkland (Marina Park) to Leschi	Public	●	●	◓	No parking available No shuttle needed	Eliminated due to superior connection at UW WAC
Kirkland (Carillon Point) to UW WAC	Private (built out)	●	◓	●	Parking on-site	Eliminated due to superior connection at Marina Park, Kirkland
Kirkland (Carillon Point) to UW Oceanography	Private (built out)	●	◓	○	Parking on-site	Walking route is indirect to the Link light rail station.
Kirkland (Carillon Point) to Madison	Private (built out)	●	◓	◓	Parking on-site	Eliminated due to superior connection at UW WAC
Kirkland (Carillon Point) to Leschi	Private (built out)	●	◓	◓	Parking on-site	Eliminated due to superior connection at UW WAC
Bellevue to UW WAC	Public	●	◓	●	No parking available Shuttle needed from transit center	Route moving forward in analysis
KEY		● Yes/Good	◓ Moderate	○ No/Poor		

Route	Ownership	Time Competitive	Departure Site Access	Destination Transit/Ped Connections	Parking/Shuttle Needs	Other/Notes
Bellevue to UW Oceanography	Public	○	◓	○	No parking available Shuttle needed from transit center	Is not time competitive, therefore eliminated
Bellevue to Madison	Public	●	◓	◓	No parking available Shuttle needed from transit center	Eliminated due to superior connection at UW WAC
Bellevue to Leschi	Public	●	◓	◓	No parking available Shuttle needed from transit center	Eliminated due to superior connection at UW WAC
Renton to UW WAC	Private (under construction)	○	●	●	Parking assumed at development site	Is not time competitive, therefore eliminated
Renton to UW Oceanography	Private (under construction)	○	●	○	Parking assumed at development site	Is not time competitive, therefore eliminated
Renton to Madison	Private (under construction)	○	●	◓	Parking assumed at development site	Is not time competitive, therefore eliminated
Renton to Leschi	Private (under construction)	●	●	◓	Parking assumed at development site	Eliminated due to superior connection at UW WAC
Renton to Bellevue	Private (under construction)	●	●	◓	Parking assumed at development site	Route moving forward in analysis
Des Moines to Downtown Seattle (Pier 50)	Public	●	◓	●	Parking assumed at Marina	Route moving forward in analysis
Ballard to Downtown Seattle (Pier 50)	Port of Seattle	●	◓	●	Parking assumed at Marina	Route moving forward in analysis
Ballard (24th) to South Lake Union	Public	○	●	●	No parking, located near neighborhood center	Is not time competitive, therefore eliminated
KEY		● Yes/Good	◓ Moderate	○ No/Poor		

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Attachment C

POF Travel Time and Cost Summary

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Summary of Travel Time and Costs for Each Route (35 knots)

	Route	Total Trip Delta		Total Trip Time			AM Commute by Mode			PM Commute by Mode			PM Delta		AM Delta		Cost (one-way)			Cost	
		delta POF/ Transit	delta POF/Car	POF	Transit	Car	POF (35knt) Travel Time	Transit	Car	POF (35knt) Travel Time	Transit	Car	delta POF/ Transit	delta POF/Car	delta POF/ Transit	delta POF/Car	POF	Bus/Light Rail	Car*	delta POF/ Transit	delta POF/Car
1	**Kenmore (LB) to UW WAC**	0:26	0:23	1:49	1:23	1:25	54.8	39	43	54.8	44	42	10.8	12.5	15.8	11.4	$ 4.75	$ 2.50	$ 8.11	$ 2.25	$ (3.36)
	Kenmore (LB) to UW Oceanography	0:51	0:48	2:14	1:23	1:25	67.1	39	43	67.1	44	42	23.1	24.8	28.1	23.7	$ 4.75	$ 2.50	$ 8.11	$ 2.25	$ (3.36)
	Kenmore (LB) to Madison	0:46	0:44	2:09	1:23	1:25	62.0	39	43	68.0	44	42	24.0	25.6	23.0	18.6	$ 4.75	$ 2.50	$ 8.11	$ 2.25	$ (3.36)
	~~Kenmore (LB) to Leschi~~	0:43	0:40	2:06	1:23	1:25	61.1	39	43	65.1	44	42	21.1	22.8	22.1	17.7	$ 4.75	$ 2.50	$ 8.11	$ 2.25	$ (3.36)
2	**Kenmore (LB) to Bellevue**	0:16	0:25	1:39	1:23	1:14	49.7	41	36	49.7	42	38	7.7	11.7	8.7	13.7	$ 4.75	$ 2.75	$ 7.99	$ 2.00	$ (3.24)
	~~Kenmore (LP) to UW WAC~~	0:12	0:09	1:35	1:23	1:25	47.8	39	43	47.8	44	42	3.8	5.5	8.8	4.4	$ 4.75	$ 2.50	$ 8.11	$ 2.25	$ (3.36)
	~~Kenmore (LP) to UW Oceanography~~	0:24	0:22	1:47	1:23	1:25	60.1	39	43	47.8	44	42	3.8	5.5	21.1	16.7	$ 4.75	$ 2.50	$ 8.11	$ 2.25	$ (3.36)
	~~Kenmore (LP) to Madison~~	0:32	0:30	1:55	1:23	1:25	55.0	39	43	61.0	44	42	17.0	18.6	16.0	11.6	$ 4.75	$ 2.50	$ 8.11	$ 2.25	$ (3.36)
	~~Kenmore (LP) to Leschi~~	0:29	0:26	1:52	1:23	1:25	54.1	39	43	58.1	44	42	14.1	15.8	15.1	10.7	$ 4.75	$ 2.50	$ 8.11	$ 2.25	$ (3.36)
	~~Kenmore (LP) to Bellevue~~	0:05	0:14	1:28	1:23	1:14	43.7	41	36	44.7	42	38	2.7	6.7	2.7	7.7	$ 4.75	$ 2.75	$ 7.99	$ 2.00	$ (3.24)
3	**Kirkland (Marina) to UW WAC**	0:21	0:50	1:40	1:19	0:50	50.2	34	22	50.2	45	28	5.2	22.2	16.2	28.2	$ 4.75	$ 3.25	$ 11.91	$ 1.50	$ (7.16)
	~~Kirkland (Marina) to UW Oceanography~~	0:30	0:59	1:49	1:19	0:50	59.2	34	22	50.2	45	28	5.2	22.2	25.2	37.2	$ 4.75	$ 3.25	$ 11.91	$ 1.50	$ (7.16)
	~~Kirkland (Marina) to Madison~~	0:34	1:03	1:53	1:19	0:50	53.9	34	22	59.9	45	28	14.9	31.9	19.9	31.9	$ 4.75	$ 3.25	$ 11.91	$ 1.50	$ (7.16)
	~~Kirkland (Marina) to Leschi~~	0:31	1:00	1:50	1:19	0:50	53.1	34	22	57.1	45	28	12.1	29.1	19.1	31.1	$ 4.75	$ 3.25	$ 11.91	$ 1.50	$ (7.16)
	~~Kirkland (Carillon) to UW WAC~~	0:23	0:45	1:20	0:57	0:35	40.2	27	18	40.2	30	18	10.2	22.5	13.2	22.5	$ 4.75	$ 3.25	$ 8.98	$ 1.50	$ (4.23)
	~~Kirkland (Carillon) to UW Oceanography~~	0:39	1:01	1:36	0:57	0:35	48.2	27	18	48.2	30	18	18.2	30.5	21.2	30.5	$ 4.75	$ 3.25	$ 8.98	$ 1.50	$ (4.23)
	~~Kirkland (Carillon) to Madison~~	0:37	0:58	1:34	0:57	0:35	47.2	27	18	47.2	30	18	17.2	29.5	20.2	29.5	$ 4.75	$ 3.25	$ 8.98	$ 1.50	$ (4.23)
	~~Kirkland (Carillon) to Leschi~~	0:39	1:01	1:36	0:57	0:35	46.3	27	18	50.3	30	18	20.3	32.6	19.3	28.6	$ 4.75	$ 3.25	$ 8.98	$ 1.50	$ (4.23)
4	**Bellevue to UW WAC**	0:38	0:56	1:43	1:05	0:47	51.7	32	22	51.7	33	25	18.7	26.7	19.7	29.7	$ 4.75	$ 2.50	$ 10.13	$ 2.25	$ (5.38)
	~~Bellevue to UW Oceanography~~	1:03	1:21	2:08	1:05	0:47	64.0	32	22	64.0	33	25	31.0	39.0	32.0	42.0	$ 4.75	$ 2.50	$ 10.13	$ 2.25	$ (5.38)
	~~Bellevue to Madison~~	0:38	0:56	1:43	1:05	0:47	51.8	32	22	51.8	33	25	18.8	26.8	19.8	29.8	$ 4.75	$ 2.50	$ 10.13	$ 2.25	$ (5.38)
	~~Bellevue to Leschi~~	0:33	0:51	1:38	1:05	0:47	47.1	32	22	51.1	33	25	18.1	26.1	15.1	25.1	$ 4.75	$ 2.50	$ 10.13	$ 2.25	$ (5.38)
	~~Renton to UW WAC~~	0:49	0:52	1:56	1:07	1:03	58.1	31	32	58.1	36	32	22.1	26.5	27.1	26.1	$ 4.75	$ 3.25	$ 10.18	$ 1.50	$ (5.43)
	~~Renton to UW Oceanography~~	1:13	1:17	2:20	1:07	1:03	70.4	31	32	70.4	36	32	34.4	38.7	39.4	38.4	$ 4.75	$ 3.25	$ 10.18	$ 1.50	$ (5.43)
	~~Renton to Madison~~	0:49	0:52	1:56	1:07	1:03	58.1	31	32	58.1	36	32	22.1	26.5	27.1	26.1	$ 4.75	$ 3.25	$ 10.18	$ 1.50	$ (5.43)
	~~Renton to Leschi~~	0:37	0:41	1:44	1:07	1:03	50.5	31	32	54.5	36	32	18.5	22.8	19.5	18.5	$ 4.75	$ 3.25	$ 10.18	$ 1.50	$ (5.43)
5	**Renton to Bellevue**	0:13	0:12	1:16	1:03	1:03	37.6	23	30	38.6	40	34	-1	4	15	8	$ 4.75	$ 2.50	$ 6.10	$ 2.25	$ (1.35)
6	**Des Moines to Pier 50**	0:39	0:30	1:41	1:02	1:10	50.6	28	37	50.6	34	34	17	17	23	13	$ 4.75	$ 3.25	$ 9.78	$ 1.50	$ (5.03)
7	**Ballard to Pier 50**	0:29	0:34	1:18	0:49	0:44	39.4	21	20	39.4	28	24	11	15	18	19	$ 4.75	$ 2.75	$ 3.22	$ 2.00	$ 1.53
	~~Ballard to SLU~~	1:03	1:08	1:52	0:49	0:44	55.1	21	20	57.1	28	24	29	33	34	35	$ 4.75	$ 2.75	$ 3.22	$ 2.00	$ 1.53
	Key	< 40 min Delta					Fastest Travel Time			Fastest Travel Time							Lowest Cost			Less than $3	
																	*Does not include parking				

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Attachment D

POF Travel Times

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DRAFT CROSSING TIME MODEL

Note: For all variables with a base assumption, conditional formatting is set up to highlight assumptions that differ from the base value

		From Kenmore										From Renton					From Kirkland								From Bellevue				To Pier 50		
SLOW ESTIMATE	**Base Assumption**	**Kenmore LB-UW WAC**	**Kenmore LB-UW (OD)**	**Kenmore LB-Madison**	**Kenmore LB-Leschi**	**Kenmore LB-Bellevue**	**Kenmore LP – UW WAC**	**Kenmore LP – UW (OD)**	**Kenmore LP – Madison**	**Kenmore LP – Leschi**	**Kenmore LB-Bellevue**	**Renton – UW WAC**	**Renton – UW (OD)**	**Renton – Madison**	**Renton – Leschi**	**Renton – Bellevue**	**Kirkland (MP) – UW WAC**	**Kirkland (MP) – UW (OD)**	**Kirkland (MP) – Madison**	**Kirkland (MP) – Leschi**	**Kirkland (CP) – UW WAC**	**Kirkland (CP) – UW (OD)**	**Kirkland (CP) – Madison**	**Kirkland (CP) – Leschi**	**Bellevue – UW WAC**	**Bellevue – UW (OD)**	**Bellevue – Madison**	**Bellevue – Leschi**	**Des Moines – Pier 50**	**Ballard Marina –Pier 50**	**Ballard (24th)– SLU**
Total Route length (nautical miles)		8.65	9.15	8.20	10.30	10.57	8.80	9.30	8.35	10.45	10.72	12.55	13.05	11.10	8.46	7.32	4.15	4.65	3.60	5.70	3.75	4.25	3.20	5.30	4.87	5.37	3.47	2.57	10.35	5.80	3.40
Route length at max speed		7.40	7.40	7.40	9.65	9.97	7.40	7.40	7.40	9.65	9.97	10.95	10.95	10.75	8.06	6.97	3.52	3.10	3.00	5.25	2.65	2.65	2.55	4.80	3.52	3.52	3.37	2.42	9.35	5.30	2.90
Route length at reduced speed	0.00	0.95	1.45	0.50	0.30	0.30	0.95	1.45	0.50	0.30	0.30	1.50	2.00	0.25	0.25	0.25	1.25	1.45	0.50	0.30	0.95	1.45	0.50	0.30	1.25	1.75	0.00	0.00	1.00	0.50	0.50
Max Speed (knots)	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	7.00
Reduced Speed (knots)	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Time allowed for passenger loading (min)	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Time allowed for maneuvers over first .15 mile (min)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Crossing time at max speed (min)		15.86	15.86	15.86	20.68	21.36	15.86	15.86	15.86	20.68	21.36	23.46	23.46	23.04	17.27	14.94	7.54	6.64	6.43	11.25	5.68	5.68	5.46	10.29	7.54	7.54	7.22	5.19	20.04	11.36	24.86
Crossing time at reduced speed (min)		8.14	12.43	4.29	2.57	2.57	8.14	12.43	4.29	2.57	2.57	12.86	17.14	2.14	2.14	2.14	10.71	12.43	4.29	2.57	8.14	12.43	4.29	2.57	10.71	15.00	0.00	0.00	8.57	4.29	4.29
Time allowed for maneuvers over last .15 mile (min)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Time allowed for passenger unloading (min)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Total Crossing Time		35.00	39.29	31.14	34.25	34.94	35.00	39.29	31.14	34.25	34.94	46.82	51.11	35.68	29.91	27.58	28.76	29.57	21.21	24.32	25.32	29.61	21.25	24.36	29.26	33.54	18.22	16.19	39.61	26.64	40.14
Margin for delay en route (% of crossing time)	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Margin for Delay Crossing Time		**35.00**	**39.29**	**31.14**	**34.25**	**34.94**	**35.00**	**39.29**	**31.14**	**34.25**	**34.94**	**46.82**	**51.11**	**35.68**	**29.91**	**27.58**	**28.76**	**29.57**	**21.21**	**24.32**	**25.32**	**29.61**	**21.25**	**24.36**	**29.26**	**33.54**	**18.22**	**16.19**	**39.61**	**26.64**	
Number of Crossings in 4 hr Window	210	**6.00**	**5.35**	**6.74**	**6.13**	**6.01**	**6.00**	**5.35**	**6.74**	**6.13**	**6.01**	**4.49**	**4.11**	**5.89**	**7.02**	**7.61**	**7.30**	**7.10**	**9.90**	**8.63**	**8.29**	**7.09**	**9.88**	**8.62**	**7.18**	**6.26**	**11.52**	**12.97**	**5.30**	**7.88**	

BASELINE ESTIMATE	**Base Assumption**	**Kenmore LB-UW WAC**	**Kenmore LB-UW (OD)**	**Kenmore LB-Madison**	**Kenmore LB-Leschi**	**Kenmore LB-Bellevue**	**Kenmore LP – UW WAC**	**Kenmore LP – UW (OD)**	**Kenmore LP – Madison**	**Kenmore LP – Leschi**	**Kenmore LB-Bellevue**	**Renton – UW WAC**	**Renton – UW (OD)**	**Renton – Madison**	**Renton – Leschi**	**Renton – Bellevue**	**Kirkland (MP) – UW WAC**	**Kirkland (MP) – UW (OD)**	**Kirkland (MP) – Madison**	**Kirkland (MP) – Leschi**	**Kirkland (CP) – UW WAC**	**Kirkland (CP) – UW (OD)**	**Kirkland (CP) – Madison**	**Kirkland (CP) – Leschi**	**Bellevue – UW WAC**	**Bellevue – UW (OD)**	**Bellevue – Madison**	**Bellevue – Leschi**	**Des Moines – Pier 50**	**Ballard Marina –Pier 50**	**Ballard (24th)– SLU**
Total Route length (nautical miles)		8.65	9.15	8.20	10.30	10.57	8.80	9.30	8.35	10.45	10.72	12.55	13.05	11.10	8.46	7.32	4.15	4.65	3.60	5.70	3.75	4.25	3.20	5.30	4.87	5.37	3.47	2.57	10.35	5.80	3.40
Route length at max speed		7.40	7.40	7.40	9.65	9.97	7.40	7.40	7.40	9.65	9.97	10.95	10.95	10.75	8.06	6.97	3.52	3.10	3.00	5.25	2.65	2.65	2.55	4.80	3.52	3.52	3.37	2.42	9.35	5.30	2.90
Route length at reduced speed	0.00	0.95	1.45	0.50	0.30	0.30	0.95	1.45	0.50	0.30	0.30	1.50	2.00	0.25	0.25	0.25	1.25	1.45	0.50	0.30	0.95	1.45	0.50	0.30	1.25	1.75	0.00	0.00	1.00	0.50	0.50
Max Speed (knots)	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	7.00
Reduced Speed (knots)	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Time allowed for passenger loading (mir	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Time allowed for maneuvers over first .15 mile (min)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Crossing time at max speed (min)		14.80	14.80	14.80	19.30	19.94	14.80	14.80	14.80	19.30	19.94	21.90	21.90	21.50	16.12	13.94	7.04	6.20	6.00	10.50	5.30	5.30	5.10	9.60	7.04	7.04	6.74	4.84	18.70	10.60	24.86
Crossing time at reduced speed (min)		8.14	12.43	4.29	2.57	2.57	8.14	12.43	4.29	2.57	2.57	12.86	17.14	2.14	2.14	2.14	10.71	12.43	4.29	2.57	8.14	12.43	4.29	2.57	10.71	15.00	0.00	0.00	8.57	4.29	4.29
Time allowed for maneuvers over last .15 mile (min)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Time allowed for passenger unloading (min)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Total Crossing Time		33.94	38.23	30.09	32.87	33.51	33.94	38.23	30.09	32.87	33.51	45.26	49.54	34.14	28.76	26.58	28.25	29.13	20.79	23.57	24.94	29.23	20.89	23.67	28.75	33.04	17.74	15.84	38.27	25.89	40.14
Margin for delay en route (% of crossing time)	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Margin for Delay Crossing Time		**33.94**	**38.23**	**30.09**	**32.87**	**33.51**	**33.94**	**38.23**	**30.09**	**32.87**	**33.51**	**45.26**	**49.54**	**34.14**	**28.76**	**26.58**	**28.25**	**29.13**	**20.79**	**23.57**	**24.94**	**29.23**	**20.89**	**23.67**	**28.75**	**33.04**	**17.74**	**15.84**	**38.27**	**25.89**	**40.14**
Number of Crossings in 4 hr Window	210	**6.19**	**5.49**	**6.98**	**6.39**	**6.27**	**6.19**	**5.49**	**6.98**	**6.39**	**6.27**	**4.64**	**4.24**	**6.15**	**7.30**	**7.90**	**7.43**	**7.21**	**10.10**	**8.91**	**8.42**	**7.18**	**10.05**	**8.87**	**7.30**	**6.36**	**11.84**	**13.26**	**5.49**	**8.11**	**5.23**

MEDIUM ESTIMATE	**Base Assumption**	**Kenmore LB-UW WAC**	**Kenmore LB-UW (OD)**	**Kenmore LB-Madison**	**Kenmore LB-Leschi**	**Kenmore LB-Bellevue**	**Kenmore LP – UW WAC**	**Kenmore LP – UW (OD)**	**Kenmore LP – Madison**	**Kenmore LP – Leschi**	**Kenmore LB-Bellevue**	**Renton – UW WAC**	**Renton – UW (OD)**	**Renton – Madison**	**Renton – Leschi**	**Renton – Bellevue**	**Kirkland (MP) – UW WAC**	**Kirkland (MP) – UW (OD)**	**Kirkland (MP) – Madison**	**Kirkland (MP) – Leschi**	**Kirkland (CP) – UW WAC**	**Kirkland (CP) – UW (OD)**	**Kirkland (CP) – Madison**	**Kirkland (CP) – Leschi**	**Bellevue – UW WAC**	**Bellevue – UW (OD)**	**Bellevue – Madison**	**Bellevue – Leschi**	**Des Moines – Pier 50**	**Ballard Marina –Pier 50**	**Ballard (24th)– SLU**
Route length (nautical miles)		8.65	9.15	8.20	10.30	10.57	8.80	9.30	8.35	10.45	10.72	12.55	13.05	11.10	8.46	7.32	4.15	4.65	3.60	5.70	3.75	4.25	3.20	5.30	4.87	5.37	3.47	2.57	10.35	5.80	3.40
Route length at max speed		7.40	7.40	7.40	9.65	9.97	7.40	7.40	7.40	9.65	9.97	10.95	10.95	10.75	8.06	6.97	3.52	3.10	3.00	5.25	2.65	2.65	2.55	4.80	3.52	3.52	3.37	2.42	9.35	5.30	2.90
Route length at reduced speed	0.00	0.95	1.45	0.50	0.30	0.30	0.95	1.45	0.50	0.30	0.30	1.50	2.00	0.25	0.25	0.25	1.25	1.45	0.50	0.30	0.95	1.45	0.50	0.30	1.25	1.75	0.00	0.00	1.00	0.50	0.50
Max Speed (knots)	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	7.00
Reduced Speed (knots)	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Time allowed for passenger loading (min)	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Time allowed for maneuvers over first .15 mile (min)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Crossing time at max speed (min)		12.69	12.69	12.69	16.54	17.09	12.69	12.69	12.69	16.54	17.09	18.77	18.77	18.43	13.82	11.95	6.03	5.31	5.14	9.00	4.54	4.54	4.37	8.23	6.03	6.03	5.78	4.15	16.03	9.09	24.86
Crossing time at reduced speed (min)		8.14	12.43	4.29	2.57	2.57	8.14	12.43	4.29	2.57	2.57	12.86	17.14	2.14	2.14	2.14	10.71	12.43	4.29	2.57	8.14	12.43	4.29	2.57	10.71	15.00	0.00	0.00	8.57	4.29	4.29
Time allowed for maneuvers over last .15 mile (min)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Time allowed for passenger unloading (min)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Total Crossing Time		31.83	36.11	27.97	30.11	30.66	31.83	36.11	27.97	30.11	30.66	42.13	46.41	31.07	26.46	24.59	27.25	28.24	19.93	22.07	24.19	28.47	20.16	22.30	27.75	32.03	16.78	15.15	35.60	24.37	40.14
Margin for delay en route (% of crossing time)	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Margin for Delay Crossing Time		**31.83**	**36.11**	**27.97**	**30.11**	**30.66**	**31.83**	**36.11**	**27.97**	**30.11**	**30.66**	**42.13**	**46.41**	**31.07**	**26.46**	**24.59**	**27.25**	**28.24**	**19.93**	**22.07**	**24.19**	**28.47**	**20.16**	**22.30**	**27.75**	**32.03**	**16.78**	**15.15**	**35.60**	**24.37**	**40.14**
Number of Crossings in 4 hr Window	210	**6.60**	**5.81**	**7.51**	**6.97**	**6.85**	**6.60**	**5.81**	**7.51**	**6.97**	**6.85**	**4.98**	**4.52**	**6.76**	**7.94**	**8.54**	**7.71**	**7.44**	**10.54**	**9.51**	**8.68**	**7.38**	**10.42**	**9.42**	**7.57**	**6.56**	**12.52**	**13.86**	**5.90**	**8.62**	**5.23**

FAST ESTIMATE	**Base Assumption**	**Kenmore LB-UW WAC**	**Kenmore LB-UW (OD)**	**Kenmore LB-Madison**	**Kenmore LB-Leschi**	**Kenmore LB-Bellevue**	**Kenmore LP – UW WAC**	**Kenmore LP – UW (OD)**	**Kenmore LP – Madison**	**Kenmore LP – Leschi**	**Kenmore LB-Bellevue**	**Renton – UW WAC**	**Renton – UW (OD)**	**Renton – Madison**	**Renton – Leschi**	**Renton – Bellevue**	**Kirkland (MP) – UW WAC**	**Kirkland (MP) – UW (OD)**	**Kirkland (MP) – Madison**	**Kirkland (MP) – Leschi**	**Kirkland (CP) – UW WAC**	**Kirkland (CP) – UW (OD)**	**Kirkland (CP) – Madison**	**Kirkland (CP) – Leschi**	**Bellevue – UW WAC**	**Bellevue – UW (OD)**	**Bellevue – Madison**	**Bellevue – Leschi**	**Des Moines – Pier 50**	**Ballard Marina –Pier 50**	**Ballard (24th)– SLU**
Route length (nautical miles)		8.65	9.15	8.20	10.30	10.57	8.80	9.30	8.35	10.45	10.72	12.55	13.05	11.10	8.46	7.32	4.15	4.65	3.60	5.70	3.75	4.25	3.20	5.30	4.87	5.37	3.47	2.57	10.35	5.80	3.40
Route length at max speed		7.40	7.40	7.40	9.65	9.97	7.40	7.40	7.40	9.65	9.97	10.95	10.95	10.75	8.06	6.97	3.52	3.10	3.00	5.25	2.65	2.65	2.55	4.80	3.52	3.52	3.37	2.42	9.35	5.30	2.90
Route length at reduced speed	0.00	0.95	1.45	0.50	0.30	0.30	0.95	1.45	0.50	0.30	0.30	1.50	2.00	0.25	0.25	0.25	1.25	1.45	0.50	0.30	0.95	1.45	0.50	0.30	1.25	1.75	0.00	0.00	1.00	0.50	0.50
Max Speed (knots)	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	7.00
Reduced Speed (knots)	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Time allowed for passenger loading (min)	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Time allowed for maneuvers over first .15 mile (min)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Crossing time at max speed (min)		11.68	11.68	11.68	15.24	15.74	11.68	11.68	11.68	15.24	15.74	17.29	17.29	16.97	12.73	11.01	5.56	4.89	4.74	8.29	4.18	4.18	4.03	7.58	5.56	5.56	5.32	3.82	14.76	8.37	24.86
Crossing time at reduced speed (min)		8.14	12.43	4.29	2.57	2.57	8.14	12.43	4.29	2.57	2.57	12.86	17.14	2.14	2.14	2.14	10.71	12.43	4.29	2.57	8.14	12.43	4.29	2.57	10.71	15.00	0.00	0.00	8.57	4.29	4.29
Time allowed for maneuvers over last .15 mile (min)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Time allowed for passenger unloading (min)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Total Crossing Time		30.83	35.11	26.97	28.81	29.31	30.83	35.11	26.97	28.81	29.31	40.65	44.93	29.62	25.37	23.65	26.77	27.82	19.52	21.36	23.83	28.11	19.81	21.65	27.27	31.56	16.32	14.82	34.33	23.65	40.14
Margin for delay en route (% of crossing time)	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Margin for Delay Crossing Time		**30.83**	**35.11**	**26.97**	**28.81**	**29.31**	**30.83**	**35.11**	**26.97**	**28.81**	**29.31**	**40.65**	**44.93**	**29.62**	**25.37**	**23.65**	**26.77**	**27.82**	**19.52**	**21.36**	**23.83**	**28.11**	**19.81**	**21.65**	**27.27**	**31.56**	**16.32**	**14.82**	**34.33**	**23.65**	**40.14**
Number of Crossings in 4 hr Window	210	**6.81**	**5.98**	**7.79**	**7.29**	**7.16**	**6.81**	**5.98**	**7.79**	**7.29**	**7.16**	**5.17**	**4.67**	**7.09**	**8.28**	**8.88**	**7.84**	**7.55**	**10.76**	**9.83**	**8.81**	**7.47**	**10.60**	**9.70**	**7.70**	**6.65**	**12.87**	**14.17**	**6.12**	**8.88**	**5.23**

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Attachment E

Route Competitiveness and Accessibility Data

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Route Competitiveness and Accessibility
Site: Kenmore - Log Boom Park

Site: Kenmore - Log Boom Park
POF and Connection to Seattle/Bellevue Travel Time, Seat Changes, and Fare

UW: Washington Athletic Center											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			31.828571	AM	7:44	7:54	10	$ 4.75	54.83	3	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			31.8285714	$ 4.75	54.83	3	
UW: Oceanography Dock											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			36.114286	AM	7:44	7:54	10	$ 4.75	67.11	3	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			36.1142857	$ 4.75	67.11	3	
Madison Park											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Madison Park to Downtown				Summary of Route			
AM			27.971429	AM	7:22	7:47	25	$ 4.75	61.97	3	Metro RT 11
Bus/Express Bus from Madison Park to Downtown				POF				Summary of Route			
PM	5:14	5:45	31	PM			27.9714286	$ 4.75	67.97	3	Metro RT 11
Leschi											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Leschi to Downtown				Summary of Route			
AM			30.114286	AM	7:33	7:55	22	$ 4.75	61.11	3	Metro RT 27
Bus/Express Bus from Leschi to Downtown				POF				Summary of Route			
PM	5:01	5:27	26	PM			30.1142857	$ 4.75	65.11	3	Metro RT 27
Belleuve: Meydenbauer Bay											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Bellevue	Seat Changes	Comments
POF				Bus to Bellevue Transit Center				Summary of Route			
AM			30.662857	AM	7:54	7:55	1	$ 4.75	49.66	3	Metro 271
AM			30.662857	AM	7:57	7:59	2	$ 4.75	49.66	3	ST 550
Bellevue Transit Center to Dock				POF							
PM	5:04	5:07	2	PM			30.6628571	$ 4.75	49.66	3	Metro 271
PM	5:03	5:05	2	PM			30.6628571	$ 4.75	49.66	3	ST 550

Route Competitiveness and Accessibility
Site: Kenmore - Log Boom Park

Site: Kenmore - Log Boom Park
Current Public Transit Option Travel Time and Seat Change

Bus/Express Bus/Light Rail to Seattle						
	Depart	Arrive	Travel Time to/from Seattle	Seat Changes	Fare	Comments
AM	6:56	7:35	39	0	$ 2.50	ST Express Bus 522
AM	7:14	7:53	39	0	$ 3.25	Metro 312 Express
PM	5:04	5:49	45	0	$ 3.25	Metro 312 Express
PM	5:08	5:52	44	0	$ 2.50	ST Express Bus 522
Bus/Express Bus/Light Rail to Bellevue						
	Depart	Arrive	Travel Time to/from Bellevue	Seat Changes	Fare	Comments
AM	6:42	4:40	58	0	$ 2.75	Metro 234
AM	7:09	7:50	41	0	$ 2.75	Metro 342
PM	5:05	6:09	67	0	$ 2.75	Metro 234
PM	5:08	5:50	42	0	$ 2.75	Metro 342

Current Personal Vehicle Option Travel Time and Seat Change

Car	14.1 miles to Seattle					
	Depart	Arrive	Travel Time to/from Seattle	Seat Changes	Cost	Comments
AM	7:17	8:00	43	0	$ 8.11	
PM	5:00	5:42	42	0	$ 8.11	
Car	13.9 miles to Bellevue					
	Depart	Arrive	Travel Time to/from Bellevue	Seat Changes	Cost	Comments
AM	7:24	8:00	36	0	$ 7.99	
PM	5:00	5:38	38	0	$ 7.99	

Site: Kenmore - Log Boom Park

Parking Availability

Park and Ride Facilities				
Location/Address	Distance from Terminal (miles)	Parking Spaces	Capacity	Bus Connections
Bethany Bible Church 6214 Bothell Way NE	0.5	75	Limited, filled by 90% weekdays	Metro: 309, 312, 331, 342, 372 ST: 522
Kenmore Community Church 7504 NE Bothell Way	1.3	15	Limited, filled by 90% weekdays	Metro: 234, 244, 309, 312, 331, 342, 372 ST: 522
Kenmore Park & Ride 7346 NE Bothell Way	1.2	603	Limited, filled by 90% weekdays	Metro: 234, 244, 309, 312, 331, 342, 372 ST: 522

Route Competitiveness and Accessibility
Site: Kenmore - Lakepointe

POF and Connection to Seattle/Bellevue Travel Time, Seat Changes, and Fare

UW: Washington Athletic Center											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			31.82857143	AM	7:44	7:54	10	$ 4.75	47.82857143	2	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			31.8285714	$ 4.75	47.82857143	2	
UW: Oceanography Dock											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			36.11428571	AM	7:44	7:54	10	$ 4.75	60.11428571	2	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			36.1142857	$ 4.75	60.11428571	2	
Madison Park											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Madison Park to Downtown				Summary of Route			
AM			27.97142857	AM	7:22	7:47	25	$ 4.75	54.97142857	2	Metro RT 11
Bus/Express Bus from Madison Park to Downtown				POF				Summary of Route			
PM	5:14	5:45	31	PM			27.9714286	$ 4.75	60.97142857	2	Metro RT 11
Leschi											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Leschi to Downtown				Summary of Route			
AM			30.11428571	AM	7:33	7:55	22	$ 4.75	54.11428571	2	Metro RT 27
Bus/Express Bus from Leschi to Downtown				POF				Summary of Route			
PM	5:01	5:27	26	PM			30.1142857	$ 4.75	58.11428571	2	Metro RT 27

Route Competitiveness and Accessibility
Site: Kenmore - Lakepointe

Belleuve: Maydenbauer Bay											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Bellevue	Seat Changes	Comments
POF				Bus to Bellevue Transit Center				Summary of Route			
AM			30.66285714	AM	7:54	7:55	1	$ 4.75	44.66285714	2	Metro 271
AM			30.66285714	AM	7:57	7:59	2	$ 4.75	43.66285714	2	ST 550
Bellevue Transit Center to Dock				POF				Summary of Route			
PM	5:04	5:07	2	PM			30.6628571	$ 4.75	44.66285714	2	Metro 271
PM	5:03	5:05	2	PM			30.6628571	$ 4.75	44.66285714	2	ST 550

Current Public Transit Option Travel Time and Seat Change

Bus/Express Bus/Light Rail to Seattle						
	Depart	Arrive	Time to/from Seattle	Seat Changes	Fare	Comments
AM	6:56	7:35	39	0	$ 2.50	ST Express Bus 522
AM	7:14	7:53	39	0	$ 3.25	Metro 312 Express
PM	5:04	5:49	45	0	$ 3.25	Metro 312 Express
PM	5:08	5:52	44	0	$ 2.50	ST Express Bus 522
Bus/Express Bus/Light Rail to Bellevue						
	Depart	Arrive	Travel Time to/from Bellevue	Seat Changes	Fare	Comments
AM	6:42	4:40	58	0	$ 2.75	Metro 234
AM	7:09	7:50	41	0	$ 2.75	Metro 342
PM	5:05	6:09	67	0	$ 2.75	Metro 234
PM	5:08	5:50	42	0	$ 2.75	Metro 342

Current Personal Vehicle Option Travel Time and Seat Change

Car	14.1 miles to Seattle					
	Depart	Arrive	Travel Time to/from Seattle	Seat Changes	Cost	Comments
AM			43	0	$ 8.11	via I-522 and I-5
PM			42	0	$ 8.11	via I-522 and I-5
Car	13.9 miles to Bellevue					
	Depart	Arrive	Travel Time to/from	Seat Changes	Cost	Comments
AM			36	0	$ 7.99	Via I-405
PM			38	0	$ 7.99	Via I-405

Route Competitiveness and Accessibility
Site: Kenmore - Lakepointe

Parking Availability

Park and Ride Facilities				
Location/Address	Distance from Terminal (miles)	Parking Spaces	Capacity	Bus Connections
Bethany Bible Church	0.5	75	Limited, filled by	Metro: 309, 312, 331, 342, 372
Kenmore Community Church	1.3	15	Limited, filled by	Metro: 234, 244, 309, 312, 331, 342,
Kenmore Park & Ride	1.2	603	Limited, filled by	Metro: 234, 244, 309, 312, 331, 342,

Route Competitiveness and Accessibility
Site: Kirkland - Marina Park

POF and Connection to Seattle Travel Time, Seat Changes, and Fare

UW: Washington Athletic Center											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			27.24857143	AM	7:44	7:54	10	$ 4.75	48.25	3	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			27.24857143	$ 4.75	48.25	3	
UW: Oceanography Dock											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			28.24285714	AM	7:44	7:54	10	$ 4.75	57.24	3	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			28.24285714	$ 4.75	57.24	3	
Madison Park											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Madison Park to Downtown				Summary of Route			
AM			19.92857143	AM	7:22	7:47	25	$ 4.75	51.93	3	
Bus/Express Bus from Madison Park to Downtown				POF				Summary of Route			
PM	5:14	5:45	31	PM			19.92857143	$ 4.75	57.93	3	
Leschi											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Leschi to Downtown				Summary of Route			
AM			22.07142857	AM	7:33	7:55	22	$ 4.75	51.07	3	
Bus/Express Bus from Leschi to Downtown				POF				Summary of Route			
PM	5:01	5:27	26	PM			22.07142857	$ 4.75	55.07	3	

Current Public Transit Option Travel Time and Seat Change

Bus/Express Bus/Light Rail						
	Depart	Arrive	Travel Time to/from Seattle	Seat Changes	Fare	Comments
AM	7:22	7:56	34	0	$ 3.25	Metro RT 255
PM	5:03	5:48	45	0	$ 3.25	Metro RT 255

Current Personal Vehicle Option Travel Time and Seat Change

Car	14.1 miles via 520			17 miles via I-90		
	Depart	Arrive	Total Travel Time to/from Seattle	Seat Changes	Cost	Comments
AM	7:38	8:00	22	0	$ 11.91	520
AM	7:34	8:00	26	0	$ 9.78	90
PM	5:00	5:28	28	0	$ 11.91	520
PM	5:00	5:30	30	0	$ 9.78	90

Route Competitiveness and Accessibility
Site: Kirkland - Marina Park

Parking Availability

Park and Ride Facilities				
Location/Address	Distance from Terminal (miles)	Parking Spaces	Capacity	Bus Connections
Holy Spirit Lutheran Church 10021 NE 124th St	2.6	40		Metro: 234, 244, 255, 277
Houghton P&R 7024 116th Ave NE	1.9	470		Metro: 234, 245, 277, 342, 952, 981, 986
Kingsgate P&R 13001 116th Way NE	4.1	502	90% full by 9 AM weekdays	Metro: 235, 238, 244, 252, 255, 257, 277, 930
Kirkland Way P&R NE 85th St and Kirkland Way	1	20		Metro: 248
Korean Covenant Church of Kirkland 14220 Juanita/Woodinville	3.9	30		Metro: 238, 257
South Kirkland P&R 3677 108th Ave NE Bellevue	2.7	833	90% full by 9 AM weekdays	Metro: 234, 235, 249, 255, 981, 986 ST: 540

Route Competitiveness and Accessibility
Site: Kirkland - Carillon Point

POF and Connection to Seattle Travel Time, Seat Changes, and Fare

UW: Washington Athletic Center											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			24.18571429	AM	7:44	7:54	10	$ 4.75	40.19	3	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			24.1857143	$ 4.75	40.19	3	
UW: Oceanography Dock											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			28.47142857	AM	7:44	7:54	10	$ 4.75	48.19	3	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			28.4714286	$ 4.75	48.19	3	
Madison Park											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Madison Park to Downtown				Summary of Route			
AM			20.15714286	AM	7:22	7:47	25	$ 4.75	47.16	3	
Bus/Express Bus from Madison Park to Downtown				POF				Summary of Route			
PM	5:14	5:45	31	PM			20.1571429	$ 4.75	53.16	3	
Leschi											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Leschi to Downtown				Summary of Route			
AM			22.3	AM	7:33	7:55	22	$ 4.75	46.30	3	
Bus/Express Bus from Leschi to Downtown				POF				Summary of Route			
PM	5:01	5:27	26	PM			22.3	$ 4.75	50.30	3	

Current Public Transit Option Travel Time and Seat Change

Bus/Express Bus/Light Rail						
	Depart	Arrive	Travel Time to/from Seattle	Seat Changes	Fare	Comments
AM	7:29	7:56	27	0	$ 3.25	Metro RT 255
PM	5:02	5:32	30	0	$ 3.25	Metro RT 255

Current Personal Vehicle Option Travel Time and Seat Change

Car	9 miles via		13.3 via I-90			
	Depart	Arrive	Travel Time to/from Seattle	Seat Changes	Cost	Comments
AM	7:42	8:00	18	0	$ 8.98	Via 520
AM	7:36	8:00	24	0	$ 7.65	Via 90
PM	5:00	5:18	18	0	$ 8.98	Via 520
PM	5:00	5:27	27	0	$ 7.65	Via 90

Route Competitiveness and Accessibility
Site: Kirkland - Carillon Point

Parking Availability

Park and Ride Facilities				
Location/Address	Distance from Terminal (miles)	Parking Spaces	Capacity	Bus Connections
Holy Spirit Lutheran Church 10021 NE 124th St	4.1	40		Metro: 234, 244, 255, 277
Houghton P&R 7024 116th Ave NE	1.8	470		Metro: 234, 245, 277, 342, 952, 981, 986
Kingsgate P&R 13001 116th Way NE	4.9	502	90% full by 9 AM weekdays	Metro: 235, 238, 244, 252, 255, 257, 277, 930
Kirkland Way P&R NE 85th St and Kirkland Way	1.9	20		Metro: 248
Korean Covenant Church of Kirkland 14220 Juanita/Woodinville	5.4	30		Metro: 238, 257
South Kirkland P&R 3677 108th Ave NE Bellevue	1.3	833	90% full by 9 AM weekdays	Metro: 234, 235, 249, 255, 981, 986 ST: 540

Route Competitiveness and Accessibility
Site: Bellevue

POF and Connection to Seattle Travel Time, Seat Changes, and Fare

UW: Washington Athletic Center											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			27.74857143	AM	7:44	7:54	10	$ 4.75	51.75	2	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			27.74857143	$ 4.75	51.75	2	
UW: Oceanography Dock											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			32.03428571	AM	7:44	7:54	10	$ 4.75	64.03	2	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			32.03428571	$ 4.75	64.03	2	
Madison Park											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Madison Park to Downtown				Summary of Route			
AM			16.77714286	AM	7:22	7:47	25	$ 4.75	51.78	2	
Bus/Express Bus from Madison Park to Downtown				POF				Summary of Route			
PM	5:14	5:45	31	PM			16.77714286	$ 4.75	57.78	2	
Leschi											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Leschi to Downtown				Summary of Route			
AM			15.14857143	AM	7:33	7:55	22	$ 4.75	47.15	2	
Bus/Express Bus from Leschi to Downtown				POF				Summary of Route			
PM	5:01	5:27	26	PM			15.14857143	$ 4.75	51.15	2	

Current Public Transit Option Travel Time and Seat Change

Bus/Express Bus/Light Rail						
	Depart	Arrive	Travel Time to/from Seattle	Seat Changes	Fare	Comments
AM	7:24	7:56	32	0	$ 2.50	ST 550
PM	5:01	5:34	33	0	$ 2.50	ST 550

Current Personal Vehicle Option Travel Time and Seat Change

Car	11	miles via	11.6	via I90		
	Depart	Arrive	Travel Time to/from Seattle	Seat Changes	Cost	Comments
AM	7:41	8:00	22	0	$ 10.13	520
AM	7:35	8:00	28	0	$ 6.67	90
PM	5:00	5:18	25	0	$ 10.13	520
PM	5:00	5:26	28	0	$ 6.67	90

Route Competitiveness and Accessibility
Site: Bellevue

Parking Availability

Park and Ride Facilities				
Location/Address	Distance from Terminal (miles)	Parking Spaces	Capacity	Bus Connections
Bellevue Christian Reformed Church 1221 148th Ave NE	3.8	20		Metro: 221
Bellevue Foursquare Church 2015 Richards Rd	3.1	35		Metro: 240
Eastgate P&R 14200 SE Eastgate Way	4.5	1614	90% Filled by 9 AM	Metro: 212, 217, 221, 226, 240, 241, 245, 246, 271, 888, 989 ST: 555
Grace Lutheran Church NE 8th St & 96th Ave NE	0.4	50	90% Filled by 9 AM	Metro: 271
Newport Covenant Church 12800 SE Coal Creek Pkwy	4.6	75		Metro: 240, 245
South Bellevue P&R 2700 Bellevue Wy SE	2.3	519	90% Filled by 9 AM	Metro: 241, 249, 981 ST: 550, 555, 556, 560
St Andrew's Lutheran Church	4.7	20		Metro: 221, 245, 271
St Luke's Lutheran Church 3030 Bellevue Way NE	2.2	30		Car/Vanpool only
Wilburton P&R 720 114th Ave SE	1.6	186	90% Filled by 9 AM	Metro: 240, 246, 342, 952

Route Competitiveness and Accessibility
Site: Renton

POF and Connection to Seattle/Bellevue Travel Time, Seat Changes, and Fare

UW: Washington Athletic Center											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			42.12857143	AM	7:44	7:54	10	$ 4.75	58.13	3	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			42.1285714	$ 4.75	58.13	3	
UW: Oceanography Dock											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Light Rail from University Link Station to University Street Station Downtown				Summary of Route			
AM			46.41428571	AM	7:44	7:54	10	$ 4.75	70.41	3	
Light rail from University Link Station from University Street Station Downtown				POF				Summary of Route			
PM	5:00	5:10	10	PM			46.4142857	$ 4.75	70.41	3	
Madison Park											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Madison Park to Downtown				Summary of Route			
AM			31.07142857	AM	7:22	7:47	25	$ 4.75	58.07	3	
Bus/Express Bus from Madison Park to Downtown				POF				Summary of Route			
PM	5:14	5:45	31	PM			31.0714286	$ 4.75	64.07	3	
Leschi											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Bus/Express Bus from Leschi to Downtown				Summary of Route			
AM			26.46	AM	7:33	7:55	22	$ 4.75	50.46	3	
Bus/Express Bus from Leschi to Downtown				POF				Summary of Route			
PM	5:01	5:27	26	PM			26.46	$ 4.75	54.46	3	
Belleuve: Maydenbauer Bay											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Bellevue	Seat Changes	Comments
POF				Bus to Bellevue Transit Center				Summary of Route			
AM			24.59142857	AM	7:54	7:55	1	$ 4.75	38.59	3	Metro 271
AM			24.59142857	AM	7:57	7:59	2	$ 4.75	37.59	3	ST 550
Bellevue Transit Center to Dock				POF				Summary of Route			
PM	5:04	5:07	2	PM			24.5914286	$ 4.75	38.59	3	Metro 271
PM	5:03	5:05	2	PM			24.5914286	$ 4.75	38.59	3	ST 550

Route Competitiveness and Accessibility
Site: Renton

Current Public Transit Option Travel Time and Seat Change

Bus/Express Bus/Light Rail to Seattle						
	Depart	Arrive	Travel Time to/from Bellevue	Seat Changes	Fare	Comments
AM	7:20	7:51	31	0	$ 3.25	Metro RT 143
PM	5:17	5:53	36	0	$ 3.25	Metro RT 143
Bus/Express Bus/Light Rail to Bellevue						
	Depart	Arrive	Travel Time to/from Bellevue	Seat Changes	Fare	Comments
AM	7:24	7:47	23	0	$ 2.50	ST RT 560
PM	5:00	5:40	40	0	$ 2.50	ST RT 560

Current Personal Vehicle Option Travel Time and Seat Change

Car	17.7	via 99	12.4	via I-5		
	Depart	Arrive	Travel Time to/from Seattle	Seat Changes	Cost	Comments
AM	7:28	8:00	32	0	$ 10.18	via 99
AM	7:22	8:00	38	0	$ 7.13	via I-5
PM	5:00	5:32	32	0	$ 10.18	via 99
PM	5:00	5:37	37	0	$ 7.13	via I-5
Car	10.6	miles to Bellevue				
	Depart	Arrive	Travel Time to/from Bellevue	Seat Changes	Cost	Comments
AM	7:30	8:00	30	0	$ 6.10	
PM	5:00	5:34	34	0	$ 6.10	

Route Competitiveness and Accessibility
Site: Renton

Parking Availability

Park and Ride Facilities				
Location/Address	Distance from Terminal (miles)	Parking Spaces	Capacity	Bus Connections
City View Church 255 Hardie Ave SW	2	96		Metro: 101, 102, 107, 143
Fairwood Assembly of God 13120 SE 192nd St	6.7	25		Car/Vanpool only
Kennydale United Methodist Church 3005 Park Ave N	1.5	50	Fills to 90% by 9 AM weekdays	Metro: 111, 167, 342, 952 ST: 560
Nativity Lutheran Church 17707 140th Ave SE	5.8	49		Metro: 102, 148, 906 DART
New Life Church at Renton 15711 152nd Ave SE	4.8	25		Metro: 143, 907 DART
Renton City Municipal Garage 655 S 2nd St	1.6	150	Fills to 90% by 9 AM weekdays	Metro: Rapidride F, 101, 105, 106, 107, 143, 148, 153, 167, 169, 240, 342, 907 DART, 908 DART ST: 560, 566
Renton Fred Meyer 365 Renton Center Way SW	2.2	21	Fills to 90% by 9 AM weekdays	Metro: 101, 102, 107, 143
Renton Transit Center P&R Garage 232 Burnett Ave S	1.7	150	Fills to 90% by 9 AM weekdays	Metro: Rapidride F, 101, 105, 106, 107, 143, 148, 153, 167, 169, 240, 342, 907 DART, 908 DART ST: 560, 566
South Renton P&R S Grady Way and Shattuck Ave	2.3	373	Fills to 90% by 9 AM weekdays	Metro: 101, 102, 148, 153, 167, 169
St. Matthew Lutheran Church 2516 NE 16th St	1.2	128	Fills to 90% by 9 AM weekdays	Metro: 105, 111

Route Competitiveness and Accessibility
Site: Des Moines

POF and Connection to Seattle Travel Time, Seat Changes, and Fare

Pier 50											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Pier 50 to Downtown				Summary of Route			
AM			35.6	AM	7:45	8:00	15	$ 4.75	50.6	0	Walk from Pier 50
AM			35.6	AM	7:56	7:58	46.6	$ 4.75	46.6	2	Walk and bus to University St.
From Downtown to Pier 50				POF				Summary of Route			
PM	5:00	5:15	15	PM			35.6	$ 4.75	50.6	0	Walk to Pier 50
PM	5:01	5:04	47.6	PM			35.6	$ 4.75	47.6	2	Bus and walk from University St.

Current Public Transit Option Travel Time and Seat Change

Bus/Express Bus/Light Rail						
	Depart	Arrive	Total Travel Time to/from Seattle	Seat Changes	Fare	Comments
AM	6:59	7:56	57	1	$ 5.75	Link to Rapidride A
AM	7:16	7:44	28	0	$ 3.25	Metro 159
PM	5:01	5:34	57	1	$ 5.75	Link to Rapidride A
PM	5:13	5:47	34	0	$ 3.25	Metro 159

Current Personal Vehicle Option Travel Time and Seat Change

Car 17 miles						
	Depart	Arrive	Total Travel Time to/from Seattle	Seat Changes	Cost	Comments
AM	7:23	8:00	37	0	$ 9.78	
PM	5:00	5:34	34	0	$ 9.78	

Route Competitiveness and Accessibility
Site: Des Moines

Parking Availability

Park and Ride Facilities				
Location/Address	Distance from Terminal (miles)	Parking Spaces	Capacity	Bus Connections
Kent-Des Moines Park and Ride 23405 Military Rd S	2.6	370	Fills to 90% by 9 AM	Metro: 158, 159, 166, 192, 193, 197 ST: 574
Burien Transit Center 14900 4th Avenue SW	5.5	488		Metro: Rapidride F, 120, 121, 122, 123, 131, 132, 166, 180

Route Competitiveness and Accessibility
Site: Ballard - Shilshole

POF and Connection to Seattle Travel Time, Seat Changes, and Fare

Pier 50											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				Pier 50 to Downtown				Summary of Route			
AM			24.37	AM	7:45	8:00	15	$ 4.75	39.37	0	Walk to downtown
From Downtown to Pier 50				POF				Summary of Route			
PM	5:00	5:15	15	PM			24.37	$ 4.75	39.37	0	Walk to downtown

Current Public Transit Option Travel Time and Seat Change

Bus/Express Bus/Light Rail						
	Depart	Arrive	Total Travel Time to/from Seattle	Seat Changes	Fare	Comments
AM	7:35	7:56	21	0	$ 2.75	Metro 17
PM	5:02	5:30	28	0	$ 2.75	Metro 18

Current Personal Vehicle Option Travel Time and Seat Change

Car 5.6 miles						
	Depart	Arrive	Total Travel Time to/from Seattle	Seat Changes	Cost	Comments
AM	7:40	8:00	20	0	$ 3.22	
PM	5:00	5:24	24	0	$ 3.22	

Route Competitiveness and Accessibility
Site: Ballard - Shilshole

Parking Availability

Park and Ride Facilities				
Location/Address	Distance from Terminal (miles)	Parking Spaces	Capacity	Bus Connections
NA - Closest park and ride is Green Lake Park and Ride over 5 miles from the marina.				

Route Competitiveness and Accessibility
Site: Ballard - 24th Avenue NW

Site: Ballard (Ship Canal at 24th Ave NW)
POF and Connection to Seattle Travel Time, Seat Changes, and Fare

SLU											
	Depart	Arrive	Travel Time (min)		Depart	Arrive	Travel Time (min)	Total Fare	Total Travel Time to/from Seattle	Seat Changes	Comments
POF				SLU to Downtown				Summary of Route			
AM			40.14	AM	7:26	8:00	34	$ 4.75	74.14	0	Walk to downtown
AM			40.14	AM	7:37	7:47	12	$ 4.75	55.14	2	Walk to bus to downtown
From Downtown to SLU				POF				Summary of Route			
PM	7:26	8:00	34	PM			40.14	$ 4.75	74.14	0	Walk from downtown
PM	5:05	5:19	14	PM			40.14	$ 4.75	57.14	2	Walk to bus from downtown

Current Public Transit Option Travel Time and Seat Change

Bus/Express Bus/Light Rail						
	Depart	Arrive	Total Travel Time to/from Seattle	Seat Changes	Fare	Comments
AM	7:35	7:56	21	0	$ 2.75	Metro RT 17
PM	5:02	5:30	28	0	$ 2.75	Metro RT 18

Current Personal Vehicle Option Travel Time and Seat Change

Car 5.6 miles						
	Depart	Arrive	Total Travel Time to/from Seattle	Seat Changes	Cost	Comments
AM	7:40	8:00	20	0	$ 3.22	
PM	5:00	5:24	24	0	$ 3.22	

Route Competitiveness and Accessibility
Site: Ballard - 24th Avenue NW

Site: Ballard (Ship Canal at 24th Ave NW)
Parking Availability

Park and Ride Facilities				
Location/Address	Distance from Terminal (miles)	Parking Spaces	Capacity	Bus Connections
NA - Closest park and ride is Green Lake Park and Ride over 5 miles from the marina.				

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Attachment F

Landing Site Assessments

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Landing Site Assessment Matrix

Site Name: University of Washington - Waterfront Activities Center
Location/Address: The Waterfront Activities Center (WAC) is located at 3900 Montlake Blvd. NE, Seattle just south of Husky Stadium. The float is located at the southern end of the WAC, next to the Canoe House.

Description	Length	Width	Height
Ramp	15' 1"	7' 11'	
Dock/Float	110'	12'	
Freeboard*			1' 1"
Water Depth at Ramp*			8'

*Based on median elevation of the Lake Washington Ship Canal.

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	Yes			X	Wooden ramp is in fair condition but it includes three steps and should be replaced with a sloping ramp. Replace existing ramp with ADA compliant ramp. This will likely require the ramp to start further upland.
Railing	Yes		X		
ADA Accessibility	No			X	Due to the stairs, the ramp is not very accessible to ADA passengers.
Dock/Float	Yes		X		Wooden floating dock.
Dimensions (Approx.)	Yes	X			110' x 12 float allows room for either passenger loading or unloading. POF would likely interfere with other uses.
Freeboard	Yes			X	1' '1"
Fendering	No			X	Add fendering
Ladder	No			X	Add ladder
Railing	No			X	Add railing along at least one, but maybe both sides of the float.
Exposure	No	X			Facility is well sheltered in Union Bay.
Surface Condition	No			X	No existing vessel security measures. Fences and gates would interfere with other public uses.
Mooring Capability	Yes		X		Dock is likely adequate, but the cleats are inadequate to moor a 149 POF vessel.
Vessel Security	No			X	No existing vessel security measures. Fences and gates would interfere with other public uses.
In Water Work Required?	No	X			None.
Upland					
Accessibility					
General Assessment	No			X	There is a long distance between the marine facilities and major destinations at the University of Washington.
ADA Accessibility	No			X	There is a long distance between the marine facilities and major destinations at the University of Washington. Traffic barriers separate the parking area in front of the Canoe House from the path to the float.
Passenger Parking	No		X		There would be little demand for parking by riders since the University of Washington would be the destination for the majority of riders on this route. The University of Washington operates a large, pay parking lot on the south side of Husky Stadium. There is also a small amount of parking in front of the Canoe House.
Multi-Modal Connections					
Near Transit Stop	Yes	X			The Sound Transit University Link light-rail station will be opening in 2016 and is an approximately 6 minute walk from the WAC. While multiple bus routes serve the University District, the closest bus stop is .25 miles away from the landing site. Approximate trip time from the nearest bus stop serving downtown Seattle is 25-30 minutes.
Potential Shuttle Holding Area	Yes	X			Shuttle(s) could queue in parking lot.
Pedestrian Connections/ Trails	No			X	A trail extends west along the Montlake Cut and north along Union Bay, but is not the most direct route to major destinations. Pedestrian must walk through a large parking lot to Montlake Boulevard, across the street and further on to the destination. Also, plans to build a LINK light rail terminal at this site will create access and safety issues for POF riders.
Bicycle Facilities	Yes	X			This site provides easy access to the Burke Gilman Trail.
Sheltered Area or Potential Area	No		X		It may be possible to construct a shelter near the Canoe House.
Area for Signage, Customer Information and Ticketing	Yes	X			There is adequate area near the ramp to install customer signage, ticketing, and information.
Restrooms	Yes		X		Restrooms are provided at the WAC.
Safety					
Access and Egress from Dock/Ramp	No		X		Replacing the stairs with a ramp and paving the path to the ramp would increase safety.
Lighting	No			X	There is no lighting on the ramp or float. The area around the Canoe House has minimal lighting. Add lighting to the ramp and float.
Potential Conflicts with other Uses	Yes			X	This float and other surrounding floats are often used by non-motorized water craft. A passenger-only ferry could interfere with existing uses both on the water and upland facilities.

Landing Site Assessment Matrix

Site Name: University of Washington - Oceanography Dock

Location/Address: Oceanography Dock at the University of Washington

Description	Length	Width	Height
Ramp	N/A	N/A	N/A
Dock/Float	N/A	N/A	N/A
Small Wooden Dock w/ Seating & Bike Parking			
Freeboard*			1' 4"
Water Depth*			1' 7"
Concrete Walk - West End of Park			
Freeboard*			2' 10"
Water Depth at Ramp*			2' 10"

*Based on median elevation of the Lake Washington Ship Canal.

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	No			X	Adequate marine facilities do not exist, so this cannot be evaluated. Install a new ramp if necessary. The length, width and grade of the ramp would be determined by the location of the new float.
Railing	No				
ADA Accessibility	No				
Dock/Float	No				
Dimensions (Approx.)	No				
Freeboard	No			X	Existing facilities are not adequate, so freeboard measurements are insignificant.
Fendering	No				Add fendering
Ladder	No				Add ladder
Railing	No				
Exposure	No	X			Facility is well sheltered in Portage Bay.
Surface Condition	No			X	No existing vessel security measures. Fences and gates would interfere with other public uses.
Mooring Capability	No				Mooring capability could be incorporated into the upgraded marine facilities. Include mooring capability in design of new dock or float.
Vessel Security	No			X	Since this location would not be used for overnight moorage, limited vessel security measures could be incorporated into the upgraded marine or upland facilities. Include vessel security measures in design of new marine facilities.
In Water Work Required?	Yes				The water depth at the small wooden dock and concrete walk is not adequate for a 149 passenger-only vessel. Construct a new ramp and float or dock large enough to accommodate a 149 passenger-only vessel. An adequately sized dock or float would be approximately 1000 square feet and would need to extend out into the Montlake Cut far enough to reach an area with sufficient water depth (8').
Upland					
Accessibility					
General Assessment	Yes	X			Viewpoint has adequate pedestrian circulation.
ADA Accessibility	No			X	There is a long distance between the marine facilities and major destinations at the University of Washington. Traffic barriers separate the parking area in front of the Canoe House from the path to the float.
Passenger Parking	No				There would be little demand for parking by riders since Sakuma Viewpoint would be the destination for the majority of riders on this route. Paid parking is available at the Boat Street Marina and at the lot on the corner of NE Pacific Street and NE Boat Street.
Multi-Modal Connections					
Near Transit Stop	Yes	X			Multiple bus routes serve the University District along NE Campus Parkway and NE Pacific Street, approximately .3 miles from the park. Multiple routes run every 15-20 minutes to downtown during peak periods. Trip time to downtown Seattle is approximately 20 minutes.
Potential Shuttle Holding Area	No			X	Existing parking and bike lanes block any potential shuttle holding areas. Shuttle service may not be necessary if most users' destinations are within the University District area.
Pedestrian Connections/ Trails	Yes	X			Surrounding streets include sidewalks and the site very close to the Burke Gilman Trail, University of Washington and University of Washington Medical Center.
Bicycle Facilities	Yes	X			NE Boat Street includes a bike lake and the site is very close to the Burke Gilman Trail. There are multiple bike racks in the vicinity of the viewpoint.
Sheltered Area or Potential Area	No			X	The uplands area is small and it is unlikely that a shelter could be added to area. It may be possible to include a shelter as part of new marine facilities.
Area for Signage, Customer Information and Ticketing	No			X	A small amount of signage, information, and ticketing could likely be incorporated into the uplands area or added to new marine facilities.
Restrooms	No			X	
Safety					
Access and Egress from Dock/Ramp	No				Adequate marine facilities do not exist, so this cannot be evaluated.
Lighting	No			X	While street lightening exists along NE Boat Street, the viewpoint does not include any lighting. Add lighting to viewpoint and include in the design of new marine facilities.
Potential Conflicts with other Uses	Yes			X	The viewpoint is small and just west of a busy restaurant and kayak rental facility. A passenger-only ferry could interfere with existing uses both on the water and upland facilities.

Landing Site Assessment Matrix

Site Name: Madison Park
Location/Address: Madison Street Dock at eastern end of Madison Street.

Description	Length	Width	Height
Ramp	30'	11'	
Dock/Float	60'	11'	
Freeboard*			2' 9"
Water Depth at Ramp*			11'

*Based on median elevation of the Lake Washington Ship Canal.

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	Yes		X		Wooden plank ramp.
Railing	No			X	
ADA Accessibility	Yes			X	
Dock/Float	Yes	X			Wooden fixed pier on piles.
Dimensions (Approx.)	Yes			X	The 60' x 11' dock is not be long enough to accommodate a 149 passenger vessel. The dock allows little room for either passenger loading or unloading. POF would likely interfere with other uses. Replace or expand dock. An adequately sized dock would be approximately 1000 square feet.
Freeboard	X	X			2' 9"
Fendering	No			X	Add fendering to new or expanded dock.
Ladder	No			X	Add ladder to new or expanded dock.
Railing	No			X	Adding a railing along the dock would increase passenger safety, but would interfere with other uses. Add railing along one side of the new or expanded dock.
Exposure	Yes			X	
Surface Condition	Yes		X		Ramp surface consists of wooden planks, some of which are uneven and deteriorating; planks include knots, gaps, and holes. Surface is slippery. If dock is expanded, replace approximately 20% of wooden planks. Cover top of dock with non-skid material.
Mooring Capability	No			X	Dock does not have cleats and is too small to accommodate moorage and existing uses. The existing dock may not be able to handle of the displacement loads of the vessel. Add cleats for temporary dockings to the new or expanded dock.
Vessel Security	No			X	No existing vessel security measures. Fences and gates would interfere with other public uses.
In Water Work Required?	No	X			None.
Upland					
Accessibility					
General Assessment	No			X	While the facility is just north of Madison Park, there are no sidewalks and a guardrail obstructs access. Remove or move guardrail, install a sidewalk on the south side of the street.
ADA Accessibility	No			X	The guardrail prevents wheelchair access. The street and grassy area to the south are sloped.
Passenger Parking	No		X		There would be little demand for parking by riders since Madison would be the destination for the majority of riders on this route.
Multi-Modal Connections					
Near Transit Stop	Yes		X		Route #11 runs along Madison Avenue to 43rd Avenue E approximately every 15 minutes during the peak period in the peak direction. Trip time to downtown Seattle is less than 30 minutes. Without additional service, ferry riders could overwhelm the existing service and/or total travel time may be too long to attract adequate ferry ridership. Recommend providing direct shuttle service, which would be faster than existing transit service, to downtown Seattle for ferry riders.
Potential Shuttle Holding Area	No			X	There are King County Metro bus pull-outs that could be used, but the shuttle would interfere with the existing service.
Pedestrian Connections/ Trails	Yes		X		Surrounding streets include sidewalks and there is a path through Madison Park.
Bicycle Facilities	No		X		
Sheltered Area or Potential Area	No			X	Uplands area is very limited. Additional facilities would reduce the street right of way.
Area for Signage, Customer Information and Ticketing	No			X	While the uplands area is very limited, signage, ticketing, and customer information could be added at the top of the ramp.
Restrooms	No				Likely in the park but could be seasonal.
Safety					
Access and Egress from Dock/Ramp	No			X	Lack of pedestrian and ADA facilities and existing guardrail make access and egress difficult.
Lighting	No			X	One street light between 43rd Avenue E and dock.
Potential Conflicts with other Uses	Yes & No			X	Due to the small size of the dock, the ferry could interfere with other uses.

Landing Site Assessment Matrix

Site Name: Leschi
Location/Address: Public float at 100 Lakeside Ave S at the north end of the small marina at Leschi Park at 201 Lakeside Ave S., Seattle.

Description	Length	Width	Height
Ramp	60'	10'	
Dock/Float	140'	50'	
Freeboard*			1'9"
Water Depth at Ramp*			10'5"

*Based on median elevation of the Lake Washington Ship Canal.

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	Yes		X		Wooden plank ramp with roofing material down the center as a non-skid measure.
Railing	Yes		X		Railing is on the outside of the ramp curb and does not meet ADA standards.
ADA Accessibility	Yes		X		It is likely that some passengers will require assistance due to the ramp grade and railing placement.
Dock/Float	Yes	X			Wooden fixed pier on piles.
Dimensions (Approx.)	Yes	X			140' x 50' allows sufficient room for passenger queuing, loading and unloading and vessel berthing space. Ferry may still interfere with other uses.
Freeboard	X				1' 9"
Fendering	Yes			X	Fendering is inadequate for a 149 passenger-only vessel. Replace fendering. Modifications to float edge, removal of exiting timber extruding from float edge, would be required to attach adequate fendering.
Ladder	Yes	X			Two ladders.
Railing	No			X	The south side has a fence along a portion of the dock.
Exposure	No	X			
Surface Condition	Yes			X	Dock surface consists of wooden planks, some of which are uneven and deteriorating; planks include knots, gaps, and slightly protruding nail heads. The strip of roofing material down the side of the dock is worn and torn. Replace approximately 10-15% of wooden planks. Cover loading and unloading area with non-skid material.
Mooring Capability	Yes		X		Dock includes 4 large cleats that are satisfactory for mooring a 149 POF vessel.
Vessel Security	No			X	No existing vessel security measures. Fences and gates would interfere with other public uses. None. No overnight moorage at this landing site.
In Water Work Required?	No	X			None.
Upland					
Accessibility					
General Assessment	Yes	X			
ADA Accessibility	Yes		X		
Passenger Parking	Yes		X		There would be little demand for parking by riders since Leschi would be the destination for the majority of riders on this route. City owned parking lots need to be restriped. Parking area near water is slightly sloped and there are areas of uneven pavement.
Multi-Modal Connections					
Near Transit Stop	Yes		X		Route #27 runs along Lakeside Ave South approximately every 20 minutes during the peak period in the peak direction. Trip time to downtown Seattle is approximately 20 minutes. Without additional service, ferry riders could overwhelm the existing service and/or total travel time may be too long to attract adequate ferry ridership. Recommend providing direct shuttle service, which would be faster than existing transit service, to downtown Seattle for ferry riders.
Potential Shuttle Holding Area	Yes	X			Shuttle(s) could queue in upper parking lot.
Pedestrian Connections/ Trails	Yes	X			There are sidewalks along Lakeside Avenue South and a trail through Leschi Park.
Bicycle Facilities	Yes		X		Lake Avenue South is signed bicycle route with a shared roadway, but there are no bike racks near the float. The I-90 regional trail is 1/2 mile south.
Sheltered Area or Potential Area	Yes		X		There is room for a shelter in the parking lot, but it would decrease the number of parking stalls.
Area for Signage, Customer Information and Ticketing	Yes	X			While there is no existing information board or kiosk, there is adequate area to add customer signage, ticketing, and information near the top of the ramp.
Restrooms	Yes	X			
Safety					
Access and Egress from Dock/Ramp	Yes	X			Facilities are of an adequate size and structure to safely accommodate POF vessel capacity.
Lighting	No			X	There is no lighting on the ramp or dock. The parking lot has one street light between the upper and lower lot. Install lighting on dock and ramp and possibly in the parking lot.
Potential Conflicts with other Uses	Yes		X		The ferry would dock close to the marina entrance, which could create potential conflicts with other users, especially during summer evenings.

Landing Site Assessment Matrix

Site Name: Kenmore - Log Boom Park
Location/Address: The park is located right off Bothell Way at 60th Place NE via 175th Street NE. This park is also called Tracy Owen Station Park.

Description	Length	Width	Height
Ramp	N/A	N/A	
Dock/Float	550'	9'	
Freeboard			2' 10"
Water Depth at Ramp*			10'

**Based on median elevation of the Lake Washington Ship Canal.*

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	No				The dock extends directly from the shore and no ramp is required.
Railing	No				
ADA Accessibility	Yes	X			Concrete and wood fixed pier on piles.
Dock/Float	Yes	X			Wooden fixed pier on piles with non-skid surface over a majority of the dock.
Dimensions (Approx.)	Yes	X			550' x 9' with two piers that are 140' x 10' provides sufficient room for passenger queuing, loading and unloading and vessel berthing space. Ferry may still interfere with other uses.
Freeboard	Yes	X			2' 10"
Fendering	No			X	
Ladder	No			X	
Railing	No			X	
Exposure	Yes	X			Dock is oriented south.
Surface Condition	Yes	X			Conceret is level, in moderate condition and has limited non-skid properties. Cover loading and unloading area with non-skid material.
Mooring Capability	Yes	X			Wooden tie-offs are inadequate to moor a 149 POF vessel. Add cleats.
Vessel Security	No			X	No existing vessel security measures. Fences and gates would interfere with other public uses. Since it is highly likely that overnight moorage would be desired at this location, it may be necessary to designated one end of pier for POF use only and install a gate and fence.
In Water Work Required?	No	X			
Upland					
Accessibility					
General Assessment	Yes		X		Without shuttle service, the limited parking and distance to transit serivces may make access difficult for most passengers.
ADA Accessibility	Yes		X		Wide walkways and sidewalks with curb ramps. Both parking and transit could be difficult due to travel distances. The parking lot could be used for passenger drop-off.
Passenger Parking	Yes			X	There is some street parking along 175th Street NE. Owned by the City of Kenmore. Time limited. 46 general parking stalls and 2 ADA stalls.
Multi-Modal Connections					
Near Transit Stop	Yes		X		Multiple routes provide service along Bothell Way, but the roadway is up short but steep hill from the park. The Bethany Baptist Church Park and Ride is approximately .25 miles away and the Kenmore Park and Ride is approximately 1 mile away.
Potential Shuttle Holding Area	No			X	The park's parking area is too small to accommodate a full-sized bus. It may be possible to accommodate a shuttle further east on 175th Street NE. Since parking is limited near the site, it is likely that shuttle serivce would be required from a local park and ride.
Pedestrian Connections/ Trails	Yes			X	Located in a suburban residential area, which would limit the number of walk-on passengers. Some pedestrians may use the Burke Gilman Trail.
Bicycle Facilities	Yes	X			The located on the Burke Gilman Trail and near the Sammamish River Trail.
Sheltered Area or Potential Area	Yes		X		The park's uplands areas are of medium size and it unlikely that a shelter could be added to the facility without disrupting other uses. A small number of benches are located on and near the dock.
Area for Signage, Customer Information and Ticketing	Yes	X			There is adequate area in the vicinity of the dock to add customer signage, information and ticketing.
Restrooms	Yes		X		Portables.
Safety					
Access and Egress from Dock/Ramp	Yes	X			Facilities are of an adequate size and structure to safely accommodate POF vessel capacity.
Lighting	No			X	Install lighting.
Potential Conflicts with other Uses	Yes		X		There may be conflicts with other users of the public peir including boaters, birders and park users.

Landing Site Assessment Matrix

Site Name: Kenmore - LakePointe
Location/Address: Privately owned, commercial property at 6525 NE 175th Street, Kenmore.
Notes: Site is currently staging for 520 construction. Passenger-only ferry service would require all new infrastructure.

Description	Length	Width	Height
Ramp	N/A	N/A	
Dock/Float	N/A	N/A	
Freeboard*			N/A
Water Depth at Ramp*			N/A

*Based on median elevation of the Lake Washington Ship Canal.

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	No				
Railing	No				Include railing on ramp and loading platform.
ADA Accessibility	N/A				
Dock/Float	No				
Dimensions (Approx.)	No				
Freeboard	No				
Fendering	No				
Ladder	No				
Railing	No				
Exposure	Yes	X			The area under consideration for POF berthing is on a short, small finger of water that extends northeast from Lake Washington.
Surface Condition	N/A				New infrastructure required.
Mooring Capability	No				Incorporate mooring capabilities into the upgraded marine faculties.
Vessel Security	N/A				Vessel security measures could be incorporated into the new marine or upland facilities.
In Water Work Required?	Yes				
Upland					
Accessibility					
General Assessment	N/A				
ADA Accessibility	N/A				
Passenger Parking	N/A				The Bethany Baptist Church Park and Ride is approximately 0.5 miles away and the Kenmore Park and Ride is approximately 1 mile away. Unless shuttles are provided, it is unlikely that passengers would use the park and ride.
Multi-Modal Connections					
Near Transit Stop	No			X	The closest transit stop is over 0.25 miles away. The Kenmore Park and Ride is appoximately 1 mile away.
Potential Shuttle Holding Area	Yes	X			If necessary, a shutle holding area could be incorporated into the on-site parking mentioned above.
Pedestrian Connections/ Trails	No			X	Located in a commercial area. Some pedesrians may use the Burke Gilman Trail.
Bicycle Facilities	Yes		X		The site is near the Burke Gilman Trail. Once a cyclist leaves NE 175h Street they must travel over poorly maintained parking lots and bare groun. No bike racks exist at the site.
Sheltered Area or Potential Area	Yes	X			There is adequate area on site to install a shelter, but it may not be necessary if the facility is developed into a park and ride. The specified area of installation would likely be cleared of existing vegetation or materials and prepped for installation.
Area for Signage, Customer Information and Ticketing	Yes	X			There is adequate area on site to install customer signage and information. Signage may also need to be added near 175th to direct new riders to the landing site.
Restrooms	No			X	
Safety					
Access and Egress from Dock/Ramp	N/A				
Lighting	No			X	Add lighting near boat ramp and in parking lot.
Potential Conflicts with other Uses	Yes		X		The site is currently used for 520 staging.

Landing Site Assessment Matrix

Site Name: Kirkland Carillon Point
Location/Address: Carillon Point, Kirkland, WA

Description	Length	Width	Height
Ramp	N/A	N/A	
Dock/Float	N/A	N/A	
Freeboard			N/A
Water Depth at Ramp*			N/A

**Based on median elevation of the Lake Washington Ship Canal.*

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	No				The dock extends directly from the shore and no ramp is required.
Railing	No				
ADA Accessibility	Yes		X		The lack of a railing could be a problem for some passengers.
Dock/Float	Yes	X			Wooden fixed pier on piles with non-skid surface over a majority of the dock.
Dimensions (Approx.)	Yes	X			
Freeboard	Yes	X			
Fendering	No			X	Add fendering.
Ladder	Yes			X	
Railing	No			X	
Exposure	Yes	X			
Surface Condition	Yes	X			Dock surface does not include a non-skid surface but is in good condition.
Mooring Capability	Yes	X			
Vessel Security	No			X	No existing vessel security measures. Fences and gates could interfere with other public uses and would need to be negotiated with the City of Kirkland.
In Water Work Required?	No	X			
Upland					
Accessibility					
General Assessment	Yes	X			
ADA Accessibility	Yes	X			
Passenger Parking	Yes		X		Ample parking exists upland near the businesses at the marina.
Multi-Modal Connections					
Near Transit Stop	Yes	X			Bus routes, including local and express routes, serve Kirkland Transit Center, approximately .25 miles from the dock.
Potential Shuttle Holding Area	Yes		X		Shuttles could be staged near the Carillon businesses.
Pedestrian Connections/ Trails	Yes	X			Surrounding streets include sidewalks and there is a path north of the marina.
Bicycle Facilities	Yes	X			Lake Washington Boulevard includes marked bike lanes.
Sheltered Area or Potential Area	Yes				
Area for Signage, Customer Information and Ticketing	Yes	X			There is adequate area in the vicinity of the dock to add customer signage, information and ticketing.
Restrooms	Yes	X			Carillon Point has restrooms.
Safety					
Access and Egress from Dock/Ramp	Yes	X			Facilities are of an adequate size and structure to safely accommodate POF vessel capacity.
Lighting	Yes	X			
Potential Conflicts with other Uses	Yes		X		The ferry could create conflicts with other users of the marina.

