AMENDMENT NO. 4

185085

CONTRACT NO. 30000091

FOR

Architectural & Engineering Services for Union Station Phase II Facility Improvements

Pursuant to Ordinance No. 182481

This Contract was made and entered into on the 30th day of March 2009 by and between <u>Architectural</u> <u>Resources Group, Inc.</u>, hereinafter called Contractor, and the City of Portland, a municipal corporation of the State of Oregon, by and through its duly authorized representatives, hereinafter called City.

- A Qualifications Based Selection for a consultant to provide architectural and engineering services for the Union Station Phase II Facility Improvements project was issued July 31, 2008. A selection committee reviewed the responses and recommended award of the contract to Architectural Resources Group, Inc. who was the highest scoring Respondent.
- 2. The Agreement amount was \$145,057 with an expiration date of June 1, 2011.

3. Ordinance No. 183026 passed by Council July 22, 2009 authorized amending Agreement No. 30000091 to allow for additional services in the amount of \$297,852 for a total contract amount of \$442,909.

4. Amendment No. 1, dated July 28, 2009, increased the contract amount \$240,102 for a total contract amount of \$385,159 and extended the termination date for an additional one (1) year period until June 1, 2012 to allow for additional architectural and engineering services for the Union Station Phase II Facility Improvement project. Additional services included design roof repairs and related work for the entire Union Station roof.

5. Amendment No. 2, dated January 4, 2010, increased the contract amount \$38,991.48 for a total contract amount of \$424,150.48 to allow for additional architectural and engineering services for the Union Station Phase II Facility Improvement project. Additional services included: additional site investigations, architectural design and engineering related to seismically supporting the two southern chimneys due to hidden conditions; related special meetings and review; additional charges for accelerated schedule for additional services.

6. Amendment No. 3, dated June 8, 2011, increased the contract amount \$4,780 for a total contract amount of \$428,930.48 to allow for additional architectural and engineering services for the Union Station Phase II Facility Improvement project. Additional services included: Prepare for sandstone survey, establish repair markings, and procedures; survey exterior sandstone from scaffold and at ground; assemble field survey information and photos; and prepare summary memo.

7. Additional architectural and engineering services in the amount of \$65,081 for the Union Station Phase II Facility Improvement project are necessary as described in the attached Exhibit A. Additional work includes: North shop gravity loading and additional construction administration services.

8. Architectural and engineering services in the amount of \$256,150 are necessary as described in the attached Exhibit A to proceed with Phase IIb of the Union Station Facility Improvement project. Work includes: North Shop gravity loading; gutter survey; wood window survey with Oculus; additional construction administration services; annex building; Wilf's Roof – evaluation of gravity loading for HVAC; design HSS sections for support of flat skylights.

9. The City of Portland and the Contractor wish to amend Contract No. 30000091 to increase the contract by \$321,231 to provide additional architectural and engineering services for the Union Station Facility Improvement project, as described in #7 and #8 above, for a new total contract amount of \$750,161.48.

All other terms and conditions shall remain unchanged and in full force and effect.

CONTRACTOR SIGNATURE:

This contract amendment may be signed in two (2) or more counterparts, each of which shall be deemed an original, and which, when taken together, shall constitute one and the same contract amendment.

The parties agree the City and Contractor may conduct this transaction by electronic means, including the use of electronic signatures.

Architect	ural Resources Green, inc.	_Date:	10/28/11
Name:	David P. Wessel		
Title:	Principal		
Address:	9 Pier, The Embarcadero, Ste. 107, San Francisco, CA 94111		
Telephor	ne: 415-421-1680		

REV 04/10

Contract No. 30000091

Amendment/Change Order No. ____4___

Contract Title: A/E Services for Union Station Phase II Facility Improvements

CITY OF PORTLAND SIGNATURES:

By: <u>N/A</u> Chief Procurement Officer	Date:	
By: Elected Official	Date:	
Approved:		
By: Office of City Auditor	Date:	
Approved as to Form: By: Office of City Attorney Office of City Attorney Office of City Attorney	Date:	12/22/2011

EXHIBIT A RA pgs. 185085

Principals



19 November 2010

Marina Cresswell City of Portland Office of Management and Finance Facilities Services 1120 S.W. 5th Avenue, Room 1204 Portland, Oregon 97204

Re: Union Station – Contract No. 3000091 Additional Services – Phase II/IIb Partial Roof Framing and Shop Floor

Dear Marina,

Architectural Resources Group is requesting approval of the following proposal for additional fee to cover site investigations, architectural design, and engineering outside of the contacted scope of services.

This additional work is needed due to discovery during the construction process, which has shown the existing gravity framing of the North Shop roof and Baggage Claim roof between Gridlines 1 and 3 has been affected by water-related damage, its relation to prior seismic detailing, and RFI 015 which requires that the raised floor needs to be evaluated for its lateral capacity to resist seismic loads.

The work is delineated for Phase II and/or Phase IIb architectural and structural engineering work below. Attached is further clarification of the scope from Degenkolb Engineers as drawing packages A, B, and C.

Phase II

Architectural Resources Group		\$5,745
Degenkolb Engineers		\$22,712
	Lump Sum	\$28,457
		a a
Phase IIb		
Architectural Resources Group		\$7,684
Degenkolb Engineers		\$28,446

Lump Sum \$36,130

Sincerely,

Merry

David Wessel Principal Fredrick H. Zal Architect Bruce D. Judd, faia Stephen J. Farneth, faia, leed a? Takashi Fukuda Aaron Jon Hyland, aia Naomi O. Mirogelo, aia David P. Wessel, aic, fapt

Associate Principals

CHARLES EDWIN CHASE, AIA	
ARNIE HOLLANDER	
TAMES MCLANE, AIA, TEED AP	

Senior Associates

Andrew G. Beyholder, aia, leed ap Deborah J. Cooper, aia, leed ap M. Bridget Maley Cathleen Maimstrom, aia Susan McDonald, aia, leed ap Katherine T. Petrin W. Dean Randle, aia

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San Francisco	
Pasadena	
PORTLAND	

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Pacific Narthwest Office

Portland, Oregon 97204-2921 e-mail arg@arg-pnw.com fax 503.471.1401 503.471.1440

380381



	Architectural Resources Group					
	Principal	Project Architect	Preservation Architect			
	D.Wessel	F.Zal	M.Foty			
Rate/Hr.	\$190	\$125	\$110			

Degenkolb	
Engineers	

Phase II		ARG Hours		
Existing Condition's Assessment	0.5	3	0	\$2,466
Area A	. 0	4	0	\$7,143
Area B	0	4	0	\$8,618
Area C	0	0	0	\$0
Construction Administration	0	12	. 0	\$4,235
Total Hours	0.5	23	0	
ARG Staff Fee	\$95	\$2,875	\$0	
ARG Subtotal	\$2,970	· .		,
Estimated Reimbursibles	\$50			\$250
Consultant Management Fee [12%]	\$2,725			
Total Fee	\$5,745			\$22,712

\$28,457

Phase II Lump Sum

ARG Hours Phase IIb \$2,466 0.5 3 0 Existing Conditions Assessment \$4,152 4 0 0 Area A \$7,068 Area B 0 4 0 0 .4 0 \$9,345 Area C \$5,165 0 18 Construction Administration 0 Total Hours 0.5 33 0 \$0 ARG Staff Fee \$95 \$4,125 . \$4,220 ARG Subtotal \$250 \$50 Estimated Reimbursibles \$3,414 Consultant Management Fee [12%] \$28,446 Total Fee \$7,684

Phase IIb Lump Sum

\$36,130

San Francisco Los Angeles Portland Oakland San Diego Seattle



November 19, 2010

Mr. David Wessel Architectural Resources Group Pier 9, The Embarcadero, Suite 107 San Francisco, California 97111

Reference: Union Station Phase II/IIb, Partial Roof Framing Repair – Additional Services, Portland, Oregon [Degenkolb Job Number A8437013.00]

Dear David:

We are pleased to present this proposal for additional structural engineering services related to the historic roof replacement and partial seismic upgrade of the Union Station building in Portland, Oregon.

