



**BOARD OF DIRECTORS SPECIAL MEETING**

**DATE** : Thursday, September 26, 2013  
**TIME** : 7:00 p.m.  
**PLACE** : Vancouver Community Library, Columbia Room, 901 C. Street, Vancouver WA (360-696-4494, e-mail: [debbiej@c-tran.org](mailto:debbiej@c-tran.org); Web site: [www.c-tran.com](http://www.c-tran.com))

Vancouver Community Library is accessible by C-TRAN Routes C-TRAN Routes #2, #4, #25, #30, #32, #37, #44, and #105

The complete C-TRAN Board of Directors meeting packet is available on C-TRAN's website at [http://www.c-tran.com/board\\_meeting\\_minutes.html](http://www.c-tran.com/board_meeting_minutes.html)

**AGENDA**

**TIME** **PAGE NO.**  
**ESTIMATE**

7:00 p.m.	<b><u>CALL TO ORDER</u></b>	
7:00 p.m.	<b><u>PLEDGE OF ALLEGIANCE</u></b>	
7:01 p.m.	<b><u>ROLL CALL OF BOARD MEMBERS</u></b>	
7:02 p.m.	<b><u>CITIZEN COMMUNICATIONS</u></b> – <i>(Anyone requesting to speak to the Board of Directors regarding the <u>Scheduled Action Item ONLY</u>, may come forward at this time. Comments are limited to three minutes.)</i>	
<b><u>ACTION ITEMS</u></b>		
7:30 p.m.	<b>POTENTIAL AGREEMENTS AND FINANCE PLAN FOR THE BI-STATE PHASED CONSTRUCTION OF THE COLUMBIA RIVER CROSSING PROJECT, STAFF REPORT #13-045</b> 1. Staff Presentation <i>(30 Minutes)</i> 2. Board Deliberation <i>(45 Minutes)</i> 3. Board Action <i>(15 Minutes)</i>	<b>2</b>
9:00 p.m.	<b>BOARD RESOLUTION BR-13-015, PRESENTED BY BOARD MEMBER DAVID MADORE; A RESOLUTION TO UPHOLD FOUNDATIONAL C-TRAN ADOPTED POLICIES</b> 1. Board Member Presentation <i>(5 Minutes)</i> 2. Board Deliberation <i>(20 Minutes)</i> 3. Board Action <i>(5 Minutes)</i>	<b>32</b>
9:30 p.m.	<b><u>ADJOURNMENT</u></b>	



**STAFF REPORT  
#13-045**

**TO** : Chair and Board of Directors

**FROM** : Jeff Hamm, Executive Director/CEO 

**DATE** : September 26, 2013

**SUBJECT** : Potential Agreements and Finance Plan for the Construction, Maintenance, and Operation of the Phased Bi-State Columbia River Crossing Project

**OBJECTIVE:**

For the C-TRAN Board of Directors to consider information regarding draft intergovernmental agreements/contracts and associated terms and a draft operations and maintenance finance plan for C-TRAN participation in the phased Bi-State Columbia River Crossing Project.

**BACKGROUND:**

At the May 23, 2013 C-TRAN Board meeting, for the purposes of discussion, the Board directed staff to begin drafting terms for a contract with TriMet for maintenance and operation of the light rail transit (LRT) component in Vancouver of the Washington State Department of Transportation (WSDOT) led Columbia River Crossing Project (CRC). The Board also directed staff to draft a finance plan to fund the cost of operating the LRT in Vancouver without raising taxes. On July 2, 2013, WSDOT issued to C-TRAN a stop work order on the CRC project as a result of loss of funding for the project from the Washington State Legislature. Over the course of the summer, the State of Oregon began exploring an option to assume the lead for the project and for TriMet to become the Federal Transit Administration (FTA) grantee in place of WSDOT.

At the September 10, 2013 C-TRAN Board meeting, the Board authorized the expenditure of resources for staff to expeditiously evaluate and prepare Bi-State CRC related agreements, terms and finance plan, and to present the same as soon as possible to the Board.

Attachment No. 1 is a list of key agreements and approvals necessary to be executed in order for FTA to consider granting the Phased Bi-State CRC a full funding grant agreement (FFGA) for the capital cost of the light rail component of the project and a portion of the bridge crossing structure.

Attachment No. 2 is a draft term sheet between C-TRAN and TriMet for project development and operation and maintenance of the LRT extension between Expo Center and the Clark park and ride. In summary form, the term sheet establishes the following:

**Section 2** – Cooperative setting of service levels and operations and maintenance policies.

**Section 3** – Mutual setting of transit fares and allocation formula for associated revenues.

**Section 4** – C-TRAN and TriMet Board processes for setting service levels and budgeting for costs of operation and maintenance.

**Section 5** – Quarterly payment schedule for payment of estimated costs.

**Section 6** – Annual reconciliation of estimated payments to audited costs.

**Section 7** – Designation of operation and maintenance functions and costs to be the sole responsibility of each transit district e.g. routine maintenance of trackway, park and ride lots, light rail stations located respectively within each district, marketing/public information/outreach, and utility costs.

**Section 8** – Description of mutual operations and maintenance costs to be shared including light rail vehicle, track and system maintenance, labor of operators, supervisors, fare inspectors and on train security and capital maintenance.

*Note that general and administrative overhead is not included as a mutual cost. Each transit district will be responsible for those costs. Also note in Section 8.1.6 that the parties acknowledge that TriMet's unfunded pension legacy costs and unfunded medical benefits costs will be excluded from any calculation of mutual O & M costs as they relate to the C-TRAN share. Also note that in Section 8.8.2 the apportionment of 63.2% of Mutual O & M costs to C-TRAN and 36.8% to TriMet represents the Oregon/Washington state line as the dividing point for calculations.*

**Section 9** – Describes respective FTA reporting requirements and obligations.

**Section 10** – Addresses the crediting of federal State of Good Repair grant funds to the project (see Finance Plan).

**Section 11** – Describes the process and responsibilities for property acquisition.

**Section 12** – Provides for a dispute resolution process.

Attachment No. 3 is a draft finance plan for C-TRAN's share of the maintenance and operation of the LRT. The costs, revenues, and service hours expressed are derived from most recent C-TRAN and TriMet figures, plans and modeling of costs and revenues. Page one utilizes the draft term sheet to calculate and allocate C-TRAN and TriMet district and shared costs and then subtracts estimated farebox and federal State of Good Repair grant funding. The Funding for C-TRAN Share section proposes means to fund the required C-TRAN subsidy without raising taxes. Pages 2 – 17 provide detail and the assumptions used to arrive at the costs and revenues.

*Note that a third party contribution of \$400,000 is assumed throughout the operations term to reduce the funding obligation of C-TRAN. Also, note that beginning in year 2027 additional funding will be needed to fund the subsidy gap because the sales tax revenue windfall garnered from the construction of the project will have been exhausted.*

The draft Finance Plan does not currently contain an assumption for revenue derived from charging for parking in the park and ride lots. Attachment No. 4 is an outline of the considerations and types of analyses that would need to be undertaken to provide a reasonable dollar estimate and when it might be realizable.

**PROPOSAL:**

That the Board review, discuss and consider action on the draft terms, agreements and finance plan for C-TRAN's participation in the Bi-State Phased Columbia River Crossing project.

**ACTION:**

Provide staff direction.

**Attachments:**

1. Key Agreements and Approvals Required by Revised Plan; DRAFT Updated 09/23/13
2. DRAFT Term Sheet
3. DRAFT Finance Plan
4. Park & Ride Lots & Parking Charges

## ATTACHMENT NO. 1

### Key Agreements and Approvals Required by Revised Plan: DRAFT 9-23-13

Agreement/Resolution	Purpose/Key Provisions	Required Actions
ODOT-WSDOT Project Development and Operations Agreement	ODOT agrees to construct bridge and LRT. WSDOT agrees that ODOT will toll and retain all toll revenues from the I-5 Bridges. WSDOT agrees to acquire highway ROW as required for the Project. If ODOT employs WSDOT to collect tolls, the terms of toll collection.	OTC approval required for ODOT. WSDOT Secretary has authority to execute agreement.
OTC-WSTC Tolling Agreement	An agreement currently exists between OTC and WSTC regarding joint toll setting. This agreement would be amended to allow OTC to set tolls in consultation with WSTC.	OTC and WSTC must approve.
ODOT-TriMet Project Development and Funding Agreement	Agreement will address project organization and decision-making; roles and responsibilities, cost overruns, ODOT funding contributions to TriMet, TriMet funding obligations and reimbursement for ODOT, shared interim borrowing obligations, design review and approval rights, schedule, and accounting and auditing requirements.	Approval required by OTC or ODOT and TriMet Board for TriMet
ODOT-TriMet LRT Operations and Maintenance Agreement	Agreement will address maintenance on jointly used bridges and other O&M-related obligations of ODOT, if any.	Approval required by OTC or ODOT and TriMet Board for TriMet
C-TRAN-TriMet Project Development and Operations Agreement	Assigns roles and obligations between transit districts regarding project development, construction, ownership, and operations.	Approved by C-TRAN Board and TriMet Board
C-TRAN-City of Vancouver Operations Agreement	Assigns roles and obligations between C-TRAN and City regarding general light rail operations. Over course of project development there may be some additional agreements of very narrow scope addressing specific issues.	Approved by City Council of Vancouver and C-TRAN Board
Transfer Agreement	Agreement transferring ownership of transit assets located in Washington and related obligations to FTA from TriMet, as grantee, to C-TRAN	Approved by C-TRAN Board and TriMet Board
City of Vancouver-TriMet LRT Project Development and Operations Agreement	Assigns roles and obligations between TriMet and City regarding project development, construction, maintenance, and operations of light rail within City.	Approved by City Council of Vancouver and TriMet Board
Continuing Control Agreements	Agreements to satisfy FTA continuing control requirements; will also address maintenance roles and responsibilities for joint use streets or bridges.	C-TRAN-Vancouver, TriMet-ODOT, TriMet-Portland, C-TRAN-WSDOT; all require board action except WSDOT
Joint Facility Maintenance Agreements	As Needed: Additional, issue specific agreements, addressing maintenance roles and responsibilities for joint use streets or bridges, if not addressed in primary operations agreement.	C-TRAN-Vancouver, TriMet-ODOT, TriMet-Portland, C-TRAN-WSDOT; all require board action except WSDOT

COLUMBIA RIVER CROSSING PROJECT  
TERM SHEET BETWEEN C-TRAN AND TRIMET REGARDING  
PROJECT DEVELOPMENT AND OPERATIONS AND MAINTENANCE  
OF THE LRT EXTENSION BETWEEN EXPO CENTER AND CLARK PARK-AND-RIDE

1. General

- 1.1 This term sheet is a non-binding description of preliminary terms for a future agreement between C-TRAN and TriMet regarding the development, operations, and maintenance of the light rail extension from the Expo Center Station in Portland, Oregon to the Clark Park-and-Ride in Vancouver, Washington (CRC LRT). The Parties acknowledge and agree that the provisions set forth in this term sheet are subject to change until the final binding agreements are executed by the Parties.
- 1.2 This term sheet focuses on CRC LRT project development, right-of-way-acquisition, operations, maintenance, and capital maintenance and replacements.
- 1.3 All provisions included in this term sheet are subject to all applicable laws.
- 1.4 Capitalized words in this term sheet are defined terms; the meaning of defined terms is provided in Exhibit A to this term sheet.