Landing Site Assessment Matrix

Site Name: Marina Park

Location/Address: Marina Park at 25 Lakeshore Plaza Drive, Kirkland. The most likely location for POF service would be the end of the main pier. The City of Kirkland has also identified the public pier at the west end of 2nd Avenue S as another potential location. This public dock has similar marine attributes, but has not been

Description	Length	Width	Height
Ramp	N/A	N/A	
Dock/Float	400'	10'	
Freeboard			1' 8"
Water Depth at Ramp*			22'

**Based on median elevation of the Lake Washington Ship Canal.*

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	No				The dock extends directly from the shore and no ramp is required.
Railing	No				
ADA Accessibility	Yes		X		The lack of a railing could be a problem for some passengers.
Dock/Float	Yes	X			Wooden fixed pier on piles with non-skid surface over a majority of the dock.
Dimensions (Approx.)	Yes	X			400' x 10' allows room for passenger queuing, loading and unloading. Ferry may still interfere with other uses.
Freeboard	Yes	X			1' 8"
Fendering	No			X	Add fendering.
Ladder	Yes			X	Ladder is in poor condition and needs to be replaced.
Railing	No			X	
Exposure	Yes	X			Dock is oriented south.
Surface Condition	Yes	X			The first 300' of dock surface is even and has adequate non-skid treatment. The remaining dock surface consists of wooden planks, some of which are slightly uneven; planks include small knots and very slightly protruding nail heads. Apply non-skid surface to remainder of the dock.
Mooring Capability	Yes	X			Dock includes cleats that are satisfactory for mooring a 149 passenger-only vessel.
Vessel Security	Yes			X	No existing vessel security measures. Fences and gates could interfere with other public uses and would need to be negotiated with the City of Kirkland. Add a security gate.
In Water Work Required?	No	X			
Upland					
Accessibility					
General Assessment	Yes	X			
ADA Accessibility	Yes	X			ADA parking stalls exist near the dock and access to the dock is provided via a dead-end roadway or sidewalks with curb ramps.
Passenger Parking	Yes			X	Parking in the area is intended for use by customers of local businesses. Street parking along Lakeshore Plaza Drive and other downtown streets is time limited.
Multi-Modal Connections					
Near Transit Stop	Yes	X			Multiple bus routes, including local and express routes, serve Kirkland Transit Center, approximately .25 miles from the park. Sound Transit route 540 runs every 12-15 minutes to the University District during peak periods. Trip time to/from the University District is approximately 30 minutes, which would compete with POF service if the other end of the Kirkland route was the University District.
Potential Shuttle Holding Area	Yes		X		Shuttles could be staged along Lakeshore Plaza Drive, but would temporarily obstruct parking in the chosen staging area.
Pedestrian Connections/ Trails	Yes	X			Surrounding streets include sidewalks and there is a path through Marina Park.
Bicycle Facilities	Yes	X			Lake Street includes marked bike lanes.
Sheltered Area or Potential Area	Yes		X		While there is room for a sheltered area, it would interfere with the other uses of Marina Park.
Area for Signage, Customer Information and Ticketing	Yes	X			There is an existing information board for the City of Kirkland and marina. There is adequate area in the vicinity of the dock to add customer signage and information. Ticketing could be added.
Restrooms	Yes	X			Marina Park has public restrooms.
Safety					
Access and Egress from Dock/Ramp	Yes	X			Facilities are of an adequate size and structure to safely accommodate POF vessel capacity.
Lighting	Yes	X			Parking, park and marine facilities near Argosy's moorage are well lit.
Potential Conflicts with other Uses	Yes		X		The ferry could create conflicts with other users of the marina and park, including the Argosy Kirkland Lake Tour and Waterways Cruises and Events, especially during summer evenings.

Landing Site Assessment Matrix

Site Name: Bellevue - Meydenbauer Bay Marina

Location/Address: Meydenbauer Bay Marina at 2 99th Ave NE, Bellevue. The most suitable slip is the uncovered slip at the very end of Pier 1.

Notes: This site is very high risk as the City of Bellevue did not include POF service in the their master plan for the Meydenbauer Bay Marina and surrounding area.

Description	Length	Width	Height
Ramp	N/A	N/A	
Dock/Float	131'	5'	
Freeboard*			3' 4"
Water Depth at Ramp*			18'

**Based on median elevation of the Lake Washington Ship Canal.*

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	No			X	The dock extends directly from the shore and no ramp is required.
Railing	No				
ADA Accessibility	No				
Dock/Float	Yes				Wooden fixed pier on piles.
Dimensions (Approx.)	Yes		X		At 131' x 5', the dock is one of the narrowest being considered and there are obstructions that narrow the dock even further. Passengers would need to be staged uplands to avoid conflict with other users. The dock provides suficient vessel berthing space.
Freeboard	Yes	X			3'4"
Fendering	Yes			X	Fendering is not adequate for a 149 POF vessel and is likely the property of the current slip leasor. Add fendering.
Ladder	Yes	X			
Railing	No			X	Adding a railing along the dock would increase passenger safety. If a railing was added to both sides of the dock, it would interfere with access to the adjacent slip. Add railing along at least one, but possibly both sides of the dock.
Exposure	No	X			Facility is well sheltered in bay.
Surface Condition	No	X			Surface is even and well maintained. There are some small gaps between planks.
Mooring Capability	No	X			Dock include cleats that are satisfactory for mooring a 149 passenger-only vessel.
Vessel Security	No	X			Access to the float is restricted. Security measures at the slip could be added.
In Water Work Required?	No	X			
Upland					
Accessibility					
General Assessment	Yes			X	Access to the facility is along a small, residential street. Passenger loads could overwhelm the facility if a majority of the passengers do not arrive on foot or via bicycle or shuttle.
ADA Accessibility	No		X		There is an area that would be used to drop-off passengers near the entrance to the marina.
Passenger Parking	No			X	There would be little demand for parking by riders since Bellevue would be the destination for the majority of riders on this route. Owned by City of Bellevue, Parks Approximately 50 stalls adjacent to the marina, which could be inadequate for ferry passenger loads. None of the stalls are designated ADA. The City may not want the parking to be used by commuters.
Multi-Modal Connections					
Near Transit Stop	Yes			X	Bus service to/from the Bellevue Transit Center is available on 100th Avenue NE, approximately 2 miles from the marina and on NE 8th, which is more than .5 miles from the marina.
Potential Shuttle Holding Area	Yes		X		Parking lot could be used for shuttle holding.
Pedestrian Connections/ Trails	No			X	Roadway leading down to the marina on the north side is steep and does not include sidewalks. Several parking areas must be crossed when approaching the marina from the south. Most major destinations and employment centers are more than .5 miles away.
Bicycle Facilities	No			X	
Sheltered Area or Potential Area	No			X	The uplands area is small and it is unlikely that a shelter could be added to area. It may be possible to replace some of the parking stalls with a shelter.
Area for Signage, Customer Information and Ticketing	No		X		While the uplands area is very limited, signage, customer information, and ticketing could be added at the entrance to the dock.
Restrooms	Yes	X			
Safety					
Access and Egress from Dock/Ramp	Yes	X			Facilities are of an adequate size and structure to safely accommodate POF vessel capacity, although the narrow dock could impact operations.
Lighting	Yes		X		The marina has lighting, but it may need to be upgraded for POF service. The parking lot does not have any lighting
Potential Conflicts with other Uses	Yes			X	The marina facilities, include the docks and parking lot are small and POF service would likely create conflicts with other users and the suitable slips are currently under lease for private use. Also, the City of Bellevue is developing a master plan for the nearby park, marina and upland facilities, which does not include a POF. If this site is to be considered further, immediate coordination with the City of Bellevue is required.

Landing Site Assessment Matrix

Site Name: Renton - Bristol at Southport

Location/Address: The dock is adjacent to the Bristol at Southport apartments located at 1133 Lake Washington Blvd N., Renton. The dock is located next to 1083 Lake Washington Blvd N. Property is owned by Southport One LLC but public access is allowed.

Notes: Access to marine and upland facilities will require negotiations with Southport One LLC. Currently, Waterways Cruises and Events is allowed to pick-up/drop-off at the dock for privately chartered events.

Description	Length	Width	Height
Ramp	N/A	N/A	
Dock/Float	120'	20'	
Freeboard*			3'1"
Water Depth at Ramp*			9'

*Based on median elevation of the Lake Washington Ship Canal.

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	No				
Railing	No				
ADA Accessibility	No				
Dock/Float	Yes	X			Wooden fixed pier on piles.
Dimensions (Approx.)	Yes	X			128' x 20' allows sufficient room for passenger queuing, loading and unloading and vessel berthing space. Ferry may still interfere with other uses.
Freeboard	Yes	X			3' 1"
Fendering	No			X	Add fendering
Ladder	Yes		X		
Railing	No		X		The 20' side of the dock includes a railing.
Exposure	Yes		X		Site partial sheltered by land mass to the east.
Surface Condition	Yes		X		Dock surface consists of wooden planks, some of which are uneven and deteriorating; planks include knots, gaps and some holes. Replace approximately 10% of wooden planks. Cover loading and unloading area with non-skid material.
Mooring Capability	Yes		X		No existing vessel security measures. Fences and gates would interfere with other public and private uses.
Vessel Security	No			X	None
In Water Work Required?	No	X			Standard maintenance requirements.
Upland					
Accessibility					
General Assessment	No		X		From the parking area, a dead end, private roadway could be used for passenger access to the dock. Access is also provided to the dock via Gene Coulon Memorial Beach Park from 7:00 a.m. to dusk.
ADA Accessibility	No			X	It is approximately 250' feet from the parking lot to the dock and there is a short, but steep driveway to negotiate.
Passenger Parking	Yes	X			Gravel parking lot managed by Diamond Parking, but owned by Southport One LLC. Parking is $7/day. The gravel lot transitions into a large empty lot owned by Southport One LLC that could be converted to parking. Prepare property to provide a designated parking area for POF riders. Non ADA stalls could be gravel to minimize improvements.
Multi-Modal Connections					
Near Transit Stop	No			X	The nearest bus stop is half a mile away.
Potential Shuttle Holding Area	Yes	X			The Southport One LLC owned property would be an appropriate site for shuttle holding. Shuttle service may not be required if sufficient parking is available.
Pedestrian Connections/ Trails	Yes	X			The site is adjacent to Gene Coulon Memorial Beach Park and near residential and commercial areas west of I-405.
Bicycle Facilities	Yes	X			The site is accessible via the Lake Washington Trail and the Cedar River Trail.
Sheltered Area or Potential Area	No			X	There is room for a shelter in the parking lot, but it would decrease the number of parking stalls.
Area for Signage, Customer Information and Ticketing	Yes	X			There is adequate area to add customer signage, ticketing, and information near the dock.
Restrooms	No			X	
Safety					
Access and Egress from Dock/Ramp	Yes	X			Directly adjacent to the dock is a pathway that leads to Gene Coulon Memorial Beach Park.
Lighting	No			X	There is only on light on the dock, and neither the pathway or parking lot have lighting.
Potential Conflicts with other Uses	Yes			X	The property is owned by a Southport One LLC, a development company, and is for the use of the development's residents and their guests. Public access is allowed during park hours. It is highly likely that POF passengers will create traffic, noise, light and other disturbances that could be disruptive to residents of the Bristol development. The POF could also interfere with public uses of the dock, such as fishing.

Landing Site Assessment Matrix

Site Name: Des Moines Marina
Location/Address: Des Moines Marina located at 22307 Dock Street, Des Moines. The most likely location of POF service is the end of the northern most floating pier close to the entrance to the marina.

Description	Length	Width	Height
Ramp	37'	3'7"	
Dock/Float	136'	7'	
Freeboard*			1'3"
Water Depth at Ramp*			24'

*From 2009 Demonstration Route Analysis

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	Yes		X		Wood and steel ramp with non-skid treatment down the middle of the ramp.
Railing	Yes	X			Ramps includes hand railings.
ADA Accessibility	Yes		X		It is likely that some passengers will require assistance because the railings are too high (3' 6") for ADA and the grade of the ramp is relatively steep. Near the end of 2010 the City of Des Moines is installing a new ramp that is more ADA compliant.
Dock/Float	Yes	X			Wood and concrete floating pier is in good condition.
Dimensions (Approx.)	Yes	X			136' x 7' slip float is narrow and is obstructed by several piles along the north side float. The berthing space is sufficient for a 149 POF vessel, but the pile may interfere with placement of the gangplank and the gangplank may interfere with access to the adjacent slip. Passengers would need to queue upland to minimize conflict with other users on the ramp and float.
Freeboard			X		1' 3"
Fendering	No			X	Add fendering.
Ladder	No			X	Add ladder.
Railing	No			X	Adding a railing along the float would increase passenger safety. If a railing was added to both sides of the float, it would interfere with access to the adjacent slip.
Exposure	Yes	X			The marina is located behind a breakwater.
Surface Condition	Yes	X			The float surface is even and has adequate non-skid qualities.
Mooring Capability	Yes		X		The float include cleats, but they are not sufficient for mooring a 149 POF vessel.
Vessel Security	No			X	No existing vessel security measures. Fences and gates could interfere with other public uses. Since It is highly likely that overnight moorage will be desired at this location, it may be necessary to designate both slips at the end of the float for POF use only and install a security gate and fence.
In Water Work Required?	No	X			None.
Upland					
Accessibility					
General Assessment	No	X			Adjacent parking and passenger holding areas.
ADA Accessibility	No	X			It may be necessary to designate additional ADA parking stalls near the ramp.
Passenger Parking	Yes			X	The marina has free on-site parking. To the north of the marina office there are approximately 200 parking spots plus 4 ADA spots. 3 of the ADA spots are not close to the ramp to the proposed POF float. The City of Des Moines has plans to re-strip the lot, which will increase the number of parking spaces. There are additional lots to the south of the marina office. Use of on-site parking would need to be negotiated with the City of Des Moines.
Multi-Modal Connections					
Near Transit Stop	No			X	The closest transit stop is almost half a mile away from the float but there is service every 10-15 minutes in the peak direction during peak periods. The Kent-Des Moines Park and Ride is 3 miles away and the Burien Park and Ride is 6 miles away.
Potential Shuttle Holding Area	Yes	X			The parking lot provides ample area for shuttle holding, but shuttle service may not be necessary if parking capacity is not exceeded.
Pedestrian Connections/ Trails	Yes		X		The marina is surrounded by multi-family and commercial zoning and adequate sidewalks exist in and around the marina.
Bicycle Facilities	Yes		X		Although the Regional Green River Trail is three miles away, the surrounding area has many relatively low-traffic streets and bike racks are available at the marina. The Des Moines section of the Lake-to-Sound Trail, which will terminate at the Des Moines Marina, begins construction in 2009.
Sheltered Area or Potential Area	No			X	There is room for a shelter in the parking lot, but it would decrease the number of parking stalls.
Area for Signage, Customer Information and Ticketing	Yes	X			There is adequate space close to the ramp for customer signage, ticketing, and information.
Restrooms	Yes	X			
Safety					
Access and Egress from Dock/Ramp	Yes	X			Facilities are of an adequate size and structure to safely accommodate POF vessel capacity.
Lighting	No		X		Lighting appears adequate for POF service.
Potential Conflicts with other Uses	Yes & No		X		The ferry would dock close to the marina entrance and fuel dock, which could create potential conflicts with other users, especially during summer evenings.

Landing Site Assessment Matrix

Site Name: Ballard Shilshole Bay Marina
Location/Address: 7001 Seaview Avenue NW, Suite 100. The site visit documents the conditions at the southern most dock, "Dock A," and Slip 12, which is one of the slips that could accommodate a passenger-only ferry vessel. Other slips could be considered.

Description	Length	Width	Height
Ramp	67'	5'	
Dock/Float	100'	6'	
Freeboard			1'4"
Water Depth at Ramp*			21'

*From 2009 Demonstration Route Analysis

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	Yes	X			Concrete and steel ramps, one at each of the pier, are in excellent condition. Passenger access and egress could use separate ramps to minimize conflicts.
Railing	Yes	X			Ramps includes hand railings and decorative enclosures that extend beyond the railing.
ADA Accessibility	Yes		X		It is likely that some passengers will require assistance.
Dock/Float	Yes				
Dimensions (Approx.)			X		100' x 6' slip float is narrow and is obstructed by 1 pile at the mid-point of the float. The berthing space is sufficient for a 149 POF vessel, but the pile may interfere with placement of the gangplank and the gangplank may interfere with access to the adjacent slip.
Freeboard			X		
Fendering	No			X	Add fendering.
Ladder	No			X	Add ladder.
Railing	No			X	Adding a railing along the float would increase passenger safety. If a railing was added to both sides of the float, it would interfere with access to the adjacent slip. Add railing along at least one, but maybe both side of the float.
Exposure	Yes	X			The marina is located behind a breakwater and Dock A is further sheltered by the Henry L. Kotkins Pier, which is also a seawall.
Surface Condition	Yes	X			The float surface is even and has adequate non-skid qualities.
Mooring Capability	Yes	X			Float include cleats that are satisfactory for mooring a 149 POF vessel.
Vessel Security	Yes		X		Access to the ramp and float is restricted. Security measures at the slip could interfere with access to the adjacent slip.
In Water Work Required?	No	X			None
Upland					
Accessibility					
General Assessment	Yes				
ADA Accessibility	Yes	X			No ADA parking stalls near the ramp. F53 Identify and mark ADA parking stalls.
Passenger Parking	No			X	Limited parking available along Seaview Avenue NW. The parking lot is owned by the Port of Seattle and has approximately 120 parking stalls intended for marina parking. There is a high potential for POF parking and general marina parking.
Multi-Modal Connections					
Near Transit Stop	No			X	No transit service.
Potential Shuttle Holding Area	Yes	X			Shuttle(s) could queue in parking lot.
Pedestrian Connections/ Trails	Yes	X			There is a bike trail, that could be used by pedestrians and sidewalks along Seaview Avenue, but the surrounding areas are not conducive to generating walk-on passengers.
Bicycle Facilities	Yes	X			There is a bike trail along Seaview Avenue that provides access to other local trails including the Burke Gilman Trail and Myrtle Edwards Trail.
Sheltered Area or Potential Area	Yes	X			There is a large open space at the top of "Dock A, " which could accommodate a shelter if the shelter did not interfere with emergency vehicle access.
Area for Signage, Customer Information and Ticketing	Yes	X			While there is no existing information board or kiosk, there is adequate area to add customer signage and information near the top of the ramp. There is adequate space close to the ramp to place ticket vending equipment. Install customer signage, information, and ticket vending equipment.
Restrooms	Yes	X			Shilshole Bay Marina has public restrooms in the Marina Office.
Safety					
Access and Egress from Dock/Ramp	Yes	X			Facilities are of an adequate size and structure to safely accommodate passenger-only vessel capacity.
Lighting	Yes		X		There is lighting along the Henry L. Kotkins Pier that runs parallel to "Dock A," but it may not be sufficient for passenger-only ferry service. Add lighting if required.
Potential Conflicts with other Uses	Yes		X		The POF could create conflicts with other users, especially during summer evenings.

Landing Site Assessment Matrix

Site Name: Ballard - Ship Canal at 24th Ave NW
Location/Address: Southern terminus of 24th Avenue NW in the street right of way. The closest intersection is 24th Avenue NW and NW 54th Street

Description	Length	Width	Height
Ramp	N/A	N/A	
Dock/Float	270'	17'	
Freeboard*			2'8"
Water Depth at Ramp*			22'

*Based on median elevation of the Lake Washington Ship Canal.

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	No				
Railing	No				
ADA Accessibility	Yes		X		Ramp needs to be fixed.
Dock/Float	Yes				Wooden fixed pier on piles.
Dimensions (Approx.)	Yes		X		270' x 17' allows room for some passenger queuing, loading and unloading, and vessel berthing space.
Freeboard	Yes		X		2' 11"
Fendering	No			X	Add fendering
Ladder	No			X	Add ladder
Railing	No			X	
Exposure	Yes	X			Site is well shelter.
Surface Condition	Yes		X		Dock surface consists of wooden planks, some of which are uneven and deteriorating; planks include knots, gaps and some holes. Replace approximately 10% of wooden planks. Cover loading and unloading area with non-skid material.
Mooring Capability	Yes	X			Float include cleats that are satisfactory for mooring a 149 POF vessel.
Vessel Security	No			X	No existing vessel security measures. Fences and gates would interfere with other public uses.
In Water Work Required?	No	X			None
Upland					
Accessibility					
General Assessment	No			X	Upland area consist of 24th Avenue NW, public parking and access to adjacent businesses. The dock access point is narrow and poorly maintained.
ADA Accessibility	No			X	The dock is at the end of the street right of way and tis separated from the street by three traffic post barricades that would not allow a wheelchair to pass.
Passenger Parking	Yes	X			There is free parking along 24th Avenue NW and Shilshole Avenue NE. A pay parking lot at 5300 24th Ave NW includes 120 parking stalls which may be accessed from Shilshole Avenue NE. There is a driveway between the parking lot and the dock that could be used for pedestrian access.
Multi-Modal Connections					
Near Transit Stop	Yes		X		Multiple routes, including the 17, 18 and 44, travel along NW Market Street and/or 24th Avenue north of NW Market Street. The first bus stop is less than .25 miles from the dock. Trip time to/from Seattle is approximately 30 minutes by bus, which would compete with POF service.
Potential Shuttle Holding Area	No			X	Shuttle service could be provided along Shilshole Ave NW, but signage would need to be added to resrict parking. The pay parking lot could also be used, but there may be a fee associated with such use.
Pedestrian Connections/ Trails	No		X		While the site is not far from Historic Ballard, the immediate vicinity is industrial and many nearby streets lack pedestrian facilities.
Bicycle Facilities	Yes		X		The site is approximately 1 mile from the current terminus of the Burke Gilman Trail. The City of Seattle's plan to extend the Burke Gilman Trail through Ballard would improve bicycle access.
Sheltered Area or Potential Area	No			X	There is a large open space at the top of "Dock A, " which could accommodate a shelter if the shelter did not interfere with emergency vehicle access.
Area for Signage, Customer Information and Ticketing	No			X	While the uplands area is very limited, signage, fare equipment, and customer information could be added at the top of the dock.
Restrooms	No			X	
Safety					
Access and Egress from Dock/Ramp	No			X	Poor. The area immediately adjacent to the dock and to the northwest of the top of the dock would need to be redesigned.
Lighting	No			X	There is one street light at the top of the dock. It would not be sufficient for POF service.
Potential Conflicts with other Uses	No			X	Uplands, POF service could potentially interfere with normal public parking use, adjacent business access. POF service could also interfere with public access to the marine facilities.

Landing Site Assessment Matrix

Site Name: South Lake Union

Location/Address: South Lake Union Park at 860 Terry Avenue N. The dock is just west of the Naval Reserve Building, next to the Historic Ships Wharf.

Description	Length	Width	Height
Ramp	26'	9'	
Dock/Float	205'	10'	
Freeboard			1' 4"
Water Depth at Ramp*			18'

Based on median elevation of the Lake Washington Ship Canal.

Facilities	Yes/ No	Assessment			Considerations/Proposed Improvements
		Good	Fair	Poor	
Marine					
Ramp	Yes	X			Wood ramp in excellent condition
Railing	Yes		X		The ramp is not very long and grade is very slight.
ADA Accessibility	Yes		X		The lack of a railing could be a problem for some passengers.
Dock/Float	Yes	X			Wood and concrete pier on piles. In excellent condition.
Dimensions (Approx.)	Yes	X			205' x 10' allows room for passenger queuing, loading and unloading. Ferry may still interfere with other uses.
Freeboard	Yes		X		1' 4"
Fendering	No			X	Add fendering.
Ladder	Yes	X			Two ladders.
Railing	No			X	
Exposure	Yes			X	Dock is surrounded by an open park to the south and west.
Surface Condition	Yes	X			Dock is even and smooth, but does not have a non-skid treatment. Add non-skid treatment.
Mooring Capability	Yes	X			Dock includes cleats that are satisfactory for mooring a 149 POF vessel.
Vessel Security	Yes			X	No existing vessel security measures. Fences and gates would interfere with other public uses.
In Water Work Required?	No	X			
Upland					
Accessibility					
General Assessment	Yes	X			Uplands area consists of a park facility with gravel and paved trails. Construction is scheduled for completion in Spring 2010 and would not interfere with demonstration route service.
ADA Accessibility	Yes	X			No ADA parking stalls near the ramp. F53 Identify and mark ADA parking stalls.
Passenger Parking	No			X	There would be little demand for parking by riders since South Lake Union would be the destination for the majority of riders on this route. Owned by the City of Seattle. The parking is time limited and intended for users of the park facility.
Multi-Modal Connections					
Near Transit Stop	Yes	X			Multiple bus routes serve the South Lake Union Area. A Seattle Streetcar stop is located .2 miles from the dock and provides service every 15 minutes to downtown and the Fred Hutchinson Cancer Research Center.
Potential Shuttle Holding Area	No			X	It is unlikely that shuttle service would be required for this landing site.
Pedestrian Connections/ Trails	Yes	X			Sidewalks and trails are part of the park development and surrounding streets include sidewalks. The Cheslahud Lake Union Loop runs through the park
Bicycle Facilities	Yes	X			The Cheslahud Lake Union Loop runs through the park and provides access to the Burke Gilman Trail.
Sheltered Area or Potential Area	No			X	It is unlikely that City of Seattle would allow a sheltered area to be added to the park.
Area for Signage, Customer Information and Ticketing	Yes	X			There is adequate area near the dock to install customer signage, information and ticketing.
Restrooms	Yes		X		Restrooms are available in the Naval Reserve Building from 8:30 a.m. to 5:30 p.m.
Safety					
Access and Egress from Dock/Ramp	Yes	X			Facilities are of an adequate size and structure to safely accommodate POF vessel capacity.
Lighting	Yes		X		Low light are incorporated in the dock and the South Lake Union Park plan calls for lighting within the park. Additional lighting may be required on the dock.
Potential Conflicts with other Uses	Yes			X	The POF could create conflicts with other users of both the park and marine facilities, especially during summer evenings. It should also be noted that South Lake Union supports significant recreational and commercial traffic, including float planes. Conflicts with other users of the lake are highly likely.

Attachment G

Park and Ride Locations

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LEGEND

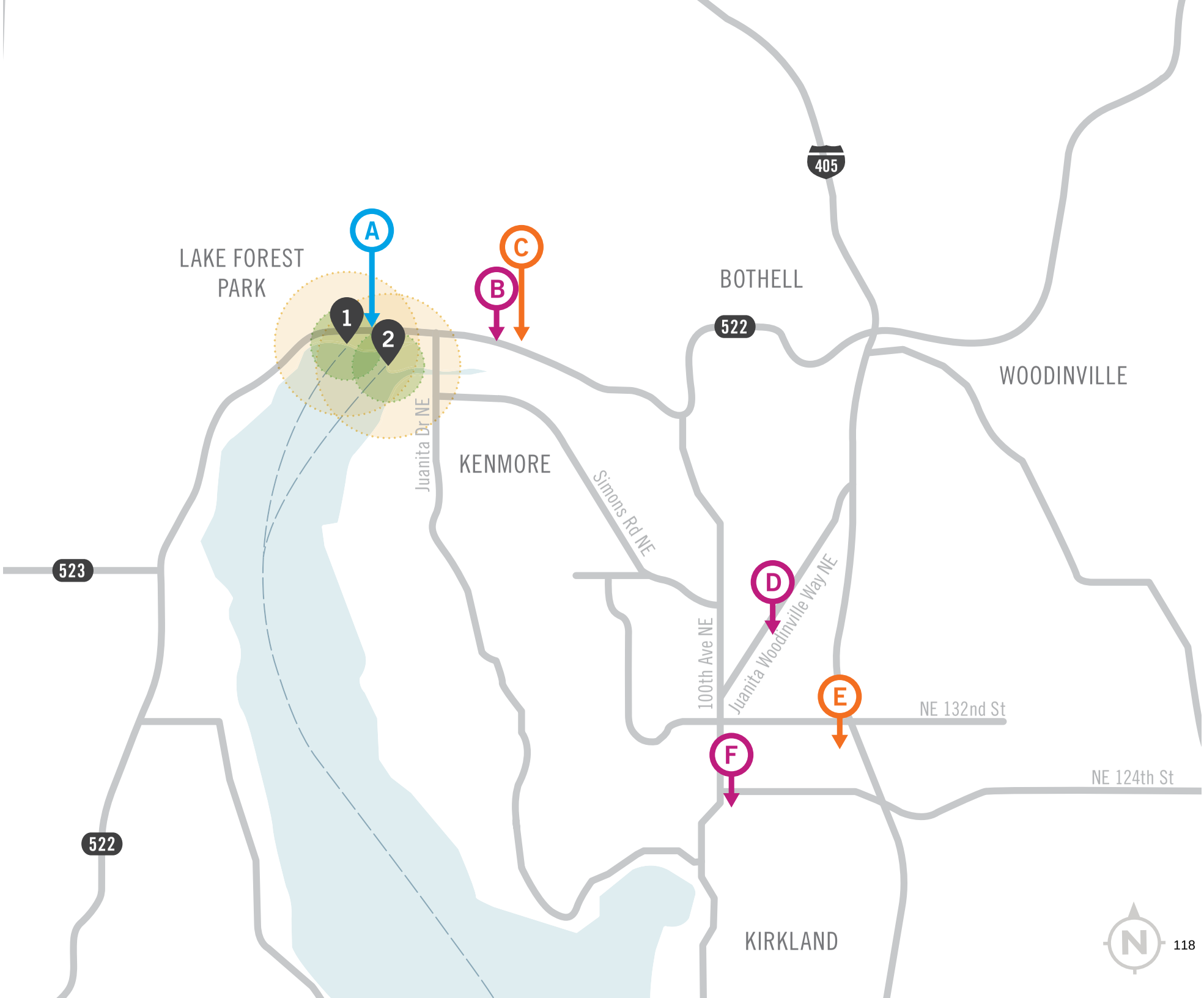
- 1/4 Mile Radius
- 1/2 Mile Radius
- Potential Landing Sites
- Park-and-Ride, <50 Parking Spaces
- Park-and-Ride, 50–200 Parking Spaces
- Park-and-Ride, 200+ Parking Spaces

LANDING SITES

1 Log Boom Park (Kenmore)
2 Lakepointe (Kenmore)
3 Marina Park (Kirkland)
4 Carillion Point (Kirkland)
5 Maydenbauer Bay Marina (Bellevue)
6 Bristol at Southport (Renton)
7 Leschi Public Float (Seattle)
8 Madison Street Dock (Seattle)
9 UW Waterfront Activities Center (Seattle)
10 Oceanography Dock (Seattle)
11 South Lake Union (Seattle)
12 Fremont (Seattle - Exact Location TBD)
13 Ship Canal at 24th Ave NW (Seattle)
14 Shilshole Bay Marina (Seattle)
15 Pier 50 (Seattle)
16 Des Moines Marina (Des Moines)

PARK-AND-RIDES

A Bethany Bible Church (Kenmore)
B Kenmore Community Church (Kenmore)
C Kenmore Park-and-Ride (Kenmore)
D Korean Covenant Church (Kirkland)
E Kingsgate Park-and-Ride (Kirkland)
F Holy Spirit Lutheran Church (Kirkland)
G Kirkland Way Park-and-Ride (Kirkland)
H Houghton Park-and-Ride (Kirkland)
I South Kirkland Park-and-Ride (Kirkland)
J St. Luke's Lutheran Church (Bellevue)
K Grace Lutheran Church (Bellevue)
L Wilburton Park-and-Ride (Bellevue)
M South Bellevue Park-and-Ride (Bellevue)
N Newport Covenant Church (Bellevue)
O Eastgate Park-and-Ride (Bellevue)
P Bellevue Foursquare Church (Bellevue)
Q St. Andrew's Lutheran Church (Bellevue)
R Bellevue Christian Reformed Church (Bellevue)
S Kennydale United Methodist Church (Renton)
T St. Matthew Lutheran Church (Renton)
U Renton Transit Center Park-and-Ride Garage (Renton)
V Renton City Municipal Garage (Renton)
W City View Church (Renton)
X Renton Fred Meyer (Renton)
Y South Renton Park-and-Ride (Renton)
Z Fairwood Assembly of God (Renton)
AA Nativity Lutheran Church (Renton)
BB New Life Church (Renton)
CC Kent-Des Moines Park-and-Ride (Des Moines)
DD Burien Transit Center (Des Moines)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KIRKLAND
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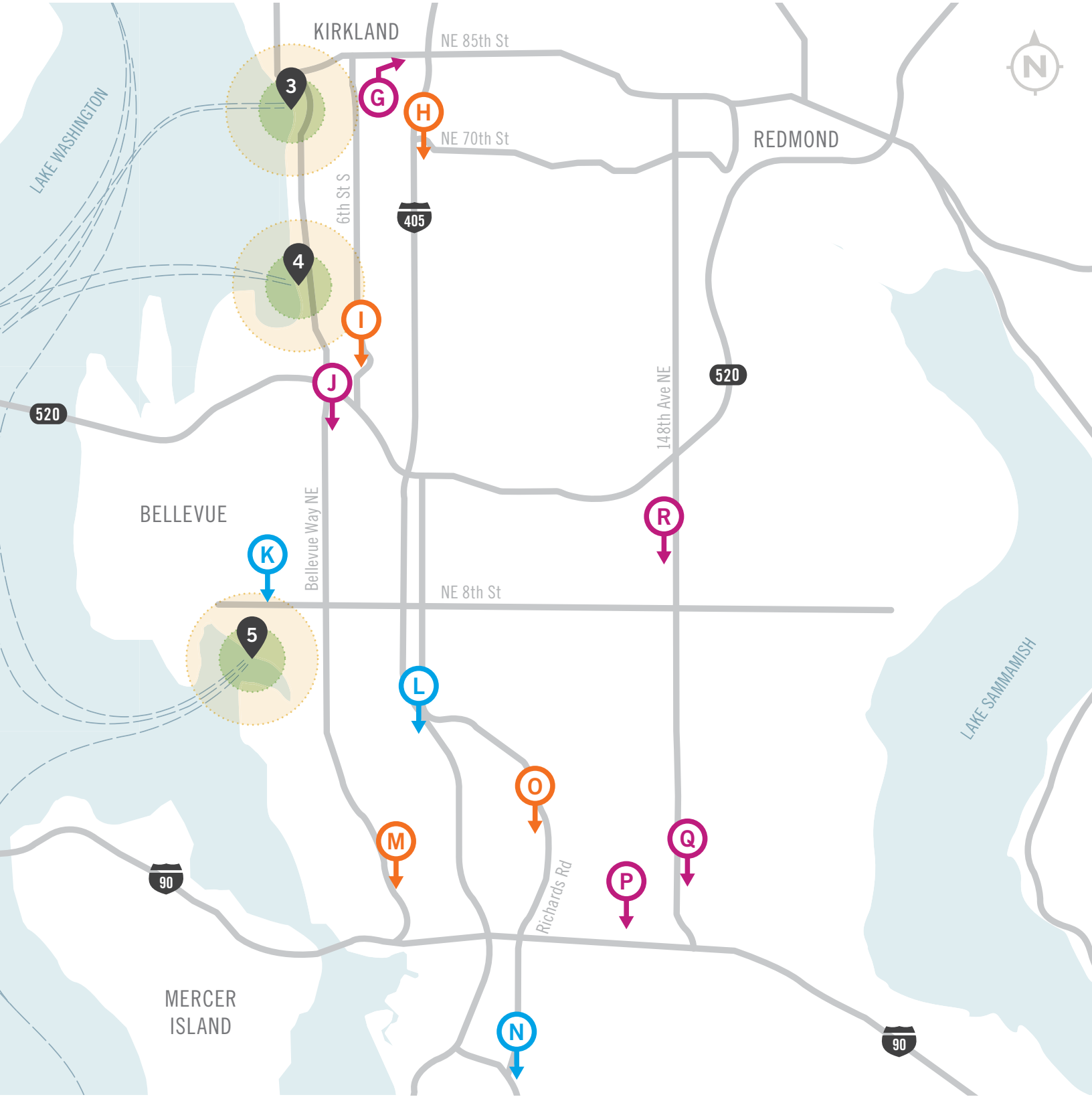
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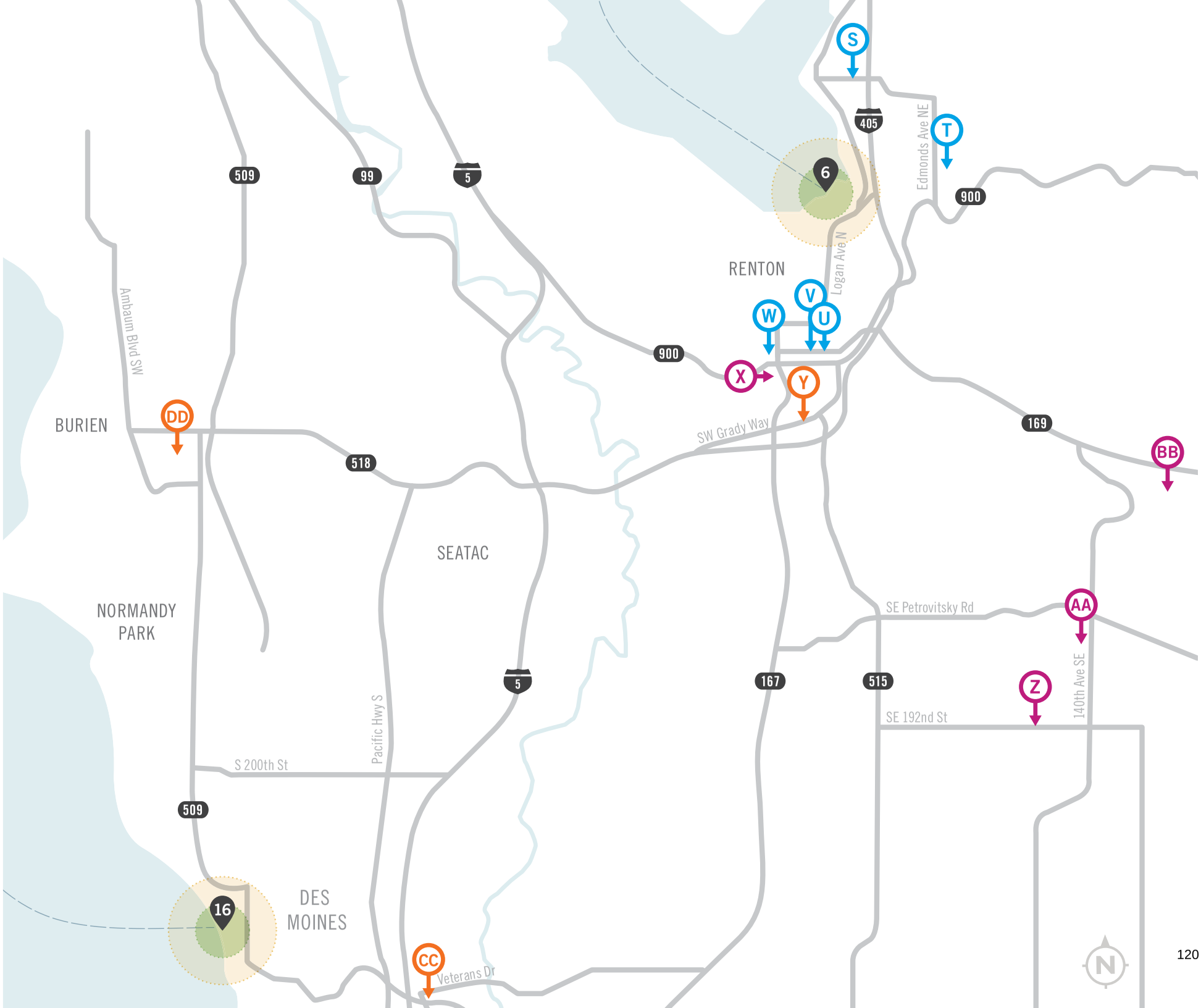
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Edmonds Ave NE
SE Petrovitsky Rd
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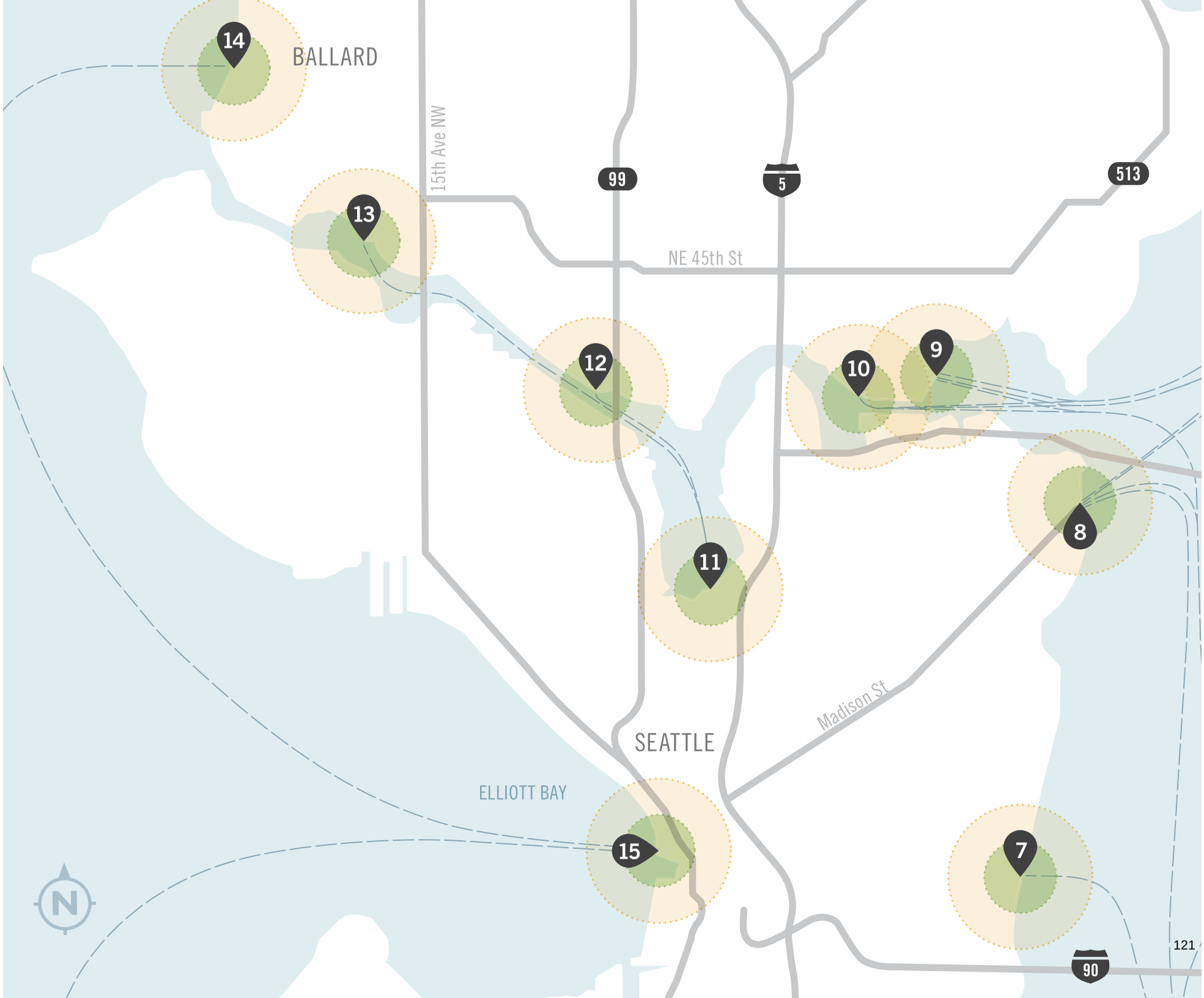
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Appendix C

King County Water Taxi

TASK 3: RIDERSHIP ASSESSMENT ANALYSIS

Final Report on Ferry Expansion Options for Marine Division

PREPARED FOR KING COUNTY MARINE DIVISION
BY KPFF CONSULTING ENGINEERS
WITH BERK CONSULTING, INC.
OCTOBER 30, 2015

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Figure 1: Routes Identified for Ridership Analysis

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Table 1: Annual Ridership Growth by Route, 2015 and 2025

Table 2: Farebox Recovery Growth Projection, 2015 and 2025

Attachments

Attachment A – Ridership Report

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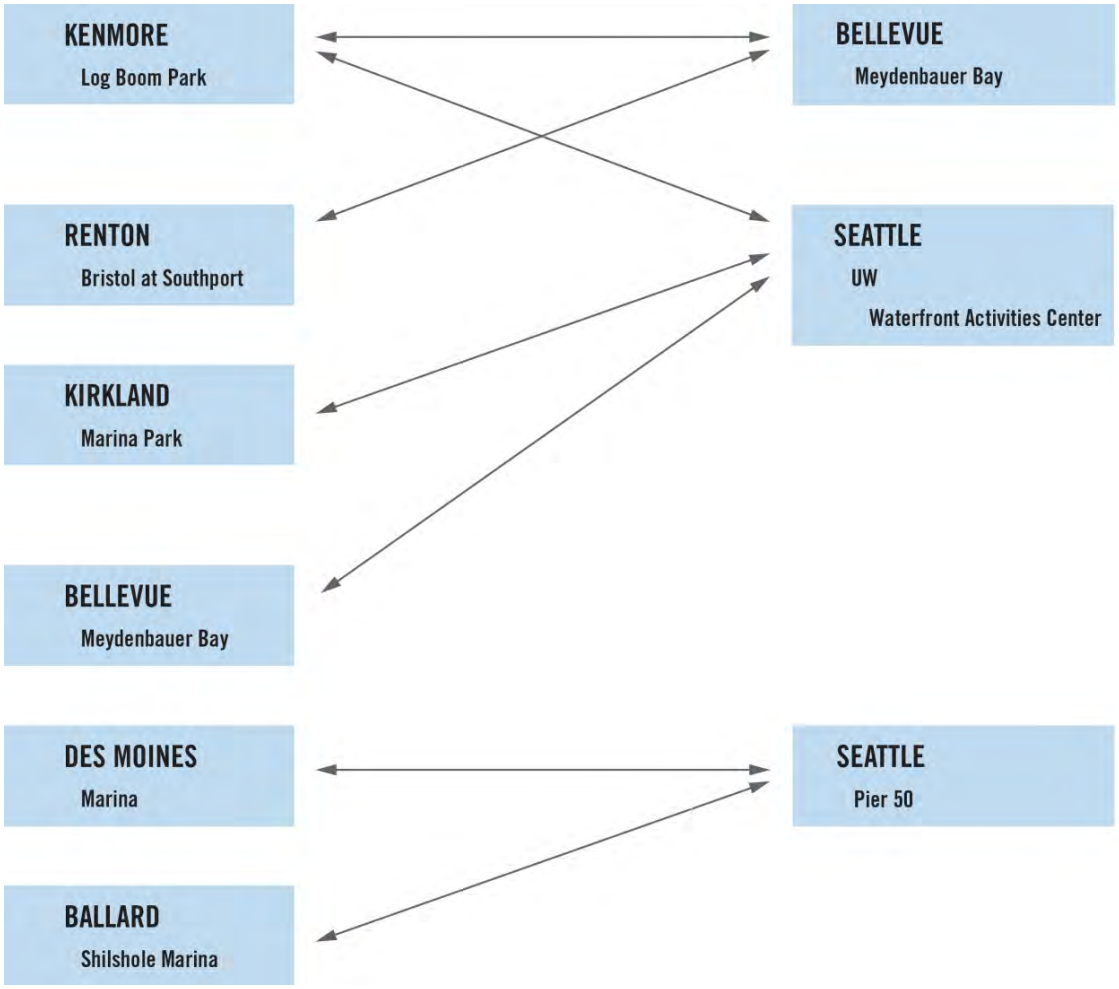
1. Introduction

The purpose of this report is to outline the steps taken to assess the ridership demand for the seven routes carried forward, outline the approach for evaluation and identify those routes that will continue to infrastructure analysis.

Figure 1 outlines the routes evaluated for ridership demand, as identified in the Task 2, Route Profile Report.

Figure 1: Routes Identified for Ridership Analysis



2. Methodology

In order to assess the routes projected ridership, ridership demand was calculated by Berk Consulting. The results were then used to calculate farebox recovery for each route individually and also as a three route water taxi system. This farebox recovery finding was then used to identify those routes which would move on to further analysis. Three routes identified in Figure 1 above had a high enough farebox recovery to move to the next phase of review. Please refer to the analysis below.

Ridership Analysis

This report will outline the basic structure of the ridership analysis. For a thorough documentation of ridership methodology and findings, please refer to Appendix A, Ridership Forecast.

Ridership demand was calculated by reviewing commute characteristics of populations within the vicinity of the potential water taxi landing sites. Along with population information, ridership forecasts were developed by reviewing existing and potential public transit options, route time competitiveness data outlined in Task 2, travel demand models from Puget Sound Regional Council (PSRC), and historical West Seattle Water Taxi ridership.

Each terminal location was assigned a geographic boundary based on the transportation options available to commuters near the terminal and potential barriers to easily accessing the terminal location. The capture area was weighted based on the likelihood a population would choose the water taxi (given route competitiveness with other modes of transportation) and potential barriers to access including traffic congestion approaching the terminal, parking availability at the terminal, and accessibility for pedestrians and bicyclists.

The ridership analysis also forecasted a capture rate of passengers anticipated to use the water taxi out from the capture area. As this would be a new mode of public transportation, there can be a period of time for commuters to familiarize themselves with a new transit option. To account for this period of time, Berk used the 2010 West Seattle/Pier 50 capture rate to project the capture rate for a new route.

Each potential landing site provides opportunities for recreational riders to explore the area around the ferry terminal. Generally, recreational ridership increases during the summer months. Therefore, recreational and seasonal ridership variations in service were also factored into the annual ridership projections for weekday service.

It should be noted that additional ridership analysis did not occur after the initial findings. After findings were presented in the Interim Report, additional information was provided by local jurisdictions, specifically Kenmore and Kirkland which may enhance ridership. The City of Kenmore informed the planning team that work is being done at the intersection from where pedestrians would access the Log Boom Park terminal. These improvements would alleviate existing barriers and would likely increase ridership, although insignificantly. Additionally, the City of Kirkland has requested that a circulator shuttle be considered for the operation of the Kirkland route. This enhanced access to terminal is likely to increase ridership on this route, however likely not significantly enough that would alter the program identified for this route.

Farebox Recovery Analysis

Farebox recovery is a calculation of the fraction of operating expenses that are met by fares paid by passengers. It is calculated by dividing the system, or routes total fare revenue by total operating expenses.

Farebox recovery calculations in this study were based off of King County Marine Division's 2014 actual operating expenses. Operating expenses include route specific costs, such as fuel, shuttle costs and crew labor, as well as a portion of the divisions fixed costs, which include administration/management labor and maintenance. Shared costs can be broken down into administrative costs and route-based costs (maintenance). It is assumed that adding a third route to the system would not increase the administrative fixed costs. This assumption would need to be validated once specific route needs are identified. However, any increase above three routes would require the addition of administration/management and maintenance needs and therefore costs. The division of fixed costs is portioned based on the operating hours of each route. For the purposes of this study, any new route proposed would be commute only service, much like that of the

current Vashon to Downtown Seattle (Pier 50) schedule. Therefore, route specific costs, as well as the shared costs are modeled from the existing Vashon proportioned costs.

Start-up service year (2015) route revenue was calculated by multiplying the current ORCA fare by projected ridership. A fare realization factor of 86% was applied to the calculated route revenue to account for the actual apportioned revenues received, reduced fares and non-paying customers. The 2025 revenues were determined by multiplying projected ridership by the 2025 fares (which were escalated from 2015 using existing fare policy guidelines). The fare realization factor was also applied to the 2025 calculated fare revenue.

3. Elimination Criteria

The elimination criterion for this analysis was based on farebox recovery calculations for the stand alone route in a 2015 (route start-up) and then 2025 (route maturity) ridership scenario. For 2015 ridership, natural breaks were apparent in the 2015 farebox recovery rates resulting in two routes with farebox recovery rates lower than 10 percent. Furthermore, routes which did not meet a mature farebox recovery of 25[1] percent or greater in 2025 were eliminated. The 25 percent or greater threshold for farebox recovery was based on current established King County policy.

4. Findings

Findings can be categorized into two pieces: ridership and farebox recovery. Farebox recovery is in part, guided by the projected ridership for each route. Table 1 provides a summary of 2015 and 2025 high forecast annual ridership projections for the seven routes reviewed.

Ridership Analysis

Generally, 2015 (start-up) ridership numbers begin in a similar range. Once the routes reach maturity in 2025, some routes show greater growth, while others remain stagnant. Kenmore, Kirkland and Ballard continue to show ridership growth, while Bellevue and Des Moines have limited growth. For these two routes, this trend is in part due to the other competing modes that are offered near Des Moines and Bellevue, which include Link Light Rail, and regular and express bus service. Kenmore and Ballard do not have substantial upgrades to the transportation infrastructure planned and, therefore, riding a water taxi becomes a more competitive mode. As for Kirkland, the new 520 bridge will be in operation with its associated tolling. The proximity of the Kirkland marina to the UW WAC and the water taxi's system reliability make this route a very competitive option.

[1] 25 percent is the system-wide target for farebox recovery for King County Metro and the current Water Taxi routes and used as a guide in this analysis. However, Metro and the Water Taxi have been exceeding this target since 2009. (http://metro.kingcounty.gov/am/reports/annual-measures/financial.html)

Table 1: Annual Ridership Growth by Route, 2015 and 2025

Route	2015 Annual Ridership Forecast	2025 Annual Ridership Forecast	Percent Growth
Kenmore (Log Boom Park) to UW WAC	57,148	119,210	109%
Kirkland (Marina Park) to UW WAC	56,666	115,625	104%
Bellevue (Meydenbauer Bay Marina) to UW WAC	45,579	72,357	59%
Des Moines (Marina) to Downtown Seattle (Pier 50)	42,473	61,998	46%
Ballard (Shilshole Bay Marina) to Downtown Seattle (Pier 50)	59,433	107,175	80%

*Note: While ridership numbers were calculated based on a 2015 year, service would not begin in 2015 as funding, terminal improvements and agreements would need to be reached with the terminal facility jurisdiction.

To put these numbers in perspective, the West Seattle route has experienced 84 percent growth in ridership from 2010, when King County took over service of the route to 2014 (4 year maturity). This route continues to experience growth, however, some of that growth can be attributed to recreational ridership, which is not applicable for the commute-only service proposed on these new routes.

Farebox Recovery Analysis

Farebox recovery calculations allow us to use the ridership projections in a meaningful way and provide a fuller understanding the financial impact of supporting new routes. As ridership reaches more mature levels, farebox recovery rates increase between 2015 and 2025. Once the data was plotted, natural breaks occurred between routes.

At system start-up (2015), five routes meet a farebox recovery of 10 percent, which include: Kenmore to UW, Kirkland to UW, Bellevue to UW WAC, Des Moines to Downtown Seattle (Pier 50) and Ballard to Downtown Seattle (Pier 50). Refer to Table 2 below.

At system maturity (2025), three routes meet or exceed the established King County farebox recovery policy target of 25 percent. The routes that met this criterion include: Kenmore to UW WAC, Kirkland to UW WAC, and Ballard to Downtown Seattle (Pier 50). The Bellevue to UW WAC and Des Moines to Downtown Seattle did not meet the evaluation criterion. Refer to Table 2 below for route specific farebox recovery at startup (2015) and at system maturity (2025).

Table 2: Farebox Recovery Growth Projection, 2015 and 2025

Route	Stand-Alone Farebox Recovery (at start-up 2015)*	Stand-Alone Farebox Recovery (at maturity 2025)*
Kenmore (Log Boom Park) to UW WAC	12.2%	28.0%
Kirkland (Marina Park) to UW WAC	14.0%	31.4%
Bellevue (Meydenbauer Bay Marina) to UW WAC	10.7%	18.7%
Des Moines (Marina) to Downtown Seattle (Pier 50)	10.5%	16.9%
Ballard (Shilshole Bay Marina) to Downtown Seattle (Pier 50)	16.0%	31.5%

5. Routes for Future Analysis

Routes identified for further infrastructure analysis include:

- Kenmore (Log Boom Park) to UW WAC
- Kirkland (Marina Park) to UW WAC
- Ballard (Shilshole Bay Marina) to Downtown Seattle (Pier 50)

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Attachment A

Ridership Report

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KING COUNTY MARINE DIVISION

Water Taxi Alternatives Ridership Forecast

June 3, 2015

BERK

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1.0 OVERVIEW AND APPROACH

This report evaluates seven alternative water taxi routes in order to develop average daily and annual ridership forecasts for the years 2015, 2025, and 2040. The routes evaluated include:

- Kenmore (Log Boom Park) to University of Washington (WAC)
- Kenmore (Log Boom Park) to Bellevue (Marina)
- Kirkland (Marina) to UW (WAC)
- Bellevue (Marina) to UW (WAC)
- Renton (Southport) to Bellevue (Marina)
- Des Moines (Marina) to Pier 50
- Ballard (Marina) to Pier 50

As with the 2009 pedestrian ferry route analysis[1], this study first analyzed ridership statistics for the West Seattle/Downtown Water Taxi to determine potential market capture rates for commute travel to employment centers. Following that analysis three primary factors were used to forecast commute ridership for each route alternative:

- Accessibility of the terminal to potential customers
- Market demand in the travel corridor
- Travel time competitiveness of ferry routes compared to bus/rail transit

The primary data source used for the commute ridership forecasts is travel demand model output from the Puget Sound Regional Council (PSRC). This data summarizes peak AM person-trips between origin and destination zones throughout King County and nearby areas by mode of travel (single occupancy vehicle, carpool, transit, and other). This study analyzed data from different model outputs that reflect anticipated land use and transportation conditions in 2010, 2025, and 2040.

Recreational ridership is forecasted separately using a different methodology under the assumption that all recreational trips are induced[2] and would not be reflected in PSRC's travel model data. The analysis considers key differences between the Water Taxi service and destination characteristics compared to the proposed route alternatives in order to estimate recreational ridership potential and growth for each route.

2.0 WEST SEATTLE/DOWNTOWN WATER TAXI ANALYSIS

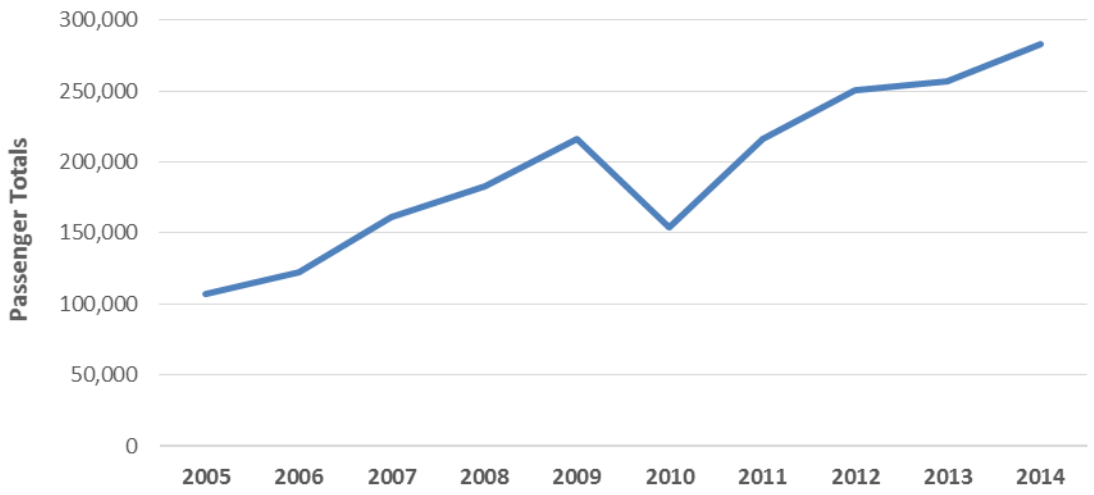
The West Seattle to Downtown water taxi began sailings in 2005 as a seasonal service (April – October) and extended to a year-round service in late 2010. Exhibit 1 shows annual ridership as a steadily growing trend since 2010. In 2014, the water taxi carried over 282,000 passengers, the highest ridership since the route began.

---

[1] KPFF Consulting Engineers 2009. *King County Ferry District Demonstration Project Technical Studies and Implementation: Refined Route Analysis*. Release date: June 30, 2009.

[2] "Induced" trips are trips which would not have otherwise happened if the service were not available. Since these trips would not reflect regular trip making patterns, they would not be expected to be reflected in regional travel model output.

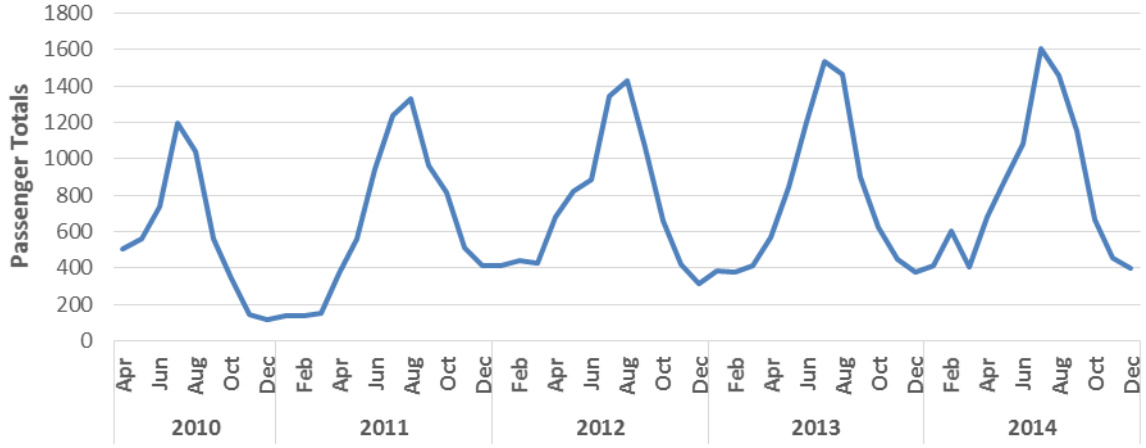
Exhibit 1. Annual Ridership, West Seattle/Downtown Water Taxi



Source: King County Marine Division, 2015; BERK, 2015

Water taxi ridership varies significantly by season due in part to the large number of summer recreational passengers. Exhibit 2 shows average West Seattle Water Taxi daily ridership from 2010 to 2014.

Exhibit 2. Average Daily Ridership, West Seattle/Downtown Water Taxi

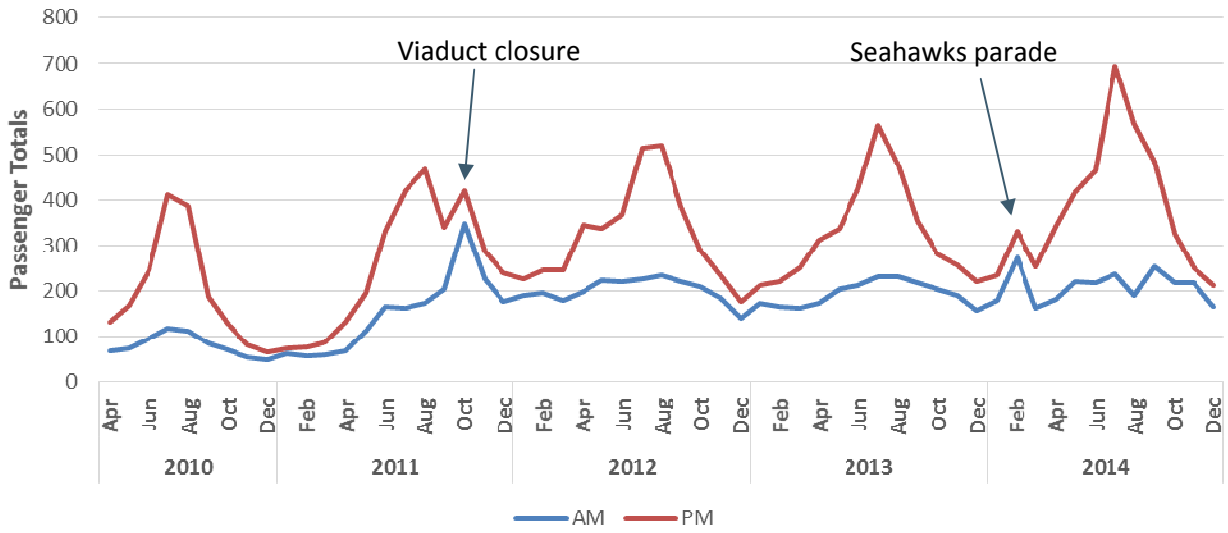


Source: King County Marine Division, 2015; BERK, 2015

One way to differentiate commute ridership from recreational ridership is to analyze passengers by time of sailing. Exhibit 3 show peak period commute ridership for weekday travel by month during 2010 – 2014. The AM peak period includes sailings from 6:00 – 8:45 AM while the PM peak period includes sailings from 3:45 – 6:45 PM. AM peak ridership (shown in blue) has remained fairly steady since mid-2011, with the exception of slight seasonal variation, the October 2011 Alaskan Way Viaduct closure and February 2014 Seahawks parade. PM peak period ridership, on the other hand, shows a great deal of seasonal variation as well as growth from year to year. This study assumes all AM peak period trips are

associated with commute travel and that additional PM peak period trips are for recreational travel. Therefore, to estimate daily commute ridership this study doubles AM peak period ridership. All other trips are assumed to be for recreational purposes. These assumptions are consistent with the findings of a 2008 survey of West Seattle/Downtown Water Taxi passengers.[3]

Exhibit 3. Commute Ridership, West Seattle/Downtown Water Taxi Peak



Source: King County Marine Division, 2015; BERK, 2015

Currently, the West Seattle/Downtown Water Taxi provides weekend service during the summer sailing season of April through October. Ridership data from a peak travel week in 2014 (August 4 – 10) indicates that weekend ridership can exceed weekday ridership during the peak summer months. Average daily weekday ridership during this period was 1,678 while average daily weekend ridership was 2,307.

3.0 COMMUTE TRAVEL LEVEL OF DEMAND

To summarize the total potential demand for ridership, BERK analyzed the volume of AM peak commute trips between each route's origin and destination market areas. This section describes the methods used to identify the geographic boundaries of origin (home) and destination (workplace) travel market areas. It also describes the travel model data used to summarize current and future market demand in each route corridor.

3.1 Data Source – PSRC Travel Model Output

The person-trip counts reported in this study are based on outputs of PSRC's travel demand forecasting model. This data summarizes morning peak (6:00 AM - 9:00 AM) person-trips by mode of travel between origin and destination zones throughout King County and nearby areas. This study analyzed data from different model outputs that reflect current or anticipated land use and transportation network

[3] See KPFF Consulting Engineers 2009. *King County Ferry District Demonstration Project Technical Studies and Implementation: Refined Route Analysis*. Release date: June 30, 2009.

conditions in 2010, 2025, and 2040. The impacts of current and future toll rates, transit fares, parking costs, and congestion are all considered when determining whether the trip produced by a given household will select to travel via single occupancy vehicle, carpool, transit, or non-motorized (bicycle and pedestrian trips combined). Also considered are the socio-economic characteristics of individual households such as income, which can also have an influence on mode choice. These factors combined sometimes result in a decline in total trips between zones of interest despite a growth in housing and employment.[4]

The PSRC trip data is grouped by Traffic Analysis Zones (TAZ), which are geographic areas used in transportation modeling. The size of a TAZ scales with the density of the population and jobs within a specific area, and can range from the size of a few city blocks in dense urban areas to several square miles in suburban areas, or more in rural areas. Trips are summarized by origin and destination TAZ pairs; therefore, it is possible to summarize the total volume of peak AM trips from one part of King County to another, isolating travel patterns in corridors of interest.

This study seeks to forecast ridership for the years 2015, 2025, and 2040. PSRC does not provide data for the year 2015. Therefore, trip volumes for 2015 are estimated using the following formula:

2015 Trips = 2010 trips + ((2025 trips – 2010 trips)* 0.4)

The ratio of projected King County population growth from 2010 – 2015 to PSRC's forecasted population growth from 2010 – 2025 is 0.4 or 40%. Essentially it assumes that each TAZ has achieved approximately 40% of its progress towards the 2025 household and population targets assumed in the PSRC land use and travel demand model.

A limitation of this approach is that the 2025 travel model assumes the introduction of additional highway tolling and other changes the transportation network, which are not in effect as of 2015. As a result, this method of estimating 2015 trip counts may underestimate total trips in some zones. Similarly, transit trips could potentially be overestimated if the model is forecasting a shift to transit as a result of network changes that have not yet taken place in 2015.

Finally, PSRC produces different versions of travel model output based on different assumptions about the trip-making patterns of households in the future. This study analyzed two different travel model outputs each for the years 2025 and 2040. Essentially, one forecast assumes greater reductions in trip making per household than the other. By analyzing data from each forecast BERK is able to produce two different ridership forecasts for each year, which we call "Low" and "High". These are described later in the Appendix.

3.2 Selection of Origin and Destination Market Areas

To measure level of demand, it is necessary to define the geographic boundaries of origin and destination market areas for each route alternative.

- Origin markets are defined as the catchment area of all household locations for which the ferry route may provide a reasonably competitive alternative to current and future transit options.

[4] PSRC produces different versions of travel model output based on different assumptions about the trip-making patterns of households in the future. This study analyzed two different travel model outputs each for the years 2025 and 2040. Essentially, one forecast assumes greater reductions in trip making per household than the other. By analyzing data from each forecast BERK was able to produce higher and lower end forecasts of commute ridership potential.

- Destination markets are employment/activity centers that are attractors of daily commute trips.

Origin Market Areas

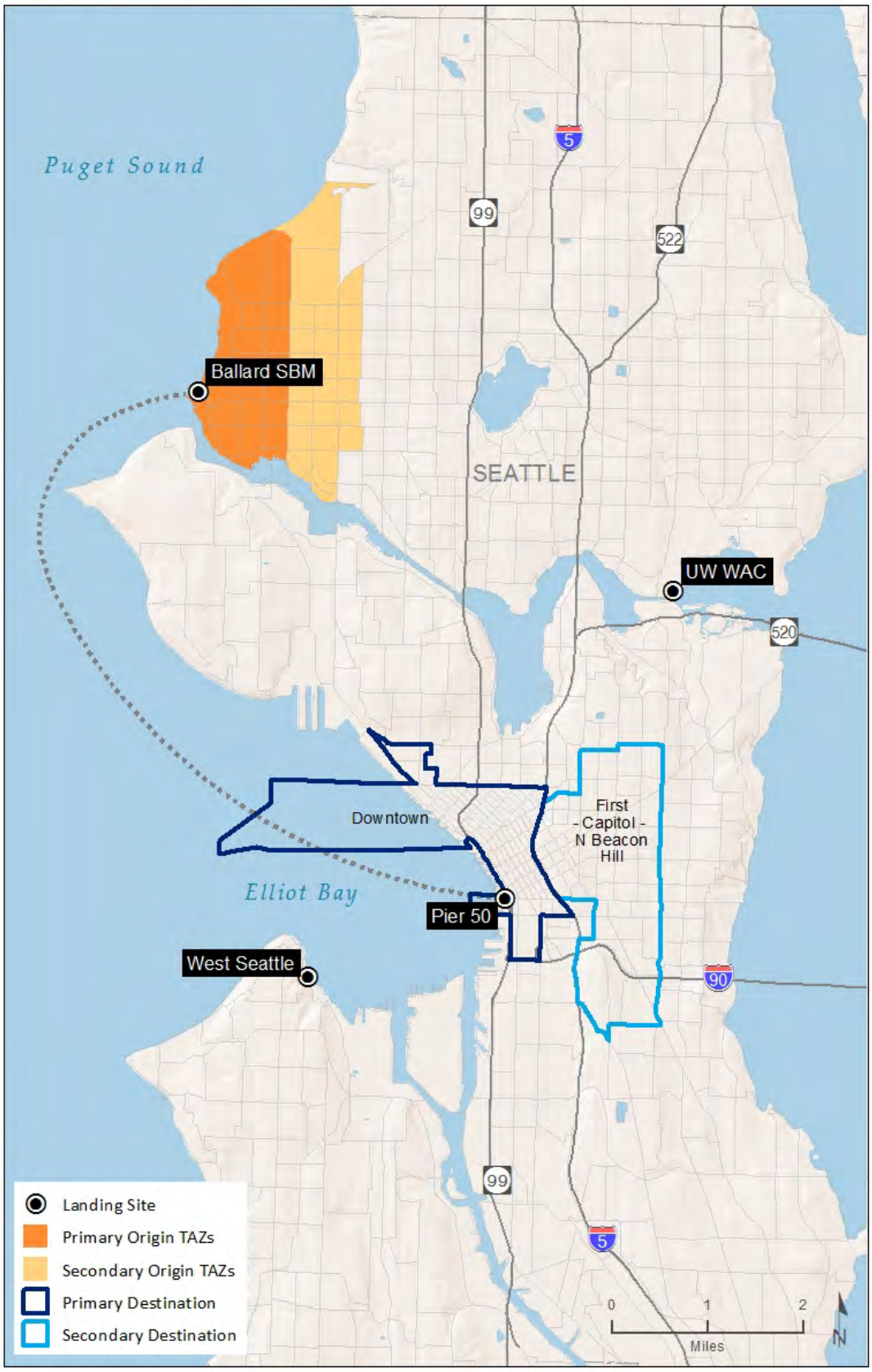
Origin market areas are defined for all ferry landings because many routes are expected to have at least some bi-directional commute travel. Each origin market is divided into two or three segments, depending upon the presence or absence of a park-and-ride facility. Primary market areas include all TAZs within two mile of the landing site. Secondary market areas include TAZs within a 10-minute uncongested drive from the landing site. For ferry landings that include park-and-ride lots, tertiary market areas are created to take into account due to the increased accessibility for passengers arriving by automobile. Tertiary areas included TAZs within a 15-minute uncongested drive of the landing site.

The resulting market areas were then scaled back by eliminating TAZs too close to the destination. This was done under the assumption that potential riders would not travel away from their destination to access the ferry. Drive-time contours from the destination were used as a guide to eliminate TAZs where potential riders would have to back-track or drive significantly out of their way to get to the landing site. Similarly, capture areas were scaled back where ferry travel time competitiveness compared to transit options diminished significantly. Examples include areas east of 15th Street NW in Ballard and TAZs intersecting the SR 520 corridor in Kirkland and Bellevue's market areas.

In addition, select TAZs were also eliminated from a market area if barriers not captured by the GIS would make it unreasonable for potential riders to consider the ferry route. For example, the ship canal was considered a barrier (especially for walking and biking) for the Ballard market area. Even though a few TAZs south of the canal in Magnolia were not screened out by the drive-time mask, it was still unreasonable that riders would take a ferry from the Shilshole Marina to Downtown if they lived south of the canal.

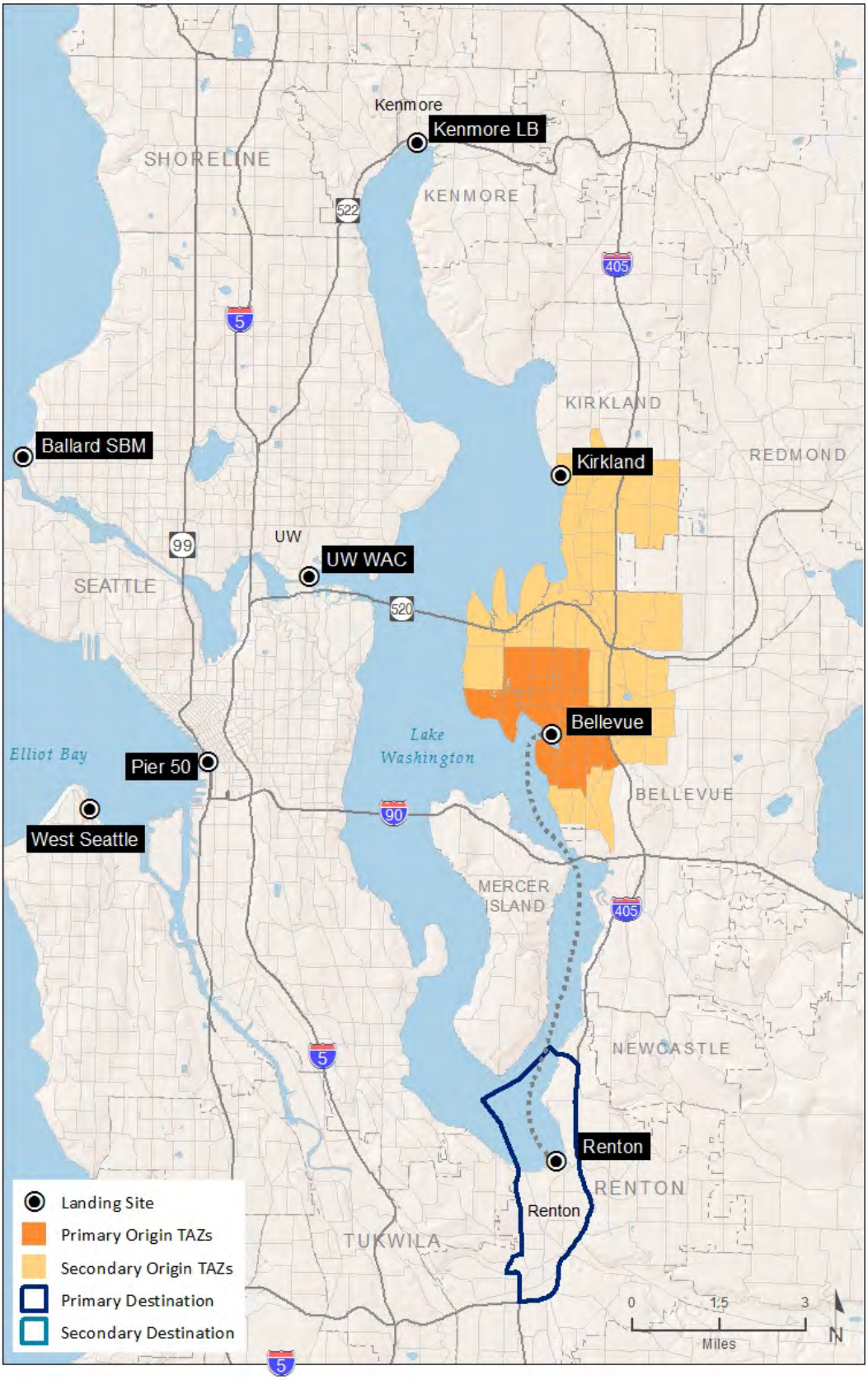
Exhibit 4 through Exhibit 14Exhibit 12 show the origin market areas and associated destination market areas for each point of origin. UW and Bellevue have differentiated origin market areas based on route. These are displayed in separate maps. Exhibit 15 shows the origin and destination areas for West Seattle, as a comparison.