Project Understanding

Our proposal letters of October 30, 2008 and July 7, 2009 outlines the scope of work of which we are currently under contract for this facility. We propose to provide our additional services in accordance with the Structural Engineering Services General Conditions and Compensation document (a copy of which has been previously provided to you as part of our current contract). This additional work is based on the discovery of water-related damage in portions of the shop roof and baggage claim roof between gridlines 1 and 3 and the exposure of the existing raised floor structure in the shop area.

Project Approach

Since this project involves a voluntary seismic upgrade, we have been using ASCE-41 Seismic Rehabilitation of Existing Buildings to design seismic upgrades. To assess the adequacy of existing gravity supporting framing and to develop details, we propose to use the 2010 Oregon Structural Specialty Code. Since this work will be performed in an historic space, detailing requires coordination between ARG, City of Portland, SHPO, and P&C.

Scope of Work

Water-related damage has been discovered in a number of different locations throughout the shop roof and a portion of the baggage claim roof between gridlines 1 and 3. Degenkolb has performed three site visits to view the different locations as they have become exposed. Based on our observation of some of the roof joists not having any bearing area left at the

Degenkolb Engineers

700 SW Washington Street Portland, Oregon 97205 600 31113

503

223-9932 phone 242-1780 fax

185085



November 19, 2010 Page 2

ends of the joists, the end connections of the joists are not adequate for the current code required dead and snow loads.

Loading conditions for the structural elements affected by water-related damage varies significantly due to (1) different snow drift profiles associated with the shape of the roof and the height of adjacent roof projections, and (2) the existing different, sometimes complicated structural framing. Development of structural repair details in each area requires careful consideration and collaboration with the City, ARG, SHPO, and P&C to minimize required demolition of existing construction, address the visual impact of repair work and address constructability and cost issues associated with repair work. Many seismic strengthening details we previously developed are affected by the gravity framing repair work and require revision. We have assumed that the gravity strengthening will be limited to those items noted below as currently known items that contain water-related damage.

In the shop, the east half of the floor is raised about two to three feet. The floor framing and foundation in this area has been inaccessible in the past and we have been unable to assess the complete lateral load path of the raised floor. Since demolition for the construction of the east shop shotcrete wall and strongback columns has begun, the area has now become accessible to assess the lateral load carrying capacity of this raised floor.

This scope of work has been separated into three areas to be submitted in three separate packages to the city to expedite the review and repair work. Area A will cover the shop roof area between gridlines 1 and 2. Area B will cover the baggage claim roof area between gridlines 2 and 3. Area C will cover the raised floor area of the shop.

Area A Scope of Work:

Phase II Scope of Work (Area A):

Existing Gravity Framing Affected by Water-Related Damage

- 1. Damage in ends of (E) shed roof joists and sill plate along gridline E.2 and G (approximately 4 joists affected on E.2, 12 joists affected on G and 15 joists lengths affected by sill plate damage on G);
- 2. Damage in portions of (E) straight sheathing (noted at 2 locations near gridline E.2); and
- 3. (E) framing at the shed roof level between gridline G and the framing intersection with the gabled roof. Evidence of damage and partial inadequate replacement.



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Seismic (Affected by Gravity Framing Work)

- 4. Detail 3/S5.10 on gridlines 1 and 2 (affected by ledger beam damage and (E) roof joist damage) (50% Phase II, 50% Phase IIb); and
- 5. Detail 7/S5.2 on gridline E.2 and G (affected by damage in ends of (E) shed joists and sill plate)

Phase IIb Scope of Work (Area A):

Existing Gravity Framing Affected by Water-Related Damage

1. Damage in ends of (E) gabled roof joists, (E) collar ties, and (E) sill plated along gridline G

Seismic (Affected by Gravity Framing Work)

2. Detail 3/S5.10 on gridlines 1 and 2 (affected by ledger beam damage and (E) roof joist damage) - (50% Phase II, 50% Phase IIb)

Area B Scope of Work:

Phase II Scope of Work (Area B):

Existing Gravity Framing Affected by Water-Related Damage

- 1. Damage in (E) beams around large skylight near gridlines 2 and G; and
- 2. Damage in ends of (E) roof joists south of gridline 2 running N-S framing into (E) URM wall on gridline 2.

Phase IIb Scope of Work (Area B):

Existing Gravity Framing Affected by Water-Related Damage

- 1. Damage in ends of (E) roof joists just north of gridline 3 running N-S framing into (E) URM wall on gridline 3. (extent of damage yet unknown); and
- 2. Damage in end of Valley roof beam at gridline 3 and E.8

Seismic (Affected by Gravity Framing Work)

3. Details 2/S5.0 & 7/S5.10 on gridline 3 (affected by damage in ends of (E) roof joists and sill plate)



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Area C Scope of Work:

Phase IIb Scope of Work (Area C):

1. RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) raised floor framing in the shop area. This raised floor needs to be evaluated for its lateral capacity to resist seismic demands.

Compensation

Our proposed fee for the work is \$51,158 broken down as follows:

Existing Conditions Assessment:

		Associate	Design		
	Principal	Principal	Engineer	CAD	TOTAL
Hours	0	9	26	0	
Rates	\$215	\$184	\$126	\$116	
Total	\$0	\$1,656	\$3,276	\$0	\$4,932

Area A Construction Documents – Phase II:

		Associate	Design		
	Principal	Principal	Engineer	CAD	TÓTAL
Hours	0.5	. 4	32.5	19	
Rates	\$215	\$184	. \$126	\$116	
Total (A,II)	\$108	\$736	\$4,095	\$2,204	\$7,143

Area A Construction Documents – Phase IIb:

[Design		
	Principal	Principal	Engineer	CAD	TOTAL
Hours	0.5	2.5	. 22	7	
Rates	\$215	\$184	\$126	\$116	•
Total (A,IIb)	\$108	\$460	\$2,772	\$ 812	\$4,152

Area B Construction Documents – Phase II:

		Associate	Design		
	Principal	Principal	Engineer	CAD	TOTAL
Hours	0.5	6.5	47	12	
Rates	\$215	\$184	\$126	\$116	
Total (B,II)	\$108	\$1,196	\$5,922	\$1,392	\$8,618



November 19, 2010 Page 5

Area B Constr	uction Docum	ients – Phase	IIb:		
	Associate Desig		Design		
	Principal	Principal	Engineer	CAD .	TOTAL
Hours	0.5	5.5	38	10	
Rates	\$215	\$184	\$126	· \$116	
Total (B,IIb)	\$108	\$1,012	\$4,788	\$1,160	\$7,068

Area C Construction Documents - Phase IIb:

ſ		Associate	Design		
	Principal	Principal	Engineer	CAD	TOTAL
Hours	1	4.5	53	14	-
Rates	\$215	\$184	\$126	\$116	
Total (C,IIb)	\$215	\$828	\$6,678	\$1,624	\$9,345

Construction Administration (Areas A,B &C) – Phase II:

		Associate	Design		
	Principal	Principal	Engineer	CAD	TOTAL
Hours	0	3.5	28.5	0	
Rates	\$215	\$184	\$126	\$116	
Total (CA,II)	\$0	\$644	\$3,591	\$0	\$4,235

Construction Administration (Areas A, B & C) – Phase IIb:

		Associate	Design		
	Principal	Principal	Engineer	CAD	TOTAL
Hours	· 0	6.5	31.5	0	
Rates	\$215	· \$184	\$126	\$116	
Total (CA,IIb)	\$0	\$1,196	\$3,969	\$0	\$5,165

Reimbursable Expenses = \$500

We propose this work to be fixed fee and is limited to the scope of work described in this proposal.

We have budgeted four site visits and three project meetings to address/resolve construction issues during construction.

Additional site visits during construction can be provided for a fixed fee of \$500 per visit. We propose to provide our services in accordance with the Structural Engineering Services General Conditions and Compensation document. Our proposed fee includes all reimbursable expenses.



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We have provided the 90% review set of construction documents for the package covering Area A. We are currently preparing the construction documents for the package covering Area B. If this proposal meets your approval, please issue us a contract at your earliest convenience.