2. Service and O&M Policies

- 2.1 Setting CRC LRT Service and O&M Policies. C-TRAN and TriMet will cooperatively set Service Policies and O&M Policies for the CRC LRT as follows:
- 2.1.1 CRC LRT Service Policies will be set through coordinated annual/bi-annual budget approvals of C-TRAN and TriMet, as described in Section 4.
- 2.1.2 C-TRAN and TriMet shall agree on a Five-Year CRC LRT Plan, as described in Subsection 2.2; the Service Policies in the Five-Year Plan shall be a basis for setting service levels and O&M budgets in the annual/bi-annual budgets of each district approved by its respective Board of Directors.
- 2.1.3 O&M Policies for *District* functions shall be set by the responsible transit district; except that if the Five-Year Plan sets minimum criteria for any *District* function, each transit district shall comply with such criteria.
- 2.1.4 O&M Policies for *Mutual* functions shall be set by the transit district responsible for providing such function, except that if the Five-Year Plan sets minimum criteria for any *Mutual* function, the responsible transit district shall comply with such criteria. For example, because TriMet will operate trains and maintain vehicles on behalf of both transit districts, TriMet's policies regarding its operators and vehicle maintenance programs will apply to the CRC LRT.
- 2.2 Instituting and Administering the Five-Year Plan for the CRC LRT.
- 2.2.1 The Five-Year Plan for the CRC LRT shall be prepared and administered as follows:

- 2.2.1.1 No later than two years before the fiscal year in which CRC LRT operations start, TriMet shall prepare a review draft of the initial Five-Year CRC LRT O&M Plan describing the anticipated service hours, headways, hours of operation, vehicle miles and hours of operation, and other pertinent information for CRC LRT O&M *Service Policies* and *Mutual* O&M costs for each district on both a TriMet and C-TRAN fiscal year basis. The TriMet and C-TRAN shares of Mutual O&M costs shall be calculated as set forth in Section 8.
- 2.2.1.2 The *Service Policies* in the initial Five-Year CRC LRT Plan shall be consistent with the service levels provided to FTA in support of securing the Full Funding Grant Agreement (FFGA), as those service levels may be adjusted subject to FTA approval, if required under the FFGA, and by mutual agreement of C-TRAN and TriMet.
- 2.2.1.3 C-TRAN and TriMet shall work cooperatively to resolve issues and reach agreement on the initial Five-Year Plan.
- 2.2.1.4 To be effective, the Five-Year Plan must be approved by C-TRAN and TriMet. C-TRAN and TriMet shall each determine for itself the appropriate process for granting its approval to the Five-Year Plan.
- 2.2.3 The Five-Year Plan shall be updated by C-TRAN and TriMet on a five-year cycle; provided that C-TRAN and TriMet may agree to revisions to the Five Year Plan at any time. Any amendment of the Five-Year Plan shall require approval by C-TRAN and TriMet to be effective.
- 2.3 Integration of Bus Service and Park-and-Ride Facilities with LRT Service. Unless otherwise agreed by mutual consent and, when required, by FTA, each transit district will:
  - 2.3.1 Take into account the feeder bus needs of the CRC LRT, including without limitation the levels of bus service underlying the New Starts submissions to FTA, in setting and implementing bus Service Policies within its district.
  - 2.3.2 Set its own fares for bus service.
  - 2.3.3 Provide for seamless inter-system transfers.
  - 2.3.4 Not charge CRC LRT riders for park-and-ride spaces prior to 2031.
- 3. **Sale and Collection of Fares**
  - 3.1 No later than two years before the fiscal year in which CRC LRT operations start, C-TRAN and TriMet shall set by mutual agreement (1) transit fares for individual trips and discounted passes that will apply to trips on the CRC LRT, and (2) an allocation formula for sharing the proceeds of bi-state fares.
  - 3.2 C-TRAN and TriMet shall (1) each sell fare instruments for interstate trips, and (2) provide an accounting of the farebox revenues it collects from interstate riders; such accounting shall be in a form acceptable to both Parties.

- 3.3 C-TRAN and TriMet will take steps to implement a compatible smart-card based, automated fare collection systems that provide for regionally coordinated fare collection that would give base-fare credit for intersystem cash transfers and a method of reconciling revenue from passes and transfer trips.
4. **CRC LRT Service Level and O&M Budget Approvals**
- 4.1 Each year C-TRAN and TriMet shall agree on the CRC LRT service levels and, to the extent set forth in the Five Year Plan, the feeder bus service levels. The agreed upon service levels shall be consistent with any applicable requirements set forth in the Full Funding Grant Agreement for CRC LRT and the Five Year Plan.
- 4.2 The Board of Directors for each transit district shall approve for each budget cycle the (1) CRC LRT service levels, (2) budget for District O&M costs for which it is responsible, and (3) budget for the Mutual O&M costs. Approval by both Boards of Directors is required for approval of the budget for Mutual O&M costs.
- 4.2.1 The Parties acknowledge that (1) the fiscal years of C-TRAN (January 1 – December 30) and TriMet (July 1 – June 30) differ, (2) the budget cycles of C-TRAN (primarily bi-annual) and TriMet (primarily annual)differ, and (3) the final transit operations agreement will further detailthe timing coordination of the budget approvals described in this Section 4.
- 4.3 Each budget cycle, starting two years prior to the start of operations of the CRC LRT, the staffs of C-TRAN and TriMet shall prepare a comprehensive budget for CRC LRT and agency budgets, consistent with the comprehensive budget, for adoption by the applicable transit district.The budgets shall be prepared in a coordinated manner as follows:
- 4.3.1 C-TRAN and TriMet shall seek to reach agreement on the estimated ridership, service hours, rail miles, and other data to be used in determining service levels and O&M costs; the Parties agree to use the best and most recent available data at the time.
- 4.3.2 Each transit district shall prepare a preliminary budget for the *District* O&M costs for which it is responsible; such preliminary budgets shall be based on the data described in Section 4.3.1 and consistent with any applicable policies or criteria in the current Five-Year Plan.
- 4.3.3 TriMet shall prepare a preliminary budget of *Mutual O&M* costs for which it is responsible; such preliminary budget shall be based on the data described in Section 4.3.1 and consistent with any applicable policies or criteria in the Five-Year Plan.
- 4.3.4 C-TRAN and TriMet shall (1) work cooperatively to ensure that the budgets are consistent with each other, (2) make adjustments to service levels and budgets required to match anticipated costs with revenues, and (3) use best efforts to reach agreement on coordinated budgets to be recommended to their respective Boards of Directors.
- 4.3.5 Within 45 days of receipt of the budget recommendation, each transit district shall notify the other transit district of either (1) the Board's intent to incorporate the recommended CRC LRT budget in in the agency's budget or (2) the Board's intent to reject the budget recommendation. Any notice of intent to reject the budget recommendation shall provide a detailed description of the reasons for the Board's rejection and any proposed revisions it would find acceptable. The Parties shall proceed as follows:

- 4.3.5.1 If the transit districts each notify the other of their Board's intent to approve the recommended CRC LRT budget, then each Board shall incorporate its portion of the recommended budget in its agency's budget and follow its regular budget process to finalize its approval.
- 4.3.5.2 If one or both transit districts notify the other transit district of its Board's intent to reject the budget recommendation, the Parties shall meet within seven calendar days from the day on which the earliest notification was provided and negotiate in good faith to resolve the issues.
- 4.3.5.3 If agreement cannot be reached on a recommended budget within 15 calendar days from the start of the negotiations under Subsection 4.3.5.2, either Party may initiate the dispute resolution process in Section 11.
- 4.3.5.4 Notwithstanding Subsections 4.3.5.2 and 4.3.5.3, the dispute resolution process shall be initiated within seven calendar days from when a Party reasonably determines and notifies the other Party that impairment of CRC LRT service is imminent due to a potential disagreement; such notification can be provided any time following receipt of notice of intent to reject a budget recommendation.

**5. Payment of O&M Costs**

- 5.1 The costs of the District functions shall be paid when due by the responsible transit district in accordance with its regular procedures and protocols.
- 5.2 TriMet shall pay when due the costs of the Mutual O&M Functions for which it is responsible in accordance with its regular procedures and protocols.
- 5.3 Each year on or before February 15<sup>th</sup>, May 15<sup>th</sup>, August 15<sup>th</sup>, and November 15<sup>th</sup>, C-TRAN shall transfer to TriMet one-quarter (25%) of the amount it budgeted as its share of Mutual O&M Costs for the year as a preliminary estimated payment of its share of Mutual O&M Costs for the fiscal year quarter within which payment is made. These preliminary estimated payments shall be reconciled as described in Section 6.

**6. Reconciliation of Estimated CRC LRT O&M Payments with Audited Results**

- 6.1 Each year C-TRAN and TriMet shall reconcile the amounts each transit district paid for Mutual O&M Costs with the actual amounts owed by each transit district, taking into account the estimated quarterly payments made in Section 5.3 and the federal formula grants for the CRC LRT discussed in Section 10.1. The reconciliation of payment of Mutual O&M Costs shall be independent of the allocation of farebox revenues set forth in Section 3.1. The time period for this annual reconciliation will be addressed in the final agreement between C-TRAN and TriMet.
  - 6.1.1 Within ninety (90) days from the end of its fiscal year, TriMet shall prepare and transmit to C-TRAN a final report on its fiscal year expenditures for Mutual O&M Functions.
  - 6.1.2 The report shall contain an accounting of the apportionment of these expenditures between TriMet and C-TRAN in accordance with Section 8, and a reconciliation of accounts between C-TRAN and TriMet in accordance with Subsection 6.2.

