

# Agreement Edit Information

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Agreement Review <input checked="" type="radio"/> Region Approved and Executed <input type="radio"/> HQ Agreement Review Transmittal Required		<b>Agreement Number</b>  <b>GCA 5744</b>		<b>Supplement Number</b>  <b>4</b>	
Agreement Retention <input type="radio"/> Retain Agreement for six (6) years after closure <input checked="" type="radio"/> Retain Agreement for Twenty-Fve (25) years after closure <input type="radio"/> Agreement requires permanent retention (75 years)		Agreement Manager  George Humphrey		Region  Southwest	
Payor/Payee Name and Address METRO 600 Northeast Grand Avenue Portland, OR 97232-2736		Org. Code  <b>441101</b>		<b>All Reports will be sent to this Organization Number</b>	
		Start Date  <b>5/31/2010</b>		<b>Vouchers will not be paid for work performed before this date</b>	
Federal Employer ID Number <b>OR</b> Social Security Number  93-0636311		End Date  <b>7/31/2010</b>		<b>Vouchers will not be paid for work performed after this date</b>	
Project Title Columbia River Crossing Project					
Project Description Provide support to the CRC Project  Additional work Increase the total amount authorized by \$172,411.73 bringing the total to \$867,819.93 Time Extension to July 31, 2010					
<b>Payable Agreement</b> <b>Work by Others to be PAID by WSDOT</b>			<b>Reimbursable Agreement</b> <b>Work by WSDOT to be REIMBURSED by OTHERS</b>		
Maximum Amount Payable \$867,819.93			Amount Reimbursable to WSDOT 0		
Management Reserve Fund (Funds setup when requested) 0			Reciprocal Overhead Agreement Number (If applicable) N/A		
Allowed Overrun Percent 0			Allowed Overrun Percent 0		
Preparer's Signature		Date  7/22/2010		Phone  360-816-8864	

**AGREEMENT NO. GCA 5744  
AMENDMENT NO. 4**

This AMENDMENT NO. 4 is made and entered into between the STATE OF WASHINGTON, Department of Transportation, hereinafter the "STATE," and METRO of 600 Northeast Grand Avenue, Portland, OR 97232, hereinafter the "METRO," collectively "PARTIES" and individually "PARTY."

WHEREAS, the PARTIES hereto entered into the original Agreement GCA 5744 on November 1 2007; AMENDMENT NO. 1 on March 30, 2009; AMENDMENT NO. 2 on July 20, 2009, and AMENDMENT NO. 3 on June 14, 2010 which provides for the METRO to perform work elements for the Columbia River Crossing Project, and

WHEREAS, it is deemed desirable to amend the original Agreement to include additional work, increase the total amount authorized, and extend the expiration date.

NOW THEREFORE, in consideration of the terms, covenants, conditions, and performances contained herein, or attached and incorporated and made a part hereof,

IT IS MUTUALLY AGREED AS FOLLOWS:

The total amount authorized in the original Agreement is hereby increased by \$172,411.73 bringing the total amount authorized to \$867,819.93.

The expiration date is hereby extended to July 31, 2010.

The original Agreement is hereby revised to include additional work and associated costs as shown on Exhibit A-3, attached hereto and by this reference made a part hereof.

On April 15, 2010 it was mutually agreed verbally between the PARTIES that METRO would perform the work covered by this AMENDMENT NO. 4 at STATE expense.

All other terms and conditions of the original Agreement, AMENDMENT NO. 1, AMENDMENT NO. 2 and AMENDMENT NO. 3 shall remain in full force and effect except as modified by this AMENDMENT NO. 4.

IN WITNESS WHEREOF, the PARTIES hereto have executed this AMENDMENT NO. 4 as of the PARTY's date last signed below.