We are pleased to have this opportunity to provide continued service to ARG and are looking forward to being more involved with this important project.

Architectural Resource Group, Inc.

Very truly yours,

DEGENKOLB ENGINEERS

Jennifer Eggers Project Engineer Kent Yu Principal James O. Malley Senior Principal & Group Director

ACCEPTED:

BY:

DATE:

PURCHASE ORDER OR REFERENCE NUMBER:

This proposal is valid for 60 days. Please notify us immediately if an extension is necessary.

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Project No: A8437013.00 Project Manager: Kent Yu Date: November 19, 2010 Principal 2008 RATES 2008					
2008 RATES \$205 2008 RATES (with 5% Increase for living cost adjustment) \$215 TASKS:					
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Project Manager: Kent Yu Date: November 19, 2010 Principal 2008 RATES 2008 RATES (with 5% increase for living cost adjustment) EXISTING CONDITIONS ASSESSMENT 1. LEXISTING CONDITIONS ASSESSMENT 1. LEXISTING CONDITIONS ASSESSMENT 2. LEXISTING CONDITIONS ASSESSM				yc	Inc
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2008 RATES (with 5% Increase for living cost adjustment) \$215 TASKS:					
TASKS:	\$175	\$205	\$120	\$110	
TASKS:	\$184	\$215	\$126	\$ \$116	
EXISTING CONDITIONS ASSESSMENT					
1. Existing Roof Framing Condition Assessment (3 site visits and meetings) RATES RATES \$215 SUB-TOTAL EXISTING CONDITIONS ASSESSMENT \$00 CONSTRUCTION DOCUMENTS - DRB for Area A - Shop Roof (north of gridline 2) - Phase II - Existing Gravity Framing Affected by Water-Related Damage - 1. Damage in ends of (E) shed roof Jolsts and sill plate along gridline E.2 and G (approximately 4) Jolsts affected on E.2, 12 Jolsts affected on G and 15 Jolsts lengths affected 9. gill plate damage on G) 1 1. Concection design and detailing 2. Damage in portions of (E) straight sheathing (noted at 2 locations near gridline E.2) - 2. Damage in portions of (E) straight sheathing (noted at 2 locations near gridline E.2) - 2. Coordination with ARG, City of Portland, SHPO, & P&C - 2. Replacement design and detailing - 3. (E) framing at the shed roof level between gridline G and the framing intersection with the saccoordination with ARG, City of Portland, SHPO, & P&C 3. Coordination with ARG, City of Portland, SHPO, & P&C - 3. Coordination with ARG, City of Portland, SHPO, & P&C - 3. Coordination with ARG, City of Portland, SHPO, & P&C - 3. Coordination with ARG, City of Portland, SHPO, &					
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CONSTRUCTION DOCUMENTS DRB for Area A - Shop Roof (north of gridline 2) Phase II Existing Gravity Framing Affected by Water-Related Damage A - Shop Roof (2) shed roof joists and sill plate along gridline E.2 and G (approximately 4 joists affected on E.2, 12 joists affected on G and 15 joists lengths affected by sill plate damage on G) A - Coordination with ARG, City of Portland, SHPO, & P&C A - Detail 3/S5.1 on gridline ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 2, Coordination with ARG, City of Portland, SHPO, & P&C C - 2, 5, Calculations and re-design of detail 3/S5.2 for locations affected C - 2, 5, Calculations and re-design of detail 3/S5.2 for locations affected C - 2, 5, Calculations and re-design of detail 3/S5.2 for locations affected C - 2, 5, Calculations and re-design of detail 3/S5.2 for locations affected C - 2, 5, Calculations and re-design of detail 3/S5.2 for locations affected C - 2, 5, Calculations and re-design of detail 3/S5.2 for locations affected C - 2, Develop Partial Plan Sheets (Roof Area A) betwe	\$184	\$215	\$120	2 2110	
DRB for Area A - Shop Roof (north of gridline 2) Phase II Existing Gravity Framing Affected by Water-Related Damage	\$1,656	\$0	\$3,276	\$ \$0	\$4,932
DRB for Area A - Shop Roof (north of gridline 2)			<u>†</u>		
Phase II Existing Gravity Framing Affected by Water-Related Damage 1. Damage In ends of (E) shed roof joists and sill plate along gridline E.2 and G (approximately 4) joists affected on E.2, 12 joists affected on G and 15 joists lengths affected by sill plate damage on G) 1a. Coordination with ARG, City of Portland, SHPO, & P&C 1b. Assessment of (E) Joists for code level loads 1c. Connection design and detailing 2. Damage in portions of (E) straight sheathing (noted at 2 locations near gridline E.2) 2. Replacement design and detailing 3. (E) framing at the shed roof level between gridline G and the framing intersection with the gabled roof. Evidence of damage and partial inadequate replacement. 3a. (Cordination with ARG, City of Portland, SHPO, & P&C 3b. Assessment of (E) Shed and Gabled Joists for code level loads 3c. Connection design and detailing Sc. Connection design of detail 3/S5.10 on gridlines 1 and 2 (affected by ledger beam damage and (E) roof joist damaeg) (60% Phase II b) 4. Coordination with ARG, City of Portland, SHPO, & P&C 4b. Calculations and re-design of detail 3/S5.2 for locations affecte				+	<u> </u>
Existing Gravity Framing Affected by Water-Related Damage - 1. Damage In ends of (E) shed roof joists and sill plate along gridline E.2 and G (approximately 4 joists affected on E.2, 12 joists affected on G and 15 joists lengths affected by sill plate damage on G) 1a. Coordination with ARG, City of Portland, SHPO, & P&C 1b. Assessment of (E) Joists for code level loads 1c. Connection design and detailing 20 20 2. Damage In portions of (E) straight sheathing (noted at 2 locations near gridline E.2) 2a. Coordination with ARG, City of Portland, SHPO, & P&C 2b. Replacement design and detailing 3. (E) framing at the shed roof level between gridline G and the framing intersection with the gabled roof. Evidence of damage and partial inadequate replacement. 3a. Coordination with ARG, City of Portland, SHPO, & P&C 3b. Assessment of (E) Sheal and Gabled Joists for code level loads 3c. Connection design and detailing - 3c. Connection design and detailing - - - 3c. Coordination with ARG, City of Portland, SHPO, & P&C - - 3c. Coordination with ARG, City of Portland, SHPO, & P&C - - 3c. Coordination with ARG, City of Portland, SHPO, & P&C - - 4b. Activation design and detailing - - - 5c. Connection design of detail 3/S5.2 for locations affected	<u> </u>		+	+	
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5. Detail 7/S5.2 on gridline E.2 and G (affected by damage in ends of (E) shed joists and sill plate) 5.a. Coordination with ARG, City of Portland, SH/PO, & P&C 5.b. Calculations and re-design of detail 7/S5.2 for locations affected General 6. Develop Partial Plan Sheets (Roof Area A) between Gridlines 1 and 2 7. Develop Additional Specifications as needed 8. Address ARG/City of Portland/P&C Comments on 90% CD Documents 9. Finalize 100% Construction Documents 10. Work with City Building Official to Secure Permit 0.5 11. Work with P&C to Address Buy American Regularements	0.25		5 1.	5 1	
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Sa. Coordination with ARG, City of Portland, SHPO, & P&C Sb. Calculations and re-design of detail 7/S5.2 for locations affected General	<u> </u>	-		-	<u> </u>
5b. Calculations and re-design of detail 7/S5.2 for locations affected General 6. Develop Partial Plan Sheets (Roof Area A) between Gridlines 1 and 2 7. Develop Additional Specifications as needed 8. Address ARG/City of Portland/P&C Comments on 90% CD Documents 9. Finalize 100% Construction Documents 10. Work with City Building Official to Secure Permit 11. Work with P&C to Address Buy American Requirements 21. Work with P&C to Address Buy American Requirements				1	
General 6. Develop Partial Plan Sheets (Roof Area A) between Gridlines 1 and 2 7. Develop Additional Specifications as needed 8. Address ARG/City of Portland/P&C Comments on 90% CD Documents 9. Finalize 100% Construction Documents 10. Work with City Building Official to Secure Permit 11. Work with P&C to Address Buy American Regularments	0,8		5	4 4	·
6. Develop Partial Plan Sheets (Roof Area A) between Gridlines 1 and 2 7. Develop Additional Specifications as needed 8. Address ARG/City of Portland/P&C Comments on 90% CD Documents 9. Finalize 100% Construction Documents 10. Work with City Building Official to Secure Permit 11. Work with P&C to Address Buy American Requirements 21. Work with P&C to Address Buy American Requirements				1	<u> </u>
7. Develop Additional Specifications as needed 8. Address ARG/City of Portland/P&C Comments on 90% CD Documents 9. Finalize 100% Construction Documents 10. Work with City Building Official to Secure Permit 11. Work with P&C to Address Buy American Regularements 12. Work with P&C to Address Buy American Regularements 13. Work with P&C to Address Buy American Regularements	-	-	-		l
7. Develop Additional Specifications as needed 8. Address ARG/City of Portland/P&C Comments on 90% CD Documents 9. Finalize 100% Construction Documents 10. Work with City Building Official to Secure Permit 11. Work with P&C to Address Buy American Regularements 12. Work with P&C to Address Buy American Regularements 13. Work with P&C to Address Buy American Regularements			1	1 1	l
Address ARG/City of Portland/P&C Comments on 90% CD Documents Finalize 100% Construction Documents Over with City Building Official to Secure Permit O.5 Over with P&C to Address Buy American Regultements Over With P&C to Address Buy American Regultements Over With P&C to Address Buy American Regultements	0.28			1	
G. Finalize 100% Construction Documents O. Work with City Building Official to Secure Permit O.5 O.5 Vork with P&C to Address Buy American Regultements O.5				1	
10. Work with City Building Official to Secure Permit 0.5 11. Work with P&C to Address Buy American Regularements			2.		
11. Work with P&C to Address Buy American Regultements	5 0.5	0.5	5 <u>0</u> ,	5	
				1	
	1.000	1995年2015	4 32	5 306:019	9
RATES \$215	\$184	\$215	4] \$12	0 2110	
SUB-TOTAL CONSTRUCTION DOCUMENTS - Area A - Phase II \$108	\$736	\$108	6 \$4,09	5 \$2,204	\$7,143