- 6.2. The CRC LRT O&M payment reconciliation process shall proceed as follows:
- 6.2.1 The *Preliminary Amount of Mutual O&M Costs Paid* by C-TRAN during a subject year shall be calculated by summing the estimated quarterly payments C-TRAN made during the year to TriMet for such costs.
  - 6.2.2 The *Final Amount of Mutual O&M Costs Owed* by C-TRAN in a subject year shall be the amount calculated as the product of: (1) the total amount of actual Mutual O&M costs paid in the year by TriMet and C-TRAN, (2) minus the amount of State of Good Repair Funds apportioned to CRC LRT pursuant to Section 10.3, (3) multiplied by the *Mutual O&M Cost Factor*.
  - 6.2.3 The *Reconciliation Amount* in a subject year shall be the amount calculated as the difference between (1) the Final Amount of Mutual O&M Costs Owed by C-TRAN for the subject year minus (2) the Preliminary Amount of Mutual O&M Costs Paid by C-TRAN in the subject year. If the *Reconciliation Amount* is a positive value, that amount shall be paid by C-TRAN to TriMet. If the *Reconciliation Amount* is a negative value, that amount shall be paid by TriMet to C-TRAN.
- 6.3 If a dispute arises between C-TRAN and TriMet regarding any of the amounts calculated under Subsection 6.2, the disputing party shall promptly notify the other party. The notice shall explain the details of the dispute, including any data supporting its position. Within fifteen (15) calendar days of such notification, the Parties shall meet and negotiate in good faith to resolve the dispute. If the dispute is not resolved within fifteen (15) days from the date on which such negotiations begin, either Party may initiate formal dispute resolution as set forth in Section 11.

## 7. District O&M Functions and Costs

### 7.1 General

- 7.1.1 Each transit district shall be responsible for performing and paying for all District O&M Functions within its district, except as otherwise provided in this Section 7.
- 7.1.2 All District O&M Functions shall be performed in accordance with the standard practices of the transit district performing the function and in accordance with any applicable policies in the Five-Year Plan or any other agreement between the Parties.
- 7.1.3 District O&M Functions and costs exclude any Mutual O&M Functions and costs described in Section 8 that may otherwise be considered a component of a responsibility described in this Section 7.

### 7.2 Routine (Non-Specialized) Maintenance-of-Way Excluding the Main River Crossing.

- 7.2.1 This Section 7.2 addresses routine maintenance-of-way and specifically excludes any specialized maintenance activities that may otherwise be considered maintenance-of-way, such as catenary repair; all LRT Capital Maintenance, such as rail grinding; and all maintenance-of-way on the main river crossing. Specialized maintenance-of-way activities, Capital Maintenance, and maintenance-of-way activities on the main bridge crossing are Mutual O&M activities and are addressed in Section 8.

7.2.2 Each transit district shall undertake or cause to be undertaken all actions required for routine maintenance-of-way within its district.

7.2.1.1 Routine maintenance-of-way includes such activities as cleaning, replacing lighting bulbs, landscaping, repairing right-of-way barriers, and any street maintenance for which a transit district's light rail operations is responsible, including any general maintenance obligations resulting from continuing control or other agreements with local jurisdictions within its district.

7.2.2 Each transit district is individually responsible for paying the cost of routine maintenance-of way-activities described in this Subsection 7.2 within its district.

7.3 Operations and Maintenance of Light Rail Park-and-Rides

7.3.1 Each transit district shall undertake or cause to be undertaken all actions required to operate and maintain light rail park-and-ride facilities within its district, provided however,that Capital Maintenance of light rail park-and-ride facilities shall be a Mutual O&M cost as addressed in Subsection 8.7.

7.3.1.1 Light Rail Park-and-ride facilities include all components of such facilities including without limitation the parking areas, structures, grounds, lighting, accessways, signs, elevators, amenities, systems, utility connections, and any commercial spaces within the facility.

7.3.1.2 Except for Capital Maintenance, as provided in Subsections 8.7, the operations and maintenance of the park-and-ride facility includes all aspects of operating and maintaining the facility, including without limitation security, cleaning, landscaping, resurfacing of parking areas, repair, and replacement of building elements and systems, facility marketing and public information, and payment of utilities and any applicable fees or taxes.

7.3.2 Unless otherwise agreed by C-TRAN and TriMet, there shall be no charge for park-and-riders to park in a park-and-ride facility prior to 2031; provided that the transit district may require the park-and-rider to have a valid fare instrument.

7.3.3 To the extent permitted by FTA, if commercial space is included in a park-and-ride facility, the applicable transit district shall be responsible for all activities, permits, liabilities, and costs associated with leasing or using such space and may, to the extent permitted by FTA, retain any net revenues from such leases or commercial uses. As set forth in Subsection 7.3.5, a transit district may contract with a city to perform these functions and pay such costs.

7.3.4 To the extent permitted by FTA, the applicable transit district may sell advertising space within a station or park-and-ride facility located within its district and retain all net revenues from any such advertising contracts. C-TRAN and TriMet shall determine a way to share the additional advertising revenues, if any, received by TriMet for selling advertising on or in light rail vehicles operating on the CRC LRT extension. C-TRAN and TriMet shall coordinate their advertising activities on the CRC LRT extension.

- 7.3.5 Each transit district may enter into an agreement with a third party wherein the third party agrees to meet all or a portion of the obligations of the transit district under this Section 7.3, provided that:
- (a) If required by FTA, FTA approves the agreement between the city and transit district in advance of its execution; and
  - (b) The assigning transit district remains liable for its obligations for the park-and-ride facilities under this Section 7.3 to WSDOT, the other transit district, and FTA, unless the release of such obligations is expressly approved by WSDOT, the other transit district and, if required, FTA.

7.4 Operations and Maintenance of Light Rail Stations.

- 7.4.1 Except as provided in Subsections 7.4.4, 8.3 and 8.4, each transit district shall undertake or cause to be undertaken all actions required to operate and maintain light rail stations within its district, provided however, that Capital Maintenance of light rail stations shall be a Mutual O&M cost as addressed in Subsection 8.7.
- 7.4.2 As used in this term sheet, light rail stations include all applicable access and transition areas (such as kiss-and-ride zones, plazas, stairwells, and elevators), platforms, amenities, and furnishings (such as seating, public art, trash receptacles, signage, and landscaping), lighting, utilities and drainage, and shelters and coverings). The track and system components located within station areas are included in the general provisions for track and traction electrification system set forth in Subsections 8.3 and 8.4, respectively, and are not light rail station functions or costs for purposes of this term sheet.
- 7.4.3 Except as otherwise provided in this term sheet, the operations and maintenance of the light rail stations includes all aspects of operating and maintaining the station, including without limitation cleaning, trash removal, general maintenance, removal of hazardous substances, managing stormwater drainage from station areas, operating and maintaining any station impact mitigation measures, and payment of station utilities. Operations and maintenance of a light rail station does not include Capital Maintenance of the station.
- 7.4.4 C-TRAN and TriMet shall work cooperatively to determine the functional and financial responsibilities for fare vending machines, reader boards, and security systems, and the coordination of such activities and financial responsibilities between CRC LRT and C-TRAN's planned BRT system.

7.5 Marketing, Public Information, and Community Outreach.

- 7.5.1 Unless otherwise agreed by C-TRAN and TriMet as described in Subsection 7.5.3, each transit district shall undertake or cause to be undertaken all actions to market, provide public information, and respond to media or public inquiries that relate to the CRC LRT extension within its district.
- 7.5.2 Except as provided in Subsection 7.5.3, each transit district shall pay the cost of actions it undertakes or causes to be undertaken pursuant to Subsection 7.5.1, including the costs of any brochures, schedules, media, advertising, information centers, or special events or programs associated with such actions.

7.5.3 In performing the functions described in this Subsection 7.5, C-TRAN and TriMet shall to the extent practical seek to coordinate such activities and, when efficient, share such costs. Such coordination may include, without limitation, assigning one transit district the responsibility to perform certain functions on behalf of both districts on an on-going or case-by-case basis. It may also include having one transit district prepare materials (such as brochures and public information materials) for use by both transit districts. Any such arrangements shall be agreed to by C-TRAN and TriMet and may include sharing in related costs.

7.6 Betterments.

7.6.1 Unless otherwise agreed by C-TRAN and TriMet, each transit district shall be responsible for undertaking and paying the full cost of any Betterment located within its district.

7.6.2 Any Betterment in a district must be approved by the other transit district prior to implementation of the Betterment; such approval may not be unreasonably withheld.

7.7 Utility Costs.

7.7.1 Each transit district shall be responsible for paying as a District O&M Cost the cost of all utilities metered in its district, including without limitation water, stormwater, and electricity (including cost of purchasing electricity for light rail propulsion).

8. **Mutual O&M Functions and Costs**

8.1 General

8.1.1 This term sheet assumes that all Mutual O&M Functions will be performed by TriMet. If at any time C-TRAN assumes responsibility for a Mutual O&M function, the provisions of this term sheet shall be amended and the terms applicable to C-TRAN's performance and payment of Mutual O&M Functions shall be the same as those previously applicable to TriMet.

8.1.2 All Mutual O&M Functions shall be performed in accordance with the standard practices of the transit district performing the function and in accordance with any applicable policies in the Five-Year Plan or any other agreement between the Parties.

8.1.3 General and Administrative (or "G&A") cost is a District O&M cost, and shall be excluded from all calculations of Mutual O&M cost.

8.1.3.1 G&A cost includes all management, financial, administrative, and other overhead expenses incurred by a transit district for the general, day-to-day management and administration of the transit district as a whole, including without limitation the cost of executive management, accounting, general legal counsel (provided that legal fees and expenses, whether in-house or third-party, that are specific to CRC LRT and not a general expense are not a G&A cost), Board functions, government affairs, communications, office space, utilities, supplies, and other expenses related to such functions.

8.1.3.2 G&A cost does not include those management expenses with a direct or causal relationship to the operations and maintenance of CRC LRT.