**METRO**

**STATE OF WASHINGTON  
DEPARTMENT OF TRANSPORTATION**

By: \_\_\_\_\_

By: \_\_\_\_\_

DOUGLAS P. FICCO  
Director, Project Delivery

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**Agreement GCA 5744  
AMENDMENT NO. 4  
EXHIBIT A-3**

## Work Element 1: FTA New Starts Travel Demand Forecasting and Analysis

### Description

METRO will provide travel demand forecasting and analysis in support of the FTA New Starts process from April 1, 2010 until July 30, 2010. This support has been requested in order to complete both the annual New Starts Update (due to FTA in August/September, 2010). It will also be used to develop a response to assist the STATE in responding FTA's question regarding parking in the baseline scenario. The FTA questions arose from outputs in Amendment NO. 3. In addition, METRO will provide further modeling analysis to respond to future requests from the STATE.

The CRC Project's model runs for the New Starts update and baseline reevaluation will require several iterations.

Work to be completed in April, May, June and July of 2010 is in addition to the scope of work and change orders already outlined in the AMENDMENT No. 3. This includes scenario evaluation for user benefit impacts to the transit funding program (New Starts) application of the modeling program (SUMMIT), and some additional modeling for transit.

### Deliverables

METRO staff will provide the STATE with transportation output packages which consist of transit outline data, ridership information, and other transportation metrics. New Starts outputs will consist of SUMMIT user benefits reports, including maps and tables.

### Schedule

This work will be completed by July 30, 2010.

## Work Element 2: Support Integrated Project Sponsors Council Staff and Hayden Island Design Group

### Description

In response to questions raised by local partners and the community, the CRC Project formed an Integrated Project Sponsors Council Staff to prepare responses to questions and address issues. METRO will provide input and assist to develop alternative scenarios for Hayden Island design options, specifically to reduce the footprint of the project across the island.

### Deliverables

METRO staff developed alternative Hayden Island Design scenarios and will assist CRC in evaluating those scenarios. METRO staff will also suggest scopes of work and develop a strategy as part of products developed for the Integrated Project Sponsors Council Staff. METRO staff is lead for the Hayden Island Design Group for the Integrated Project Sponsors Council Staff.

### Schedule

This work began April 15, 2010 and is scheduled to be completed July 30, 2010.

### Work Element 3: Metroscope Model Runs, Analysis and Quality Control

#### Description

The Modeling and Forecasting Division of the Research Center will complete a series of three land use and travel demand forecasting modeling scenarios as shown below:

- 1) “No Build” scenario: minimum accessibility scenario – existing bridge without LRT extension
- 2) “Full Build Toll” scenario – 12-lane bridge, LRT extension, with toll
- 3) “Full Build No Toll” scenario: maximum accessibility scenario – 12-lane bridge, LRT extension, no toll

In order to assess the changes in accessibility and the impact on land use resulting from the different scenarios the regional travel demand model will be used in conjunction with the Metroscope land use model.

The results of the technical analyses will be analyzed and summarized in a way that provides data for the CRC Project and the Integrated Project Sponsors Council Staff. This task provides senior Metro staff to explain the implications of the 3 scenarios above. In addition other project partners will assist in evaluating the results and developing conclusions.

Assumption: 2020 is necessary to run in order to run 2030.

#### Deliverables

For the above three scenarios, Metro will complete the following:

1. Appropriate model outputs for the three scenarios above.
2. Revised growth allocations for 2020 and 2030 using the Metroscope model.
3. Technical memoranda describing the inputs, methodology, outputs, and results for the three scenarios analyzed above.
4. Provide a set of graphics and slides suitable for presentations to the Project Sponsor’s Council, and Integrated Project Sponsors Council Staff, and others as requested.