						-
Prolect Name; Union Station, Partial Roof Framing Repair - Add Services			<u> </u>		1	- 11
Project No.: A8437013.00	·		De	ge	nka	
Project Manager, Kent Yu	Alt u	28-03-1-4-C	L .		1	
Date: November 19, 2010						
		Assoc.	} ••			
	Principal	Princ.	Eng.	CAD	Total	
2008 RATES	\$205	\$175	\$120	\$110		
2008 RATES (with 5% Increase for living cost adjustment)	\$215					Í
TASKS:						
Phase llb						
Existing Gravity Framing Affected by Water-Related Damage	-	-	-	-		l
	-	-	<u>-</u> '			
1. Damage in ends of (E) gabled roof joists, (E) collar ties, and (E) sill plated along gridline G		0.5	3	ļ		ĺ
1a. Coordination with ARG, City of Portland, SHPO, & P&C		0.5	6			ĺ
1b. Assessment of (E) Joists for code level loads 1c. Connection design and detailing		1	4	· · · · · · · · · · · · · · · · · · ·		
ra, comcobar acagri and actaining	-	-	-	-		
Seismic (Affected by Gravity Framing Work)		-	-	-		ł
2. Detail 3/S5.10 on gridlines 1 and 2 (affected by ledger beam damage and (E) roof joist	-	-	_	-		
damage) (50% Phase II, 50% Phase IIb)						
2a. Coordination with ARG, City of Porlland, SHPO, & P&C 2b. Calculations and re-design of detail 3/S5,2 for locations affected		0,25	0.5			
20. Calculations and re-design of detail 3/55,2 for locauons anected		0,20	1.0	·'		
General	-	-	-	-		
3. Develop Partial Plan Sheets (Roof Area A) between Gridlines 1 and 2			1	1		
4. Develop Additional Specifications as needed		0.25	1			
5. Address ARG/City of Portland/P&C Comments on 90% CD Documents			1	·		
5. Finalize 100% Construction Documents		0.5	2.5			
7. Work with City Building Official to Secure Permit	0.5	0.5	1	· · ·		
Work with P&C to Address Buy American Requirements HOURS	0.5	645425		Sugara		
RATES	\$215	\$1B4				
SUB-TOTAL CONSTRUCTION DOCUMENTS - Area A - Phase lib	\$108	\$460	\$2,772	\$812	\$4,152	l
						Ded
SUB-TOTAL CONSTRUCTION DOCUMENTS - Area A - Phase II + IIb						511
CONSTRUCTION DOCUMENTS		-	-			
DRB for Area B - Baggage Claim Roof (between gridlines 2&3)	-	-		-		ĺ –
Sich fal Alen b - Dugguge olumi koor (aethoen grannes zoo)						
Phase II						
Existing Gravity Framing Affected by Water-Related Damage	-		-	-		l I
, Damage in (E) beams around large skylight near gridlines 2 and G	-			-		
1a. Coordination with ARG, City of Portland, SHPO, & P&C		1	3			
1b. Assessment of (E) gravity loads around skylight		0,5				
 Assessment of seismic loading around skylight Assessment of (E) framing supporting skylight (beams, attic and roof joists) 		1				
1e. Further field verification of (E) load path		1	З			j –
1f. Strengthing design/Connection design and detailing		1	8	8		l
· ·						
1g. Skylight curb assessment and replacement details for skylight repair/replacement			2	·		
2. Damage in ends of (E) roof joists south of gridline 2 running N-S framing into (E) URM	-	-	-	: -		
vall on gridline 2. 2a. Coordination with ARG, City of Portland, SHPO, & P&C			1			ĺ
2b. Assessment of (E) Joists for code level loads			2			l
2c. Connection design and detailing		1	3	2		
-			-	-		
0	-	· ·		- 1		
General		0.5	1			
Develop Partial Plan Sheets (Roof Area B) between Gridlines 2 and 3						
, Develop Partial Plan Sheets (Roof Area B) between Gridilnes 2 and 3 Develop Additional Specifications as needed		0.0	1 1			í –
. Develop Partial Plan Sheets (Roof Area B) between Gridlines 2 and 3 . Develop Additional Specifications as needed . Address ARG/City of Portland/P&C Comments on 90% CD Documents			1 2.5			
Develop Partial Plan Sheets (Roof Area B) between Gridlines 2 and 3 Develop Additional Specifications as needed Address ARG/City of Portland/P&C Comments on 90% CD Documents Finalize 100% Construction Documents	0.5	0.5	2.5	1		1
Develop Partial Plan Sheets (Roof Area B) between Gridlines 2 and 3 Develop Additional Specifications as needed Address ARG/City of Portland/P&C Comments on 90% CD Documents Finalize 100% Construction Documents Work with City Building Official to Secure Permit Work with P&C to Address Bux American Requirements		0.5	2.5 0.5	1		
Develop Partial Plan Sheets (Roof Area B) between Gridlines 2 and 3 Develop Additional Specifications as needed Address ARG/City of Portland/P&C Comments on 90% CD Documents Finalize 100% Construction Documents Work with City Building Official to Secure Permit Work with P&C to Address Buy American Requirements Work with P&C to Address Buy American Requirements	疗器器分0.5	0.5 2387615	2.5 0.5 1	1 12		
General Develop Partial Plan Sheets (Roof Area B) between Gridlines 2 and 3 Develop Additional Specifications as needed Address ARG/City of Portland/P&C Comments on 90% CD Documents Finalize 100% Construction Documents Work with City Building Official to Secure Permit Work with P&C to Address Buy American Requirements USUB-TOTAL CONSTRUCTION DOCUMENTS - Area B - Phase II	作為出分0.5 \$ 215	0.5	2.5 0.5 1 \$126	1	\$8,618	