Exhibit 4. Ballard SBM Origin and Destination Market Areas



Source: BERK, 2015

Exhibit 5. Bellevue Origin and Destination Market Areas (Renton Route)



Source: BERK, 2015

Exhibit 6. Bellevue Origin and Destination Market Areas (UW and Kenmore Routes)

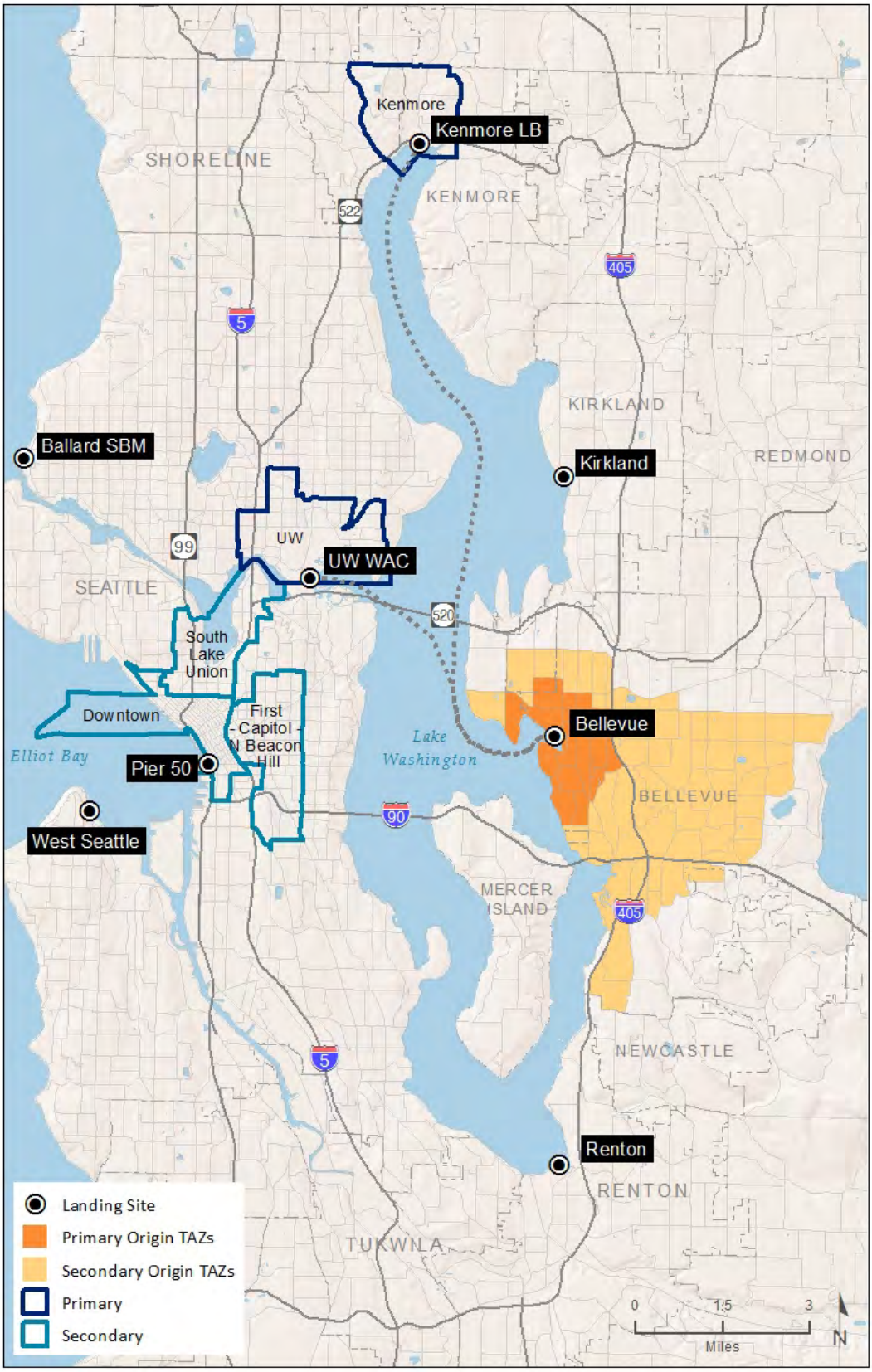
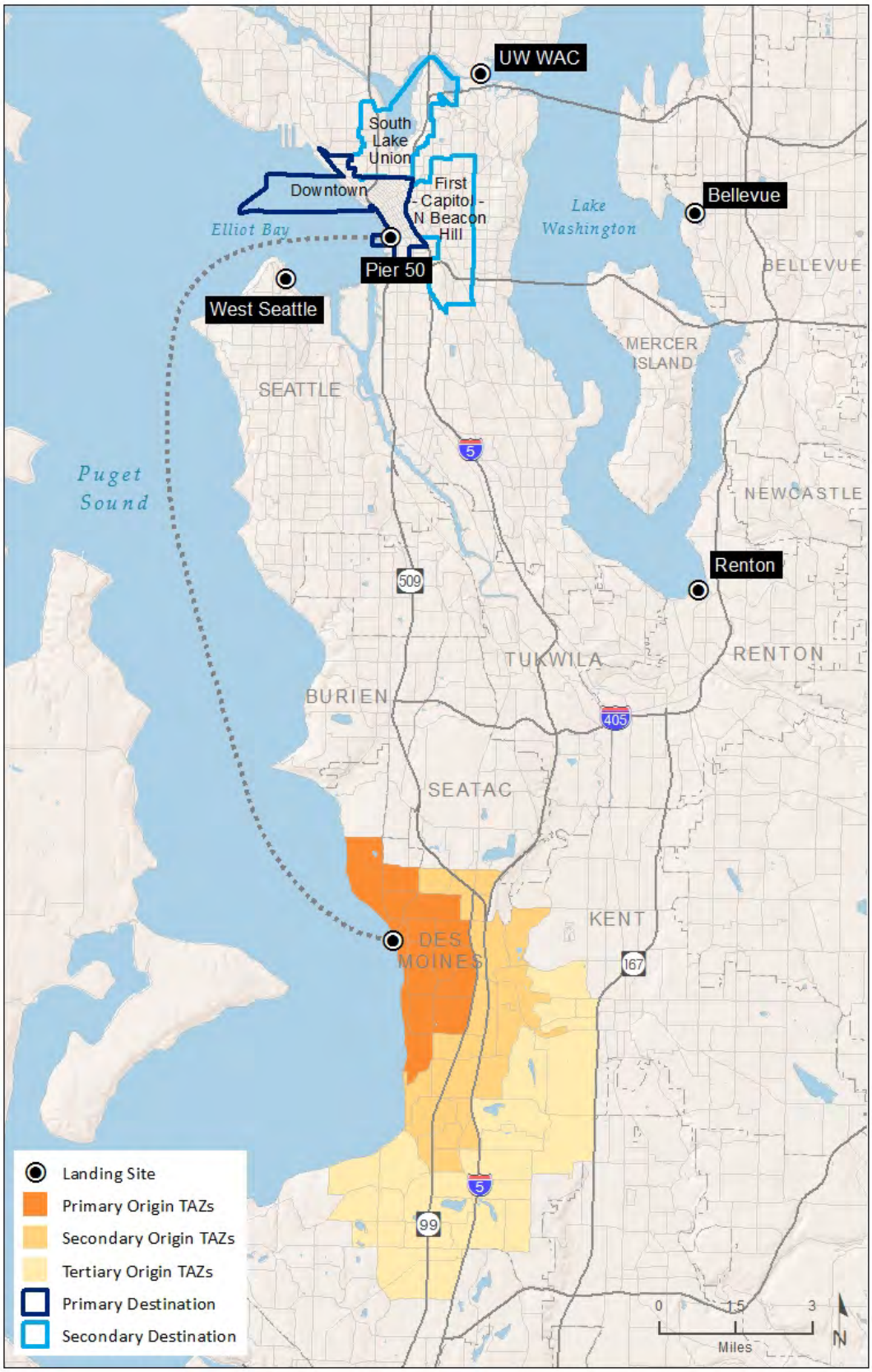
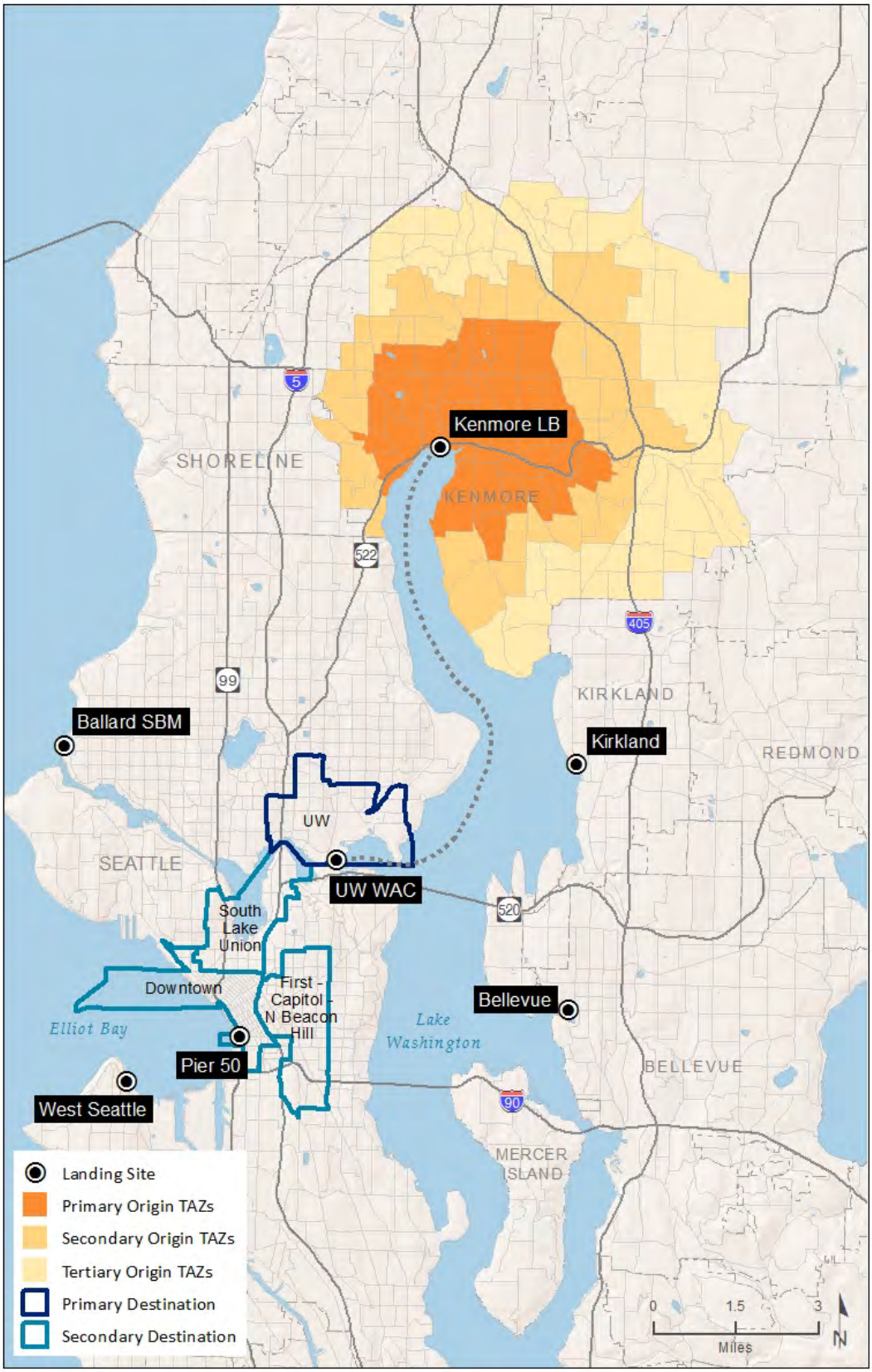


Exhibit 7. Des Moines Origin and Destination Market Areas



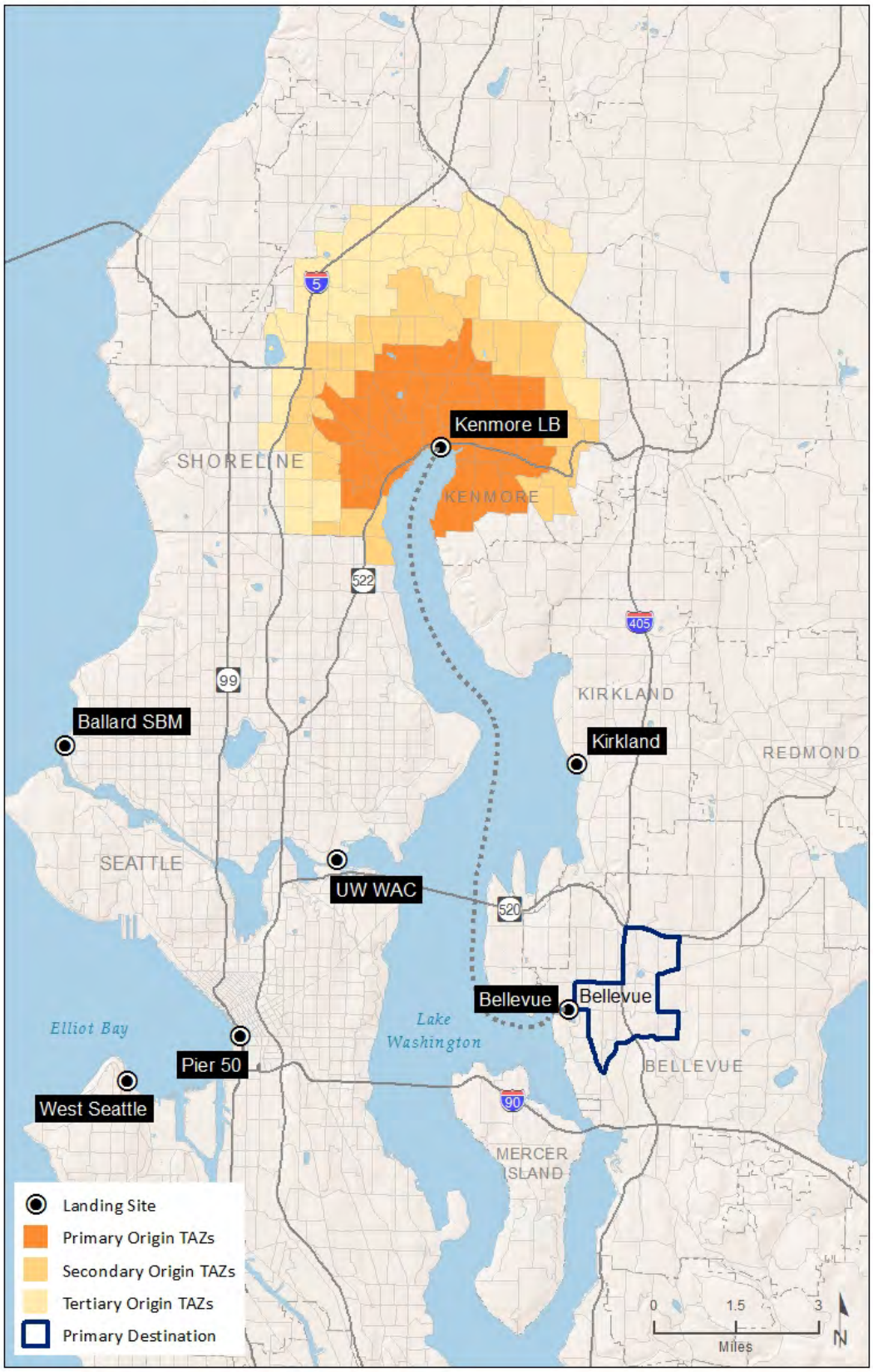
Source: BERK, 2015

Exhibit 8. Kenmore Origin and Destination Market Areas (UW Route)



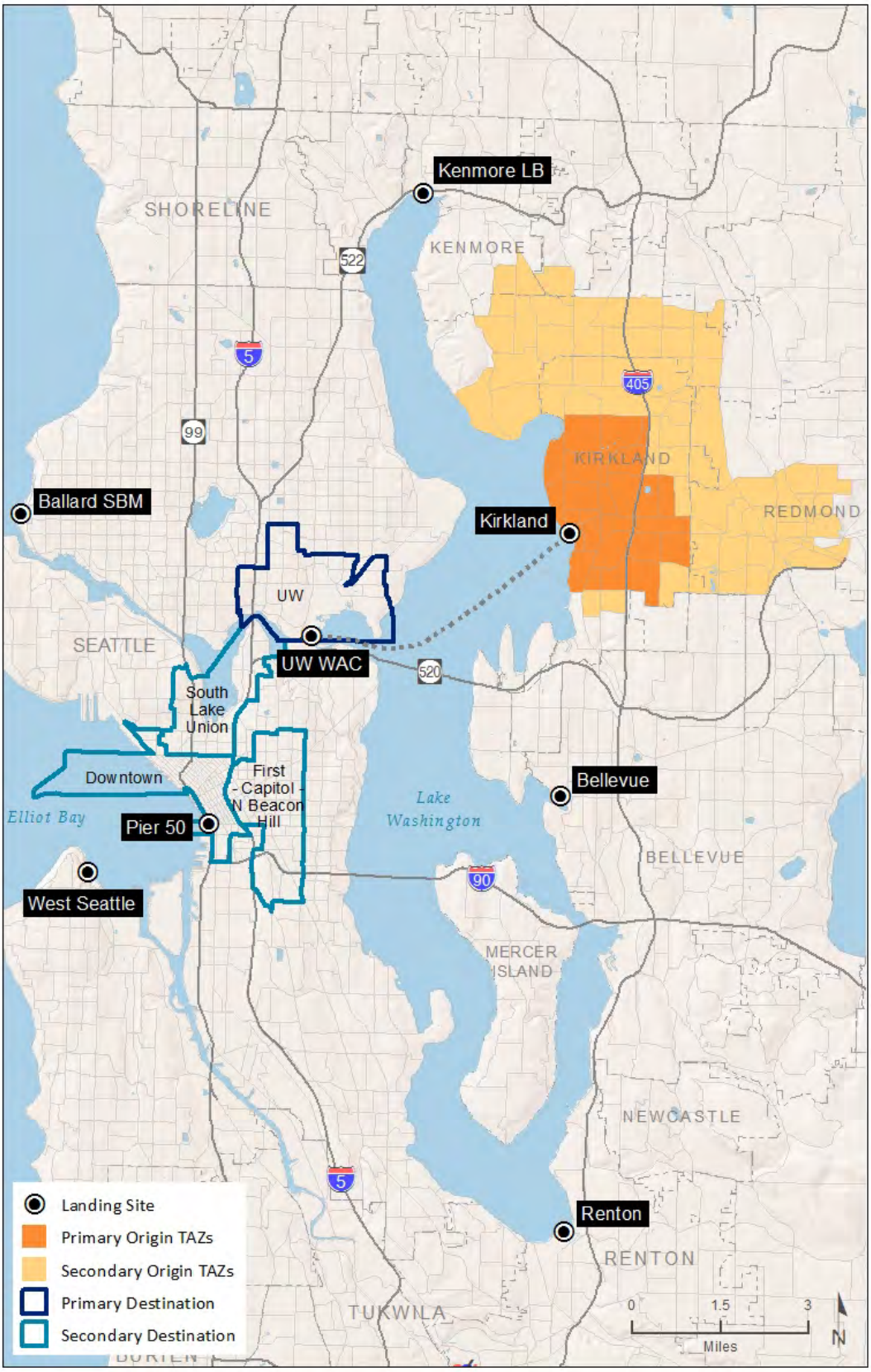
Source: BERK, 2015

Exhibit 9. Kenmore Origin and Destination Market Areas (Bellevue Route)



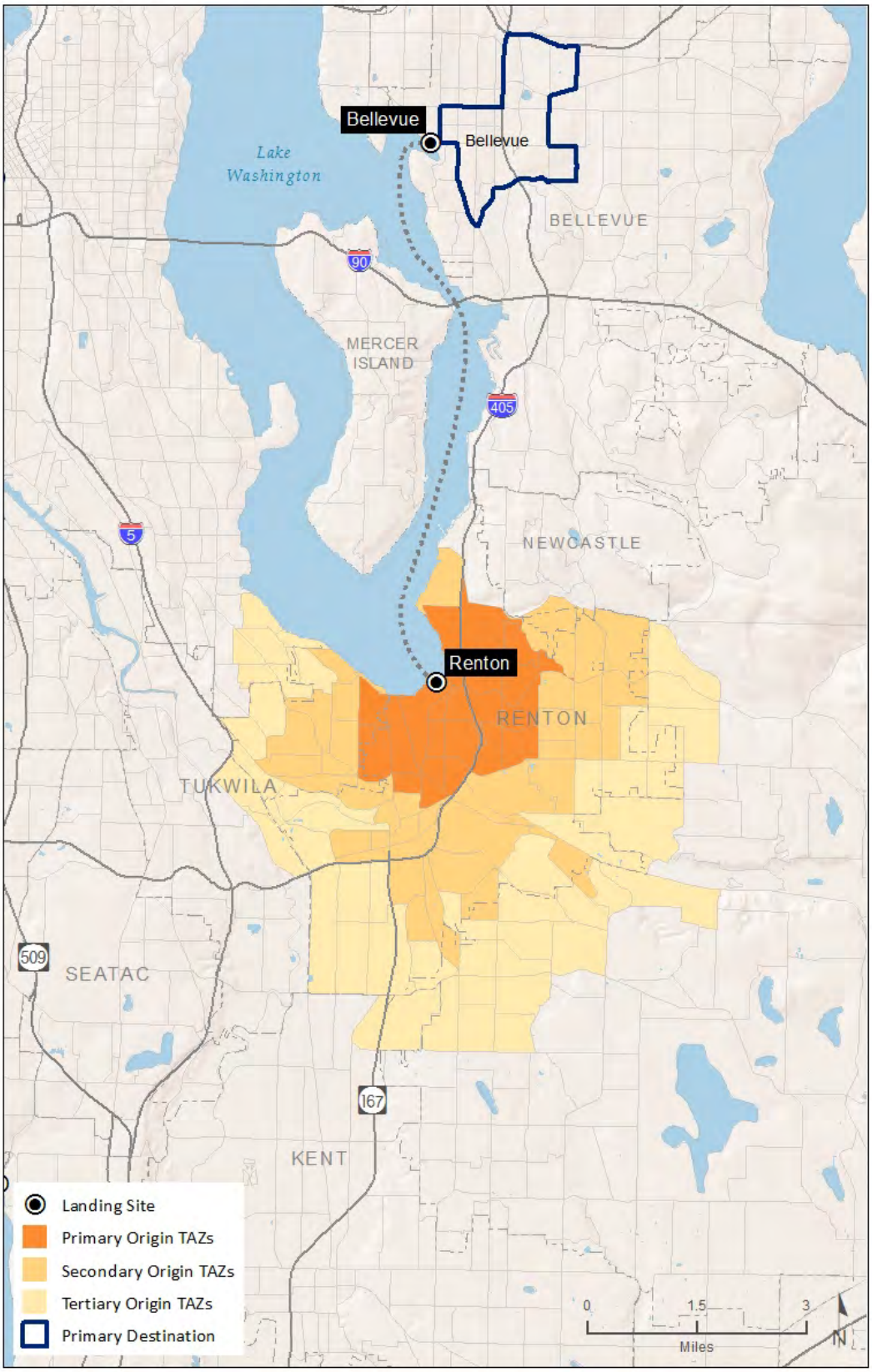
Source: BERK, 2015

Exhibit 10. Kirkland Origin and Destination Market Areas



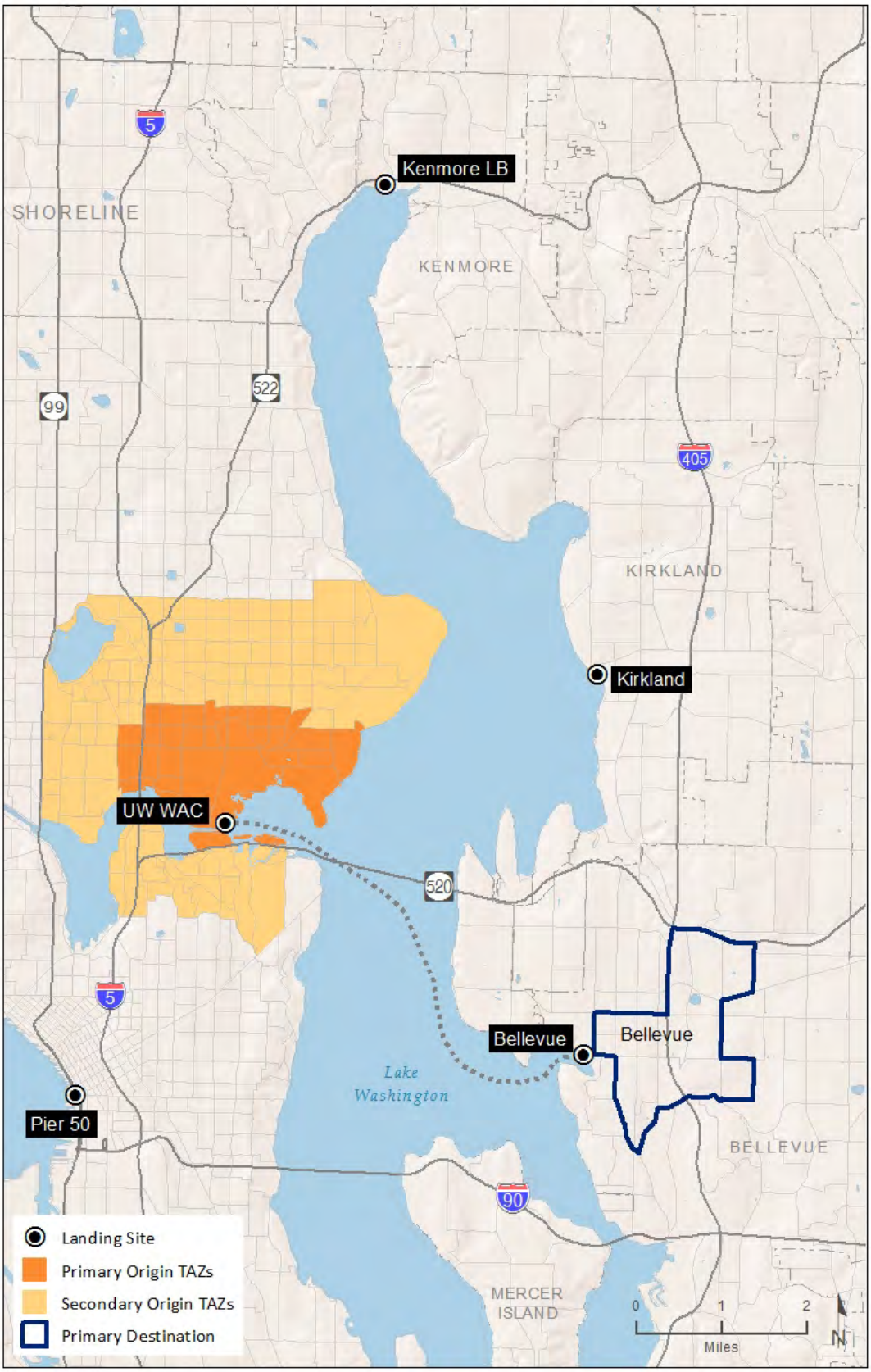
Source: BERK, 2015

Exhibit 11. Renton Origin and Destination Market Areas



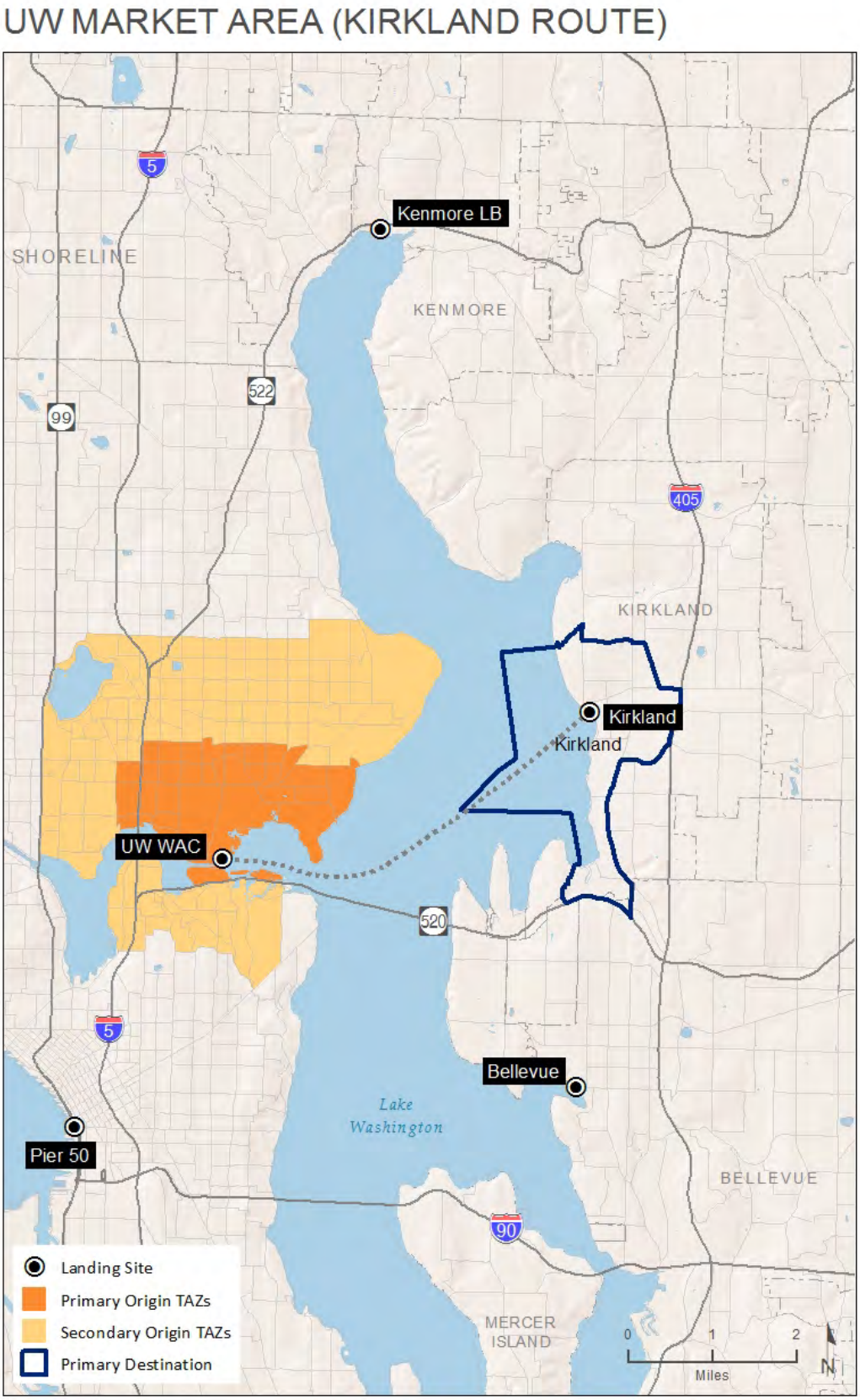
Source: BERK, 2015

Exhibit 12. University of Washington Origin and Destination Market Areas (Bellevue Route)



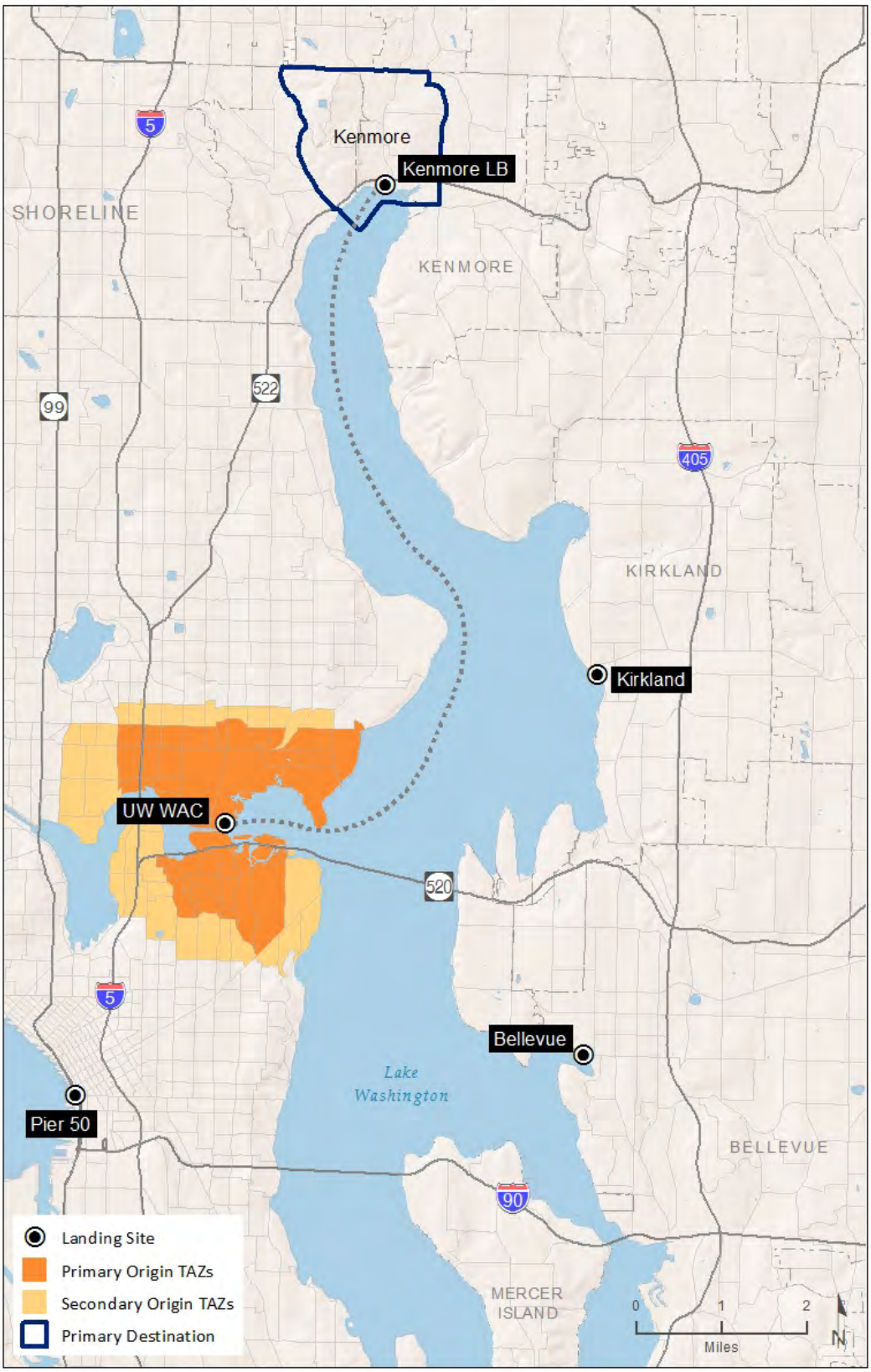
Source: BERK, 2015

Exhibit 13. University of Washington Origin and Destination Market Areas (Bellevue Route)



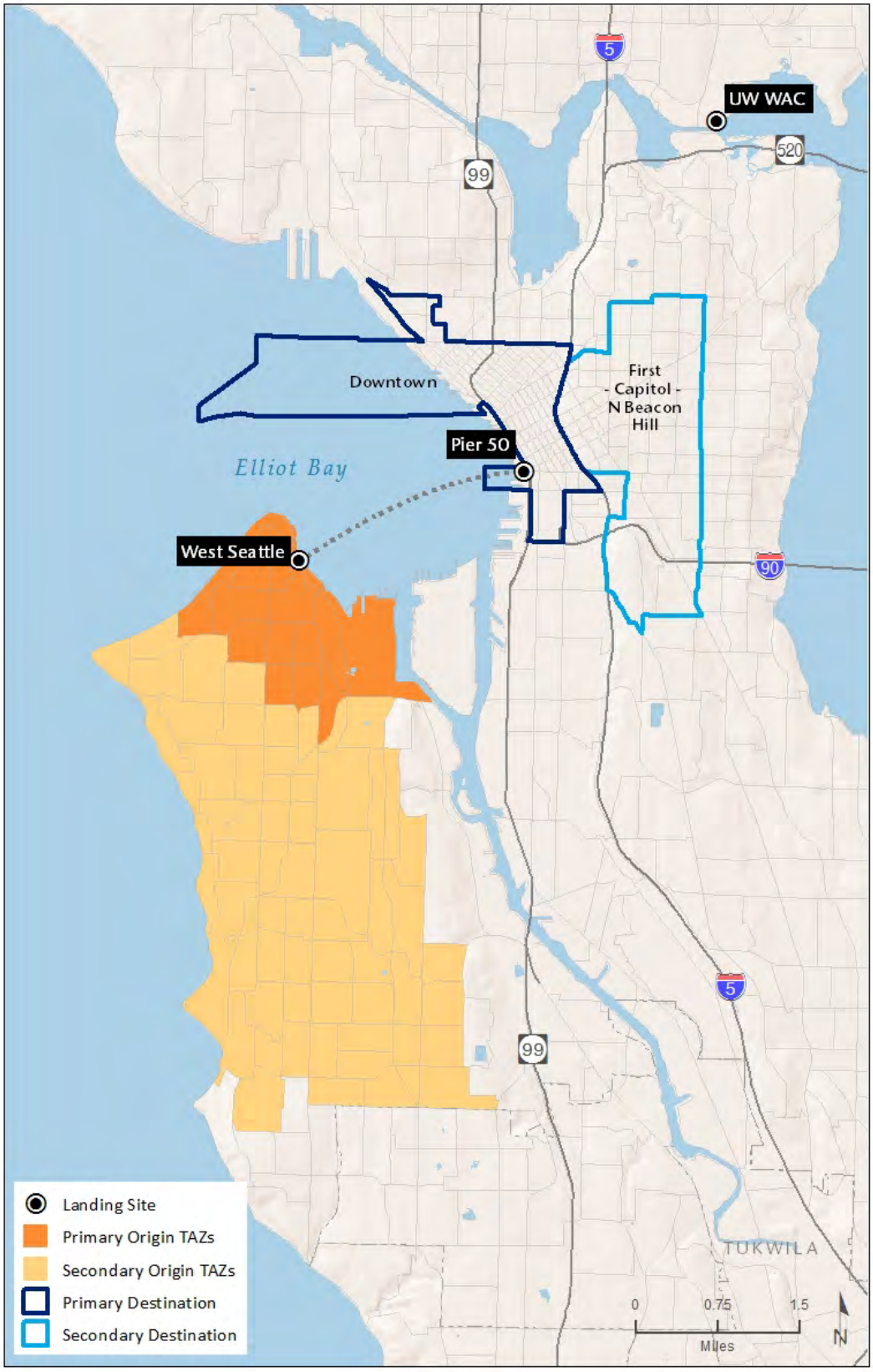
Source: BERK, 2015

Exhibit 14. University of Washington Origin and Destination Market Areas (Kenmore Route)



Source: BERK, 2015

Exhibit 15. West Seattle Origin and Destination Market Areas



Source: BERK, 2015

Destination Market Areas

Destination markets emphasize areas of higher employment and are smaller than origin market areas to account for the fact that passengers must travel on foot, bicycle, or transit transfer to get to their final destination. Each ferry route is associated with one primary destination market area, which contains the ferry landing. Some ferry routes are also associated with secondary destinations. Travel to these secondary destinations would require a transfer to another form of transit or a longer bike ride from the ferry landing for a passenger traveling with a bicycle. Secondary destinations are also less competitive than primary destinations when compared to transit travel time. Exhibit 16 lists primary and secondary destinations by route alternative. The location of destination market areas are mapped in Exhibit 4 through Exhibit 14.

Exhibit 16. Primary and Secondary Destinations by Route Alternative

Route Alternative	Primary Destinations	Secondary Destinations
West Seattle – Pier 50	*Downtown Seattle* *West Seattle*	*South Lake Union* *First Hill/Capitol Hill/North Beacon*
Ballard SBM – Pier 50	Downtown Seattle Ballard	First Hill/Capitol Hill/North Beacon
Des Moines – Pier 50	Downtown Seattle Des Moines	South Lake Union First Hill/Capitol Hill/North Beacon
Kenmore LB – UW WAC	UW Kenmore	South Lake Union Downtown Seattle First Hill/Capitol Hill/North Beacon
Kirkland – UW WAC	UW Kirkland	South Lake Union Downtown Seattle First Hill/Capitol Hill/North Beacon
Kenmore LB – Bellevue	Bellevue Kenmore	*None*
Bellevue – UW WAC	UW Bellevue	South Lake Union Downtown Seattle First Hill/Capitol Hill/North Beacon
Renton – Bellevue	Bellevue Renton	*None*

Source: BERK, 2015

3.3 Market Area Summary

Exhibit 17 summarizes estimated total population by origin market area and proposed route alternative for 2015. Note that some origin market areas change for different route alternatives. For instance University of Washington has a larger primary market area population for the UW WAC - Bellevue route than for the UW WAC - Kenmore route because the market areas cover different TAZs. Generally, routes with tertiary market areas have the greatest total population. Routes with more limited market areas such as Ballard have the least population.

Exhibit 17. Estimated Population by Origin Market Area, 2015

Origin Area	Route	Estimated Population, 2015			
		Primary	Secondary	Tertiary	Total
West Seattle	West Seattle – Pier 50	17,595	57,066	-	74,661
Ballard	Ballard SBM – Pier 50	17,161	25,375	-	42,537
Bellevue	Bellevue - Renton	27,481	36,920	-	64,401
Bellevue	Bellevue – UW WAC	27,481	53,352	-	80,832
Des Moines	Des Moines – Pier 50	34,916	32,211	59,721	126,848
Kenmore	Kenmore LB – UW WAC	41,356	58,920	73,934	174,210
Kenmore	Kenmore LB – Bellevue	31,482	53,855	45,345	130,683
Kirkland	Kirkland – UW WAC	23,360	82,483	-	105,843
UW	UW WAC - Bellevue/Kirkland	43,054	72,737	-	115,792
UW	UW WAC - Kenmore	35,648	44,994	-	80,642
Renton	Renton – Bellevue	33,706	39,402	56,265	129,373

Source: BERK, 2015

Exhibit 18 summarizes estimated employment for the year 2013 by destination market areas. Unlike origin market areas, destination markets do not change in size by route alternative. Downtown Seattle, South Lake Union, and Bellevue have the greatest estimated employment. Kenmore and Ballard have the least.

Exhibit 18. Estimated Employment by Destination Market Area, 2013

Destination Area	Estimated Employment
West Seattle	8,767
Ballard	2,841
Bellevue	71,425
Des Moines	4,675
Downtown	115,023
First - Capitol - N Beacon Hill	56,842
Kenmore	1,636
Kirkland	17,428
Renton	24,183
South Lake Union	81,494
UW	46,109

Source: PSRC, 2015; BERK, 2015

3.4 Findings – Commute Travel Level of Demand

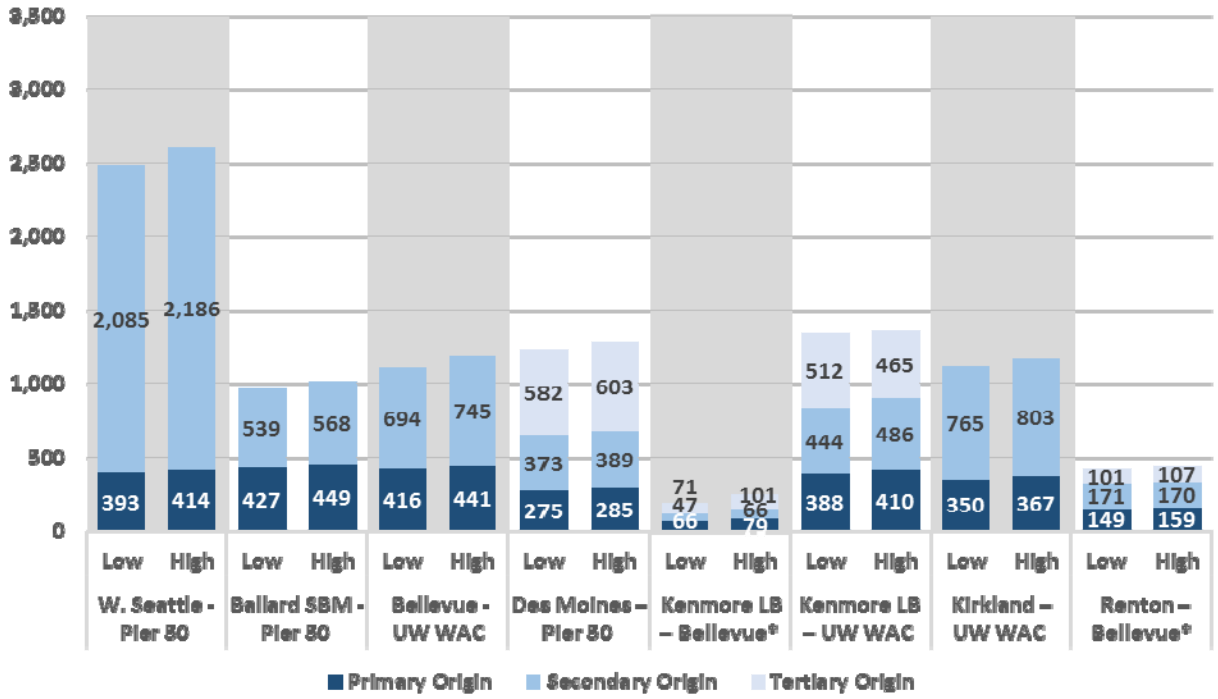
Exhibit 19 through Exhibit 21 summarize level of demand for the West Seattle/Downtown Water Taxi as well as for each proposed route alternative for the years 2015, 2025, and 2040. This analysis treats pedestrian ferries as a form of transit. PSRC travel model data forecasts total demand for transit travel between origin and destination TAZs during the peak AM commute period. So this study measures demand as total peak AM transit trips between origin market areas and potential destinations for each proposed ferry route alternative.

As discussed previously, BERK analyzed two different sets of PSRC travel model output data to calculate a range of possible demand depending upon future household trip making habits. Therefore, two bars are shown for each route: one representing each forecast (Low and High). The 2015 forecast does not show significant difference between the Low and High bars due to greater certainty about near-term travel patterns. By 2040, the difference between the Low and High forecasts becomes more noticeable.

Each bar is divided into three segments, corresponding to primary, secondary, and tertiary origin market areas (primary being the closest and tertiary the furthest from the ferry landing). Demand from each of these market area segments is treated differently in the ferry ridership forecasting analysis, as discussed later in this Appendix. In 2015, many of the proposed routes have similar demand within their primary market areas. The exceptions include Kenmore – Bellevue, Renton – Bellevue, and Des Moines – Pier 50. Much larger difference can be seen when comparing the secondary and tertiary market demand. The West Seattle – Pier 50 route has the highest demand overall in 2015. The next two highest demand routes (Kenmore – UW and Des Moines – Pier 50) benefit from the inclusion of tertiary market areas due to the availability of parking. Routes that do not include Downtown Seattle as a primary or secondary destination show the lowest overall demand. These include Renton – Bellevue and Kenmore – Bellevue.

Exhibit 19. Level of Demand by Proposed Route – High and Low Forecasts

Total Transit Trips from Origin Market Areas to Destination Market Areas, AM Peak Period, 2015

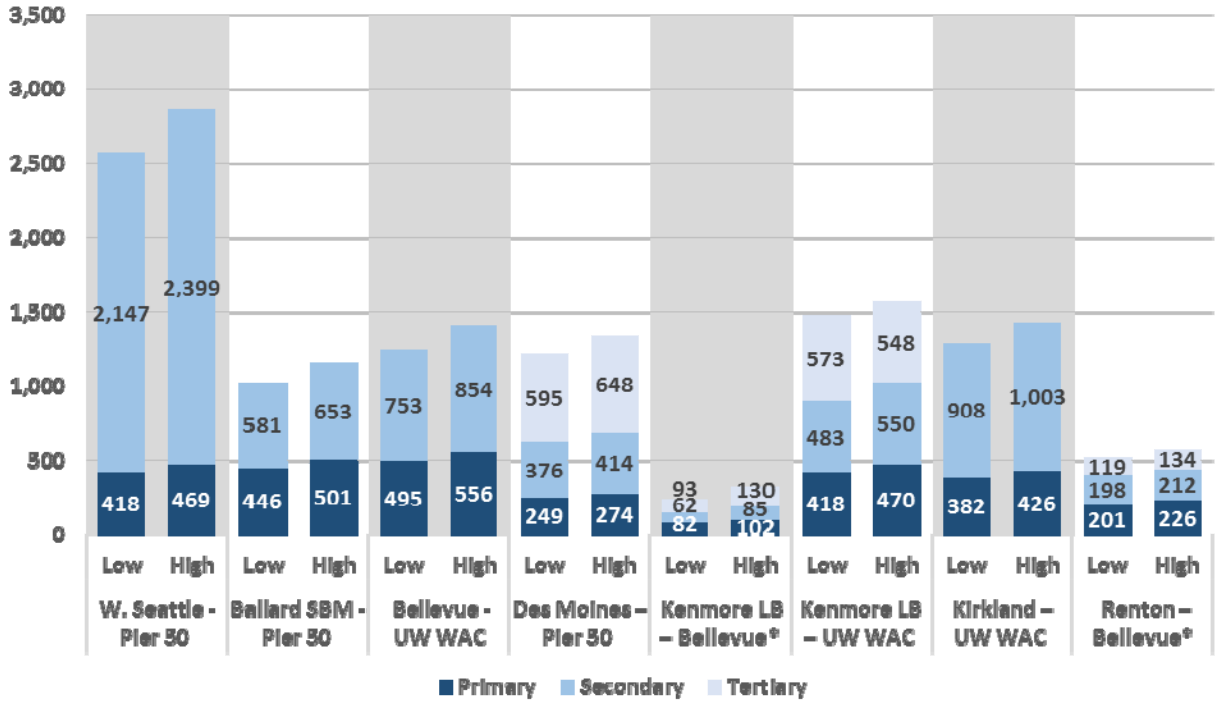


Note: Routes with an asterisk (*) do not have secondary destinations.

Source: PSRC, 2015; BERK, 2015

Exhibit 20. Level of Demand by Proposed Route – High and Low Forecasts

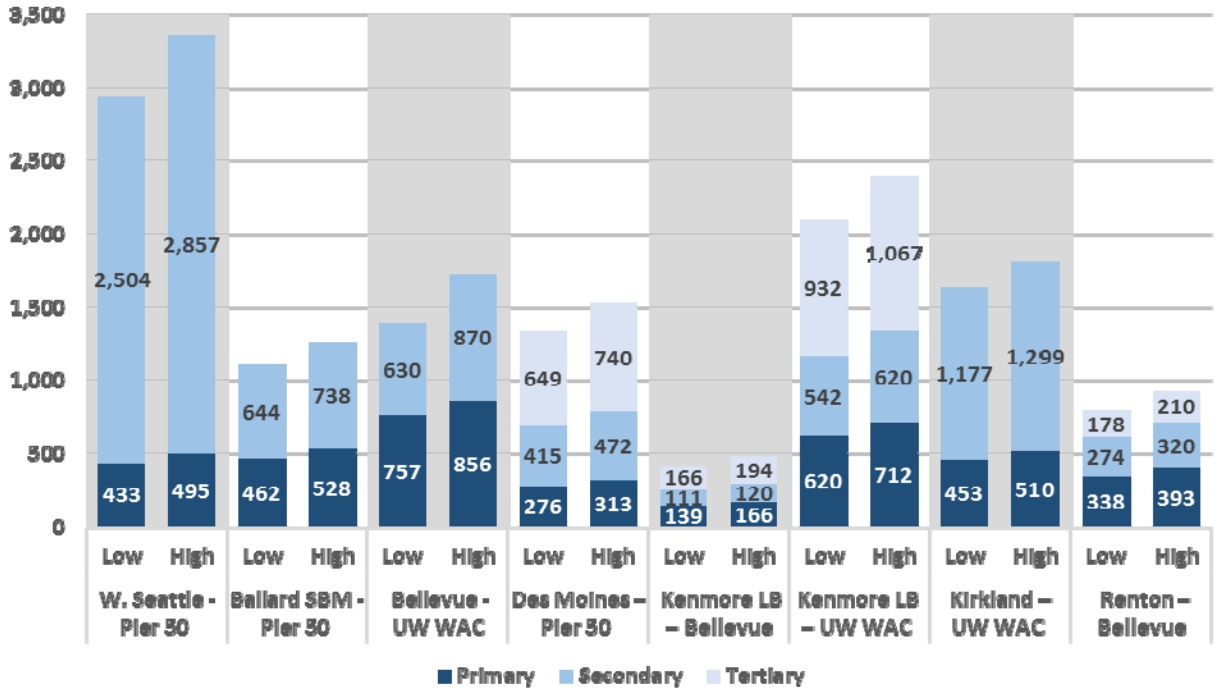
Total Transit Trips from Origin Market Areas to Destination Market Areas, AM Peak Period, 2025



Source: PSRC, 2015; BERK, 2015

Exhibit 21. Level of Demand by Proposed Route – High and Low Forecasts

Total Transit Trips from Origin Market Areas to Destination Market Areas, AM Peak Period, 2040



Source: PSRC, 2015; BERK, 2015

By 2040, demand for transit travel grows for all proposed route alternatives. However, this growth is more rapid for some routes. The routes with the fastest percentage growth in demand are the ones with the lowest demand overall: Kenmore – Bellevue and Renton – Bellevue. Routes landing at Pier 50 show the slowest growth in demand. Routes from the north and east side of Lake Washington to UW all show moderate to rapid growth in demand. By 2040, the Bellevue – UW route will have the largest primary origin demand of all proposed route alternatives. Kenmore – UW also emerges with the second largest primary market demand and largest demand overall among the proposed route alternatives.

4.0 COMMUTE RIDERSHIP FORECAST

This study breaks ridership forecasts into two components: commute ridership and recreational ridership. Section 4.0 focuses on the commute ridership component.

4.1 Commute Ridership Capture Rate

Commute ridership for each route alternative is forecasted based on the assumed percentage share of travelers that choose to ride the ferry out of the total market demand for transit travel from the origin market areas to the destinations served. The best available information regarding potential capture rates can be derived by estimating actual capture rates for the West Seattle/Downtown Water Taxi. Commute ridership capture rates for the proposed route alternatives are expected to vary based on the relative travel time competitiveness of their service compared to other transit options, as will be discussed later.

This study begins with the assumption that market capture rates will be highest for trips starting in the primary origin market area (TAZ closest to the origin ferry terminal) and ending within the primary destination area. Therefore, the analysis began by estimating a "base" market capture rate just for trips from West Seattle's primary origin market area and ending in Downtown Seattle. This capture rate is estimated using actual AM peak West Seattle/Downtown Water Taxi ridership data for 2010 and 2014 as well as estimated level of demand (peak AM transit trips) for the same years.[5] However, not all commute passengers on the West Seattle ferry route are assumed to be traveling to downtown destinations. The actual origins and destinations of water taxi passengers is unknown. Therefore, for the purpose of estimating base capture rates, this study assumes that 71% of peak morning commute passengers start their trip within the primary origin market area and are bound for downtown destinations, while the remaining 29% have different origins and/or destinations. Exhibit 22 shows base market capture rates estimated for the West Seattle/Downtown Water Taxi.

Exhibit 22. West Seattle/Downtown Water Taxi Market Capture Rates

	2010	2014
Average daily peak AM ridership, summer season (April – Oct)	103	217
Total transit trips from West Seattle primary origin market area to primary destination market area (Downtown Seattle)	307	311

[5] As discussed previously, "level of demand" refers to total transit trip during the AM peak period from primary origin area TAZ to primary destination area TAZ. 2010 demand is calculated directly from 2010 PSRC travel model output. 2014 demand is estimated in a similar method as used for 2015, described under Data Source on page 4.

Assumed percentage of all peak AM ridership to start in primary origin market area and end in primary destination market area (Downtown Seattle)	71%	71%
Estimated market capture rate for trips starting in primary origin area and ending in Downtown Seattle (Base market capture rate)	24%	49%

Source: King County Marine Division, 2015; PSRC, 2015; BERK, 2015

By comparing ridership and base market capture rates for 2010 and 2014, it is clear that the West Seattle Water Taxi has increased its share of potential travelers over time as customers have become more familiar with the service and its potential utility for commute travel. It is not realistic to assume that new ferry routes would achieve the 2014 Water Taxi base capture rate on opening day. Therefore, this study uses the Water Taxi's 2010 capture rate as a proxy for the potential base capture rate for a new route's first year of operation. The 2014 Water Taxi base capture rate is considered by this study to be the potential base capture rate for a water taxi system that has reached its maturity.

Even though 2010 is five years after the inception of the West Seattle water taxi service, there are certain reasons why it is appropriate to use 2010 as a proxy for the year one base capture rate for new routes. Firstly, in 2010 the Water Taxi was relocated from Pier 55 to Pier 50. Ridership dropped significantly that year[6], likely in part as a consequence of the move and change in system operator. Both new and existing passengers needed to reacquaint themselves with the new service and new landing location to determine how it meets their commute needs. Secondly, Water Taxi service was a new concept to Seattle area commuters when it was introduced in 2005. Today, the water taxi has been around for over a decade and has been established as a reliable option for some commuters.

It is also necessary to estimate market capture rates for trips that start in a secondary or tertiary origin market area and for trips that end in a secondary destination. This study assumes that these rates will be lower due to the increased travel time necessary to reach the ferry terminal and/or reach the final destination after the ferry trip. This increased travel time reduces the likelihood that ferry travel will be the most convenient or attractive option in comparison to bus/rail transit or another mode of travel. Estimated capture rates for trips in these categories are calibrated to reproduce the actual 2014 ridership counts for the West Seattle/Downtown Water Taxi.

Exhibit 23 shows relative market capture rates for trips by category.

Exhibit 23. Relative Market Capture Rates by Trip Category

Capture Rate	Trip Origin	Trip Destination
Highest (Base rate)	Primary	Primary
↓	Primary	Secondary
	Secondary	Primary
	Secondary	Secondary
	Tertiary	Primary
Lowest	Tertiary	Secondary

[6] Annual ridership in 2010 was similar to that in 2007, as shown in Exhibit 1.

Source: BERK, 2015

Not all proposed route alternatives will be able to achieve the same capture rates as the West Seattle/Downtown Water Taxi. Base capture rates are expected to vary based on the relative travel time competiveness[7] of commuting via ferry when compared to bus or rail transit.

Exhibit 24. Baseline Travel Time ComparisonExhibit 24 summarizes travel time competitiveness of ferry travel versus public transit with a focus on three employment center destinations. For Lake Washington routes landing at UW WAC, travel time competitiveness is measured in two ways: trips to the UW Medical Center, and trips to University Street Station in downtown Seattle due to the relative ease of transfer to the UW light rail station scheduled to open in 2016. The West Seattle/Downtown Water Taxi route is provided for comparison.

Exhibit 24. Baseline Travel Time Comparison

Baseline percent difference in travel time: Bus/Rail transit compared to ferry

	Destination		
Route Alternative	**UW Med Center**	**University Street Station (Downtown)**	**Bellevue Transit Center**
West Seattle - Pier 50		2%	
Ballard SBM - Pier 50		-38%	
Bellevue - UW WAC	-27%	-37%	
Des Moines – Pier 50		-39%	
Kenmore LB – UW WAC	17%	-24%	
Kenmore LB – Bellevue			-16%
Kirkland – UW WAC	-12%	-21%	
Renton – Bellevue			-17%

Source: KPFF, 2015; BERK, 2015.

Only one proposed route offers a travel time savings when compared to travel on bus or rail: Trips from Kenmore to the UW Medical Center. The remainder of routes are less competitive in comparison to bus/rail, to varying degrees. Kenmore to UW is also the only route that is more competitive than the West Seattle/Downtown Water Taxi.

Relative travel time competitiveness is used as the primary basis for determining the base market capture rate for each proposed route alternative. The base rates are calculated by increasing or reducing the West Seattle/Downtown Water Taxi base capture rate proportionally to the travel time competitiveness of the proposed route alternative. For instance, the base rate for the Ballard SBM – Pier 50 is assumed to be 38% lower than the West Seattle – Pier 50 rate. Likewise, the base rate for the Kenmore – UW WAC route is assumed to be 17% higher than the West Seattle – Pier 50 rate. Additional adjustments to market capture rates were made to account for terminal area characteristics that are expected to impact the attractiveness of a route for commute travel. Exhibit 25 shows base market capture rates for each proposed route alternative with West Seattle provided as a comparison. Note that the 2015 rates reflect the reduced capture potential during the initial year of service.

[7] The methodology for analyzing travel time competitiveness for commute travel was introduced earlier in this report.

Exhibit 25. Assumed Base Market Capture Rates by Proposed Route Alternative

	Year of Ridership Forecast		
Route Alternative	**2015**	**2025**	**2040**
West Seattle - Pier 50	49.3%	49.3%	49.3%
Ballard SBM - Pier 50	14.8%	30.7%	30.7%
Bellevue - UW WAC	15.7%	32.6%	32.6%
Des Moines – Pier 50	14.5%	27.2%	27.2%
Kenmore LB – Bellevue	17.8%	37.1%	37.1%
Kenmore LB – UW WAC	27.7%	57.6%	57.6%
Kirkland – UW WAC	20.8%	43.2%	43.2%
Renton – Bellevue	17.7%	36.7%	36.7%

Source: BERK, 2015.

Characteristics of terminal locations that are anticipated to affect the attractiveness of routes for commute travel are discussed below.

Landing Area Characteristics Affecting Commute Ridership Potential

Pier 50 / Downtown Seattle

Downtown Seattle is the largest employment center in the region and is assumed to be the destination of nearly all morning commute trips on routes that include Pier 50. The landing is located near the south end of downtown Seattle. The surrounding streets all include sidewalks, cross walks, and excellent network connectivity for ease of pedestrian travel. Pedestrians must climb a hill for trips to downtown. However, the grade is not nearly as steep at Pier 50 as it is further north on the waterfront. Due to the high employment density of downtown, a great number of jobs are within an easy walk of the terminal. Jobs on the northern end of downtown would require a longer walk or bus transfer. Due to the large number of bus routes traversing the area, nearly all major job site within the downtown or secondary destination market areas (South Lake Union and First Hill/Capitol Hill/North Beacon) could be reached with a single bus transfer. However, all transfers would require additional walking time from the ferry terminal. Conversely, commuters arriving by bus or rail would be less likely to require a transfer for travel to employment sites downtown. And those requiring a transfer would likely not have as far a walk to reach the transfer point as would a traveler arriving by ferry.

The additional time required to travel to many downtown job sites is reflected in the travel time competitiveness calculations. Ferry travel time includes a 15 minute walk to University Street Station in the center of Downtown Seattle whereas bus/rail travel time assumes the rider will disembark at University Street Station requiring no additional walk time to the job site. For routes destined for Pier 50, market capture rates for trips to secondary destinations (South Lake Union and First Hill/Capitol Hill/North Beacon) are discounted by 66% from the base to reflect the diminished travel time competitiveness of ferry travel for reaching these destinations and relative inconvenience of making transfers compared to travelers arriving by bus or rail.

Ballard / Shilshole Bay Marina

While Ballard is a minor employment center in the Seattle region, Shilshole Bay Marina is located about 1.5 miles from the neighborhood commercial center and industrial jobs along the waterfront. Therefore, it is anticipated that the majority of commute travel will use Ballard SBM as the point of origin. The Ballard terminal would have onsite parking, which would allow driving ferry riders the ability to drive and park their car at or near the ferry terminal. Bikers and pedestrians can also access the potential Ballard ferry terminal via the Burke-Gilman trail, which is located nearby.

The most densely populated portions of Ballard along NW Market Street and 15th Avenue NW feature frequent bus service direct to downtown. Therefore many Ballard residents would likely find commute travel by bus to be a faster and more convenient option for most downtown job sites. However, for some Ballard residents ferry travel may be an attractive option, particularly for those living in the northern and western portions of the neighborhood where buses travel times are significantly higher.

The origin market areas for Ballard reflect the travel time competitiveness compared to transit as well as the fact that the street network provides limited points of access to the ferry landing, extending travel times. No tertiary market area is included, despite the presence of parking, due to the assumption that commuters in tertiary areas would have to travel too far out of their way to access the terminal.

Bellevue – Meydenbauer Bay Marina

Bellevue is anticipated to be both an origin and destination point for commute travelers. The terminal is located at Meydenbauer Bay Marina and would have no onsite parking. A shuttle bus would be available to take passengers to/from the Bellevue Transit Center (approximate 6 minutes away). The ferry terminal is located along a residential street making passenger drop off and pick up difficult, and also risks creating local traffic problems. Additionally, the drop-off passenger point to the ferry terminal would be near the entrance to the marina. Passengers would then have to walk down a steep grade road without sidewalks to get on a ferry. Conversely, passengers destined for Bellevue would be faced with a steep climb up the hill to reach the shuttle.

The Bellevue Transit Center is a major regional transit hub and provides access to at least 20 Metro and Sound Transit bus lines. It is also located in the heart of Downtown Bellevue which features a high density of employment. Many ferry travelers could walk to work sites from the transit center without requiring an additional bus transfer.

Market capture rates have been adjusted downward to reflect the difficulty in accessing the Bellevue ferry terminal and steep hill climb required for potential ferry passengers. Additionally, the market capture rate for secondary destinations (including Downtown Seattle) is further reduced after 2025 to reflect the opening of Link Light Rail and the increased competitiveness of this transit option when compared to ferry travel.

Des Moines

The Des Moines Marina is located in downtown Des Moines. The Des Moines Terminal would have onsite parking, which would give ferry drivers the ability to drive and park their car at or near the ferry terminal. There are adequate sidewalks around the marina for travelers arriving by foot. Commuters could also access the potential Des Moines ferry terminal via three different bus routes. Additionally, the Des Moines Creek Trail provides direct access to the marina for bicycle commuters.

This ferry route would compete directly with bus service to Downtown Settle via the Kent-Des Moines Park and Ride (3 miles away), which features frequent transit service during peak commute periods. Furthermore, Link Light Rail is funded to expand service to Kent/Des Moines. Due to the anticipated improved competitiveness of this new rail service, the base capture rates for Des Moines is adjusted downward in the 2025 and 2040 forecasts.

Kenmore – Log Boom

The Kenmore - Log Boom Terminal is located on the Kenmore Waterfront. The terminal would have no onsite parking, and this study assumes a shuttle from the Kenmore Park and Ride, which would take approximately 4 minutes. There is a small parking lot to facilitate passenger drop off and pick up. Sidewalks and walkways are available for travelers arriving on foot. However, a pedestrian would have

to walk up a short but steep hill to access the nearest transit stop, which provides access to six different bus routes. Finally the terminal is well suited to provide access to commuters arriving by bicycle, as the Burke Gilman Trail, which runs through Log Boom Park.

No special market capture adjustments are made to account for Kenmore Log Boom landing area characteristics.

Kirkland

The terminal is located at the Kirkland Marina Park in the Kirkland Central Business District. There would be no onsite parking, and there is no shuttle assumed for this route. Parking in the surrounding streets is time limited, but there are some nearby commercial lots that offer all day rates. The Kirkland Transit Center is an eight minute walk from the terminal and offers access to several bus routes. There are ample sidewalks and street connectivity in the surrounding neighborhood to facilitate accessibility to foot passengers. Commuters destined for Kirkland could walk to jobs in the central business district or transfer to a bus at the Transit Center to neighboring employment centers.

No special market capture adjustments are made to account for Kirkland landing area characteristics.

Renton – Southport

The Renton Southport terminal is located at the Gene Coulon Memorial Park, north of Downtown Renton. The Renton ferry terminal would have onsite parking available to ferry passengers. From the parking lot, passengers would access the terminal through a dead end, private roadway. Access is also provided to the dock via Gene Coulon Memorial Beach Park from 7:00 a.m. to dusk. The City of Renton has plans to connect the waterfront and anticipated new waterfront development to the Bus Rapid Transit corridor at the Park Avenue and 757th Avenue intersection and business district. This would greatly facilitate pedestrian access to the terminal from the surrounding area. The terminal is also accessed via bike on the Lake Washington Trail and the Cedar River Trail. Commuters arriving by bus would need to walk a half mile from the nearest stop.

While Renton is assumed to primarily serve as the origin for commute trips to Bellevue, the terminal is located within walking distance to the Boeing facility and jobs at The Landing (a nearby commercial and mixed use development). Additional commercial development is planned in the waterfront area, and could be well served by the ferry terminal.

No special market capture adjustments are made to account for Renton landing area characteristics.

University of Washington – Waterfront Activities Center

The University of Washington (UW) terminal is located at the UW Waterfront Activities Center on the south end of campus near Husky Stadium, and a six minute walk from the new Link light rail station. The terminal would have no onsite parking. However, the area is well served by connecting transit as well as the nearby Burke-Gilman Trail.

Commute passengers disembarking at UW could walk or bike to job sites on the campus, UW Medical Center, or in the University District. Given the peripheral location of the terminal, walk times would range from 5 to 25 minutes depending upon the work site. Several bus transfers would also be available at the Link light rail station. Commuters bound for Downtown or Capitol Hill could also transfer to the light rail which is expected to offer frequent and rapid service.

Travel time competitiveness for trips to Downtown is assessed assuming a transfer at the light rail station. Due to the relative ease of transfer to the light rail, the market capture rate for trips to secondary destinations (Downtown Seattle, First Hill/Capitol Hill/North Beacon Hill) are based on travel

time competitiveness when compared to bus/rail transit with only a modest (10%) additional reduction in rate to account for the additional seat change.

Findings - Commute Ridership Forecast

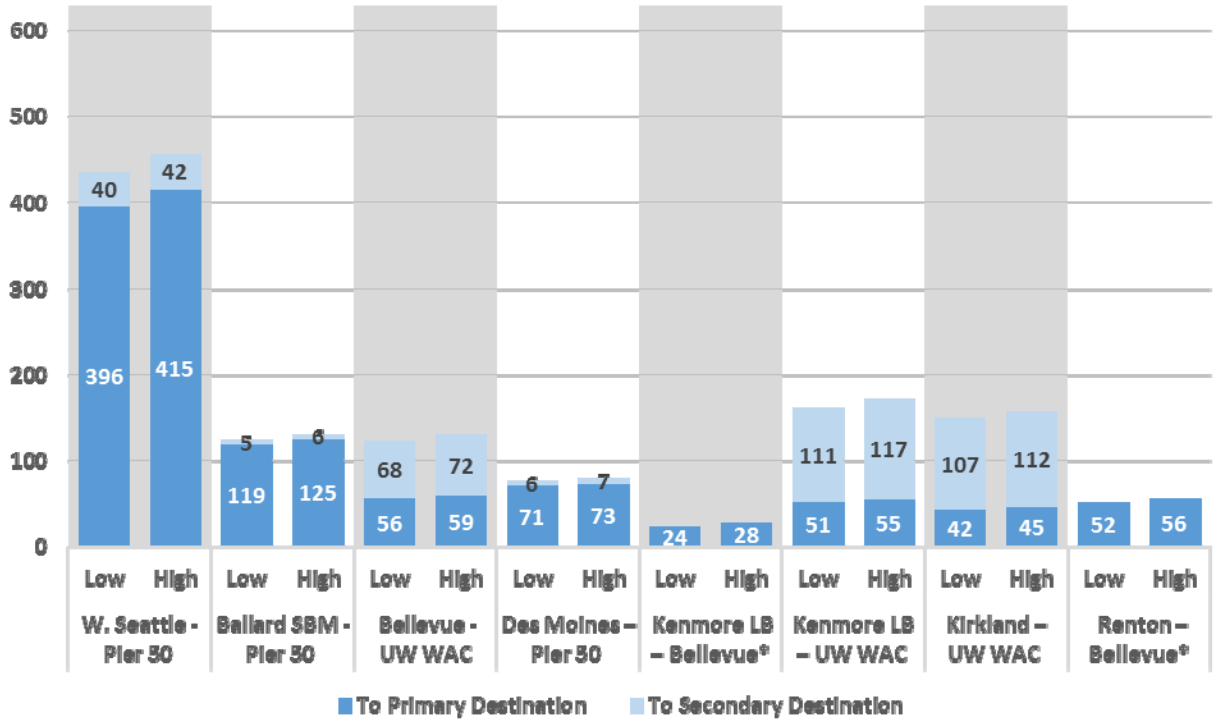
Exhibit 26 through Exhibit 28 show forecasted daily commute ridership for the West Seattle/Downtown Water Taxi and each proposed route alternative. For each route the Low and High forecast are displayed, indicating a range of assumptions about future travel behavior in the PSRC travel model data. This range is more pronounced in the 2025 and 2040 forecasts. Furthermore, these forecasts reflect average daily commute travel during the summer season.[8]

In 2015 all of the proposed route alternatives are forecasted to have significantly less daily commute ridership than the existing West Seattle – Pier 50 route, reflecting the assumption of reduced market capture rates during the initial year of service. Among the alternatives, Kenmore – UW has the highest ridership forecast with between 163 and 173 forecasted daily commute trips. Kirkland – UW is not far behind with 150 – 157 daily commute trips. Both Ballard – Pier 50 and Bellevue – UW are forecasted to have approximately 130 daily commute riders. Des Moines – Pier 50, Renton – Bellevue, and Kenmore – Bellevue all are forecasted to have significantly lower ridership.

The forecasted ridership increases significantly in 2025 and 2040 for all routes, reflecting the greater market capture rate expected for a mature ferry service as well as increased demand for travel. By 2040 Kenmore – UW is forecasted to have the highest commute ridership with 536 to 618 daily trips, surpassing West Seattle – Pier 50. The next strongest route is Kirkland – UW with 418 to 470 daily trips.

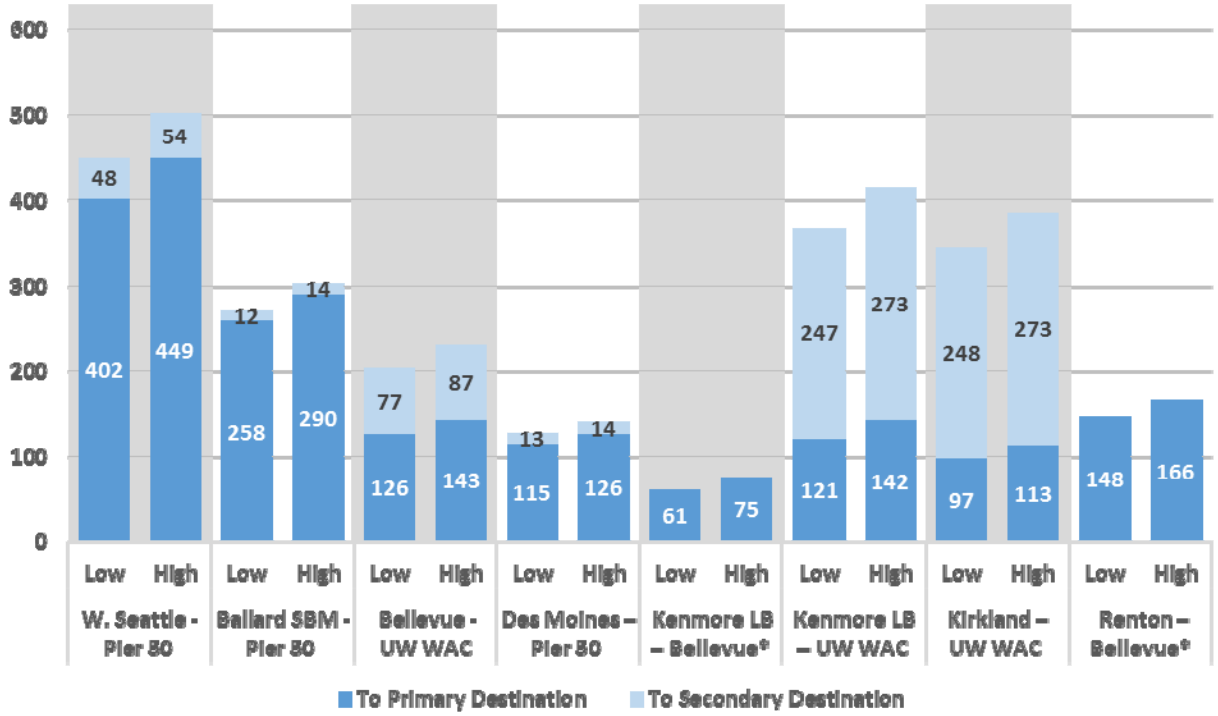
[8] Ridership data for the West Seattle/Downtown Water Taxi shows an 8% decline in commute ridership during the non-summer season (Late October – Early April). Annual ridership forecasts (shared later) reflect this diminished ridership in the off season.

Exhibit 26. Daily Commute Ridership Forecast, 2015 (Summer Season)



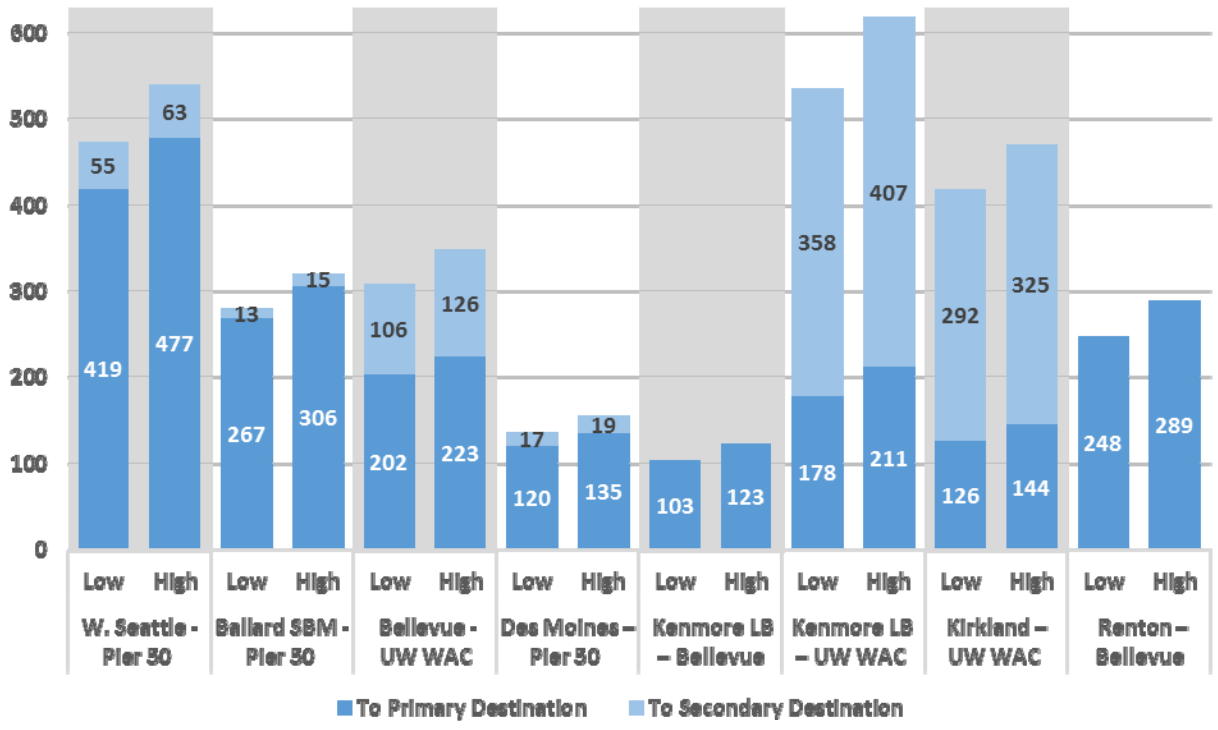
Source: BERK, 2015

Exhibit 27. Daily Commute Ridership Forecast, 2025 (Summer Season)



Source: BERK, 2015

Exhibit 28. Daily Commute Ridership Forecast, 2040 (Summer Season)



Source: BERK, 2015

5.0 RECREATIONAL RIDERSHIP POTENTIAL

As discussed, a significant share of the West Seattle/Downtown Water Taxi is assumed to be for recreational purposes. Exhibit 29 shows estimated average daily recreational travel on the West Seattle/Downtown route, based on an analysis of 2014 ridership data. The greatest amount of recreational travel occurs on weekends. However, there is also significant recreation ridership during summer weekdays. Offseason recreational ridership, as would be expected, is much lower.

Exhibit 29. Average Daily Recreational Ridership: West Seattle/Downtown Water Taxi, 2014

Time Period	Ridership
Summer weekend	1,400
Summer weekday	642
Offseason weekday	55
Offseason weekday as a percentage of summer weekday	9%

Source: BERK, 2015

The proposed route alternatives are not assumed to offer weekend service targeted to recreational passengers. Therefore, this study seeks to forecast only weekday recreational travel for routes by comparing their features to the West Seattle/Downtown route. Two criteria are discussed below: number of daily roundtrip sailings, relative attractiveness of landings for recreational travel.

5.1 Number of Daily Roundtrip Sailings

One key difference between the current West Seattle/Downtown Water Taxi and the proposed route alternatives is the number of roundtrip sailings per day. The West Seattle route features 19 roundtrip sailings Monday through Thursday and 23 roundtrip sailings on Friday[9]. In comparison, the proposed route alternatives are each assumed to offer six roundtrip sailings per day: three during the AM peak commute period and three during the PM peak commute period. Analysis of weekday ridership during a busy week in August 2014 shows a steady flow of passenger trips in both directions of travel from mid-morning onward, with a peak in late afternoon.

This study assumes that recreational ridership potential on the proposed route alternatives decreases in direct correspondence to the decreased number of daily sailings. The route alternatives would provide less options for sailing times, and also less time for recreation at the point of destination for trips that occur in the peak PM hours.

5.2 Appeal of Landing Areas for Recreational Travel

Route alternatives can also be differentiated by the attractiveness of the landing areas for recreational trips. The West Seattle/Downtown route has a number of assets to attract recreational travel. Downtown Seattle has a great number of destinations within a relatively short walk of the landing, including sports stadiums, museums, Pioneer Square, and Pike Place Market. Travelers to West Seattle can enjoy a waterfront stroll, bike ride, or free shuttle to Alki Beach as well as a great number of beachside dining and recreation options. In this section, we discuss the relative appeal of each proposed landing location and rank them in terms of relative recreational appeal.