#### Schedule

All three scenarios will be run concurrently. This process will take six weeks to complete with a delivery date of July 26, 2010

**Cost Estimate for Work Element 1- FTA New Starts Travel Demand Forecasting and Analysis (April 1, 2010 through July 30, 2010). Fiscal Year 2011 rates used. Invoice will reflect actual rates of employees.**

Staff	Classification	Hours	Rate	Cost
Pederson	Principal Modeler	200	\$ 99.21	\$ 19,842.00
Higgins	Principal Modeler	100	\$ 99.21	\$ 9,921.00
Bosa	Associate Modeler	120	\$ 67.26	\$ 8,071.20
Walker	TRMS Manager	60	\$ 114.57	\$ 6,874.20
Mendoza	Mgr, Transit Analysis	24	\$ 99.45	\$ 2,386.80
Bihn	Senior Planner	40	\$ 83.77	\$ 3,350.80
Roberts*	Deputy Director	8	\$ 123.50	\$ 988.00
<b>TOTAL</b>		552		\$ 51,434.00

**Cost Estimate for Work Element 2- Support Integrated Project Sponsors Council Staff and Hayden Island Design Group. Fiscal Year 2011 rates used. Invoice will reflect actual rates of employees.**

Staff	Classification	Hours	Rate	Cost
Cotugno	Policy Advisor, 4-15 to 7-31	206	\$ 140.26	\$ 28,893.56
<b>TOTAL</b>		206		\$ 28,893.56

**Cost Estimate for Work Element 3- Metroscope Model Runs, Analysis and Quality Control. Fiscal Year 2011 rates used. Invoice will reflect actual rates of employees. The budget for this task includes computer time for Metro modeling staff that is included in their hourly rates and not shown as a separate line item.**

<b><u>Model Runs</u></b>				
Pederson	Principal Modeler	106	\$ 99.21	\$ 10,516.26
Cser	Associate Modeler	246	\$ 81.69	\$ 20,095.74
Conder	Principial Modeler	81	\$ 99.21	\$ 8,036.01
Yee	ELUF Manager	20	\$ 102.05	\$ 2,041.00
Higgins	Principal Modeler	56	\$ 99.21	\$ 5,555.76
Bosa	Associate Modeler	152	\$ 67.26	\$ 10,223.52
Todd	Assistant Modeler	40	\$ 61.06	\$ 2,442.40
Walker	TRMS Manager	32	\$ 114.57	\$ 3,666.24
Hoglund	RC Director	12	\$ 135.64	\$ 1,627.68
<b><u>Analysis of Results</u></b>				
Mendoza	Mgr, Transit Analysis	48	\$ 99.45	\$ 4,773.60
Bihn	Senior Planner	36	\$ 83.77	\$ 3,015.72
Roberts	Deputy Director	40	\$ 123.50	\$ 4,940.00
Cotugno	Policy Advisor	108	\$ 140.28	\$ 15,150.24
<b>TOTAL</b>		977		\$ 92,084.17

## **Change Order No. 4**

### **Work Element No. 1: New Starts Travel Demand Forecasting and Analysis**

#### Description

Metro will provide travel demand forecasting and analysis in support of the FTA New Starts process from April 1st until the end of July 2010. This support has been requested in order to complete both the annual New Starts Update (due to FTA in August/September) and to develop a response to FTA's question regarding parking in the baseline scenario. In addition, Metro staff will provide further modeling analysis to respond to future requests from FTA or the CRC traffic analysis team.

The CRC Project's model runs for the New Starts update and baseline reevaluation will be extensive. Work to be completed in April-July 2010 is part of Change Order No. 4 and is in addition to the scope of work and change orders already outlined in the existing IGA. This includes scenario evaluation for user benefit impacts to the transit funding program (New Starts) application of the modeling program (SUMMIT), and some additional modeling for transit.

Note that the budget for this task includes computer time for Metro modeling staff that is included in their hourly rates and not as a separate line item.

#### Deliverables

Metro staff will provide the CRC Project with transportation output packages which consist of transit cutline data, ridership information, and other transportation metrics. New Starts outputs will consist of SUMMIT user benefits reports, including maps and tables.

#### Schedule

This work will be completed by July 31, 2010.

### **Work Element No. 2. Support Integrated Project Staff, Hayden Island Design Group**

#### Description

In response to questions raised by local jurisdictions, the CRC formed an Integrated Project Staff team to prepare responses to these questions. Metro staff will supply technical assistance in developing alternative design options particularly related to alternative scenarios for Hayden Island design options, specifically to reduce the footprint of the project across the island.