- 8.1.4 The Parties acknowledge that under current law in the State of Washington, TriMet may be required to pay certain state taxes when operating within the State of Washington. The Parties shall cooperatively seek an exemption from such taxes. Unless and until the such exemption is obtained, the cost of any taxes paid by TriMet as a result of operating and maintaining the CRC LRT in the State of Washington shall be a Mutual O&M cost that is shared between the Parties as described in Section 8.8.
- 8.1.5 The Parties shall cooperatively determine the types, amounts, deductibles, and cost of any property, casualty, and liability insurance to be carried on the tangible assets and operations of the CRC LRT. The annual premium cost of any liability insurance policy and the payment of any deductibles shall be a Mutual O&M cost that is shared by C-TRAN and TriMet. The Parties may determine that certain insurance coverage, such as property insurance, should be purchased on a District basis rather as a Mutual O&M Cost. The Parties shall negotiate in good faith any cost sharing formula that may be required.
- 8.1.6 The Parties acknowledge that TriMet has unfunded pension legacy costs and unfunded medical benefit legacy costs that it will have to fund in the future. Any payments of such legacy costs shall be excluded from any calculation of Mutual O&M costs as they relate to C-TRAN's cost sharing obligations.
- 8.1.7 C-TRAN and TriMet shall each pay a share of start-up (or pre-opening) operations and maintenance costs, including training and testing expenses, which are Mutual O&M costs under this term sheet.
- 8.1.7.1 Start-up costs shall be paid with New Start funds to the extent possible; up to the amount such funds are available under the FFGA.
- 8.1.7.2 Start-up costs not paid with New Start funds shall be shared between C-TRAN and TriMet. The amount owed by each transit district shall be the amount of Start-up costs not paid with New Start Funds multiplied by the Mutual O&M Factor for the transit district as set forth in Subsection 8.8.
- 8.2 Maintenance of Light Rail Vehicles.
- 8.2.1 TriMet shall undertake or cause to be undertaken all actions required to maintain light rail vehicles used for the CRC LRT extension including without limitation cleaning, general maintenance, and routine parts replacement. TriMet shall also maintain a light rail fleet management plan for its entire fleet, including CRC LRT, which meets FTA requirements.
- 8.2.2 TriMet shall pay when due all costs of performing or procuring light rail vehicle maintenance, including the costs of all associated supplies, equipment, parts, and other expenses.
- 8.2.3 TriMet and C-TRAN shall establish by mutual agreement a LRV Maintenance Discount Factor to be included in the calculation of shared light rail vehicle maintenance costs for an agreed-upon number of years of operation to reflect the anticipated lower costs of the new vehicles procured for the CRC Project.

8.2.4 The annual cost of maintaining light rail vehicles apportioned to the CRC LRT shall be calculated as: (1) the total cost of maintaining all light rail vehicles in the TriMet fleet during the year, (2) multiplied by the Car Miles Ratio for the year, (3) multiplied during the applicable time period by the LRV Maintenance Discount Factor.

8.3 Track Maintenance

8.3.1 TriMet shall undertake or cause to be undertaken all actions required to maintain the track for the full length of the CRC LRT extension, including without limitation such activities as lubricating and adjusting switches and switch heaters, tightening loose track components, inspections, and replacing track parts. Track maintenance shall include maintenance of track bed, track drains and the maintenance of any structures on which track is laid. Track maintenance shall also include performing any mitigation measures regarding track noise, vibration, and/or electrolytic corrosion.

8.3.2 TriMet shall pay when due all costs of performing or procuring such track and maintenance, including the costs of all associated supplies, equipment, parts, and other expenses.

8.3.3 The annual cost of track maintenance apportioned to the CRC LRT shall be calculated as (1) the total cost of track maintenance throughout the TriMet system (including CRC LRT) during the year, multiplied by (2) the Route Miles Ratio.

8.4 Operations and Maintenance of Electrification, Communications, Signal, and Security Systems.

8.4.1 Except as otherwise provided in this term sheet, TriMet shall undertake or cause to be undertaken all actions required to operate and maintain the systems required for the safe and efficient operations of CRC LRT, including:

8.4.1.1 The traction electrification system, including without limitation power substations; traction power feeder systems, including the cables, conduit, and ductbanks; the overhead contact system, including catenary wires and poles, and any redundant (back-up) electrification systems. The cost of purchasing electricity for the traction electrification system is addressed in Subsections 8.5.4, and is not considered a system cost in this term sheet.

8.4.1.2 The light rail communications system, including without limitation the central/operational control center; supervisory, control and data acquisition system; train-wayside communications system; radio systems; vehicle locator systems; and related central dispatch equipment and facilities.

8.4.1.3 The light rail signal system, including without limitation the automatic block system, street-crossing warning devices, logic control systems, and on-board traffic signal pre-emption systems.

8.4.1.4 The light rail security systems including without limitation emergency warning systems, video surveillance systems, and fire protection and suppression systems. The responsibility and cost of security operations at stations and park-and-rides is described in Subsections 7.4.4 and 7.3.1.2, respectively; and the costs of on-train security operations is described in Subsection 8.5.1, and are not part of the system activities or costs described in this Subsections 8.4.

- 8.4.2 Except as otherwise described herein, TriMet shall pay when due all costs of performing or procuring the operations and maintenance of the systems described in Subsection 8.4.1, including the costs of all associated supplies, equipment, parts, software, and other expenses.
- 8.4.3 The annual cost of operating and maintaining the traction electrification (excluding the power costs described in Subsection 8.5.4) communications, and signal systems to be apportioned to the CRC LRT shall be calculated as the (1) total cost of operating and maintaining the systems described in Section 8.4.1 throughout the TriMet system (including CRC LRT) during the year multiplied by (2) the Car Miles Ratio for the year.
- 8.5 Light Rail Operations Costs.
- 8.5.1 Except as provided in Subsections 8.5.4 and 8.5.5, TriMet shall undertake all actions required to operate light rail service for the CRC LRT extension including without limitation vehicle training and provision of operators, supervisors, fare inspectors, and on-train security. C-TRAN is not precluded from providing additional fare inspectors and on-train security in its district (beyond those provided by TriMet that are Mutual O&M Costs), provided that the cost of such additional on-board security or fare inspectors provided by C-TRAN shall be a C-TRAN District cost that is not shared by TriMet.
- 8.5.2 TriMet shall pay when due all costs of performing or procuring such light rail operations, including the costs of all associated supplies, equipment, parts, and other expenses.
- 8.5.3 The annual cost of light rail operations apportioned to the CRC LRT shall be calculated as the total cost of light rail operations throughout the TriMet system (including CRC LRT) during the year multiplied by the Train Miles Ratio for the year.
- 8.5.4. As described in Subsection 7.7.1, the cost of purchasing electricity for light rail propulsion shall be a District O&M cost; each transit district shall be responsible for paying the cost of electricity provided to power substations located within its district. This cost shall be excluded from all calculations of Mutual O&M cost.
- 8.5.5 The Parties acknowledge and agree that from time to time, light rail service on all or a portion of the CRC LRT extension may be disrupted due to breakdowns, accidents, power outages, weather, or other incidents on the CRC LRT extension or elsewhere on the LRT system, and that temporary bus service to bridge the disruption shall be provided to mitigate impact of the light rail service on light rail patrons. The Parties agree to cooperatively prepare and implement a temporary bus bridge service plan to respond to disruptions in light rail service; the plan shall specify if and how the cost of such temporary bus bridge services will be shared between C-TRAN and TriMet.
- 8.6 Maintenance-of-Way on the Main Bridge Crossing.
- 8.6.1 This Subsection 8.6 addresses maintenance-of-way on the main bridge crossing of the Columbia River. For purposes of this subsection, the main bridge crossing is defined as the structure bounded on the south end by the north most edge of the Hayden Island station and on the north end by the point at which the light rail alignment first touches down at street level in the City of Vancouver.

- 8.6.2 TriMet shall undertake or cause to be undertaken all maintenance of the light rail right of way on the main bridge crossing.
- 8.6.3 TriMet shall pay when due all costs of performing or procuring maintenance-of-way on the main bridge crossing, including the costs of all associated supplies, equipment, parts, and other expenses. TriMet shall also pay when due any amounts due to ODOT and/or WSDOT for maintaining the main bridge crossing under any agreement between TriMet and/or C-TRAN and ODOT and/or WSDOT. The maintenance of way costs for the main bridge costs shall be a Mutual O&M Cost.
- 8.7 Capital Maintenance and Replacement.
- 8.7.1 TriMet shall undertake or cause to be undertaken all Capital Maintenance for the full length of the CRC LRT extension, including without limitation such activities as rail grinding, and the rehabilitation or replacement of outdated or damaged track, equipment, vehicles, and systems. The Capital Maintenance Plan and budget shall be incorporated in the Five Year Plan. Unless otherwise caused by unanticipated events, the Capital Maintenance in a given year shall be consistent with that programmed in the Five Year Plan for the year.
- 8.7.2 TriMet shall pay when due all costs of performing or procuring Capital Maintenance, including the costs of all associated supplies, equipment, parts, and other expenses.
- 8.7.3 Capital Maintenance shall be budgeted and charged on a direct basis. The annual cost of Capital Maintenance shall be those costs actually and directly incurred due to Capital Maintenance of the CRC LRT Extension.
- 8.8 Calculation of Shared Cost Responsibility.
- 8.8.1 The annual total amount of Mutual O&M costs, excluding the shared bridge maintenance-of-way discussed in Subsection 8.6, shall be the sum of the following:
- a) The cost of maintaining light rail vehicles as set forth in Subsection 8.2.3;
  - b) The cost of track maintenance as set forth in Subsection 8.3.3;
  - c) The operations and maintenance costs of electrification, communications, signal, and security systems as set forth in Subsection 8.4.3;
  - d) The light rail operations costs set forth in Subsection 8.5.3;
  - e) The cost to be shared, if any, of temporary bus bridge services as set forth in Subsection 8.5.5;
  - f) The cost to be shared of insurance as set forth in Subsection 8.1.5;
  - g) When applicable, the Start-up costs not paid with New Start funds as set forth in Subsection 8.1.7;
  - h) The shared cost of operating and maintaining fare vending machines, security systems, and reader boards, if any, depending on the conclusions from Subsection 7.4.4;
  - i) The Capital Maintenance costs as set forth in Subsection 8.7; and
  - j) If applicable, the state taxes paid by TriMet as set forth in Subsection 8.1.4.
- 8.8.2 Based on using the state boundary as the dividing line for cost sharing, the Mutual O&M Cost Factor to be used to apportion Mutual O&M Costs between C-TRAN and TriMet shall apportion 63.2% of Mutual O&M Costs to C-TRAN and 36.8% to TriMet.