Project Name: Union Station, Partial Roof Framing Repair - Add Services Project No.: A8437013.00					1	
2minut No : A9437013 00	4		De	ne	nko	hlc
•				95	1 11 1	
Project Manager, Kent Yu				.		
Date: November 19, 2010		Assoc.	Design			
	Principal	Princ.	Eng.	CAD	Totai	
2008 RATES	\$205					
2008 RATES (with 5% increase for living cost adjustment)	\$215	\$184	\$126	\$116		
ASKS:						
hase llb						
Existing Gravity Framing Affected by Water-Related Damage	-	-	-	-		
. Damage In ends of (E) roof joists just north of gridline 3 running N-S framing into (E) URM	-		-			
vall on gridline 3, (extent of damage yet unknown)		1	4			
1a. Coordination with ARG, City of Portland, SHPO, & P&C 1b. Assessment of (E) Roof and Attic Joists for code level loads			3			
10. Assessment of (2) room and rate object for body lover lover body		1	4	4		
Damage in end of Valley roof beam at gridline 3 and E.8	-	-	-	-		
2a. Coordination with ARG, City of Portland, SHPO, & P&C		1				
2b. Assessment of (E) beam for code level loads		1	2	4		
2c. Connection design and detailing		-	- 3	- 1		
Seismic (Affected by Gravity Framing Work)	-	-	-	'		
Details 2/S5.0 & 7/S5.10 on gridline 3 (affected by damage in ends of (E) roof joists and	-	-	_	-		
ill plate)	-					
3a. Coordination with ARG, City of Portland, SHPO, & P&C		0.5	2			
3b. Calculations and re-design of detail for transfer of in-plane and out-of-plane lateral		0.5	6			
pads to (E) URM wall on gridline 3.				-		
General	-	-	-	-		
. Develop Partial Plan Sheets (Roof Area B) between Gridlines 2 and 3			1	1		
Develop Additional Specifications as needed			1			
Address ARG/City of Portland/P&C Comments on 90% CD Documents			2.5			{
Finalize 100% Construction Documents Work with City Building Official to Secure Permit	0.5	0.5	0.5			
Work with R&C to Address Buy American Requirements			1			
HOURS HOURS DU Address Du Addre	的意义的15	5.5				{
RATES	\$215			\$116	57 000	{
SUB-TOTAL CONSTRUCTION DOCUMENTS - Area B - Phase IIb	\$108	\$1,012	\$4,788	\$1,160	\$7,068	ł
						\$15,6
SUB_TOTAL CONSTRUCTION DOCUMENTS - Area B - Phase II + IIb						910,0
SUB-TOTAL CONSTRUCTION DOCUMENTS - Area B - Phase II + IIb						\$10,0
SUB-TOTAL CONSTRUCTION DOCUMENTS - Area B - Phase II + IIb						\$10,0
	-	-				\$10,0
CONSTRUCTION DOCUMENTS	-	-	-			\$15,6
CONSTRUCTION DOCUMENTS RE for Area C - Shop Raised Floor		-	-			
CONSTRUCTION DOCUMENTS DRB for Area C - Shop Ralsed Floor hase lib		-				<u> </u>
CONSTRUCTION DOCUMENTS IRE for Area C - Shop Ralsed Floor hase lib Shop Ralsed Floor - Selsmic REI 015 Follow-up - Exoosure of foundation at east shop shotcrete wall exposed the (E)	-			-		
CONSTRUCTION DOCUMENTS IRE for Area C - Shop Ralsed Floor hase lib Shop Ralsed Floor - Seismic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral	-	-		-		
CONSTRUCTION DOCUMENTS DRB for Area C - Shop Ralsed Floor Thase lib Shop Ralsed Floor - Seismic RFI 015 Follow-up - Exposure of foundation at east shop, shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands.	-			-		
CONSTRUCTION DOCUMENTS DRB for Area C - Shop Ralsed Floor Thase Ilb Shop Ralsed Floor - Seismic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are	-	-		-	· · · · · · · · · · · · · · · · · · ·	
CONSTRUCTION DOCUMENTS IRE for Area C - Shop Ralsed Floor hase lib Shop Ralsed Floor - Seismic REI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are xrossed	-			-		
CONSTRUCTION DOCUMENTS IRE for Area C - Shop Ralsed Floor hase lib Shop Ralsed Floor - Selsmic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are xposed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment	-			-		
CONSTRUCTION DOCUMENTS RE for Area C - Shop Ralsed Floor Phase IIb Shop Ralsed Floor - Seismic RE 1015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are xposed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment bocated on raised floor.	-	- 1	- - 12 5	-		
CONSTRUCTION DOCUMENTS URE for Area C - Shop Ralsed Floor hase lib Shop Ralsed Floor - Selsmic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are xposed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions.	-	- - - 1	- - 12 5 15	-		<u>* 13,0</u>
CONSTRUCTION DOCUMENTS IRE for Area C - Shop Raised Floor hase lib Shop Raised Floor - Seismic REI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are exposed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment boated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path	-		- - 5 - 15 3	-		
ONSTRUCTION DOCUMENTS RB for Area C - Shop Raised Floor hase lib Shop Raised Floor - Seismic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) itsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are gossed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions.	-	- 1	- - 12 5 15	-	· · · · · · · · · · · · · · · · · · ·	
ONSTRUCTION DOCUMENTS RB for Area C - Shop Ralsed Floor hase llb Shop Ralsed Floor - Selsmic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) lised floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are cposed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path	-		- - 5 - 15 3	-		
ONSTRUCTION DOCUMENTS RB for Area C - Shop Ralsed Floor hase llb Shop Ralsed Floor - Seismic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) ised floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are coosed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path 1e. Coordination with ARG, City of Porlland, SHPO, & P&C General	-	- - 1 1 - 1 -				
ONSTRUCTION DOCUMENTS RB for Area C - Shop Ralsed Floor hase lib Shop Raised Floor - Seismic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) lised floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are coosed. 1b. Lateral analysis on (E) reised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path 1e. Coordination with ARG, City of Portland, SHPO, & P&C General Develop Partial Plan Sheet (Raised Floor Plan) between Gridlines 1 and 2 Develop Additional Specifications as needed	-	- 1	- - - - - - - - - - - 2 2 2	8		
ONSTRUCTION DOCUMENTS RB for Area C - Shop Ralsed Floor hase lib Shop Ralsed Floor - Seismic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) ised floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are goosed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path 1e. Coordination with ARG, City of Portland, SHPO, & P&C General Develop Partial Plan Sheet (Ralsed Floor Plan) between Gridlines 1 and 2 Develop Additional Specifications as needed Address ARG/City of Portland/P&C Comments on 90% CD Documents	-	- - 1 1 - 1 -	12 5 15 3 3 - - - - - - - - - - - - - - - - -			
ONSTRUCTION DOCUMENTS RB for Area C - Shop Ralsed Floor hase llb Shop Ralsed Floor - Selsmic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) issed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are xposed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path 1e. Coordination with ARG, City of Portland, SHPO, & P&C General Develop Partial Plan Sheet (Ralsed Floor Plan) between Gridlines 1 and 2 Develop Additional Specifications as needed Address ARG/City of Portland/P&C Comments on 90% CD Documents Finalize 100% Construction Documents	-	- - 1 1 - - - 0.5				
ONSTRUCTION DOCUMENTS RB for Area C - Shop Raised Floor hase lib Shop Raised Floor - Seismic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) sited floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are goosed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path 1e. Coordination with ARG, City of Portland, SHPO, & P&C General Develop Partial Plan Sheet (Raised Floor Plan) between Gridlines 1 and 2 Develop Additional Specifications as needed Address ARG/City of Portland/P&C comments on 90% CD Documents Finalize 100% Construction Documents Work with City Building Official to Secure Permit Work with City Building Official to Secure Permit	-	- - 1 1 - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -		
ONSTRUCTION DOCUMENTS RB for Area C - Shop Raised Floor hase lib Shop Raised Floor - Seismic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) sited floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are goosed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path 1e. Coordination with ARG, City of Portland, SHPO, & P&C General Develop Partial Plan Sheet (Raised Floor Plan) between Gridlines 1 and 2 Develop Additional Specifications as needed Address ARG/City of Portland/P&C comments on 90% CD Documents Finalize 100% Construction Documents Work with City Building Official to Secure Permit Work with City Building Official to Secure Permit	-	- - 1 1 - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -		
CONSTRUCTION DOCUMENTS IRE for Area C - Shop Raised Floor hase lib Shop Raised Floor - Seismic RE 1015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are xposed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path 1e. Coordination with ARG, City of Portland, SHPO, & P&C Ceneral Develop Partial Plan Sheet (Raised Floor Plan) between Gridlines 1 and 2 Develop Partial Plan Sheet (Raised Floor Plan) between Gridlines 1 and 2 Develop Additional Specifications as needed Address ARG/City of Portland/P&C Comments on 90% CD Documents Finalize 100% Construction Documents Work with City Building Official to Secure Permit Work with P&C to Address Buy American Requirements RATES	-	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	- - - - - 4 - - - - 4 - - - - 4 - - - -		
CONSTRUCTION DOCUMENTS IRE for Area C - Shop Raised Floor hase lib Shop Raised Floor - Selsmic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are xposed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment cated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path 1e. Coordination with ARG, City of Portland, SHPO, & P&C General Develop Partial Plan Sheet (Raised Floor Plan) between Gridlines 1 and 2 Develop Additional Specifications a needed Address ARG/City of Portland/P&C comments on 90% CD Documents Finalize 100% Construction Documents Work with City Building Official to Secure Permit Work with P&C to Address Buy American Requirements		- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -		
CONSTRUCTION DOCUMENTS URB for Area C - Shop Ralsed Floor Thase lib Shop Ralsed Floor - Selsmic RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. 1a. Perform 3 condition assessment site visits to explore (E) field conditions as they are xposed. 1b. Lateral analysis on (E) raised floor including determining weights of (E) equiment incated on raised floor. 1c. Design and detail seismic strengthening, as required, in N-S and E-W directions. 1d. Further field verification of designed load path 1e. Coordination with ARG, City of Portland, SHPO, & P&C Ceneral Develop Partial Plan Sheet (Ralsed Floor Plan) between Gridlines 1 and 2 Develop Partial Plan Sheet (Ralsed Floor Plan) between Gridlines 1 and 2 Develop Additional Specifications as needed Address ARG/City of Portland/P&C Comments on 90% CD Documents Finalize 100% Construction Documents Work with City Building Official to Secure Permit Work with P&C to Address Buy American Requirements RATES	- - - 1 \$215	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	- - - - - 4 - - - - 4 - - - - 4 - - - -		