## Deliverables

Metro staff developed alternative Hayden Island Design scenarios and assisted CRC in evaluating those scenarios. Metro staff also provided scopes of work and developed strategy as part of products developed for the IPS.

## Schedule

This work began April 15, 2010 and is scheduled to be completed July 31, 2010.

### **Work Element No. 3 Metroscope Runs, Analysis of Results, Summary and Presentation of Conclusions and Findings**

#### Description

This task consists of two major subtasks. The first generates the model outputs that will be reviewed in subsequent subtasks. The second sub-task performs quality control checks and provides analysis of the three runs completed during the first sub-task, and involves coordination with the CRC regarding the policy implications of the model results and support for the Project Sponsors Council and other groups as the results of the runs are processed and understood. Metro staff will develop presentations and interpretative materials for the Project Sponsor's Council and other groups as required.

This task does not cover the development of any additional transportation or land use scenarios beyond those below. If Metro is asked to perform additional model runs and analysis, an amendment to this IGA will be required to fund those efforts. Any further travel demand forecasting or analysis beyond the runs used for the revised 2030 Metroscope growth forecasts would also be an addition to scope and require an IGA amendment.

### **3.1 Metroscope and Travel Forecasting Model Runs**

#### Task Description

The Modeling and Forecasting Division of the Research Center has been asked by the CRC to complete a series of three land use and travel demand forecasting modeling scenarios as shown below:

- 1) "No Build" scenario: minimum accessibility scenario – existing bridge without LRT extension
- 2) "Full Build" scenario w/o tolls maximum accessibility scenario – 12-lane bridge, LRT extension, no tolls
- 3) "Full Build" scenario w/tolls : 12-lane bridge, LRT extension, with tolls

In order to assess the changes in accessibility (and the impact on land use) resulting from the different scenarios, the regional travel demand model will be used in conjunction with the Metroscope (MS) land use model. Note that the budget for this task includes computer time for Metro modeling staff that is included in their hourly rates and not as a separate line item.

#### Deliverables

All appropriate model outputs from the scenarios as outlined above. These deliverables are inputs to subtask 3.2 below.

For the above three scenarios, Metro will complete the following:

Revised growth allocations for 2020 and 2030 using the Metroscope model.

#### Schedule

Due to the accelerated time frame, all three scenarios will be run concurrently. There is some economy of scale in this method, which is why the cost estimates for the second two runs together roughly equal the first run. This process will take six weeks to complete.

### **3.2 Analysis, Quality Control, Report Preparation, Presentations to PSC, Coordination of IPS Sub-Committee Reviews**

#### Task Description

The results of the technical analyses also need to be analyzed and summarized in a way that informs policy choices and that is most relevant to the CRC project. This is a critical task in order to fully understand what that results are telling us, and to make sure that the results will stand up to intense scrutiny by staff, elected officials and the public. Metro will work with other project partners to vet the results in the most useful and appropriate manner.

The outputs of 3.1 above must be well understood by the Project Sponsor's Council, the Independent Review Panel, and others in order to be useful to answer the questions posed by the PSC. This task provides senior Metro staff to explain the policy implications of the results and respond to any questions about the inputs, methods and policy assumptions that were tested in the two tasks above. Project partners will assist in evaluating the results and developing conclusions.

#### Deliverables

Technical memoranda describing the inputs, methodology and results for the three scenarios analyzed above. Metro will produce a summary of the analysis and policy conclusions for use



by elected officials. In addition, Metro will provide a set of graphics and slides suitable for powerpoint presentations to the PSC and other groups.

### Schedule

This work is done concurrently with the model runs themselves as a way to save time. The total duration of the quality control and analysis of results is scheduled to be completed by July 31, 2010.