- 8.8.3 The annual share of Mutual O&M costs to be paid by each transit district shall be the amount calculated as the sum of (1) the product of the total amount of Mutual O&M costs during the year, as set forth in Subsection 8.8.1, multiplied by the applicable Mutual O&M Cost Factor for the transit district, plus (2) the amount of bridge maintenance-of-way costs apportioned to the district pursuant to Subsection 8.6.4.
- 8.8.4 The calculations described in Subsections 8.8.1 through 8.8.3 shall be used to estimate Mutual O&M Costs for budgeting and for determining the actual amounts owed when final costs for the year are available.
- 8.8.4 In addition to the respective shares of Mutual O&M costs resulting from the calculations described in this Subsections 8.8, each transit district shall be responsible for paying its share of any improvement and expansion costs under Section 9, as well as its District O&M costs under Section 7.

## 9. Compliance with FTA Requirements

- 9.1 Each Party shall comply with all FTA regulations, rules, and procedures applicable to the operation and maintenance of CRC LRT.
- 9.2 Each Party is responsible for complying with all FTA reporting requirements for the expenditures for which it is responsible for under this term sheet, and for the physical assets under its control. The Parties shall cooperate as necessary to ensure compliance with such reporting requirements; each Party shall promptly provide to the other Party all information in its possession that is necessary for the other party to comply with such reporting requirements.
- 9.3 Each Party is responsible for complying with any on-going requirements of the Full Funding Grant Agreement for CRC LRT for which it is assigned responsibility. The Parties shall cooperate as necessary to ensure compliance with such requirements; each Party shall promptly provide to the other Party all information in its possession that is necessary for the other party to comply with such requirements.

## 10. Grant Funds and Other Non-Fare Revenues

### 10.1 FTA State of Good Repair Grant Funds.

- 10.1.1 The Parties acknowledge that under current federal statutes CRC LRT would receive a formula allocation of State of Good Repair Grant Funds beginning in the eighth year of operations of CRC LRT. Such grant funds would be provided to CRC LRT on the basis of a formula set forth in federal statute.
- 10.1.2 For federal grant processing purposes, all such grant funds shall be awarded to TriMet as part of its larger system-wide apportionment. TriMet may use its full apportionment of State of Good Repair Grant Funds, including the amount apportioned to CRC LRT under Subsection 10.1.1 of this term sheet, in whatever manner TriMet determines, provided that the manner in which such grant funds are used may not affect the apportionment provisions in Subsection 10.1.4.

ATTACHMENT NO. 2  
DRAFT.9-23-13

---

- 10.1.3 Each year starting when CRC LRT becomes eligible to receive State of Good Repair Grant Funds, TriMet shall calculate the amount of such grant funds resulting from CRC LRT by proportioning its total (systemwide) grant award between CRC LRT and the remainder of its system based on the federal formula used to apportion such grant funds nationally.
- 10.1.4 Each year the amount of State of Good Repair Grant Funds apportioned to CRC LRT pursuant to Subsection 10.1.3 shall be applied to the Mutual O&M cost of CRC LRT for the year to the maximum extent possible under FTA rules and the remainder, if any, shall be applied to Capital Maintenance of the CRC LRT.
- 10.2 Formula Grant Funds: In allocating the Section 5307 transit funds apportioned to the Portland-Vancouver among C-TRAN, TriMet, and SMART, the operating statistics and ridership due to the CRC LRT included in the intra-region allocation formula for TriMet and C-TRAN shall be the applicable ridership and operating statistics for CRC LRT multiplied by the Mutual O&M Cost Factor for the subject transit district.
- 10.3 Special Grant Funds: The Parties acknowledge that from time to time, C-TRAN and/or TriMet may seek supplemental federal, state, or regional grant funding for the CRC LRT. The use of supplemental grant funds secured by one transit district shall be determined by such district. If supplemental grant funds are sought jointly by C-TRAN and TriMet, the use of such supplemental grant funds shall be agreed upon by C-TRAN and TriMet on a case-by-case basis.
- 11. Project Development-Right of Way**
- 11.1 The Parties acknowledge that property in the State of Washington will need to be acquired to construct and operate the CRC LRT project
- 11.2 Except as described in Section 11.3, TriMet shall be responsible for acquiring or causing to be acquired all property for the CRC LRT. TriMet's obligations include, without limitation, making offers to property owners, relocating owners or tenants as required, and purchasing property as part of an administrative settlement.
- 11.3 In the event that TriMet is unable to acquire property in the State of Washington required for the CRC LRT through administrative settlement and so notifies C-TRAN, C-TRAN shall use its eminent domain powers to acquire such property in accordance with Washington law.
- 11.4 TriMet shall pay all reasonable C-TRAN costs associated with acquiring property through the eminent domain process described in Section 11.3.
- 12. Dispute Resolution.**
- 12.1 If a dispute on any arises under this term sheet between C-TRAN and TriMet, the applicable staff members from each transit district shall cooperate in good faith effort to mediate and resolve such dispute.
- 12.2 If the dispute is not resolved through the cooperative effort of staff members, the Parties agree to mediate such dispute.
- 12.3 The details of the mediation process and any subsequent activities if the mediation is not successful shall be set forth in the final agreement resulting from this term sheet.

EXHIBIT A: DEFINITIONS

- A. **Betterment** means an improvement to or in conjunction with a light rail station or an appurtenance to the CRC LRT system that may supplement or leverage the benefits of CRC LRT but is not fundamentally required for the operations of CRC LRT. An improvement to a component of the CRC LRT that is a Mutual O&M function is not a Betterment.
- B. **Boarding Trip** means a one-way transit trip that uses the CRC LRT for at least a portion of the one-way trip. For example, a walk-on passenger to CRC LRT, a passenger transferring from a bus to CRC LRT, and a passenger transferring to a bus from CRC LRT is each a Boarding Trip.
- C. **Bridge Maintenance-of-Way Cost Ratio** means that fraction by which the annual total maintenance-of-way costs on the main bridge crossing are multiplied to determine C-TRAN's share of such costs.
- D. **Capital Maintenance** means the periodic rehabilitation and replacement of CRC LRT elements, such as track lining, surfacing, and grinding, worn rail replacement, grade crossing reconstruction, replacement of outdated system components, etc. that are not part of routine maintenance and are carried as capital costs in the budget.
- E. **Car Miles** means the annual total miles traveled by light rail cars from pull-out (leaving the garage) to pull-in (returning to garage). A two-car train has twice as many Car Miles as Train Miles.
- F. **Car Miles Ratio** means the fraction calculated by dividing the Car Miles on the CRC LRT extension during the year by the total of all Car Miles on the TriMet light rail system (including CRC LRT) during the year.
- G. **CRC LRT** means the light rail extension between the Expo Center and the Clark Park-and-Ride developed as part of the Columbia River Crossing (CRC) Project.
- H. **District O&M Functions** means those operations and maintenance functions that each transit district performs on its own behalf, within its district, and pays for with its own funds.
- I. **Final Amount of Mutual O&M Costs Owed** means the final annual amount of Mutual O&M costs to be paid by a transit district for a given year after actual costs and federal grant amounts are known, as set forth in Subsection 6.2.2.
- J. **Five-Year CRC LRT Plan (or "Five-Year Plan")** means the plan described in Section 2.2 of this term sheet that describes the anticipated Service Policies and other policies for the CRC LRT that serve as a starting point for preparing annual service levels and budgets for the CRC LRT over the five year period. The Five Year Plan provides a strategic direction for the operations of CRC LRT, the actual service levels and costs of the CRC LRT are set in the budget process and may differ from those in the Five Year Plan.
- K. **LRV Maintenance Discount Factor** means that factor included in the calculation of shared light rail vehicle maintenance costs for an agreed-upon number of years of operation to reflect lower initial costs of vehicle maintenance for the CRC Project resulting from the progressive overhaul program and possibly other quantifiable factors. For example, if new vehicles are anticipated to have 10% lower than average maintenance costs for the first five years of operation, the LRV Maintenance Discount Factor would be 0.90 and that factor would only be incorporated in the calculation of shared LRV maintenance costs for the first five years of operation.

- L. **Mutual O&M Functions** means those operations and maintenance functions performed by transit district on behalf of both districts, such as when TriMet operates trains and maintains vehicles for the entire CRC LRT extension; the costs of which are paid by both transit districts based on an allocation formula.
- M. **O&M Policies** means those policies of a transit district regarding: (a) how a transit district manages its labor force, vehicles, systems, equipment, and other assets to achieve its *Service Policies*, such as: deployment of vehicles, assignment of operators, on-board security, operator instructions and protocols, operator pay and benefits, and other operations factors other than *Service Policies*, and (b) how the district maintains, refurbishes, and replaces its vehicles, systems, equipment, other physical assets, and real property, such as: vehicle cleaning, vehicle maintenance, station cleaning and maintenance, vehicle and equipment repair, replacement of vehicles and equipment, hardware and software repair and replacement, and other maintenance factors.
- N. **Mutual O&M Cost Factor** means the fraction applied to the total of all Mutual O&M costs apportioned to CRC LRT to determine the funding obligation of a specific transit district. For example, the C-TRAN Mutual O&M Factor represents the percentage share of Mutual O&M costs to be paid by C-TRAN. The Mutual O&M Cost Factor is used to apportion all Mutual O&M Costs except for the maintenance-of-way costs on the main bridge crossing of the Columbia River for which the Bridge Maintenance-of-Way Cost Ratio is used.
- O. **Party** means either TriMet or C-TRAN. Parties mean C-TRAN and TriMet.
- P. **Preliminary Amount of Mutual O&M Costs Paid** means the annual amount paid by a transit district, in part based estimated payments before actual costs and reconciled amounts are known, as set forth in Subsection 6.2.1.
- Q. **Reconciliation Amount** means the annual amount to be paid by a transit district to the other transit district to reconcile the preliminary amounts paid for Mutual O&M costs with the actual amount owed. For example, after final accounting C-TRAN overpaid its share of Mutual O&M Cost by \$10, the \$10 TriMet must pay to C-TRAN to reconcile shares is the Reconciliation Amount.
- R. **Route Miles Ratio** means that fraction calculated as the total amount of route miles on the CRC LRT extension divided by the total amount of route miles on TriMet's light rail system including the CRC LRT extension.
- S. **Service Policies** means those policies of a transit district regarding the quantity, quality, and type of transit services, such as: hours of service, frequency of service, capacity, type of service (i.e. fixed-route/fixed-schedule or demand-responsive), station dwell times, transfer policies, and other service-related factors. *Service Policies* also include applicable fare policies.
- T. **Train Miles** means the annual total miles traveled by light rail trains from pull-out (leaving the garage) to pull-in (returning to garage). Train miles are the same whether the train has one or two cars.
- U. **Train Miles Ratio** means the fraction calculated by dividing the Train Miles on the CRC LRT extension during the year by the total of all Train Miles on the TriMet light rail system (including CRC LRT) during the year.