Project Name: Union Station, Partial Roof Framing Repair - Add Services				~~~	mle
Project No.: A8437013.00 Project Manager: Kent Yu			De	<u>ege</u>	<u>enk</u>
Date: November 19, 2010		1.	Design	·	
	Principal	Assoc. Princ.	Design Eng.	CAD	Total
)				1	
2008 RATES 4.44 57 1					
2008 RATES (with 5% increase for living cost adjustment) TASKS:	\$215	\$184	\$126	\$116	5
					+
CONSTRUCTION ADMINISTRATION - PHASE II 1. Attend One OAC Meeting (two hours)		-	<u> </u>	-	
2. Structural Observation (two times)		1	2		·
	•	-	-	-	1
Existing Gravity Framing Affected by Water-Related Damage	-	-		-	
 Damage in ends of (E) shed roof joists and sill plate along gridline E.2 and G (approximately 4 joists affected on E.2, 12 joists affected on G and 15 joists lengths affected by sill plate damage on G) 					
 Damage in portions of (E) straight sheathing (noted at 2 locations near gridline E.2) 			2		
 (E) framing at the shed roof level between gridline G and the framing intersection with the gabled roof. Evidence of damage and partial inadequate replacement. 			· · · ·		
6. Damage in (E) beams around large skylight near gridlines 2 and G		1	- 3		†{
 Damage in ends of (E) roof joists south of gridline 2 running N-S framing into (E) URM wall on gridline 2. 			2		
		-	-	-	
Selsmic (Affected by Gravity Framing Work) 8. Detail 3/S5.2 on gridlines 1 and 2 (affected by ledger beam damage and (E) roof)olst	-		-	-	
damage between gridline 2 & 3) (50% Phase II, 50% Phase IIb) 3. Detail 7/S5.2 on gridline E.2 and G (affected by damage in ends of (E) shed joists and slil			1		
Denter Och William	-	-	2		
10. Review Submittals 11. Project Close-out		1	8		·
HOURS		0.5	0.5 2B/5	in the second	
RATES	\$215	\$184	\$126	\$116	
SUB-TOTAL CA - Phase II	\$0	\$644		\$0	
			;		
Attend One OAC Meeting (two hours)		-	- 2	•	
2. Structural Observation (two times)		1	2		
	-			-	
Existing Gravity Framing Affected by Water-Related Damage	-	-	-	-	
b. Damage in ends of (E) gabled roof joists, (E) collar ties, and (E) slil plated along gridline G extent yet unknown)		1	3		
		-	з		
. Damage In ends of (E) roof joists just north of gridline 3 running N-S framing into (E) URM vall on gridline 3. (extent of damage yet unknown)		!			
			2		
vali on gridline 3. (extent of damage yet unknown) . Damage in end of Valley roof beam at gridline 3 and E.8		~		-	
vali on gridline 3. (extent of damage yet unknown)				-	
vali on gridline 3. (extent of damage yet unknown) . Damage in end of Valley roof beam at gridline 3 and E.8 Seismic (Affected by Gravity Framing Work) . Detall 3/S5.2 on gridlines 1 and 2 (affected by ledger beam damage and (E) roof joist amage between gridline 2 & 3) (50% Phase II, 50% Phase IIb)	-			-	
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vali on gridline 3. (extent of damage yet unknown) . Damage in end of Valley roof beam at gridline 3 and E.8 Seismic (Affected by Gravity Framing Work) . Detail 3/55.2 on gridlines 1 and 2 (affected by ladger beam damage and (E) roof joist arnage between gridline 2 & 3) (50% Phase II, 50% Phase IIb) . Details 2/55.0 & 7/55.10 on gridline 3 (affected by damage in ends of (E) roof joists and III plate) Shop Raised Floor - Seismic . RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. Review Submittaits D. Project Close-out . Project Close-out RATES SUB-TOTAL CA - Phase IIb RATES	\$215	1 - 1 0.5 \$184	2 	- - - \$116	
valion gridline 3. (extent of damage yet unknown) . Damage in end of Valley roof beam at gridline 3 and E.8 Seismic (Affected by Gravity Framing Work) . Detail 3/S5.2 on gridlines 1 and 2 (affected by ledger beam damage and (E) roof joist armage between gridline 2 & 3) (50% Phase II, 50% Phase IIb) . Details 2/S5.0 & 7/S5.10 on gridline 3 (affected by damage in ends of (E) roof joists and II plate) Shop Raised Floor - Seismic . RFI 015 Follow-up - Exposure of foundation at east shop shotcrete wall exposed the (E) alsed floor framing in the shop area. This raised floor needs to be evaluated for its lateral apacity to resist seismic demands. Review Submittals D. Project Close-out SUB-TOTAL CA - Phase IIb SUB-TOTAL CA - Phase II + IIb	\$215 \$0	1 - 1 0.5 \$184	2 	- - - \$116	\$500



June 15, 2011

Marina Cresswell City of Portland Office of Management and Finance Faculties Services 1120 S.W. 5th Ave., Room 1204 Portland, OR 97204

Re: Union Station - Contract No. 3000091 Gutter Survey

Dear Marina:

Attached is a schedule showing fees for survey of the existing gutters. We will survey the copper gutter liner and fascia as well as the wood soffits after the Peel and Stick has been removed and mark conditions on a roof plan and reflected soffit plan. We will then annotate the roof plan and reflected soffit plan with notations for repair of the various conditions identified in the survey and include specifications as necessary for the work.

Please contact either Maya or me if you have any questions.