**Change Order No. 4 - Proposed**

**Work Element No. 1 - New Starts Travel Demand Forecasting Runs and Analysis, Through July 31, 2010**

Status: Written notice to proceed received from Kris Strickler to Ross Roberts on May 27, 2010

Staff	Classification	Total Hours	FY 10 Hours	FY 10 Rate	Cost	FY 11 Hours	FY 11 Rates	FY 11 Cost	TOTAL
Pederson	Principal Modeler	120	24	\$ 94.83	\$ 2,275.92	96	\$ 99.21	\$ 9,524.27	\$ 11,800.19
Higgins	Principal Modeler	100	31	\$ 94.83	\$ 2,939.73	69	\$ 99.21	\$ 6,845.57	\$ 9,785.30
Bosa	Associate Modeler	200	100	\$ 64.29	\$ 6,429.00	100	\$ 67.26	\$ 6,726.02	\$ 13,155.02
Walker	TRMS Manager	60	24	\$ 109.09	\$ 2,618.16	36	\$ 114.57	\$ 4,124.52	\$ 6,742.68
Mendoza	Mgr, Transit Analysis	24	12	\$ 94.69	\$ 1,136.28	12	\$ 99.45	\$ 1,193.40	\$ 2,329.68
Bihn	Senior Planner	40	20	\$ 80.07	\$ 1,601.40	20	\$ 83.77	\$ 1,675.38	\$ 3,276.78
Roberts	Deputy Director	8	4	\$ 117.60	\$ 470.40	4	\$ 123.50	\$ 494.00	\$ 964.40
<b>TOTAL WORK ELEMENT No. 1</b>		<b>552</b>	<b>215</b>		<b>\$ 17,470.89</b>	<b>337</b>		<b>\$ 30,583.16</b>	<b>\$ 48,054.05</b>

**Work Element No. 2 - Integrated Project Staff Support, Hayden Island Design Group (4/16/2010 to 7/31/2010)**

Status: Verbal approval to pay from Don Wagner to Andy Cotugno, June 2 2010

Staff	Classification	Total Hours	FY 10 Hours	FY 10 Rate	Cost	FY 11 Hours	FY 11 Rate	FY 11 Cost	TOTAL
Cotugno	Policy Advisor								
Cotugno	4-15 to 7-31-2010	206	140	\$ 133.57	\$ 18,699.80	66	\$ 140.26	\$ 9,257.16	\$ 27,956.96
<b>TOTAL WORK ELEMENT No. 2</b>		<b>206</b>	<b>140</b>		<b>\$ 18,699.80</b>	<b>66</b>		<b>\$ 9,257.16</b>	<b>\$ 27,956.96</b>

**Work Element No. 3 - Metroscope Runs, Analysis of Results, Summary and Presentation of Conclusions and Findings (6/11 to 7/31)**

Status: The PSC agreed to fund the effort on June 11, 2010

**3.1 Metroscope Model Runs**

Staff	Classification	Total Hours	FY 10 Hours	FY 10 Rate	Cost	FY 11 Hours	FY 11 Rates	FY 11 Cost	TOTAL
Pederson	Principal Modeler	106	35	\$ 94.83	\$ 3,317.15	71	\$ 99.21	\$ 7,045.98	\$ 10,363.13
Cser	Associate Modeler	246	81	\$ 78.08	\$ 6,338.53	165	\$ 81.69	\$ 13,464.15	\$ 19,802.68
Conder	Principal Modeler	81	27	\$ 94.83	\$ 2,534.81	54	\$ 99.21	\$ 5,384.13	\$ 7,918.93
Yee	ELUF Manager	20	7	\$ 97.17	\$ 641.32	13	\$ 102.05	\$ 1,367.47	\$ 2,008.79
Higgins	Principal Modeler	56	18	\$ 94.83	\$ 1,752.46	38	\$ 99.21	\$ 3,722.40	\$ 5,474.86
Bosa	Associate Modeler	152	50	\$ 64.29	\$ 3,224.79	102	\$ 67.26	\$ 6,849.78	\$ 10,074.56
Todd	Assistant Modeler	40	13	\$ 58.37	\$ 770.48	27	\$ 61.06	\$ 1,636.41	\$ 2,406.89
Walker	TRMS Manager	32	11	\$ 109.09	\$ 1,151.99	21	\$ 114.57	\$ 2,456.38	\$ 3,608.37
Hoglund	RC Director	12	4	\$ 128.94	\$ 510.60	8	\$ 135.64	\$ 1,090.58	\$ 1,601.19
		<b>745</b>	<b>246</b>		<b>\$ 20,242.14</b>	<b>499</b>		<b>\$ 43,017.27</b>	<b>\$ 63,259.41</b>