1. Pier 50

Pier 50 is located in downtown Seattle. With a walk score of 96, visitors can walk to a plethora of dining, entertainment, and cultural attractions. Along the waterfront, the Seattle Aquarium and the Seattle Great Wheel are among some of the many attractions. The Pioneer Square neighborhood is also easily accessible from the Pier 50 terminal, which includes Pioneer Place as well as many different types of restaurants and art galleries. Visitors can also walk or bike to Century Link (half a mile) or Safeco field (just under one mile).

2. Ballard – Shilshole Marina

The Shilshole Marina is located on the western end of Ballard. Visitors can walk or bike three quarters of a mile north along the Burke Gilman Trail to Golden Gardens, one of Seattle's most popular beaches. A few waterfront restaurants are located a short walk to the south. For cyclists and recreational trail enthusiasts, the Burke Gilman Trails offers access to Downtown Ballard and destinations to the east.

3. Kirkland – Marina Park

The landing is located in the Kirkland Central Business District within walking access to restaurants, shops, galleries, and parks. The Kirkland Art Center is also located within a short walk. During the summer months, the Kirkland Marina Park has a Wednesday Farmers' Market, and a summer concert series.

[9] On Fridays as well as weekdays with evening Sounders, and Seahawks games, the schedule expands to offer 4 additional roundtrip evening sailings.

4. University of Washington – Waterfront Activities Center

The Waterfront Activities Center is adjacent to the Husky Stadium parking lot, offering easy access to game day events as well as the soon-to-open Link Light Rail stop for trips bound for downtown. The WAC rents rowboats and canoes to the public for exploring Lake Washington and the nearby Arboretum. The Burke Gilman trail is one quarter mile away. Visitors can also walk to the University of Washington and The Ave, the commercial heart of the University District.

5. Renton – Southport

The landing is located adjacent to Gene Coulon Memorial Beach Park, which includes picnic shelters, playground equipment, tennis courts, a horseshoe pit, sand volleyball courts, an interpretive botanic walk, a fishing area and summer swimming area. The park also provides bike access to the Lake Washington Loop Trail. A commercial district, a short walk inland to the south, offers several restaurants, retail shops, and a movie theater. Additionally, a planned waterfront development is expected to add additional entertainment, shopping, and dining opportunities as well as a hotel and convention center, which is reflected in Renton's 2025 and 2040 year recreational ridership forecasts.

6. Kenmore – Log Boom Park

Visitors can explore Log Boom Park, the fishing pier, and waterfront viewpoints. Visitors also have easy access to the Burke Gilman trail for long walks, cycling and trail runs. Across Bothell Way, there are a few restaurants within easy walking distance. However, they do not offer waterfront appeal.

7. Des Moines

The landing is located in downtown Des Moines, in the marina and next to Des Moines Beach Park. Visitors can walk to a few restaurants, one of which is located on the waterfront. The park provides easy access to the Des Moines Creek Trail, offering six paved miles, which leads to four additional miles of mountain bike trails.

8. Bellevue – Meydenbauer Bay

Visitors would need to climb up a hill and walk just under quarter of a mile to access Meydenbauer Beach Park, which includes a fishing dock, play area, picnic tables, restrooms, paved pathways, and a beach with designated swimming area. Visitors could also walk a half mile through residential streets to Bellevue Square for shopping and dining opportunities.

5.3 Recreational Ridership Forecasts

2014 recreational ridership on the West Seattle/Downtown route is used as the base from which to scale recreational ridership potential of the proposed route alternatives. Each route is then given a score based on the number of peak PM sailings and relative attractiveness of each landing area for attracting recreational trips. The results for 2015 are shown in Exhibit 30. Recreational ridership in 2025 and 2040 is then projected based on total forecasted population growth in King County, as shown in Exhibit 31 and Exhibit 32.

Exhibit 30. Recreational Ridership Forecast, 2015

Route	Weekday (Summer)	Weekday (Offseason)	Weekend (Summer only)
W. Seattle - Pier 50	642	55	1,400
Ballard SBM - Pier 50	184	16	N/A

Des Moines – Pier 50	154	13	N/A
Kenmore LB – Bellevue	72	6	N/A
Kenmore LB – UW WAC	102	9	N/A
Kirkland – UW WAC	123	11	N/A
Renton – Bellevue	92	8	N/A
Bellevue - UW WAC	92	8	N/A

Source: BERK, 2015

Exhibit 31. Recreational Ridership Forecast, 2025

Route	Weekday (Summer)	Weekday (Offseason)	Weekend (Summer only)
W. Seattle - Pier 50	706	61	1,540
Ballard SBM - Pier 50	223	19	N/A
Des Moines – Pier 50	111	10	N/A
Kenmore LB – Bellevue	186	16	N/A
Kenmore LB – UW WAC	87	7	N/A
Kirkland – UW WAC	124	11	N/A
Renton – Bellevue	149	13	N/A
Bellevue - UW WAC	111	10	N/A

Source: BERK, 2015

Exhibit 32. Recreational Ridership Forecast: 2040

Route	Weekday (Summer)	Weekday (Offseason)	Weekend (Summer only)
W. Seattle - Pier 50	770	66	1,680
Ballard SBM - Pier 50	265	23	N/A
Des Moines – Pier 50	133	11	N/A
Kenmore LB – Bellevue	221	19	N/A
Kenmore LB – UW WAC	103	9	N/A
Kirkland – UW WAC	148	13	N/A
Renton – Bellevue	176	15	N/A
Bellevue - UW WAC	133	11	N/A

Source: BERK, 2015

6.0 TOTAL DAILY AND ANNUAL RIDERSHIP FORECASTS

Exhibit 33 through

Exhibit 35 provide average daily and annual ridership forecasts for the years 2015, 2025, and 2040. Average daily ridership estimates are for weekdays only and combine both commute and recreational passengers. Annual ridership estimates are calculated assuming weekday service only and no service on seven major holidays. Annual ridership estimates also include assumptions about seasonal reductions in recreation and commuter ridership during the non-summer period, based on trends observed in West Seattle/Downtown Water Taxi ridership. Forecasts for the West Seattle – Pier 50 route includes summer weekend ridership as well, boosting the annual ridership numbers accordingly.

Exhibit 33. Daily and Annual Ridership Forecast, 2015

Route	Low Forecast			High Forecast		
	Average Daily Weekday Ridership		Annual Ridership	Average Daily Weekday Ridership		Annual Ridership
	Summer	Offseason		Summer	Offseason	
W. Seattle - Pier 50	1,078	457	283,105	1,099	476	288,234
Ballard SBM - Pier 50	309	131	57,878	315	136	59,433
Bellevue - UW WAC	216	122	43,865	223	129	45,579
Des Moines – Pier 50	231	84	41,820	234	87	42,473
Kenmore LB – Bellevue*	96	28	16,538	100	32	17,640
Kenmore LB – UW WAC	265	159	54,759	275	168	57,148
Kirkland – UW WAC	273	149	54,798	280	156	56,666
Renton – Bellevue*	144	56	26,562	148	60	27,433

Source: BERK, 2015

Exhibit 34. Daily and Annual Ridership Forecast, 2025

Route	Low Forecast			High Forecast		
	Average Daily Weekday Ridership		Annual Ridership	Average Daily Weekday Ridership		Annual Ridership
	Summer	Offseason		Summer	Offseason	
W. Seattle - Pier 50	1,156	475	304,218	1,209	524	317,035
Ballard SBM - Pier 50	494	268	99,096	527	299	107,175
Bellevue - UW WAC	315	197	66,009	341	221	72,357
Des Moines – Pier 50	314	134	58,943	326	145	61,998
Kenmore LB – Bellevue*	148	64	27,887	162	77	31,347
Kenmore LB – UW WAC	492	350	107,779	539	393	119,210
Kirkland – UW WAC	494	331	105,936	534	368	115,625
Renton – Bellevue*	259	145	52,457	277	163	56,986

Source: BERK, 2015

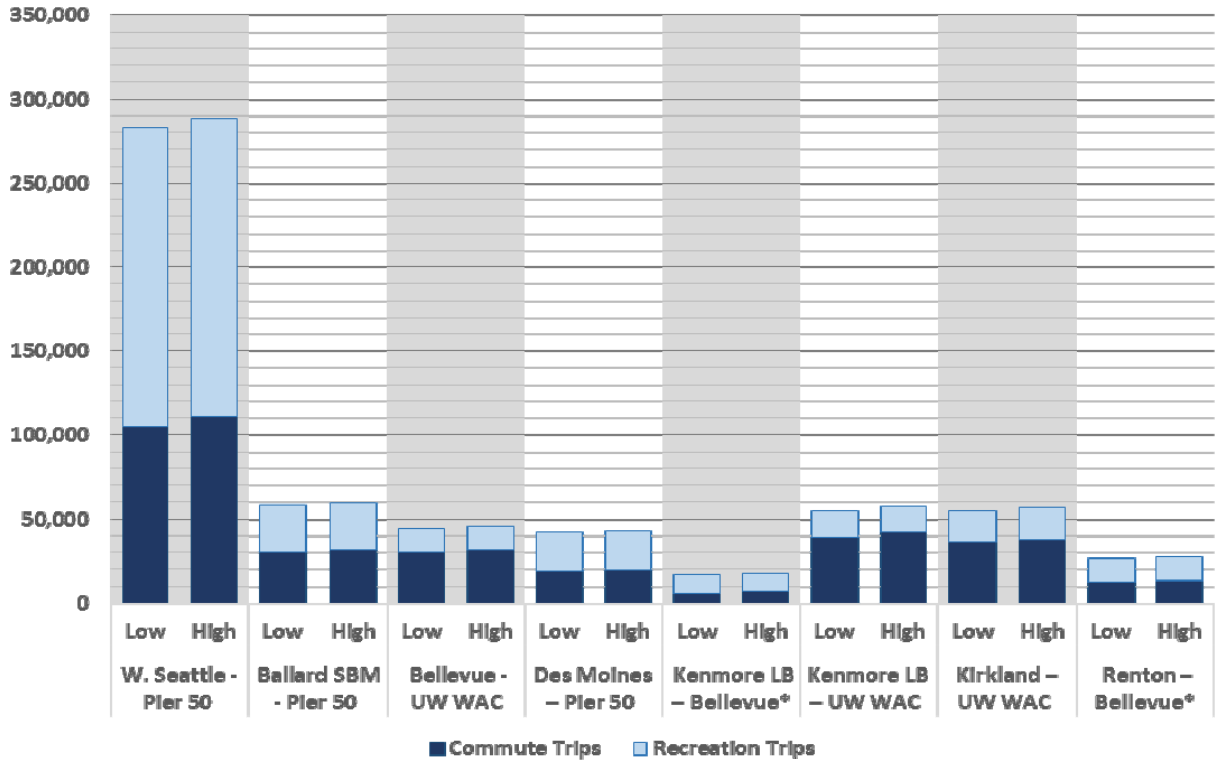
Exhibit 35. Daily and Annual Ridership Forecast, 2040

Route	Low Forecast			High Forecast		
	Average Daily Weekday Ridership		Annual Ridership	Average Daily Weekday Ridership		Annual Ridership
	Summer	Offseason		Summer	Offseason	
W. Seattle - Pier 50	1,244	502	327,726	1,311	564	343,914
Ballard SBM - Pier 50	546	281	107,920	586	318	117,645
Bellevue - UW WAC	441	295	94,657	482	333	104,584
Des Moines – Pier 50	357	145	66,315	375	161	70,710
Kenmore LB – Bellevue*	206	104	40,448	226	122	45,373
Kenmore LB – UW WAC	683	506	151,963	766	582	171,911
Kirkland – UW WAC	595	401	127,862	646	448	140,332
Renton – Bellevue*	381	240	80,099	422	278	89,995

Source: BERK, 2015

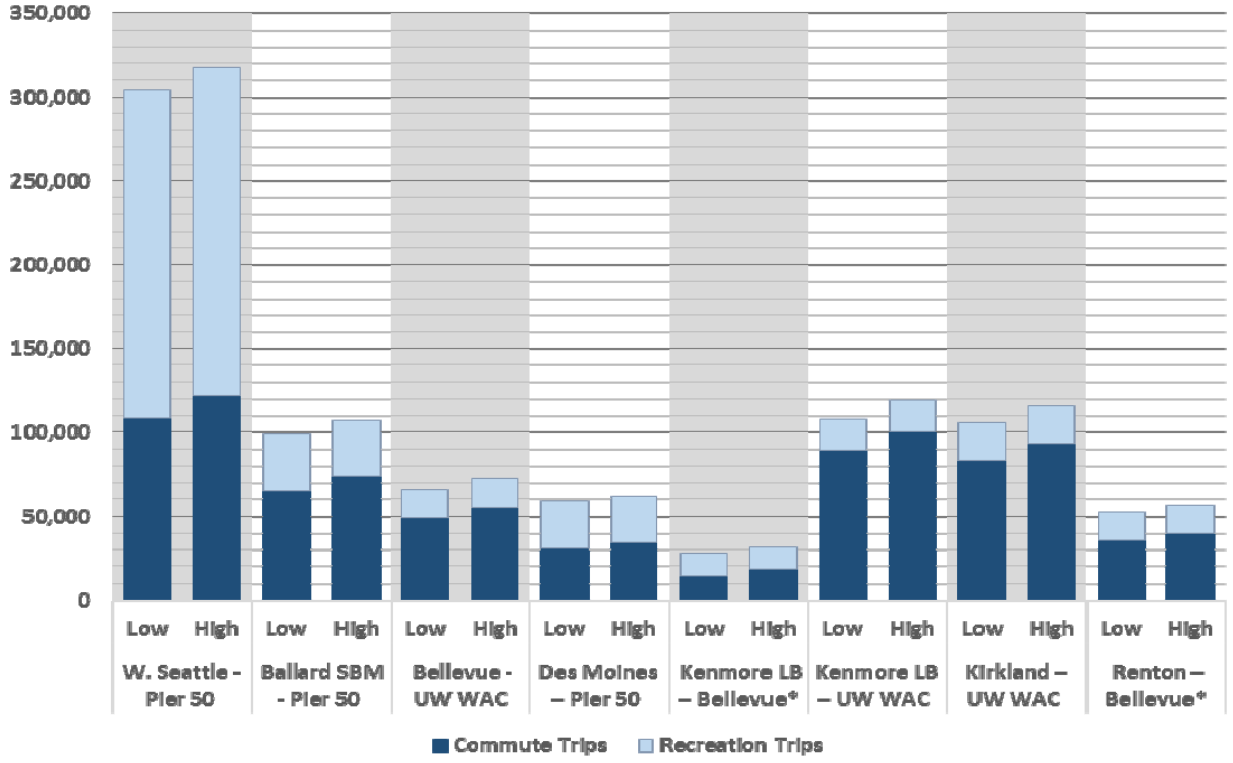
Exhibit 36 through Exhibit 38 compare total annual ridership among route alternatives and the West Seattle/Downtown Water Taxi for the three forecast periods. As with previous charts, they show both Low and High forecasts for each route. Each bar is broken into commute ridership and recreational ridership segments. In 2015, Ballard – Pier 50 is forecasted to have the greatest annual ridership, followed closely by the Kenmore – UW and Kirkland – UW routes. These three routes continue to show the greatest annual ridership potential in 2025 and 2040. However both the Kenmore – UW and Kirkland – UW routes show greater growth in annual ridership in 2025 and 2040, overtaking the Ballard route.

Exhibit 36. Annual Ridership Forecast, 2015



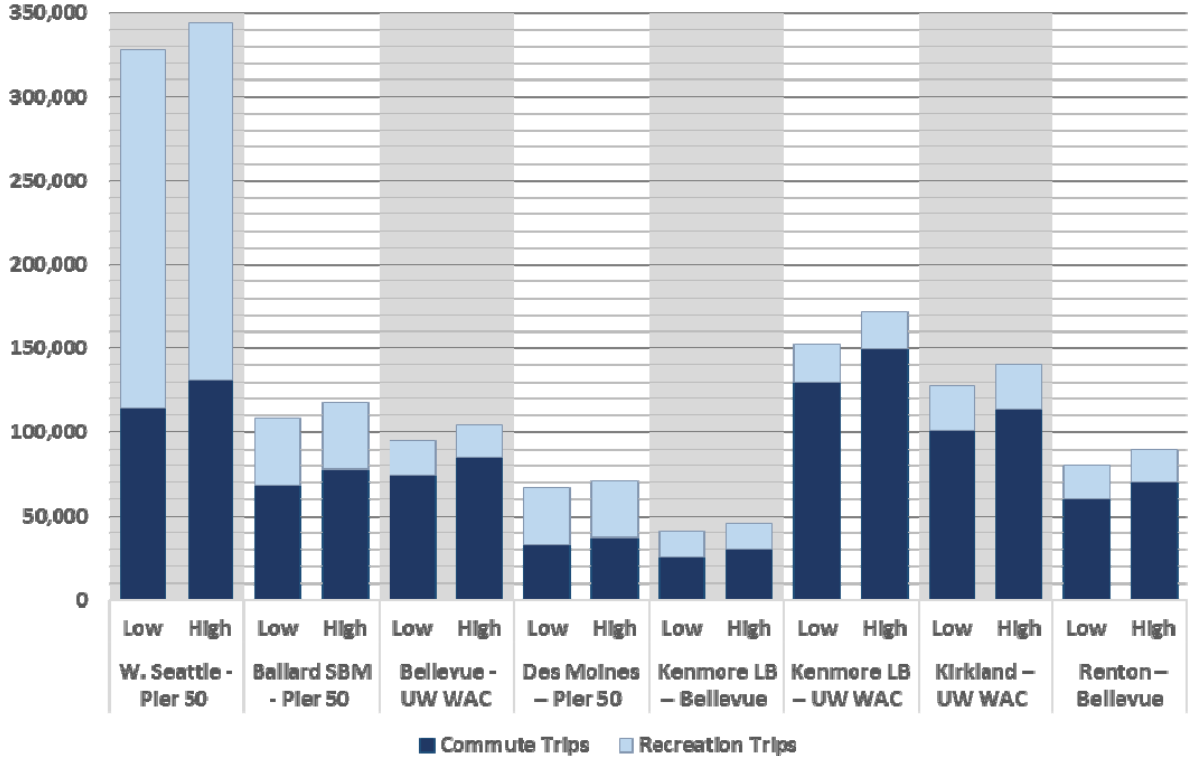
Source: BERK, 2015

Exhibit 37. Annual Ridership Forecast, 2025



Source: BERK, 2015

Exhibit 38. Annual Ridership Forecast, 2040



Source: BERK, 2015

7.0 VASHON WATER TAXI RIDERSHIP FORECAST

Subsequent to the analysis described above, BERK was asked to forecast 2025 ridership for the Vashon Island/Downtown Seattle Water Taxi. This route, in place since 2005, provides year-round service from Vashon Island to Pier 50 during weekday commute hours. In 2014 annual ridership was 184,457.

BERK used the same general methodology described above to derive a low and high 2025 forecast for this route. However, a few modifications were necessary. This section provides an overview of the methodology, followed by ridership forecast tables.

7.1 Vashon Water Taxi Ridership Analysis

King County Marine Division provided detailed ridership data for the year 2014 and ridership to date for 2015. BERK analyzed this data to estimate commute and recreational ridership during the most recent 12-month period, September 2014 through August 2015. The results are shown in

Exhibit 39 below.

Exhibit 39. Vashon Water Taxi Ridership Sept. 2014 – Aug. 2015

	Summer Season (April – Oct.)	Offseason (Nov. – March)	Offseason as a percentage of Summer Season
Average Daily AM Ridership	347	340	
Average Daily Ridership	754	734	
Average Daily Commute Ridership Estimate	695	681	98%
Average Daily Recreational Ridership Estimate	60	53	89%
Service Days	151	100	

Source: King County Marine Division, 2015; BERK, 2015

Using the daily ridership counts in Exhibit 39, the projected annual ridership for 2015 is 187,334.

7.2 Vashon Commute Travel Demand

To quantify current and future travel demand between Vashon Island and Seattle destinations, BERK used the same PSRC travel model data described in Section 3.1. However, BERK's analysis of this data and correspondence with travel modeling staff at PSRC have revealed shortcomings that call into question the reliability of PSRC's demand forecast for quantifying Vashon travel demand. Most notably, according to PSRC model data, total weekday AM transit trips between Vashon and any TAZ in the city of Seattle is significantly less than actual ridership on the Water Taxi. PSRC staff have acknowledged that the current travel demand model underestimates both total trips and transit trips across Puget Sound.

In part due to the underestimation of demand for trips from Vashon to Seattle, this analysis does not isolate primary and secondary destination market areas as in the analysis for the proposed routes described above. Instead it considers all of the City of Seattle, minus West Seattle, as a destination market area when summarizing the total demand for travel that could be captured by the Water Taxi. This enlarged market area can be justified because residents of Vashon Island who commute via transit to Seattle have only two viable options for crossing Puget Sound, the Water Taxi or the WSDOT ferry to Fauntleroy. This analysis assumes that taking the Water Taxi to transit-rich Downtown is the most competitive route for transit trips to all Seattle TAZ with the exception of those in West Seattle, where the WSDOT ferry to Fauntleroy is assumed to be more competitive. Even with this large destination

market area, the total potential AM peak transit trip demand modeled by PSRC (shown in Exhibit 40) does not exceed actual current ridership.

Exhibit 40. Vashon AM Commute Demand

	2010	2015 Low (interpolated)	2015 High (interpolated)	2025 Low Forecast	2025 High Forecast
Weekday AM transit trips	155	158	164	164	182
Weekday AM total trips (for comparison only)	497	471	499	420	504

Source: PSRC, 2015; BERK, 2015

7.3 Vashon Water Taxi Market Capture Rate

As with the proposed route alternative forecast analysis described above, a market capture rate is calculated by dividing current average daily peak AM Water Taxi ridership by total transit trip demand to the destination market area as modeled by PSRC. Exhibit 41 shows market capture rates calculated using PSRC's forecasted total transit trip demand interpolated for 2015 using PSRC's Low and High 2025 forecasts. [10] To maintain consistency with the proposed alternative water taxi forecasts, the capture rate using the 2015 Low forecast is used to forecast 2025 demand.[11]

Exhibit 41. Vashon AM Commute Capture Rate

	2015
Actual Peak AM ridership as a percentage of total transit trip demand	218%

Source: BERK, 2015

7.4 Vashon Water Taxi Daily Ridership Forecast

To develop the 2025 Low and High summer season commute ridership forecasts, the 2025 forecasted AM transit travel demand was multiplied by the 2015 market capture rate. The result is then multiplied

[10] The inconsistency between actual ridership data and PSRC modeled trip counts demonstrates that enhancements to PSRC's travel model are necessary to better reflect the travel behavior of Vashon residents. However such work is outside the scope of this study. So while it appears illogical to adopt a market capture rate above 100%, this approach is consistent with the analysis methodology used to forecast ridership for the proposed route alternatives and is the best available option for forecasting Vashon Water Taxi ridership. While it is true that PSRC models indicate total trip demand (including all modes of travel) exceed Vashon Water Taxi ridership, there would be drawbacks to adopting total trips as the pool of demand on which to base the Vashon Water Taxi market capture rate. First, it is not reasonable to assume that a significant proportion of travelers to Seattle TAZ outside of core urban centers rich with transit service (such as Downtown, South Lake Union, and UW) would find the Water Taxi more competitive than taking a personal vehicle on the WSDOT ferry to Fauntleroy. Secondly, PSRC's model forecasts total trip demand to shrink or remain flat in 2025, while transit ridership is forecasted to grow. This forecasted shift towards transit is consistent with BERK's analysis of PSRC travel model output for the proposed route alternative market areas and highly relevant to forecasting future Water Taxi ridership.

[11] As discussed in Section 3.1, the "Low" demand forecast counts represented in this study are actually derived from the default and standard PSRC forecast product. Therefore these were used for the purpose of calculating 2015 market capture rates.

by two to reflect a round trip. Offseason commute ridership is calculated by multiplying peak season ridership by 0.98, consistent with the current ridership analysis findings (see

Exhibit 39).

BERK's analysis of current Vashon Water Taxi ridership indicates that weekday recreational trips add up to a significantly lower percentage of total trips than found for the West Seattle Water Taxi. Furthermore, unlike the origin market areas of the proposed route alternatives, Vashon Island is not forecasted by PSRC to grow in population between 2010 and 2025.[12] For these reasons, the Vashon ridership forecast assumes that recreational trips will grow in proportion to commute ridership. Additionally, this analysis assumes that recreational trips diminish in the offseason at the same rate as found in the current ridership analysis (see

Exhibit 39). Forecasted daily trip counts are provided in Exhibit 42.

Exhibit 42. Vashon Average Daily Ridership Forecast

	2025 Low Forecast			2025 High Forecast		
	Commute	Recreation	Total	Commute	Recreation	Total
Summer Season	716	61	777	793	68	861
Offseason	701	55	756	777	61	838

Source: BERK, 2015

7.5 Vashon Water Taxi Total Annual Ridership Forecast

Vashon Water Taxi ridership data includes the actual number of sailing days during the summer and offseason months (see

Exhibit 39). This analysis assumes that the number of sailing days by period remains the same in 2025. Annual ridership forecasts, shown in Exhibit 43, combine both commute and recreational trips.

Exhibit 43. Vashon Water Taxi Annual Ridership Forecast

	2025 Low Forecast	2025 High Forecast
Annual Ridership	192,999	213,858

Source: BERK, 2015

[12] According to PSRC's Land Use Targets forecast. See http://www.psrc.org/data/forecasts/2013-forecast-products/

Appendix D

King County Water Taxi

TASK 4: INFRASTRUCTURE ASSESSMENT

Final Report on Ferry Expansion Options for Marine Division

PREPARED FOR KING COUNTY MARINE DIVISION
BY KPFF CONSULTING ENGINEERS
OCTOBER 30, 2015

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1. Introduction

Based on the findings in the Appendix B: Task 2: Route Profiles report and Appendix C: Task 3: Ridership Assessment and Analysis, this assessment provides vessel specifications, maintenance recommendations, infrastructure improvements, and high-level cost estimates for the following routes:

1. Kenmore (Log Boom Park) to University of Washington – Washington Athletic Center (UW WAC)
2. Kirkland (Marina Park) to UW WAC
3. Ballard (Shilshole Marina) to Downtown Seattle (Pier 50)

Each terminal location would require some level of improvements to accommodate Passenger Only Ferry (POF) programming needs which range from minor improvements to existing in-water and uplands infrastructure to a whole new facility. POF programming elements were identified as part of the baseline study in Task 1 and include:

- In-water improvements: improvements to existing floats or a replacement float, mooring improvements to accommodate vessels, boarding ramps, improved lighting, communication infrastructure, security elements, and utilities at the tie-up locations.
- Upland improvements: signage and wayfinding, ticketing machines, lighting, ADA accessible pathways, covered shelter, and utility connections.

2. Parking and Shuttle Requirements

One of the critical components in determining the feasibility of the Ballard to Downtown Seattle (Pier 50) route is the availability of parking at the terminal. The Appendix B: Task 2 Route Profile Analysis identified that park and rides are not located near Shilshole Marina in Ballard making parking a requirement for route competitiveness. The availability of parking will be determined through discussions with the Port of Seattle and the City of Seattle in the continued outreach effort. If parking cannot be accommodated on-site, this would be a fatal flaw for the site.

Additionally, Log Boom Park in Kenmore does not have adequate parking for a POF service, and the nearest park and ride with adequate capacity is located over one mile from the terminal. Therefore, a shuttle would be required to transport passengers between the Kenmore Park and Ride and Log Boom Park.

Kirkland Marina Park is located within walking distance to the downtown Kirkland Transit Center. Therefore, parking on-site is not required and a shuttle would not be provided for new water taxi service. However, after the publishing of the Interim Report, the Marine Division was asked to assess the use of a shuttle in Kirkland to alternate potential parking congestion concerns. The operational cost to provide a one-route shuttle has been incorporated into the farebox recovery calculations outlined in the Appendix C: Task 3 Ridership and Summary Reports.

3. Vessel Requirements

The appropriate vessel size for a water taxi route is determined by potential ridership and frequency of sailings. The US Coast Guard has specific safety and security requirements for different vessel classes including a minimum level of crew for different types of vessels and security infrastructure needs for different vessels classes. Therefore, choosing vessels with adequate capacity to accommodate the projected ridership and future demand can influence staffing levels and security infrastructure improvements.

Capacity and Design Criteria

Based on the ridership analysis, up to a 150-passenger vessel would accommodate ridership projections at each route through 2025. Using a 150-passenger vessel only requires a crew of three per US Coast Guard requirements. This is a similar size vessel currently utilized on the West Seattle Route.

Bicycle capacity should be considered for at least 10 percent of the passengers. Storage of bicycles should be located outside near the boarding stations to reduce time for bicycles to board and disembark the vessel.

150-passenger vessels could be accommodated at most terminal locations with modifications to the existing infrastructure. The majority of site locations would require designing boarding stations for the float or pier to facilitate expedited loading and unloading of passengers to maintain the route schedule.

Vessel Costs

King County has two options for acquiring a vessel(s) for a new route which include lease or purchase. Currently, King County leases the Melissa Ann for the Vashon to Downtown Seattle (Pier 50) route that is a 172-passenger vessel for $32,000 per month or $384,000 annually (using 2015 costs).

There are multiple options to purchase a 150-passenger vessel including purchasing a previously used vessel or constructing a new vessel to add to the King County fleet. The cost estimate for a previously used vessel varies based on the amount of useful life remaining for the vessel as well as maintenance costs. An older vessel with higher use will be cheaper to purchase but would likely have higher maintenance costs; whereas a more expensive used vessel will have a longer estimated lifespan. Estimated costs for these options are provided in Table 1.

Based on the Task 2 findings for route competitiveness, a new vessel would need to sustain a cruising speed of 35 knots. Recently, Kitsap Transit purchased the Rich Passage 1 (RP1) that is a 118-passenger vessel that is capable of high speeds that produces a lower wake. This vessel type would be feasible given ridership demand projections for the new proposed routes, refer to Table 1.

Table 1: Vessel Acquisition Costs (2015 dollars)

Vessel Proposed	Est. Cost ($)
Previously Used 150-Passenger	$1 M to 3.5 M
Rich Passage (RP) 1	$5.8 M
New 150-Passenger	$4.5 to 5.5 M

Maintenance Facilities

Vessels require frequent maintenance to operate safely, reliably, and efficiently. Typically, maintenance occurs on a daily basis to ensure the vessels are operating properly and ready for service the next morning. For the current King County routes, this daily maintenance occurs at the County's owned maintenance facility located at Pier 48 adjacent to the Water Taxi at Downtown Seattle (Pier 50). This maintenance facility would be available for the Puget Sound route for tie-up in the evening to perform daily maintenance. However, the maintenance barge is not easily accessible for daily access by vessels serving Lake Washington routes. King County would develop a maintenance plan for the vessels that would tie-up in Lake Washington.

In addition to daily maintenance, vessels require heavy maintenance to ensure the engine and associated systems function properly and so that useful life of the vessel is extended. The Puget Sound routes would use the maintenance barge at Pier 48 in Downtown Seattle for heavy maintenance. The Lake Washington routes could use Pier 48 maintenance barge for heavy maintenance activities or utilize an existing King County contract with Pacific Fishermen on Lake Union.

Berthing/Tie-Up and Fueling

Tie-up locations should be protected from the inclement weather and provide utility connections to remove the sewage and trash collected from the daily operation, as well as, refresh the vessel with potable water. Further analysis would be required to identify a suitable tie-up location for the Lake Washington routes. Additionally, it is proposed the vessels operating the Puget Sound routes would tie-up at the Pier 48 maintenance barge and/or Downtown Seattle (Pier 50).

There are multiple fueling locations on Lake Washington and Lake Union that could fuel a water taxi. This includes locations at the Morrison's North Star Marine on Lake Union, and Yarrow Bay in Kirkland, and Seattle Boat located at Newport Yacht Basin Marina in Bellevue.

Emergency Response Capability

POF vessels have the unique ability to be highly maneuverable and able to access many docking locations. As such, they can assist in emergency situations that require immediate response for example where bridge access has been compromised. The King County Water Taxi could aid in evacuating people in an emergency such as the Water Emergency Transportation Authority (WETA) ferries did in the 1989 Loma Prieta Earthquake in San Francisco and the evacuation of Manhattan by the Staten Island Ferries during the 9/11 attacks.

4. Terminal Infrastructure Improvements

As part of the initial baseline analysis, POF programming needs were identified that focus on passenger accessibility and safety as well as supporting the operational needs for the vessels and crew. At a minimum, each terminal location will require passenger boarding structures (transfer span and ramps), sufficient tie-up infrastructure for vessels, passenger signage and wayfinding, security improvements, and ADA accessibility improvements. Specific in-water and upland improvements used as a baseline for capital costs analysis are identified in Table 2 and described for each site in the following section. These improvements would need to be coordinated with the local jurisdiction or agency.

Table 2: Summary In-water and Upland Infrastructure Improvements

Improvements*	Terminal Locations			
	UW WAC	Kenmore	Kirkland	Ballard
In-water				
New Float	X			
New Piles	X			
New Gangway	X			
Fenders	X	X	X	X
Cleats	X	X		
Fixed Ramp/Transfer Span	X	X	X	X
Upland				
ADA Walkway	X			
Shelter	X			
Signage/Wayfinding	X	X	X	X
Ticket Vending Machines	X	X	X	X
Lighting	X	X		
Security	X	X	X	X
Utility Connections		X	X	X

*Note: All improvements in-water and upland would have to be coordinated with the local jurisdiction or agency.

UW WAC

UW WAC has an existing float and gangway currently used for recreational use. This older infrastructure would need to be replaced to accommodate a 150-passenger water taxi. Figure 1 includes an aerial photo and overview of the existing infrastructure and proposed improvements at the UW WAC.

Figure 1: UW WAC Improvements

POF FACILITIES

For a new water taxi route to be operational at UW WAC, a new float 80-feet-long by 20-feet-wide float would be required. The float can be oriented perpendicular to the shore to accommodate the berthing of two vessels simultaneously if needed. The new float would include fendering and cleats to secure the vessel to the float. Additionally, a fixed ramp and transfer span would be required for safely loading and unlading passengers. Along with a new float, new piles and new gangway would be required to support a larger float. Security improvements would need to be installed including cameras to monitor activity on and around the vessels.

It is assumed that this in-water infrastructure would be a shared-use facility to be used by UW during non-commute hours.

Upland improvements to UW WAC may include constructing a shelter for passengers to wait for the next sailing protected from inclement weather, as well as improvements to the current paved pathway to be ADA compliant. Additional improvements may include lighting, signage and wayfinding measures for passengers to easily navigate to and from the water taxi. Ticket vending machines would also need to be installed for passengers to purchase tickets prior to boarding the vessel.

Kenmore

There is an existing pier at Kenmore that is currently used for recreational use associated with Log Boom Park. Only minor improvements appear to be required to begin water taxi service at this location; however, a structural inspection would be recommended to assess the structural integrity of the in-water facilities. See Figure 2 for the current infrastructure and improvements required for beginning water taxi service at this location.

Figure 2: Kenmore Improvements

The existing pier at Log Boom Park can accommodate a 150-passenger vessel with minor in-water modifications including adding fendering and cleats securing vessels for tie-up. A transfer span and fixed ramp will also be required on the existing pier for safely loading and unloading passengers. Additional security measures required would include adding fencing and gates to protect the vessel from unauthorized boarding of the vessel as well as cameras to monitor activity on and around the vessels.

Upland improvements to Log Boom Park would include adding lighting for security, as well as, signage and wayfinding measures for passengers to easily navigate to and from the water taxi. Ticket vending machines would also need to be installed for passengers to purchase tickets prior to boarding the vessel.

Since the water taxi would tie-up at Log Boom Park in the evening, utilities (including potable water, sewage, trash collection, and shore power) would need to extend from the shore location where vessels tie-up.

Kirkland

The existing facilities at Kirkland Marina Park are currently used for vessel moorage and it is assumed this location would require minor improvements to begin water taxi service from this location; however, a structural inspection would be recommended to assess the structural integrity of the in-water facilities. Figure 3 indicates the existing facilities and proposed improvements required for water taxi service.

Figure 3: Kirkland Improvements

POF FACILITIES

Since vessels of a similar size to the proposed 150-passenger vessels currently moor at the marina, only minor modifications appear to be required to begin water taxi service at this location However, an inspection would be recommended to assess the structural integrity of the in-water facilities.. These modifications include adding fendering and cleats for vessel tie-up. A transfer span and fixed ramp would be required on the existing pier for safely loading and unloading passengers. Additional security measures required include adding fencing and gates to protect the vessel from unauthorized boarding of the vessel as well as cameras to monitor activity on and around the vessels.

Upland improvements to Marina Park would include adding signage and wayfinding measures for passengers to easily navigate to and from the water taxi. Ticket vending machines would also need to be installed for passengers to purchase tickets prior to boarding the vessel.

Ballard

The Shilshole Marina currently accommodates vessels of similar scale to a 150-passenger vessel. Therefore, only minor improvements would be required for a water taxi service to operate from this location. The vessel would likely tie-up to H-Pier within the Shilshole Marina. Figure 4 provides an aerial view of the existing facilities as well as the location of the minor improvements required for water taxi service.

Figure 4: Ballard Improvements

Since vessels of a similar size to the 150-passenger vessels currently moor at the marina, only minor modifications to the pier would be required. These modifications would include adding fendering and cleats to the float for vessel tie-up. Additionally, a transfer span and fixed ramp would be required on the existing float for safely loading and unloading passengers. Additional security measures required include adding fencing and gates to protect the vessel from unauthorized boarding of the vessel as well as cameras to monitor activity on and around the vessels.

Upland improvements to Shilshole Marina would include adding lighting for security as well as signage and wayfinding measures for passengers to easily navigate to and from the water taxi. Ticket vending machines would also need to be installed for passengers to purchase tickets prior to boarding the vessel.

5. Capital and Operating Costs

As part of the initial baseline analysis, POF programming needs were identified that focus on passenger access, vessel requirements, and maintenance facilities. Table 3 provides a cost summary that includes estimates for capital improvement costs and operating costs for each route. The following sections include a detailed description of the capital cost estimates and operating cost estimates.

Table 3: Capital and Operating Costs per Route

Route	Capital Costs[1]	Annual Operating Costs[2]
Kenmore to UW WAC		
UW WAC	$3.23 M	
Kenmore	$0.91 M	
Total	**$4.14 M**	**$2.52 M**
Kirkland to UW WAC		
UW WAC	$3.23 M	
Kirkland	$0.38 M	
Total	**$3.61 M**	**$2.26 M**
Ballard to Downtown Seattle (Pier 50)		
Ballard	$0.36 M	
Downtown Seattle (Pier 50)	$0	
Total	**$0.36 M**	**$2.12 M**

Note:
1. Site improvement costs only. Does not include vessel acquisition costs.
2. Estimated using 2014 King County information and includes $420,000 annual lease costs based on the Melissa Ann. Includes shuttle cost estimates for Kenmore and Kirkland.

Capital Costs

Infrastructure requirements identified for each site require varying levels of capital cost. The capital improvement costs would be required for a new to be operational and are preliminary, high-level cost estimates. Appendix A provides a detailed cost estimate with specific improvements for each site. Based on the conceptual level of design, the contingency for variation in cost is calculated at 30%. As the conceptual design becomes more refined and there is more certainty of the specific design elements, the contingency is reduced.

Operating Costs

By adding one additional service route to the current KCWT service, additional administrative staff would not be required. Therefore, the administrative costs would be dispersed between the three routes. Operations costs include administrative costs, vessel crew, and maintenance costs. Using 2014 financial data from King County, the annual operating costs include operations, maintenance, for an additional service route is identified in Table 3.

6. Design, Permitting, and Construction

POF terminal facilities are water dependant uses that are restricted by federal, state, and local land use and environmental regulations. Additionally, water dependent facilities have specific design and construction considerations.

Design

Each site would require design of the modifications to the existing facilities. This includes engineering and architectural work required for the improvements. UW WAC would require the most engineering and architectural work for construction of a new float and gangway.

Each transfer span and fixed ramp needs to be designed to properly fit with the vessel and the pier or float where the vessel is mooring. This requires specific engineering and design for stability and efficient operations when passengers are loading and unloading.

Permitting

Each potential landing site has existing in-water facilities and requires varying levels of modification requirements to become operational. Ballard has existing infrastructure that need railing, ladders, and/or fendering to support a POF. Kenmore and Kirkland have existing in-water facilities that would require an inspection to determine the structural integrity of these facilities. The federal, state, and local review process for these over-water infrastructure improvements is typically straight-forward and approval can be issued within six months.

UW WAC would require more substantial in-water work that would be subject to more comprehensive federal, state, and local review.

Projects that require federal funding have to complete the federal environmental review process through the National Environmental Policy Act (NEPA). Some minor projects qualify for a Categorical Exclusion (CE) to the full review process of an Environmental Impact Statement (EIS). Early coordination with the federal agency making this determination would indicate which projects qualify for the CE.

The EIS review process consists of analyzing alternatives of the project and potential social, economic and environmental effects. More specifically, an EIS includes review for potential impacts to: animals, plants, soil, water, air, climate, energy, archeological and cultural elements, noise, aesthetics, surrounding land uses, transportation, public services, and recreation. The EIS process also involves a public and agency notification and comment period. As part of this process, the lead agency reviews and considers issues raised during the comment period. Based on their review and comments received, the lead agency may require additional studies to determine if the project will have a significant impact on the environment and if mitigation would be required.

Typical mitigation requirements for new in-water infrastructure and new ferry service could include habitat mitigation and Tribal Usual and Accustomed (U&A) fishing rights. Habitat mitigation would require a biologist prepare a habitat assessment and habitat mitigation plan. The mitigation plan is reviewed and approved by Federal, State, and local agencies prior to construction. Habitat mitigation could involve an annual monitoring period to ensure the mitigation measures will be successful. Costs for habitat mitigation are highly variable due agency requirements. Generally, these costs can range from 5% to 30% of the total project construction costs. Tribal U&A mitigation is typically in the form of financial compensation to affected Tribes and the amount of compensation would be negotiated between affected parties and King County. This amount can vary

drastically depending on the project. There could be other mitigation requirements based on agency review and stakeholder agreements.

Construction of sheltered areas and other minor upland improvements (i.e. way finding or ticketing machines) also require local agency approval for consistency with the Shoreline Management Act and/or building codes. Environmental permits typically require conceptual level design detail; whereas building construction permits require final design drawings.

Construction

Construction of the improvements would be completed once permits are issued. King County has a procurement process for construction projects that begins after building permits are issued. This timeframe is built into the schedule for implementation.

Schedule

The timeframe for implementing these routes is dependent on the time needed for environmental review, design, permitting and construction. See Appendix B for a conceptual design, permitting and construction schedule for each route.

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Attachment A

Capital Cost Improvement Spreadsheets

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UW WAC Capital Cost Estimate

KPFF COST ESTIMATE				UW - WAC				
Improvements				**Quantity**	**Unit**	**Unit Cost (KC)**	**TOTAL COST**	**NOTES**
Overwater Improvements								
	Gangway (tidal locations)			-	LS	$300,000	$0	
	Gangway (freshwater locations)			1	LS	$75,000	$75,000	24' x 6'
	Upper Gangway Support			1	LS	$75,000	$75,000	
	Float			1,600	SF	$300	$480,000	70' x 20'
	Transfer Span			1	EA	$1,000	$1,000	
	Fixed Ramp			1	EA	$2,500	$2,500	
	Fendering (fixed vertical, D-Rubber on Wide Flange, installed)			-	EA	$2,500	$0	
	Fendering (pneumatic, 22" x 57", Polyform F-11)			6	EA	$500	$3,000	
	Cleats (hardware + installation)			4	EA	$500	$2,000	
	Ladder			1	EA	$500	$500	
	Railing			-	LF	$125	$0	
	Furnish 36" Steel Guide Piles (4 @ 100' ea)			4	LF	$400	$1,600	
	Furnish 36" Batter Pile (4 @ 120' ea)			4	LF	$400	$1,600	
	Bubble Curtain/Enviro Observation			-	LS	$60,000	$0	
	Pile Driving Costs			4	EA	$5,000	$20,000	
Upland								
	Plumbing (Deck Drainage)			-	SF	$5	$0	
	Electrical (Lighting)			-	SF	$15	$0	
	Railing			-	LF	$125	$0	
	Signage and Way Finding			1	EA	$75,000	$75,000	
	Shelter			200	SF	$200	$40,000	
	Ticketing			2	EA	$10,000	$20,000	
	Grading/Paving			5,000	SF	$100	$500,000	Rough estimate
	Sewage Forcemain			-	LF	$50	$0	
	Electrical Service Extension			-	LF	$100	$0	
	Electrical Submeter			-	EA	$15,000	$0	
	Shore Power (Float and Gangway only)			-	LS	$15,000	$0	
	Potable Water Submeter			-	EA	$15,000	$0	
	Potable Water Service Extension			-	LF	$100	$0	
	Fire Service			-	LF	$160	$0	
	Communications & Data Allowance			1	LS	$50,000	$50,000	
Security Needs								
	Security System (gates, fencing and monitoring system)			1	LS	$20,000	$20,000	
Subtotal of Costs							*$1,368,000*	
Mobilization (calculated based on subtotal of above construction items)							$137,000	
						10%		
Subtotal							*$1,505,000*	
General Provisions (calculated based on subtotal of construction and mob)								
	Environmental Costs					30%	$451,500	
	Construction Management and Administration (on construction + environmental costs)					6%	$117,390	
	Contingency (on construction + environmental costs)					30%	$586,950	
	Tax (on construction only)					9.5%	$142,975	
Subtotal of General Provisions							*$1,298,815*	
Subtotal with General Provisions							***$2,803,900***	
Design Engineering (% of total construction costs)						15%	$421,000	
Grand Total							**$3,225,000**	

Kenmore (Log Boom Park) Capital Cost Estimate

KPFF COST ESTIMATE			Kenmore - Log Boom Park				
Improvements			**Quantity**	**Unit**	**Unit Cost (KC)**	**TOTAL COST**	**NOTES**
Overwater Improvements							
	Gangway (tidal locations)		-	LS	$300,000	$0	
	Gangway (freshwater locations)		-	LS	$75,000	$0	
	Upper Gangway Support		-	LS	$75,000	$0	
	Float		-	SF	$300	$0	
	Transfer Span		1	EA	$1,000	$1,000	
	Fixed Ramp		1	EA	$2,500	$2,500	
	Fendering (fixed vertical, D-Rubber on Wide Flange, installed)		-	EA	$2,500	$0	
	Fendering (pneumatic, 22" x 57", Polyform F-11)		6	EA	$500	$3,000	
	Cleats (hardware + installation)		4	EA	$500	$2,000	
	Ladder		1	EA	$500	$500	
	Railing		-	LF	$125	$0	
	Furnish 36" Steel Guide Piles (4 @ 100' ea)		-	LF	$400	$0	
	Furnish 36" Batter Pile (4 @ 120' ea)		-	LF	$400	$0	
	Bubble Curtain/Enviro Observation		-	LS	$60,000	$0	
	Pile Driving Costs		-	EA	$5,000	$0	
Upland							
	Plumbing (Deck Drainage)		-	SF	$5	$0	
	Electrical (Lighting)		-	SF	$15	$0	
	Railing		-	LF	$125	$0	
	Signage and Way Finding		1	EA	$75,000	$75,000	
	Shelter		-	SF	$200	$0	
	Ticketing		2	EA	$10,000	$20,000	
	Grading/Paving		-	SF	$100	$0	
	Sewage Forcemain		500	LF	$50	$25,000	
	Electrical Service Extension		500	LF	$100	$50,000	
	Electrical Submeter		1	EA	$15,000	$15,000	
	Shore Power (Float and Gangway only)		1	LS	$15,000	$15,000	
	Potable Water Submeter		1	EA	$15,000	$15,000	
	Potable Water Service Extension		500	LF	$100	$50,000	
	Fire Service		500	LF	$160	$80,000	
	Communications & Data Allowance		1	LS	$50,000	$50,000	
Security Needs							
	Security System (gates, fencing and monitoring system)		1	LS	$20,000	$20,000	
Subtotal of Costs						*$424,000*	
Mobilization (calculated based on subtotal of above construction items)						$43,000	
					10%		
Subtotal						*$467,000*	
General Provisions (calculated based on subtotal of construction and mob)							
	Environmental Costs				15%	$70,050	
	Construction Management and Administration (on construction + environmental costs)				6%	$32,223	
	Contingency (on construction + environmental costs)				30%	$161,115	
	Tax (on construction only)				9.5%	$44,365	
	Structural Assessment of Existing Facilities					$15,000	
Subtotal of General Provisions						*$322,753*	
Subtotal with General Provisions						***$789,800***	
Design Engineering (% of total construction costs)					15%	$119,000	
Grand Total						**$909,000**	

Kirkland (Marina Park) Capital Cost Estimate

KPFF COST ESTIMATE				Kirkland - Marina Park	
Improvements	**Quantity**	**Unit**	**Unit Cost (KC)**	**TOTAL COST**	**NOTES**
Overwater Improvements					
Gangway (tidal locations)	-	LS	$300,000	$0	
Gangway (freshwater locations)	-	LS	$75,000	$0	
Upper Gangway Support	-	LS	$75,000	$0	
Float	-	SF	$300	$0	
Transfer Span	1	EA	$1,000	$1,000	
Fixed Ramp	1	EA	$2,500	$2,500	
Fendering (fixed vertical, D-Rubber on Wide Flange, installed)	-	EA	$2,500	$0	
Fendering (pneumatic, 22" x 57", Polyform F-11)	6	EA	$500	$3,000	
Cleats (hardware + installation)	-	EA	$500	$0	
Ladder	1	EA	$500	$500	
Railing	-	LF	$125	$0	
Furnish 36" Steel Guide Piles (4 @ 100' ea)	-	LF	$400	$0	
Furnish 36" Batter Pile (4 @ 120' ea)	-	LF	$400	$0	
Bubble Curtain/Enviro Observation	-	LS	$60,000	$0	
Pile Driving Costs	-	EA	$5,000	$0	
Upland					
Plumbing (Deck Drainage)	-	SF	$5	$0	
Electrical (Lighting)	-	SF	$15	$0	
Railing	-	LF	$125	$0	
Signage and Way Finding	1	EA	$75,000	$75,000	
Shelter	-	SF	$200	$0	
Ticketing	2	EA	$10,000	$20,000	
Grading/Paving	-	SF	$100	$0	
Sewage Forcemain	-	LF	$50	$0	
Electrical Service Extension	-	LF	$100	$0	
Electrical Submeter	-	EA	$15,000	$0	
Shore Power (Float and Gangway only)	-	LS	$15,000	$0	
Potable Water Submeter	-	EA	$15,000	$0	
Potable Water Service Extension	-	LF	$100	$0	
Fire Service	-	LF	$160	$0	
Communications & Data Allowance	1	LS	$50,000	$50,000	
Security Needs					
Security System (gates, fencing and monitoring system)	1	LS	$20,000	$20,000	
Subtotal of Costs				*$172,000*	
Mobilization (calculated based on subtotal of above construction items)				$18,000	
			10%		
Subtotal				*$190,000*	
General Provisions (calculated based on subtotal of construction and mob)					
Environmental Costs			15%	$28,500	
Construction Management and Administration (on construction + environmental costs)			6%	$13,110	
Contingency (on construction + environmental costs)			30%	$65,550	
Tax (on construction only)			9.5%	$18,050	
Structural Assessment of Existing Facilities				$15,000	
Subtotal of General Provisions				*$140,210*	
Subtotal with General Provisions				***$330,300***	
Design Engineering (% of total construction costs)			15%	$50,000	
Grand Total				**$381,000**	

Ballard (Shilshole) Capital Cost Estimate

KPFF COST ESTIMATE				Ballard - Shilshole	
Improvements	**Quantity**	**Unit**	**Unit Cost (KC)**	**TOTAL COST**	**NOTES**
Overwater Improvements					
Gangway (tidal locations)	-	LS	$300,000	$0	
Gangway (freshwater locations)	-	LS	$75,000	$0	
Upper Gangway Support	-	LS	$75,000	$0	
Float	-	SF	$300	$0	
Transfer Span	1	EA	$1,000	$1,000	
Fixed Ramp	1	EA	$2,500	$2,500	
Fendering (fixed vertical, D-Rubber on Wide Flange, installed)	-	EA	$2,500	$0	
Fendering (pneumatic, 22" x 57", Polyform F-11)	6	EA	$500	$3,000	
Cleats (hardware + installation)	-	EA	$500	$0	
Ladder	1	EA	$500	$500	
Railing	-	LF	$125	$0	
Furnish 36" Steel Guide Piles (4 @ 100' ea)	-	LF	$400	$0	
Furnish 36" Batter Pile (4 @ 120' ea)	-	LF	$400	$0	
Bubble Curtain/Enviro Observation	-	LS	$60,000	$0	
Pile Driving Costs	-	EA	$5,000	$0	
Upland					
Plumbing (Deck Drainage)	-	SF	$5	$0	
Electrical (Lighting)	-	SF	$15	$0	
Railing	-	LF	$125	$0	
Signage and Way Finding	1	EA	$75,000	$75,000	
Shelter	-	SF	$200	$0	
Ticketing	2	EA	$10,000	$20,000	
Grading/Paving	-	SF	$100	$0	
Sewage Forcemain	-	LF	$50	$0	
Electrical Service Extension	-	LF	$100	$0	
Electrical Submeter	-	EA	$15,000	$0	
Shore Power (Float and Gangway only)	-	LS	$15,000	$0	
Potable Water Submeter	-	EA	$15,000	$0	
Potable Water Service Extension	-	LF	$100	$0	
Fire Service	-	LF	$160	$0	
Communications & Data Allowance	1	LS	$50,000	$50,000	
Security Needs					
Security System (gates, fencing and monitoring system)	1	LS	$20,000	$20,000	
Subtotal of Costs				*$172,000*	
Mobilization (calculated based on subtotal of above construction items)				$18,000	
			10%		
Subtotal				*$190,000*	
General Provisions (calculated based on subtotal of construction and mob)					
Environmental Costs			15%	$28,500	
Construction Management and Administration (on construction + environmental costs)			6%	$13,110	
Contingency (on construction + environmental costs)			30%	$65,550	
Tax (on construction only)			9.5%	$18,050	
Subtotal of General Provisions				*$125,210*	
Subtotal with General Provisions				***$315,300***	
Design Engineering (% of total construction costs)			15%	$48,000	
Grand Total				**$364,000**	

Attachment B

Implementation Schedules

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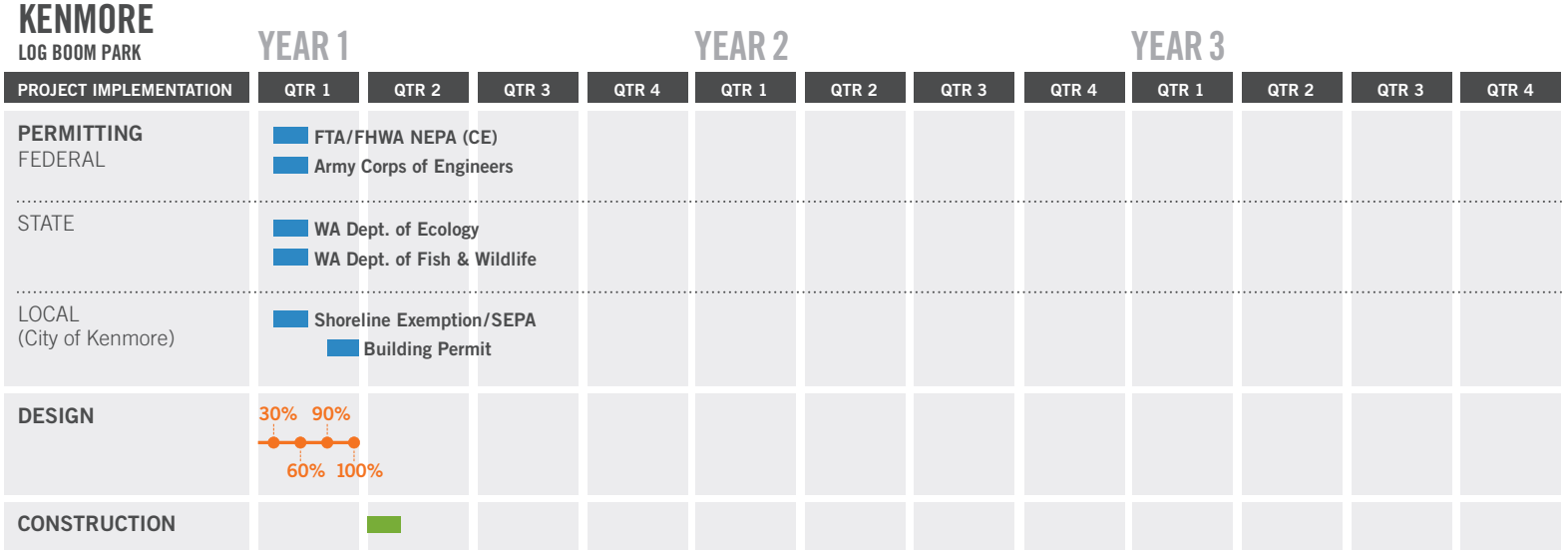
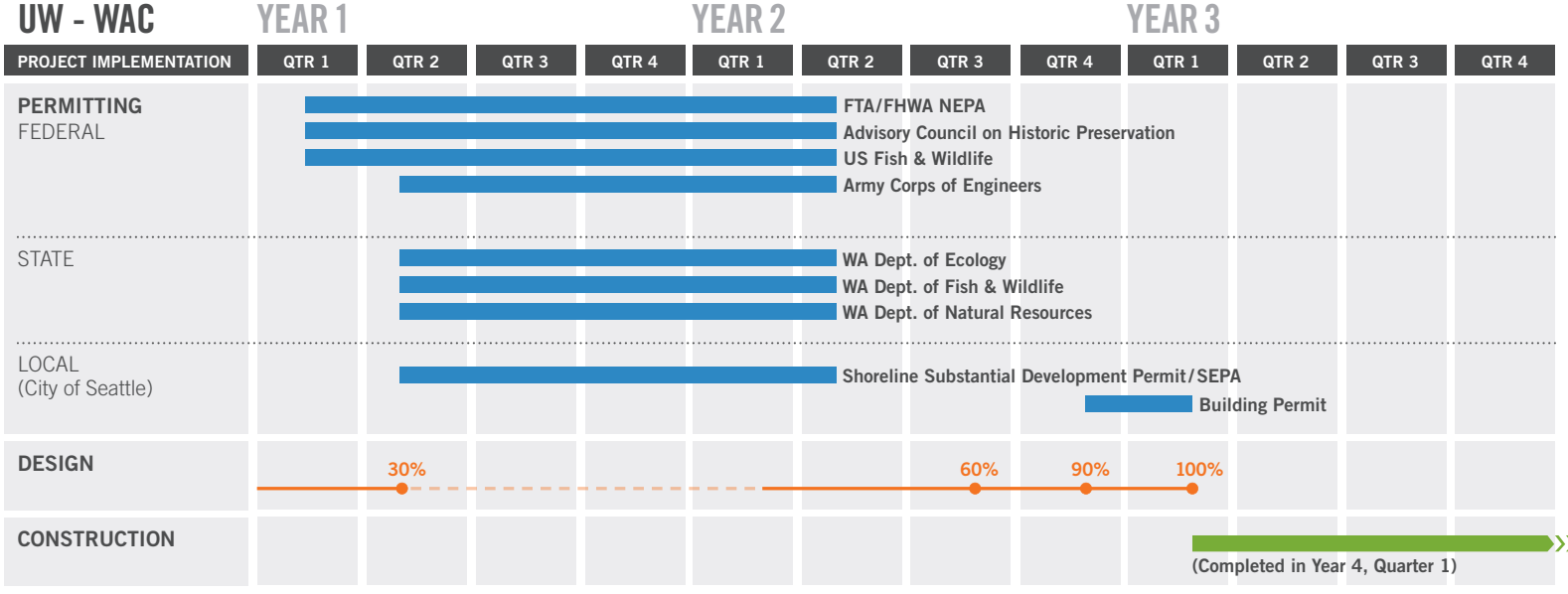
KENMORE TO UW-WAC

KENMORE
LOG BOOM PARK

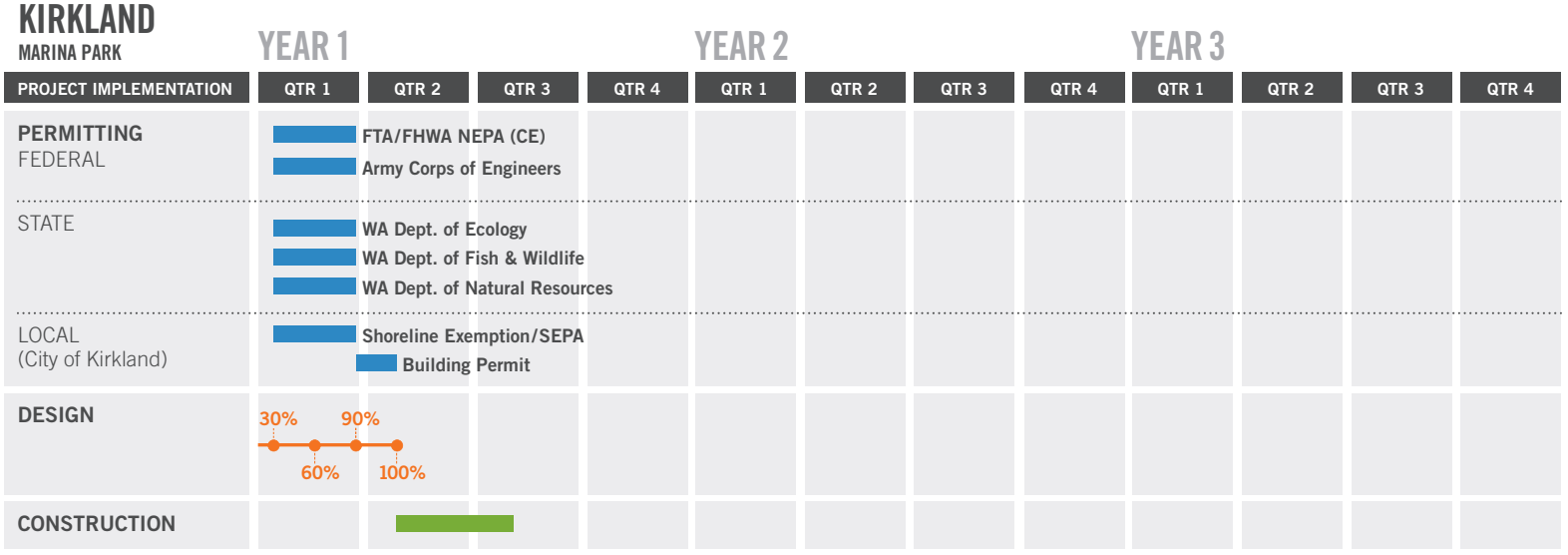


UW - WAC

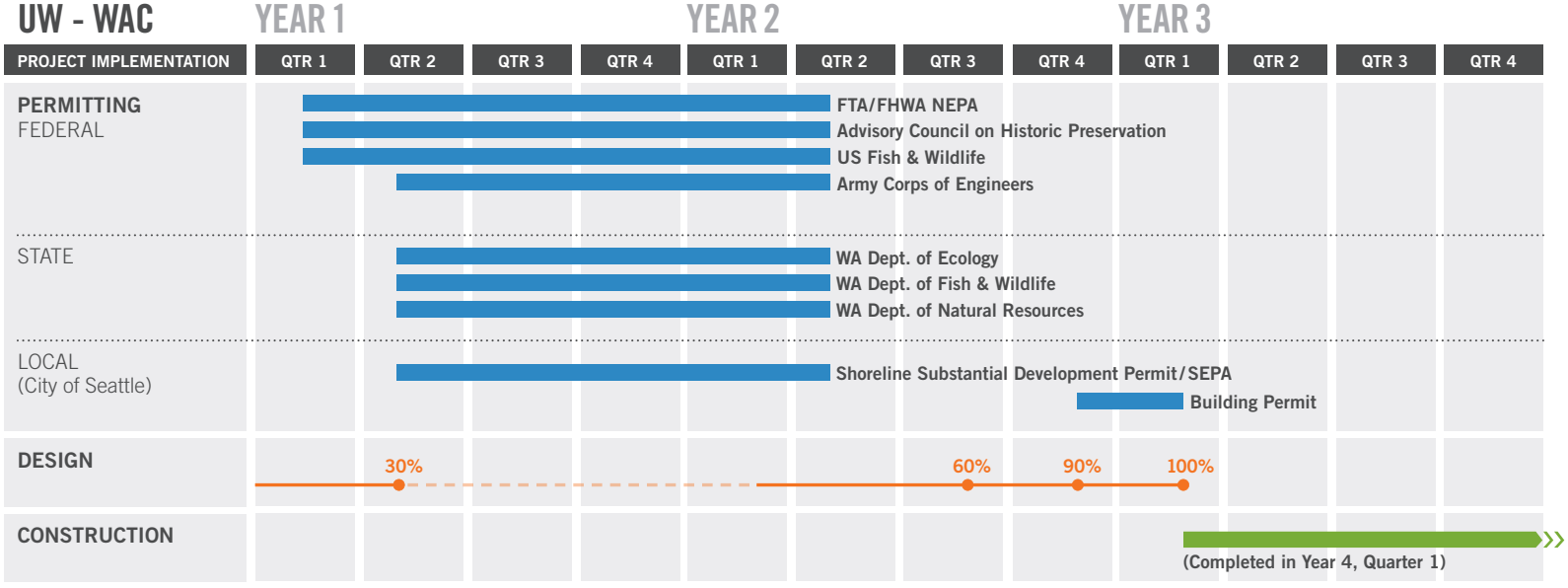


KIRKLAND TO UW-WAC

KIRKLAND
MARINA PARK



UW - WAC



BALLARD TO DOWNTOWN SEATTLE (PIER 50)

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Appendix E

King County Water Taxi

TASK 5: OUTREACH

Interim Report on Ferry Expansion Options for Marine Division

PREPARED FOR KING COUNTY MARINE DIVISION
BY KPFF CONSULTING ENGINEERS
OCTOBER 30, 2015

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Attachment B – Service Alternatives Outreach Log
Attachment C – Agency Response Letters

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1. Introduction

The purpose of this memo is to outline the outreach efforts to date, which include conversations, meetings and some outstanding coordination with potential terminal location jurisdictions.

2. Outreach to Date

On February 19, 2015, email communication was sent to communities of potential terminal locations, which introduced the project and asked for their feedback regarding potential water taxi terminal landing sites. The list of outreach recipients can be found in Attachment A and consisted of all Lake Washington communities, as well as City of Seattle and the City of Des Moines, King County Council and regional/local transportation agencies. The communication can be found as Attachment B of this memo.

Since that time, several communities have been in contact with our planning team (Refer to Attachment A). The project team then began site visits and held additional follow-up meetings with agencies.

On April 23, 2015 a second email communication (refer to Attachment B) was sent to the waterfront communities previously identified in the first wave of outreach. The purpose of this outreach was to update and inform on where the plan was and the progress that had been made to date. This correspondence outlined the seven routes that had been identified for ridership analysis, which included:

1. Kenmore (Log Boom Park) to University of Washington (Waterfront Activity Center)
2. Kenmore (Log Boom Park) to Bellevue (Marina)
3. Kirkland (Marina Park) to University of Washington (Waterfront Activity Center)
4. Bellevue (Marina) to University of Washington (Waterfront Activity Center)
5. Renton (Southport) to Bellevue (Marina)
6. Des Moines (Marina) to Downtown Seattle (Pier 50)
7. Ballard (Shilshole Marina) to Downtown Seattle (Pier 50)

Concurrently with the transmittal of the interim report to the King County Council, each community was notified regarding the findings and recommendations of the interim report. This correspondence is in letter/email format, specific to each city/community/organization.

With the preparation of the final report, the five jurisdictions/agencies associated with the three routes identified for further consideration were consulted with again to see if there were additional questions, comments or concerns. These jurisdictions/agencies included: City of Kenmore, City of Kirkland, University of Washington, Port of Seattle and City of Seattle. Outreach which occurred between the Interim Report and Final Report publishing can be found in Attachment A.

3. Feedback Received to Date

The feedback identified in Table 1 below represents feedback from the three final routes which met the evaluation criteria. These routes include:

1. Kenmore (Log Boom Park) to University of Washington (Waterfront Activity Center)
2. Kirkland (Marina Park) to University of Washington (Waterfront Activity Center)
3. Ballard (Shilshole Marina) to Downtown Seattle (Pier 50)

Of these routes, the following Table 1 identifies the general concerns identified from meetings and correspondence to date. Formal feedback has been provided by the City of Kenmore, the City of Kirkland and University of Washington and is included in Attachment C.

Meetings were held with the City of Kenmore, City of Kirkland, University of Washington, Port of Seattle and City of Seattle. Formal comments have not yet been received from the City of Kirkland, Port of Seattle or City of Seattle. The key issues gathered from those meetings have been outlined in Table 1 below. In addition to the jurisdictions/agencies involved with the three considered routes, Expedia has provided a letter of support for the expansion of water taxi service on Puget Sound. Their letter has also been included in Attachment C.

Table 1: Agency Coordination Issues Matrix can be found on the next page.

Table 1: Agency Coordination Key Issues Matrix

Agency/Jurisdiction	Key Issues/Comments Identified
City of Kenmore (Kenmore to UW WAC)	• Pedestrian connectivity • Sees as great benefit to the community • Supportive of land use policies • Access to Log Boom Park terminal is currently being upgraded
City of Kirkland (Kirkland to UW WAC)	• Increase in roadway congestion in downtown Kirkland and parking availability by adding a circulator shuttle • Sees as benefit to a growing downtown core • Access to POF terminal • Supportive of land use policies • Existing dock condition and current lease by other commercial entities • Winter seasonal wind/wave action that may impact moorage
University of Washington (Kenmore to UW WAC) (Kirkland to UW WAC)	• Potential conflict with UW rowing program practice schedule • Coordination of development plans with the University's landscape architect • Pedestrian connections from POF terminal to Light Rail Station and UW Medical Center • Coordinate operations with the WAC • Expressed interest in expanded game day service • Look at potential connections to University of Washington, Bothell Campus • Increase in UPass cost for higher priced service mode choice • Public outreach required
Port of Seattle (Ballard to Pier 50)	• Conflicts with seasonal marina traffic • Parking to be managed • Potential positive synergistic relationship by offering service/opportunities for their customers and businesses on-site
City of Seattle (Ballard to Pier 50)	• Transit access to POF terminal in Shilshole • Parking availability • Increase roadway traffic volumes
Expedia (Ballard to Pier 50)	• Sees a benefit to their workforce and the community through enhanced waterfront connections.

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Attachment A

Service Alternatives Outreach Log for Interim Report

Agency/ Jurisdiction	Contact	Initial Outreach Response from Agencies (includes contact Info)	Second Outreach to waterfront communities 4/23/15 from Kristen Kissinger sent to:	Correspondence Log
City of Kenmore	Mayor David Baker dbaker@kenmorewa.gov City Manager: Rob Karlinsey rkarlinsey@kenmorewa.gov Community Development Director: Debbie Bent dbent@kenmorewa.gov Development Services: Bryan Hampson bhampson@kenmorewa.gov	City Manager, Rob Karlinsey official City letter response, approved by City Council. NANCY K. OUSLEY ASSISTANT CITY MANAGER CITY OF KENMORE, WA 425.398.8900 OFFICE 206.604.6217 MOBILE	Nancy Ousley	3/3 Formal response from City Manager, approved by Council 3/26 Site Visit and Meeting with Assistant City Manager Nancy Ousley, Planning and Community Development Director Debbie Bent and Public Works Director Kristen Overleese
City of Lake Forest Park	City Administrator, Pete Rose prose@ci.lake-forest-park.wa.us Mayor Mary Jane Goss mgoss@ci.lake-forest-park.wa.us	Mary Jane Goss Mayor City of Lake Forest Park 206.957.2801 - Office 206.255.3564 - Cell	Mary Jane Goss	Follow-up emails with Mayor to answer questions, no formal meeting or call scheduled.
City of Mercer Island	Noel Treat Noel.Treat@mercergov.org Scott Greenberg	None	Noel Treat Scott Greenberg	None
City of Kirkland	Mayor Amy Walen awalen@kirklandwa.gov City Manager: Kurt Triplett ktriplett@kirklandwa.gov Parks and Community Services Director: Jennifer Schroder JSchroder@kirklandwa.gov Planning & Comm Devlpmt Director: Eric Shields EShields@kirklandwa.gov	None	Eric Shields	6/18 meeting with: *Kathy Brown* *Director* City of Kirkland, Department of Public Works P 425.587.3802/Cell 425.457-0047 kbrown@kirklandwa.gov and David Godfrey DGodfrey@kirklandwa.gov

Agency/ Jurisdiction	Contact	Initial Outreach Response from Agencies (includes contact Info)	Second Outreach to waterfront communities 4/23/15 from Kristen Kissinger sent to:	Correspondence Log
City of Bellevue	Mayor Claudia Balducci cbalducci@bellevuewa.gov City Manager: Brad Miyake bmiyake@bellevuewa.gov Development Services Director: Mike Brennan	Kevin McDonald, AICP Senior Transportation Planner/Bellevue Transportation Department /425.452.4558/ kmcdonald@bellevuewa.gov	Kevin McDonald	General email Correspondence 6/15 Meeting with Kevin McDonald
City of Renton	Mayor Denis Law denis.law@renton.wa.gov Department of Community and Economic Development Administrator: Vincent cvincent@rentonwa.gov	Jim Seitz Transportation Planning and Programming Manager Transportation Division Tel 425-430-7245 jseitz@rentonwa.gov	Jim Seitz	3/26 Meeting on-site with Jim Seitz
City of Des Moines	Mayor Dave Kaplan dkaplan@desmoineswa.gov City Manager: tpiasecki@desmoineswa.gov Parks Director: Patrice Thorell pthorell@desmoineswa.gov Planning Manager: Denise Lathrop dlathrop@desmoineswa.gov	Michael Matthias Asst. City Manager / Economic Development Director City of Des Moines, WA 206.870.6554 *mmatthias@desmoineswa.gov*	Michael Matthias	3/9 Conference call with: Assistant City Manager and Economic Development Director Michael Matthias, City Manager Tony Piasecki, Harbor Master Joe Dusenbury and Parks Director Patrice Thorell
City of Seattle	Mayor Ed Murray ed.murray@seattle.gov Planning Director: Diane Sugimura Diane.Sugimura@seattle.gov Parks Acting Superintendent: Chris Williams Parks Acting Deputy Superintendent: Susan Golub . golub@seattle.gov Andrew Glass Hastings Andrew.GlassHastings@seattle.gov	Direct email to the mayor and Planning Director failed.	Maria Koengeter Diane Sugimura	7/9/15 Andrew Glass Hastings emailed response with comments

Agency/ Jurisdiction	Contact	Initial Outreach Response from Agencies (includes contact Info)	Second Outreach to waterfront communities 4/23/15 from Kristen Kissinger sent to:	Correspondence Log
County Council	Councilmember Dembowski rod.dembowski@kingcounty.gov Staff:Elizabeth.evans@kingcounty.gov	None		
County Council	Councilmember Phillips larry.phillips@kingcounty.gov Staff:BrynDel.Swift@kingcounty.gov	None		
County Council	Councilmember Lambert kathy.lambert@kingcounty.gov Staff:April.sanders@kingcounty.gov	None		
County Council	Councilmember McDermott joe.mcdermott@kingcounty.gov Staff:Shannon.braddock@kingcounty.gov	None		
County Council	Councilmember Hague jane.hague@kingcounty.gov Staff: Kimberly.nuber@kingcounty.gov	None		
County Council	Councilmember Gossett larry.gossett@kingcounty.gov Staff: Michelle.clark@kingcounty.gov	None		
County Council	Councilmember Dunn reagan.dunn@kingcounty.gov Staff: Tom.goff@kingcounty.gov	None		
County Council	Councilmember von Reichbauer pete.vonreichbauer@kingcounty.gov Staff: cynthia.spellecy@kingcounty.gov and sara.smith@kingcounty.gov	None		
County Council	Councilmember Upthegrove dave.upthegrove@kingcounty.gov Staff: Jeff.muhm@kingcounty.gov	None		
PSRC	Stephen Kiehl skiehl@psrc.org	None		
Sound Transit	Trinity Parker trinity.parker@soundtransit.org ric.ilgenfritz@soundtransit.org	None		Follow up with Andrea Burnett regarding ST long range plans. Ryan Bianchi (Roosevelt/Ballard) and Page Johnson (ownership questions)

Agency/ Jurisdiction	Contact	Initial Outreach Response from Agencies (includes contact Info)	Second Outreach to waterfront communities 4/23/15 from Kristen Kissinger sent to:	Correspondence Log
WSF	Ray Deardorf deardorf@wsdot.wa.gov	None		
King County	Paul Brodeur paul.brodeur@kingcounty.gov Chris O'Claire christina.oclaire@kingcounty.gov Chris Arkills Chris.Arkills@kingcounty.gov Bill Greene Bill.Greene@kingcounty.gov	N/A (internal coordination on-going)		
University of Washington	Josh Kavanagh Transportation Director joshkav@u.washington.edu	3/2 email from Josh outlining he would be happy to provide us with any information we need.	Josh Kavanagh	5/4 Meeting with Josh 5/28 Meeting with Department Representatives: Josh Kavanagh (Transportation) Kristine Kenney (Planning) Steve Kennard (Real Estate) Jim Seagren (Recreation Sports) Stephanie Rempe (Architect) Sally Clark (Community Relations) and Daniel Erickson (Intercollegiate Athletics) 6/9 call with Aaron Hoard (Community Relations) 6/12 Response letter authored by Aaron Hoard with input from departments. 6/15 call with Bob Ernst (women's crew coach) and Paul Brodeur (concerns addressed in format UW response)
SDOT	Scot Kubly scott.kubly@seattle.gov	None		
Port of Seattle	Joseph Gellings (206) 728-3368 Gellings.j@portseattle.org			6/18 Conference Call with Marina manager Tracy McKendry and long range planner Joseph Gellings

Service Alternatives Outreach Log for Final Report

Agency/ Jurisdiction	Contact Person	Correspondence Log
City of Kenmore	Mayor David Baker dbaker@kenmorewa.gov City Manager: Rob Karlinsey rkarlinsey@kenmorewa.gov	Follow-up phone conversation followed by a formal response from City of Kenmore dated October 19, 2015.
City of Kirkland	Mayor Amy Walen awalen@kirklandwa.gov City Manager: Kurt Triplett ktriplett@kirklandwa.gov	9/25 Meeting with Kurt Triplett, Kathy Brown and Ellen Miller-Wolfe
City of Seattle	Edie Gilliss Edie.Gilliss@seattle.gov Andrew Glass Hastings Andrew.GlassHastings@seattle.gov	10/7/15 Meeting with: Edie Gilliss, Office of Intergovernmental Relations, Edie.Gilliss@seattle.gov; Bill Bryant, SDOT Bill.Bryant@seattle.gov, and Andrew Glass Hastings.
County Council	Councilmember Dembowski rod.dembowski@kingcounty.gov Staff:Elizabeth.evans@kingcounty.gov	Briefed Elizabeth Evans 7/23/15
County Council	Councilmember Phillips larry.phillips@kingcounty.gov Staff:BrynDel.Swift@kingcounty.gov	
County Council	Councilmember Lambert kathy.lambert@kingcounty.gov Staff:April.sanders@kingcounty.gov	Briefed Councilmember Lambert and April Sanders on 8/31/15
County Council	Councilmember McDermott joe.mcdermott@kingcounty.gov Staff: Carrie.Avila-Mooney@kingcounty.gov	Briefed Carrie Avila-Mooney on 7/22/15
County Council	Councilmember Hague jane.hague@kingcounty.gov Staff: Kimberly.nuber@kingcounty.gov	Briefed Kimberly Number on 7/24/15
County Council	Councilmember Gossett larry.gossett@kingcounty.gov Staff: Michelle.clark@kingcounty.gov	
County Council	Councilmember Dunn reagan.dunn@kingcounty.gov Staff: Tom.goff@kingcounty.gov	

Agency/ Jurisdiction	Contact Person	Correspondence Log
County Council	Councilmember von Reichbauer pete.vonreichbauer@kingcounty.gov Staff: cynthia.spellecy@kingcounty.gov and sara.smith@kingcounty.gov	
County Council	Councilmember Upthegrove dave.upthegrove@kingcounty.gov Staff: Jeff.muhm@kingcounty.gov	
University of Washington	Josh Kavanagh Transportation Director joshkav@u.washington.edu	9/30/15 Update email sent, no follow-up received.
Port of Seattle	Joseph Gellings (206) 728-3368 Gellings.j@portseattle.org	9/30/15 Phone conversation and update email sent, no follow-up identified.