Sincerely,

Por Men

David P. Wessel Principal Principals Britte D. Judd, fafa Stephen J. Farneth, fafa Takashi Fukuda Aaron Jon Hyland, afa Naomi O. Mirocluo, afa David P. Wessel, akc, fapt

Senior Associates Andrew G. Blyholder, am Deborah J. cooper, am Gee Heckscher, am Arnie, Hollander M. Bridget Maley Cathleen A. Malmstrom, am Susan McDonald, am Katherine T. Petrem W. Dean Randle, am

> Offices San Francisco Pasadena Seattle Portland

Nortbern California Office Pier 9, The Embascadero San Francisco, California 94111 constil arg@argsf.com phone 415.421.1680 fax 415.421.0127 www.argsf.com

. 33033

Portland Union Station Gutter Survey

Fees

185085

		Principal	Proj. Manager	
				TOTALS
1. St	urvey Preparation			
Pr	repare for survey, establish repair markings, procedures, draw			
re	flected soffit plan, etc.	- 1	·4	
H	OURS TASK 1	1	4	
PE	ERSONNEL BILLING RATE	190.00	125.00	
SU	JBTOTAL TASK 1	· \$190	\$500	\$690
	irvey			
	Survey gutters from scaffold and at ground	10	12	
`••	Assemble Field Survey information and photos		2	
H	OURS TASK 2	10	14	
PE	ERSONNEL BILLING RATE	190.00	125.00	
SU	JBTOTAL TASK 2	\$1,900	\$1,750	\$3,650
	ocumentation Follow-up			
. P	Prepare documentation of repairs with specifications as necessary	2	8	
HC	OURS TASK 3	2	8	
PE	ERSONNEL BILLING RATE	190.00	125.00	
SU	JBTOTAL TASK 3	\$380	\$1,000	\$1,380
				\$5,720
RF	EIMBURSABLE EXPENSES			
. N	None ·	· · · ·		
		•		
SU	JBTOTAL Reimbursable Expenses			\$0
1	TOTAL PROFESSIONAL FEES AND EXPENSES			\$5,720

.



October 18, 2011

Marina Cresswell City of Portland Office of Management and Finance Faculties Services 1120 S.W. 5th Ave., Room 1204 Portland, OR 97204

Re: Union Station-Contract No. 3000091: Revised Additional Services Construction Admin

Dear Marina,

Attached, please find a revised Additional Services for Construction Administration. This modifies our July 27, 2011 request specifically to extend the construction schedule from November 4, 2011 to December 31, 2011. This will result in an additional 8 weeks of construction at the estimated 20 hours per week we included in the original request for a total add of \$25,452 over the previous proposal. All other aspects of the previous request are unchanged.

I have also included a revised Wood Window Survey proposal. This was previously submitted in August, 2011 for a total of \$3,630. Please note that the original intent of the survey was to identify the windows that had unauthorized epoxy repairs in lieu of the W3 repairs. Based on what was discovered during the initial phases of the survey compelled us to survey all of the windows that had not been completed to date to document all work carried out. Our expenditure through October is \$9,770.

Lastly, I am submitting additional services for Degenkolb Engineers for the following two items:

- Wilf's Roof: Evaluation of gravity system for replacement HVAC units
 \$1,694.00
- Design HSS sections for support of flat skylight: \$847.00

Principals Bruce D. Judd, faia Stephen J. Farneth, faia Takashi Fukuda Aaron Jon Hyland, aia Naomi O. Mirogujo, aia David P. Wjessel, aic

Settion Associates Deforall J. Cooper, AIA Gee Heckscher, AIA Wendy Hills, AIA Kate Johnson, AIA M. Bridget Maley Cathleen A. Malmström, AIA Glenn David Mathews, AIA Nina Pascale

> Offices San Francisco Pasadena Seattle

Narthern Culifornia Office Pier 9, The Embarcadero San Francisco, California 94111 email arg@argsf.com 415.421.1680 fax 415.421.0127 www.argsf.com

(9030)

185085



Marina Cresswell October 18, 2011 Page 2

Please feel free to give me a call to discuss in further detail, if you have any questions.

Sincerely,

Naonu Muglio

Naomi Miroglio Principal

cc: File

Portland Union Station Wood Window Survey

Fees

August 2011 Revised October 18, 2011

		Principal	Proj. Manager	
				TOTALS
1.	Survey Preparation			
	Prepare for survey, print elevations, print enlarged elevations, coordinate w/ Amy McAuley.	•	4	
	HOURS TASK 1	0	• 4	
	PERSONNEL BILLING RATE	190.00	125.00	
	SUBTOTAL TASK 1	\$ 0	\$500	\$500
2.	Survey	•		
	• Survey wood windows, with additional time spent on windows w/ W3 repair recommendations. Mark up drawings as needed identifying repair locations.		26	
	HOURS TASK 2	0	26	
	PERSONNEL BILLING RATE	190.00	125.00	
	SUBTOTAL TASK 2	\$0	\$3,250	\$3,250
3.	Documentation Follow-up			
	. Prepare documentation with results of survey. Coordinate repair recommendations w/ Amy McAuley.		36	
	HOURS TASK 3	8	36	•
	PERSONNEL BILLING RATE	190.00	125.00	
	SUBTOTAL TASK 3	\$1,520	\$4,500	\$6,020
				\$9,770
	REIMBURSABLE EXPENSES			
	. None			
	SUBTOTAL Reimbursable Expenses			\$0
	TOTAL PROFESSIONAL FEES AND EXPENSES	 .		\$9,770