Phased, Bi-State Columbia River Crossing Project, Light Rail Transit Operations Finance Plan Draft, September 26, 2013

CRC LRT O&M Cost (1)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
C-TRAN Shared Cost	\$2,892,290	\$3,126,503	\$3,379,683	\$3,653,364	\$3,949,208	\$4,269,008	\$4,612,529	\$4,983,693	\$5,384,724	\$5,818,025	\$6,286,193	\$6,792,034
C-TRAN District Cost	\$848,295	\$892,415	\$938,828	\$987,656	\$1,039,023	\$1,093,062	\$1,155,308	\$1,221,098	\$1,290,635	\$1,364,132	\$1,441,814	\$1,523,919
TriMet Shared Cost	\$1,683,933	\$1,820,295	\$1,967,700	\$2,127,041	\$2,299,286	\$2,485,478	\$2,685,481	\$2,901,578	\$3,135,064	\$3,387,338	\$3,659,912	\$3,954,420
TriMet District Cost	\$272,361	\$288,959	\$306,569	\$325,252	\$345,073	\$366,103	\$390,493	\$416,508	\$444,256	\$473,853	\$505,421	\$539,093
<b>Total Cost</b>	<b>\$5,696,880</b>	<b>\$6,128,172</b>	<b>\$6,592,780</b>	<b>\$7,093,313</b>	<b>\$7,632,590</b>	<b>\$8,213,651</b>	<b>\$8,843,811</b>	<b>\$9,522,877</b>	<b>\$10,254,678</b>	<b>\$11,043,347</b>	<b>\$11,893,340</b>	<b>\$12,809,466</b>

Revenues	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Farebox Revenues (2)	\$2,278,752	\$2,451,269	\$2,637,112	\$3,191,991	\$3,434,665	\$3,696,143	\$3,979,715	\$4,285,295	\$4,922,246	\$5,521,674	\$5,946,670	\$6,660,923
State of Good Repair Grant (3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$459,474	\$468,664	\$478,037	\$487,598	\$497,350
TriMet Share (4)	\$1,117,772	\$1,207,250	\$1,303,879	\$1,277,722	\$1,380,490	\$1,491,495	\$1,611,541	\$1,572,132	\$1,595,603	\$1,653,451	\$1,797,688	\$1,859,452
C-TRAN Share (5)	\$2,300,356	\$2,469,653	\$2,651,789	\$2,623,600	\$2,817,435	\$3,026,013	\$3,252,555	\$3,205,976	\$3,268,166	\$3,390,186	\$3,661,385	\$3,791,742
<b>Total Revenues</b>	<b>\$5,696,880</b>	<b>\$6,128,172</b>	<b>\$6,592,780</b>	<b>\$7,093,313</b>	<b>\$7,632,590</b>	<b>\$8,213,651</b>	<b>\$8,843,811</b>	<b>\$9,522,877</b>	<b>\$10,254,678</b>	<b>\$11,043,347</b>	<b>\$11,893,340</b>	<b>\$12,809,466</b>

Funding for C-TRAN Share	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Truncated Bus Savings (6)	\$1,435,513	\$1,504,950	\$1,571,027	\$1,640,004	\$1,712,010	\$1,787,177	\$1,865,645	\$1,947,558	\$2,033,067	\$2,122,331	\$2,215,513	\$2,312,788
Commercial Lease Revenues (7)	\$74,665	\$76,158	\$77,681	\$79,235	\$80,819	\$82,436	\$84,084	\$85,766	\$87,481	\$89,231	\$91,016	\$92,836
C-TRAN Sales Tax Receipts from CRC @ 5/10th of 1% (8)	\$390,178	\$472,545	\$570,441	\$454,416	\$556,662	\$669,739	\$796,699	\$646,279	\$319,851			
Third Party (9)	\$400,000	\$416,000	\$432,640	\$449,946	\$467,943	\$486,661	\$506,128	\$526,373	\$547,428	\$569,325	\$592,098	\$615,782
Other (10)									\$280,339	\$609,299	\$762,758	\$770,337
<b>Total C-TRAN Revenues</b>	<b>\$2,300,356</b>	<b>\$2,469,653</b>	<b>\$2,651,789</b>	<b>\$2,623,600</b>	<b>\$2,817,435</b>	<b>\$3,026,013</b>	<b>\$3,252,555</b>	<b>\$3,205,976</b>	<b>\$3,268,166</b>	<b>\$3,390,186</b>	<b>\$3,661,385</b>	<b>\$3,791,742</b>

Source: CRC Project 2013

Notes:

(1): CRC LRT O&M cost estimates are based on TriMet experience and costs for its MAX system; specific estimates were developed for opening year, year five and year 11 as detailed in pages 2-4 of the following pages with the costs interpolated for the intervening periods; costs are assumed to grow at 4% annual rate after 2030.

(2): Farebox Revenues are based on an assumed growth in farebox recovery rates; 40% recovery in 2019-2021; 45% in 2022-2026; 48% in 2027; 50% in 2028-2029; 52% in subsequent periods; TriMet Max Yellow line currently (FY'13) experiences average farebox recovery of 52%.

(3): State of Good Repair Grant assumes \$400,000 funding grant (2019\$) inflated for 8th year starting point; with 2% annual growth thereafter.

(4): TriMet Share reflects the amount of funding needed to cover the total of TriMet's estimated District O&M costs plus 36.8% of the estimated Shared O&M costs based on the proportional split of the line extension's track miles at the state borderline.

(5): C-Tran Share reflects the amount of funding needed to cover the total of C-Tran's estimated District O&M costs plus 63.2% of the estimated Shared O&M costs based on the proportional split of the line extension's track miles at the state borderline.

(6): Truncated Bus Savings reflects the expected savings from eliminating the local bus service runs across the Columbia River; page 5 of the following pages details the amount of savings in 2010\$; page 6 of the following pages shows the expected savings (YOE\$) for each year based on the combined impact of the service growth and inflation assumptions noted.

(7): Commercial Lease Revenues assumes 26,000 square feet of leasable space with an average of 50% vacancy with net income of \$5 per square foot based on 2012\$ estimate inflated to 2019 and annual income growth from the 2019 start at 2% per year.

(8): C-Tran Sales Tax Receipts from CRC reflects the expected additional tax revenue generated from 5/10th of the 7/10th of 1% taxing authority of C-Tran on taxable, project-related construction spending as noted on page 7 of the following pages; reflects application of funds from the pooled collections as needed to meet the C-Tran funding commitment each year until exhausted; assumes 2% annual interest rate for deposit balance of funds.

(9): Third Party line item reflects expected partnership and cost sharing arrangements to reduce costs; assumes 4% annual growth.

(10): Other line item reflects any amount of funding short of the expected C-Tran Share as calculated in the plan.

2019 O&M  
**CRC LRT O&M Costs, 2019 Service Levels**

Supply Variable	Amount
CRC Train Vehicle Hours-2019	17,380
CRC Rail Miles-2019	375,066
CRC Route Miles-2019	2.8
CRC LRVs-2019	7
CRC Ticket Vending Machines	20
CRC Non-Revenue Vehicles	

Mutual Operations Costs	2013\$				2013\$			2019\$		
	Total System \$	Total System Factor	Per Unit Cost	LRV Main. Discount Factor	Annual CRC Costs	TriMet	CTran	Annual CRC Costs	TriMet	CTran
Transportation / Rail Ops Training	\$16,947,860	264,276	64.13		\$1,114,569	\$410,133	\$704,436	\$1,389,723	\$511,383	\$878,341
Train Control/Field Supervision	\$6,301,043	264,276	23.84		\$414,385	\$152,483	\$261,902	\$516,685	\$190,127	\$326,558
Rail Equipment (LRV) Maintenance	\$20,384,325	7,907,028	2.58	0.10	\$870,228	\$320,222	\$550,007	\$1,085,062	\$399,275	\$685,787
MOW (incl. Systems Maintenance, excl. Stations, Park-Rides)	\$7,204,887	52.6	136,975		\$383,530	\$141,129	\$242,401	\$478,212	\$175,970	\$302,242
LRT Information Technology	\$1,092,073	264,276	4.13		\$71,820	\$26,428	\$45,392	\$89,550	\$32,952	\$56,598
Liability Insurance				Lump Sum	\$100,000	\$36,797	\$63,203	\$124,687	\$45,882	\$78,805
Security	\$7,015,338	52.6	133,371		\$373,440	\$137,416	\$236,024	\$465,631	\$171,340	\$294,291
Ticket Vending Machine Maintenance	\$3,719,537	238	15,628		\$312,566	\$115,016	\$197,550	\$389,730	\$143,410	\$246,319
Non-Revenue Vehicles			\$4,938		\$29,628	\$10,902	\$18,726	\$36,943	\$13,594	\$23,349
<b>Total Mutual Costs</b>					<b>\$3,670,167</b>	<b>\$1,350,528</b>	<b>\$2,319,640</b>	<b>\$4,576,223</b>	<b>\$1,683,933</b>	<b>\$2,892,290</b>
District Operations Costs	Total System\$	Total System Factor	Per Unit Cost	Adj. for PNR	Annual CRC Costs	TriMet	CTran	Annual CRC Costs	TriMet	CTran
Propulsion	\$4,854,626	7,907,028	0.61		\$230,277	\$84,736	\$145,541	\$287,125	\$105,655	\$181,471
Facilities Maintenance	\$5,043,937	52.6	95,892	400,000	\$668,499	\$133,700	\$534,799	\$833,531	\$166,706	\$666,825
<b>Total District Costs</b>					<b>\$898,775</b>	<b>\$218,436</b>	<b>\$680,340</b>	<b>\$1,120,656</b>	<b>\$272,361</b>	<b>\$848,295</b>
<b>Total District + Mutual Costs</b>					<b>\$4,568,943</b>	<b>\$1,568,963</b>	<b>\$2,999,979</b>	<b>\$5,696,880</b>	<b>\$1,956,294</b>	<b>\$3,740,586</b>

Source: CRC Project 2013

2024 O&M  
**CRC LRT O&M Costs, 2024 Service Levels**

Supply Variable	Factored
CRC Train Vehicle Hours-2024	21,935
CRC Rail Miles-2024	473,368
CRC Route Miles-2024	2.8
CRC LRVs-2024	11
CRC Ticket Vending Machines	20
CRC Non-Revenue Vehicles	