**3.2 Analysis, Quality Control, Report Preparation, Presentations to PSC, Coordination of IPS Sub-Committee**

Staff	Classification	Total Hours	FY 10 Hours	FY 10 Rate	Cost	FY 11 Hours	FY 11 Rates	FY 11 Cost	TOTAL
Mendoza	Mgr, Transit Analysis	48	16	\$ 94.69	\$ 1,499.89	32	\$ 99.45	\$ 3,198.31	\$ 4,698.20
Bihn	Senior Planner	36	12	\$ 80.07	\$ 951.23	24	\$ 83.77	\$ 2,020.51	\$ 2,971.75
Roberts	Deputy Director	40	13	\$ 117.60	\$ 1,552.32	27	\$ 123.50	\$ 3,309.80	\$ 4,862.12
Cotugno	Policy Advisor	108	36	\$ 133.57	\$ 4,760.43	72	\$ 140.28	\$ 10,150.66	\$ 14,911.10
		<b>232</b>	<b>77</b>		<b>\$ 8,763.88</b>	<b>155</b>		<b>\$ 18,679.29</b>	<b>\$ 27,443.16</b>
<b>TOTAL WORK ELEMENT No.3</b>		<b>977</b>	<b>322</b>		<b>\$ 29,006.01</b>	<b>655</b>		<b>\$ 61,696.56</b>	<b>\$ 90,702.57</b>

**GRAND TOTALS**

Work Element	Classification	Total Hours	FY 10 Hours	Cost	FY 11 Hours	FY 11 Cost	Total Cost
Work Element 1 - New Starts		552	215	\$ 17,470.89	337	\$ 30,583.16	\$ 48,054.05
Work Element 2 - Hayden Isl, Refinement		206	140	\$ 18,699.80	66	\$ 9,257.16	\$ 27,956.96
Work Element 3 - Metroscope		977	322	\$ 29,006.01	655	\$ 61,696.56	\$ 90,702.57
<b>TOTAL</b>		<b>1735</b>	<b>677</b>	<b>\$ 65,176.70</b>	<b>1058</b>	<b>\$ 101,536.88</b>	<b>\$ 166,713.59</b>

Summary of Work Element Proposals	A	B	C	C - A	D	E	F	F - D
	Metro Proposed	CRC Proposed	Metro Revised	Delta	Metro Proposed	CRC Proposed	Metro Revised	Delta
	Hours	Hours	Hours	Hours	Cost	Cost	Cost	Cost
Work Element 1 - New Starts	560	552	552	-8	\$ 49,123.81	\$ 48,054.05	\$ 48,054.05	\$ (1,069.76)
Work Element 2 - Hayden Isl, Refinement*	280	206	206	-74	\$ 39,278.40	\$ 28,897.68	\$ 27,956.96	\$ (11,321.44)
Work Element 3 - Metroscope	1339	977	977	-362	\$ 106,430.53	\$ 82,875.33	\$ 90,702.57	\$ (15,727.96)
<b>TOTAL</b>	<b>2179</b>	<b>1735</b>	<b>1735</b>	<b>-444</b>	<b>\$ 194,832.74</b>	<b>\$ 159,827.06</b>	<b>\$ 166,713.59</b>	<b>\$ (28,119.16)</b>

**\*Work Element 2 Items Deferred for Further Discussion:**

Staff	Classification	Hours	FY 11 Rates	Cost
Cotugno	8-1 to 9-31-2010	100	\$ 140.28	\$ 14,028.00
Cotugno	10-1 to 12-31-2010	40	\$ 140.28	\$ 5,611.20
<b>Total Deferred for Future Discussion</b>		<b>140</b>		<b>\$ 19,639.20</b>