Attachment B

Initial Outreach Letter (Feburary 19, 2015)

Second Outreach Email (April 23, 2015)

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King County
Department of Transportation
Marine Division
M.S. KSC-TR-0816
201 South Jackson Street
Seattle, WA 98104-3856

February 19, 2015

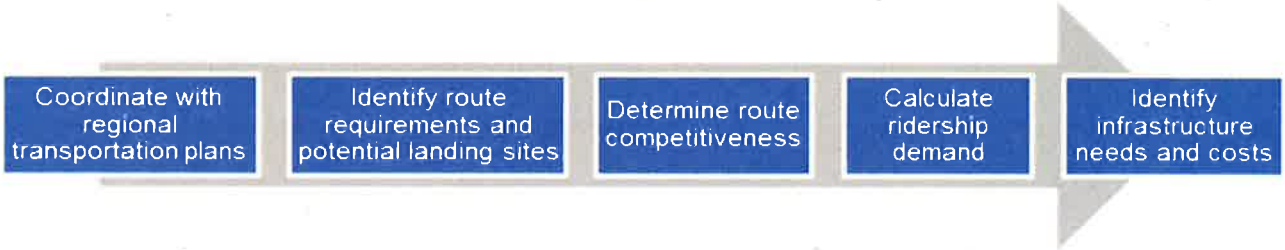
Dear Community Representative:

RE: Water Taxi Service Expansion Options Report

Your community has been included in a broad list of potential sites for expanded King County Water Taxi (Water Taxi) service. We would like to request your early assistance and expertise to inform the initial examination of potential Water Taxi routes. Transit agencies in the Puget Sound region are planning and developing exciting new transit-oriented improvements with the expansion of Sound Transit's Link Light Rail and updating the King County Metro Long Range Plan. In coordination with these planned improvements, the King County Marine Division (KCMD), a division of King County Department of Transportation, would like to improve multi-modal connections by utilizing King County waterways and expanding the current Water Taxi service.

The Water Taxi currently serves West Seattle and Vashon Island from downtown Seattle. Based on recommendations in the 2014-2018 KCMD Strategic Plan, the King County Council authorized the development of a report to identify feasible routes for expansion of the current Water Taxi service. KCMD is in the beginning stages of reviewing potential route opportunities for expanded Water Taxi service.

The intent of the report is to review multiple route options and conduct in-depth analysis of routes with the highest likelihood of success through review of existing infrastructure, ridership demand, route competitiveness, and other factors. The following includes a sequential list of report elements and route criteria:



Your early involvement in the process will be invaluable to determine the feasibility of routes. Information you can provide that will assist in the route selection could be:

- Community interest in Water Taxi service.
- Potential landing sites in your area and potential destinations for the Water Taxi.
- Transit-oriented development plans specific to your community.
- Parking opportunities (i.e. churches, lots, garages, etc.) nearby a potential landing site.

Please consider the information above as it relates to your community and provide any information you

think would be helpful in our analysis to our consultant KPFF Consulting Engineers, Attn: Kristen Kissinger (kristen.kissinger@kpff.com) by March 5, 2015. We appreciate your assistance to direct the review of potential Water Taxi service expansion and look forward to working with you on the common goal of improving transportation opportunities in our community.

Sincerely,

Paul H Brodeur

Paul H. Brodeur
Division Director
King County Marine Division

April 23, 2015

RE: UPDATE—Water Taxi Service Expansion Options Report

Dear Community Representative,

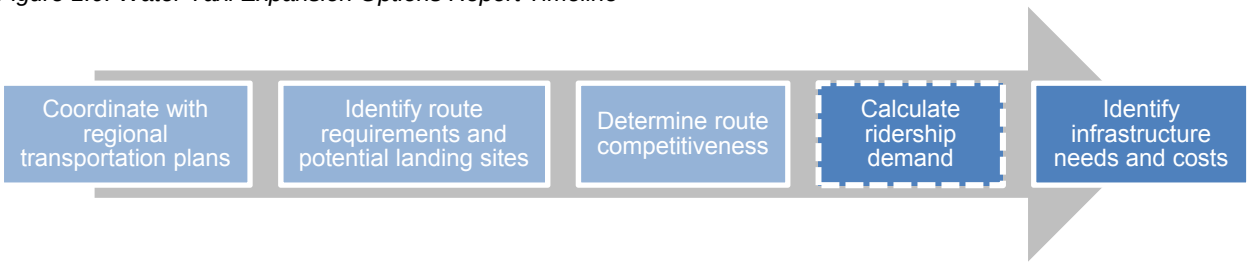
As you may remember, you were contacted in February to inform you and seek your input on the King County Water Taxi Service Expansion Report. We want to take this opportunity to inform you that the study is making progress, background research has been completed, and potential routes have been identified. The next step was to calculate time competitiveness of using the water taxi verse the competing modes (transit or a private vehicle). The purpose of this correspondence is to update you on the progress and interim findings of the analysis.

The following routes meet the criteria of time competitive and have been identified for further analysis:

1. Kenmore to University of Washington
2. Kenmore to Bellevue
3. Kirkland to University of Washington
4. Bellevue to University of Washington
5. Renton to Bellevue
6. Des Moines to Pier 50
7. Ballard, Seattle to Pier 50

The next step in route evaluation is ridership demand analysis, which may further narrow down the list of potential routes.

Figure 1.0: Water Taxi Expansion Options Report Timeline



If you have any questions, please feel free to contact me at kristen.kissinger@kpff.com. We appreciate your assistance to date and look forward to working with you further as the plan progresses on the common goal of improving transportation opportunities in our community.

Kristen Kissinger, AICP
Consultant to King County Marine Division
KPFF Consulting Engineers

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Attachment C

Agency Response Letters

- University of Washington (6/12/15)
- City of Kenmore (3/3/15)
- City of Kenmore (10/19/15)
- Expedia (10/17/15)
- City of Kirkland (10/21/15)

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June 12, 2015

Kristen Kissinger, AICP
Project Manager, KPFF
1601 5th Avenue, #1600
Seattle, WA 98101

RE: UW comments on King County Water Taxi Report

Dear Ms. Kissinger:

Thank you for briefing the University of Washington on the draft King County Water Taxi Alternative Service Options Report. We appreciate the opportunity to provide comments on this report. The following provides a summary of issues we have heard from internal stakeholders at the University.

Although there is some interest in new ferry service to campus, there are significant concerns about the impacts this may create for the UW's rowing program. There are between 300 and 150 UW rowers out on the water on any given day. They typically practice 6-9am and 2:30-6pm. This overlaps almost exactly with the proposed timeframes for ferry operation. The majority of their practice occurs between the tip of Laurelhurst and University Bridge, which intersects with the proposed ferry routes. It is the rowing program's belief that this service will create disruptive wakes and conflicts in the area regardless of boat design or operational assurances. If these impacts cannot be mitigated to their satisfaction, it is unlikely that the University will approve service to campus.

If King County can satisfy the rowing program's concerns, there are a number of other issues that would need to be addressed for new ferry service to land on campus. These include:

- Any design for improvements would need to be closely coordinated with the University Landscape Architect to make sure these compliment the University's activities and character and don't detract from the serene quality of the adjacent wetlands and waterfront. Minor elements like parking, signage, etc. will need to be fully coordinated if the project proceeds. We would also need signage and/or bollards to prevent public vehicle access to the dock area for drop-off and pick-up.

- A pedestrian connection to the Sound Transit station would be a great benefit for the University, providing a better sense of connectedness for the Waterfront Activities Center to campus. However, this is not easily done because of the steep grades between the two locations, so it would need to be carefully designed to ensure pedestrian safety through the parking lots.

218 Gerberding Hall Box 351243 Seattle, Washington 98195-1243 206/221-7684 FAX: 206/685-1201 ahoard@uw.edu
www.washington.edu/community/

- A number of ferry passengers would travel to the south campus, including the UW Medical Center and Health Sciences facilities. A single enhanced connection to the Sound Transit station would not benefit these users because it would force an out-of-direction connection versus a direct connection along an improved waterfront trail. We have performed other transportation studies on the UW campus relevant to inefficient, out-of-direction connections and the end result shows an increase in behavior that is unsafe (i.e. illegal mid-block crossings, travel paths with poor sight lines and heavy vehicular traffic). We want to support safe travel and therefor would want to see enhanced connections to both the station and along the waterfront trail.

  We would request collaboration to develop the 2.1 mile waterfront trail inclusive of both pedestrian and bicycle infrastructure to provide exceptional accessibility and connectivity. We believe, at minimum, there should be assistance with the permitting process which should include the waterfront trail and any necessary permitting to make all necessary improvements to the dock site for this new transportation service. Additional funding may also be needed for this trail.

- The Waterfront Activities Center (WAC) believes this service can coexist with their current small boat operations. However, that would need to be carefully coordinated with your boat captains to ensure the safety of these recreational boaters.

- The docks at the WAC would need to be rebuilt to accommodate this new service, current small boat users and existing boat moorage on football game days. The ferry use cannot reduce space for small boat use or game day moorage. Milfoil in the area around the dock would need to be evaluated and mitigated to ensure taxis can safely access the dock.

- The University would need to negotiate a temporary license with King County to use UW property or docks as long as the water taxis is in service. There would need to be some form of compensation from the County, either a direct payment or perhaps through construction of a new dock or improvements on UW property.

- The University would request King County to consider expanding service for Husky football games if it's logistically and financially feasible.

- The University would want analysis done on connecting this service to UW Bothell. It's likely that some students, staff and faculty would use the service as a connection to the north part of the Burke-Gilman Trail. Water taxis should have room to accommodate bicycle commuters. UW Bothell is interested in possible Metro service connections to the Kenmore dock.

- We are concerned that riders who shift from bus service to the ferries will increase the costs for our U-PASS contract without creating a better outcome in trip reduction. This can be resolved operationally, either through a reduced fare for U-PASS members OR limiting the cost to the UW of the Metro fare and charging a supplemental fare directly to the user. We would need a commitment to one of these in the agreement in order to minimize financial risk going forward.

- There are a number of other waterfront users around the University – including private rowing clubs, houseboats and waterfront home owners. It is very important for the University to maintain good relations with its neighbors, so we would require King County to fully engage these people to make sure they are comfortable with the proposed ferry service and their concerns are addressed.

Thank you again for providing us with the opportunity to give comments on this study. If you have any questions or would like to speak with us further about this, please feel free to contact me directly.

Sincerely,

Aaron Hoard

Aaron Hoard
Deputy Director
UW Regional & Community Relations

CC: Mike Anderson, KPFF
Paul Brodeur, King County Marine Division
Kristine Kenney, UW Landscape Architect
Jim Seagren, UW Waterfront Activities Center
Robert Ernest, UW Rowing
Stephanie Rempe, UW Intercollegiate Athletics
Anna Stock, UW Real Estate
Daniel Erickson, UW Intercollegiate Athletics
Josh Kavanaugh, UW Transportation
Elisabeth McLaughlin, UW Transportation
Rebecca Barnes, UW Architect
Sally Clark, UW Regional & Community Relations
Kelly Snyder, UW Bothell

City Of Kenmore, Washington

March 3, 2015

Paul H. Brodeur, Director
King County Marine Division
M.S. KSC-TR-0816
201 South Jackson Street
Seattle, WA 98104-3856

Dear Mr. Brodeur:

Thank you for including the City of Kenmore in the Water Taxi Expansion Study. Please include Kenmore as a community that is very interested in seeing a water taxi station located in our city.

Community Interest

Located on the north end of Lake Washington, Kenmore is a strategic location for passenger ferry service. Kenmore's State Route 522 is a major cross-lake corridor, carrying more than 40,000 vehicles per day. SR 522 has seen increased demand and congestion since 520 bridge tolling was installed. Population and economic growth have also added congestion pressures to the SR 522 corridor.

The Burke Gilman Trail runs along Lake Washington's north shore through Kenmore and would complement passenger ferry service given the high volumes of bicyclist and pedestrians that utilize the trail every day. The benefit of a trail and water taxi connection is the potential reduction of parking required.

Kenmore residents and those from surrounding Northshore communities use Kenmore as a major transit point as they commute to Seattle and the East Side (designated regional centers). Tech workers, university faculty, and many other employment sectors are represented among the multitude of Kenmore and Northshore commuters. Given the difficult drive down the I-5 and I-405 corridors, we believe many Northshore commuters would welcome an alternate method of transporting themselves to work.

In addition, Bastyr University provides a well-used shuttle service between Kenmore and Seattle, and a water taxi would likely be an attractive alternative and supplement to this service.

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028
Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov ·
www.kenmorewa.gov

Potential Landing Sites in Kenmore and Potential Destinations from Kenmore

Potential landing sites in Kenmore include the Lakepointe property (privately owned) via the Kenmore Navigation Channel, the public wharf at Harbor Village Marina, and the public pier at Log Boom Park.

Potential water taxi destinations from Kenmore include the University of Washington campus and the new University of Washington Light Rail Station, both of which are on the Montlake Cut. Other destinations could include drop off points at South Lake Union, Leschi, and the Madison Park dock, all of which are in proximity to bus routes to downtown Seattle. We also recommend exploring additional destination points on Lake Washington, including downtown Kirkland and as far south as Renton.

Transit-Oriented Development Plans in Kenmore

Sound Transit's long range plan has identified Kenmore for future High Capacity Transit. In addition, the City has been upgrading its transit facilities along SR 522 in phases, including new and widened bus-only lanes and upgraded bus stops. The next major phase of SR 522 improvements will be under construction this spring. Kenmore is also home to a large Metro Transit Park & Ride and serves as a major Metro Transit bus corridor. Later this year the City will be adopting a new Transit Oriented Development overlay district that reinforces the City's planned concentration of pedestrian oriented mixed-use development at intensities that support and would be supported by multi-modal transportation options.

Parking Opportunities Near Potential Landing Sites

The Lakepointe property, though privately owned, has the most potential for parking, given its current flat, undeveloped state. Plans for this 45-acre waterfront site include high density residential and commercial uses. As for the Log Boom Park pier and Harbor Village wharf locations, additional parking would need to be constructed and/or acquired. There is untapped opportunity for additional on-street parking along NE 175th Street at these potential landing site locations, and there are also neighboring commercial parking lots that are underutilized.

Again, we appreciate this opportunity to be included in this study, and we are happy to assist. Please see us as a resource, and we look forward to next steps.

Sincerely,

Rob Karlinsey
City Manager
City of Kenmore

CC: Kristen Kissinger, KPFF

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028
Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov ·
www.kenmorewa.gov

City Of Kenmore, Washington

October 19, 2015

Paul Brodeur, Director Marine Division
King County Department of Transportation
KSC-TR-0816
201 South Jackson Street
Seattle, WA 98104-3856

Sent by email and USPS

RE: Water Taxi Service Expansion Report

Dear Mr. Brodeur:

Thank you for providing information on the assessment of potential water taxi expansion routes. We are very pleased that Kenmore is a top option for further study, and we have long believed that passenger ferry service would attract many riders in this area. Please consider the following comments as you prepare a final report.

Projected Ridership and Connections with Other Travel Modes: Kenmore's location at the top of Lake Washington is convenient to employment centers in Seattle, Eastside, and South Snohomish County; State Route 522 is a toll-free and busy corridor, carrying 40,000 - 50,000 vehicles per day. Transit travel on Metro and Sound Transit is a popular travel choice in Kenmore, and Sound Transit's Route 522 Express ridership increased by 18% between 2014 and 2015—one of the highest growth rates of all Sound Transit Express routes. Metro Route 372 carries more than 5,000 riders daily on the corridor. Many riders come from Kenmore, and others come from other Northeast King County or South Snohomish County communities. Park and Ride lots are at capacity early each day, and the Burke-Gilman Trail is an important commuter artery through the city. Recent counts along the trail at weekday peak hours showed several hundred bikes using the route. Kenmore Air Harbor, the largest in the US, is adjacent to the water taxi landing sites being considered.

We are working with neighboring cities and a community coalition to advocate and ensure that the following investments are incorporated into the ST3 final project list: bus rapid transit and a light rail study for SR 522; bus rapid transit connecting to the light rail station on NE 145th Street; and SR 522 Corridor structured parking.

Kenmore and nearby Bothell constitute a higher education destination—Bastyr University's main campus is in Kenmore and the University has a teaching clinic in North Lake Union in Seattle. Bastyr maintains regular and well-used shuttle service between the Kenmore campus and their North Lake Union location. UW Bothell and Cascadia College are fast growing institutions a few miles from downtown Kenmore. Overall, there are over 12,000 students and employees connected with these three higher education institutions.

18120 68th Ave NE • PO Box 82607 • Kenmore, WA 98028
Office: (425) 398-8900 • Fax: (425) 481-3236 • cityhall@kenmorewa.gov • www.kenmorewa.gov

The City of Kenmore has approved a large area in downtown Kenmore for Transit Oriented Development, and recent multifamily projects in the heart of downtown have added over 300 units near the proposed water taxi landing sites. The City has, along with funding partners, made major investments of over $70 million to provide transit lanes, pedestrian facilities and streetscape improvements along the SR 522 Corridor, and the State Legislature funded the final project segment in the 2015 Session. In summary, a Kenmore-University of Washington water taxi route will attract substantial ridership traveling to destinations in both directions.

Lakepointe Landing Site: This proposed landing site is situated along the Kenmore Navigation Channel, a US Army Corps of Engineers facility. In recent years a portion of the 45 acre Lakepointe property has been leased to the WSDOT State Route 520 Bridge project contractor, KGM, for fabrication of bridge anchors and deck components. The contractor has completed the fabrication work and will leave the site in late 2016.

The larger Lakepointe property is a prime location for potential redevelopment, and a development company is actively assessing moving forward with a project on the site. This project could include approximately 1200 residential units and 600,000 square feet of commercial development, including a hotel and marina. This development is early in its process, and the development team is positive about the prospect of a water taxi landing site at the property.

Log Boom Park Landing Site: The summary report on Log Boom Park in the Interim Report was accurate, and we agree that it could be a suitable landing site, particularly on an interim basis. The report mentions the access to the nearest transit stop on SR 522 is challenging because of the steep conditions on 61st Ave NE between NE 175th Street and SR 522; this street section is currently being realigned to improve the access for autos and pedestrians. The near-shore platform at the entry ramp to the pier at Log Boom Park could be considered for use as a passenger shelter with minimal disruption to recreational activities. There may be options for secure overnight water taxi vessel moorage at two nearby marinas.

Thank you again for your work on this important project. If you have any questions, please contact me or Assistant City Manager Nancy Ousley.

Sincerely,

Rob Karlinsey
City Manager

Cc: City Council
King County Councilmember Rod Dembowski
Bcc: Management Team

expedia inc.

October 17, 2015

Paul H. Brodeur
Division Director
King County Department of Transportation, Marine Division
201 S. Jackson Street
Seattle, WA 98104

Dear Paul,

Thank you for the opportunity to submit this letter, which expresses Expedia, Inc.'s interest in and strong support for a possible future water taxi route to/from Ballard and downtown Seattle.

In anticipation of our move in 2019 to Amgen's former Helix campus, we are hard at work planning several aspects of our future home on the 40-acre waterfront site. Expedia, Inc. currently employs roughly 3,000 people in Bellevue and we anticipate additional growth by the time we move.

Our current work includes a strong focus on strategies we can support and deploy in an effort to reduce single-vehicle (SOV) trips to and from our Seattle campus during peak commute hours. We've committed to a SOV rate of 49% by the time we move to the campus in 2019 and have a variety of tools to use in our pursuit of that goal.

As such, we're excited about King County's current discussion around possible expansion of its water taxi service. As regional studies have shown, there are very few multi-modal commute options for residents getting to and from Ballard. Bus service, including Rapid Ride, is very popular and often full. The notion of adding a passenger-only water taxi route to/from Shilshole Marina to downtown Seattle, with a stop at or near our Interbay campus, would add much-needed options for north end residents and would be a natural benefit to our future employees, as well as close-in workers from other firms (Big Fish Games, F5, Holland America, etc.).

Thank you for the work you are doing to expand the water taxi service. Please let us know if there is any way we can be of assistance as this process progesses and if possible, we would like to be included as the discussions move forward.

Sincerely,

Mark Nagle
Vice President of Real Estate & Procurement
Expedia, Inc.

333 108th Ave N.E. | Bellevue WA 98004 USA | T +1 425 679 7000 | F +1 425 679 7240 | www.expediainc.com

October 21, 2015

Paul H. Brodeur
Division Director
King County Department of Transportation
Marine Division
201 S. Jackson Street, Room 816
Seattle, WA 98104

Dear Mr. Brodeur:

Thank you for the opportunity to comment on the Interim Report on Ferry Expansion Options for the Marine Division. The report identifies a potential ferry route between Marina Park, the City of Kirkland's downtown waterfront, and the University of Washington's Waterfront Activity Center (WAC) as one of three routes that met four criteria, including route time competitiveness, as well as ridership demand, operational costs, and fare box recovery.

The City of Kirkland is pleased that the route is under consideration. Ferry service across Lake Washington, whether for daily commuter service for workers and students or in support of Kirkland's vibrant seasonal tourism business, would be a wonderful addition to our mobility options. There, however, are a number of considerations that we discussed during our recent meeting with you, your staff and consultants. I would like to reiterate them so they may be considered as part of your further analysis.

The proposal indicates that the ferry would use the downtown marina. For the foreseeable future, there will be a scarcity of parking for the needs of Kirkland businesses and residents in downtown and City policy does not support a Park & Ride facility. Currently, the Interim Report does not contemplate additional parking capacity, nor is there much opportunity for expanding parking capacity in Kirkland's downtown business district.

Scarcity of parking means that, for ferry service in Kirkland to be successful, there will need to be a circulator service from major downtown employment hubs, residential areas, and our Kirkland Transit Center. The current report does not address the need for a connector, relying on the existing Transit Station to convey riders to and from the ferry. In order for the ferry service to succeed, there would need to be a connector.

The proposal is correct in showing an additional dock extending to the west in the downtown marina to accommodate ferry service. Most of the moorage in the downtown marina serves recreational users with limited space for large commercial boats. These spaces are either leased on a two to three-year basis (Argosy Cruises), or available for touch and go use by commercial charter boats (e.g. Waterways). The 2nd Avenue dock located south of the Downtown Marina also is in use, and should also be considered for ferry service.

In addition to being enlarged, the existing docks may need to be refurbished. While the City has received funding from the State of Washington for its small recreational boat slips and docks,

commercial moorage requires other funding sources and therefore should be considered as part of the capital budget for ferry service.

Lastly, the downtown marina and 2nd Avenue dock are limited to seasonal use as turbulence in shoulder seasons makes it difficult to maneuver or moor a boat in the marina. A breakwater will likely be required for year-round use and also should be considered as part of the capital costs of ferry service. If King County wishes to consider mooring the ferries in Kirkland, a breakwater would definitely be required.

Thank you again for considering our comments. My staff and I look forward to cooperating with you and your department on what could be a significant opportunity to improve mobility for Kirkland residents and others.

Sincerely,

Kurt Triplett
City Manager

cc: Kathy Brown, Public Works Director
Ellen Miller-Wolfe, Economic Development Manager

Appendix F

King County Water Taxi

KING COUNTY TRANSPORTATION, ECONOMY AND ENVIRONMENT COMMITTEE RESPONSE

Final Report on Ferry Expansion Options for Marine Division

PREPARED FOR KING COUNTY MARINE DIVISION
BY KPFF CONSULTING ENGINEERS
OCTOBER 30, 2015

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Overview and Responses

The purpose of this document is to outline the follow-up items identified during the briefing of the interim report to the King County Transportation, Economy and Environment (TrEE) committee. This document responds to the topics identified for further analysis and outlines the section of the summary report and appendices where that revision or topic can be found.

Table 1.0: Response to 9/1/15 TrEE Committee Inquiries

Staff Report Topic and Follow-up Item	**Page/Appendix Reference**
Ferry Market Considerations	
Include a discussion of the market advantages and disadvantages compared to other modes. RESPONSE: Market advantages and disadvantages have been addressed in a separate appendix document. This document also touches on the regional emergency response capabilities of a water taxi service.	Appendix—H
Include a brief summary of the market analysis of what type of riders are likely to be drawn to the 3 routes identified for further consideration. RESPONSE: The service being offered is a commute only service with three round-trips in the AM commute and three round-trips in the PM commute. Therefore, it is expected that commuters would take advantage of this service. Should additional sailing times be offered, a broader base of ridership could be expected.	Appendix—H
Look again at potential dock locations in Fremont and a potential Fremont to South Lake Union route RESPONSE: A route from Fremont was considered; however, due to the slow down requirements in Lake Union of 7 knots, this service would not be time competitive to alternative modes of transportation.	Appendix—A
Screening Criteria and Threshold Considerations	
Include a discussion of why the screening criteria and thresholds were chosen. RESPONSE: The screening criteria used primary factors a commuter would use as a decision tool in determining their mode of transit. Factors included travel time, cost, accessibility, reliability, safety, and traveler experience. Time savings was the primary factor in San Francisco and New York. Congestion on the alternative modes, ferry	Not Applicable

schedule dependability and the traveler's experience were also factors considered. WSDOT is not applicable as they have no passenger ferry only routes.	
Look at what screening methods have been used by other ferry systems and consider any lessons learned or potential adjustments to the screening process used in the interim report. RESPONSE: Other passenger ferry systems use the same or similar criteria in the assessment of new routes. Ultimately, ridership levels and the related fare-box recovery calculations are the primary measurements that are used in the assessment of success. Ridership forecasts are driven by economic conditions, capture area, and market share. The market share is principally influenced by a rider or potential rider's assessment of cost and travel time competiveness compared to alternative modes of travel. Additional factors such as: departure and schedule reliability, frequency of service, safety, and passenger experience impact ridership potential.	Summary Report pg. 7
Ridership Forecasting Considerations	
In the ridership forecasting methodology, what adjustments were made to account for the service span and frequency differences between the West Seattle service and potential expansion routes? What would happen to ridership forecasts if they were compared to West Seattle ridership at a time of year when peak only service was offered? RESPONSE: The ridership forecasting methodology used as part of this study is described in technical Attachment A - KCMD Water Taxi Alternatives Ridership Forecast of Appendix C. This study first analyzed ridership statistics for the West Seattle/Downtown Water Taxi to determine potential market capture rates for commute travel to employment centers. Following that analysis three primary factors were used to forecast commute ridership for each expansion route alternative: • Accessibility of the terminal to potential customers • Market demand in the travel corridor • Travel time competitiveness of ferry routes compared to bus/rail transit The primary data source used for the commute ridership forecasts is travel demand model output from the Puget Sound Regional Council (PSRC). This data summarizes peak AM person-trips between origin and destination zones throughout King County and nearby areas by mode of travel (single occupancy vehicle, carpool, transit, and other). This study analyzed data from different model outputs that reflect anticipated land use and transportation conditions in 2010 and 2025. Recreational ridership is forecasted separately using a different methodology under the assumption that all recreational trips are	Not Applicable

induced and would not be reflected in PSRC's travel model data. The analysis considers key differences between the Water Taxi service and destination characteristics compared to the proposed route alternatives in order to estimate recreational ridership potential and growth for each route. Additionally, the analysis only used data from the commute period timeframes on the existing West Seattle Water-taxi route (not expanded mid-day, evening, and weekend service during peak season) to help predict commute period ridership on the expansion routes.	
Look at a 2008 PSRC study of Kirkland to UW ridership and include a discussion of that study and its relation to current conditions RESPONSE: While there are some projections from the 2008 PSRC study that are higher or comparable to this latest study, it is true that forecasts in this latest study are generally higher. There are several reasons for this. Most notably, estimated ridership on the West Seattle to Downtown Seattle ferry has increased between 2008 and 2014, and estimated commute ridership has also increased between 2010 (the first year for which data is available) and 2014. Annual ridership in 2014 was also 17% higher than PSRC's projections: 282,662 (2014 actuals) compared to 240,900 (projected). Based on this newer data, BERK used higher market capture rates for commute travel between West Seattle and Downtown than those used in the 2009 study. These capture rates are used as a baseline for projecting the potential market capture of proposed ferry routes, taking into consideration differences between routes with regards to travel time competitiveness. Additionally, transit ridership in King County has grown considerably between 2008/2009 and 2015. PSRC travel demand forecasts suggest that ridership will continue to grow in years to come, increasing the total number of projected future transit commuters in the ferry markets served. This analysis is based on assumptions about reasonable capture rates of total transit riders between residential markets and employment centers served by ferries. As the demand for transit trips grows, so does the potential for ferry ridership.	Not Applicable
System Integration Considerations	
Expand upon how riders would access terminal locations and job sites, what access barriers exist, and what access improvements may be beneficial. Specific issues to include in the access discussion are: RESPONSE: This information can be found in the Infrastructure Cost appendix.	Appendix—D

o The potential of Lakepointe as a future Kenmore terminal location RESPONSE: Lakepointe is seen as the preferred final location for a Kenmore water taxi. However, due to an uncertain development schedule, Log Boom Park has been identified as a more immediate and suitable interim location.	Appendix—D Summary Report pg. 8
o A Kirkland circulator service RESPONSE: After discussions with City staff, one Kirkland circulator shuttle has been added to the proposed service. This additional service will add to operating costs and it has the potential to bring a slight increase in ferry ridership and alleviate downtown Kirkland parking concerns around supporting a water taxi service. Ridership numbers in the report were not adjusted for this potential change.	Summary Report pg. 8
o Bike and pedestrian access (including shelter) at Kirkland Marina RESPONSE: Bike and pedestrian access to the proposed Marina Park terminal are currently seen as sufficient. A shelter has not been included in proposed capital costs as these improvements over water are typically not preferred due to view obstruction, shadowing over water, and regulatory conditions. Through meetings with the City of Kirkland, they have identified that the existing Marina Park dock facilities may undergo improvements in the near future, however this would not include improvements to the commercial portion of the dock (which is the proposed location for the water taxi terminal).	Appendix—D
Capital Cost Considerations	
Include more information about potential environmental and mitigation costs. RESPONSE: Environmental and mitigation costs can vary substantially depending on the magnitude of construction at each location, as well as on agency and public comment. These costs can range from 5-30% of construction costs and could be more based on mitigation requirements. Based on the current understanding of the facilities, environmental costs were estimated at 15% of construction costs for Kirkland, Kenmore, and Ballard locations. UW WAC has known in-water improvements required and environmental costs were estimated at 30% of construction costs. The environmental review process and potential mitigation elements are described in “Next Steps” section of the Summary Report.	Appendix—D

Include a discussion of the potential for use of the Spirit of Kingston or other available leased vessels at startup. RESPONSE: The Spirit of Kingston does not meet the service criteria of the proposed routes and therefore was not considered as a back-up or main service vessel.	Not Applicable
Environmental Considerations	
Include a brief discussion of potential environmental impacts likely to be considered in the EIS process. RESPONSE: The typical environmental reviews analyzed during the EIS process are included in Design, Permitting, and Construction section of Appendix D.	Appendix—D
Safety Considerations	
Include a brief discussion about the safety and marine traffic impacts of ferry expansion routes. RESPONSE: There are no unusual safety issues associated with the expansion routes. Passenger Ferry service is regulated by the USCG and all operating safety and security protocols currently being followed on the Vashon and West Seattle service would apply. The terminal location at the UW WAC has a high occurrence of recreational water borne craft in the summer months. Any future water taxi service in/out of that facility would need to share the waters with these users much as is done today at West Seattle's Seacrest Park where the waterway is shared with paddle boarders, kayakers, and recreational divers.	Not Applicable
Other	
Include an appendix describing the work underway to consider passenger ferry service between Kitsap County and Seattle, and what King County's role may be in providing service, as well as how it would impact Pier 50. RESPONSE: This information has been included in a separate appendix.	Appendix—G

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Appendix G

King County Water Taxi

KITSAP TRANSIT PASSENGER-ONLY FERRY PLAN OVERVIEW

Final Report on Ferry Expansion Options for Marine Division

PREPARED FOR KING COUNTY MARINE DIVISION
BY KPFF CONSULTING ENGINEERS
OCTOBER 30, 2015

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1. Overview: Kitsap Transit Passenger-Only Ferry Business Plan and Long-Range Strategy
2. What is the current Kitsap Transit POF Business Plan?
3. How would the Kitsap Transit POF service be implemented?
4. What are the next steps?
5. What has Kitsap Transit learned through current public outreach?

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1. Overview: Kitsap Transit Passenger-Only Ferry Business Plan and Long-Range Strategy

Kitsap Transit has developed a business plan and long range strategy for implementation of passenger-only ferry services between Kitsap County and downtown Seattle. The plan includes analysis on routes, fares, ridership, and schedules; required vessels and shoreside facilities; a proposed implementation plan and schedule, and a twenty year financial plan balanced with a modest sales tax levy to subsidize service.

Input from thousands of Kitsap residents shaped the initial plan, adopted unanimously by the Kitsap Transit Board on January 6, 2015. At the time of adoption, the Board requested additional work to be completed to further refine the plan. It is expected that this would serve to support the Board's deliberations related to a levy increase ballot measure. This additional planning work should be completed by the end of 2015 and will include:

- Engaging the broader community in dialogue about the plan.
- Working with the State Legislature for additional funding options.
- Developing alternative capital funding and service phasing plans.
- Refining the governance plan and local taxing approach.
- Further exploring fare structure alternatives and fare collection.
- Developing alternative route and system financial plans.
- Defining in more detail the service delivery approach with King County and within Kitsap Transit.
- Outlining terminal lease arrangement for the west side terminals

2. What is the current Kitsap Transit POF Business Plan?

- Commute only service is funded at a County-wide sales tax increase of 2/10ths of a cent (a higher sales tax levy will be required for an extended service plan).
- Service would be implemented at Bremerton, Kingston and Southworth (in that order).
- Current crossing times are cut nearly in half from alternative option.
    - Bremerton (28 min crossing + 7 minute dwell time).
    - Kingston (33 minute crossing + 7 minute dwell time).
    - Southworth (23 minute crossing + 7 minute dwell time).
- Kitsap would partner with King County to operate the service. Kitsap Transit would set policies for fares & schedule level and manage the capital program. The existing organization and expertise available in the King County Marine Division would be utilized to operate the service

- Fare structure and collection would be integrated with ORCA.

3. How would the Kitsap Transit POF service be implemented?

- The Bremerton route is currently proposed to start within ~9 months of a successful sales tax levy vote.
- Kingston will follow (+2 yrs), once an appropriate vessel is procured and infrastructure improvements are completed.
- Southworth will follow (+7 yrs) following extensive infrastructure improvements.
- Pier 50 improvements will be needed to support additional service, which include the enhanced queuing planned for the new King County Water Taxi terminal. The existing two-slip float at Pier 50 would be expanded to a four slip float to support existing King County service and more than one Kitsap route. Route implementation will be dependent on the completion of these improvements. (current planned uplands work and expanded float)

4. What are the next steps?

- The Kitsap Transit Board will decide on the level of tax support and when to place a measure on the ballot.
- King County and Kitsap Transit would begin discussing partnership arrangements prior to a ballot measure vote insuring service could be up and running as quickly as possible, upon a successful vote.

5. What has Kitsap Transit learned through current public outreach?

To-date, public outreach has included a series of surveys, including two voluntary web surveys and two random sample telephone surveys, as well as stakeholder outreach, regional roundtables, community meetings and general public education on the plan. Overall the support for Kitsap based POF service is strong and most understand the benefits the service will bring to both the County and the region. However, many believe additional service outside the commute hours must be offered, that service to all three proposed routes should happen as quickly as possible and that support for local funding is dependent upon a clear demonstration of the benefits to commuter and the broader community.

Appendix H

King County Water Taxi

PASSENGER-ONLY FERRY MARKET ADVANTAGES

Final Report on Ferry Expansion Options for Marine Division

PREPARED FOR KING COUNTY MARINE DIVISION
BY KPFF CONSULTING ENGINEERS
OCTOBER 30, 2015

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Passenger-Only Ferry Market Advantages

A passenger-only ferry service (water taxi) can provide many benefits which make it a compelling and competitive mode of travel, such as: travel time, trip cost, reliability, and customer experience.

Advantages:

- Departure and Schedule Reliability
    - Existing King County Water Taxi service maintains a 97 percent on-time departure rate and a 99.4 percent trip completion reliability. Proposed expansion routes are predicted to perform at a similar reliability level.
    - Ferry service typically experiences significantly less variability in travel times compared to road alternatives
- Seat for every passenger
- Customer Experience:
    - Scenic ride
    - WiFi (if offered)
    - Concessions (if offered)
    - Comfort
        - Room to work or rest in an individual seat
        - Ability to get up and roam around the vessel
        - Restrooms onboard
        - Opportunity to go out onto the outer decks of the water-taxi and experience the open air
- High safety records
- Trip cost is more affordable than personal vehicle travel (mileage, wear and tear, tolls and parking)

Disadvantages (in this application):

- Routes identified for further consideration (routes from Kenmore, Kirkland and Ballard) include longer commute times from 2015 alternative mode (transit or personal vehicle) ranging from a 17 to 29 minute total round trip time differential from the alternative transit mode.
- Higher proposed fare than current transit alternatives.
- Schedule delays (even cancellations during extreme conditions) can occur due to weather, however, road travel frequently experiences equal or greater delays during inclement weather.

Emergency Response Capability

The King County Ferry District approved a Strategic Plan in 2014. This plan laid the framework for integrating passenger only ferry service into the broader regional transportation system. As such,

there were four strategies outlined to continue to grow passenger only ferry service in King County. One of the four strategies was “Coordinate with Regional Planning and Emergency Management Efforts”.

The Marine Division has been highly successful in creating and maintaining strong relationships with other emergency responders and emergency management agencies within the region and emergency preparedness is a high priority. Our regional passenger only ferry service constitutes an essential marine link to an effective emergency response to natural disasters, threats to national security, extreme weather events, or water-borne rescues. In the past year, crews have been successful in performing five water rescues in the waters of Puget Sound.

From inception, the Marine Division has been an essential marine participant in multi-agency emergency response drills. Participation in the Evergreen Quake exercise, Operation Lifeline, and a Joint Maritime Security Exercise prepare crews to be effective responders and strategic partners in the event of disaster or threat. By including passenger only ferries in the cadre of assets available in an emergency, regional responders are able to deposit or evacuate personnel and supplies throughout coastal Puget Sound on a scale and speed previously unavailable.

POF vessels have the unique ability to be highly maneuverable and able to access many docking locations. As such, they can assist in emergency situations that require immediate response for example where bridge access has been compromised. The King County Water Taxi could aid in evacuating people in an emergency such as the Water Emergency Transportation Authority (WETA) ferries did in the 1989 Loma Prieta Earthquake in San Francisco and the evacuation of Manhattan by the Staten Island Ferries during the 9/11 attacks.

ATTACHMENT 2

November 23, 2015

The Honorable Larry Phillips
Chair, King County Council
Room 1200
C O U R T H O U S E

Dear Councilmember Phillips:

As required by Ordinance 17941, I am transmitting to the King County Council a motion to approve the Marine Division's Final Report on Ferry Expansion Options, included as Attachment A. This motion responds to Proviso 1 in Section 94 of Ordinance 17941, as amended by Ordinance 18110.

"SECTION 94, Proviso 1

> *Of this appropriation, $150,000 shall not be expended or encumbered until the executive transmits both an interim and a final report on ferry expansion options and motions that approve the reports and the motions are passed by the council.*
>
> *The executive must file the interim report and motion required by this proviso by July 31, 2015, and the final report and motion required by this proviso by ((~~September 30~~)) November 25, 2015,"*

Motion 14421 was passed by the King County Council on September 9, 2015 approving the interim report as submitted. The input and dialogue provided by the Transportation, Economy and Environment Committee in its review of the interim report has been included in the final report

The purpose of the Final Report on Ferry Expansion Options is to provide:

- An assessment of passenger-only ferry expansion options, consistent with the strategic plan adopted by the Ferry District, which builds on new transit options that are projected to be delivered through Sound Transit's University Link and other funded regional transit expansions being delivered in the next decade.

- An assessment of facilities, service options, community interest and readiness and cost estimates for both capital and operations.

The final report provides a new appendix titled King County Transportation, Economy and Environment Committee Response, which captures all interim report updates and changes in one location. Additionally, the Kitsap Transit Passenger Only Ferry Plan and Passenger Only Ferry Market Advantages have been added as appendices.

Further, the report provides an executive summary and a detailed report assessing passenger-only ferry expansion options. The methodology for this assessment builds upon work completed to date, with a focus on analyzing implementation of regular, year-round, commuter-based King County Water Taxi service at start-up and route maturity.

The Final Report on Ferry Expansion Options will help the County address the following objectives from King County's Strategic Plan:

- Economic Growth and Built Environment – Objective 2.a: Focus transportation resources to support density and growth; Objective 2.b: Coordinate and develop services for an integrated and seamless regional transportation system.
- Financial Stewardship – Objective 2.a: Manage the county's assets and capital investments in a way that maximizes their productivity and value; Objective 2.b: Develop and implement a long-term financial plan that reflects service levels desired by the public; and Objective 3.a: Clearly define the services King County will provide, to whom, and at what level, focusing on quality, timeliness, and cost.

Access to safe and efficient transportation is identified as one of the determinants of equity in the county. The integration of existing low-income fare policies for all potential new routes was assumed in the development of this report. Further, the report includes discussion of geographic concentrations of consolidated measures of equity and social justice populations and the relationship and evaluation outcomes of the potential terminals in proximity.

The Final Report on Ferry Expansion Options helps the County address the following goals and strategies from the Marine Division strategic plan adopted by the King County Ferry District:

- GOAL: Integrate Water Taxi Service with Broader Regional Transportation System and Economy
- Strategy 16: Determine feasible routes for expansion of passenger-only service within King County

It is estimated that development of the Interim and Final Reports on Ferry Expansion Options has cost approximately $190,000.

Thank you for your consideration of this motion to approve the Marine Division's Final Report on Ferry Expansion Options.

If you have any questions, please contact Paul Brodeur, Marine Division Director, at 206-477-3966, or via email at paul.brodeur@kingcounty.gov.

Sincerely,

Dow Constantine
King County Executive

Enclosures

cc: King County Councilmembers
ATTN: Carolyn Busch, Chief of Staff
Anne Noris, Clerk of the Council
Carrie S. Cihak, Chief of Policy Development, King County Executive Office (KCEO)
Dwight Dively, Director, Office of Performance, Strategy and Budget
Diane Carlson, Director of Regional Initiatives, KCEO
Rachel Smith, Director of Government Relations, KCEO
Harold S. Taniguchi, Director, Department of Transportation (DOT)
Paul Brodeur, Division Director, Marine Division, DOT

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King County

Metropolitan King County Council
Transportation, Economy and Environment Committee

STAFF REPORT

Agenda Item:	12	**Name:**	Paul Carlson
Proposed No.:	2016-0089	**Date:**	February 2, 2016

SUBJECT

A motion approving a report on the traffic impacts of a new bus stop on northbound Montlake Avenue North in the vicinity of Hec Edmundson Pavilion.

SUMMARY

Proposed Motion 2016-0089 is one of three motions submitted by the Executive in response to requirements of Ordinance 18133, approving the restructure of Metro bus routes designed to integrate the bus routes with the University Link Light Rail extension to Capitol Hill and University of Washington Link Stations, effective March 26, 2016.

This proposed motion approves a study of the traffic impacts resulting from a new bus stop on northbound Montlake Boulevard NE near Hec Edmundson Pavilion. Route 65 serving Lake City via 35th Avenue NE and Route 78 serving Seattle Children's Hospital would pick up northbound passengers at this stop. Attachment A to Ordinance 18133, defining the revisions to the bus routes, includes in the descriptions of Routes 65 and 78 the requirement that the Montlake bus stop may only be used if the proposed motion has been approved.

An amendment has been prepared to replace the transmitted traffic study with a revised version; references in this staff report are to the revised report.

BACKGROUND

University Link Restructure

In September-October 2015, the County Council reviewed the King County Metro proposal to restructure approximately 30 bus routes in conjunction with the opening of University Link, the extension of Sound Transit's Central Link Light Rail line to Capitol Hill Station and University of Washington Station adjacent to Husky Stadium. On October 19, 2015, the Council passed Ordinance 18133, approving the proposed restructure with some route modifications.

The Council evaluation of this major restructure identified several specific issues associated with the proposed restructure. Ordinance 18133 includes provisions addressing four of these issues:

- **Transfer environment.** The amenities at bus stops where the number of transfers is projected to increase, and requiring a motion approving a work plan for implementing planned improvements (Section 2 of Ordinance 18133);

- **Public outreach.** A joint public engagement campaign leading up to the March 26, 2016 effective date, carried out in collaboration with Sound Transit, the City of Seattle, and the University of Washington (Section 3 of Ordinance 18133);

- **Performance measures.** Evaluation of ridership impacts and customer response to the restructure, and requiring a motion approving a work plan for customized performance measures (Section 4 of Ordinance 18133); and

- **Montlake traffic study.** A study of the traffic impacts of installing a bus stop on northbound Montlake Boulevard NE, and requiring a motion approving a report on the traffic impacts study (Section 5 of Ordinance 18133).

The proposed motions required by Sections 2, 4, and 5 have been transmitted for Council review. The oral reports required by Section 3 were presented in committee in December and January.

Montlake Boulevard Bus Stop

Passenger facilities near the University of Washington Link Station have been upgraded to allow for increased transfers between buses and light rail as well as improved access to the UW campus. Most transfers will be to or from stops on NE Pacific Street. A proposed new bus stop on Montlake Boulevard NE near Hec Edmundson Pavilion would be the only bus stop on the same side of Montlake Boulevard NE as the Link station. Up to eight buses per hour could pick up and drop off passengers at this stop. Section 5 of Ordinance 18133 is intended to ensure an evaluation of the traffic impacts of this stop:

> <u>SECTION 5.</u> To ensure a full understanding of the potential traffic impacts in the vicinity of the University of Washington light rail station, before the installation of a bus stop on Montlake Boulevard NE near Hec Edmundson Pavilion, the council must pass a motion approving a report to be transmitted by the executive. The report shall summarize the results of a traffic impact analysis of a new bus stop on Montlake Boulevard NE near Hec Edmundson Pavilion with an assessment of the impact of that stop on general purpose traffic travel time on Montlake Boulevard NE from Boyer Avenue East to NE 45th Street and impact on the level of service and performance of intersections at Montlake Boulevard NE with NE Pacific Street and NE Pacific Place. The executive shall transmit the report and motion in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copyto all councilmembers, the council chief of staff, the policy staff director and the lead

staff for the transportation, economy and environment committee, or its successor.

The Report

Attachment A to the proposed motion is a report on the evaluation of travel times between Boyer Avenue E and 24th Avenue E and Montlake Boulevard NE and NE 45th Street – as shown in a map on page 2 of the Report.

The travel time analysis used software, described in Appendix B, to assess afternoon peak period travel conditions. The impacts on general purpose traffic and transit traffic were evaluated for eight buses per hour in the afternoon peak, based on 10-minute peak service on Route 65 and 30-minute service on Route 78. Results include travel time on the corridor and intersection delay at two intersections, Montlake Boulevard NE/NE Pacific Street and Montlake Boulevard NE/NE Pacific Place.

On page 3, Table 1 shows the results that northbound travel time for general purpose traffic would not be affected and northbound travel time for transit would increase slightly. The increased transit time is the result of passengers boarding and deboarding at the new stop. The report notes that northbound traffic at the NE Pacific Street light would experience some friction if a bus was at the new stop, as right lane vehicles merged left, but states that overall there is very little to no impact.

Table 2 shows the current Level of Service (LOS) and seconds of delay at the two intersections. The model shows no impact at the intersection of Montlake Boulevard NE/NE Pacific Street (LOS D/52 seconds) and a slight decrease at Montlake Boulevard NE/NE Pacific Place (LOS F/119 seconds vs. LOS F/116 seconds). Appendix A is a table of LOS standards, which come from the Highway Capacity Manual, developed by the Transportation Research Board.

ANALYSIS

Approval of the proposed motion would approve the report finding no significant impact on traffic from establishment of a bus stop at the location described.

The City of Seattle Department of Transportation has written to concur with the results of the traffic study and to commit to continue to work with Metro to monitor traffic in the area to ensure transit benefits are realized. (See Attachment 4.) Please note that the Seattle Department of Transportation is preparing infrastructure in the vicinity and anticipates beginning work necessary to prepare the potential bus stop area the weekend of February 6, but that the bus stop would not be flagged or used unless the proposed legislation is adopted by Council.

AMENDMENT

Attachment 2 is an amendment to insert a revised report. The amendment will correct a heading in Table 2 and will modify the street segment evaluated for travel time impacts to reflect the requirement of Section 5 of Ordinance 18133. This change in the length of

the segment evaluated results in a change in the travel times listed in Table 1 but there is no change to the finding of no significant impact to travel times on the street segment.

ATTACHMENTS

1. Proposed Motion 2016-0089 (and its attachments)
2. Amendment
3. Transmittal Letter
4. City of Seattle Letter

INVITED

- Victor Obeso, Deputy General Manager Planning and Customer Service, King County Transit Division
- Marty Minkoff, Acting Manager Service Development, King County Transit Division
- Owen Kehoe, Engineer, King County Transit Division

KING COUNTY

Signature Report

January 29, 2016

Motion

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Proposed No. 2016-0089.1 **Sponsors** Dembowski

A MOTION relating to public transportation, approving a report assessing potential traffic impacts of a new bus stop on Montlake Boulevard NE and NE Pacific Place, as directed by Ordinance 18133, Section 5.

WHEREAS, in October 2015, Ordinance 18133 approved the March 2016 University Link bus integration service changes, and

WHEREAS, Ordinance 18133, Section 5, requires that the council pass a motion approving a traffic impacts analysis report before the installation of a bus stop on Montlake Boulevard NE at NE Pacific Place, and

WHEREAS, Ordinance 18133, Section 5, requires the report to summarize the results of a traffic impact analysis of a new bus stop on Montlake Boulevard NE near Hec Edmundson Pavilion with an assessment of the impact of that proposed stop on general purpose traffic travel time on Montlake Boulevard NE from Boyer Avenue East to NE 45th Street and impact on the level of service and performance of intersections at Montlake Boulevard NE with NE Pacific Street and NE Pacific Place, and

WHEREAS, Metro has commissioned the required traffic study and the executive has transmitted to the council the report summarizing the results of the traffic study as set forth as Attachment A to this motion, and

WHEREAS, the Seattle Department of Transportation has authority to approve new bus stops within the city of Seattle, has reviewed the results of the traffic impact study, and concurs with its conclusions;

NOW, THEREFORE, BE IT MOVED by the Council of King County:

The King County Council hereby approves the King County Metro Transit Montlake Triangle New Bus Zone Traffic Analysis report, Attachment A to this motion.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

_____

J. Joseph McDermott, Chair

ATTEST:

_____

Anne Noris, Clerk of the Council

APPROVED this _____ day of _____, _____.

_____

Dow Constantine, County Executive

Attachments: A. King County Metro Transit - Montlake Triangle New Bus Zone Traffic Analysis Dated December 9, 2015

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King County Metro Transit

Montlake Triangle New Bus Zone Traffic Analysis

December 9, 2015

Prepared for:
King County Council

Prepared by:

Department of Transportation
Metro Transit Division
Service Development Section
King Street Center, KSC-TR-0415
201 S Jackson St.
Seattle, WA 98104
www.kingcounty.gov/metro

Alternative Formats Available
206-477-3832 TTY Relay: 711

DKS Associates
719 Second Ave., Suite 1250
Seattle, WA 98104-170

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Results and Conclusion 2
Appendix A: Level of Service 4
Appendix B: Vissim Microsimulation Software 5

Analysis Purpose

DKS was tasked with performing an operational analysis of the Montlake Triangle area to estimate the impacts of adding a new northbound bus stop near Alaska Airlines Arena at "Hec" Edmundson Pavilion on northbound general purpose traffic on Montlake Boulevard NE. Figure 1 shows the proposed bus stop location. The concern was whether northbound buses stopping in-lane would create queuing problems and travel time delay northbound on Montlake Boulevard NE.

The traffic analysis was completed using an existing Vissim microsimulation model (Vissim is described in Appendix B), which was recently calibrated to traffic conditions around the Montlake Triangle for the PM peak hour. The proposed new stop would serve routes 65 and 78 and have capacity to accommodate two 60-foot buses. The model included eight buses per hour split between routes 65 and 78 at the new stop.

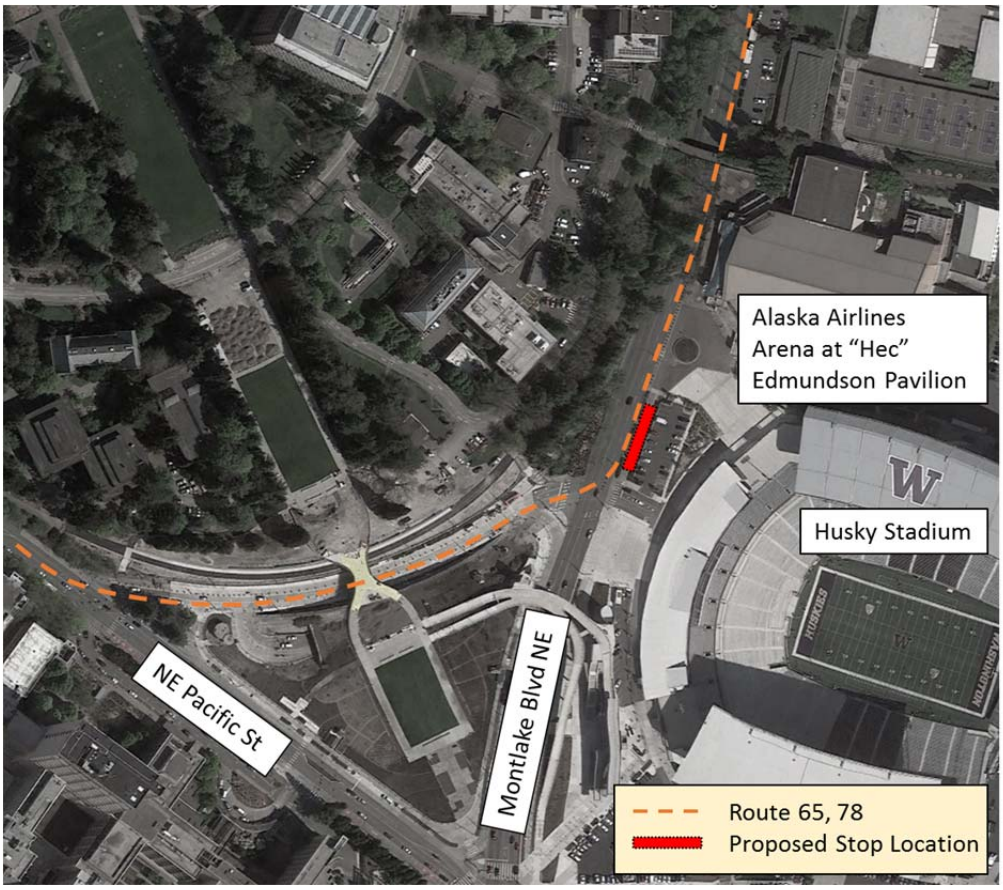

Figure 1: Proposed Stop Location

Results and Conclusion

Travel times were measured from the intersection of Boyer Avenue E/24th Avenue E to the intersection of Montlake Boulevard NE/Walla Walla Road as shown in Figure 2.

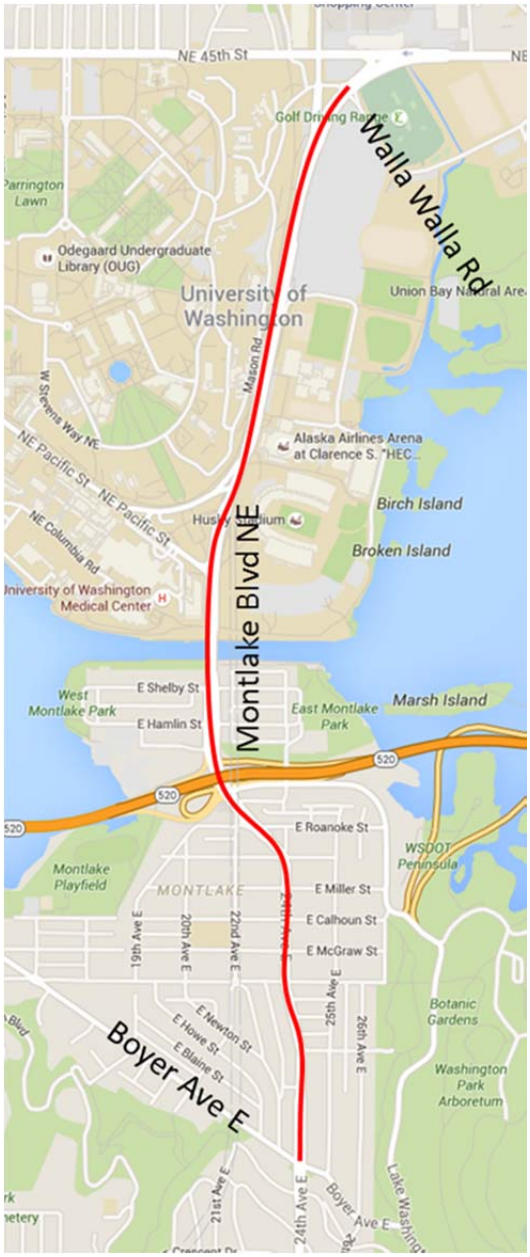

Figure 2: Travel Time Segment

The analysis showed negligible impact to northbound transit travel times as shown in Table 1. The 30-second increase in transit travel time can be attributed to the loading/unloading delay in the new stop. Table 2 shows the overall intersection delay and level of service (LOS) at the intersections of Montlake Blvd NE/NE Pacific St and Montlake Blvd NE/NE Pacific Pl (level of service is further defined in Appendix A). Intersection delay values changed very little with no change in level of service. The three-second decrease in intersection delay at

Montlake Blvd NE/NE Pacific Pl from the No-Build scenario to the Build scenario can be attributed to variations in the model runs.

Even with the addition of the new bus stop, there was no increase in travel time for general purpose traffic. Queuing for northbound traffic on the south side of the intersection of Montlake Blvd NE/NE Pacific Pl exists, but is not excessive. This provides opportunity for vehicles to merge into the left lane if a bus is serving the stop on the north side of the intersection. General purpose traffic will have some increased friction traveling through the intersection when a bus is present at the stop with some vehicles queuing behind the bus while waiting to merge left to pass the bus. Even with the increased friction through the intersection, the model shows that installing the new transit stop would have very little to no impact on traffic operations at the Montlake Triangle.

Table 1: Northbound Travel Times

Travel Mode	No-Build Travel Time (minutes)	Build Travel Time (minutes)
General Purpose	8.7	8.7
Transit	11.3	11.8

Table 2: Intersection LOS/Average Delay per Vehicle

Travel Mode	No-Build LOS/Delay (seconds)	Build LOS/Delay (seconds)
Montlake Blvd NE/NE Pacific St	D/52	D/52
Montlake Blvd NE/NE Pacific Pl	F/119	F/116

Appendix A: Level of Service

As used in this study, level of service (LOS) is a measurement of average vehicle delay in seconds per vehicle for a signalized intersection. LOS is separated into several letter grades depending on the expected delay at the intersection. Table 3 shows the breakdown of the delay values. LOS is a useful measure of effectiveness for intersections as it can describe the overall delay that can be expected at an intersection or identify specific movements or approaches that experience high amounts of delay.

Table 3: Level of Service Values

LOS	Intersection Delay (seconds/vehicle)
A	≤ 10
B	10 - 20
C	20 – 35
D	35 – 55
E	55 – 80
F	≥ 80

Appendix B: Vissim Microsimulation Software

Vissim is a microsimulation software used to model multimodal facilities. Vissim models individual vehicles and their interactions with one another within a predefined study area. Since Vissim models individual vehicles, it captures the effects of small changes in lane geometry, intersection layouts, or intersection timing.

Typically, an existing conditions model is created based on existing lane geometry and signal timing. The existing conditions model is calibrated to field conditions like transit and general purpose travel times through a study area. The model is also calibrated to match existing turning movement counts. This calibration is completed so the model matches as closely as possible how drivers behave in that specific corridor. Once the existing conditions model is calibrated, future No-build and Build models are created. The future No-Build model serves as a baseline for comparison to the future Build model.

Each model is run several times (20 runs per model in this study during the PM peak hour) and average measures of effectiveness are collected and documented for the multiple model runs. Each model run uses the same turning movement volumes at each intersection, but each run feeds the vehicles into the system differently. This gives some variability between runs for congestion levels not unlike variations in congestion day-to-day. Since the same model is run several times, travel times and delays are averaged across all runs to give statistically significant results. The measures of effectiveness generated from Vissim for this study included general purpose travel time, transit travel time, and intersection delay.

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February 2, 2016

pdc

Sponsor: Dembowski

Proposed No.: 2016-0089

AMENDMENT TO PROPOSED MOTION 2016-0089, VERSION 1

Delete Attachment A, King County Metro Transit – Montlake Triangle New Bus Zone Traffic Analysis, dated December 9, 2015, and insert Attachment A, King County Metro Transit – Montlake Triangle New Bus Zone Traffic Analysis, dated February 2, 2016

EFFECT: Modifies attachment A, the transmitted report, to modify the map on page 2 and the travel times in Table 1, correct the heading in Table 2, and to make wording changes to reflect the length of the street segment evaluated in the Report.

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February 2, 2016

King County Metro Transit

Montlake Triangle New Bus Zone Traffic Analysis

December 9, 2015

Prepared for:
King County Council

Prepared by:

Department of Transportation
Metro Transit Division
Service Development Section
King Street Center, KSC-TR-0415
201 S Jackson St.
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Analysis Purpose

DKS was tasked with performing an operational analysis of the Montlake Triangle area to estimate the impacts of adding a new northbound bus stop near Alaska Airlines Arena at "Hec" Edmundson Pavilion on northbound general purpose traffic on Montlake Boulevard NE. Figure 1 shows the proposed bus stop location. The concern was whether northbound buses stopping in-lane would create queuing problems and travel time delay northbound on Montlake Boulevard NE.

The traffic analysis was completed using an existing Vissim microsimulation model (Vissim is described in Appendix B), which was recently calibrated to traffic conditions around the Montlake Triangle for the PM peak hour. The proposed new stop would serve routes 65 and 78 and have capacity to accommodate two 60-foot buses. The model included eight buses per hour split between routes 65 and 78 at the new stop.

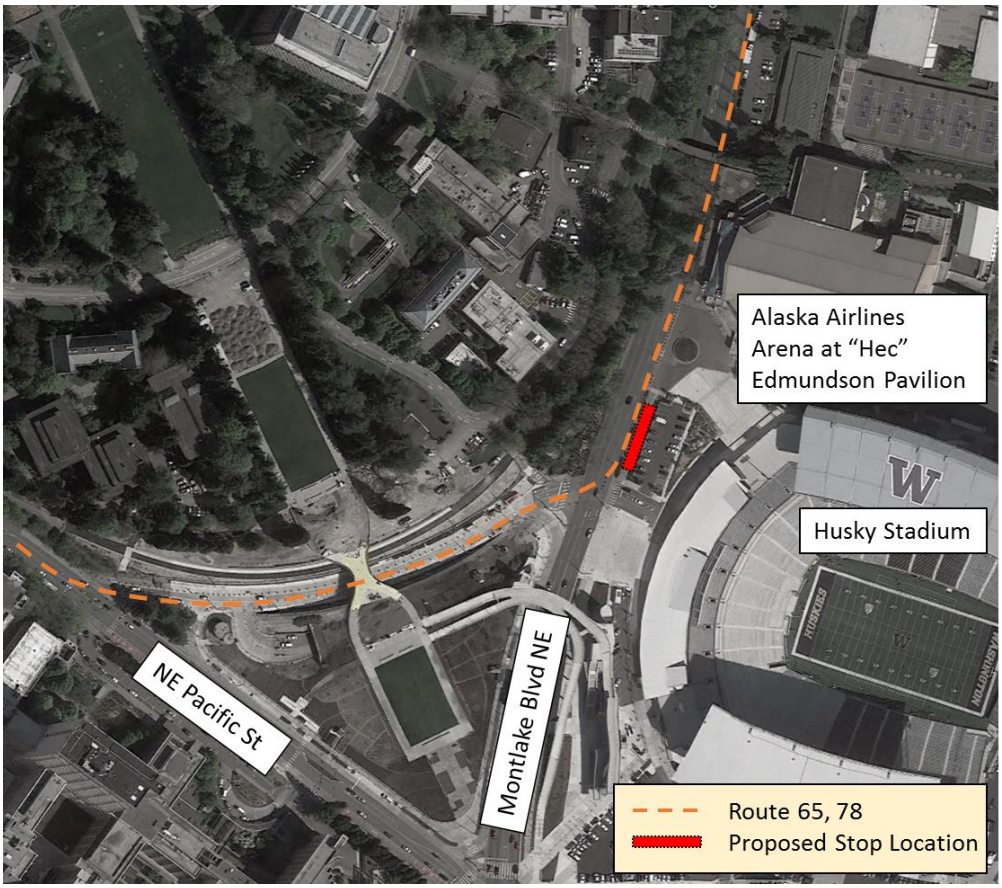

Figure 1: Proposed Stop Location

Results and Conclusion

Travel times were measured from the intersection of Boyer Avenue E/24th Avenue E to the intersection of Montlake Boulevard NE/NE 45th Street as shown in Figure 2.

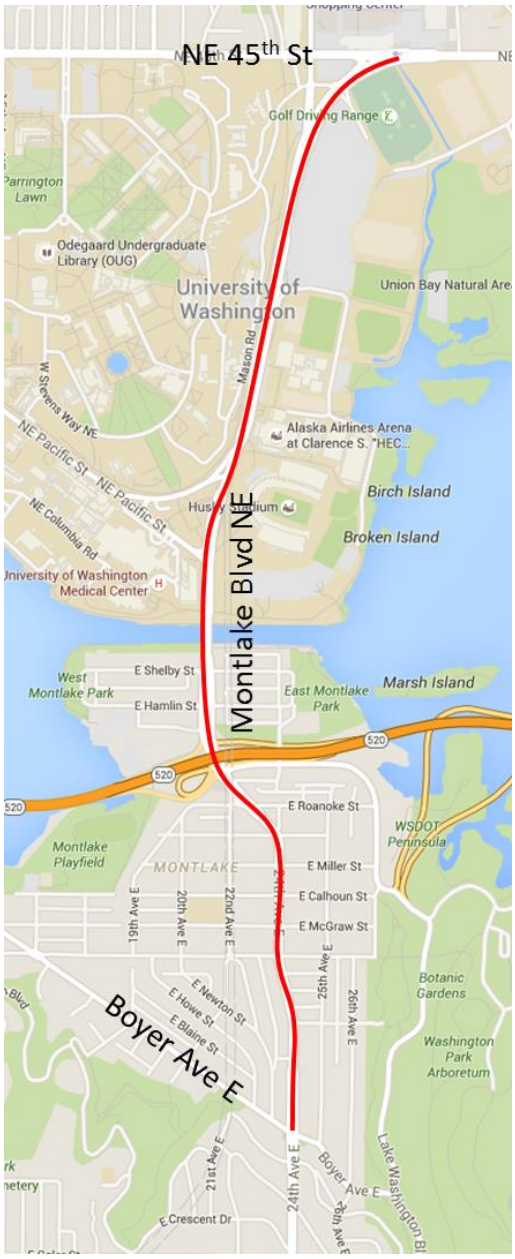

Figure 2: Travel Time Segment

The analysis showed negligible impact to northbound transit travel times as shown in Table 1. The 30-second increase in transit travel time can be attributed to the loading/unloading delay in the new stop. Table 2 shows the overall intersection delay and level of service (LOS) at the intersections of Montlake Blvd NE/NE Pacific St and Montlake Blvd NE/NE Pacific Pl (level of service is further defined in Appendix A). Intersection delay values changed very little with no change in level of service. The three-second decrease in intersection delay at

Montlake Blvd NE/NE Pacific Pl from the No-Build scenario to the Build scenario can be attributed to variations in the model runs.

Even with the addition of the new bus stop, there was no increase in travel time for general purpose traffic. Queuing for northbound traffic on the south side of the intersection of Montlake Blvd NE/NE Pacific Pl exists, but is not excessive. This provides opportunity for vehicles to merge into the left lane if a bus is serving the stop on the north side of the intersection. General purpose traffic will have some increased friction traveling through the intersection when a bus is present at the stop with some vehicles queuing behind the bus while waiting to merge left to pass the bus. Even with the increased friction through the intersection, the model shows that installing the new transit stop would have very little to no impact on traffic operations at the Montlake Triangle.

Table 1: Northbound Travel Times

Travel Mode	No-Build Travel Time (minutes)	Build Travel Time (minutes)
General Purpose	9.0	9.0
Transit	12.1	12.6

Table 2: Intersection LOS/Average Delay per Vehicle

Intersection	No-Build LOS/Delay (seconds)	Build LOS/Delay (seconds)
Montlake Blvd NE/NE Pacific St	D/52	D/52
Montlake Blvd NE/NE Pacific Pl	F/119	F/116

Appendix A: Level of Service

As used in this study, level of service (LOS) is a measurement of average vehicle delay in seconds per vehicle for a signalized intersection, based on the Highway Capacity Manual published by the Transportation Research Board. LOS is separated into several letter grades depending on the expected delay at the intersection. Table 3 shows the breakdown of the delay values. LOS is a useful measure of effectiveness for intersections as it can describe the overall delay that can be expected at an intersection or identify specific movements or approaches that experience high amounts of delay.

Table 3: Level of Service Values

LOS	Intersection Delay (seconds/vehicle)
A	≤ 10
B	10 - 20
C	20 – 35
D	35 – 55
E	55 – 80
F	≥ 80

Appendix B: Vissim Microsimulation Software

Vissim is a microsimulation software used to model multimodal facilities. Vissim models individual vehicles and their interactions with one another within a predefined study area. Since Vissim models individual vehicles, it captures the effects of small changes in lane geometry, intersection layouts, or intersection timing.

Typically, an existing conditions model is created based on existing lane geometry and signal timing. The existing conditions model is calibrated to field conditions like transit and general purpose travel times through a study area. The model is also calibrated to match existing turning movement counts. This calibration is completed so the model matches as closely as possible how drivers behave in that specific corridor. Once the existing conditions model is calibrated, future No-build and Build models are created. The future No-Build model serves as a baseline for comparison to the future Build model.

Each model is run several times (20 runs per model in this study during the PM peak hour) and average measures of effectiveness are collected and documented for the multiple model runs. Each model run uses the same turning movement volumes at each intersection, but each run feeds the vehicles into the system differently. This gives some variability between runs for congestion levels not unlike variations in congestion day-to-day. Since the same model is run several times, travel times and delays are averaged across all runs to give statistically significant results. The measures of effectiveness generated from Vissim for this study included general purpose travel time, transit travel time, and intersection delay.

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ATTACHMENT 3

January 19, 2016

The Honorable Joe McDermott
Chair, King County Council
Room 1200
C O U R T H O U S E

Dear Councilmember McDermott:

Pursuant to Ordinance 18133, Section 5, I am transmitting to the King County Council a motion for approval of the King County Metro Transit Montlake Triangle New Bus Zone Traffic Analysis report.

As called for in the ordinance, this report will ensure a full understanding of the potential traffic impacts in the vicinity of the University of Washington light rail station due to the planned installation of a new northbound bus stop on Montlake Boulevard Northeast near Hec Edmundson Pavilion. The results of a traffic impact analysis of the proposed new bus stop are summarized within the report, including an assessment of the impact of such a stop on general purpose traffic travel time on Montlake Boulevard Northeast from Boyer Avenue East to Northeast 45th Street. Also addressed is the impact on the level of service and performance of the intersections at Montlake Boulevard Northeast with Northeast Pacific Street and Montlake Boulevard Northeast with Northeast Pacific Place. The traffic impact study was performed by DKS Associates, a traffic engineering consultant. The consultant analysis concluded that installing the planned new transit stop would have very little to no impact on traffic operations at the Montlake Triangle.

The integration of bus service with the Link light rail extension to Capitol Hill and the University of Washington provides an opportunity for Metro to prepare for the region's growth, expand service, and increase rider choices. The proximity of the proposed new Montlake Boulevard bus stop to the light rail station entrance is intended to enhance the quality of passenger transfers between Metro bus service and Link light rail. The installation of this bus stop will contribute to improving mobility options that support Objective 2 of the *Economic Growth and Built Environment* goal of the King County Strategic Plan, which is to "Meet the growing need for transportation services and facilities throughout the county." Working to improve facilities that support increased ridership also supports King County's

Strategic Climate Action Plan. As well, such efforts are consistent with Objective 6.1 of King County Metro's Strategic Plan for Public Transportation 2011-2021, which calls for Metro to work to create a public transportation system that emphasizes productivity, while ensuring social equity and providing geographic value. Installation of the new bus stop will also help with future implementation of Strategy 3.2.2, that directs Metro to coordinate and develop services and facilities with other providers to create an integrated and efficient regional transportation system.

Seattle Department of Transportation (SDOT) is responsible for reviewing and approving all new bus stop requests within the City of Seattle. King County Metro Transit collaborated with SDOT on the scope of the traffic study and review of the results. SDOT concurs with the conclusions of the report as is indicated in Letter Attachment 1.

DKS Associates was paid $4,606 to perform the traffic study. An estimated 30 hours was required by King County staff to negotiate the contract with DKS, coordinate review with SDOT, and prepare the report for submittal to Council. The total cost to King County was approximately $6,400. Printing costs were minimal.

Thank you for your consideration of this motion to approve the King County Metro Transit Montlake Triangle New Bus Zone Traffic Analysis report.

If you have any questions, please contact Marty Minkoff**,** Acting Manager of Service Development, at 206-477-5799, or via email at marty.minkoff@kingcounty.gov.

Sincerely,

Dow Constantine
King County Executive

Enclosures

cc: King County Councilmembers
ATTN: Carolyn Busch, Chief of Staff
Anne Noris, Clerk of the Council
Carrie S. Cihak, Chief of Policy Development, King County Executive Office
Dwight Dively, Director, Office of Performance, Strategy and Budget
Harold S. Taniguchi, Director, Department of Transportation (DOT)
Kevin Desmond, General Manager, Metro Transit Division, DOT
Victor Obeso, Deputy General Manager, Planning and Customer Services, Metro Transit Division, DOT
Marty Minkoff, Acting Manager, Service Development, Metro Transit Division, DOT

City of Seattle
Edward B. Murray, Mayor

Department of Transportation
Scott Kubly, Director

December 15, 2015

Victor Obeso
Deputy General Manager
King County Metro
201 S Jackson Street, Room 415
Seattle, WA 98104

Dear Mr. Obeso,

The Seattle Department of Transportation concurs with the conclusions of the traffic analysis for the new bus stop northbound on Montlake Boulevard NE, far-side of NE Pacific Place as completed by DKS and Associates on behalf of King County Metro.

As with any new bus stop, we will continue to work with Metro to monitor traffic in the area to ensure transit benefits are realized.

Sincerely,

Mark Bandy, P.E.,
Director of Transportation Operations

cc: Matt Beaulieu, Seattle Department of Transportation
Jonathan Bez, King County Metro
Bill Bryant, Seattle Department of Transportation
Carter Danne, Seattle Department of Transportation
Jeremy Fichter, King County Metro
Owen Kehoe, King County Metro
Irin Limargo, King County Metro
Candida Lorenzana, Seattle Department of Transportation

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King County

Metropolitan King County Council
Transportation, Economy and Environment Committee

STAFF REPORT

Agenda Item:	13	**Name:**	Paul Carlson
Proposed No.:	2016-0092	**Date:**	February 2, 2016

SUBJECT

Proposed Motion 2016-0092 approves a work plan for improvements to bus stops where increased transfer activities are expected as a result of the University Link restructure of Metro bus routes.

SUMMARY

Proposed Motion 2016-0092 is one of three motions submitted by the Executive in response to requirements of Ordinance 18133, approving the restructure of Metro bus routes designed to integrate the bus routes with the University Link Light Rail extension to Capitol Hill and University of Washington Link Stations, effective March 26, 2016.

The bus restructure is expected to generate significant additional transfers between buses and between buses and Link Light Rail. Ordinance 18133, Section 2, therefore requires transmittal of a proposed motion approving a work plan for improving the transfer environment at 10 Key Transfer Locations.

The transmitted work plan includes information about on-going stop improvement efforts, bus-rail station area planning, improvements to be completed by March 2016, during the remainder of 2016, and in future year, cost estimates for the improvements, and an appendix with details about each Key Transfer Location.

BACKGROUND

University Link Restructure

In September-October 2015, the County Council reviewed the King County Metro proposal to restructure approximately 30 bus routes in conjunction with the opening of University Link, the extension of Sound Transit's Central Link Light Rail line to Capitol Hill Station and University of Washington Station adjacent to Husky Stadium. On October 19, 2015, the Council passed Ordinance 18133, approving the proposed restructure with some route modifications.

The Council evaluation of this major restructure identified several specific issues associated with the proposed restructure. Ordinance 18133 includes provisions addressing four of these issues:

- **Transfer environment.** The amenities at bus stops where the number of transfers is projected to increase, and requiring a motion approving a work plan for implementing planned improvements (Section 2 of Ordinance 18133);

- **Public outreach.** A joint public engagement campaign leading up to the March 26, 2016 effective date, carried out in collaboration with Sound Transit, the City of Seattle, and the University of Washington (Section 3 of Ordinance 18133);

- **Performance measures.** Evaluation of ridership impacts and customer response to the restructure, and requiring a motion approving a work plan for customized performance measures (Section 4 of Ordinance 18133); and

- **Montlake traffic study.** A study of the traffic impacts of installing a bus stop on northbound Montlake Boulevard NE, and requiring a motion approving a report on the traffic impacts study (Section 5 of Ordinance 18133).

The proposed motions required by Sections 2, 4, and 5 have been transmitted for Council review. The oral reports required by Section 3 were presented in committee in December and January.

Transfers

The U Link bus restructure is projected to increase transfers between bus routes and between buses and Link Light Rail, leading to the Council's request for information about plans to ensure that bus stops have capacity to deal with the increases. Section 2 of Ordinance 18133 is intended to ensure an evaluation of planned stop improvements:

> SECTION 2. Consistent with the King County Metro Service Guidelines, Metro considers as part of its network planning locations where transfer opportunities could be provided and where provision of convenient transfers could improve the efficiency of the network. Metro strives to make transfers convenient, safe and accessible, and to work with partners to provide safe environments for pedestrians in a manner consistent with the goals of the City of Seattle Vision Zero Safer Streets for Seattle initiative. In order to help facilitate connections in locations where passenger transfers are expected to increase due to the proposed changes, the executive is directed to work with Sound Transit, the University of Washington and the city of Seattle to improve the transfer environment in such locations. Locations where transfers are expected to increase as a result of the proposed changes include, but are not limited to NE Northgate Way and Roosevelt Way NE, Roosevelt Way NE and NE 65th Street, NE Ravenna Boulevard and NE 65th Street, 25th Avenue NE and NE 65th Street, NE Campus Parkway and University Way NE, 19th Avenue E and E Madison Street, 23rd Avenue E and E Madison Street, and near the new Capitol Hill and University of Washington light rail stations, including each of the bus

stops planned near the University of Washington light rail station. A number of transfer locations are shown in Attachment B to this ordinance, Key Transfer Locations map. Amenities or treatments that would improve the transfer environment include, but are not limited to, shelters, lighting, benches, trash receptacles, wayfinding signage, digital signboards, customer information, crosswalks and changes to signalization.