Mutual Operations Costs	2013\$				2013\$			2024\$		
	Total System \$	Total System Factor	Per Unit Cost	LRV Main. Discount Factor	Annual CRC Costs	TriMet	CTran	Annual CRC Costs	TriMet	CTran
Transportation / Rail Ops Training	\$16,947,860	264,276	64.13		\$ 1,406,678	517,622	889,057	2,140,040	787,480	1,352,560
Train Control/Field Supervision	\$6,301,043	264,276	23.84		\$ 522,989	192,446	330,542	795,645	292,777	502,868
Rail Equipment (LRV) Maintenance	\$20,384,325	7,907,028	2.58	0.00	\$ 1,220,344	449,055	771,289	1,856,562	683,167	1,173,395
MOW (incl. Systems Maintenance, excl. Stations, Park-Rides)	\$7,204,887	52.6	136,975		\$ 383,530	141,129	242,401	583,481	214,706	368,775
LRT Information Technology	\$1,092,073	264,276	4.13		\$ 90,642	33,354	57,288	137,898	50,743	87,155
Liability Insurance			Lump Sum		\$100,000	36,797	63,203	152,134	55,982	96,153
Security	\$7,015,338	52.6	133,371		\$ 373,440	137,416	236,024	568,130	209,057	359,073
TVM Maintenance	\$3,719,537	238	15,628		\$ 312,566	115,016	197,550	475,520	174,979	300,541
Non-Revenue Vehicles			\$4,938		29,628	10,902	18,726	45,075	16,586	28,488
<b>Total Mutual Costs</b>					<b>4,439,818</b>	<b>1,633,739</b>	<b>2,806,079</b>	<b>6,754,486</b>	<b>2,485,478</b>	<b>4,269,008</b>
District Operations Costs	Total System\$	Total System Factor	Per Unit Cost	Adj. for PNR	Annual CRC Costs	TriMet	CTran	Annual CRC Costs	TriMet	CTran
Propulsion	\$4,854,626	7,907,028	0.61		\$ 290,631	106,945	183,686	442,149	162,700	279,450
Facilities Maintenance	\$5,043,937	52.6	95,892	400,000	\$ 668,499	133,700	534,799	1,017,016	203,403	813,613
<b>Total District Costs</b>					<b>959,129</b>	<b>240,644</b>	<b>718,485</b>	<b>1,459,165</b>	<b>366,103</b>	<b>1,093,062</b>
<b>Total District + Mutual Costs</b>					<b>5,398,947</b>	<b>1,874,384</b>	<b>3,524,564</b>	<b>8,213,651</b>	<b>2,851,581</b>	<b>5,362,070</b>

Source: CRC Project 2013

2030 O&M  
**CRC LRT O&M Costs, 2030 Service Levels**

Supply Variable	Amount
CRC Train Vehicle Hours-2030	29,003
CRC Rail Miles-2030	625,906
CRC Route Miles-2030	2.8
CRC LRVs-2030	19
CRC Ticket Vending Machines	20
CRC Non-Revenue Vehicles	

Mutual Operations Costs	2013\$				2013\$			2030\$		
	Total System \$	Total System Factor	Per Unit Cost	LRV Main. Discount Factor	Annual CRC Costs	TriMet	CTran	Annual CRC Costs	TriMet	CTran
Transportation / Rail Ops Training	\$16,947,860	\$264,276	\$64.13		\$1,859,945	\$684,412	\$1,175,533	\$3,644,715	\$1,341,162	\$2,303,553
Train Control/Field Supervision	\$6,301,043	\$264,276	\$23.84		\$691,509	\$254,458	\$437,051	\$1,355,068	\$498,630	\$856,438
Rail Equipment (LRV) Maintenance	\$20,384,325	\$7,907,028	\$2.58	0.00	\$1,613,586	\$593,758	\$1,019,828	\$3,161,954	\$1,163,518	\$1,998,436
MOW (includes Systems Maintenance, excludes Stations, Park-Rides)	\$7,204,887	\$53	\$136,975.03		\$383,530	\$141,129	\$242,401	\$751,559	\$276,554	\$475,004
LRT Information Technology	\$1,092,073	\$264,276	\$4.13		\$119,850	\$44,102	\$75,748	\$234,855	\$86,421	\$148,435
Liability Insurance			Lump Sum		\$100,000	\$36,797	\$63,203	\$195,958	\$72,108	\$123,851
Security	\$7,015,338	\$53	\$133,371.45		\$373,440	\$137,416	\$236,024	\$731,786	\$269,279	\$462,508
TVM Maintenance	\$3,719,537	\$238	\$15,628.31		\$312,566	\$115,016	\$197,550	\$612,499	\$225,384	\$387,115
Non-Revenue Vehicles			\$4,938.06		\$29,628	\$10,902	\$18,726	\$58,059	\$21,364	\$36,695
<b>Total Mutual Costs</b>					<b>\$5,484,054</b>	<b>\$2,017,992</b>	<b>\$3,466,063</b>	<b>\$10,746,454</b>	<b>\$3,954,420</b>	<b>\$6,792,034</b>
District Operations Costs	Total System\$	Total System Factor	Per Unit Cost	Adj. for PNR	Annual CRC Costs	TriMet	CTran	Annual CRC Costs	TriMet	CTran
Propulsion	\$4,854,626	7,907,028	\$0.61		\$384,283	\$141,406	\$242,877	\$753,035	\$277,098	\$475,937
Facilities Maintenance	\$5,043,937	52.6	\$95,892.34	\$400,000	\$668,499	\$133,700	\$534,799	\$1,309,978	\$261,996	\$1,047,982
<b>Total District Costs</b>					<b>\$1,052,782</b>	<b>\$275,106</b>	<b>\$777,676</b>	<b>\$2,063,013</b>	<b>\$539,093</b>	<b>\$1,523,919</b>
<b>Total District + Mutual Costs</b>					<b>\$6,536,836</b>	<b>\$2,293,098</b>	<b>\$4,243,738</b>	<b>\$12,809,466</b>	<b>\$4,493,513</b>	<b>\$8,315,953</b>

Source: CRC Project 2013

C-Tran Truncated Bus Service Savings

C-TRAN O&M Cost Model: Savings from Truncated Buses - 2010 Service Levels - 2010\$

EXCLUDES ANY SAVINGS IN GENERAL ADMINISTRATION EXCEPT INSURANCE

Line Item	\$/ Standard Bus Platform Hour	\$/ Articulated Bus Platform Hour	\$/ Standard Bus Vehicle Mile	\$/ Articulated Bus Vehicle Mile	\$/ Standard Vehicle	\$/ Articulated Vehicle	TOTAL Bus Savings (2010 '000s)
<b>Operations</b>							
Operations Employees Wages	34.36		-	-	-	-	
Operators Fringe Benefits	23.34		-	-	-	-	
Contractor Support	0.81		-	-	-	-	
Fuel and Lubricants							
Tires and Tubes	-		0.02		-	-	
Other Materials/Supplies	0.05		-	-	-	-	
Utilities Cost	-	-	-	-	-	-	
<b>Maintenance</b>							
Mechanics Wages	-	-	0.35		-	-	
Mechanics Fringe Benefits	-	-	0.24		-	-	
Contractor Support	-	-	0.05		-	-	
Fuel and Lubricants	-	-	0.02		-	-	
Vehicle Parts	-	-	0.00		-	-	
Other Materials/Supplies	-	-	0.24		-	-	
Utilities Cost	-	-	-		-	-	
<b>Building, Grounds, Facilities</b>							
Maintenance Worker Wages	-	-	-	-	4,800.38		
Worker Fringe Benefits	-	-	-	-	3,444.63		
Contractor Support	-	-	-	-	3,520.41		
Other Materials/Supplies	-	-	-	-	1,442.02		
Utilities Cost	-	-	-	-	-	-	
<b>Administration</b>							
Administrative Wages/Salaries	EXCLUDED						
Administration Fringe Benefits							
Contractor Support							
Other Materials/Supplies							
Utilities Cost							
Vehicle Liability Insurance			0.09				
Taxes	EXCLUDED						
Miscellaneous Costs							
Transfer Expense							
<b>TOTAL Service Unit Cost (2010\$)</b>	58.57	0.00	1.47	0.00	13,207.44	0.00	
<b>Service Variables (in '000s)</b>	10.44	-	187.27	-	0.004	-	
	=	=	=	=	=	=	
<b>Total O&amp;M Cost (2010\$ '000s)</b>	611.18	-	274.36	-	52.83	-	938.37

Final O&M Cost Equation in July 2010 dollars = \$58.57 \* # of Standard Bus Hours +  
 \$58.57 \* # Articulated Bus Hours +  
 \$1.54 \* # of Standard Bus Vehicle Miles +  
 \$1.78 \* # of Articulated Bus Vehicle Miles +  
 \$13,244.50 \* # of Peak Standard Vehicles -- Excludes General Administration Costs+  
 \$19,866.74 \* # of Peak Articulated Vehicles Excludes General Administration Costs

Note: Platform hours were calculated using 2008 schedule data; VMT was calculated using the difference between the LPA model results and 2008 AVL data from C-TRAN.

C-TRAN truncated route in LPA	2008 running hours	2008 VMT	LPA VMT	Difference
C004	8,287.6	537,037.7	436,159.4	100,878.3
C041	85.0	20,476.1	13,667.4	6,808.7
C044	1,147.5	146,744.5	75,082.7	71,661.7
C047	76.5	33,003.2	25,083.0	7,920.2
<b>Total-running Layover</b>	<b>9,596.6</b>		<b>Total (1000s)</b>	<b>187,268.9</b>
	<b>838.8</b>			<b>187.3</b>
<b>Grand Total (1000s)</b>	<b>10,435.4</b>			
<b># of vehicles</b>		0.0038 about 2,760 hours per vehicle. Round up.		