Architectural Resources Group

SCOPE OF SERVICES / FEES

		ļ.:	A	unnectur	al Resources	aroup	
	Task	DW/NM	Maya Foty	Jason Wright	TOTAL	Phase II	Phase llb
		\$190	\$125	\$110	101/12		
		4100	4120	4110			
۱.	CONSTRUCTION ADMINISTRATION - 39 additional weeks						
	Respond to field inquiries and RFIs/Prepare clarifications (6 hrs/wk)		165	117			·
	Rotunda coring obstruction						
	Site visits and follow up	3	3				
	Archive research / coordination with Syracuse historian	16	7 16				
	Assist Owner with potential changes to the work and change order rvw	16	165	117			
	Process, review and distribute submittals (6 hrs/wk)		165				
~~~~	Jurisdictional co-ordination for changes to the project (City of Portland)		· 15				
	Skylight Code Issues		15				
	Hardware Code issues	39	118				
	Attend weekly construction meetings	39	110				
	Review and process pay applications	74	504	234			
	Hours Task	5190	\$125	\$110			
	Personnel Billing Rate	\$14,060		\$25,740	\$102,800	\$20,560	\$82,24
	ARG Subtotal Task	\$14,000	303,000	azu,/40	\$102,000	420,000	402,2
					\$5,000		\$5,00
	Degenkolb Engineers				40,000		44,00
					\$107,800	\$20,560	\$87,24
	Subtotal Task I				\$101,000	\$20,000	401,24
11.	SUBMITTAL REVIEW - Additional Scope						
	040000: Exterior Masonry						
	Review of Ploneer Waterproofing surveys/submittal review	1	4	7			
	Site visits to verify Ploneer Waterproofing surveys		6				
-	Subtotal Hours	1	10	7			
	Subtotal Fees	\$190	\$1,250	\$770	\$2,210	\$663	\$1,54
	076100 Sheet Metal (gutter/cornice)						
	Preparation of CCD 005 and ASI 012 to assist in determin'g rehab app	1	3				
	Review outter/comice repair options			24			
	Consultation with local and Calif Dow reps to obtain warranty for 123 p	3					
	Subtotal Hours	4	3	24			
	Subtotal Fees	\$760	\$375	\$2,640	\$3,775	\$1,133	\$2,64
	08011.71: Bronze Door Rehabilitation	`					
	On-site survey and field notes and follow up/submittal review	2	12	. 24			
·	Solvent testing/correspondence		6				
	RFI 072 and 094			31			
	Hardware review and selection		10	12			
	Subtotal Hours	2	28	67			
	Subtotal Fees	\$380	\$3;500	\$7,343	\$11,223		\$11,22
	080114.71: Wood Door Rehabilitation		•				
	Archiform visit/field notes/submittal review		5				
	Scope/work plan door N102	1		10			
	Subtotal Hours	1	5	10			
	Subtotal Fees	\$190	\$625	\$1,100	\$1,915		\$1,91
	080140.71: Steel Door & Window Rehabilitation						
	On-site site submittal review/MCM site visit/submittal mark ups		· 8	8			
	Review rehab program	1		16			
	Review steel door hardware program		3	16			
	Subtotal Hours	1	11	40			
	Subtotal Fees	\$190	\$1,375	\$4,400	\$5,965		\$5,96
	081433: New Stile & Rail Wood Doors						
	Door survey/reconcile with submittal/ respond	2	10	4			
	Existing width analysis, design/hardware review		16	12			
	Subtotal Hours	2	26	16			
	Subtotal Fees	\$380	\$3,250	\$1,705	\$5,335		\$5,33
	080152.71: Wood Windows - New and Rehab						
	Site visit/field notes/submittal review	2	12				
	Review rehab/replace scope of work submittal		•	4			
	Subtotal Hours	2	12	4			
	Subtotal Fees	\$380		\$440	\$2,320		\$2,32
	080163.71: Skylight Rehabilitation/Replacement						
	Coordination with Lacey Glass to review st and alum frame options	16	32				
	Coordination with Lacey Glass to review glazing options		4				
	Subtotal Hours	16		a			
	Subtotal Fees	\$3,040	\$4,500	\$0	\$7,540	\$7,540	
	ARG Subtotal Task II			<b>!</b>	\$40,283	\$9,336	\$30,94
III.	REIMBURSABLE EXPENSES				64 ARA	PC 705	P4 401
	Reimbursable Expenses: expended through 7-29-11 beyond contract	1			\$7,828	\$6,728	\$1,100 \$3,85
	The second second the second the second seco				\$3,852	\$0	
	Reimbursable Expenses; esumated birough Final Completion						
	Reimbursable Expenses: estimated through Final Completion Reimbursable Subtotal Task III				\$11,680 \$159,763	\$6,728 \$36,624	\$4,952 \$123,139





July 27, 2011

Marina Cresswell City of Portland Office of Management and Finance Faculties Services 1120 S.W. 5th Ave., Room 1204 Portland, OR 97204

Re: Union Station - Contract No. 3000091: Additional Services Annex Building

#### Dear Marina,

We are very pleased to submit our fee proposal to complete Final Design for the additional scope of work at Union Station. We have based this proposal on the description of tasks we received from you, as well as subsequent discussions, and includes the following:

Main Building Crawl Space

- Specify pipe insulation for existing steam and condensate piping
- Specify batt insulation at wood floors under crawlspace

Annex Building

- Confirm the historic Annex Building drawings, and update to match current conditions. Develop a South Elevation.
- Survey and identify treatment recommendations for wood windows, historic wood doors, brick walls and sandstone window sills and base (parged).
   Survey and develop recommendations/documents for replacement of non-historic wood doors to match original. The treatment recommendations will be based on approved materials, mock ups and techniques established for the Main Building during Phase II/IIb. It is assumed that General Contractor will provide scaffolding for the survey work.

Awnings (on Main Building)

Survey and develop repair and/or replacement recommendations for the existing fabric awnings and awning structure/mechanisms on the Main Building in order to allow the awnings to be raised and lowered.

Principals Bruce D. Judid, pala Stephen J. Farneth, faia Takashi Fukuda Aaron Jon Hyland, aia Naomi O. Miroguo, aia David P. Wessel, aic

Senior Associates Deborah J. Cooper aia Gee Heckscher, aia Wendy Hillis, aia Kate Johdson, aia M. Bridget Maley Cathleen A. Malmström, aia Glenn David Mathews, aia Nina Pascale

> Offices San Francisco Pasadena Seattle

Northern California Office Pier 9, The Embarcadero San Francisco, California 94111 email arg@argsf.com 415.421.1680 fax 415.421.0127





Marina Cresswell July 27, 2011 Page 2

Construction Administration

• Construction Administration services for the tasks described above, based on an eight week pre-construction (submittals, RFI's, etc) and eight-week construction schedule per P & C.

Based on this scope of work, we have outlined the tasks and fees associated on the attached fee proposal. Reimbursable expenses would be billed separately.

Please feel free to give me a call to discuss the fee proposal in further detail, once you have had a chance to review the attachment. We are looking forward to continuing to work with you on this important historic site.

Sincerely,

Naonu Muglio

Naomi Miroglio Principal

cc: File

185085

July 26, 2011

Portland Union Station Construction Administration

Annex Building Additional Services

# SCOPE OF SERVICES / FEES Crawlspace/Annex Building/Main Building Awnings

		Architect			
Т	[°] ask	DW/NM	Maya Foty	Jason Wright	TOTAL
		\$190	\$125	\$110	
F	INAL DESIGN			<u> </u>	
C	Crawlspace Insulation		· · ·		
	Specify Pipe Insulation at (E) steam & condensate piping		8		
	Specify Batt Insulation at wood floors under crawlspace		8	4	
A	nnex Building		•		
	Confirm Historic Base Drawings and update as necessary		12		
	Prepare for Field Survey		8		
	Field Surveys				
	Wood Windows		12		
	Existing Doors / Hardware		4		
	Replacement Doors/Hardware		. 4		
	Brick Walls	•	12		
	Sandstone Sills and Bases (parged)		12		
	Assemble Field Survey information and photographs		10		
	Prepare documents and schedules	4	40		
	Update Main Building Specifications, as necessary			8	
Δ	wnings (Main Building)				
· · ·	Research original awning locations, design and fabric	2	4		
	Prepare for Field Survey		4		
	Field Survey of Awnings and Awning Frames/Mechanisms		12		
	Assemble Field Survey information and photographs		8	4	
	Review Recommendations with Client	2	4	1	
	Prepare Documents		16		
	Prepare Specifications	•	8	8	
	Permit Submittal and Response to Comments		12		
		· · · · · · · · · · · · · · · · · · ·			
P	reconstruction Meeting		4		
F	Respond to RFIs/Prepare clarifications (8 hrs/wk for 16 weeks)		80	48	
·A	ssist Owner with change order review	<u> </u>			
P	Process, review and distribute submittals (8 hrs/wk for 16 weeks)	<u> </u>	64	. 64	
F	Review and process Pay Applications	6			· ·
A	ttend weekly site meetings (16 mtgs @ 3 hrs/each)		48		
P	Punchlist site visit/preparation of punch list documents		16		
		·		100	
	Subtotal Hours	30	418		£70 0
	Subtotal Fees	\$5,700	\$52,250	\$20,900	\$78,8
	TOTAL PROFESSIONAL FEES				\$78,85



185085

#### Degenkolb

080281

# Additional Services Agreement

Job Number <u>A8437013.00</u>

Client: Architectural Resources Group

Project Name: Union Station, Phase II and IIb

Description of Additional Services:

Wilf's Roof: Evaluation of gravity system for replacement HVAC unit.

Hours: David Gonzalez: 2 hours at \$210 = \$420_

Kyle Steuck: 8 hours at \$140 = \$1120 _____

Total: \$1540

The change is not considered within the "Scope of Services."

Total estimated time required for this change:

Charges for this change will be billed as additional services as follows:

At our current standard hourly rate.

At our current standard hourly rate, not to exceed \$_____

Fixed fee of \$1540

As follows:

Services will proceed upon receipt of a signed copy of this form.

All Terms and Conditions of the original contract shall remain in effect.

(Signature

#### Offered by Degenkolb Engineers

logether	James a Melle
(Signature Date)	(Signature Date)
David Gonzalez, Principal	James Malley Senior Principal
(Printed Name / Title)	(Printed Name / Title)

Accepted by Client

.

Date)

(Printed Name / Title)

DEGENKOLB = # 1,540 ARG (50 BCONSULTANT = # 159 MARK-UP @ 10 20) = # 1,694 TOTAL

page 1

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