The executive shall submit to the council a work plan describing specific improvements planned for each of these transfer areas and a timeline for implementation that shall include plans to be implemented by March 2016, as well as plans to be implemented during the course of 2016 and plans to be implemented between 2017 and 2020. The work plan shall identify the responsible party and funding source for each planned improvement and shall include any legislation needed to implement the improvements. These improvements shall be implemented as expeditiously as possible to help achieve the objectives of safe and accessible transfer environments. When transmitted to the council, the work plan shall be accompanied by a motion to approve the work plan. The executive shall transmit the work plan and motion by January 29, 2016, in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copy to all councilmembers, the council chief of staff, the policy staff director and the lead staff for the transportation, economy and environment committee, or its successor.

The Key Transfer Locations Map mentioned in Section 2 is Attachment 3 to this Staff Report. The map shows 10 numbered Key Transfer Locations. The Work Plan uses these numbers in referring to the Key Transfer Locations.

Work Plan Overview

Council staff reviewed the Work Plan and found that it describes specific improvements for the Key Transfer Locations. Here is an overview of the Work Plan.

Following the Introduction and Summary, the Work Plan describes **On-Going Efforts** (page 3) including background on the factors that determine bus stop amenities – these include the number of boardings[1], specific site conditions, Americans with Disabilities Act (ADA) requirements, and personal safety, traffic safety, and improvements that allow boarding and deboarding from the rear doors. There is also a discussion of Real Time Information Signs (RTIS) for bus arrival information, which are part of the RapidRide Station infrastructure and have been installed by the City of Seattle at some bus stops.

On page 4, **Bus-Rail Station Area Planning** describes the work of a joint King County Metro / Sound Transit Integration Steering Committee and inter-agency Station Area Planning staff work group. These bodies focus on intermodal (bus-rail) facilities such as the two new Link stations: Capitol Hill, Key Transfer Location #8 (also a terminus of the

[1] The King County Metro Service Guidelines state that "bus stop amenities should be installed based on ridership, in order to benefit the largest number of riders." For non-RapidRide routes, consideration of amenities is recommended for bus stops with 50 or more boardings within the City of Seattle and 25 or more boardings outside Seattle.

City of Seattle's First Hill Streetcar); University of Washington, Key Transfer Locations #6-7; and the future Roosevelt Station, Key Transfer Location #3.

Pages 5-11 provide the specific information required by Section 2 of Ordinance 18133.

The Work Plan's Table 1, from page 5, is reproduced here to illustrate the estimated additional transfer activity at each location.

Table 1 – Estimated Increase in Transfer Activity

Transfer Location	Location Description	Estimated Increase in Transfer Activity following March 2016 Service Change [A]
1	NE Northgate Way and Roosevelt Way NE	60
2	NE Ravenna Boulevard and NE 65th Street	80
3	Roosevelt Way NE and NE 65th Street	80
4	25th Avenue NE and NE 65th Street	30
5	NE Campus Parkway and University Way NE	0
6/7	NE Pacific Street /Montlake Boulevard NE and ST Link University of Washington Station	1580
8	ST Link Capitol Hill Station (Broadway Avenue E and E John Street)	560
9	23rd Avenue E and E Madison Street	90
10	19th Avenue E and E Madison Street	0

[A] Following the March 2016 transit service change, the estimated number of additional riders transferring to Metro bus routes each day at each transfer location.

Note that the Work Plan groups Locations 6 and 7 together as part of the University of Washington Link Station-Montlake Triangle area and provides detailed information about each bus stop in the area. Location 10, East Madison Street and 19th Avenue E, was identified as a Key Transfer Location because Routes 8 and 11 were expected to turn between the two streets. These route changes will not be implemented because the Seattle Department of Transportation (SDOT) did not approve the street modifications necessary to allow the buses to make the turn; accordingly, no additional transfer activity is projected at this location.

Table 2 lists improvements planned to be completed by March 2016; these are at Key Transfer Locations 1, 6-7, and 8. Total costs are $1,454,000; King County costs are estimated at $427,000 plus a share of $182,000 yet to be allocated.

Table 3 lists improvements planned for completion during the rest of 2016; these are at Key Transfer Locations 1, 2, 3, 4, and 9. Total costs are $335,000; King County costs are estimated at $135,000. Installation of landing pads at Locations 1, 2, 4, and 9 is new work identified through development of this Work Plan; the work at Location 3 is an SDOT paving project on a separate schedule.

Table 4 lists improvements planned for the 2017-2021 time period; these are at Key Transfer Locations 2, 3, 5, 6-7, 8, and 9. Total costs are estimated at $3,767,400; King County costs are estimated at $1,420,000 plus a share of $1,137,400 yet to be allocated. Some work at Location 3 is connected to the Northgate Link extension; work at Location 8 is part of a future northern extension of Seattle's First Hill Streetcar; work

at Location 9 is part of an SDOT project on 23rd Avenue; and RTIS projects depend on future budget decisions.

Table 5 identifies the Work Plan total currently estimated costs broken out by Key Transfer Location, completion timeframe, and allocation among the County, Sound Transit, and the City of Seattle. Through 2016, County costs are included in two Transit Capital Improvement Projects (Bus Safety Zone and Access, and Shelters and Lighting). For 2017-2018, the proposed transit budget is expected to request funding for the Work Plan activities in that year.

With respect to Real Time Information Signs, County policy is that RapidRide Line station amenities should include RTIS; this is one of the distinguishing features of RapidRide. The City of Seattle has provided RTIS capacity at some bus stops and the County has installed RTIS at the SR 520 stations; a County decision to further expand RTIS would require both a policy decision and appropriation of sufficient budget authority.

Appendix A to the Work Plan provides more detailed information on the Key Transfer Locations. For each Location, there is a map showing the area, the bus stops associated with the location, and the bus routes serving the location. There is a description of the location, expected transfer activity post March 2016, and an explanation of current and planned future amenities. A table lists each bus stop's direction and location, current boardings and deboardings ("ons" and "offs"), and passenger amenities expected in March 2016. The amenities are categorized as shelters, lighting, landing pads, bench, and RTIS.

It may be helpful to note that a landing pad is a paved area between curb and sidewalk (i.e. in the landscape strip) that allows passengers to alight from rear doors. Also, there are several types of bus shelters; for each Key Transfer Location description in Appendix A, the table has a footnote explaining what the shelter designations mean.

ANALYSIS

Adoption of Proposed Motion 2016-0092 will approve the bus stop improvements described in Attachment A, Work Plan for Improving the Transfer Environment at Locations Impacted by the University Link Bus Integration. The Work Plan identifies a series of planned and potential future improvements at Key Transfer Locations, each of which includes between four and seven bus stop locations. Future improvements are contingent on Council approval of budget authority for the 2017-2018 biennium. The proposed Work Program meets the requirements of Section 2 of Ordinance 18133.

ATTACHMENTS

1. Proposed Motion 2016-0092 (and its attachments)
2. Transmittal Letter
3. Ordinance 18133, Attachment B (Map of Key Transfer Locations)

INVITED

- Victor Obeso, Deputy General Manager Planning and Customer Service, King County Transit Division
- Marty Minkoff, Acting Manager Service Development, King County Transit Division
- Paul Roybal, Transportation Planner, King County Transit Division

KING COUNTY

Signature Report

January 29, 2016

Motion

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Proposed No. 2016-0092.1 **Sponsors** Dembowski

A MOTION relating to the establishment of a work plan for improving the transfer environment at locations impacted by the University Link bus integration, as directed by Ordinance 18133, Section 2.

WHEREAS, in October 2015, Ordinance 18133 approved the March 2016 University Link bus integration service changes, and

WHEREAS, Ordinance 18133, Section 2, requires the executive to transmit a motion by January 29, 2016, approving a work plan to improve the transfer environment at locations impacted by the University Link bus integration, and

WHEREAS, the work plan shall:

1. Describe specific improvements planned for each of ten key transfer locations shown in Attachment B to Ordinance 18133, Key Transfer Locations map, and a timeline for implementation that shall include plans to be implemented by March 2016, during the course of 2016, and plans to be implemented between 2017 and 2020;

2. Identify the responsible party and funding source for each planned improvement;

3. Include any legislation needed to implement the improvements; and

4. Be implemented as expeditiously as possible to help achieve the objectives of safe and accessible transfer environments.

WHEREAS, the work plan includes a scope of work, tasks, schedule, milestones, and budget, and

WHEREAS, Metro has compiled the required information and the executive has transmitted the work plan for improving the transfer environment at locations impacted by the University Link bus integration as set forth as Attachment A to this motion to the council;

NOW, THEREFORE, BE IT MOVED by the Council of King County:

The council hereby accepts the King County Metro Transit Work Plan for

Improving the Transfer Environment at Locations Impacted by the University Link Bus Integration, Attachment A to this motion.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

_____

J. Joseph McDermott, Chair

ATTEST:

_____

Anne Noris, Clerk of the Council

APPROVED this _____ day of _____, _____.

_____

Dow Constantine, County Executive

Attachments: A. King County Metro Transit Work Plan for Improving the Transfer Environment of Locations Impacted by the University Link Bus Integration

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King County Metro Transit

Work Plan for Improving the Transfer Environment at Locations Impacted by the University Link Bus Integration

January 29, 2016

Prepared for:
King County Council

Prepared by:

King County METRO

Department of Transportation
Metro Transit Division
Service Development Section
King Street Center, KSC-TR-0415
201 S Jackson St.
Seattle, WA 98104
www.kingcounty.gov/metro

Alternative Formats Available
206-477-3832 TTY Relay: 711

Introduction

Ordinance 18133, adopted in October 2015, approved King County Metro's public transportation service changes to integrate with the Sound Transit University Link light rail extension to Capitol Hill and the University of Washington. Metro will implement those changes in March 2016.

To help facilitate connections in locations where passenger transfers are expected to increase due to the proposed changes, Section 2 of the ordinance requires a work plan to make transfers convenient, safe and accessible. This work plan will:

1. Describe specific improvements planned for each of 10 Key Transfer Locations shown in Attachment B to the ordinance, Key Transfer Locations map, and a timeline for implementation that shall include plans to be implemented by March 2016, during the course of 2016, and plans to be implemented between 2017 and 2020;
2. Identify the responsible party and funding source for each planned improvement;
3. Include any legislation needed to implement the improvements; and
4. Be implemented as expeditiously as possible to help achieve the objectives of safe and accessible transfer environments.

This document is the work plan for implementing improvements at these transfer locations.

Summary

The integration between bus and rail services provides an opportunity for Metro to improve service, and to increase rider choices to take transit to more destinations. Transfers by riders connecting between bus routes, as well as transfers between rail and bus services, are expected to increase with the March 26, 2016, service change. Metro's vision for key transfer locations is to provide an environment that is convenient, safe, and accessible, and would include:

- bus stops that are within a reasonable walking distance and connected to a good sidewalk network;
- amenities for riders to make their wait between buses comfortable, safe, and secure, including bus shelters and benches, lighting, and trash receptacles;
- wayfinding and other signage to orient riders and direct their travel between stops; and
- printed or electronic information for customers including schedules, maps, and bus arrivals.

As part of its network planning, and consistent with its service guidelines, Metro considers locations where transfer opportunities could be provided and where the provision of convenient transfers could improve the efficiency of the transportation network. To ensure that the impacts and opportunities are addressed in the upcoming transit service change, as well as future service changes, Metro is working with its transit and jurisdictional partners, including Sound Transit, the University of Washington and the City of Seattle Department of Transportation (SDOT), to provide convenient and accessible transfer facilities that will improve the experience for riders.

There is a major effort in progress to ensure that critical transfer location improvements are in place in time for the start of the March 2016 service change (see Table 2), including transit information displays at both the Capitol Hill and University of Washington Link stations.

Other improvements slated for completion in 2017 or later are summarized in Table 4. Current funding and potential future funding (via the 2017/18 budget process) are noted in Table 5. Implementation of future improvements is contingent upon negotiated agreements between Metro and the jurisdictional partners.

On-going Efforts

Through on-going programs, Metro regularly works to provide passenger amenities and customer information to improve the environment at bus stops. Metro upgrades facilities based on the number of boardings at the stops, changes to the transit network, and physical conditions surrounding the stop environment. When appropriate, Metro works with other transit agencies, jurisdictions, institutions and property owners in planning and implementing physical improvements at bus stops.

To ensure that passenger amenities provide the greatest benefit across the transit system, ridership is used to guide investment decisions for specific types of improvements. For instance, benches are typically warranted when there are 25 or more daily boardings, and shelters are warranted when there are 50 or more daily boardings. At all bus stops, ridership activity is monitored and additional benches, shelter capacity or other passenger amenities are added if warranted by the number of daily boardings.

The number of boardings is not the only factor considered when determining whether a location should receive a shelter or other amenities. Site suitability depends on the amount of available space and other site conditions, like terrain, existing obstructions, and adjacent property uses. Expected redevelopment or planned improvements by others also affect decisions about the scope of bus stop improvements to be undertaken. For instance, improvements may be deferred if upcoming construction projects would require removal of the shelter and tearing out costly site preparation work.

Facility improvements are designed and implemented to meet requirements of the Americans with Disabilities Act (ADA), as well as local standards and guidelines for access, regardless of the number of users of the facilities. These include pathway improvements to remove barriers to access, curb ramps at intersections, and shelter design that meets ADA requirements.

Other improvements are made to address safety and operational needs. For example:

- personal safety – including amenities that enable riders to feel secure and comfortable while waiting for the bus;
- traffic safety – placing stops and amenities to minimize adverse impacts to traffic flow and sight-lines for vehicles travelling on adjacent roadways; and
- operational policies – adding features, like paved areas within the bus stops, to allow passengers to board and alight using the rear coach doors.

Project elements included in this work plan address these needs.

Customer information that is accessible to all users, including those with disabilities, is provided at bus stops in a variety of ways. Bus stop signs are augmented with route schedule information and maps where appropriate. In more complex stop environments where many routes intersect, individual stops may be designated as bus bays, and additional wayfinding displays are provided to direct passengers to the appropriate bays. Metro recognizes the benefits of providing electronic displays at bus stops to show bus arrival information (commonly referred to as real time information signs, or RTIS), and has implemented these displays at RapidRide stations. Outside of RapidRide, Metro currently does not have a specific program to provide RTIS displays. In recent years the City of Seattle has implemented such RTIS infrastructure at several bus stops outside of the RapidRide corridors. In the future, RTIS displays could be implemented by either Metro or local cities at bus stops that have 150 or more daily boardings, comparable to the ridership criteria used to establish RapidRide stations.

Bus-Rail Station Area Planning

Locations where Metro bus routes intersect with rail services (Sound Transit Link light rail or the City of Seattle streetcar lines) provide opportunities to improve the efficiency of the transportation network.

A King County Metro / Sound Transit Integration Steering Committee (co-chaired by King County Metro's General Manager and Sound Transit's Chief Executive Officer) provides a forum for coordination between Metro, Sound Transit and partnering jurisdictions (including City of Seattle) in the planning and implementation of facility improvements at intermodal hubs. The objective of this committee is to provide King County transit riders with a seamless transit experience and instill public confidence in the partner agencies. The group monitors activities related to short-range projects, long-range planning, customer experience, infrastructure and facilities, and operational efficiencies.

An inter-agency Station Area Planning staff work group recommends facility improvements that will provide consistency in facility identification, integrated wayfinding, and amenities. Specific amenities for each bus stop within the planning area are designated, agency planning and implementation roles are established, and costs are allocated between parties.

Work at bus stops or along pedestrian routes of travel between stops is undertaken independently by Metro and or jointly with its jurisdictional partners. Some improvements, such as wayfinding and directional signage, are also made by Sound Transit on station property or on walkways leading to adjacent bus stops. Work at several locations included in this work plan (specifically, Transfer Locations 3, 6, 7 and 8) will be undertaken jointly by agencies with the goal of improving the efficiency the transfer environment, and supporting intermodal connections.

Key Transfer Locations

Ten specific locations are identified in Ordinance 18133 as being affected by the University Link Bus Integration and are addressed in this work plan:

1. NE Northgate Way and Roosevelt Way NE
2. NE Ravenna Boulevard and NE 65th Street
3. Roosevelt Way NE and NE 65th Street
4. 25th Avenue NE and NE 65th Street
5. NE Campus Parkway and University Way NE
6. NE Pacific Street and ST Link University of Washington Station
7. Montlake Boulevard NE and ST Link University of Washington Station
8. ST Link Capitol Hill Station (Broadway Avenue E and E John Street)
9. 23rd Avenue E and E Madison Street
10. 19th Avenue E and E Madison Street

Although called out separately in Ordinance 18133, Transfer Locations 6 and 7 are both adjacent to the ST Link University of Washington Station, and transfers can occur between any of seven bus stops in this vicinity. In this work plan, Transfer Locations 6 and 7 are described jointly.

Table 1 summarizes the estimated increase in daily transfer activity at the 10 Key Transfer Locations following implementation of the March 2016 transit service change.

Table 1 – Estimated Increase in Transfer Activity

Transfer Location	Location Description	Estimated Increase in Transfer Activity following March 2016 Service Change [A]
1	NE Northgate Way and Roosevelt Way NE	60
2	NE Ravenna Boulevard and NE 65th Street	80
3	Roosevelt Way NE and NE 65th Street	80
4	25th Avenue NE and NE 65th Street	30
5	NE Campus Parkway and University Way NE	0
6/7	NE Pacific Street /Montlake Boulevard NE and ST Link University of Washington Station	1580
8	ST Link Capitol Hill Station (Broadway Avenue E and E John Street)	560
9	23rd Avenue E and E Madison Street	90
10	19th Avenue E and E Madison Street	0

[A] Following the March 2016 transit service change, the estimated number of additional riders transferring to Metro bus routes each day at each transfer location.

Scope of Work, Responsibilities, and Schedule

Specific improvements planned for each of 10 key transfer areas are described in this work plan and a timeline for their implementation is provided, as directed in Ordinance 18133. The responsible party and funding source for each of the planned improvements are also identified in the work plan, as well as legislation required to implement the improvements.

Detailed descriptions of each transfer location are provided in Appendix A, Key Transfer Location Details, found on pages A1 through A14 of this document.

Improvements to be Completed by March 2016

In preparation for the March 2016 Metro transit service change, Metro has been working both independently and with others (Sound Transit, City of Seattle, and University of Washington) on a number of projects to improve the transfer environment at many individual bus stops associated with the Transfer Locations affected by the University Link transit restructure. The locations, scope of improvements, and agencies working on various components of each project are described in Table 2. Highlighted in the table are improvements that have been agreed to through the Station Area Planning effort, described in the Background section of this report.

All work described for these locations is scheduled to be completed in advance of the March 26, 2016, Metro transit service change date unless otherwise noted in Table 2.

Table 2 – Transfer Location Improvements for Completion by March 2016

Transfer Location	Stop #	Direction	On Street	Cross Street	Scope for March 2016 Implementation	Agencies
1	82198	WB	NE Northgate Way	Roosevelt Way NE	Shelter with lighting and bench, paved landing pads	Metro
6/7	29299	EB	NE Pacific St	Montlake Blvd	Shelters with lighting and benches, paved landing pads, RTIS [A], bus stop signage	Metro, SDOT, ST
6/7	29405	WB	NE Pacific St	Montlake Blvd	Shelters with lighting and benches, paved landing pads, RTIS [A], bus stop signage	Metro, SDOT, ST
6/7	25765	NB	Montlake Blvd	NE Pacific Pl	Shelters with lighting and benches, paved landing pads, bus stop signage [B]	Metro, SDOT, ST
6/7	25240	SB	Montlake Blvd	NE Pacific Pl	Shelters with lighting and benches, bus stop signage	Metro, SDOT, ST
6/7	29242	EB	NE Pacific Pl	NE Pacific ST	Shelter improvements, bus stop signage	Metro
6/7	75415	EB	Stevens Way	Rainier Vista	Establish bus stops by March 2016; passenger amenities to be added upon approval by UW [C]	Metro, SDOT, UW
6/7	75402	WB	Stevens Way	Rainier Vista	Establish bus stops by March 2016; passenger amenities to be added upon approval by UW [C]	Metro, SDOT, UW
8	29270	EB	E John St	Broadway East	Establish stop at ST station entrance, install bus stop signage	Metro, ST
8	11060	SB	Broadway	E Denny Way	Establish stop at ST station entrance, install bus stop signage	Metro, ST

[A] Bus arrival information on electronic Real Time Information Signs (RTIS) furnished by SDOT.
[B] Establishment of stop 25765, including construction of associated passenger amenities, is pending KC Council approval of a traffic impacts analysis of adding this stop.
[C] Stops on Stevens Way will be established by March 2016 and available for passenger boarding and alighting. Passenger amenity improvements including shelters, seating, lighting, and RTIS are dependent on approval by the University of Washington, and will be implemented as early as possible.

King County Funding

All King County work identified in Table 2 will be implemented and funded by two on-going King County programs: Shelters and Lighting, and Bus Zone Safety and Access. Both programs are included in the current adopted budget. King County's costs are estimated at $427,000 plus a share of $182,000 *Costs to be Allocated* (refer to Table 5).

Improvements to be Completed in 2016, following the March 26, 2016, Transit Service Change

Additional improvements listed in Table 3 are currently in the planning or design phases, and are expected to be completed in 2016, following the March 2016 transit service change. The proposed scope of improvements, expected completion date, and agencies involved in the projects are provided.

Table 3 – Transfer Location Improvements for Completion during 2016, but following March 26, 2016

Transfer Location	Stop #	Direction	On Street	Cross Street	Proposed Scope	Expected Completion	Agencies
1	81367	EB	NE Northgate Way	Roosevelt Way NE	Landing pads	Summer 2016	Metro
2	16409	SB	NE Ravenna Blvd	I-5 SB Ramp	Landing pads	Fall 2016	Metro
3	16440	SB	Roosevelt Way NE	NE 65th St	Improvements by SDOT Roosevelt AAC [A] project: transit island with shelter, bench, RTIS [B]	Summer 2016	SDOT, Metro
4	37410	EB	NE 65th St	25th Ave NE	Landing pads	Fall 2016	Metro
9	35825	NB	23rd Ave E	E John St	Landing pads	Fall 2016	Metro
9	29276	EB	E John St	22nd Ave E	Landing pads	Fall 2016	Metro
9	35821	SB	23rd Ave E	E John St	Landing pads	Fall 2016	Metro

[A] Arterial Asphalt and Concrete (AAC) paving projects led by SDOT.

[B] Bus arrival information on electronic RTIS furnished by SDOT.

King County Funding

All King County work identified in Table 3 will be implemented and funded by two on-going King County programs: Shelters and Lighting, and Bus Zone Safety and Access. Both programs are included in the current adopted budget. Work at stop 16440 is led by the SDOT Transit Division; SDOT funding comes from a variety of sources. King County will contribute to this project by funding and installing the bus shelter and static signage. King County's costs are estimated at $135,000.

Improvements to be Completed in 2017 and Later

Additional improvements listed in Table 4 are currently in the planning phase and are expected to be completed in future years, as indicated. The proposed scope of improvements, expected completion date, and agencies involved in the projects are provided.

Table 4 – Transfer Location Improvements for Completion in 2017 and Later

Transfer Location	Stop #	Direction	On Street	Cross Street	Proposed Scope	Expected Completion	Agencies
2	36960	WB	NE 65th St	Oswego Pl NE	RTIS [A]	2018	Metro, SDOT
2	16410	EB	NE 65th St	NE Ravenna Blvd	RTIS [A]	2018	Metro, SDOT
2	16409	SB	NE Ravenna Blvd	I-5 SB Ramp	RTIS [A]	2018	Metro, SDOT
3	New	WB	NE 65th St	12th Ave NE	Consolidate stops 36950, 36940 at station entrance, add passenger amenities, RTIS	2021	Metro, SDOT, ST [B]
3	New	EB	NE 65th St	12th Ave NE	Consolidate stops 16430, 35740, add shelter or other passenger amenities, RTIS	2021	Metro, SDOT, ST [B]
3	23560	NB	12th Ave NE	NE 65th St	Additional RapidRide improvements led by SDOT [C], scope TBD	2021	Metro, SDOT
3	16440	SB	Roosevelt Way NE	NE 65th St	Additional RapidRide improvements led by SDOT [C], scope TBD	2021	Metro, SDOT
5	9581	NB	University Way NE	NE 41st St	RTIS [A]	2018	Metro, SDOT
5	9142	SB	University Way NE	NE 41st St	RTIS [A]	2018	Metro, SDOT
6,7	25765	NB	Montlake Blvd	NE Pacific Pl	RTIS [A]	2018	Metro, SDOT
6,7	25240	SB	Montlake Blvd	NE Pacific Pl	RTIS [A]	2018	Metro, SDOT
6,7	75415	EB	Stevens Way	Rainier Vista	RTIS [A]	2018	Metro, SDOT
6,7	75402	WB	Stevens Way	Rainier Vista	RTIS [A]	2018	Metro, SDOT
8	29264	WB	East Olive Way	Broadway East	Relocate to E John Street with new shelter, RTIS	2018	Metro, SDOT, ST
8	29270	EB	E John St	Broadway East	Additional passenger amenities at station entrance, RTIS	2018	Metro, SDOT, ST
8	11060	SB	Broadway E	E Denny Way	Relocate with FHS[D], shelter and other passenger amenities, RTIS	2018	Metro, SDOT, ST
8	11180	NB	Broadway E	E John St	Relocate with FHS[D], shelter and other passenger amenities, RTIS	2018	Metro, SDOT, ST
9	35825	NB	23rd Ave E	E John St	RTIS [A]	2018	Metro, SDOT
9	29258	WB	E John St	22nd Ave E	RTIS [A]	2018	Metro, SDOT
9	29258	WB	E John St	22nd Ave E	Pursue stop relocation to 23rd Ave E, add landing pads, shelter, other passenger amenities	2018	Metro, SDOT
9	new	NB	23rd Ave E	E Denny Way	Establish with SDOT 23rd Ave Project: shelter and other passenger amenities	2017	SDOT

[A] Bus arrival information on electronic RTIS to be developed jointly between Metro and SDOT.
[B] ST Link Roosevelt Station.
[C] Seattle RapidRide Corridor 7: Roosevelt. Scope and implementation date undetermined; 2021 is shown here in reference to the ST Link Roosevelt Station opening.
[D] First Hill Streetcar(FHS) extension to E Roy Street.

Real Time Information Signage

Real time information signs (RTIS) at the 11 bus stops associated with Transfer Locations 2, 5, 6/7, and 9 are planned to be implemented by 2018. Metro is currently developing a new project initiative to implement RTIS installations on non-RapidRide corridors. If this initiative advances, Metro will lead the RTIS projects identified here. In the absence of a new Metro RTIS program, Metro will work with SDOT to assess the feasibility of these RTIS installations, and will advance these projects jointly.

King County Funding

Funding for RTIS improvements at the 11 bus stops associated with Transfer Locations 2, 5, 6/7, and 9 is dependent on additional budget authority that Metro will seek through the 2017-2018 King County budget process. The approximate cost of adding RTIS at these 11 bus stops is $1,100,000.

In addition to funding required to provide RTIS described above, King County's costs to provide other passenger amenities require additional budget authority that Metro will seek through the 2017-2018 King County budget process. In the 2017 or later timeframe, these King County costs are approximately $320,000 plus a share of $1,137,400 *Costs to be Allocated* (refer to Table 5).

Cost Summary

The total projected cost of all improvements described in this work plan is currently estimated at $5,556,400. All project costs, including contributions by other agencies, are summarized in Table 5. These cost estimates and agency cost allocations will continue to be refined and updated as planning and design work progresses.

King County's projected costs in the current budget biennium (through 2016) are estimated at $562,000 plus a share of $182,000 *Costs to be Allocated*. King County's projected costs in future years (2017 and beyond) are estimated at $1,420,000 plus a share of $1,137,400 *Costs to be Allocated*.

Table 5 – Work Plan Costs

		King County	Sound Transit	City of Seattle	Costs to be Allocated *	Total
Completion by March 2016						
Transfer Location 1	NE Northgate Way and Roosevelt Way N	$ 25,000				$ 25,000
Transfer Locations 6, 7	ST Link University of Washington Station	$ 372,000	$ 285,000	$ 467,000	$ 182,000	$ 1,306,000
Transfer Location 8	ST Link Capitol Hill Station	$ 30,000	$ 93,000			$ 123,000
	subtotal	**$ 427,000**	**$ 378,000**	**$ 467,000**	**$ 182,000**	**$ 1,454,000**
Completion during 2016 (after March)						
Transfer Location 1	NE Northgate Way and Roosevelt Way N	$ 20,000				$ 20,000
Transfer Location 2	NE Ravenna Boulevard and NE 65th Street	$ 20,000				$ 20,000
Transfer Location 3	Roosevelt Way NE and NE 65th Street	$ 15,000		$ 200,000		$ 215,000
Transfer Location 4	25th Avenue NE and NE 65th Street	$ 20,000				$ 20,000
Transfer Location 9	23rd Avenue E and E Madison Street	$ 60,000				$ 60,000
	subtotal	**$ 135,000**	**$ 0**	**$ 200,000**	**$ 0**	**$ 335,000**
Completion in 2017 or later						
Transfer Location 2	NE Ravenna Boulevard and NE 65th Street	$ 300,000				$ 300,000
Transfer Location 3	Roosevelt Way NE and NE 65th Street	$ 156,000	$ 110,000	$ 571,000	$ 553,400	$ 1,390,400
Transfer Location 5	NE Campus Parkway and University Way NE	$ 200,000				$ 200,000
Transfer Locations 6, 7	ST Link University of Washington Station	$ 400,000				$ 400,000
Transfer Location 8	ST Link Capitol Hill Station	$ 89,000	$ 83,000	$ 396,000	$ 584,000	$ 1,152,000
Transfer Location 9	23rd Avenue E and E Madison Street	$ 275,000		$ 50,000		$ 325,000
	subtotal	**$ 1,420,000**	**$ 193,000**	**$ 1,017,000**	**$ 1,137,400**	**$ 3,767,400**
Total		$ 1,982,000	$ 571,000	$ 1,684,000	$ 1,319,400	$ 5,556,400

* Cost sharing between King County and City of Seattle to be determined; includes project contingency.

Legislation Needed

To fund future RTIS implementation described in this work plan at the 11 bus stops associated with Transfer Locations 2, 5, 6, 7, and 9, additional budget authority will be sought through the 2017-2018 King County budget process.

To fund King County's contribution to work to be undertaken beyond 2016 in the Station Area Planning effort, overseen by the Integration Steering Committee, additional budget authority may be sought through the 2017-2018 King County budget process.

Key Transfer Location Details

A detailed description of each of the 10 Key Transfer Locations identified in Ordinance 18133 is provided in Appendix A, including a summary of the expected bus transfer activity, desired amenities, proposed improvements and future related projects impacting the locations.

Appendix A
Key Transfer Location Details

1. NE Northgate Way and Roosevelt Way NE

Summary: A shelter will be added at stop 2 by March 2016. Landing pads are proposed for stop 3.

Location description: Connecting transit markets: northeast Seattle, Shoreline, and Snohomish County communities including Richmond Beach, Mountlake Terrace, UW, Sand Point, and Lake City. All routes serving this Transfer Location continue to the Northgate Transit Center, less than ½ mile away. Pedestrian environment: All stops are within 400' of the intersection; sidewalk connections between existing bus stops are good.

Expected transfer activity: In March 2016, transfer activity is expected to double, increasing to about 60 daily transfers. Existing ridership - 280 ons and 270 offs daily. Overall ridership activity is not expected to change significantly with the implementation of the March 2016 service change.

Amenities warranted by expected ridership activity: Each of the four bus stops at this location currently exceeds ridership warrants for shelters. None of the stops approach warrants for RTIS.

Facilities expected to be in place in March 2016: Work is under way to add a shelter at stop 2 by March 2016. Stops 1 and 4 currently have standard Metro shelters. Past projects to add a shelter stop 3 have not advanced due to right-of-way constraints; this stop currently has a bench.

Proposed additional improvements: Landing pads at stop 3 for rear door alighting.

Future related projects: No additional transit-related changes, major transportation projects by others, or development changes are currently known for this vicinity.

							Passenger Amenities Expected in March 2016				
	Stop #	Direction	On Street	Cross Street	Ons	Offs	Shelter	Lighting	Landing Pads	Bench	RTIS
1	81368	NB	Roosevelt Way NE	NE Northgate Way	77	42	F21	No	Yes	inside shelter	No
2	82198	WB	NE Northgate Way	Roosevelt Way NE	55	202	in process	in process	in process	in process	No
3	81367	EB	NE Northgate Way	Roosevelt Way NE	84	20	No	No	Front door	stand alone	No
4	82205	SB	Roosevelt Way NE	NE Northgate Way	63	6	F21	Yes	Yes	inside shelter	No

F21: Small standard Metro bus shelter.
In process: indicates new work that is expected to be complete by March 2016; other amenities listed in the table are currently installed unless otherwise noted.

2. NE Ravenna Boulevard and 65th Street

Summary: Metro will add landing pads at stop 5. Metro will work with SDOT to assess the feasibility of adding RTIS at stops 1, 2 and 5.

Location description: Connecting transit markets: various northeast Seattle communities and routes serving Downtown Seattle and First Hill. The Green Lake Park-and-Ride lot is adjacent. Pedestrian connections: a pair of stops on NE 65th Street beneath I-5 serve all routes operating through this area and facilitates easy transfers, other stops are within 500'; sidewalk connections between existing bus stops are good.

Expected transfer activity: In March 2016, transfers are expected to double, increasing to about 80 daily transfers. All increase in transfer activity will be during the peak periods. Existing ridership - 670 ons and 690 offs daily. Most boardings occur at stops 1 and 2, directly across the street from one another; stop 3 serves almost entirely people getting off the bus. A small increase in overall ridership activity is expected with the implementation of the March 2016 service change.

Amenities warranted by expected ridership activity: Stops 1, 2 and 5 currently exceed ridership warrants for shelters. These stops are also expected to meet warrants for RTIS following implementation of the March 2016 service change.

Facilities expected to be in place in March 2016: Stops 1, 2 and 5 currently have standard Metro shelters with adequate capacity for the number of expected boardings. These shelters are lit, and additional overhead cover is provided at stops 1 and 2 by the I-5 structure running above the stops. No additional amenities are expected to be added by March 2016.

Proposed additional improvements: Metro will add landing pads for rear door alighting at stop 5. Metro will work with SDOT to determine the feasibility of adding RTIS at stops 1, 2 and 5.

2. (continued) NE Ravenna Boulevard and 65th Street

Future related projects: The ST Link Roosevelt Station will be at Roosevelt Ave NE and NE 65th Street, about ¼ mile east of this Transfer Location, planned for completion in 2021. Except routes 316 and 542, other routes serving the Transfer Location also operate through Transfer Location #3, adjacent to the future ST Link Roosevelt Station. Additional development is likely to occur in the vicinity with completion of the ST station.

							Passenger Amenities Expected in March 2016				
	Stop #	Direction	On Street	Cross Street	Ons	Offs	Shelter	Lighting	Landing Pads	Bench	RTIS
1	36960	WB	NE 65th St	Oswego Pl NE	351	314	F12	Yes	Yes	inside shelter	No
2	16410	EB	NE 65th St	NE Ravenna Blvd	134	40	F11	Yes	Yes	inside shelter	No
3	16419	NB	8th Ave NE	NE 64th ST	12	229	No	No	Yes	No	No
4	16509	NB	NE Ravenna Blvd	NE 65th ST	6	100	No	No	Yes	No	No
5	16409	SB	NE Ravenna Blvd	I-5 SB Ramp	164	9	F21	Yes	No	Inside shelter	No

F21, F11: Small standard Metro bus shelter. F12: Large standard Metro bus shelter.
Amenities listed in the table are currently installed unless otherwise noted.

3. Roosevelt Way NE and NE 65th Street

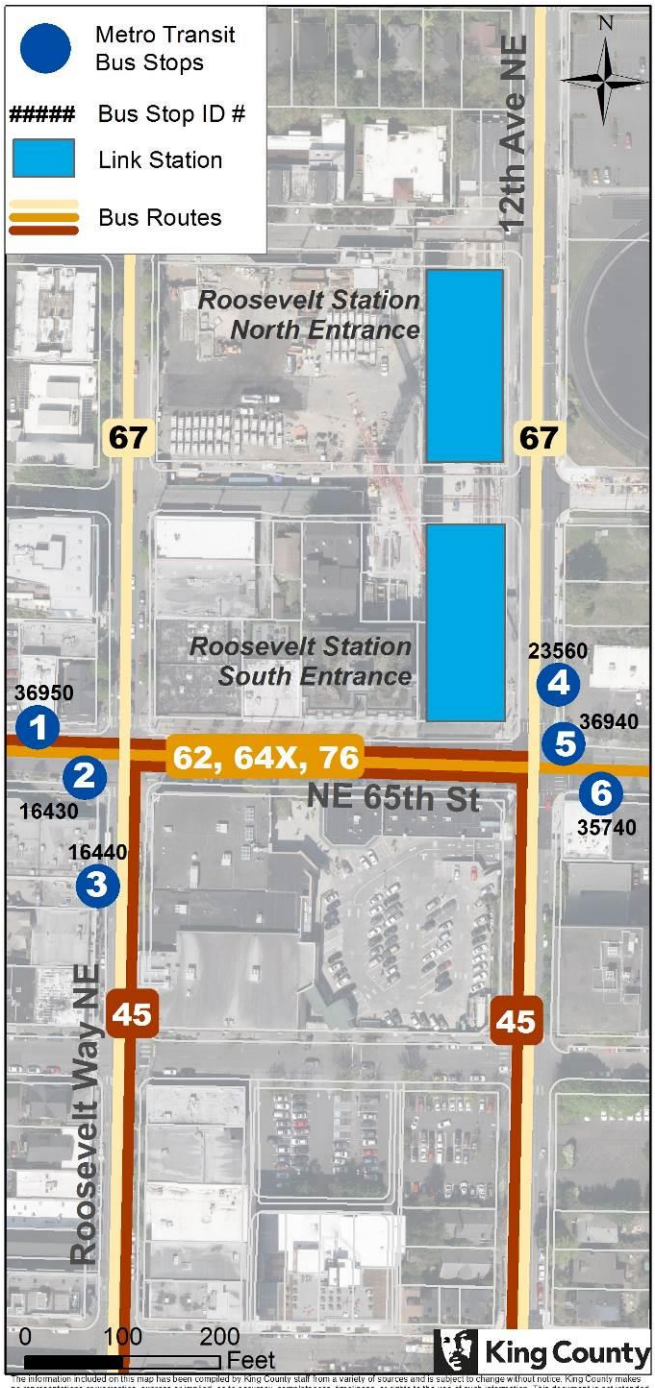
Summary: SDOT will complete improvements to stop 3 in 2016, including a transit island, shelter, bench, and RTIS. The east bound stops (stops 2 and 6) and the west bound stops (stops 1 and 5) will be consolidated to a single stop pair on the block of NE 65th Street between Roosevelt Way NE and 12th Avenue NE, to facilitate transfers at the future ST Link Roosevelt Station. Stop consolidation to a new east bound stop will be advanced by Metro, independent of ST construction. Consolidation to a new west bound stop will coincide with the ST Link Roosevelt Station opening in 2021.

Location description: Connecting transit markets: various north Seattle communities, including Northgate and the University District. This location is the future site of the ST Link Roosevelt Station, planned to be open in 2021. Pedestrian connections: North-south transit service operates on the 12th Ave NE - Roosevelt Way NE couplet. Long-standing bus stops in the vicinity were placed to minimize the distance between connecting routes. Proposed stop consolidation, described earlier, will facilitate bus-rail transfers and improve pedestrian connections. All existing bus stops at this location are within 500' of each other.

Expected transfer activity: In March 2016, transfers are expected to increase, from about 140 to 220 daily. Existing ridership - 560 ons and 520 offs daily. Most boardings occur at the stops closest to Roosevelt Way NE, and most alightings are closer to 12th Avenue NE. A modest increase in overall ridership activity is expected with the implementation of the March 2016 service change.

Amenities warranted by expected ridership activity: Stops 1, 2, 3, and 4 currently exceed ridership warrants for shelters. Stops 2 and 3 exceed warrants for RTIS.

Facilities expected to be in place in March 2016: Stops 2, 4 and 5 have standard Metro shelters with adequate capacity for the number of expected boardings. No additional amenities are expected to be added by March 2016.



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3. (continued) Roosevelt Way NE and NE 65th Street

Proposed additional improvements: The SDOT Roosevelt Arterial Asphalt and Concrete (AAC) project, scheduled for completion in 2016, will add amenities at stop 3 including a transit island, shelter, bench, and RTIS. Metro will pursue stop consolidation of east bound stops 2 and 6 including shelter or other overhead cover and RTIS, independently of ST station construction. West bound stops 1 and 5 will be consolidated with the opening of the ST Link Roosevelt Station in 2021; Metro will work with ST to provide passenger amenities at this stop including overhead cover, lighting, and RTIS.

Future related projects: Proposed SDOT Rapid Ride Corridor 7: Roosevelt – will run on the north-south couplet with stations planned north bound at the NE 65th St/12th Ave NE intersection, and south bound at NE 65th St/Roosevelt Way NE, replacing existing passenger facilities at the north and south bound stops; implementation date is unknown.

							Passenger Amenities Expected in March 2016				
	Stop #	Direction	On Street	Cross Street	Ons	Offs	Shelter	Lighting	Landing Pads	Bench	RTIS
1	36950	WB	NE 65th St	Roosevelt Way NE	114	134	No	No	Yes	No	No
2	16430	EB	NE 65th St	Roosevelt Way NE	175	106	F21	No	Yes	inside shelter	No
3	16440	SB	Roosevelt Way NE	NE 65th St	154	60	in process	in process	in process	in process	in process
4	23560	NB	12th Ave NE	NE 65th St	63	116	F21	Yes	Yes	inside shelter	No
5	36940	WB	NE 65th St	12th Ave NE	28	79	F21	No	Yes	Yes	No
6	35740	EB	NE 65th St	12th Ave NE	29	29	No	No	No	No	No

F21: Small standard Metro bus shelter.
In process: indicates new work that is expected to be complete by March 2016; other amenities listed in the table are currently installed unless otherwise noted.

4. 25th Ave NE and NE 65th Street

Summary: Metro will add landing pads at stop 4. Existing facilities at remaining stops are commensurate with the expected ridership activity following March 2016.

Location description: Connecting transit markets: northeast Seattle communities including Northgate, Sand Point, Greenlake, Wallingford, Fremont, and the University District, SR-522 corridor to north King County. Pedestrian connections: stops are within 200' of the intersection; sidewalk connections between existing bus stops are good.

Expected transfer activity: In March 2016, transfers are expected to increase from about 20 to 50 transfers daily. Existing ridership - 250 ons and 260 offs daily. Most passenger activity is associated with service operating along 25th Avenue NE. A small increase in overall ridership is expected with implementation of the March 2016 service change.

Amenities warranted by expected ridership activity: Stops 1 and 3 currently exceed ridership warrants for shelters. None of the stops meet warrants for Real Time Information Signs.

Facilities expected to be in place in March 2016: Stop 1 currently has a shelter and stop 3 has overhead cover provided by adjacent building awning. No additional amenities are expected to be added by March 2016.

Proposed additional improvements: Add landing pads for rear door alighting at stop 4 (note impacts to landscaping at adjacent single-family residences).

Future related projects: No additional transit changes, major transportation projects by others, or development changes are currently known for this vicinity.

							Passenger Amenities Expected in March 2016				
	Stop #	Direction	On Street	Cross Street	Ons	Offs	Shelter	Lighting	Landing Pads	Bench	RTIS
1	23905	SB	25th Ave NE	NE 65th St	119	38	F21	Yes	Yes	inside shelter	No
2	25795	NB	25th Ave NE	NE 65th St	36	130	No	No	Yes	stand alone	No
3	37990	WB	NE 65th St	25th Ave NE	86	6	awning	No	Yes	No	No
4	37410	EB	NE 65th St	25th Ave NE	7	90	No	No	front door	No	No

F21: Small standard Metro bus shelter.
Amenities listed in the table are currently installed unless otherwise noted.

5. NE Campus Parkway and University Way NE

Summary: Metro will work with SDOT to assess the feasibility of adding RTIS at stops 1 and 2. Other existing facilities at remaining stops are commensurate with the expected ridership activity following March 2016. Transfer activity at this location is not expected to increase because the route structure does not change significantly.

Location description: Connecting transit markets: Fremont/Wallingford, Capitol Hill, other northeast Seattle neighborhoods, and South Lake Union. Pedestrian connections: existing stops are within 500' of the intersection; sidewalk connections between bus stops are good.

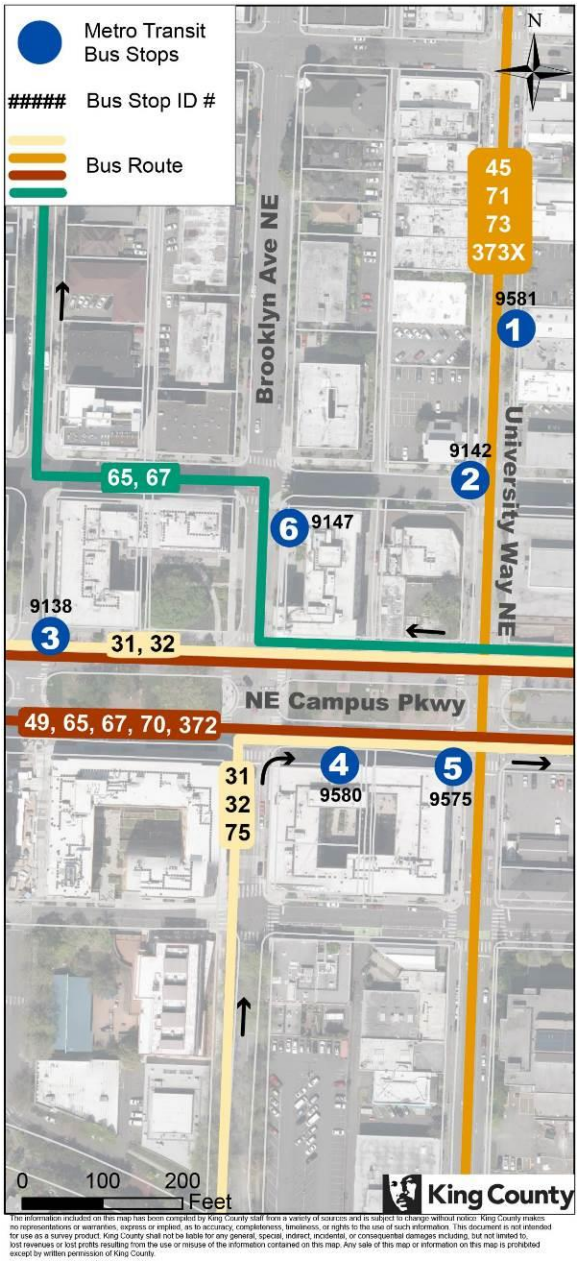
Expected transfer activity: In March 2016, transfer activity is expected to remain at about 360 daily transfers. Existing ridership - 6420 ons and 5860 offs daily.

Amenities warranted by expected ridership activity: All stops currently exceed ridership warrants for shelters. All stops except stop 6 exceed ridership warrants for RTIS.

Facilities expected to be in place in March 2016: All stops have shelter coverage adequate for the number of boardings, benches, and lighting. RTIS are currently in place at stops 3, 4 and 5, provided by SDOT. No additional amenities are expected to be added by March 2016.

Proposed additional improvements: Metro will work with SDOT to determine the feasibility of adding RTIS at stops 1 and 2.

Future related projects: No anticipated transit changes or major transportation projects by others. Re-development of some adjacent parcels in the area is expected by UW.



	Stop #	Direction	On Street	Cross Street	Ons	Offs	Passenger Amenities Expected in March 2016				
							Shelter	Lighting	Landing Pads	Bench	RTIS
1	9581	NB	University Way NE	NE 41st St	533	470	F22	Yes	Yes	Yes	No
2	9142	SB	University Way NE	NE 41st St	930	668	F22	Yes	Yes	Yes	No
3	9138	WB	NE Campus Parkway	12th Avenue NE	2212	852	Custom UW	Yes	Yes	Yes	Yes
4	9580	EB	NE Campus Parkway	Brooklyn Ave NE	674	1832	Custom UW	Yes	Yes	Yes	Yes
5	9575	EB	NE Campus Parkway	University Way NE	1997	1913	Custom UW	Yes	Yes	Yes	Yes
6	9147	NB	Brooklyn Ave NE	NE Campus Parkway	71	129	Custom UW	Yes	Yes	Yes	No

F22: Large standard Metro bus shelter. Custom UW: Shelter provided and maintained by UW or incorporated in building design.
Amenities listed in the table are currently installed unless otherwise noted.

6. NE Pacific Street and ST Link University of Washington Station

7. Montlake Boulevard NE and ST Link University of Washington Station

Summary: Significant upgrades to the passenger facilities associated with this Transfer Location are underway with planned completion by March 2016, with work at all associated stops.

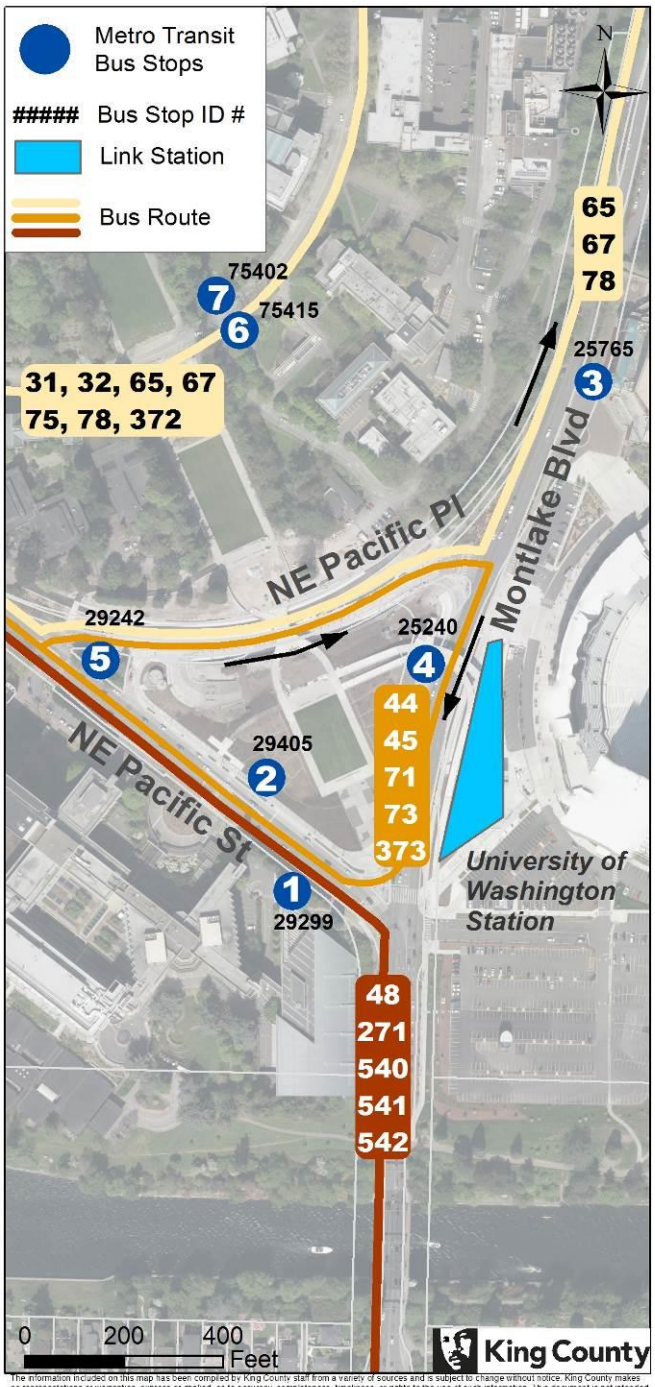
Location description: Transit markets served: bus connections to various northeast Seattle neighborhoods, Capitol Hill and Central District, East King County, and Downtown Seattle, rail connections to ST Link light rail serving Downtown Seattle. Pedestrian connections: stops range from 500' to 900' from the ST Link University of Washington Station; sidewalk connections between the bus stops are very good.

Expected transfer activity: In March 2016, transfer activity is expected to increase greatly due to the addition of ST Link light rail service and the increased frequency of feeder bus routes. The total number of bus transfers is expected to increase from about 220 to about 1800 transfers daily. Existing ridership - about 2700 ons and 2600 offs daily. A significant increase in overall ridership activity is expected with the implementation of the March 2016 service change. (Only three of the seven bus stops that comprise this Transfer Location are currently active; current ridership data are not indicative of future boardings and alightings.)

Amenities warranted by expected ridership activity: All stops are expected to exceed ridership warrants for shelters. Stops 1 and 2 are expected to exceed warrants for RTIS beginning in March 2016.

Facilities expected to be in place in March 2016: By March 2016, stops 1, 2, 3, 4 and 5 are expected to have shelters, benches, lighting and landing pads to allow all-door use. RTIS signs will be installed at stops 1 and 2. Establishment of stop 3, including construction of associated passenger amenities, is pending KC Council approval of a traffic impacts analysis of adding this stop. Stops 6 and 7 will be established by March 2016; completion of stop amenities is dependent on approvals by the University of Washington.

Proposed additional improvements: Metro will work with SDOT to assess the feasibility of adding RTIS at stops 6 and 7. Metro will monitor boarding activity at stops 3 and 4 and work with SDOT to add RTIS if warranted.



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6. (continued) NE Pacific Street and University of Washington Station

7. (continued) Montlake Boulevard NE and University of Washington Station

Future related projects: Beyond March 2016, there are no anticipated transit changes or major transportation projects by others. Additional re-development in the area by UW is unknown. Planning by UW is underway for future upgrades to the Burke Gilman Trail.

							Passenger Amenities Expected in March 2016				
	Stop #	Direction	On Street	Cross Street	Ons	Offs	Shelter	Lighting	Landing Pads	Bench	RTIS
1	29299	EB	NE Pacific St	Montlake Blvd	1558	546	in process	in process	in process	in process	in process
2	29405	WB	NE Pacific St	Montlake Blvd	1139	1758	in process	in process	in process	in process	in process
3	25765	NB	Montlake Blvd	NE Pacific Pl	n/a		in process	in process	in process	in process	No
4	25240	SB	Montlake Blvd	NE Pacific Pl	n/a		in process	in process	in process	in process	No
5	29242	EB	NE Pacific Pl	NE Pacific ST	44	284	F12	Yes	Yes	inside shelter	No
6	75415	EB	Stevens Way	Rainier Vista	n/a		in process	in process	in process	in process	No
7	75402	WB	Stevens Way	Rainier Vista	n/a		in process	in process	in process	in process	No

F12: Large standard Metro bus shelter.

In process: indicates new work that is expected to be complete by March 2016; other amenities listed in the table are currently installed unless otherwise noted.

8. ST Link Capitol Hill Station (Broadway Avenue E and E John Street)

Summary: Metro will work with SDOT to assess the feasibility of adding RTIS at all stops, and will pursue the relocation of stop 2 west of Broadway E beginning in 2016. Future improvements are planned in association with the First Hill Streetcar extension in 2018.

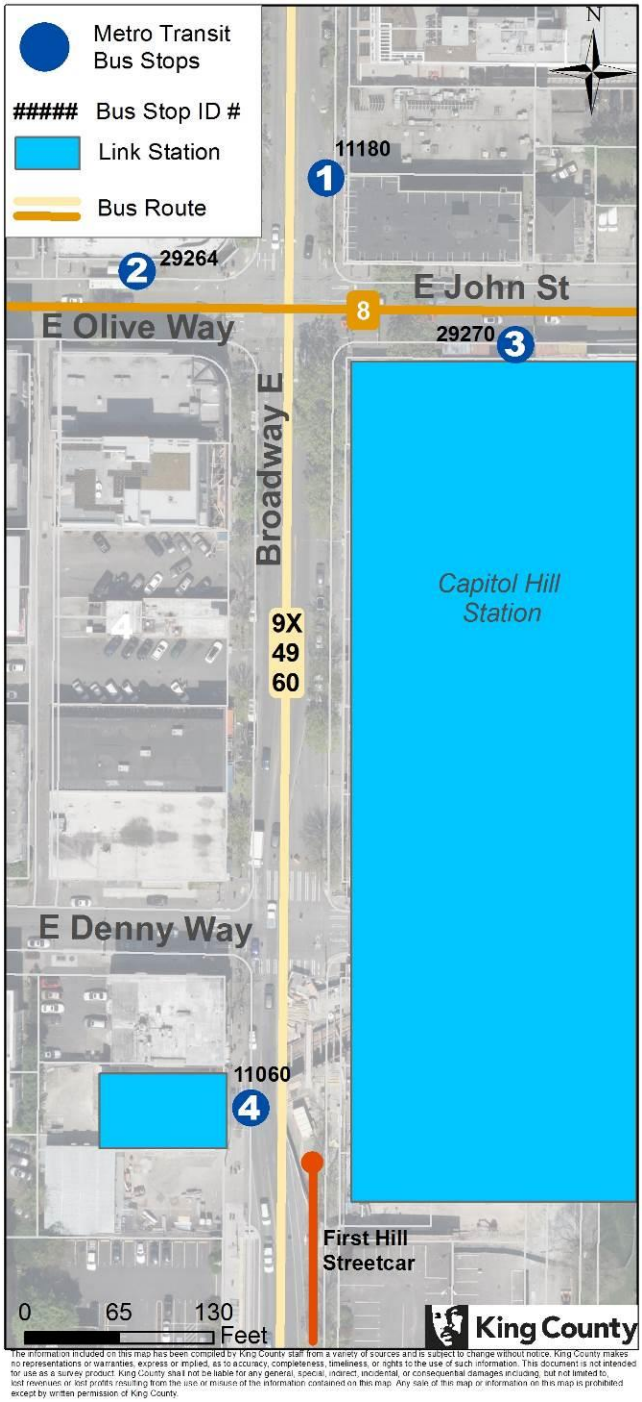
Location description: Connecting transit markets: Capitol Hill, Central District, South Lake Union, Lower Queen Anne, University District, and Downtown Seattle. The Transfer Location serves the ST Link Capitol Hill Station, as well as the Seattle First Hill Streetcar. Pedestrian connections: bus stops are within 400'of the intersection; sidewalk connections between existing bus stops are very good.

Expected transfer activity: In March 2016, transfer activity is expected to increase significantly, from about 140 to about 700 transfers daily, due to the addition of ST Link light rail service. Existing ridership – about 1410 ons and 1830 offs daily (spring 2015 ridership for stops 1 and 2, plus prior ridership at stops 3 and 4 which have been closed for ST Link station construction). A significant increase in overall ridership activity is expected with the implementation of the March 2016 service change, ST Link light rail service, and Seattle First Hill Streetcar service.

Amenities warranted by expected ridership activity: All stops at this location are expected to exceed ridership warrants for both shelters and RTIS.

Facilities expected to be in place in March 2016: Stop 2 currently has standard Metro shelters with adequate capacity for the number of expected boardings. Stops 3 and 4 will be reopened adjacent to the ST Link Capitol Hill Station entrances upon completion of those facilities; those stops will have overhead cover provided by the station entrances. A shelter at stop 1 is not possible due to site constraints.

Proposed additional improvements: Metro will work with SDOT to determine the feasibility of adding RTIS in the future at all stops. In 2016, Metro will work with Sound Transit and SDOT to relocate stop 2 to 10th Avenue East to improve its proximity to the ST Link Capitol Hill Station.



8. (continued) ST Link Capitol Hill Station (Broadway Avenue E and E John Street)

Future related projects: Seattle First Hill Streetcar Broadway Extension – expected to begin construction 2016, and be completed as early as 2018. This project will extend the streetcar line along Broadway Avenue East to East Roy Street, with two new stations north of existing terminus at the ST Link Capitol Hill Station. This project provides the opportunity for future co-location of the north and south bound bus stops (stops 1 and 4) and streetcar stops; Metro will pursue the relocation of stop 1 to East Denny Way, to the proposed streetcar station.

							Passenger Amenities Expected in March 2016				
	Stop #	**Direction**	**On Street**	**Cross Street**	**Ons**	**Offs**	**Shelter**	**Lighting**	**Landing Pads**	**Bench**	**RTIS**
1	29264	WB	East Olive Way	Broadway East	600	692	F31 x 2	No	Yes	inside shelter	No
2	11180	NB	Broadway	E John St	309	460	No	No	Yes	No	No
3	29270	EB	E John St	Broadway East	394*	547*	Awning	Yes	Yes	No	No
4	11060	SB	Broadway	E Denny Way	115*	129*	Awning	Yes	Yes	No	No

*Ridership prior to temporary stop closure for ST Link station construction.
F31 x 2: Two small standard Metro bus shelters.
Amenities listed in the table are currently installed unless otherwise noted.

9. E Madison Street and 23rd Avenue E

Summary: Metro will add landing pads at stops 1, 2, 3, and 4, and will pursue the relocation of stop 2 to improve its proximity for transfers at 23rd Avenue E. Metro will work with SDOT to assess the feasibility of adding RTIS at stops 1 and 2. Metro will work with SDOT to establish a new north bound stop at E Denny Way, consistent with the SDOT 23rd Avenue project implementation. Ridership activity will be monitored and additional shelter capacity or other passenger amenities will be added if warranted.

Location description: Connecting transit markets: Capitol Hill, Central District, South Lake Union, Lower Queen Anne, University District, and Downtown Seattle. Due to the close proximity between E Madison Street and E John Street, existing north and south bound bus stops associated with this Transfer Location are closer to E John Street; east-west transit service on E John Street (Route 8) is also included in this Transfer Location. Pedestrian connections: the six existing bus stops are within 600'of the Madison/23rd Street intersection; sidewalk connections between existing stops are good.

Expected transfer activity: In March 2016, transfer activity is expected to double, to approximately 180 daily transfers, due to the elimination of Route 43. Existing ridership – 860 ons and 820 offs daily. Ridership is not expected to increase substantially with the implementation of the March 2016 service change.

Amenities warranted by expected ridership activity: With the exception of stop 6, all other existing stops at this location currently exceed ridership warrants for shelters. Additional shelter capacity is warranted at stops 1 and 2, but right of way constraints prohibit larger shelters than currently exist at these stop. Stops 1 and 2 exceed warrants for RTIS.

Facilities expected to be in place in March 2016: Stop 6 is temporarily closed for a private development project; upon completion in 2017, this stop will have overhead cover provided by building awnings. All remaining existing stops at this location currently have shelters.

Proposed additional improvements: Metro will add landing pads at stops 1, 2, 3, and 4 for rear door alighting. Metro will also work to relocate stop 2 to be closer to the 23rd Avenue E intersection. Metro will work with SDOT to determine the feasibility of adding RTIS at stops 1 and 2.

9. (continued) E Madison Street and 23rd Avenue E

Future related projects: SDOT 23rd Avenue Project Phase 1 – will be completed in 2017. Metro will work with SDOT to add a new north bound stop at E Denny Way (stop 7). SDOT RapidRide Corridor 1: Madison BRT – will run on Madison Street with stations planned for the Madison/22rd and Madison/John intersections nearby, replacing existing passenger facilities at the east and west bound stops; implementation date unknown. SDOT RapidRide Corridor 4: 23rd Avenue/Rainier – will run on 23rd Ave E, with stations planned for the E Denny Way and E John Street intersections, replacing existing passenger facilities at the north and south bound stops; implementation date unknown.

							Passenger Amenities Expected in March 2016				
	Stop #	**Direction**	**On Street**	**Cross Street**	**Ons**	**Offs**	**Shelter**	**Lighting**	**Landing Pads**	**Bench**	**RTIS**
1	35825	NB	23rd Ave E	E John St	324	151	F31	No	front door	inside shelter	No
2	29258	WB	E John St	22nd Ave E	273	172	F21	PED-SCALE	front door	inside shelter	No
3	29276	EB	E John St	22nd Ave E	100	304	F21	No	front door	inside shelter	No
4	35821	SB	23rd Ave E	E John St	66	103	F21	Yes	front door	No	No
5	12350	WB	E Madison St	23rd Ave E	65	49	F51	No	Yes	inside shelter	No
6	12377	EB	E Madison St	23rd Ave E	27	43	Private redevelopment underway that will incorporate overhead cover (awning) in the building design.				
7	new	NB	23rd Ave E	E Denny Way	n/a		Stop to be established in 2017 with completion of SDOT 23rd Avenue Project Phase 1 improvements.				
F31, F21, F51: Small standard Metro bus shelters. Amenities listed in the table are currently installed unless otherwise noted.											

10. E Madison Street and 19rd Avenue E

Summary: Because transfer activity at this location is not expected to change, improvements are not planned at this time. This location was identified as a Key Transfer Location in Ordinance 18133 due to a proposed change in the routing of Route 8 which would have operated through this intersection. A decision by SDOT not to alter the street layout prohibits this routing change; instead Route 8 will maintain its current routing on E John Street.

Location description: Connecting transit markets: Madison Park, Capitol Hill, First Hill, and Downtown Seattle. Pedestrian connections: two common bus stops, directly across E Madison Street, serve both routes at this intersection.

Expected transfer activity: In March 2016, transfer activity is not expected to change. Two routes serving this location serve similar markets and are not expected to generate significant transfer activity. Existing ridership – 190 ons and 130 offs daily. Overall ridership is not expected to increase with the implementation of the March 2016 service change.

Amenities warranted by expected ridership activity: Stop 1 currently exceeds ridership warrants for a shelter, and also meets warrants for a RTIS.

Facilities expected to be in place in March 2016: Stop 1 currently has a shelter and additional overhead cover provided by the adjacent building.

Proposed additional improvements: None.

Future related projects: SDOT RapidRide Corridor 1: Madison BRT – runs on E Madison Street with stations planned for the Madison/17th intersection nearby, replacing existing passenger facilities at the east and west bound stops. Implementation date unknown. Due to this pending project, RTIS will not be pursued at stop 1 at this time.

							Passenger Amenities Expected in March 2016				
	Stop #	Direction	On Street	Cross Street	Ons	Offs	Shelter	Lighting	Landing Pads	Bench	RTIS
1	12353	WB	E Madison St	19th Ave	182	38	F21	No	Yes	inside shelter	No
2	12373	EB	E Madison St	18th Ave	10	94	No	No	Yes	No	No

F21: Small standard Metro bus shelter.
Amenities listed in the table are currently installed unless otherwise noted.

ATTACHMENT 2

January 19, 2016

The Honorable Joe McDermott
Chair, King County Council
Room 1200
C O U R T H O U S E

Dear Councilmember McDermott:

Pursuant to Ordinance 18133, Section 2, I am transmitting to the King County Council a motion for approval of the King County Metro Transit Work Plan for Improving the Transfer Environment at Locations Impacted by the University Link Bus Integration.

As part of its network planning, and consistent with service guidelines, King County Metro Transit (Metro) considers locations where transfer opportunities could be provided and where provision of convenient transfers could improve the efficiency of the network. Metro strives to make transfers convenient, safe, secure, and accessible, and to work with partners to provide environments for pedestrians in a manner consistent with the goals of City of Seattle's Vision Zero Safer Streets for Seattle initiative.

Metro rider transfers are expected to increase with the March 26, 2016, service change as a result of the bus route integration with the Link light rail extension and its new stations at Capitol Hill and the University of Washington. In order to facilitate connections at key transfer locations, Metro is working with Sound Transit, the University of Washington and the City of Seattle Department of Transportation (SDOT) to implement this work plan to improve the transfer environment. Described in this work plan are specific improvements planned for each of 10 key transfer areas and a timeline for their implementation. The responsible party and funding source for each of the planned improvements are also identified in the work plan, as well as any legislation required to implement them. Implementation will be as expeditious as possible to help achieve the objectives of safe and accessible transfer environments.

The integration of bus service with the Link light rail extension to Capitol Hill and the University of Washington provides an opportunity for Metro to prepare for the region's growth, expand service, and increase rider choices. Bus stop improvements included in this work plan support Objective 2 of the *Economic Growth and Built Environment* goal of the King County Strategic Plan, which is to "Meet the growing need for transportation services and facilities throughout the county." Working to improve facilities that support increased ridership supports the County's Strategic Climate Action Plan. Such efforts are also

consistent with Objective 6.1 of King County Metro's Strategic Plan for Public Transportation 2011-2021, that calls for Metro to work to create a public transportation system that emphasizes productivity, while ensuring social equity and providing geographic value.

The bus and rail integration and related changes will likely result in many riders transferring between Metro and Link services, and will provide new opportunities for riders to take transit to more destinations. To ensure that the impacts and opportunities are understood and can be addressed in future service changes as needed, the work plan identifies capital facilities that will be added at bus stops to improve the transfer environment for riders affected by the March 2016 transit service restructure. The work plan is consistent with Objective 5.2 of Metro's Strategic Plan directing Metro to provide service that is easy to understand and use. The work plan also helps with future implementation of Strategy 3.2.2, which calls for Metro to coordinate and develop services and facilities with other providers to create an integrated and efficient regional transportation system.

The work plan includes a scope of work, tasks, schedule, milestones, and costs. It is estimated that this work plan required 50 staff hours to produce, costing $3,000, with minimal printing costs.

Thank you for your consideration of this motion to approve the King County Metro Transit Work Plan for Improving the Transfer Environment at Locations Impacted by the University Link Bus Integration.

If you have any questions, please contact Marty Minkoff**,** Acting Manager of Service Development, at 206-477-5799, or via email at marty.minkoff@kingcounty.gov.

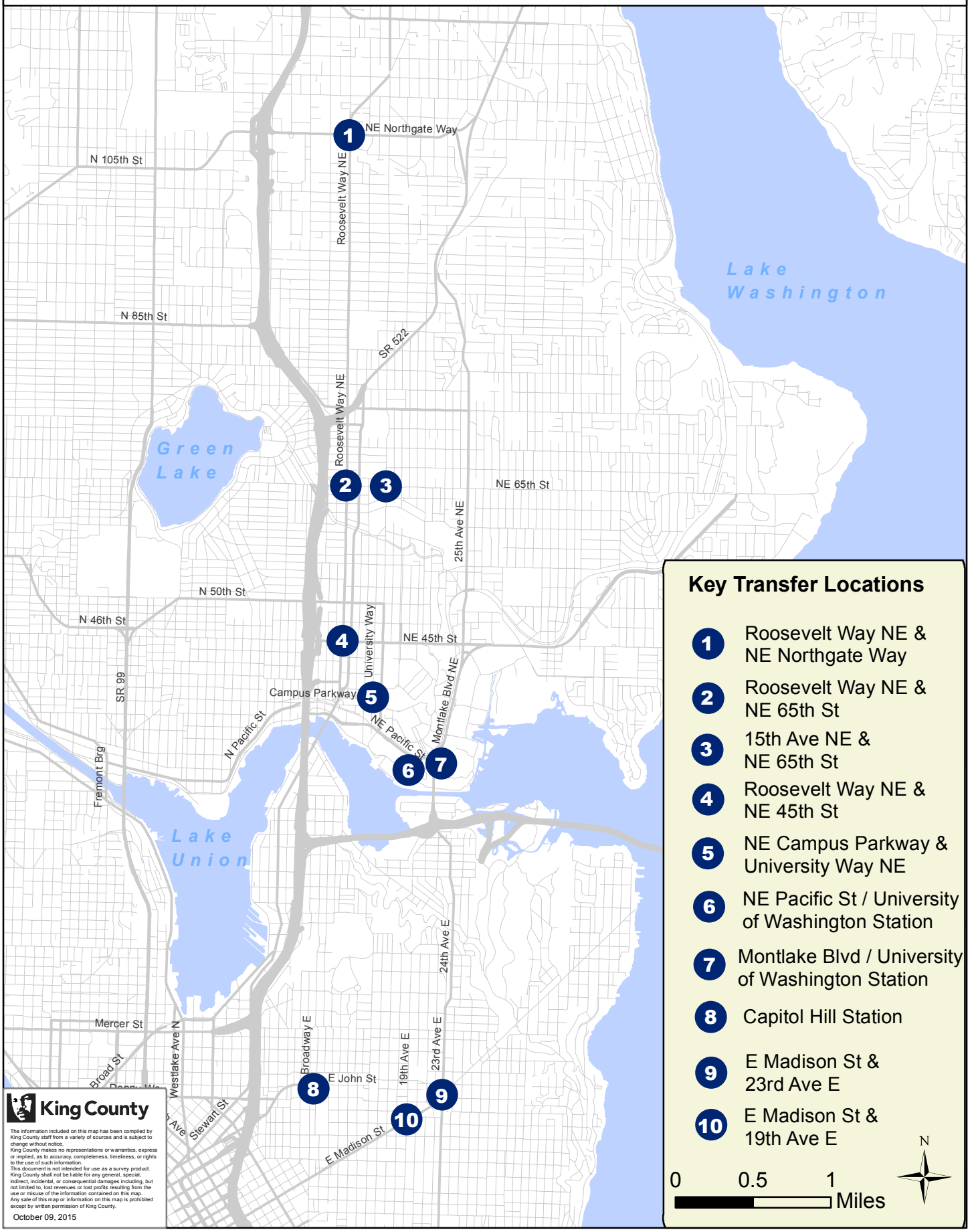
Sincerely,

Dow Constantine
King County Executive

Enclosures

cc: King County Councilmembers
ATTN: Carolyn Busch, Chief of Staff
Anne Noris, Clerk of the Council
Carrie S. Cihak, Chief of Policy Development, King County Executive Office
Dwight Dively, Director, Office of Performance, Strategy and Budget
Harold S. Taniguchi, Director, Department of Transportation (DOT)
Kevin Desmond, General Manager, Metro Transit Division, DOT
Victor Obeso, Deputy General Manager, Planning and Customer Services, Metro Transit Division, DOT
Marty Minkoff, Acting Manager, Service Development, Metro Transit Division, DOT

Key Transfer Locations



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King County

Metropolitan King County Council
Transportation, Economy and Environment Committee

STAFF REPORT

Agenda Item:	14	**Name:**	Paul Carlson
Proposed No.:	2016-0093	**Date:**	February 2, 2016

SUBJECT

A motion approving a work plan for assessing ridership impacts and customer response to the University Link bus integration.

SUMMARY

Proposed Motion 2016-0093 is one of three motions submitted by the Executive in response to requirements of Ordinance 18133, approving the restructure of Metro bus routes designed to integrate the bus routes with the University Link Light Rail extension to Capitol Hill and University of Washington Link Stations, effective March 26, 2016.

Since the University Link bus restructure will result in a significant shift of trip patterns for many riders, Ordinance 18133 requires a motion approving a work plan to assess ridership and customer satisfaction with existing services and subsequently the new bus and light rail network.

BACKGROUND

University Link Restructure

In September-October 2015, the County Council reviewed the King County Metro proposal to restructure approximately 30 bus routes in conjunction with the opening of University Link, the extension of Sound Transit's Central Link Light Rail line to Capitol Hill Station and University of Washington Station adjacent to Husky Stadium. On October 19, 2015, the Council passed Ordinance 18133, approving the proposed restructure with some route modifications.

The Council evaluation of this major restructure identified several specific issues associated with the proposed restructure. Ordinance 18133 includes provisions addressing four of these issues:

- **Transfer environment.** The amenities at bus stops where the number of transfers is projected to increase, and requiring a motion approving a work plan for implementing planned improvements (Section 2 of Ordinance 18133);

- **Public outreach.** A joint public engagement campaign leading up to the March 26, 2016 effective date, carried out in collaboration with Sound Transit, the City of Seattle, and the University of Washington (Section 3 of Ordinance 18133);

- **Performance measures.** Evaluation of ridership impacts and customer response to the restructure, and requiring a motion approving a work plan for customized performance measures (Section 4 of Ordinance 18133); and

- **Montlake traffic study.** A study of the traffic impacts of installing a bus stop on northbound Montlake Boulevard NE, and requiring a motion approving a report on the traffic impacts study (Section 5 of Ordinance 18133).

The proposed motions required by Sections 2, 4, and 5 have been transmitted for Council review. The oral reports required by Section 3 were presented in committee in December and January.

Ridership Impacts and Customer Response

Section 4 of Ordinance 18133 addresses the means by which the County will assess the impacts on riders of the University Link bus route restructure:

> SECTION 4. A. To ensure a full understanding of the ridership impacts and customer response to the University Link bus integration service change, by January 29, 2016, the executive shall transmit a work plan, and a motion for the approval of the work plan, identifying customized performance measures for the routes and corridors affected by the restructure. The work plan shall:
>
> 1. Identify performance measures to assess ridership and customer satisfaction with the existing Metro bus network and the new network integrated with the Central Link light rail;
> 2. Include plans through which the division shall conduct a customer and resident service assessment survey to be conducted by March 2017 to measure customer and resident satisfaction before and following the service change;
> 3. Be coordinated with Sound Transit performance assessments to avoid duplication of effort; and
> 4. Be modeled on past performance reports such as the C and D Line assessment.
>
> B. The council is interested in near-term assessments of the service change impacts but recognizes that a thorough evaluation must take place over an extended time period.
>
> C. The executive shall transmit the report in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copy to all councilmembers, the council chief of staff, the policy staff director and the lead staff for the transportation, economy and environment committee, or its successor.

Work Plan Overview

Attachment A to Proposed Motion 2016-0093 is the King County Metro Transit Work Plan for Assessing Ridership Impacts and Customer Response to the University Link

Bus Integration. It describes plans to conduct ridership assessment, customer analysis, and resident service assessment pertaining to the March 2016 service change. Here is an overview of the Work Plan's Scope of Work and Tasks.

Ridership Assessment (pages 2-3)

This section of the Work Plan identifies King County Metro Service Guidelines goals for bus service restructures and the Federal Transit Administration requirement for Title VI review of disparate impact on minority populations and disproportionate burden on low-income populations.

With these goals in mind, the Work Plan calls for analyzing overall ridership in the restructure area, and at the route level, route segment level, and stop level. Using Automatic Vehicle Locator (AVL), Automatic Passenger Counter (APC), and ORCA databases, the report will address ridership; on-time performance; "ons and offs" by bus trip and for weekday timetable trips, each bus stop; and transfers using ORCA. It should be noted that origin and destination data is not available from these databases.

The Work Plan states that this "report will be very similar to the August 2013 report, RapidRide C & D Line Implementation and Restructures, Ridership Assessment and Guidelines Analysis":

http://metro.kingcounty.gov/am/reports/2013/rapidride-c-and-d-line-restructures-assessment-august2013.pdf

The C and D Line Report includes some 70 pages of data and graphic displays. Note that the Fall 2012 service change with the C and D Lines took place during an upgrade of the automatic passenger counters, which complicated the before and after analyses. King County Metro staff states that this is not an issue now because the 30 percent of buses equipped with APCs all have the same equipment.

Customer Analysis (pages 3-4)

The Work Plan includes "before" and "after" on-board surveys to assess customer satisfaction with the existing and future Metro bus networks.

Prior to service change, in February and March, on-board surveys using self-administered questionnaires will be conducted on Routes 8, 16, 25, 26, 28, 30, 43, 48, 49, 64-68, 71-76, 242, 316, 372, and 373. A total of 50 bus trips will be selected to conduct the surveys; an estimated 1,300 surveys are expected to be completed. Relevant data from a 2015 Sound Transit survey will also be included in the analysis.