ATTACHMENT NO. 3

Annual C-Tran Truncated Bus Service Savings in YOES\$

TRUNCATED BUS SAVINGS BY YEAR IN YOES\$

APPLY AVERAGE ANNUAL GROWTH RATES TO 2010 TRUNCATED BUS SAVINGS IN 2010\$

Average Annual Growth Rates calculated for 2010 - 2020, and 2020 - 2030; average rate applied to all years in time period

GROWTH RATES FROM C-TRAN MODEL	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Service Hr. Growth Factor		1.65%	1.65%	1.65%	1.65%	1.65%	1.65%	1.65%	1.65%	1.65%	1.65%	0.83%	0.83%	0.83%	0.83%	0.83%	0.83%	0.83%	0.83%	0.83%	0.83%
Cumulative Service Hour Growth Factor		1.0165	1.0333	1.0503	1.0676	1.0852	1.1031	1.1213	1.1398	1.1586	1.1777	1.1875	1.1974	1.2074	1.2174	1.2276	1.2378	1.2481	1.2585	1.2689	1.2795
Annual Cost Inflation Factor		3.14%	3.14%	3.14%	3.14%	3.14%	3.14%	3.14%	3.14%	3.14%	3.14%	3.53%	3.53%	3.53%	3.53%	3.53%	3.53%	3.53%	3.53%	3.53%	3.53%
Cumulative Cost Inflation Factor								1.2413	1.2802	1.3204	1.3618	1.4098	1.4596	1.5111	1.5644	1.6196	1.6768	1.7360	1.7972	1.8606	1.9263

  

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Add Service Hour Growth to 2010 Savings (2010\$)	\$938.37	\$953.84	\$969.58	\$985.57	\$1,001.82	\$1,018.35	\$1,035.14	\$1,052.22	\$1,069.57	\$1,087.21	\$1,105.15	\$1,114.34	\$1,123.62	\$1,132.97	\$1,142.40	\$1,151.90	\$1,161.49	\$1,171.15	\$1,180.90	\$1,190.73	\$1,200.64
Add Cost Escalation to Service Hr. Growth - YOES\$	\$938.37	983.76	1,031.34	1,081.23	1,133.53	1,188.36	1,245.84	1,306.10	1,369.28	1,435.51	1,504.95	1,571.03	1,640.00	1,712.01	1,787.18	1,865.64	1,947.56	2,033.07	2,122.33	2,215.51	2,312.79
Bus Savings in YOES\$ in Actual\$ (X\$1000)	\$938,366	\$983,756	\$1,031,341	\$1,081,228	\$1,133,528	\$1,188,358	\$1,245,840	\$1,306,103	\$1,369,280	\$1,435,513	\$1,504,950	\$1,571,027	\$1,640,004	\$1,712,010	\$1,787,177	\$1,865,645	\$1,947,558	\$2,033,067	\$2,122,331	\$2,215,513	\$2,312,788

Source: CRC Project 2013 & C-Tran HCT Finance Plan

Page 6

C-Tran Expected Sales Tax Receipts From Taxable, Construction-Related Spending

Columbia River Crossing Phased Project: CTRAN SALES TAX RECEIPTS			
Item	YOE Cost	YOE Cost Applicable to Sales Tax	C-TRAN Sales Tax at 0.5%
Professional Service-Mgt (Inc. Permitting)	\$197,733,679	\$34,189,859	\$170,949
Right-of-Way	\$191,418,255	\$0	\$0
River Crossing and Approaches	\$1,069,292,031	\$418,324,012	\$2,091,620
Hayden Is Interchange			
SR 14	\$109,262,951	\$72,157,928	\$360,790
Bridge Demolition	\$78,513,033	\$22,982,021	\$114,910
Mainland Connector	\$89,269,173	\$0	\$0
Marine Drive Interchange	\$257,154,659	\$0	\$0
Washington North of SR 14	\$0	\$0	\$0
Guideway & Support Facilities	\$253,456,030	\$94,488,356	\$472,442
Systems	\$70,157,631	\$38,303,930	\$191,520
Park-Ride Structures	\$161,993,762	\$108,924,752	\$544,624
Vehicles	\$90,792,177	\$57,318,294	\$286,591
Toll Bond Issuance, Capitalized Interest, Reserves	\$32,730,539		\$0
Interim Borrowing	\$63,121,623		\$0
Total	\$2,711,826,553	\$846,689,153	\$4,233,446

C-TRAN Sales Tax at 7/10ths of 1 percent	\$5,926,824
--	-------------

Source: CRC Project 2013

Page 7



**RICK WILLIAMS CONSULTING**

Parking & Transportation

610 SW Alder, Suite 1221

Portland, OR 97205

Phone: (503) 236-6441 Fax: (503) 236-6164

E-mail: rick.williams@bpmdev.com

---

**MEMORANDUM**

**TO:** Jeff Hamm, C-TRAN  
**FROM:** Rick Williams, RWC  
**DATE:** September 24, 2013

**RE:** *Park & Ride Lots & Parking Charges*

---

Find below some preliminary thoughts on the question of the feasibility of imposing parking charges at park & ride lots that would serve light rail in the C-TRAN jurisdiction. The intent being to explore a strategy or strategies necessary to develop a pay to park system that would not adversely impact light rail ridership. I have also provided a listing of some ancillary considerations that could affect such an analysis.

**ASSUMPTIONS**

As I approach this analysis, I want to be sure that the following assumptions are reasonable and/or accurate.

- C-TRAN “park and ride facilities” include new parking assets in downtown Vancouver (2 potential garage sites) and near Clark Community College (1 garage site).
- There are no prohibitions on implementing parking charges at park and ride facilities that could be imposed by the project or the FTA, which would immediately preclude the consideration of parking charges on transit riders.
- Tolls would be in place for auto trips traversing the new bridge.<sup>1</sup>
- Operational systems (gates, signage, revenue control/collection systems and enforcement) are or will be in place and of a high quality and efficiency to ensure transit riders seeking parking in affected areas are directed exclusively to designated park and ride facilities.

---

<sup>1</sup> The Consultant is neutral on whether tolling should or should not be used as a financing tool for the project. For purposes of this analysis, tolling is important because it can serve to contain park and ride users in Vancouver in Vancouver based park and ride lots. If for instance, Vancouver began charging for use of park and rides and Portland continued to provide free parking in its park and rides – and there were no tolls; parking charges imposed in Vancouver could cause users to “flee” Vancouver to facilities in Portland.

As we explore this question with C-TRAN, refining or revising these assumptions will be important and a necessary first step.

### **BASE CONSIDERATIONS**

If the above referenced assumptions are accurate, imposition and timing for imposing parking charges could be analyzed in the following manner:

- Timing of charges should be programmed to system opening. In other words, implementing parking charges before light rail opening (at existing C-TRAN park and rides) and/or implementation of auto roadway tolls would make imposition of such charges more difficult and have possible adverse impacts. This is because the public would not see a relationship between changes in status quo park and ride protocols and meaningful changes to the transit system.
- Establishing appropriate charges should be based on a rate formula that accounts for the relationship between out-of-pocket expenses for transit and park and ride charges (by the transit rider) and the combined average cost of what an auto commuter would pay for per month for auto tolls and parking costs at their likely transit destination (e.g., downtown Portland).
- Rate models will be informed with research derived from other urban transit systems where parking charges are in place in park and ride facilities (e.g., San Francisco, Los Angeles and some east coast cities).
- On-going projections of rates (forecasting) and feasibility of rates would be “demand” based, assuming that calibration of rates would be a function of actual facility use. As such, facilities assumed to be consistently occupied at levels above 85% would charge higher daily/monthly parking fees than facilities with lower average daily occupancies.<sup>2</sup>

### **ANCILLARY CONSIDERATIONS**

- The park and ride facility near Clark College presents challenges related to parking charges unless significant commitments will be made to control on-street areas, existing College parking resources and adjacent business and residential areas. Imposing parking charges at this facility would likely result in a high percentage of spillover impacts unless aggressive parking management and enforcement were in place to direct transit users specifically into the park and ride facility.

---

<sup>2</sup>It should be noted that occupancies will be significantly influenced by a number of external factors that need to be controlled for. These include parking and access management of adjacent parking resources (on-street, private facilities and neighborhoods), tolling (which increases user out-of-pocket costs and “incent” consideration of transit as a mode choice) and parking charges in place in adjacent parking areas.

- Given the rate calculation model that will be employed, it is likely that the daily rate for parking at the park and ride facilities will (in the near term) be relatively low (i.e., in the range of \$1.00 to \$1.50 per day). This is substantially lower than parking charges currently in effect for commercial users of parking in downtown Vancouver. This rate disparity could create an “incentive” for non-transit users to compete with transit riders for access to the park and ride facilities. This may not adversely affect revenue generation models for C-TRAN, but could:
  - a. Create stall availability conflicts for transit users.
  - b. Adversely impact City revenue streams as downtown users currently paying higher City parking rates transition to the lower priced park and ride facilities.

This scenario can be avoided through aggressive parking management, enforcement and use of access control technologies and communication systems.

- There could be some “flight” of transit users to the I-205 corridor because of parking charges associated with this project. However, this is difficult to quantify.

#### **SUMMARY**

I believe that we will be able to generate a reasonable rate model for C-TRAN to consider, as well as revenue forecasts based on agreed upon assumptions. We have conducted a similar analysis in other transit corridors and would engage in additional research to support this project. I would suggest that the next step would be to have a conversation with appropriate C-TRAN representatives to validate the approach and concept(s) outlined here as well as to access any ridership forecast data that might be available.



**BOARD RESOLUTION BR-13-015**

**A RESOLUTION** to uphold foundational C-TRAN adopted policies.

**WHEREAS**, C-TRAN is considering choosing a means to finance Columbia River Crossing (CRC) Light Rail Transit (LRT) operations and maintenance costs; and

**WHEREAS**, C-TRAN Board Resolution BR-08-019 adopted on July 8, 2008 states that “Any means chosen to finance operations of the HCT component of the CRC project shall be submitted to impacted C-TRAN voters for approval.”; and

**WHEREAS**, that resolution further states “Initiation of HCT service in Clark County should provide a net service benefit to existing C-TRAN patrons, without diverting existing revenues from C-TRAN’s current operating and capital costs.”; and

**WHEREAS**, that resolution was confirmed on May 21, 2013 in C-TRAN staff report #13-023 that specifically confirms that requirement as an important condition of approval of the CRC LPA by stating “The other important condition in C-TRAN’s LPA required a public vote for ‘any means chosen’ to finance CRC LRT operations and maintenance costs on the Washington side of the project. In response, C-TRAN conducted a ballot measure to fund its share of the CRC LRT operations and maintenance costs in November 2012. The ballot measure did not pass”.

**NOW, THEREFORE, BE IT RESOLVED**, that it shall be the policy of the C-TRAN Board to uphold these adopted resolutions, policies, and commitments made to C-TRAN voters by confirming that any means chosen to finance operations of the HCT component of the CRC project shall be submitted to impacted C-TRAN voters for approval and C-TRAN shall not divert any existing revenues to fund CRC LRT operations and maintenance costs.

**RESOLVED AND ADOPTED THIS 26th day of September 2013.**

Ayes :

Nays :

Absent :

---

William J. Ganley, Chair

Attest:

---

Debbie Jermann  
Clerk of the Board