The questionnaire will be similar to the C & D Line questionnaire reprinted on pages 7-8 of the Work Plan. Questions address riders' travel behavior; fare payment; and satisfaction with trip time, frequency, reliability, personal safety, condition of the bus, bus stops, and transferring. Riders will be invited to provide contact information if they want to participate in a follow-up survey at the end of 2016.

Note that the survey questions must be finalized on February 5.

After the service change, in late 2016, self-administered questionnaires will be distributed on Routes 8, 38, 43, 45, 48, 49, 62-65, 67, 71, 73-76, 78, 316, 372, and 373, as well as to passengers boarding or alighting Link Light Rail at Capitol Hill and University of Washington Stations. A total of 50 bus trips will be selected to conduct the surveys; an estimated 1,300 surveys are expected to be completed.

Questions will be similar to those on the February-March questionnaire, with additional questions about the impacts of the March 2016 service change including new transfer patterns.

There will also be a survey of about 400 respondents who provided contact information in the February-March survey; for any respondents who stopped riding Metro, questions will ask the reasons for the change.

Resident Service Assessment (pages 4-6)

The Work Plan addresses the requirement for a survey of people who do not ride transit.

Prior to service change, for the survey of restructure area residents who do not ride transit, the Work Plan will extrapolate data from the Fall 2013 and Fall 2015 rider/non-rider survey with the expectation that about 250 non-riders in the affected zip codes will be included in the surveys. The analysis will focus on non-rider responses to questions about barriers to riding Metro, the appeal of using Metro, various attributes and benefits of Metro, commuting needs, and demographics. Other County information (such as survey results from the U-Link outreach surveys) and 2012 Sound Transit survey information will be analyzed for the report.

Post-service change, because the next non-rider survey is in Fall 2017, too late for this purpose, a survey of about 250 randomly-selected non-riders will be conducted in November-December 2016. The same non-rider survey questions will be asked, plus additional questions relating to awareness of transit and impacts of the March 2016 changes.

Schedule and Budget (page 6)

Here is the schedule provided in the Work Plan:

- **January 2016** – Notice to proceed with consultant to perform the on-board surveys
- **January 2016** – Submit work plan to the King County Council
- **February-March 2016** – Conduct on-board surveys prior to the service changes
- **October-November 2016** – Formal analysis of ridership from the March-September service period and ridership from before the service changes
- **November-December 2016** – Conduct on-board surveys after the service changes
- **November-December 2016** – Conduct residential assessment
- **January-March 2017** – Prepare and analyze report

- **March 2017** – Deliver report to the King County Council

The budget is estimated at $117,000 for consultant work, primarily covered in the 2015-2016 transit operating budget for customer research but possibly including a 2017-2018 budget request.

ANALYSIS

Adoption of Proposed Motion 2016-0093 will approve the work plan for assessing ridership impacts and customer response to the University Link bus integration. The Work Plan identifies pre-University Link and post-implementation actions to assess ridership using data from the AVL, APC, and ORCA systems, to conduct on-board surveys of customers, and to survey non-rider residents of the service change area.

ATTACHMENTS

1. Proposed Motion 2016-0093 (and its attachments)
2. Transmittal Letter

INVITED

- Victor Obeso, Deputy General Manager Planning and Customer Service, King County Transit Division
- Marty Minkoff, Acting Manager Service Development, King County Transit Division
- Rob Coughlin, Project/Program Manager, King County Transit Division

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KING COUNTY

Signature Report

January 29, 2016

Motion

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Proposed No. 2016-0093.1 **Sponsors** Dembowski

A MOTION relating to public transportation, approving a work plan for assessing ridership impacts and customer response to the University Link bus integration, as directed by Ordinance 18133, Section 4.

WHEREAS, in October 2015, Ordinance 18133 approved the March 2016 University Link bus integration service changes, and

WHEREAS, Ordinance 18133, Section 4, requires the executive to transmit a motion by January 29, 2016 for the approval of a work plan for assessing ridership impacts and customer response to the University Link bus integration, and

WHEREAS, Ordinance 18133, Section 4 requires the work plan to:

1. Identify performance measures to assess ridership and customer satisfaction with the existing Metro bus network and the new network integrated with the Central Link light rail;

2. Include plans through which the division shall conduct a customer and resident service assessment survey to be conducted by March 2017 to measure customer and resident satisfaction before and following the service change;

3. Be coordinated with Sound Transit performance assessments to avoid duplication of effort; and

4. Be modeled on past performance reports such as the C and D Line Assessment, and

WHEREAS, the work plan includes a scope of work, tasks, schedule, milestones, and budget, and

WHEREAS, Metro has compiled the required information and the executive has transmitted the work plan for assessing ridership impacts and customer response regarding the University Link bus integration as set forth as Attachment A to this motion to the council;

NOW, THEREFORE, BE IT MOVED by the Council of King County:

The council hereby approves the King County Metro Transit Work Plan for

Assessing Ridership Impacts and Customer Response to the University Link Bus Integration, Attachment A to this motion.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

_____

J. Joseph McDermott, Chair

ATTEST:

_____

Anne Noris, Clerk of the Council

APPROVED this _____ day of _____, _____.

_____

Dow Constantine, County Executive

Attachments: A. King County Metro Transit Work Plan for Assessing Ridership Impacts and Customer Response to the University Link Bus Integration

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King County Metro Transit

Work Plan for Assessing Ridership Impacts and Customer Response to the University Link Bus Integration

January 29, 2016

Prepared for:
King County Council

Prepared by:

King County METRO

Department of Transportation
Metro Transit Division
Service Development Section
King Street Center, KSC-TR-0415
201 S Jackson St.
Seattle, WA 98104
www.kingcounty.gov/metro

Alternative Formats Available
206-477-3832 TTY Relay: 711

Introduction

Ordinance 18133, adopted in October 2015, approved King County Metro's public transportation service changes to integrate with the Link light rail extension to Capitol Hill and the University of Washington. Metro will implement those changes in March 2016.

To ensure a full understanding of the ridership impacts and customer response to the bus integration, Section 4 of the ordinance requires a work plan that identifies customized performance measures for the routes and corridors affected by the restructure. Specifically the work plan will:

1. Identify performance measures to assess ridership and customer satisfaction with the existing Metro bus network and the new network integrated with the Central Link light rail;
2. Include plans through which the division shall conduct a customer and resident service assessment survey to be conducted by March 2017 to measure customer and resident satisfaction before and following the service change;
3. Be coordinated with Sound Transit performance assessments to avoid duplication of effort; and
4. Be modeled on past performance reports such as the C and D Line assessment.

This document is the work plan for the above research.

Scope of Work and Tasks

The assessment of ridership impacts and customer response to the University Link bus integration has multiple components and will be conducted over multiple time periods. Reports will be presented to Council by March 2017.

Ridership Assessment

Assessing ridership and other service elements is critical with all service restructures. The King County Metro Strategic Plan which was adopted by Council, as was a revision in 2013 (Ordinance 17143), identifies the following goals and objectives on page SG-12.

- Under all circumstances, whether adding, reducing or maintaining service hours invested, service restructures shall have a goal to focus service frequency on the highest ridership and productivity segments and to match service capacity to ridership demand to improve productivity and cost-effectiveness of service.
- In managing the transit system, service restructures shall have a goal of increasing ridership.
- Under service reduction conditions, service restructures shall have an added goal of resulting in an overall net reduction of service hours invested.
- Under service addition conditions, service restructures shall have added goals of increasing service levels and ridership.

Additionally, major restructures also undergo a review, based on the requirements of Title VI, USC, to assess the impacts of these changes on minority and low-income populations. Prior to implementation, Metro assesses whether or not the service change would have a disparate negative impact on minority

populations and/or would impose a disproportionate burden on low-income populations. This analysis also is in support of King County Ordinance 16948 and the implementation of the countywide strategic plan principle of "fair and just" in all the county does in order to achieve equitable opportunities for all people and communities. If this analysis determines the change will result in disparate negative impacts or disproportionate burdens on minority or low-income populations, Metro modifies the proposed restructure to make the changes more equitable.

With these goals and objectives in mind, Metro will analyze overall ridership in the U-Link area, and at the route level, segment level, and stop level. Ridership data is processed by Metro, and Link ridership data will be obtained from Sound Transit. Productivity (rides per hour), transfer data (from ORCA databases), and on-time performance of the affected bus routes will also be analyzed.

The report will be very similar to the August 2013 report, RapidRide C & D Line Implementation and Restructures, Ridership Assessment and Guidelines Analysis:
http://metro.kingcounty.gov/am/reports/2013/rapidride-c-and-d-line-restructures-assessment-august2013.pdf

Customer Analysis

To assess the impacts of major service changes, Metro regularly conducts on-board surveys before and after the changes. The purpose of these surveys is to obtain feedback about the service and any difficulties riders have with it, as well as to assess levels of satisfaction and gain insights on customer benefits or impacts as a result of the service changes. Over the course of many studies of this nature, Metro has refined the survey process to thoroughly capture rider experiences and feedback related to service changes and has developed performance measures to quantify this feedback.

Prior to the Service Change

In February and March 2016, Metro will conduct surveys on-board bus routes that will later have significant changes (or be eliminated) in the U-Link integration. Consultant staff will distribute self-administered questionnaires on Routes 8, 16, 25, 26, 28, 30, 43, 48, 49, 64-68, 71-76, 242, 316, 372, and 373. Surveys will be conducted on about 50 trips selected on these routes to provide an overall picture of customer response. Metro estimates about 1,300 completed surveys.

Questions will focus on the same performance measures as studied in previous research on service changes. Riders will be asked about their travel behavior, fare payment, and their satisfaction overall and with components of:

- Trip time
- Frequency and reliability
- Personal safety
- Coach attributes (cleanliness, seating availability, smoothness of ride, etc.)
- Bus stops
- Transferring

The questionnaire will be similar to that used in the 2012 research conducted for the C & D Line implementation, the model from which the research is based. That questionnaire is in the appendix of this work plan. As in the past, there will be versions of the questionnaires in languages other than English.

A new element to this research is asking respondents for phone numbers and or email addresses if they wish to participate in the "after" phase. That will enable Metro to capture data on current riders who may no longer ride after the service change.

Metro assisted Sound Transit with their on-board surveys in the Link corridor in October and November 2015. Many of the surveys were conducted on the same routes as the research outlined here. That study did not ask satisfaction questions, but did ask trip origin, destination, trip purpose, transferring, fare payment and demographics. Further, Sound Transit conducts a customer satisfaction survey on their routes every fall. The Sound Transit data collected in 2015 that is relevant to the U-Link integration analysis will be incorporated into the Metro research efforts.

After the Service Change

In October and November 2016, Metro will conduct a follow-up survey to assess customer response to the service changes. This will be more than six months after the service change, when riders will have had time to establish new travel patterns in response to the changes. As well, the University of Washington (UW) will be back in full session. Consultant staff will distribute self-administered questionnaires on Routes 8, 38, 43, 45, 48, 49, 62-65, 67, 71, 73-76, 78, 316, 372, and 373, as well as passengers boarding or deboarding Link light rail at the UW or Capitol Hill stations. Surveys will be conducted on about 50 weekday trips selected on these routes to provide an overall picture of customer response. Metro estimates about 1,300 survey responses will be completed.

The questionnaires will be similar to the ones used in the "pre" survey, with additional questions related specifically to the service change and any change in ridership habits since the change. Transferring between Metro bus routes or between Metro bus and Link light rail will be a major focus in the "after" phase. In addition, a telephone and/or internet survey will be conducted with about 400 respondents who provided contact information in the "pre" research described above. This will help to identify former riders who are not riding after the service change (or riding much less or much more). Metro will ask them the reasons for their change in transit ridership.

Metro and the marketing research consultant will analyze and report upon the findings.

Resident Service Assessment

The resident service assessment reflected in the March 2016 U-Link Service Change ordinance is a new component that has not been done in previous research on transit service changes. Many of the respondents to the customer satisfaction research described above will be residents of the areas around the service changes. The on-board research described above will capture riders in the area who no longer ride after the service change, and it will capture new riders in the area. The additional resident assessment is intended to gather information from residents who were not riders before the service change and continue to be non-riders after the service change.

Prior to the Service Change

Metro regularly conducts its Rider/Non-Rider Study. This is a statistically valid telephone survey of about 2,000 randomly-selected residents of King County. Riders are surveyed every year,

while non-riders are surveyed every other year. The two most recent non-rider surveys were conducted in fall 2013 and fall 2015. The 2015 study was still being conducted at the time this work plan was prepared, but Metro estimates that between the two studies about 250 non-riders in the zip codes within the service change areas will be interviewed.

The questions asked of non-riders that are relevant to a survey about the U-Link integration will focus on the performance measures below.[1]

- Barriers to riding Metro – degree to which the following are barriers to riding: unfamiliarity, unreliability, infrequency, preference to drive alone, travel time, crowding, cleanliness, safety, security, need to transfer, buses not going to destination, weather barriers, image of riding the bus, distance to bus stop.
- Appeal of using Metro – to get to work/school/for personal travel.
- "Goodwill" of Metro and benefits from riding it – degree to which non-riders agree/disagree about various Metro attributes: respect and trust of the agency; expectations of quality; the riders' ability to reduce travel costs, lower stress, and increase productive time; and environmental benefits, innovation, customer service, and social responsibility.
- Commute status – mode of travel, destination, distance and time, and availability and cost of parking.
- Demographics – gender, age, income, ethnicity, etc.

To augment the rider/non-rider data, applicable data and information from other Metro sources (e.g., the public outreach surveys conducted as part of the U-Link service planning process, and customer feedback received through Metro Customer Communications group) will be analyzed. Also, Sound Transit produced a Sound Transit Market Share report in 2012. Data relevant to the research outlined in the work plan will be reviewed, mainly the demographics and travel modes of riders.

Metro will analyze and report upon the findings.

After the Service Change

The next non-rider survey is not scheduled until fall 2017, which is after the research discussed in this work plan is due to Council. Thus, we will conduct a separate, scientifically-valid non-rider survey in late fall 2016. The sample will have approximately 250 randomly-selected non-riders among the residents of the zip codes encompassing the U-Link bus integration.

The same questions from the "pre" non-rider surveys will be used and supplemented with focus on additional topic areas as we learn more about various impacts of the service changes in the course of the coming year. The additional questions will focus on non-riders' awareness of transit opportunities and changes to transit, and identify any new barriers to transit unique to the service area or to the changes made in March 2016. Likewise, any questions from the 2012 Sound Transit market study that are directly relevant to U-Link bus integration will be asked again in this phase of the resident analysis.

[1] Some of these questions were not asked in 2015 to reduce costs, but more than half of the respondents will be from the longer 2013 survey.

Metro and the marketing research consultant(s) will analyze and report upon the findings.

Schedule

This research effort is a year-long undertaking. Below are key dates:

- **January 2016** – Notice to proceed with consultant to perform the on-board surveys
- **January 2016** – Submit work plan to the King County Council
- **February-March 2016** – Conduct on-board surveys prior to the service changes
- **October-November 2016** – Formal analysis of ridership from the March-September service period and ridership from before the service changes
- **November-December 2016** – Conduct on-board surveys after the service changes
- **November-December 2016** – Conduct residential assessment
- **January-March 2017** – Prepare and analyze report
- **March 2017** – Deliver report to the King County Council

Budget

The estimated cost for the consultant work is approximately $117,000, and is broken out as follows:

- "Before" and "after" on-board data collection, data processing, and report: $80,000 (total)
- Residential assessment and data processing: $22,000
- Phone survey of "before" riders who agreed to be reached "after", data processing, and report: $15,000

In addition, this will take approximately 400 hours of staff time.

The costs will be primarily covered within the current 2015-2016 Metro operating budget earmarked for customer research. Some of the cost may need to be included in the 2017-2018 budget proposals.

Appendix A – Questionnaire from C & D Line Service Revisions Assessment

King County METRO
We'll Get You There

Rider Report Card

ID / QRC CODE

Please let us know how we are doing and how we can improve service on this route.

IMPORTANT INSTRUCTIONS:

If you would like to complete the survey online either: (1) use your camera to take a picture of the QR code to open the survey or (2) enter the following URL – www.ORCsurvey.com/metro3—and use the ID number printed above as your USERID.

Please use a blue or black pen. Mark your answers by placing an X inside the correct box ☒.

When you are done, return your completed questionnaire to the survey worker onboard the bus. If you are unable to complete the survey while on the bus, please ask the survey worker for a postage-paid return envelope.

SATISFACTION WITH THIS ROUTE

Please check the box to show how satisfied or dissatisfied you are with route you are currently riding.

Remember to **rate the route you are currently riding**, not other routes or Metro Transit in general.

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Q1. Trip Time on This Route					
How long my bus trip takes	☐	☐	☐	☐	☐
Number of stops my bus makes	☐	☐	☐	☐	☐
Q2. Personal Safety on This Route					
Personal safety while on the bus	☐	☐	☐	☐	☐
Behavior of other passengers on the bus	☐	☐	☐	☐	☐
Personal safety while waiting for the bus during the day	☐	☐	☐	☐	☐
Personal safety while waiting for the bus at night	☐	☐	☐	☐	☐
Behavior of other people at the waiting area	☐	☐	☐	☐	☐
Q3. Waiting Area/Bus Stop Where You Boarded the Bus for This Trip					
Being able to sit down while waiting	☐	☐	☐	☐	☐
Cleanliness of waiting area	☐	☐	☐	☐	☐
Amount of lighting	☐	☐	☐	☐	☐
Protection from the weather	☐	☐	☐	☐	☐
Having information available about routes and connections	☐	☐	☐	☐	☐
Convenience of bus stop to my home or where I started trip	☐	☐	☐	☐	☐
Being able to see an oncoming bus	☐	☐	☐	☐	☐
Q4. Things About Buses on This Route					
Being able to get a seat	☐	☐	☐	☐	☐
Amount of lighting inside the bus	☐	☐	☐	☐	☐
Cleanliness of the bus interior	☐	☐	☐	☐	☐
Bus is free of graffiti	☐	☐	☐	☐	☐
Smoothness of the ride	☐	☐	☐	☐	☐
Enough bike rack capacity	☐	☐	☐	☐	☐
Wide enough doors and aisles for loading and unloading	☐	☐	☐	☐	☐
Enough bars/straps to hang onto while standing	☐	☐	☐	☐	☐
Q5. Frequency and Reliability of Buses on This Route					
The bus not leaving the stop early	☐	☐	☐	☐	☐
The bus not leaving the stop late	☐	☐	☐	☐	☐
The bus getting me where I'm going on time	☐	☐	☐	☐	☐
How often bus runs during peak hours (6-9 a.m.; 3-6 p.m.)	☐	☐	☐	☐	☐
How often bus runs during midday hours (9 a.m. - 3 p.m.)	☐	☐	☐	☐	☐
How often the bus runs in the evening/night	☐	☐	☐	☐	☐
How often the bus runs on weekends	☐	☐	☐	☐	☐
How early the bus runs in the morning	☐	☐	☐	☐	☐

If you make a transfer on This Route, please rate the items below.
Otherwise continue on other side of page.

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Q6. Ease of Transferring to or from This Route					
The number of transfers I make	☐	☐	☐	☐	☐
The way buses are scheduled to make transfer connections	☐	☐	☐	☐	☐
Waiting time between transfers	☐	☐	☐	☐	☐
Helpfulness of drivers in ensuring transfer connections	☐	☐	☐	☐	☐
The bus coming on time when transferring	☐	☐	☐	☐	☐
How often the bus runs in the evening/night	☐	☐	☐	☐	☐
Transfer information at the waiting area	☐	☐	☐	☐	☐

Continue on other side.

Q7. Overall how satisfied are you with **This Route**?

Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
☐	☐	☐	☐	☐

Q8. How many one-way rides have you taken on **This Route** in the last 30 days? (Count a round trip as 2 rides) Write Number in Box ➔ [ ][ ][ ]

Q9. What is the purpose of the trip you take **most often** on **This Route**?

- ☐ To/from work
- ☐ To/from school
- ☐ Shopping/errands
- ☐ Fun/recreation/social
- ☐ Appointments
- ☐ Something else

Q10. When do you usually ride **This Route**? Please check all that apply.

- ☐ Weekdays before 6 a.m.
- ☐ Weekdays—AM peak (6-9 a.m.)
- ☐ Weekdays—PM peak (3-6 p.m.)
- ☐ Weekdays 9 a.m. to 3 p.m.
- ☐ Weekdays 6-9 p.m.
- ☐ Weekdays later than 9 p.m.
- ☐ Weekends

Q11a. Did you transfer **TO** **This Route** from another bus on this trip today?

☐ No ☐ Yes ➔ Which route? [ ][ ][ ]

Q11b. Will you transfer **FROM** **This Route** to another bus to reach your destination on this trip today?

☐ No ☐ Yes ➔ Which route? [ ][ ][ ]

Q12a. Prior to the September 2012 service change, which route did you take?

Enter route number in boxes below:		

Q12b. How does **This Route** compare overall to the route you took before?

- ☐ Better
- ☐ About the Same
- ☐ Not as Good ➔ Why? _____

Q13. How long have you been a Metro rider?

- ☐ Less than 6 months
- ☐ 6 – 12 months
- ☐ More than 1 year but less than 5 years
- ☐ 5 years or more

Q14. How do you pay your fare? If you use an ORCA Card what product(s) do you have on your ORCA Card?

- ☐ Cash
- ☐ Tickets
- ☐ Something else _____
- ☐ ORCA Card ➔
  - ☐ Pass
  - ☐ E-purse / money on card
  - ☐ Both pass and an e-purse

Q15. What ONE THING would you recommend to improve **this route**?

_____

_____

Please answer the following demographic questions to help us with our evaluation.

Q16. Are you... ☐ Male ☐ Female

Q17. How old are you? [ ][ ]

Q18. Do you consider yourself to be Hispanic? ☐ Yes ☐ No

Q19. Do you consider yourself to be White? ☐ Yes ☐ No

Q20. What is the primary language spoken in your home? ☐ English ☐ Other _____

Q21. How well do you speak English? ☐ Very well ☐ Well ☐ Not well ☐ Not at all

Q22. What is your total household income? ☐ Under $20,000 per year ☐ $20,000 up to $35,000 ☐ $35,000 or more per year

Q23. What is your home ZIP code? [ ][ ][ ][ ][ ]

Q24. What is your work ZIP code? [ ][ ][ ][ ][ ]

Or the nearest intersections to your work location.

_____ and _____

ATTACHMENT 2

January 19, 2016

The Honorable Joe McDermott
Chair, King County Council
Room 1200
C O U R T H O U S E

Dear Councilmember McDermott:

Pursuant to Ordinance 18133, Section 4, I am transmitting to the King County Council a motion to approve the King County Metro Transit Work Plan for Assessing Ridership Impacts and Customer Response to the University Link Bus Integration.

King County Metro Transit (Metro) rider mobility and the overall customer experience are expected to change with the March 2016 service change. This anticipated change is due to the major bus route restructure, integrating the Metro bus network with the Link light rail extension (and its new stations at Capitol Hill and the University of Washington). As called for in the ordinance, Metro has developed this work plan to identify customized performance measures for the routes and corridors affected by the restructure, to help ensure a full understanding of the ridership impacts and customer response to the University Link bus/rail integration service changes. It is modeled on past performance reports such as the RapidRide C and D Line assessment, and has been coordinated with Sound Transit performance assessments to avoid duplication of efforts.

The performance measures identified in this work plan are designed to assess ridership and customer satisfaction with the existing Metro bus network and the new network integrated with the extended Link light rail line. Also included are plans through which Metro will conduct a customer and resident service assessment survey, to be completed by March 2017, to measure satisfaction before and following the service change. In doing so, this work plan is consistent with Strategy B of Objective 1 of the *Service Excellence* goal of the King County Strategic Plan, which is to "Gather customer feedback regarding service delivery and report results as part of the county's performance management system."

The integration of bus service with the Link light rail extension to Capitol Hill and University of Washington provides an opportunity for Metro to prepare for the region's growth, expand

service, and increase rider choices. By working to increase ridership, this plan supports the County's Strategic Climate Action Plan. It is also consistent with Objective 6.1 of King County Metro's Strategic Plan for Public Transportation 2011-2021 that calls for Metro to work to create a public transportation system that emphasizes productivity, while ensuring social equity and providing geographic value.

Assessing the ridership impacts and customer response to these changes is a key element in evaluating and potentially improving the integration of these services. This is consistent with Objective 5.2 of Metro's Strategic Plan directing Metro to work to provide service that is easy to understand. It will also help with future implementation of Strategy 3.2.2, directing Metro to coordinate and develop services and facilities with other providers to create an integrated and efficient regional transportation system.

The work plan includes a scope of work, tasks, schedule, milestones, and budget. It is estimated that this work plan required 40 staff hours to produce, costing $2,400, with minimal printing costs.

Thank you for your consideration of this motion to approve the King County Metro Transit Work Plan for Assessing Ridership Impacts and Customer Response to the University Link Bus Integration.

If you have any questions, please contact Marty Minkoff**,** Acting Manager of Service Development, at 206-477-5799, or via email at marty.minkoff@kingcounty.gov.

Sincerely,

Dow Constantine
King County Executive

Enclosures

cc: King County Councilmembers
ATTN: Carolyn Busch, Chief of Staff
Anne Noris, Clerk of the Council
Carrie S. Cihak, Chief of Policy Development, King County Executive Office
Dwight Dively, Director, Office of Performance, Strategy and Budget
Harold S. Taniguchi, Director, Department of Transportation (DOT)
Kevin Desmond, General Manager, Metro Transit Division, DOT
Victor Obeso, Deputy General Manager, Planning and Customer Services, Metro Transit Division, DOT
Marty Minkoff, Acting Manager, Service Development, Metro Transit Division, DOT

King County

Metropolitan King County Council
Transportation, Economy and Environment Committee

STAFF REPORT

Agenda Item:	15	**Name:**	Beth Mountsier
Proposed No.:	2016-0016	**Date:**	February 2, 2016

SUBJECT

This ordinance would approve the Ship Canal Water Quality Joint Project Agreement and authorize the Executive to enter into the agreement to have Seattle Public Utilities design, construct, own and manage a combined sewer overflow control project for both Seattle and King County wastewater influent in north Seattle.

SUMMARY

King County entered into a federal consent decree with the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA) on July 3, 2013, which requires control of the County's CSO basins by December 31, 2030. Seattle also entered into a Consent Decree to control its CSO basins by 2030.

After considering separate CSO storage facilities and combinations of shared facilities, the Ship Canal Water Quality (WQ) Project is proposed as a coordinated effort between King County's Department of Natural Resources and Parks (DNRP) and Seattle's Seattle Public Utilities (SPU) to construct a 15-million gallon CSO storage facility to control five of SPU's CSO basins in Ballard and Fremont/Wallingford, and the County's 3rd Avenue West and 11th Avenue Northwest CSO basins. The project would be constructed by tunneling below publicly owned right-of-ways between Ballard and Highway 99.

Subject to the King County Council's and Seattle City Council's[1] approval, DNRP and SPU have tentatively agreed on the terms of a Ship Canal Water Quality Joint Project Agreement (JPA) that provides for the funding of the planning, design, construction, maintenance, operation, repair, replacement, alteration, and improvement of the facility.

The JPA defines King County's role in the execution and management of this project including decision-making and dispute resolution processes during design and construction and after the facility begins operating to control overflows. SPU would pay for portions of the project that solely relate to its delivery of influent to the storage facility. Otherwise, all costs of the joint facility would be split with Seattle paying 65 percent and King County 35 percent of the costs currently estimated to be $134 million.

[1] Seattle approved the JPA in December 2015 (Ordinance124966), so long as it is substantially in the form as submitted to the King County Council.

BACKGROUND

Combined Sewer Overflows

Combined sewer overflows are discharges of untreated or partially treated sewage and stormwater released directly into marine waters, lakes and rivers during heavy rainfall, when the sewers have reached their capacity. Although the sewage in CSOs is greatly diluted by stormwater, both CSOs and stormwater may be harmful to public health and aquatic life because they carry chemicals and disease-causing pathogens.

From the late 1800s through the 1940s, engineers designed combined sewers (sewers that carry sewage and stormwater runoff in a single pipe) to convey sewage, horse manure, street and rooftop runoff, and garbage from city streets to the nearest receiving body of water. Starting in the 1950s, most sewer systems were built as separated systems (sewage in one pipe; stormwater in another pipe). In the late 1950s, treating wastewater became the standard. Interceptor pipes were built to transport all wastewater (from either combined or separated systems) to treatment plants.

Combined sewers exist in many parts of older cities, including Seattle. During heavy or long storms, the volume of the stormwater runoff may become too much for the combined sewers to handle. To protect treatment plants and avoid sewer backups into homes, businesses and streets, combined sewers sometimes overflow into Puget Sound, the Duwamish Waterway, Elliott Bay, the Ship Canal and Lake Washington.

Both King County and the City of Seattle manage CSOs within Seattle. King County's WTD manages 38 locations and Seattle Public Utilities manages more than 90. King County also has four CSO treatment plants, one in north Seattle (Carkeek Park CSO Treatment Plant) and one in West Seattle (Alki CSO Treatment Plant), and the relatively new Mercer/Elliott West and Henderson/MLK facilities. The Georgetown treatment facility (to control the Brandon and Michigan CSO basins) is currently being designed.

King County's Consent Decree with Ecology and EPA

Ecology and EPA alleged that the County violated Sections 301 and 402 of the Clean Water Act and the conditions and limitations of the County's National Pollutant Discharge Elimination system (NPDES) permit issued to the County by Ecology. These are violations related to the quality of the effluent released from combined sewer overflow control facilities that act as satellite treatment plants to West Point Treatment Plant. In response, King County, without admitting any liability related to the alleged violations, negotiated a consent decree that the Council approved via adoption of Ordinance 17514 in 2013.

The consent decree obligates King County to implement the long-term CSO control plan that the Council approved in September 2012 (Ordinance 17413) for future projects per the proposed design criteria/specifications and schedule in the plan, including final completion of all projects in 2030. In addition, the consent decree provides direction for 1) implementation of CSO control projects currently in design 2) improvements in operations of existing CSO treatment plants to meet effluent standards, 3) various

reporting requirements regarding progress towards these goals, post-construction monitoring, etc., 4) dispute resolution procedures, and 5) penalties.

The overall goal of the consent decree and EPA's compliance action is to ensure that combined sewer overflows at King County's outfalls occur on average only once per year based on a rolling 20-year average and that the effluent discharged from CSO control treatment plants meet certain standards.

The consent decree contains some provisions for 'flexibility' with regard to the implementation of King County's long term combined sewer overflow control plan. King County may propose changes to the design specifications for projects, the priority and sequencing of projects and may propose a supplemental 'integrated plan' that includes additional activities or refines the proposed CSO control projects to address other water pollution issues and thereby results in better water quality in the receiving waters where CSOs currently discharge.

Consideration of Joint Projects

King County's long-term CSO control plan as proposed and approved by the Council envisioned the possibility of joint projects with Seattle. Seattle was also interested in shared projects. Additionally both King County's and Seattle's consent decrees required them to coordinate their efforts and future operation of new CSO facilities since each would have impacts upon the other's facilities (and their ability to control overflows) and the West Point Treatment Plant.

With this backdrop, King County and Seattle developed and provisionally agreed to a series of technical memos and plans about cost-sharing, assessment of current and projected flows and exploration of alternatives to control overflows in basins in NW Seattle. Many of these agreements date back to and overlap with the time period when King County's long-term CSO control plan and Consent Decree were being approved.

By April 2014, both SPU and the Wastewater Treatment Division[2] (WTD) had agreed to a "Seattle Public Utilities & King County Wastewater Treatment Division Coordination Plan." Its purpose was to guide each agency in executing both joint and individual CSO projects to efficiently and effectively achieve CSO control to comply with their respective Consent Decrees and other regulatory requirements.

The development of the Ship Canal WQ Project and the Ship Canal WQ JPA is therefore built upon a series of provisional agreements regarding each agency's acceptance of the technical aspects, assumptions and parameters of a shared project addressing:

- existing and future wastewater flows in the basins;
- amounts of combined wastewater and stormwater that would need to be stored;
- conceptual design of a facility to provide the storage;

[2] WTD is a division of the Department of Natural Resources and Parks. WTD is responsible for constructing, maintaining and operating wastewater facilities, including CSO control facilities. As the preliminary planning got underway WTD was signing off on Technical Memorandums and Plans. In 2015, when the JPA was developed King County and interchangeably DNRP was/is named as the agency entering into the agreement. To confuse matters more, the JPA as transmitted, has a signature block for the Director of DNRP. However PO 2016-0016 authorizes the Executive to enter into the agreement.

- division of potential costs for the project (based on the cost and amount of storage needed by each agency);
- parameters for operation of storage facilities and discharge to the WestPoint Treatment Plant; and
- a potential management structure of a shared project from design through operation.

In 2015 both WTD and SPU concluded that a joint project would be the best means of controlling overflows and would reduce environmental impacts and minimize neighborhood disruptions compared to building separate CSO control facilities in a group of drainage/CSO basins. The agencies proceeded to develop the JPA in 2015 (based on and citing their previous work and provisional agreements) to legally and perpetually bind SPU and the Department of Natural Resources and Parks (DNRP) to execute the project, unless they mutually agreed to terminate the JPA.

The JPA designates Seattle/SPU as the lead agency during design and construction of the project; and upon completion, SPU would be the owner and manager of the facility. The JPA also defines King County's role throughout the project design, construction and future operation of the facility.

Project Description

The Ship Canal WQ Project would provide storage of combined wastewater in a deep storage tunnel constructed between the Ballard and Wallingford CSO areas, on the north side of the Seattle Ship Canal that connects Lake Union and Elliott Bay. The Project would control SPU's Ballard CSO basins (Outfalls 150,151 and 152), Fremont (Outfall 174) and Wallingford CSO basins (Outfall 147), King County's DNRP 3rd Avenue West Regulator (DSN008), and 11th Avenue NW Regulator (DSN004) by the end of year 2025.

The Ship Canal WQ Project would include the storage tunnel and 'appurtenances,' conveyance facilities to convey SPU and DNRP CSO flows into the tunnel, and a pump station and force main to drain flows from the tunnel. A detailed description of the project (including Figure 1 showing a plan view of the Ship Canal WQ Project location and components) can be found in Exhibit A to the JPA. The following is a summary of the key components of the project:

The storage tunnel and appurtenances would include:

- A minimum 15.24 million gallon (MG) offline[3] storage tunnel. The tunnel is expected to have a 14-foot inside diameter and be approximately 14,000 feet long[4] (2.7 miles).
    - The stored combined sewage in the storage tunnel will flow from the Wallingford CSO Outfalls westward to an effluent pump station located near the Ballard CSO Outfalls 150 and 151.
    - The tunnel route is planned to be generally in street right-of-way along the north side of the Ship Canal.
- Seven diversion structures for diverting influent CSO flow away from existing CSO outfalls to the tunnel.

[3] "Offline" meaning the storage isn't in a conveyance pipe
[4] These dimensions could be changed during the design phase of the project.

- Four drop structures (each with odor control) to convey influent CSO flow into the storage tunnel.
- A pump station would be located at the West tunnel Portal as defined during the design phase of the project, with a minimum peak capacity of 32 MGD to empty the storage tunnel in approximately 12 hours.

Conveyance facilities would include a:

- Gravity sewer line to convey flows from SPUs diversion structure at Fremont Outfall 174 to the tunnel drop shaft;
- Gravity sewer line to convey flows from DNRPs diversion structure at 3rd Ave. W (under the Ship Canal) to the tunnel drop shaft;
- Gravity sewer line to convey flows from DNRPs diversion structure at 11th Ave. NW to the tunnel drop shaft; and a
- Force main to convey flows from the tunnel pump station to DNRPs existing Ballard Siphon wet-weather barrel forebay.

SPU would be solely responsible for the design, construction, management and cost of gravity sewer lines to convey flows from SPU's diversion structures at Ballard outfalls 150, 151 and 152, and Wallingford outfall 147 to the tunnel drop shafts.[5]

Project Design Assumptions and Parameters

The control strategy will limit the inflow to the storage tunnel from each outfall basin for each storm event. The minimum control volume for each outfall is:

<u>SPU Outfalls</u>

- Fremont (Outfall 174): 1.06 MG
- Wallingford (Outfall 147): 2.15 MG
- Ballard (Outfall 152): 5.38 MG
- Ballard (Outfall 150/151): 0.62 MG

<u>DNRP Outfalls</u>

- 3rd Avenue West (DSN008): 4.18 MG
- 11th Avenue Northwest (DSN004): 1.85 MG

Each Party has calculated the control volumes required to meet their independent needs. Although calculation methods vary between the agencies, SPU and DNRP agree that these are the minimum volumes to be controlled and provided for by The Ship Canal WQ Project.

Ownership and Operation of the Facility

SPU would own and operate the storage tunnel and all of the related components listed in the project description above, including all new structures and pipes appended to each existing DNRP outfall pipe and all real estate previously owned or acquired for the project. However, ownership of outfall pipes would remain unchanged. Prior to commissioning of the project, SPU is compelled by the JPA to develop an Operations and Maintenance Plan that must be agreed to by DNRP. The JPA also stipulates a “No Impact Release Rate” to ensure pumping out of the storage facility does not impact the function of the

[5] These are components and costs of the project are referred to as “excluded” in the JPA

West Point Treatment Plant or cause King County to not meet its regulatory standards for discharges from West Point.

Project Costs and Cost Sharing

SPU and WTD aimed to define a method for sharing capital and operating costs in the joint project that ensures a "win-win" outcome, in which associated risks and rewards are apportioned equitably. The cost sharing methods incorporated into the JPA are based on three principles:

1. Controlling CSO's through joint multi-basin efforts may be less costly (or otherwise beneficial) than controlling the same CSOs individually;
2. Both SPU and WTD should share in the potential savings of such joint action; and
3. Projects or facilities within SPU or WTD's independent long term control plan responsibilities that are unaffected by the choice of a joint project should remain the responsibility of that agency.

SPU and WTD agreed to a Joint King County/Seattle CSO Initiative Work Plan Item 4: Cost-sharing Method for Joint Capital Projects, dated March 26, 2012 (Technical Memorandum No. 4) for the purpose of determining each agency's proportionate share of the total cost of The Ship Canal WQ Project. They also agreed to a Technical Memorandum 7, dated January 7, 2013, addressing a compensation methodology (costs and credits) for incremental changes to SPU wastewater flows that directly affect the operation and maintenance costs of DNRP facilities downstream of SPU facilities.

Cost estimates at a Class 4 level (with a range of minus 20 percent to plus 30 percent) were developed and cross-verified for each agencies' separate, individual projects. They also agreed on a total cost of a shared Ship Canal WQ Project. A proportionate share of the costs was allocated based on the 'avoided' costs of what otherwise would have been individual projects divided by the cost of the shared project (excluding costs solely the responsibility of SPU). This methodology arrived at the proposed split of costs with King County paying 35 percent of the shared costs and Seattle paying 65 percent. However King County will be entitled to 40 percent of the shared storage with Seattle using the remaining 60 percent.

The total cost estimate (still Class 4) for the Ship Canal WQ Project is approximately $423 million. This includes approximately $41 million in land acquisition costs and conveyance pipes that are solely the responsibility of SPU (referred to as excluded costs). Based on the agreed cost-sharing methodology, the cost for WTD is estimated to be $134 million and SPU's to be $289 million ($41 million for SPU's sole responsibility + $248 million for their proportionate share).

The JPA also spells out who will be responsible for fines or other costs related to discharges from outfalls that do not meet the regulatory standards and consent decree requirements.

Joint Project Agreement (JPA) – Section Descriptions
The following major elements are contained in the JPA:

Recitals (Article II):
- The Ship Canal WQ Project will not be used for any other basins or purpose than those defined in the JPA

Project Design & Construction (Article IV):
- SPU shall be the lead agency and will be responsible for the planning, design, construction, delivery, operation, maintenance
- SPU will notify DNRP in advance of project milestones
- DNRP and SPU will communicate collaboratively with the Department of Ecology and EPA
- SPU will follow DNRP's Local Public Agency project review process

Roles & Responsibilities (Article V):
- SPU will lead Project design, construction, commissioning, and operations; DNRP has a defined participation, review and inspection role at each stage of the Project
- Any changes that affect the Project Description (project scope, schedule or budget) will be resolved via the Change Management process

Project Management (Article VI):
- SPU will develop and implement the Project Management Plan
- Any changes to scope, schedule or budget will be resolved via the Change Management process (Exhibit B)
- Joint public outreach and communications

Ownership & Use (Article VII):
- SPU will own the Project
- The specific CSOs to be controlled by the Project, and the control volumes to be achieved are contained in this Article

Operations & Maintenance (Article VIII):
- SPU will develop an O&M Plan in consultation with DNRP
- Content requirements for the O&M Plan are defined in this Article
- The O&M Plan is to be finalized at the end of construction; The Article contains a general schedule for completion in relation to Project design and construction

Cost Sharing (Article IX):
- The Article contains the 65%/35% cost share split for non-excluded costs; SPU has a right to 60% of the volume, DNRP has a right to 40% of the volume
- Provisions for managing higher costs, allocating excess volumes, and addressing regular and continuous excess use capacity are contained in this Article

Insurance & Indemnification Articles XI & XII):
- Requires City and County risk managers from to cooperate in the development of an insurance program for design and construction of the Project

- Insurance and Indemnification Requirements developed with the County's Risk Management Office and County's legal counsel in the Civil Division of the PAO

Project Description (Exhibit A)

- This Exhibit describes the Project Purpose, Scope, Capital Cost Estimate (including the excluded costs) and a Schedule Summary
- Change to the project scope would need to be negotiated and agreed to by both SPU and DNRP through the "Change Management Process" (see below)

Change Management (Exhibit B)

- Addresses potential risks to the project by utilizing senior level management from each agency as a Project Review and Change Management Committee (PRCMC) to provide oversight, support and direction should issues arise affecting project scope, schedule and/or budget.
- PRCMC decisions intended to be made by consensus – and otherwise relies on Paragraph 12 of the "One Team Decision Making Guidelines" (Exhibit C)
- SPU leadership will convene meetings with a "Direction and Action Log" maintained and shared for each meeting in addition to meeting minutes.
- Includes direction for PRCMC involvement in Consultant Contract Amendments and Construction Contract Changes

One Team Decision Making Guidelines (Exhibit C)

- Outlines the goals of a Project Team during phases of the project with regard to decision making, team member interactions, responsibilities and what to do if a team member disagrees with the decisions of the team or Team Lead.
- Paragraph 12 calls for the Team Lead to make a project decision in the absence of consensus.

List of Potential Causes for Capital Cost Increases (Exhibit D)

- Assigns financial responsibility for potential capital cost increases to the Lead Agency (SPU) or Partner Agency (DNRP) or where the cost increase would be shared.

DNRP-WTD Invoice Format (Exhibit E)

- Titled to be the 'invoice format' – but is actually intended to provide the format for reporting of SPU costs (to accompany monthly invoices) ranging from staffing to mitigation.

ANALYSIS

Council staff and legal analysis of the proposed project and JPA is still ongoing.

In addition to PO 2016-0016 approving the Ship Canal Water Quality Joint Project Agreement, the Executive also transmitted PO 2016-0017 approving a supplemental appropriation for the Ship Canal WQ Project for approximately $14.2 million. This appropriation is requested to cover the DNRP's portion of the costs for the preliminary

analysis and design work, including costs from the years 2014 – 2015 and anticipated costs in 2016.

Though this is a separate decision of the Council, it should be noted that a supplemental appropriation and any first allocation of funding to a capital project is required by KCC 4A.130.010 to undergo an annual mandatory phased appropriation determination[6] if it exceeds $10 million. Capital project are required to receive an annual risk assessment score using a risk assessment scoring instrument developed by the Capital Projects Oversight Program in the Auditor's Office. For capital project supplemental appropriation requests, the Executive is required by KCC 4A.130.020 to transmit a risk assessment score, with the request. Within a reasonable time, the Joint Advisory Group (JAG) in consultation with the Capital Projects Oversight Program shall consider the project's risk assessment score and determine if the project is to be a mandatory phased appropriation project. At this time, the project risk assessment has not been received and the Oversight Program staff have not been briefed on the project yet.

The remainder of this analysis section of this staff report provides a preliminary assessment of how the Ship Canal WQ Project would meet the Consent Decree terms and King County's long term CSO control plan and how it compares to estimated costs for separate projects. Finally this section briefly summarizes policy considerations regarding the project and agreement.

Compliance with Consent Decree and Long-term CSO Control Plan

The Consent Decree contemplated potential joint projects between King County and Seattle. King County's long-term CSO control plan recommended the 3rd Ave W (DSN 008) CSO project be a joint Seattle-County storage tank on the north side of the Ship Canal. It was scheduled for completion in 2023 and proposed to hold up to 7.23 MG of peak CSO storage with the County's portion of the project estimated to be $50.3 million (in 2010 dollars and at a Class 5 cost estimate[7]). But as a fall back, the plan recommended an independent storage tank near Seattle Pacific University at an estimated cost of $56.4 million.

The 11th Ave NW (DSN 004) was proposed to be controlled by reducing some flows through green stormwater infrastructure (GSI) in the basin and additional conveyance capacity to move flows to the Ballard Siphon more swiftly at an estimated cost of $23.7 million. Because of the GSI component project wasn't scheduled to be completed until 2030.

DNRP has already begun discussions and would be seeking approval from EPA and Ecology to approve a modified schedule for completion of the 3rd Ave W. CSO control project and a change in the project description for the 11th Ave. NW CSO and 3rd Ave W. CSO control projects consistent with the Ship Canal WQ Project schedule and description. It is premature to formally request approval of the project changes until the Council has approved the project and the JPA. It is noted here as a potential (though

[6] The Council developed this code provision to determine which projects had significant risks, requiring monitoring of the project through design and construction, with requirements for written documentation and reviews as the project progressed through 'phases' prior to Council authorization of appropriation for the next phase.

[7] Class 5 estimates have a variance ranging from minus 50% to plus 100%

unlikely risk) that EPA and Ecology will need to approve the changed project scopes and schedules.

Cost Comparisons

As noted above, the total Class 5 cost estimate for CSO projects for 3rd Ave W. and 11th Ave NW was approximately $74 million (in 2010 dollars). Those cost estimates were based on long-range planning concepts for the projects in the 1999 Regional Wastewater Services Plan. Adjusting for inflation and typical project cost increases that estimate would be almost $86 million (with a range of $43 million to $171 million).

By comparison, the current estimate of $134 million for King County's portion of the costs in the Ship Canal WQ Project actually reflects a range (at a Class 4 cost estimate ranging from minus 20 percent to plus 30 percent) of $107 million to $174 million.

Council staff has not analyzed all the components of the cost estimates or assessed the accuracy of the estimates. Staff has provided the comparison of the separate projects to a shared project to note that the cost estimates are relatively similar. Executive staff have verbally noted that the shared project may cost about the same or slightly less than two separate projects. But rather than cost, the primary driver for the shared project is the opportunity to consolidate several complex projects under the coordinated leadership of a single entity while reducing environmental and community impacts.

There are different risks and benefits between controlling costs during the design phase for multiple complex projects compared to one larger complex project (see below).

Environmental and Community Impacts

Council staff has not done a detailed examination of the impacts of separate projects versus a joint project but logically it is assumed that one project versus seven lessen the impact on the immediate environment and the broader communities that would be affected by these projects.

Construction of one storage tunnel will involve the deployment of a single tunnel boring machine with portals constructed at either end. This single project could be expected to reduce traffic disruptions and other neighborhood impacts compared to tunneling or construction of storage is needed at seven different sites. The joint project as proposed would also require a reduced number of necessary property acquisitions, which would lower the impact on commercial businesses and residences.

Control over scope, schedule and budget

The JPA calls for Seattle to assume the project lead for design and construction of the project. King County's DNRP leadership would have an ongoing and defined role in decision-making, especially where it concerns any proposal to amend the scope or address issues affecting schedule and budget. However the day to day project management responsibilities would fall primarily to SPU staff. The JPA and attached Exhibits address decision-making and anticipated cost assignments where costs might escalate due to one party or the other not meeting deadlines or project conditions that cannot be known at this time. These same unknowns would likely exist for individual projects.

King County is required to complete the control of its CSOs under the terms of the consent decree. However, if the Council approves the Ship Canal WQ Project JPA through Proposed Ordinance 2016-0016 and the supplemental appropriation proposed through Proposed Ordinance 2016-0017 and allows the Executive to enter into the JPA, the County will be able to satisfy the consent decree obligations through the Ship Canal WQ Project. The JPA, if signed by both City and County would continue in perpetuity, unless both parties mutually agree to terminate it.

This aspect of the project reflects potentially the most risk and benefit. As noted above, though not quantified, there are potentially significant benefits to a coordinated single project in a dense, urban neighborhood, compared to multiple complex projects in this setting. However, there is also risk in assigning the project to Seattle and SPU to lead. Though DNRP will have a role in decision-making affecting the scope, schedule and cost of the project, it ultimately will be the Seattle's project to deliver on time and on budget.

Mitigating the risks for project scope alterations, etc. is outlined throughout the JPA but it is a policy decision whether what is outlined provides sufficient security and confidence for the project funders.

As noted above, staff and legal analysis is ongoing.

ATTACHMENTS

1. Proposed Ordinance 2016-0016 (and its attachments)
2. Transmittal Letter , dated December 29, 2015
3. Fiscal Note

INVITED

- Sharman Herrin, Governmental Relations Director, Wastewater Treatment Division
- Mark Buscher, Capital Project Manager and CSO Program Lead, Wastewater Treatment Division

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KING COUNTY

Signature Report

January 29, 2016

Ordinance

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Proposed No. 2016-0016.1 **Sponsors** Dembowski

AN ORDINANCE relating to King County's long-term combined sewer overflow plan; approving a joint project agreement with the city of Seattle for the ship canal water quality project and authorizing the King County executive to sign and fulfill the county's obligations in the agreement.

STATEMENT OF FACTS:

1. King County and the city of Seattle have entered into separate federal court-ordered consent decrees with the United States Environmental Protection Agency and the Washington state Department of Ecology requiring control of combined sewer overflows to the Lake Washington Ship Canal, Duwamish river and Elliott bay.

2. The 2012 combined sewer overflow long-term control plan, approved by Ordinance 17413 and incorporated into the consent decree, notes the potential for joint projects with the city.

3. The city of Seattle's Ballard and Fremont/Wallingford combined sewer overflow basins are located in close proximity to the county's 3rd Avenue West regulation and 11th Avenue Northwest regulation combined sewer overflow sites.

4. The coordination efforts of the county and the city have resulted in the proposed joint ship canal water quality project that will control four of the city's and two of the county's combined sewer overflow sites in the ship canal.

5. King County and Seattle agree that the joint ship canal water quality project is a preferred alternative over independently-constructed combined sewer overflow control projects by the county and the city.

6. The city of Seattle will serve as the lead agency for design and construction of the proposed ship canal water quality project, a 2.7-mile, approximately fourteen-foot diameter storage tunnel that will capture and temporarily hold more than fifteen-million gallons of stormwater mixed with sewage from seven combined sewer overflow sites during a storm event.

7. The county is seeking approval from the United States Environmental Protection Agency and the Washington state Department of Ecology of a modified schedule for completion of the 3rd Avenue West regulation combined sewer overflow control project and a change in the project description for the county's 3rd Avenue West regulation and 11th Avenue Northwest control projects consistent with the ship canal water quality project schedule and description.

8. The proposed ship canal water quality project will provide operational efficiencies based on the ability of the storage tunnel to control large flow volumes from adjacent basins in a single facility.

9. Construction of a single project, rather than six independent projects, will reduce environmental impacts and minimize neighborhood disruption.

10. King County and the city of Seattle have agreed to jointly cooperate in, and share funding of, the planning, design, construction and maintenance, as well as the long-term operation, repair, replacement, alteration and improvement of the ship canal water quality project as provided for in the proposed joint project agreement that is Attachment A to this ordinance.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. The King County council hereby approves the ship canal water quality joint project agreement, substantially in the form of Attachment A to this

ordinance, and authorizes the King County executive to sign and fulfill the county's obligations in the agreement.

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

_____

J. Joseph McDermott, Chair

ATTEST:

_____

Anne Noris, Clerk of the Council

APPROVED this _____ day of _____, _____.

_____

Dow Constantine, County Executive

Attachments: A. City of Seattle and King County Ship Canal Water Quality Project Joint Project Agreement

Seattle Public Utilities King County

Protecting Seattle's Waterways

City of Seattle and King County Ship Canal Water Quality Project Joint Project Agreement

October 28, 2015

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City of Seattle and King County

Ship Canal Water Quality

Joint Project Agreement

Article I - Agreement for Joint Project

I.1 This City of Seattle and King County Ship Canal Water Quality Joint Project Agreement ("Joint Project Agreement" or "Agreement") is made by and between the City of Seattle, a municipal corporation of the State of Washington, operating through its Seattle Public Utilities (SPU) department, and King County, a political subdivision of the State of Washington, operating through its Department of Natural Resources and Parks (DNRP), and collectively referred to as "the Parties."

I.2 The effective date of this Joint Project Agreement is the date of last approval signature of this Agreement ("Effective Date").

I.3 This Agreement between the Parties is for the purpose of jointly cooperating in, and sharing funding of, the planning, design, construction, operations, maintenance, repair, replacement, alteration, and improvement of The Ship Canal Water Quality Joint Project, hereinafter referred to as "The Ship Canal WQ Project" or "Project" as defined in Article III.18.

I.4 This Agreement is pursuant to the Guiding Principles dated September 18, 2013 and incorporated into the Term Sheet between the Parties dated November 15, 2013, as amended, and the Ballard-Fremont-Wallingford 3rd Ave. West and 11th Ave. Northwest Storage Tunnel Option (Joint Storage Option) Term Sheet between the Parties dated February 13, 2015, as amended.

I.5 The term of this Joint Project Agreement shall begin on the Effective Date and continue, in perpetuity unless the Parties, their successors or assigns mutually agree in writing to amend or terminate this Joint Project Agreement.

I.6 If a conflict exists between this Agreement and prior agreements incorporated into this Agreement (either attached as an Exhibit or by reference), then the Parties agree that the language in this Agreement shall control.

Article II - Recitals

II.1 The City of Seattle and the Municipality of Metropolitan Seattle ("METRO") entered into a long term "Agreement for Sewage Disposal", dated January 26, 1961, as amended (the "1961 Agreement"); and

II.2 In 1994, METRO merged with and became part of King County, now known as the King County Department of Natural Resources and Parks, Wastewater Treatment Division; and

II.3 The Parties have entered into separate federal court-ordered consent decrees with the U.S. Environmental Protection Agency ("EPA"), the Washington State Department of Ecology ("Ecology"), and the U.S. Department of Justice ("DOJ") requiring control of combined sewer overflows (CSOs) to the Lake Washington Ship Canal, Duwamish River, and Elliott Bay (Civil Action No. 2:13-cv-678("City's Consent Decree" dated July 3, 2013), and Civil Action No. 2:13-cv-677("King County's Consent Decree" dated July 3, 2013); and

II.4 The Parties entered into a set of Guiding Principles, dated September 18, 2013, incorporated into the Term Sheet dated November 15, 2013, ("Guiding Principles"), for the purpose of working together to deliver waste water and water pollution control services as efficiently and effectively as possible, including but not limited to partnering on combined sewer overflow (CSO) control projects; and

II.5 The Parties have identified a wastewater storage tunnel option to be located at the west end and on the north side of the Seattle Ship Canal as a preferred joint solution to control CSOs from the City's Ballard drainage basin outfalls 150, 151 and 152 and its Fremont/Wallingford drainage basin outfalls 174 and 147, and from DNRP's 3rd Avenue West outfall 008 and 11th Avenue Northwest outfall 004, as memorialized in the Shared West Ship Canal Tunnel Description and Schedule in the Ballard-Fremont/Wallingford Combined Sewer Overflow Reduction Project: Final Project Definition Report Volume 1, December 2014, incorporated herein by reference; and

II.6 The Parties entered into the Ballard-Fremont-Wallingford-3rd Avenue West and 11th Avenue Northwest CSO Control Storage Tunnel Option (Joint Tunnel Project) Term Sheet dated February 13, 2015, (the "2015 Term Sheet") setting forth the terms for further consideration of proceeding with the planning, design, construction, operations, maintenance, and joint funding of The Ship Canal WQ Project, for the control of CSOs to the Lake Washington Ship Canal; and

II.7 In accordance with the City's Consent Decree, SPU has a 2015 CSO Long Term Control Plan ("LTCP") approved by state and federal regulators,

identifying Shared West Ship Canal Tunnel (aka The Ship Canal WQ Project) as its preferred option to control CSOs at its Ballard, Fremont and Wallingford outfalls; and

II.8 SPU has also published a final State Environmental Policy Act, Programmatic Environmental Impact Statement ("EIS") dated December 4, 2014, for its CSO program and LTCP; and

II.9 DNRP has a 2012 CSO Long Term Control Plan Amendment approved by state and federal regulators identifying options to control overflows at its 3rd Ave .W. outfall (008) and 11th Ave. NW outfall (004) ; and

II.10 The Parties agree that The Ship Canal WQ Project is a preferred alternative over independently constructed wastewater control projects by the City or King County; and

II.11 DNRP is seeking approval from EPA and Ecology to a modified schedule for completion of the 3rd Ave W. CSO control project and a change in the project description for the 11th Ave. NW CSO and 3rd Ave W CSO control projects consistent with The Ship Canal WQ Project schedule and description; and

II.12 The Parties have mutually agreed to a "Seattle Public Utilities & King County Wastewater Treatment Division Coordination Plan" dated April 7, 2014 (The SPU/DNRP Project Coordination Plan) ("Coordination Plan"). The purpose of the Coordination Plan is to guide the Parties in executing both joint and individual CSO projects to efficiently and effectively achieve CSO control to comply with their respective Consent Decrees and other regulatory requirements; and

II.13 The Parties have agreed to use the Coordination Plan, as appropriate, for the purpose of ensuring coordination between SPU and DNRP and achieving efficient administration of The Ship Canal Project; and

II.14 The Parties have agreed to a Joint King County/Seattle CSO Initiative Work Plan Item 4: Cost-Sharing Method for Joint Capital Projects, dated March 26, 2012 (Technical Memorandum No. 4") for the purpose of determining each Party's proportionate share of the total cost of The Ship Canal WQ Project; and

II.15 The Parties have agreed in Joint King County/Seattle Initiatives Item 7: Incremental Costs and Credits Associated with Combined Sewer Overflow Return Flows and Other Seattle Flow-Changing Initiatives ("Technical Memorandum No. 7"), dated January 7, 2013, to a compensation methodology

for incremental changes to SPU wastewater flows that directly affect the operation and maintenance costs of DNRP facilities downstream of SPU facilities; and

II.16 The Parties have agreed that The Ship Canal WQ Project will be designed, constructed, operated, and maintained to manage CSOs from the seven basins described herein. Minimum Baseline control volumes (per Article III.6) for The Ship Canal WQ Project are:

A) King County CSO Outfalls:

• 11th Avenue Northwest Outfall number 004	1.85 million gallons (MG)
• 3rd Avenue West Outfall number 008	4.18 MG
	6.03 MG

B) SPU CSO Outfalls:

• Ballard Outfall numbers 150/151	0.62 MG
• Ballard Outfall number 152	5.38 MG
• Wallingford Outfall number 147	2.15 MG
• Fremont drainage basin: Outfall number 174	1.06 MG
	9.21 MG

The storage volume of the tunnel may increase due to design and/or other considerations. The Ship Canal WQ Project will not be used for any other basins or purpose unless mutually agreed by both parties in accordance with Change Management as defined in Article III.2 of this Agreement and described in Exhibit B; and

II.17 The Parties have agreed in the 2015 Term Sheet to No Impact Release Rates ("NIRR") for The Ship Canal Project as described in SPUs LTCP, CSO Control Measures Performance Modeling Report, January 2015, (Appendix L of the Final LTCP Volume 2, dated May 29, 2015); and

II.18 Both Parties have already expended funds on technical analyses and on preliminary design work (the "Preliminary Expenditures") in order to determine that The Ship Canal WQ Project is the preferred approach to managing DNRP and SPU CSOs in the West Ship Canal area. The Parties agree that the Preliminary Expenditures are a cost of the Project and are subject to the cost sharing percentages set forth in Section IX.1 through IX.3.

II.19 The Parties acknowledge that this Joint Project Agreement is intended to be binding on SPU and DNRP in perpetuity unless and until it is mutually terminated in accordance with Article XXII.2. The Parties also acknowledge that The Ship Canal WQ Project will require budget appropriations beyond the

respective current approved budget ordinances passed by the Seattle City Council and the King County Council, and thus will be subject to subsequent budget ordinance approvals by both Councils, as appropriate, to adequately fund The Ship Canal WQ Project; and

II.20 The Parties agree that the Recitals in this Article II are incorporated into and constitute a vital part of this Joint Project Agreement.

Article III - Definitions

III.1 **Capital Project Budget** means the annual budget of The Ship Canal Project, as described in the Project Description attached to this Agreement as Exhibit A. The baseline project budget is defined in in the Shared West Ship Canal Tunnel Description and Schedule in the Ballard-Fremont/Wallingford Combined Sewer Overflow Reduction Project: Final Project Definition Report Volume 1, December 2014.

III.2 **Change Management** means the process for evaluation, approval and oversight of changes to The Ship Canal Project attached to this Agreement as Exhibit B.

III.3 **Consent Decree(s)** means the federal court ordered consent decree(s) that the City of Seattle and King County have each entered into with the U.S. Environmental Protection Agency ("EPA"), the Washington State Department of Ecology ("Ecology"), and the U.S. Department of Justice ("DOJ") requiring control of combined sewer overflows (CSOs) to Lake Washington, the Lake Washington Ship Canal, Duwamish River, and Elliott Bay (Civil Action No. 2:13-cv-678 ("City's Consent Decree" dated July 3, 2013), and Civil Action No. 2:13-cv-677 ("King County's Consent Decree" dated July 3, 2013).

III.4 **Consent Decree Extension** means an extension of the construction completion date to achieve the regulatory standard for CSO control at any one or group of outfalls.

III.5 **Control Status** means control of a CSO Outfall as defined by WAC 173-245-020(22).

III.6 **Control Volume** means the volume of combined sewage overflow, as determined by each Party in their respective Long Term Control Plans and/or CSO control plans, required to be controlled through storage in The Ship Canal Project, to achieve control status of the seven CSO outfalls within The Ship Canal WQ Project, as defined in Article II.16.

III.7 **Cost Share(s)** means each Party's proportionate share of The Ship Canal Project's costs, as defined in Articles IX.1 through IX.3 of this Agreement.

III.8 **Flow Attribute Data** means measurements of flow volume and flow rate related to the operation of the Ship Canal WQ Joint Project including but not limited to:

- Water elevation upstream of each diversion point (City and Metro Datums)
- Water elevation downstream of gate at each diversion point (City and Metro Datums)
- Gate position at each diversion point to the tunnel
- Measured flowrate of any flow diverted to the tunnel
- Calculated flowrate of any flow diverted to the tunnel
- Cumulative flow diverted to the tunnel from each basin for the current event
- Total flow diverted to the tunnel for the current event
- Cumulative flow diverted to the tunnel from each basin for historic events
- Total flow diverted to the tunnel for the current event
- Water elevations in tunnel (City and Metro Datums) – upstream and downstream ends (plus any in the middle)
- Calculated volume of tunnel storage used
- Calculated volume of tunnel storage remaining
- Calculated available tunnel volume for each inflow location
- Metered pumped flow from the tunnel – from each pump and total flow
- Pump on-off indicators
- Pump speeds
- Volume pumped out of tunnel during current event

III.9 **No Impact Release Rate (NIRR):** are a set of time series data obtained from models, identifying available capacity at a specific point in the DNRP system after DNRP's future CSO control projects are on-line. The NIRR estimates when and how SPU can drain a storage facility or transfer captured CSO to a specific point in the DNRP system without adversely impacting DNRP facilities. Predicted performance of The Ship Canal WQ Project was analyzed using NIRRs in SPU's Long Term Control Plan, CSO Control Measures Performance Modeling Report, January 2015, (Appendix L of the Final LTCP Volume 2 dated May 29, 2015), incorporated herein by reference.

III.10 **Operation and Maintenance** means the activities performed on all The Ship Canal WQ Project equipment, facilities, systems and structures to assure they achieve their useful life and operate reliably and efficiently in accordance with the principles and guidelines of the Operations and Maintenance Plan.

III.11 **Operations & Maintenance Plan** means the plan setting forth the operating and maintenance principles, and protocols for coordination and communication between SPU and DNRP, and the control strategy and means for monitoring, controlling and regulating the functions of The Ship Canal WQ Project.

III.12 **Peak Flow Event** means any storm event that causes a CSO at any outfall served by The Ship Canal WQ Project, when operated in accordance with the Operations and Maintenance Plan.

III.13 **Post-Construction Monitoring** means the monitoring required by an approved Post Construction Monitoring Plan (PCMP) in accordance with City's and King County's Consent Decrees as well as any additional post-construction monitoring or modeling activities included in any Supplemental Compliance Plan, if needed..

III.14 **Preliminary Expenditures** means costs incurred for, but not limited to, planning, technical analyses, and preliminary design work associated with evaluating the feasibility of The Ship Canal WQ Project.

III.15 **Project Management Plan (PMP)** defines the basis of all work, and describes the processes to be used to plan and deliver The Ship Canal WQ Project through design, construction, and commissioning.

III.16 **Soft Costs** means the fully burdened labor and administrative costs for the planning, design, construction, and commissioning of The Ship Canal WQ Project. Soft Costs include both consultant and agency costs, but excludes costs for materials testing during construction, land survey, and SPU and/or DNRP crew construction costs.

III.17 **Storage Volume** means the total internal volume of The Ship Canal WQ Project available to store wastewater, estimated to be a minimum of 15.4 million gallons.

III.18 **The Ship Canal WQ Project** means the Ship Canal Water Quality Project (SPU Project Number C314056) as described in the Project Description, attached to this Agreement as Exhibit A.

Article IV - Project Design & Construction

IV.1 SPU shall be the lead agency and will be responsible for the planning, design, construction, delivery, operation, maintenance, repair, alteration, monitoring, improvement and support of The Ship Canal WQ Project in

accordance with the terms and conditions of this Joint Project Agreement, Exhibits, and documents incorporated into this Agreement by reference.

IV.2 SPU will execute The Ship Canal WQ Project utilizing the Project Management Plan ("PMP"), as described in Article VI, or as otherwise modified and approved through the Change Management process in accordance with Exhibit B, or by mutual agreement of the Parties.

IV.3 SPU will design The Ship Canal WQ Project for the following:

- Provide Storage Volume, as defined in Article III.16., which is, at a minimum, the aggregate of the seven contributory basin Control Volumes. Any increase in storage volume above and beyond the minimum control volume shall be evaluated through Change Management process (Exhibit B) and Cost Share provisions in accordance with Article IX.
- Ensure each CSO served by the Project is able to use its assigned volume when needed during Peak Flow Events through the use of active controls.
- Preserve existing outfall flow path capacity to retain existing upstream water levels during Peak Flow Events.
- Meet the parameters of the No Impact Release Rates ("NIRR") in accordance with Article III.9. Any changes to the NIRR must be evaluated in accordance with the Change Management process (Exhibit B) and the Cost Share provisions of Article IX.

IV.4 DNRP and SPU will communicate with the Department of Ecology and EPA in a coordinated and collaborative manner and work together to address any subsequent actions that may be needed to keep each Party in compliance. This will include but is not limited to the following:

- Jointly develop a written regulatory strategy to gain approvals from Ecology and EPA for The Ship Canal WQ Project for design, construction, operation and maintenance.
- The regulatory strategy will include communication concerning impacts to up or down stream DNRP or SPU facilities, a process for independent and joint submittals, and regularly scheduled briefings with regulators on their respective Consent Decrees.
- Consistent with the Joint Operations and System Optimization Plan required in both Parties Consent Decrees, each Party will review language pertaining to The Ship Canal WQ Project in each other's annual CSO and Consent Decree reports or other regulatory documents to ensure that each Party is aware of and in agreement with the language.
- DNRP and SPU will work together to prepare summaries of the meetings with Ecology and EPA and conduct follow-up as appropriate.

IV.5 Each Party will be responsible for reporting to EPA and Ecology milestone completions of The Ship Canal WQ Project in compliance with the reporting

requirements of the Parties' respective Consent Decrees and applicable NPDES permits, Long-Term Control Plans and Post Construction Monitoring Plans.

IV.6 SPU will notify DNRP, within thirty (30) calendar days, of substantial and relevant milestones during the construction of The Ship Canal WQ Project. Prior to completion of the Project, SPU will provide DNRP sixty (60) calendar days written notice of the start-up of operations of that facility and that SPU will begin delivery of increased flows from that facility to the Ballard Siphon, pursuant to the terms and conditions of this agreement. DNRP will provide to SPU sixty (60) calendar days written notice of the transfer of flows from 3rd Ave. W and 11th Ave. NW to The Ship Canal WQ Project pursuant to the terms and conditions of this agreement. Prior to commissioning of the Project, SPU and DNRP will document operating assumptions, agreed upon release rates, and any other relevant agreements concerning upstream and downstream flow impacts.

IV.7 SPU will follow DNRP's Local Public Agency project review process as described in the SPU/DNRP Project Coordination Plan as amended, including providing DNRP with as-built drawings for The Ship Canal WQ Project and ancillary facilities upon project completion and/or any future modifications. SPU will submit draft as-built drawings to DNRP prior to commissioning of The Ship Canal WQ Project facilities and final as-built drawings to DNRP within 6 months after Construction Completion as defined in the Consent Decree.

IV.8 DNRP will follow a similar review process as outlined in Article IV.7 to inform SPU of future changes to DNRP's upstream facilities that may impact The Ship Canal WQ Project.

Article V - Roles & Responsibilities

V.1 SPU, in consultation with DNRP, shall develop a schedule for implementation of this Agreement including all deliverables. The schedule will be developed within sixty (60) calendar days of the Effective Date of this Agreement.

V.2 SPU shall be the lead agency responsible for compliance with the State Environmental Policy Act (SEPA), designing, constructing, commissioning, and operating and maintaining The Ship Canal WQ Project. DNRP shall coordinate and cooperate with SPU on all phases of The Ship Canal WQ Project and shall

review and provide timely input to SPU on its facility design, permitting, construction, commissioning, and operations plans, details and specifications. Both Parties are responsible for working together for the benefit of The Ship Canal WQ Project to reach agreement on any outstanding issues or disputes that may arise during all phases of the project.

V.3 SPU shall be responsible for all design drawings and specifications and any other pertinent documentation relating to the design, construction, and operation of The Ship Canal WQ Project. DNRP shall be responsible for coordinating with SPU and providing review and input on those design drawings and specifications throughout the design process. SPU's responsibility and authority is as follows:

- Engage DNRP in continuous and uninterrupted participation in design process through Task Forces, workshops, value engineering sessions, and reviews, etc.
- Actively seek DNRP Subject Matter Experts (SME) involvement in the design process.
- Provide DNRP with work in progress/design-submittals including but not limited to 30%, 60%, and 90% design phases. Also provide information requests as required for SME's to follow and review design progress.
- Provide designers of record with comments at 30%, 60%, and 90% design phases within twenty (20) working days of receipt. SPU comments to the designer will include all DNRP comments and recommendations.
- Any and all comments and recommendations made by either Party that are inconsistent with each other shall be resolved in accordance with the One Team Decision Making Guidelines (Exhibit C), attached to this Agreement, to both parties' mutual satisfaction. Comments that require more than twenty (20) working days to resolve shall be addressed within the succeeding design phase package.
- Any changes that affect the Project Description (project scope, schedule or budget) as defined in Exhibit A of this Agreement shall be resolved in accordance with the Change Management process (Exhibit B) attached to this Agreement.
- SPU shall give DNRP the opportunity to review and comment on all design elements of the Project. SPU recognizes and understands that DNRP has high interest and will focus its review and participation in the design process, including but not limited to the following elements:
    - CSO flow management to limit control volume allocations as specified in Article II.16

- Tunnel drain rate to ensure the NIRR will be met
- Tunnel flow control strategies and associated instrumentation and controls (I&C) to ensure compatibility w/DNRP operations, including solids flushing through the Ballard Siphon
- Areas of interface with DNRP facilities
- Areas to reduce project lifecycle costs, improve reliability and/or function.

V.4 SPU shall execute and administer all construction contracts for The Ship Canal WQ Project in accordance with scope, schedule, budget and approved plans and specifications including and subject to the following:

- Prior to issuance of notice to proceed, SPU will meet with project team members including DNRP. DNRP shall identify construction documents to be reviewed by DNRP.
- SPU will provide construction documentation including, but not limited to, Submittals, Requests for Information (RFIs), and Change Requests that involve DNRP's system components to DNRP for review and comment via SPU's electronic document management system.
- SPU will provide all progress and schedule updates to DNRP via SPU's electronic document management system.
- SPU will make all contract change documents available for DNRP review.
- SPU will follow the approval guidelines set forth in Change Management, Exhibit B.
- DNRP will have the right but not the obligation to provide construction management staff to observe construction at its own cost. All DNRP comments concerning the progress and quality of construction will be given only to SPU Construction Management staff.
- SPU and DNRP will each make their respective requests to the other agency using Exhibits B and C when either agency proposes a change to the project that will affect the terms of the construction contract.

V.5 SPU shall be responsible for commissioning The Ship Canal WQ Project. DNRP shall coordinate and cooperate with SPU and shall review and provide input on plans and specifications for commissioning and for coordinating commissioning activities between SPU staff and staff at the West Point Treatment Plant. Roles and responsibilities for the commissioning process shall be as follows:

- SPU shall be responsible to produce the startup and commissioning plan as part of the design and construction phase for The Ship Canal WQ Project.
- DNRP shall be responsible for providing review and input throughout development of the specifications and implementation of the startup

and commissioning plan. The review and input process shall consist of the following:

  - SPU will include DNRP in the development of specifications for the startup and commissioning process through planning workshops and task forces that include both SPU and DNRP staff, and through direct engagement of subject matter experts from both Parties.
  - The Ship Canal WQ Project contractor will be required to provide to SPU a Commissioning Plan a minimum one hundred eighty (180) calendar days prior the start-up of any major component.
  - Upon receipt from the contractor, SPU shall forward the draft Startup and Commissioning Plan to DNRP for review at least one hundred twenty (120) calendar days prior to the startup of any major component of The Ship Canal WQ Project.
- DNRP shall complete its review and provide input to SPU within thirty (30) calendar days of receipt of the draft Startup and Commissioning Plan.
- During commissioning and startup, SPU shall notify DNRP at least sixty (60) calendar days prior to conveying initial flows from The Ship Canal WQ Project into DNRP's regional system.
  - Flows of wastewater from The Ship Canal WQ Project shall be coordinated with designated DNRP staff regarding operations and monitoring of the West Point Treatment Plant.
  - DNRP shall provide a construction management or operations staff member(s) on site for testing during the commissioning process of The Ship Canal WQ Project to ensure agreed-to specifications are being met; and, to coordinate with designated DNRP staff regarding operations and monitoring of the West Point Treatment Plant.

V.6 SPU shall be responsible for operating the completed Project tunnel and associated equipment to control CSOs to meet the Consent Decree Performance Standards in accordance with WAC 173-245-020(22) and the control volumes specified in Article II.16 of this Agreement. Roles and responsibilities for operations and maintenance of The Ship Canal WQ Project will be as follows:

- SPU is responsible to develop an Operations and Maintenance Plan that includes, at a minimum, the Standard Operating Procedures (SOPs) described in Article VIII.1 of this Agreement.
- DNRP shall be responsible for providing review and input for developing the Operations Plan
- SPU shall include DNRP in development of the Operations and Maintenance Plan through workshops and task forces as may be appropriate that include both SPU and DNRP staff, and through direct engagement of Subject Matter Experts' from both organizations. SPU shall forward an Operations and Maintenance Plan to DNRP for review and input at least one hundred twenty (120) calendar days prior to the startup of any major system of The Ship Canal Water Quality Project.

- SPU will provide at least sixty (60) calendar days for DNRP to review and provide input and comment to the Operations and Maintenance Plan; and for both Parties to reach agreement on input received.
    - SPU shall incorporate DNRP's input and comment(s) or provide written explanation as to why DNRP comments cannot be incorporated.
    - Any disputes will be resolved in accordance to the One Team Decision Making Guidelines (Exhibit C) to both parties' mutual satisfaction.
    - SPU will finalize the Operations and Maintenance Plan prior to construction completion.
- Both Parties shall utilize the Change Management process specified in Exhibit B to this Agreement to modify or amend the completed and approved Operations and Maintenance Plan.
- SPU will provide DNRP opportunity to review and comment within thirty (30) calendar days of receiving draft and final operations and maintenance plans, comments from regulatory agencies, final plans, specifications, agreements, and scopes of work for any consultants and contractors to be retained, and any other pertinent documentation relating to the operation and maintenance of The Ship Canal WQ Project.
- Upon request by either Party, SPU and DNRP shall conduct joint post-storm event debriefs following commencement of operations of the Ship Canal WQ Project to control CSOs in accordance with the Post Construction Monitoring Plan per Article VIII.8
- SPU and DNRP will work jointly to optimize The Ship Canal Water Quality Project operations and maintenance, and will meet annually to assess and document performance of The Ship Canal WQ Project in accordance with Article VIII of this Agreement.
- SPU will operate and maintain the Ship Canal WQ Project and associated equipment according to the final Operations and Maintenance Plan per Article VIII of this Agreement.
- SPU to the best of its ability will notify DNRP in writing of maintenance activities on The Ship Canal WQ Project facilities so that DNRP can coordinate such maintenance activities with the operations of its West Point Treatment Plant.
- SPU shall provide DNRP an annually updated list of maintenance activities and equipment changes as described in Article VII.7 of this Agreement.

Article VI - Project Management

VI.1 SPU will prepare and implement the Project Management Plan (PMP) for The Ship Canal WQ Project. The PMP shall describe the processes that will be used to plan and deliver The Ship Canal WQ Project to completion. The Parties agree that the PMP when finalized and as amended from time to time will be incorporated into the Agreement by reference. SPU will make available to DNRP all progress and status reports required as a part of the PMP. The PMP will include, but will not be limited to the elements described in Articles VI.2 through VI.8 below.

VI.2 SPU will retain the services of design consultants to prepare detailed drawings and specifications for The Ship Canal WQ Project. Review and comment of all detailed drawings and specifications shall follow the process contained in Article V.3.

VI.3 SPU will be responsible for the production of the facility plan, control strategy, final plans and specifications, scopes of work for engineering consultants and contractors to be retained, and any other pertinent documentation relating to the design, construction, and operation of The Ship Canal WQ Project. Review and comment of all documentation relating to the design, construction, and operation of The Ship Canal WQ Project shall follow the process contained in Article V.3.

VI.4 The Parties will jointly develop and coordinate the implementation of a public outreach and communication plan for impacted communities, regulators, media, neighborhoods and businesses affected by implementation of The Ship Canal WQ Project. During design and construction, the joint media and communications task force will oversee and direct this effort. Post construction, the Parties will each appoint a media and communications representative to work together on developing an operations and maintenance communication strategy that will include community outreach for operations, maintenance and emergency response activities.

VI.5 The Parties jointly agree to utilize and comply with the Change Management process as provided in Exhibit B which provides processes and procedures for changing the scope, schedule, or Capital Project Budget, as well as thresholds and required approvals for each type of change to The Ship Canal WQ Project.

VI.6 In consultation with DNRP, SPU may create Task Forces, defined as committees of subject matter experts that are assigned a specific responsibility to assist in the planning, design, construction, delivery, operation, maintenance, repair, alteration, monitoring, improvement and/or support of The Ship Canal WQ Project. Each Task Force will be composed of SPU or DNRP staff, or both, and will have a written charter addressing, including but not limited to, staff roles and responsibilities, a defined purpose, identified deliverables, set of tasks, who the task force reports to, and a schedule to complete their specific tasks and objectives.

VI.7 The Parties agree that The Ship Canal WQ Project shall be bid, contracted for, designed, and constructed in accordance with State and local law applicable to City of Seattle public works projects.

VI.8 Because a portion of the Project will be conducted on County owned property and/or for the benefit of the County, the contracts between SPU and its contractors, consultants and designers will include the following requirements:

- With respect to any and all of the County's interests, SPU, and the consultants/contractors will acknowledge that the County is an intended third party beneficiary of the design, construction management and construction contracts;
- SPU and the contractor will include the County as a named third party beneficiary of the SPU design, construction and construction management contracts; and
- SPU and the consultants/contractor will include the County in the indemnification and insurance provisions contained in the SPU contracts. SPU and the County do not intend that this paragraph be interpreted to create any obligation, liability, or benefit to any third party, other than SPU and the County for purposes of the design and construction of the Project.

Article VII - Ownership and Use of The Ship Canal WQ Project

VII.1 SPU will own the completed Ship Canal WQ Project, and shall be responsible for operation, maintenance, permitting, monitoring, replacement, repair, alteration, and improvement of The Ship Canal WQ Project, with the Parties sharing all costs and expenses related to such operation, maintenance, permitting, monitoring, replacement, repair, alteration, and improvement of The Ship Canal WQ Project in accordance with the cost share terms of Article IX of this Joint Project Agreement.

VII.2 In consideration for and subject to fully and continually meeting its cost share obligations as defined under Articles IX.1 through IX.3, DNRP shall have the right to use 6.03 MG gallons of the Storage Volume of The Ship Canal WQ Project in accordance with Article II.16. SPU shall have the right to use 9.21 MG of the Storage Volume of The Ship Canal WQ Project in accordance with Article II.16.

VII.3 Ownership of the outfall structures for the seven outfalls to The Ship Canal WQ Project as listed below will be retained by the Party to this Agreement that owns each outfall as of the Effective Date of this Agreement:

A) King County Outfalls by NPDES number:

- 004: 11th Ave N.W
- 008: 3rd Ave West

B) SPU Outfalls by NPDES number:

- Ballard drainage basin: Outfall numbers 150,151 and 152
- Fremont drainage basin: Outfall number 174
- Wallingford drainage basin: Outfall number 147

VII.4 DNRP shall work with SPU to secure necessary permissions and permits to access DNRP-owned land, rights-of-way and facilities for the purpose of planning, design, construction, operation, maintenance, repair, replacement, alteration, and improvement of The Ship Canal WQ Project, including but not limited to all Ship Canal WQ Project-related conveyance facilities, devices, structures, and any flow monitoring required to convey, measure and control combined flows to The Ship Canal WQ Project and from The Ship Canal WQ Project to the DNRP's regional wastewater system as long as this Agreement remains in effect.

VII.5 In the event that any County-owned property interest becomes subject to any claims for mechanics', artisan's, materialmen's liens or other encumbrances chargeable to or through the City for work related to The Ship Canal WQ Project, that the City does not contest, the City shall cause such lien, claim or encumbrance to be discharged or released of record (by payment, posting of bond, court deposit or other appropriate means) without cost to the County and shall indemnify the County against all costs and expenses (including attorney's fees) incurred in discharging and releasing such claim, lien or encumbrance prior to completion of The Ship Canal WQ Project.

Notwithstanding any language herein to the contrary, SPU's Contractors retained for The Ship Canal WQ Project work shall be responsible for any damage done to DNRP-owned property and shall promptly repair such damage.

VII.6 Once constructed, SPU shall retain ownership and title to all storage and conveyance facilities, devices, connections, structures, equipment and flow monitoring equipment, as well as all real property required for the operation, support, maintenance, repair, improvement, and administration of The Ship Canal WQ Project as defined in the Project Description (Exhibit A), unless otherwise agreed to in writing by the Parties. Notwithstanding anything in this section or in this Agreement, DNRP shall retain ownership of any property or property interests it owned as of the Effective Date of this Agreement.

VII.7 SPU will provide DNRP an annual, updated list of all storage and conveyance facilities, devices, connections, structures, flow monitoring equipment and other equipment required for the operation of The Ship Canal Project. The updated list will include facility location information and any anticipated changes, including maintenance, to the facilities, devices, connections, structure, flow monitoring or other equipment anticipated in the next 5 years.

VII.8 DNRP will provide SPU with an annual, updated list of all storage and conveyance facilities, devices, connections, structures, flow monitoring

equipment or other equipment related to DNRP facilities upstream of or connected to The Ship Canal Project. The updated list will include facility location information and any anticipated changes, including maintenance, to the facilities, devices, connections, structure, flow monitoring or other equipment anticipated in the next 5 years.

Article VIII - Operations & Maintenance

VIII.1 In consultation with DNRP, SPU will complete development of an Operations and Maintenance (O&M) Plan as defined in Articles III.10 and III.11, simultaneously with the completion of project design.

The Final O&M Plan shall address how the Project will limit the inflow to the Ship Canal WQ Project from each outfall to each outfall's control volume per event, specify processes and procedures for the monitoring, control and regulation of the completed Ship Canal WQ Project that will control CSO basins as defined in Article II.16. The O&M Plan should include methods to minimize life-cycle costs and achieve the goals and requirements of the Parties' respective LTCP/CSO Control Plans, their respective Consent Decrees and NPDES permits.

SPU shall engage DNRP in continuous and uninterrupted participation throughout development of the O&M Plan. DNRP shall be responsible for providing SPU with timely review comments and recommendations of all materials. All comments and recommendations made by either agency that are inconsistent with each other, shall be resolved to both Parties' mutual satisfaction through the One Team Decision Making Guidelines (Exhibit C) and Change Management (Exhibit B).

The O&M Plan shall include operation and maintenance elements contained in the Department of Ecology's "Criteria for Sewerage Works Design" (Publication No. 98-37 WQ) or its successor and WAC 173-240-080 or its successor. Additionally, the operation and maintenance elements listed below are to be used as guidance during development of the O&M Plan.

- Monitoring requirements, quality control, and responsibilities
- Monitoring and Modeling Plan
- Staffing Plan, that requires certified operators with collection system endorsement and confined space entry certification
- Real-time sharing of Flow Attribute Data, as defined in Article III.8, from the Joint Tunnel and from each basin connected to the Joint Tunnel
- Operating control strategy and change process

- Real-time control and reporting strategy
- Process to evaluate facility performance
- Decision making strategy and protocols for facility changes over time
- Start-up and commissioning plan
- Emergency response protocols
- Optimization plan
- Inter-agency Communication protocol
- Change management process
- Detailed Standard Operating Procedures (SOPs)

The O&M Plan shall also include maintenance elements contained in the Department of Ecology's "Criteria for Sewerage Works Design' (Publication No. 98-37 WQ) or its successor, and WAC 173-240-080 or its successor. Additionally, the O&M Plan should include a Maintenance staffing plan that includes number of staff with mechanical, electrical and instrumentation and controls (I&C) disciplines, and confined space entry certification.

Development of the O&M Plan shall occur during the Design and Construction phases for the Project to ensure that operation and maintenance are considered during those phases. Progress on the O&M Plan should proceed at the following pace in relation to design and construction:

60% Design	O&M Plan at 30%
90% Design	O&M Plan at 60%
80% Construction	O&M Plan at 85%
Operational Testing	O&M Plan at 95%
Construction Completion	O&M Plan Finalized

The Final O&M Plan shall be executed by SPU and DNRP and will be incorporated into this Agreement by reference.

VIII.2 DNRP and SPU agree to cooperate in the implementation and optimization of the Operations and Maintenance Plan and to work cooperatively on any update, modification, or amendment to the Operations and Maintenance Plan as may be necessary or desirable, as experience is gained with the operation of The Ship Canal WQ Project.

VIII.3 DNRP and SPU agree to meet annually to assess and document performance of the Ship Canal WQ Project and up and downstream impacts during the first five years following Project start-up, or more frequently if necessary due to operational and regulatory compliance issues. Annual meeting topics may include but are not limited to the following:

- Monitoring and overflow results from the current and previous years
- Comparison of the modeled and monitored data for the current and previous years, if appropriate
- Facility performance and operations adjustments
- Impacts to SPU's and DNRP's up and downstream systems, including discussion of thresholds for developing and executing action plans
- Potential improvements to communications and/or operations coordination
- Short-term operational adjustments or capital improvements to mitigate impacts, if necessary
- Flow monitoring changes, if necessary
- Regulatory compliance issues and response plans, if necessary.

VIII.4 The Parties agree that The Ship Canal WQ Project will be designed and operated to control the flow of grit, settleable solids and debris so as not to impair the capacity of the Ballard Siphon. If it is jointly determined grit, settleable solids or debris from the The Ship Canal WQ Project is adversely affecting the Ballard siphon, SPU will work with DNRP to draft an alternatives analysis to diagnose the problems and propose solutions, evaluating both independent and joint control, maintenance, or repair measures. The proposed solutions will be reviewed by the Joint Oversight Committee as defined in Article XIV.2; and the cost share for the solution(s) implemented shall be negotiated by the Joint Oversight Committee.

VIII.5 SPU will operate The Ship Canal WQ Project within the parameters of the No Impact Release Rates ("NIRRs") in accordance with Article III.9. SPU will also develop NIRRs for The Ship Canal WQ Project to assess potential impacts from flows entering the tunnel. Optimization of these NIRRs will occur jointly and will be described in the Operations and Maintenance Plan.

VIII.6 Prior to commissioning The Ship Canal WQ Project, SPU and DNRP will document all operating assumptions, and any relevant agreements concerning upstream and downstream flow impacts.

VIII.7 Start-up and commissioning of The Ship Canal WQ Project will be conducted jointly as defined in the term sheet and the SPU/DNRP Project Coordination Plan as amended.

VIII.8 SPU and DNRP will prepare a joint draft and final Monitoring and Modeling Plan for The Ship Canal WQ Project, and a five-year Post-Construction Monitoring Plan (PCMP), as defined in Article III.13.

VIII.9 SPU and DNRP shall jointly prepare a draft and final Monitoring and Modeling Report that summarize the results of the baseline period prior to the

increased flows from SPU's Ship Canal WQ Project and five-year post-construction monitoring effort. The specific tasks involved in preparing the report will include but not be limited to:

- Description of the baseline monitored peak flows and volumes at the monitoring locations
- Comparison of baseline monitored peak flows and volumes to monitored post-construction peak flows and volumes and the NIRRs
- Comparison of the monitored flows to the modeled flows
- Description of the total increase in flow volume from SPU Basins (150, 151, 152, 147, 174) to relevant DNRP facilities for calculation of the incremental O&M charges
- Description of any hydrologic/hydraulic modeling work
- Description of the impacts of the increased flows on any DNRP facility including treatment effectiveness at the West Point Treatment Plant and all other related regulatory compliance or operational issues.
- Description of impacts of increased flows and storage volume impacts to The Ship Canal WQ Project above and beyond those defined in Article II.16.

VIII.10 In the event it is necessary to meet the Parties' Consent Decree requirements and/or other regulatory requirements, following the issuance of the Final Monitoring and Modeling Report, the Parties shall work together in preparing a draft and final Post-Monitoring Action Plan to summarize regional and local impacts and recommend actions to mitigate any adverse impacts. The Post-Monitoring Action Plan will include but is not limited to the following:

- Short-term operational adjustments to mitigate impacts
- Long-term operational/capital improvements to mitigate impacts
- Recommended actions necessary to meet regulatory requirements
- Costs and schedules for implementation
- Adaptive management approaches or strategies appropriate to mitigate impacts

Article IX - Cost Sharing

IX.1 DNRP will pay to SPU 35.0% of all costs of The Ship Canal WQ Project as defined in Article III.18 and in accordance with Article IX.3, including all costs

associated with operations and maintenance in accordance with the final Operations and Maintenance Plan, except as specifically otherwise provided by this Agreement.

IX.2 SPU will pay 65.0% of all costs of The Ship Canal WQ Project, as defined in Article III.18 and in accordance with Article IX.3, including all costs associated with operations and maintenance in accordance with the final Operations and Maintenance Plan, except as specifically otherwise provided by this Agreement.

IX.3 The cost share percentages in Article IX.1 and IX.2 will apply to the allocation of all non-excluded costs of The Ship Canal WQ Project. These include but are not limited to project planning, design, land acquisition, permitting, construction, mitigation required by SEPA, commissioning, operation, maintenance, repairs, replacements, alterations, improvements, monitoring and modeling, and 1% for the arts as applicable, except as excluded by King County Ordinance No. 12089.

There are components of the Project that are associated with SPU's CSO control solution in the Ballard and Wallingford basins that are being constructed by SPU and that, consistent with Technical Memorandum No. 4, are to be funded in their entirety by SPU. No costs associated with these components shall be borne by DNRP, including but not limited to project planning, design, land acquisition, permitting, construction, mitigation commissioning, operation, maintenance, repairs, replacements, alterations, improvements, monitoring and modeling, and 1% for the arts. The Ship Canal WQ Project, as defined herein, does not include the components excluded from cost sharing in accordance with those described in Exhibit A and the SPU purchase of parcel numbers 046700-0423 and 046700-0431 (former Yankee Grill site) in Ballard.

IX.4 Any alteration or improvement to The Ship Canal WQ Project following completion that is required by regulation or a Consent Decree, or as may be mutually agreed upon by the Parties through the Change Management process, Exhibit B, shall require an options analysis, and include consideration of both independent and joint control measures.

IX.5 The Parties agree that Soft Costs, as defined in Article III.16., shall be subject to the following:

- At the beginning of each year and continuing through the construction and commissioning of The Ship Canal WQ Project, SPU and DNRP will agree to an annual Soft Costs budget.
- The annual Soft Costs budget will be the Parties' annual limit of Soft Costs charges for The Ship Canal WQ Project.
- The Soft Costs budget will be a part of the total cost of The Ship Canal WQ Project, and will be subject to the Cost Share provisions of Article IX.1 through IX.3 of this Agreement.

- If a Capital Cost Increase is solely due to an increase in Soft Costs, the Change Management process will be utilized.

IX.6 Proceeds or monies received by SPU or DNRP, either individually or jointly, for the benefit of The Ship Canal WQ Project, including but not limited to the award of grants or loans, any insurance proceeds, recovery of any damages, judgments, settlements, or tax adjustments or deferrals, shall benefit SPU and DNRP in proportion to their contributed share of payments for The Ship Canal WQ Project as defined by the cost share percentages in Article IX.1, IX.2 and IX.3 above. If land purchased, in whole or in part, for The Ship Canal WQ Project and paid for by the Parties in accordance with the cost share percentages in Article IX.1, IX.2, and IX.3 is subsequently sold or declared surplus as no longer needed for construction or operation of The Ship Canal WQ Project, then the proceeds of the sale shall be credited to each Party in proportion to their contributed share of The Ship Canal WQ Project in accordance with the cost share percentages in Article IX.1, IX.2 and IX.3, above.

IX.7 Capital Cost Increases, which are costs of planning, design, permitting, construction, mitigation, completing, and commissioning The Ship Canal WQ Project that exceed the Capital Project Budget, will be paid for by the Parties using the cost share percentages in Articles IX.1 and IX.2, subject to Articles IX.9, and IX.10 below.

IX.8 SPU will implement a cost monitoring and reporting system as part of the PMP, which shall document costs incurred and progress to date on The Ship Canal WQ Project, along with any reporting in accordance with the PMP and Article X of this Agreement.

IX.9 The Parties will share Capital Cost Increases exceeding the Capital Project Budget that would have occurred regardless of which Party is in the lead, in proportion to their shares of The Ship Canal WQ Project costs as defined by the cost share percentages in Article IX.1, IX.2, and IX.3 above.

IX.10 As a guide for determining whether a Capital Cost Increase exceeding the baseline Ship Canal WQ Project Budget, as defined in Article III.1, is to be a shared cost, or exclusively a cost to SPU or DNRP, SPU will refer to the "List of Potential Causes for Capital Cost Increases" contained in Exhibit D.

IX.11 The Project shall be designed and constructed to meet the aggregate of the minimum control volumes stated in Article II.16 and in the Project Description. Storage volume in excess of the stated minimum control volumes may come from one or both of the following:

- Tunnel system components, refinements, non-discretionary changes, and contractors' means and methods ("Excess Volume")
- Discretionary changes to the Project Description ("Discretionary Excess Volume")

Allocation of Excess Volume is defined in Article IX.12. Allocation of Discretionary Excess Volume is defined in Article IX.13.

IX.12 Excess Volume, excluding Discretionary Excess Volume, is volume obtained incidentally during design and construction of the Project, in accordance with the Project Description, and is anticipated from one or more of the following:

- Portals and down-shafts
- The pump station wet well
- Non-discretionary Project revisions and refinements (adjustments to the tunnel alignment, portal diameters, etc.)
- Contractor means and methods that meet the requirements of the bid documents and result in the lowest bid amount
- Other means

The Parties agree that Excess Volume, excluding Discretionary Excess Volume, shall be allocated such that SPU has rights to 60 percent and DNRP 40 percent of the Excess Volume. These proportions are consistent with the control volume allocations in Article II.16 and the Project Description, Exhibit A. To ensure appropriate allocation of Excess Volume, The Ship Canal Project Excess Volume shall be estimated at construction substantial completion and allocated between SPU and DNRP in the proportions of 60 and 40 percent respectively. The Ship Canal Project Excess Volume shall only be used exclusively for CSO storage from the basins identified in Article II.16 and the Project Description, Exhibit A. Excess Volume is incidental to the Project and is included in the shared project costs in accordance with Articles IX.1 through IX.3.

IX.13 Discretionary changes to the Project Description that result in Discretionary Excess Volume (e.g., construction of a tunnel diameter greater than 14 feet diameter) shall go through the change management process. Unless otherwise modified by agreement: 1) the cost share between the Parties for the Discretionary Excess Volume shall be proportionate to the agreed upon allocation of the Discretionary Excess Volume; 2) the Parties have the right to, but are not obligated to purchase 65 percent to SPU and 35 percent to DNRP of the Discretionary Excess Volume.

IX.14 Both Parties acknowledge there is a possibility that: 1) a Party may on a regular or continuous basis need to use a portion of the Storage Volume greater than its right to use as defined in Article VII.2, or 2) regulatory compliance may not be obtained by one or both Parties through implementation and operation of the Project in accordance with the final Operations and Maintenance Plan, and will require one or both Parties to develop a supplemental compliance plan under the terms of each Party's Consent Decree. Project commissioning and the 5-year post construction monitoring period will inform both Parties on project performance, possible excess use and compliance with regulations. In the event that regular or continuous use of excess volume or a supplemental compliance

plan is needed by either Party, as determined by annual monitoring following the 5-year post construction monitoring period, consideration will be given to purchasing or leasing available capacity from the other Party. Neither Party shall be obligated to sell or lease their available capacity to the other Party. Requests to purchase or lease volume from the other Party shall be made through the Project Review and Change Management Committee (Exhibit B).

When such regular or continuous excess use is determined after the 5-year post construction monitoring period, if required, the responsible Party will produce a supplemental compliance plan in accordance with that Party's Consent Decree. Annual payment obligations by that Party will be incurred from the time the regular or continuous excess use is determined until the new control measure is implemented. These payment obligations will accrue with interest until they are paid.

The Parties agree that the annual payments for regular or continuous excess use will be equal to a fraction, the numerator of which is the responsible Party's additional control volume and the denominator of which is the Project's total Storage Volume, multiplied by the sum of:

- the estimated annual operating cost of the Project, plus
- three percent (3%) times all capital cost of the Project to reflect for the time value of money.

Article X - Project Budget and Funding

X.1 The Ship Canal WQ Project as defined in Article III.18, or as modified through written agreement of the Parties, is based on the Capital Project Budget, which shall be used as the basis for calculating each Party's financial contribution to plan, design, construct, and complete The Ship Canal WQ Project, and establishing a schedule of payments for planning, design, construction and completion of The Ship Canal WQ Project.

X.2 SPU and DNRP agree that SPU will invoice DNRP each month for DNRP's share of the costs to date of The Ship Canal WQ Project and DNRP shall invoice SPU on a quarterly basis for SPU's share of DNRP costs on The Ship Canal WQ Project. The Parties shall provide each other with invoices showing expenditures during the previous month (or previous quarter for DNRP's expenditures) on The Ship Canal WQ Project. Invoices shall itemize the consultants' and contractors' payments, equipment, materials and labor expended on the Project, plus SPU's and DNRP's expenditures in support of The Ship Canal WQ Project. Invoices seeking payment or reimbursement for contractor and consultant expenditures shall not include any Party mark-up.

Invoices seeking payment or reimbursement for a Party's employee labor charges shall state the number of labor hours expended on the Project by such employees, along with their names, job titles, and fully burdened labor rates. Any direct non-salary charges shall be itemized by category, i.e. mileage, reproduction, postage and shipping, telephone, etc. Supporting documentation will accompany each invoice submitted. Copies of receipts for expenses for which reimbursement is sought shall be attached. Properly documented invoices shall be paid by the receiving Party within thirty (30) calendar days of receipt, unless otherwise agreed to in writing by the billing Party. Notice of any potential dispute regarding current invoices shall be made in writing within the same time-period. Payment by a Party shall not constitute agreement as to the appropriateness of any item or acceptance of the work so represented. At the time of final audit, all required adjustments related to any potential dispute for which notice has been timely given shall be made and reflected in a final payment.

X.3 SPU will provide DNRP a progress report on work completed on The Ship Canal WQ Project to-date, along with a cost report, with each invoice in a format as shown in Exhibit E. SPU will submit the cost report with each monthly invoice.

X.4 SPU's first invoice shall be submitted to DNRP thirty (30) calendar days after the mutual execution of this Agreement or January 30, 2016, whichever is later. The first invoice to DNRP for The Ship Canal WQ Project costs shall include $463,080 for DNRP's expenses accrued in 2014 and DNRP's proportionate share of costs, as defined in Article IX.1, IX.2 and IX.3, incurred for The Ship Canal WQ Project including costs and expenses accrued since January 1, 2015, excluding costs associated with negotiating and drafting of this Joint Project Agreement.

X.5 The Parties agree to pay simple interest at the rate of one percent (1%) per month on any undisputed amounts that are more than thirty (30) calendar days overdue under this Agreement, unless otherwise agreed to in writing by the Parties.

X.6 In accordance with the cost share provisions of Article of IX.1 through IX.3, SPU and DNRP will jointly fund an independent audit of costs for The Ship Canal WQ Project for the purpose of reconciling actual costs for each Party in accordance with this Joint Project Agreement within one year of The Ship Canal WQ Project achieving Control Status.

X.7 Within one year of completion of the independent audit described in Article X.6 above, the Parties will reconcile their contributions made in comparison to the audited actual cost to deliver The Ship Canal WQ Project to completion.

X.8 SPU will invoice DNRP annually for Operation and Maintenance (O&M) costs, during the first five (5) years of operation of The Ship Canal WQ Project,

based on a mutually agreed O&M estimate, to be developed at completion of project construction, and incorporated herein by reference. Prior to the end of the sixth year of operation of The Ship Canal WQ Project, SPU will reconcile actual costs against the O&M estimate, and invoice/credit DNRP for the difference between actual O&M costs and estimated O&M costs. SPU will invoice DNRP annually thereafter for DNRP's share of O&M costs incurred, and DNRP will pay to SPU the amount due within ninety (90) calendar days of receipt of an annual O&M invoice.

X.9 The Parties acknowledge and agree that this Joint Project Agreement will require budget appropriations beyond the respective current approved budget ordinances passed by the Seattle City Council and the King County Council, and thus will be subject to subsequent annual or biennial budget ordinance approvals by both Councils, in accordance with the City of Seattle and King County Charters and applicable state law.

Article XI - Insurance

XI.1 Prior to the contract solicitation for the Construction contract(s) and signature of any Design contract(s) for The Ship Canal WQ Project the Risk Managers from the City of Seattle and King County will co-operate in the development of an insurance program for the design and construction of The Ship Canal WQ Project. Both parties shall agree on the scope and content of the insurance programs.

Coverages and limits shall be in accordance with prudent risk management practices and shall be consistent with those insurance coverages routinely requested and obtained by the parties for projects of similar size and scope.

XI.2 The Design Contract at a minimum shall require the following coverages and limits:

a) Commercial General Liability: Coverage shall be at least as broad as: Insurance Services Office Form No. CG 00 01, covering Commercial General Liability no less than $1,000,000 combined single limit per occurrence and, for those policies with an aggregate limit, a $2,000,000 aggregate limit.
b) Automobile Liability: Insurance Services Office form number CA 00 01, covering BUSINESS AUTO COVERAGE, symbol 1 "any auto"; or the combination of symbols 2, 8, and 9. $1,000,000 Combined Single limit Bodily Injury and Property Damage.
c) Umbrella or Excess Liability Insurance: The Contractor shall provide minimum Excess or Umbrella Liability coverage limits of $5,000,000

each occurrence in excess of the primary CGL and Automobile liability insurance limits.

d) Professional Liability, Errors and Omissions (PLI): $20,000,000 per Claim and in the Aggregate. SPU and DNRP agree that the minimum coverage specified in this paragraph will be met through any combination of the following, to be mutually agreed upon by the Parties prior to the design contract being executed with the selected design consultant: 1) the Design Consultant's Professional Liability/E&O standard practice policy; 2) Project Specific PLI Policy; and/or 3) SPU and DNRP jointly-purchased Owner's Protective Professional Liability Indemnity (OPPI) insurance policy. Coverage shall be maintained for a period of six years subsequent to project completion.

e) Contractor's Pollution Liability Coverage: Contractor shall provide Contractor's Pollution Liability coverage in the amount of $1,000,000 per occurrence and in the aggregate to cover sudden and non-sudden bodily injury and/or property damage to include the destruction of tangible property, loss of use, clean-up costs and the loss of use of tangible property that has not been physically injured or destroyed.

f) Workers' Compensation: Workers' Compensation coverage, as required by the Industrial Insurance Act of the State of Washington.

g) Employers Liability or "Stop-Gap": The protection provided by the Workers Compensation policy Part 2 (Employers Liability) or, in states with monopolistic state funds, the protection provided by the "Stop Gap" endorsement to the General Liability policy. Limit: $1,000,000.

XI.3 The Parties expect that construction contracts for The Ship Canal Project will be solicited and entered into in the years 2017 and 2018. Prior to solicitation the Parties shall meet and consider the potential insurance programs suitable for a project of this size and scope. This can include but not be limited to: contractor provided insurance, OCIP or CCIP coverage. Construction contract coverages to be included:

a) Commercial General Liability: Coverage shall be at least as broad as: Insurance Services Office Form No. CG 00 01, covering Commercial General Liability no less than $1,000,000 combined single limit per occurrence and, for those policies with an aggregate limit, a $2,000,000 aggregate limit.

b) Automobile Liability: Insurance Services Office form number CA 00 01, covering BUSINESS AUTO COVERAGE, symbol 1 "any auto"; or the combination of symbols 2, 8, and 9. $1,000,000 Combined Single limit Bodily Injury and Property Damage.

c) Umbrella or Excess Liability Insurance: The Contractor shall provide minimum Excess or Umbrella Liability coverage limits of $50,000,000 each occurrence in excess of the primary CGL and Automobile liability insurance limits.
d) Contractor's Pollution Liability Coverage: Contractor shall provide Contractor's Pollution Liability coverage in the amount of $15,000,000 per occurrence and in the aggregate to cover sudden and non-sudden bodily injury and/or property damage to include the destruction of tangible property, loss of use, clean-up costs and the loss of use of tangible property that has not been physically injured or destroyed.
e) Workers' Compensation: Workers' Compensation coverage, as required by the Industrial Insurance Act of the State of Washington.
f) Employers Liability or "Stop-Gap": The protection provided by the Workers Compensation policy Part 2 (Employers Liability) or, in states with monopolistic state funds, the protection provided by the "Stop Gap" endorsement to the General Liability policy. Limit: $1,000,000.
g) Contractor's Professional Liability: The Contractor shall provide evidence of Professional Liability insurance covering professional errors and omissions for construction management, value engineering, or any other non-construction professional services. Such insurance must provide a minimum limit of liability of $2,000,000 million each claim and may be evidenced as an extension of a CGL policy or by a separate Professional Liability policy.
h) Inland Marine Coverage: Contractor shall procure and maintain Inland Marine coverage to include coverage for the Full Replacement Value of the Tunnel Boring Machine(s). Coverage shall include "All risk" perils to include Earthquake and Flood.
i) Builder's Risk/Installation Floater: "All Risk" Builders Risk including coverage for collapse, theft, off-site storage, soft costs, delay and property in transit. The coverage shall insure for direct physical loss to property of the entire construction project, for 100% of the replacement value thereof and include earthquake.
j) Other coverages to be considered upon determination of the contract means and methods may include (but not be limited to) Marine and Railroad Protective.

XI.4 Other Insurance Provisions

a) Insurance limits and coverage provisions in this Article XI are meant to provide guidance but may be altered, enhanced and finalized by the City and King County using prudent risk management practices, and

shall be consistent with those insurance coverages routinely requested and obtained for projects of this size and scope.

b) Each insurance policy shall be written on an "Occurrence" basis, except Professional Liability.
c) If insurance is on a claims-made form, its retroactive date, and that of all subsequent renewals, shall be no later than the Notice to Proceed Date. Coverage shall be effective for a period of six years subsequent to project completion.
d) XCU and Subsidence Perils Not Excluded on General Liability coverages.
e) Any deductibles or self-insured retentions in excess of $25,000 must be declared to and approved by the City of Seattle and King County.
f) For all liability policies except Professional Liability, Workers Compensation, and Employers' Liability, the City of Seattle and King County, its officers, officials, employees, and agents are to be covered as additional insureds as respects liability arising out of activities performed by or on behalf of SPU or DNRP in connection with this Agreement. Additional Insured status shall include both Ongoing Operations and Products-Completed Operation and extend for a period of six years subsequent to the expiration or termination of this Agreement or substantial completion of construction. Such coverage shall be Primary.
g) Acceptability of Insurers. Insurance is to be placed with insurers with a Bests' rating of no less than A: VIII, or if not rated with Bests' with minimum surpluses, the equivalent of Bests' surplus size VIII.
h) Failure on the part of the Consultant or Contractor to maintain insurance as required shall constitute a material breach of contract
i) Consultant or Contractor shall contractually require that each subcontractor of every tier include the City of Seattle and King County as additional insureds for primary and non-contributory limits of liability.
j) Except as may be agreed upon by the Parties for the design contract PLI, the Consultant's and Contractor's insurance coverage shall be primary insurance as respects the City and County, its officers, officials, employees, and agents. Any insurance and/or self-insurance maintained by the City or County, its officers, officials, employees, or agents shall not contribute with the Consultant's or Contractor's in any way.
k) The Consultant's and Contractor's insurance shall apply separately to each insured against whom a claim is made and or lawsuit is brought, except with respect to the limits of the insurer's liability.
l) For all insurance policies, coverage shall not be suspended, voided, canceled, reduced in coverage or in limits, until after thirty (30) days

prior notice - return receipt requested, has been given to the City and County.

m) Substitution of insurance: if project work under XI.2.E and/or XI.3.D is subcontracted, applicable minimum coverages and limits of liability may be evidenced by any subcontractor, instead of the prime contractor; provided that such insurance fully meets the applicable requirements set forth herein and must include the City of Seattle and King County as Additional Insureds.

XI.5 For SPU Project contracts, SPU and the consultant or contractor will include the King County as a named third party beneficiary of the SPU design, construction, construction management, and operations and maintenance contracts for the Project, and SPU and the consultants/contractor will include King County in the indemnification and insurance provisions contained in the SPU contracts.

For DNRP Project contracts, DNRP and the consultant or contractor will include The City of Seattle as a named third party beneficiary of the DNRP design, construction, construction management, and operations and maintenance contracts for the Project, and DNRP and the consultants/contractors will include The City of Seattle in the indemnification and insurance provisions contained in the DNRP contracts.

SPU and DNRP do not intend that this Article XI.5 be interpreted to create any obligation, liability, or benefit to any third party, other than SPU and DNRP for purposes of the design and construction of the Project.

Article XII - Indemnification

XII.1 As between the Parties, each Party shall protect, defend, indemnify and save harmless the other Party, its officers, officials, employees and agents while acting within the scope of their employment as such, from any and all suits, costs, claims, actions, losses, penalties, judgments, and/or awards of damages, of whatsoever kind arising out of, or in connection with, or incident to the obligations assumed under this Agreement caused by or resulting from each Party's own negligent acts or omissions. Each Party agrees that it is fully responsible for the acts and omissions of its own contractors, subcontractors, their employees and agents, acting within the scope of their employment as such, as it is for the acts and omissions of its own employees and agents.

Each Party agrees that its obligations under this provision extend to any claim, demand, and/or cause of action brought by or on behalf of any of its employees, or agents. The foregoing indemnity is specifically and expressly intended to constitute a waiver of each Party's immunity under Washington's

Industrial Insurance act, RCW Title 51, as respects the other Party only, and only to the extent necessary to provide the indemnified Party with a full and complete indemnity of claims made by the indemnitor's employees. The Parties acknowledge that these provisions were specifically and mutually negotiated.

In the event it is determined that R.C.W. 4.24.115 applies to this Agreement, then each Party agrees to defend, hold harmless, and indemnify the other to the maximum extent permitted thereunder, and specifically for its' negligence concurrent with the other Party to the full extent of the indemnifying Parties,' it's employees', agents', contractors' and consultants' negligence.

The Parties agree that the provisions of this Article XII shall survive the termination of this Agreement.

Article XIII - Change in Project Purpose

XIII.1 The Parties agree that the purpose of this Joint Project Agreement is to implement The Ship Canal WQ Project as defined in Exhibit A, and through such implementation, achieve the control of combined sewer overflows as required by the Parties' respective Consent Decrees for the seven outfalls identified and described Article VII.3. Any change in the purpose of The Ship Canal WQ Project may be made only through mutual agreement of the Parties and written amendment of this Joint Project Agreement.

Article XIV - Governance

XIV.1 The Parties acknowledge that while The Ship Canal WQ Project represents a preferred means to control CSOs, it is unique and will present challenges to both Parties during its design, construction, and operating life. Therefore, the governing structure in Article XIV.2 through Article XIV.4 below is established to provide the Parties with a means of managing and achieving mutual compliance with the terms of this Joint Project Agreement.

XIV.2 The Parties may agree to form a Joint Oversight Committee whose members shall be SPU's Deputy Director of Corporate Policy and the Deputy Director of Drainage and Wastewater, Deputy Director of Project Delivery and Engineering, and DNRP's Deputy Director and Director of the Wastewater Treatment Division, or otherwise as may be designated by the Directors of DNRP and SPU. The Joint Oversight Committee shall provide policy guidance in the implementation and administration of The Ship Canal WQ Project. The Joint

Oversight Committee will meet not less than two times per year until Control Status is achieved or unless an alternative meeting schedule is mutually agreed upon by the Oversight Committee Members.

XIV.3 Project Principals, defined as the Manager of SPU's Project Delivery and Engineering Branch and DNRP's Wastewater Treatment Division, Project Planning and Delivery Section Manager, or as may be designated by the Parties' respective agency Directors, shall serve to provide timely oversight and coordination between the Parties and provide direction to the Project Manager as needed to manage changes not otherwise subject to the Change Management process, Exhibit B, and requirements of Article VI.5.

XIV.4 SPU may form Task Forces, in accordance with Article VI.6., in consultation with the Project Principals to provide advice and support through completion, and through the operating life of The Ship Canal WQ Project.

Article XV - Incremental Flow Charges

XV.1 SPU will pay DNRP for SPU's incremental increases in flows to DNRP's sewer system from The Ship Canal Project as follows: 1) in accordance with Technical Memorandum No. 7 methodology; 2) in accordance with the final monitoring and modeling report described in Article VIII.9; 3) based on data produced from actual monitoring of SPU's and DNRP's combined sewage inflows to The Ship Canal WQ Project conveyance and storage system; and 4) based on data produced from actual monitoring of effluent discharged from The Ship Canal WQ Project to the regional sewer system. During the first 5 years of operation of The Ship Canal WQ Project, such payments may be based on an estimate of flows, based on modeled information prepared by each Party for their respective LTCP/CSO Control Plan. Within one year following the end of the 5th year of operation of The Ship Canal WQ Project, DNRP and SPU will reconcile payments based on actual monitoring of the first five years of flows to The Ship Canal WQ Project storage system, and actual SPU flows discharged to DNRP's sewer system.

XV.2 DNRP and SPU acknowledge and agree that the payments made by SPU for incremental flows under Article XV.1 satisfy the obligation for payment under Section 5.3(c) of the Agreement for Sewage Disposal, as amended in 1992, for the flows resulting from The Ship Canal WQ Project.

Article XVI - Miscellaneous

XVI.1 SPU will pay 100 percent of applicable fines or penalties to EPA or Ecology that are imposed for not meeting the CSO Control standard as defined by WAC 173-245-020(22) for each of the seven CSO outfalls within The Ship Canal WQ Project, as defined in Article II.16 including DNRP's 11th Avenue Northwest outfall (004) and 3rd Avenue West outfall (008)), except where it has been determined through modeling of flows from each basin that the tunnel design Control Volume has been exceeded, in which case SPU and DNRP will pay their proportionate share of the fines and penalties in accordance with the cost share provisions of Article IX.1 and IX.2 of this Agreement.

XVI.2 DNRP and SPU agree that flows from The Ship Canal WQ Project shall be released into DNRP's regional system based on the NIRR as described in SPU's Long Term Control Plan, CSO Control Measures Performance Modeling Report, January 2015 (Appendix L of the Final LTCP Volume 2 dated May 29, 2015), incorporated herein by reference.

XVI.3 The Ship Canal WQ Project shall not be considered a regional facility as defined in the 1961 Agreement.

Article XVII - Dispute Resolution

XVII.1 If a dispute regarding the terms of this Joint Project Agreement arises between the Parties, the Parties agree to first attempt resolution of the issues through One Team Decision Making Guidelines (Exhibit C). In the event the Parties are not able to reach reasonable and prompt resolution through One Team Decision Making Guidelines (Exhibit C), the Parties agree to engage in mediation to attempt to resolve the dispute prior to initiating any lawsuit arising under this Agreement. The Parties shall jointly select a neutral third party mediator, and agree to share the costs of mediation equally.

XVII.2 This Joint Project Agreement is made pursuant to, and shall be construed according to the laws of the State of Washington. In the event that mediation is unsuccessful and either Party finds it necessary to initiate legal proceedings to enforce any provision of this Agreement, both Parties agree and consent to the exclusive jurisdiction of the courts of the State of Washington, and that the venue of any action shall be Seattle, King County, Washington.

Article XVIII - Authority to Sign

XVIII.1 The individual signing this Joint Project Agreement on behalf of SPU represents and warrants that he or she has the authority to enter into this Agreement on behalf of The City of Seattle and to bind the City to the terms and conditions contained herein.

XVIII.2 The individual signing this Joint Project Agreement on behalf of DNRP represents and warrants that he or she has the authority to enter into this Agreement on behalf of King County and to bind King County to the terms and conditions contained herein.

Article XIX - Modifications and Amendments

XIX.1 Either Party may request changes, amendments, or additions to any portion of this Joint Project Agreement; however, except as otherwise provided in this Agreement, no such change, amendment, or addition to any portion of this Agreement shall be valid or binding upon either Party unless it is in writing and signed by personnel authorized to bind each of the Parties. All amendments shall be made part of this Agreement.

Article XX - Entire Agreement

XXI.1 These provisions represent the entire agreement of the Parties and may not be modified or amended except as provided herein. Any understanding, whether oral or written, past, concurrent or future, which is not expressly incorporated herein as either an Exhibit or by reference, is expressly excluded.

Article XXI - Notices

XXI.1 Unless otherwise directed in writing, notices, reports and payments shall be delivered to each party as follows:

The City of Seattle Seattle Public Utilities Attn: Ship Canal WQ Project Administrator	King County Dept. of Natural Resources Wastewater Treatment Division Attn: Project Control and Contract Management Unit Manager

701 Fifth Ave., Ste. 4900
Seattle, WA 98120

201 South Jackson Street
Mailstop: 512
Seattle, WA 98104

XXI.2 Notices mailed by either party shall be deemed effective on the date mailed. Either party may change its address for receipt of reports, notices, or payments by giving the other written notice of not less than five days prior to the effective date.

Article XXII - Termination

XXII.1 The intent of this Joint Project Agreement is to establish a permanent cooperative partnership between the Parties to efficiently execute, construct, and operate The Ship Canal WQ Project, meet the Parties' respective Consent Decree requirements, and avoid either Party experiencing a significant schedule and/or cost performance variance on The Ship Canal Project or other joint or independent water quality projects.

XXII.2 This Agreement may be terminated only upon the mutual written agreement of the Parties.

Article XXIII - Counterparts

XXIII.1 This Agreement may be executed simultaneously in two counterparts, each of which shall be an original and all of which shall constitute but one instrument.

Article XXIV - No Third Party Beneficiaries

XXIV.1 This Agreement is entered into solely for the mutual benefit of the City of Seattle and King County. This Agreement is not entered into with the intent that it shall benefit any other person and no other such person shall be entitled to be treated as a third party beneficiary of this Agreement.

Article XXV - Successors and Assigns

XXV.1 SPU or DNRP may not assign this Agreement without the other's prior written approval.

Article XXVI - Severability

XXVI.1 If any provision of this Agreement or any provision of any law, rule or document incorporated by reference into this Agreement shall be held invalid, such invalidity shall not affect the other provisions of this Agreement which legally can be given effect without the invalid provision, unless to do so would frustrate the purpose of the provision.

Article XXVII - Headings

XXVII.1 Section titles or other headings contained in this Agreement are for convenience only and shall not be part of this Agreement, nor be considered in its interpretation.

Article XXVIII - No Waiver

XXVIII.1 Neither payment nor performance by a Party shall be construed as a waiver of the other Party's rights or remedies against the Party. Failure to require full and timely performance of any provision at any time shall not waive or reduce the right to insist upon complete and timely performance of such provision thereafter.

Article XXIX - Project Records

XXIX.1 Upon request by a Party, the other Party will provide within fourteen (14) calendar days of any request, or if the request is voluminous or is for documents in several locations then in a reasonable time, any Project-related documentation in its possession or in the possession of its agents, contractors and consultants (except documents that are not subject to the Washington State Public Records Act, Ch. 42.56 RCW), including but not limited to environmental analyses, geotechnical reports, engineers estimates, bid tabulations, contractor submittals, and contract payment records relating to the Project. In addition, the Consent Decrees require that the Parties retain and instruct their respective contractors

and agents to preserve all non-identical copies of all documents, records or other information (including documents, records or other information in electronic form) in their or their respective contractor's or agent's possession or control or that come into their or their respective contractor's or agent's possession or control regarding this Project until five (5) years after the termination of the Consent Decrees. Therefore the Parties shall retain all such documents until the latter of (1) 2035, (2) five years after the termination of the City's Consent Decree or (3) five years after the termination of the County's Consent Decree. During such time all such records, accounts, documents or other data pertaining to The Ship Canal Project shall be made available for inspection and/or copies of such shall be furnished upon request.

Article XXX - Publication

XXX.1 Each party may publish information, findings, reports and results of The Ship Canal WQ Project, and may acknowledge its respective role in and support of The Ship Canal WQ Project.

IN WITNESS WHEREOF, in consideration of the terms, conditions and covenants contained herein, or attached and incorporated and made a part hereof, the Parties have executed this Joint Project Agreement by having their authorized representatives affix their signatures below.

Christie True
Director
King County Dept. of Natural Resources & Parks
King Street Center
201 S Jackson St; Suite 700
Seattle, WA 98104-3855

By_____
Signature Date

_____
Type or Print Name

Director
Department of Natural Resources
Parks, King County

Ray Hoffman
Director
Seattle Public Utilities
P. O. Box 34108
Seattle, WA 98124-4018

By_____
Signature Date

_____
Type or Print Name

Director
Seattle Public Utilities
City of Seattle

EXHIBITS:

Exhibit A: SPU/DNRP Ship Canal Water Quality Project – Project Description
Exhibit B: SPU/DNRP Ship Canal Water Quality Project – Change Management
Exhibit C: SPU/DNRP Ship Canal Water Quality Project – One Team Decision Making Guidelines
Exhibit D: SPU/DNRP Ship Canal Water Quality Project – List of Potential Causes for Capital Cost Increases
Exhibit E: DNRP-WTD Invoice Format

Exhibit A

SPU / DNRP Ship Canal Water Quality Project

Project Description

October 26, 2015

Project Purpose

The purpose of The Ship Canal Water Quality (WQ) Project is to provide offline storage of combined sewer overflows (CSOs) for five Seattle Public Utilities (SPU) and two King County Department of Natural Resources and Parks (DNRP) CSO basins to meet regulatory control standards which limits CSOs to an average of no more than one untreated discharge per year per outfall on a twenty year moving average. The specific basins, and CSO to be controlled by the project, include the SPU Ballard CSO basins (Outfalls 150, 151, and 152), Fremont CSO basin (Outfall 174) and Wallingford CSO basins (Outfall 147), DNRP 3rd Avenue West Regulator (DSN008), and DNRP 11th Avenue NW Regulator (DSN004). The total minimum control volume to be achieved for these SPU and DNRP CSO basins combined is 15.24 million gallons (MG). The facility must also meet water quality standards and protection of designated uses, and must be verified by post construction monitoring (frequency of overflow and sediment sampling).

Project Scope

The Ship Canal WQ Project will provide offline storage of combined wastewater in a deep storage tunnel constructed between the Ballard and Wallingford CSO areas, on the north side of the Ship Canal. The Project will control the Ballard CSO basins (Outfalls 150,151 and 152), Fremont (Outfall 174) and Wallingford CSO basins (Outfall 147), DNRP 3rd Avenue West Regulator (DSN008), and 11th Avenue NW Regulator (DSN004). Figure 1 provides a plan view of the Ship Canal WQ Project location and components.

The main components of The Ship Canal WQ Project include the storage tunnel and appurtenances, conveyance facilities to convey SPU and DNRP CSO flows into the tunnel, and a pump station and force main to drain flows from the tunnel.

The storage tunnel and appurtenances will include:

- A minimum 15.24-MG offline storage tunnel with a nominal 14-foot inside diameter and approximately 14,000 feet long or as defined during the design phase of the project.
    - The stored combined sewage in the storage tunnel will flow from the Wallingford CSO Outfalls westward to an effluent pump station located near the Ballard CSO Outfalls 150 and 151.
    - The tunnel route is planned to be generally in street right-of-way along the north side of the Ship Canal.
- Seven diversion structures for diverting influent CSO flow away from existing CSO outfalls to the tunnel.
- Four drop structures to convey influent CSO flow into the storage tunnel.

- All four drop structures will have odor control.

- A pump station will be located at the West tunnel Portal as defined during the design phase of the project, with a minimum peak capacity of 32 MGD to empty the storage tunnel in approximately 12 hours.

Conveyance facilities will include:

- Gravity sewer line to convey flows from SPUs diversion structure at Fremont Outfall 174 to the tunnel drop shaft (approximately 100 lineal feet (lf) of 36-inch diameter pipe);

- Gravity sewer line to convey flows from DNRPs diversion structure at 3rd Ave. W (under the Ship Canal) to the tunnel drop shaft (approximately 800 lf of 60 and 48-inch diameter pipe);

- Gravity sewer line to convey flows from DNRPs diversion structure at 11th Ave. NW to the tunnel drop shaft (approximately 100 lf of 72 and 60-inch diameter pipe);

- Force main to convey flows from the tunnel pump station to DNRPs existing Ballard Siphon wet-weather barrel forebay (approximately 1900 lf of 24-inch diameter pipe).

All conveyance sizing and quantities are estimates based on conceptual planning to date. Actual diameters and lengths of conveyance facilities will be determined during the design phase of the project.

Gravity sewer lines to convey flows from SPUs diversion structures at Ballard outfalls 150, 151 and 152, and Wallingford outfall 147 to the tunnel drop shafts have been excluded from The Ship Canal WQ Project in accordance with the Joint King County/Seattle CSO Initiative Work Plan Item 4: Cost-Sharing Method for Joint Capital Projects.

The control strategy will limit the inflow to the tunnel from each outfall to each outfall's control volume per event. The minimum control volume for each outfall is:

<u>SPU Outfalls</u>

- Fremont (Outfall 174): 1.06 MG
- Wallingford (Outfall 147): 2.15 MG
- Ballard (Outfall 152): 5.38 MG
- Ballard (Outfall 150/151): 0.62 MG

<u>DNRP Outfalls</u>

- 3rd Avenue West (DSN008): 4.18 MG
- 11th Avenue Northwest (DSN004): 1.85 MG

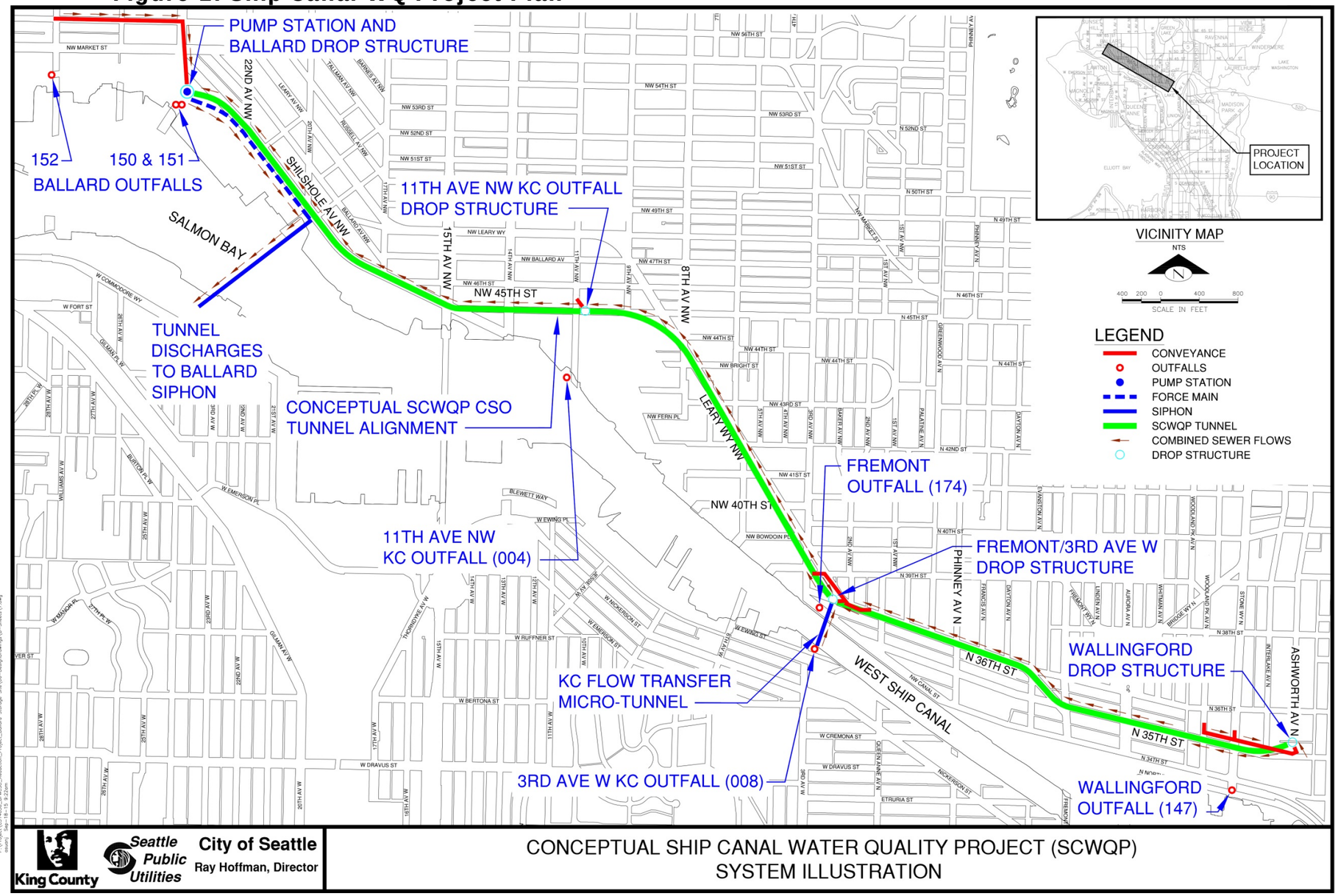
Each agency has calculated the control volumes required to meet their independent needs. Although calculation methods vary between the agencies, SPU and DNRP agree that these are the minimum volumes to be controlled to and provided for by The Ship Canal WQ Project.

SPU will own and operate the tunnel components listed below, and all new structures and pipes appended to each existing DNRP outfall pipe. Ownership of outfall pipes will remain unchanged. The Ship Canal WQ Project tunnel components include:

- The tunnel in its entirety, including the East and West Portals;
- The pump station and force main;
- All diversion structures, including DNRP's 3rd Avenue West and 11th Ave NW structures, SPU diversion structures for Ballard outfalls 150,151 and 152, Fremont outfall 174 and Wallingford outfall 147;
- All of the conveyance system associated with SPU's outfalls and downstream of the 3rd Avenue West and 11th Ave NW diversion structures;
- All control gates and associated structures and control systems;
- All odor control systems;
- All appurtenances associated with the above; and
- All real property associated with the Project

Any changes to this project scope need to be negotiated and agreed to by both SPU and DNRP through the Change Management process, attached to the Joint Project Agreement as Exhibit B.

Figure 1: Ship Canal WQ Project Plan



King County | Seattle Public Utilities | City of Seattle | Ray Hoffman, Director

CONCEPTUAL SHIP CANAL WATER QUALITY PROJECT (SCWQP)
SYSTEM ILLUSTRATION

Project Capital Cost Estimate

Total project capital costs for the Ship Canal Water Quality (WQ) Project are estimated at $423.4 million. This estimate is from SPU's Final Project Definition Report Volume 1, December 2014, with sales tax and escalation adjustments. The estimate includes exclusions from cost sharing described above and is escalated to the mid-point of construction assuming 2% escalation. The estimate is AACE Class 4, which has level of accuracy of minus 20%, plus 30% ($338.7 to $550.4 million cost range).

Project Schedule Summary

The compliance schedule for the Ship Canal WQ Project (per the City's approved Plan to Protect Seattle's Waterways) is summarized below. A detailed project schedule shall be included in the Project Management Plan.

Task	Compliance Date
Submit Draft Engineering Report (Facility Plan) for review and comment	3/31/2017
Submit Final Engineering Report (Facility Plan) for approval	12/31/2017
Submit Draft Plans and Specifications for review	3/31/2020
Submit Final Plans and Specifications for approval	12/31/2020
Construction Start (notice to proceed)	7/1/2021
Construction Completion	12/31/2025
Achieve Controlled Status	12/31/2026

Signatures

Madeline Goddard, P.E.	*Deputy Director, Drainage and Wastewater Line of Business, Seattle Public Utilities*
	Date:

Henry Chen, P.E.	*Deputy Director, Project Delivery and Engineering Branch, Seattle Public Utilities*
	Date:

Pam Elardo, P.E.	*Director, King County Wastewater Treatment Division*
	Date:

Exhibit B

SPU / DNRP Ship Canal Water Quality Project

CHANGE MANAGEMENT

October 26, 2015

Background

SPU and DNRP are committed to work together to implement the Joint Ship Canal Water Quality Project (Project), to control both agencies' CSOs into the Ship Canal. The Project is under a Consent Decree mandated schedule (both agencies have separate consent decree schedules that this project must comply with,) and like many large scale municipal projects, is expected to be technically challenging and complex. The Project must meet all required milestones as it progresses through design and construction. Potential cost increases are to be managed and/or avoided and require management oversight, review and guidance through project design and construction.

To address the potential risks to the project, a Change Management process with a Project Review and Change Management Committee (PRCMC) is established through this document and the Joint Project Agreement (JPA) to provide senior level management oversight, support, and direction to the project. The PRCMC will focus on project issues that can affect project scope, schedule and/or budget, and serve as the forum to discuss major issues and concerns as they arise and make recommendations to keep the project on schedule and within budget. The PRCMC will provide support and guidance throughout the project design,construction phases. Decisions will be made by consensus of the Committee. If consensus cannot be reached, the decision will be elevated to follow Paragraph 12 of the One Team Decision Making Guidelines (Exhibit C).

In addition, the PRCMC will provide support and guidance throughout the project commissioning, operations and maintenance. Changes to the final Operations and Maintenance Plan are to be managed and require management oversight, review and guidance. Decisions will be made by consensus of the Committee. If consensus cannot be reached, the decision will be elevated to follow Paragraph 12 of the One Team Decision Making Guidelines (Exhibit C).

If the Parties agree to change the project scope beyond the Project Description, then the joint project cost shares and the costs to which those shares apply will be revised. The cost shares will be recalculated in accordance with Technical Memorandum No. 4 to include additional avoided independent project, if applicable. These modified cost shares will then be used to assign costs to the Parties for both the larger Ship Canal Project and any consequently modified CSO control project in other basins.

Project Review and Change Management Committee Objectives and Membership

SPU is responsible for the implementation of PRCMC decisions for the Project. However both agencies' compliance with their approved mandated Consent Decrees, NPDES Permits and Post Construction Monitoring Plans are dependent in part on the Project's success in controlling CSOs.

SPU will use the PRCMC to leverage the experiences, expertise, and insights of the committee members to effectively progress the Project. The PRCMC will be responsible for the following:

- Understand the commitments inherent in the Project Description and the Joint Project Agreement. Provide the bigger picture and look-ahead view;
- Reach agreement on what the required goals of the Project are versus the desired goals,
- Maintain an awareness of risks through regular project briefings;
- Engage in high level problem solving to ensure effective management of project risks,
- Monitor and conduct formal reviews of project scope, costs, schedules, refinements and adjustments during project design through construction;
- Meet every other month or more frequently as determined by the PRCMC or requested by the Project team to provide management-level oversight by both SPU and DNRP,
- Review status reports and monitor project progress;
- Review and validate prior to SPU's formal Stage Gates 2 (preferred option, funding for design, placeholder for total cost projection and O&M), Stage Gate 3 (final design plans, contract specifications and engineer's estimate of construction costs) and Stage Gate 5 (project close out) to ensure approved project objectives, as documented in the Project Description, are met or that new/modified objectives are justified and documented;
- Make decisions and provide direction to the Project team on course of action for key project elements;
- Make decisions on contract changes as defined in Table B-1,Table B-2 and Table B-3, attached;
- Authorize Project Description and budget changes.

PRCMC meetings will be structured to fully inform the committee members and provide up to date status reports on the following:

- Cost and schedule;
- Understanding of the risks identified for the Project, and the cost and schedule implications of the risks;
- Permitting challenges that affect project scope, schedule or budget;
- Alternatives analysis, and approach for on-going success of the project;
- Analysis of consultant and construction contract changes essential for project delivery as defined in the Project Description, Exhibit A; and
- The plan for stakeholder involvement, stakeholder input and expectations, and proposed strategy to respond to stakeholder expectations.

Meetings

Meetings will be scheduled by SPU as the lead agency. The SPU Project Delivery and Engineering Deputy Director will chair the PRCMC. The WTD Division Director will attend the meetings and the SPU Project Administrator will staff the meetings. Meeting agendas will be provided at least two days in advance of all meetings. Minutes will be taken and retained on an accessible site for all committee members using either dedicated project or SharePoint. An electronic "Direction and Action Log" will be developed, maintained and retained on an accessible site for reference by the project team and the PRCMC members.

PRCMC Membership

The PRCMC shall be composed of SPU and DNRP management with specific areas of expertise and experience considering the nature of the project and its potential challenges. The PRCMC Chair ensures the board fulfills its role. The Project Administrator organizes, schedules and staffs the meetings, develops agendas, coordinates with PRCMC Chairand DNRP's Project Representative on agenda items, materials and presentations as they are needed for the PRCRC meetings; records and maintains records for the PRCMC proceedings. Committee members will bring their experience and expertise to bear on the review, analysis and decisions made and directions given by the PRCMC.

The PRCMC members include the following:

- DNRP WTD Director
- DNRP WTD Project Planning & Delivery Section Manager
- DNRP WTD Engineering Unit Manager
- DNRP WTD Construction Unit Manager
- DNRP WTD Plant Operations Manager
- DNRP WTD Assistant Plant Manager
- SPU DWW LOB Deputy Director
- SPU Project Delivery and Engineering Branch Deputy Director (Chair)
- SPU Construction Management Director
- SPU Engineering Director
- SPU Systems Operation Assessment and Monitoring Division Director
- SPU Utility Operations and Maintenance Division Director
- SPU Systems Operation Planning and Analysis Manager
- SPU Utility Operations Manager

Participation by the members is dependent upon the phase of the Project and the PRCMC agenda. Project team subject matter experts will be requested to attend the meetings on an as-needed basis.

Table B-1. Required Approvals for Consultant Contract Amendments					
Type of Change	**Required Approval**	**Dollar Threshold**	**Aggregate Overall PROJECT Schedule Extension Threshold****	**Reporting**	**Notes**
Amendment required to deliver per JPA project description (Scope, Schedule and Budget) and is within consultant contract scope	SPU PM SPU Division Director	(Less than $250K) Per SPU change management policies and procedures	Up to 2 months impact on the required Project delivery date in the JPA	Reporting to PRCMC Reporting to DNRP on any and all contract changes (cost or schedule) on the monthly basis and at 30/60/90 submittals.	Changes essential for project delivery as defined in the baseline project description
	Approval by both PDEB and LOB Directors and concurrence of WTD PPD Section Manager	For changes exceeding $250K but under $500K	Up to 4 months impact on the required Project delivery date in the JPA		
	Approval by both SPU PDEB,LOB and concurrence of WTD Deputy Directors	For changes exceeding $500K but under $1M	Up to 6 months impact on the required Project delivery date in the JPA		
Any change to the project description and Amendments exceeding $1M	Approval by SPU Director and concurrence of DNRP Director or Delegated to PRCMC	All changes that are outside the JPA project description. All changes above $1M	Greater than 6 months impact on the required Project delivery date in the JPA		Financial participation will be per the cost sharing agreement

Table B-2 Required Review and Approval Responsibility for Construction Contract Changes Per Individual Contract GREATER THAN $10M	
Construction Contract Change Threshold	**Approval Level**
Change requiring usage of budgeted project contingency reserve up to $500,000	Follows SPU project approval authority matrix
Change requiring usage of budgeted project contingency reserve over $500,000	Follows SPU project approval authority matrix and WTD PPD Section Manager
Changes requiring usage of budgeted management reserve and aggregate changes of <$500,000	SPU Project Manager/ Construction Manager/Director
Changes requiring usage of budgeted management reserve and between $500K - $1M	SPU Project Delivery and Engineering Director with WTD PPD Section Manager
Changes requiring usage of budgeted management reserve and between $1M - $2M or >10% and <15% of contract award amount	Project Review and Change Management Committee (PRCMC)
Changes requiring usage of budgeted management reserves > $2M or >15% of contract award amount	SPU and DNRP Division Level Directors
Changes desired by stakeholders but not included in JPA project description < $2 M	Project Review and Change Management Committee (PRCMC)
Changes desired by stakeholders but not included in JPA project description > $2 M	SPU and DNRP Department Level Directors

Table B-3 Required Review and Approval Responsibility for Construction Contract Changes Per Individual Contract LESS THAN $10M	
Construction Contract Change Threshold	**Approval Level**
Change requiring usage of budgeted project contingency reserve up to $250,000	Follows SPU project approval authority matrix
Change requiring usage of budgeted project contingency reserve over $250,000	Follows SPU project approval authority matrix and WTD PPD Section Manager
Changes requiring usage of budgeted management reserve and aggregate changes of <$250,000	SPU Project Manager/ Construction Manager/Director
Changes requiring usage of budgeted management reserve and between $250K - $500K	SPU Project Delivery and Engineering Director with WTD PPD Section Manager
Changes requiring usage of budgeted management reserve and between $500K - $1M or >10% and <15% of contract award amount	Project Review and Change Management Committee (PRCMC)
Changes requiring usage of budgeted management reserves > $1M or >15% of contract award amount	SPU and DNRP Division Level Directors
Changes desired by stakeholders but not included in JPA project description < $1 M	Project Review and Change Management Committee (PRCMC)
Changes desired by stakeholders but not included in JPA project description > $1 M	SPU and DNRP Department Level Directors

- Project Contingency Reserves: The amount of funds allocated to the project to cover identified risk events identified in the risk register that occur on the project, excluding changes to project scope.

- Project Management Reserves: The amount of funds allocated to the project to cover unidentified and unquantifiable risk events that occur on the project.

- Project Reserve: Sum of Project Contingency Reserves and Project Management Reserves. Project Reserves are part of the cost estimate and approved project budget.

- Project will have major milestones: Submission of Draft Facility Plan for review, Submission of Final Facility Plan for Approval, Submission of Draft Plans and Specifications for Review (90%), Submission of Final Plans and Specification for Approval (100%),. Construction start (Notice to Proceed) and Construction Completion are SPUs Consent Decree/LTCP milestone requirements. Any delay to any of the milestones is subject to the Change Management process.

- The project reserve threshold levels may be revised upon mutual written agreement of the Parties, executed by the Department Directors or their designees.

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Exhibit C

SPU / DNRP Ship Canal Water Quality Project

One Team Decision Making Guidelines

October 26, 2015

1.	The Ship Canal WQ Project Team is empowered and encouraged to make relevant decisions to carry out projects in a way that is efficient, adds value, and maximizes the prospects of a successful project. However, there are boundaries to the Team's authority. The Team is responsible for understanding project assignment, including its purpose, scope, schedule and budget; and for seeking timely approval by governance decision-makers for changes that exceed authorized levels.
2.	At each stage of the Project the active members of the Team at the time, should be solicited for their point of view. It is the responsibility of the Team lead and other members of the Team to listen to the other's view and consider it in the context of each decision being made and with the ultimate goal of achieving the best outcome for the Project, SPU and DNRP.
3.	A deliberate transistion meeting should occur whenever the Lead for the Project changes from planning to design to construction to commissioning to operations and maintenance to help ensure that the members of the Project Review and Change Management Committee understand the issues and risks.
4.	If a particular member has an opinion about something that strictly resides in their area of expertise or concern and does not significantly affect the interests of the other members, <u>and</u> it is not inconsistent with asset management guidelines or standards, the Team should give some amount of deference to that particular member on that topic. For example, if the operator has a preference for equipment that does not affect NPV, schedule, project functionality, environmental impact, department standards, or community expectations, then they would normally be the one to make that decision. Another example might be Project Delivery and Engineering Branch (PDEB) deciding between DBB and GCCM project delivery methods. However, if a Team member wants to pursue an option for their personal preference, but the option would affect the NPV or impair the functionality or operability of the Project, they should not normally be deferred to.
5.	While each Team member is expected to pay particular attention to the interests that they have selected to represent in the process, they should at the same time temper that by also considering what is best from an overall project or customers' interest. It is expected that any Team member should speak up and raise concerns within the Team about proposed project decisions or changes that, in the view of that Team member, may negatively affect scope, schedule or budget, or potentially undermine project success.
6.	Previous decisions should not be revisited unless there is compelling new information. A modification of a Team's membership is usually not a sufficient reason to revisit a previous decision. New members to the Team should be brought up to speed by the current Team lead (or someone designated by the lead) at the stage they begin engaging with the Project Team.
7.	If choices can be easily and clearly analyzed by asset management techniques, then these should be used to make a decision.
8.	The Team should work hard and creatively to openly discuss and propose alternatives in order to find the best solution or reach the best decision that can achieve as many project objectives as

possible. This is an obligation of all Team members, but especially that of the current lead which, at the particular phase, is most responsible for keeping the Project and Team moving forward.

9. The Team should strive for general agreement and clear commitment among Team members when making decisions. That is to say that each of the Team's members should at least be able to live with the decision that is being proposed, even if it is not their preferred outcome. Silence is your concurrence. It is also worth considering including other mitigating aspects of a decision that can move Team members from the most grudging acceptance to more enthusiastic support.
10. Notes should always be taken and decisions will be documented in a Decision Log.
11. All Team members are responsible for supporting Team decisions in word and action.
12. If general agreement among members is not possible, then the Lead is responsible for making a final decision (including any compromise aspect). This action will be the direction of the Team, subject to #13, below.
13. If a member cannot live with the direction of the Team; the following "appeal" process should be used:
    - The member should notify the Team and/or Team leader (Project Administrator) of their lack of agreement/support and will seek further guidance with his/her division management.
    - The member should promptly talk to the following First Level Decision Makers:

Project Phase	SPU	DNRP
Planning or Design	Engineering Director	WTD Engineering Unit Manager
Construction	Construction Management Director	WTD Construction Unit Manager
Commissioning	Systems Operation, and Planning Analysis Manager	WTD Assistant Plant Manager
Operations and Maintenance	Utility Operations Manager	WTD Assistant Plant Manager

Team members will present issues of concern in order of presidence, to the First Level Decision Makers to determine whether or not to take the dispute forward with their counterpart for resolution.

- If First Level Decision Makers choose not to pursue the issues of concern, then this is the end of the "appeal" and the Team direction stands;
- If First Level Decision Makers choose to address the issues of concern with their counterpart, and agreement is made, their decision is final; or
- If First Level Decision Makers choose to address the issues of concern with their counterpart, and no decision is made, then the issue must be promptly elevated to the Second Level Decision Makers.

- Elevate the issues of concern to the following Second Level Decision Makers:

Project Phase	SPU	DNRP
Planning, Design or Construction	Project Delivery and Engineering Branch Deputy Director	WTD Project Planning and Delivery Section Manager
Commissioning	Systems Assessment Operations and Maintenance Division Director	WTD Plant Operations Manager
Operations and Mainteance	Utility Operations and Maintenance Division Director	WTD Plant Operations Manager

- If agreement is made by the Second Level Decision Makers, their decision is final;
- If no decision is made, then the issue must be promptly elevated to the SPU DWW LOB Deputy Director and WTD Director; their decision is final.

Seattle Public Utilities

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Exhibit D

SPU / DNRP Ship Canal Water Quality Project

List of Potential Causes for Capital Cost Increases

October 26, 2015

The following table provides guidance regarding agency responsibility for costs that exceed the total Project budget as defined in the Joint Project Agreement and subsequent agreed upon revisions to the total Project cost.

Potential Causes for Capital Cost Increases		Financially Responsible Agency		
		Lead Agency	Shared	Partner Agency
1.	Project delays caused by delays in obtaining land use and development permits.	X		
2.	Project delays caused by delays in obtaining environmental permits.	To be jointly determined by both Agencies.		
3.	Unanticipated permit conditions once permits are issued.		X	
4.	Higher than estimated street-use fees by the City.		X	
5.	Unanticipated environmental mitigation costs.		X	
6.	Unanticipated changes to design and construction policies and codes. (e.g. changes to green building or sustainability requirements, or equity and social justice policies) (Shared, unless applicable to only one agency)		X	
7.	Project delays caused by delays in acquiring needed sites.	X		
8.	Project cost increases due to higher than estimated site acquisition costs.		X	
9.	Unanticipated demands by local utility managers/owners.		X	
10.	Unanticipated demands by local property owners.		X	
11.	Unknown existing utility conflicts.		X	
12.	Discovery of contaminated groundwater or soils on the construction site and resultant investigation and clean-up.		X	

Potential Causes for Capital Cost Increases		Financially Responsible Agency		
		Lead Agency	Shared	Partner Agency
13.	Discovery and removal of hazardous waste.		X	
14.	Unanticipated costs as a result of archaeological discoveries.		X	
15.	Unanticipated geotechnical considerations (seismic, boulders, groundwater, unstable soils, liquefaction, etc.) Depends on professional services compliance with industry defined 'standard of care'/ condition on appropriate construction management within industry standard/not within industry standard.	To be jointly determined by both Agencies.		
16.	Higher than anticipated requirements for storm water or dewatering treatment and disposal during construction		X	
17.	Chosen site requires extension of conveyance pipelines and outfall over assumed planning level estimates. Based on percentage.		X	
18.	Chosen site or alignment results in unanticipated costs for demolition of existing structures, property acquisition and relocation.		X	
19.	Changed market conditions for labor, materials and equipment and other factors of construction such as fuel cost.		X	
20.	Changed bidding climate.		X	
21.	Project delays and increased costs caused by bid protests.	To be jointly determined by both Agencies. (Example: If protest is due to lead agency not complying with all procurement requirements, then lead agency is responsible. If protest is found to be frivolous then agencies may share cost.		
22.	Project delays associated with material and equipment unavailability (not including sole sourced materials and equipment).		X	
23.	Higher than estimated material and equipment costs due to inflation.		X	
24.	Project cost increases caused by delays in obtaining **lead**	X		

Potential Causes for Capital Cost Increases		Financially Responsible Agency		
		Lead Agency	Shared	Partner Agency
	agency sole source materials and equipment.			
25.	Project cost increases caused by delays in obtaining **partner agency** sole source materials and equipment.			X
26.	Project cost increases caused by **partner agency** delay in providing concurrence on use of project contingency reserve per Table B-2 and Table B-3 of Exhibit B.			X
27.	Unanticipated sales tax increases.		X	
28.	Overrun due to changes that resulted from reliance on data provided by either jurisdiction proved to be inaccurate.	To be jointly determined by both Agencies based on who's Agency provided the information found to be in error.		
29.	Compressed design schedule requires additional internal and consultant staff after baseline schedule and budget are set.	To be jointly determined by both Agencies.		
30.	Increased oversight of high profile projects requires additional staff time to manage. Based on who requests, if only one agency requires then not shared (Example: Added third party oversight).	To be jointly determined by both Agencies.		
31.	Construction claims – basis of the claim used to determine.	To be jointly determined by both Agencies.		
32.	Correction of construction defects.		X	
33.	Correction of design errors and omissions.		X	
34.	Failure to achieve start-up and commissioning of project within agreed budget and time frame.	To be jointly determined by both Agencies.		
35.	Labor issues such as strikes.		X	
36.	Project delays caused by force majeure delays.		X	
37.	Legal costs.	To be jointly determined by both Agencies.		

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ATTACHMENT 2

December 29, 2015

The Honorable Larry Phillips
Chair, King County Council
Room 1200
C O U R T H O U S E

This letter transmits two ordinances relating to the Ship Canal Water Quality Project (Project), a joint project between King County and Seattle Public Utilities (SPU). This Project provides a public benefit as it controls one of the County's combined sewer overflow (CSO) basins five years earlier than anticipated and provides increased flexibility to manage CSO flows into the ship canal which improves water quality. Because this single Project negates the need for the Wastewater Treatment Division of the Department of Natural Resources and Parks (WTD) to construct two and SPU to construct four independent CSO control projects, the Project will reduce environmental impacts and minimize neighborhood disruption.

King County entered into a federal consent decree with the Washington State Department of Ecology and the U.S. Environmental Protection Agency on July 3, 2013 which requires control of the County's CSO basins by December 31, 2030. One of the ordinances transmitted with this letter would authorize execution of a Joint Project Agreement with SPU for the design, construction, operations, and maintenance of the Project for CSO control. The second ordinance requests a supplemental appropriation of $14,190,219 to WTD Capital Improvement Fund 3611 for initial work on the Project.

This Project is a coordinated effort between WTD and SPU and involves the construction of a 15-million gallon CSO storage facility. SPU will serve as the lead agency for design and construction of the Project. This single storage facility will control five of SPU's CSO basins in Ballard and Fremont/Wallingford, and the County's 3rd Avenue West and 11th Avenue Northwest CSO basins for which independent construction projects would have been completed in 2023 and 2030 respectively. The Project, which is scheduled for completion in 2025, will significantly reduce overflows of sewage and stormwater into the Ship Canal and meet the requirements for controlling these CSO basins under SPU's and WTD's federal consent decrees.

The Project allows both SPU's and WTD's flows from multiple basins to be managed in a single storage facility to minimize overflows. Subject to the King County Council's and Seattle City Council's approval, WTD and SPU have tentatively agreed on the terms of a Ship Canal

Water Quality Joint Project Agreement that provides for the funding of, the planning, design, construction, maintenance, operation, repair, replacement, alteration, and improvement of the facility.

The requested supplemental appropriation will fund WTD's portion of the proposed Project for the 2015-16 Biennial Budget. The total cost estimate for this Project is $423 million which includes approximately $41 million in conveyance and land acquisition costs that are exclusive to SPU. The proposed Project cost share is based upon the projected cost for each entity to construct independent projects. For WTD, this is estimated to be $134 million which is 35 percent of the total project cost minus costs exclusive to SPU ($382 million). Note that these cost estimates are Class 4 estimates with a range of minus 20 percent to plus 30 percent.

These two ordinances support the environmental sustainability goal of the King County Strategic Plan by authorizing a joint project agreement and appropriating funds for a CSO control project that will improve water quality in the region.

Thank you for your consideration of these ordinances. Their passage will ensure the County can continue its coordinated effort with SPU to achieve CSO control in the Lake Washington Ship Canal.

If you have any questions, please feel free to contact Sharman Herrin, Government Relations Administrator of the Wastewater Treatment Division in the Department of Natural Resources and Parks, at 206-477-5376, or sharman.herrin@kingcounty.gov.

Sincerely,

Dow Constantine
King County Executive

Enclosures

cc: King County Councilmembers
ATTN: Carolyn Busch, Chief of Staff
Anne Noris, Clerk of the Council
Carrie S. Cihak, Chief of Policy Development, King County Executive Office
Dwight Dively, Director, Office of Performance, Strategy and Budget
Christie True, Director, Department of Natural Resources and Parks (DNRP)
Pam Elardo, P.E., Division Director, Wastewater Treatment Division (WTD), DNRP
Sharman Herrin, Government Relations Administrator, WTD, DNRP

2015/2016 FISCAL NOTE

ATTACHMENT 3

Ordinance/Motion: 2015-XXXX
Title: An appropriation to Wastewater Capital Fund 3611 for the Joint Ship Canal Water Quality Combined Sewer Control Project
Affected Agency and/or Agencies: Wastewater Treatment Division (WTD), Department of Natural Resources and Parks
Note Prepared By: Kevin Yokoyama, Business & Finance Officer, WTD
Date Prepared: 10/23/2015
Note Reviewed By: John Walsh, Budget Analyst, PSB
Date Reviewed: 10/23/2015

Description of request:

This ordinance will enable WTD to enter into an agreement with Seattle Public Utilities to fund a 35% cost share ($134 million) of the estimated $382 million in shared capital costs for the Joint Ship Canal Water Quality (WQ) Combined Sewer Overflow (CSO) Control Project (1127126). The joint project is scheduled for completion in 2025. WTD's share represents the cost to design and construct planned CSO control facilities at 11th Ave NW and 3rd Ave W which are part of the joint project scope of work. WTD staff support ($10.7 million) for project oversight will be billed to and reimbursed by Seattle Public Utilities. The design and construction of a joint CSO control project to addess sewer overflows is more efficient as it improves coordination and minimizes disruption to the community.

Revenue to:

Agency	Fund Code	Revenue Source	2015/2016	2017/2018	2019/2020
Wastewater Treatment Division	3611	Bond Proceeds	13,070,095	14,367,562	45,601,263
Seattle Public Utilities	3611	Sewer Component Agencies	1,120,124	1,911,344	2,027,754
TOTAL			**14,190,219**	**16,278,906**	**47,629,017**

Expenditures from:

Agency	Fund Code	Department	2015/2016	2017/2018	2019/2020
Wastewater Treatment Division	3611	4000	13,070,095	14,367,562	45,601,263
Wastewater Treatment Division: Staff Support	3611	4000	1,120,124	1,911,344	2,027,754
TOTAL			**14,190,219**	**16,278,906**	**47,629,017**

Expenditures by Categories

	2015/2016	2017/2018	2019/2020
Capital Outlay	14,190,219	16,278,906	47,629,017
TOTAL	**14,190,219**	**16,278,906**	**47,629,017**

Does this legislation require a budget supplemental? Yes.

Notes and Assumptions: Funding for this supplemental request will be included in the Wastewater Treatment Division's balanced financial plan.