

AMENDMENT NO. 2CONTRACT NO. 37735

FOR

SOUTH AIRPORT BASIN PHASE 4 PUMP STATIONS

Pursuant to Ordinance No. \_\_\_\_\_

This Contract was made and entered by and between KPFF, 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.

1. Additional compensation is necessary and shall not exceed \$49,905. The project task budget amounts are adjusted as indicated in Exhibit A, Section IV Payment Schedule. The amended not-to-exceed total contract amount is \$97,779.
2. Additional work is necessary for the development of the project. The originally authorized and previously amended Exhibit A Statement of the Work and Payment Schedule is further amended as follows

**I PROJECT BACKGROUND**

The scope of work for the original contract included only supportive services in structural engineering and project management for subcontracted geotechnical work and architecture for the two pump stations. Geotechnical investigation supporting the design was based on the assumption that dewatering in this area would be feasible, as directed by BES. Recent gravity sewer construction, however, has resulted in the conclusion that dewatering will be possible only to a very limited extent due to limitations in disposal capacity and the potential for pulling contaminated groundwater plumes onto the construction site.

Design modifications to address changed conditions will require revision to the foundation design on both sites and further geotechnical investigation for one pump station. Structural scope changes include revisions to the structural drawings and calculations, permit modification assistance, input as needed for specification revision and additional services during construction. The original contract provided for engineering and architectural services during construction. This scope of work also includes payment for additional meetings not included in the original and previously amended contract. Additions to the geotechnical scope of work include further investigation, updates to geotechnical reports, provision of technical memoranda with design criteria and services during construction.

### III SCOPE OF WORK

#### Task 1 – Project Management

Contractor will attend one (1) additional design/coordination meeting and one (1) design review meeting. This amendment includes payment for one (1) past meeting not covered in the original and previously amended contract.

#### Task 2 – Structural Design Services

Contractor will revise the structural calculations and plans to address the foundation design for the wet wells and related details. Design revisions will be based on the geotechnical recommendations in the technical memoranda produced under Task 3 of this contract amendment. Contractor will provide structural input to the project specifications and permit revision assistance.

Anticipated tasks include the following:

- Review recommendations from the geotechnical technical memoranda and data reports produced as part of Task 3 of this contract amendment.
- Prepare structural calculations necessary for the foundation design of the wet wells at both sites.
- Revise structural drawings for the wet well design for both sites.
- Revise structural sections and details affected by changes in the wet well foundation design.
- Provide structural input as needed and as requested by BES for specification revisions.
- Provide responses to structural check sheet items during the permit revision process.

Assumptions:

- The wet well design for both pump station sites will assume no external dewatering.
- The NE 42<sup>nd</sup> Avenue site design will be based on caisson construction with a thick tremie plug. The caisson will be designed by the contractor. The caisson's cutting shoe will not enter the gravel layer.
- The NE 47<sup>th</sup> Avenue site design will use secant piles to provide a shoring system. The wet well will have a thick tremie plug. The wet well will be placed within the confines of the secant piles.
- The secant pile shoring system will be designed by the contractor.

- The design water level during construction is assumed to be 12 feet above mean sea level.
- No modifications to architectural plans or specifications will be required.

Items to be provided by BES

1. Recent specification sections for secant piles and caisson construction, for consultant review and comment.
2. Long term groundwater level design criteria.

**Items to be delivered by Contractor**

Design deliverables will be as follows:

1. Draft (90%) revised structural plans and related specifications.
2. Final (100%) revised structural plans and related specifications.
3. Conformed set of Construction Documents.

**Final design deliverables will be as follows:**

1. One electronic drawing set, one .pdf drawing set, one set of full-size signed and stamped drawings, and one set of half-size signed and stamped drawings will be submitted.
2. Technical Specifications. One electronic copy and one unbound copy will be delivered.
3. One bound copy of sealed structural calculations for each site's wet well foundation design will be delivered.

**Task 3 – Geotechnical Services**

Services will include one (1) additional boring at the NE 47<sup>th</sup> Avenue pump station site, revisions to geotechnical data reports, production of technical memoranda containing recommendations from geotechnical engineering analysis and subsurface model development and plan and specification modification support. This scope of work adds geotechnical services during bidding and construction. Project management, including payment for three past meetings, coordination and support of structural engineering efforts are included.

Anticipated tasks include the following:

- Attend one (1) design meeting to discuss constructability methods, alternative methods to resist permanent uplift and other geotechnically related design issues.

- Attend one (1) design review meeting following submittal of revised drawings and specifications.
- Complete one (1) on site boring at the NE 47<sup>th</sup> Avenue pump station site.
- Develop and confirm geotechnical subsurface models to be used for both pump station redesigns.
- Provide geotechnical engineering analysis to support structural redesign of the wet well foundations. This analysis will include evaluation of tremie thickness for hydrostatic uplift resistance and geotechnical input for alternatives to increase resistance during construction and for the permanent structure, for both pump stations.
- Geotechnical engineering analysis also will include developing allowable soil design values and alternative methods for sealing the tremie plug, for the NE 42<sup>nd</sup> Avenue pump station.
- Complete a geotechnical data report for both stations that will be available to bidders on the project.
- Complete separate technical memoranda with geotechnical design information and recommendations, one (1) memorandum for each pump station site.
- Provide geotechnical review and comments on 90% drawings and specifications.
- Provide geotechnical support to drawing and specification modifications in response to 90% design review comments.
- Provide technical support to answer prospective bidders' questions during the public bid process.
- Attend the preconstruction meeting.
- Provide responses for up to three (3) RFIs.
- Provide geotechnical support as needed for submittal review.
- Conduct five (5) site visits for special geotechnical inspections to support BES construction observation.

Assumptions:

- The boring at the 47<sup>th</sup> Avenue pump station site will extend to a depth of approximately fifty feet.
- A piezometer will not be installed at the boring site.
- The construction contractor will develop his own design parameters for the caisson and secant pile shoring system design based on the information provided in the geotechnical data report.
- Technical memoranda developed by the geotechnical engineer are intended strictly for the Contractor, to support structural engineering efforts.

**Items to be provided by BES**

1. Recent specification sections for secant piles and caisson construction, for consultant review and comment.
2. Long term groundwater level design criteria.
3. Storage location for drilling core boxes.

**Items to be delivered by Contractor**

Design deliverables will be as follows:

1. Three (3) bound copies and one (1) electronic copy of the geotechnical data report will be delivered.
2. Three (3) bound copies and one (1) electronic copy of the technical memorandum with the geotechnical design information for the NE 42<sup>nd</sup> Avenue pump station will be delivered.
3. Three (3) bound copies and one (1) electronic copy of the technical memorandum with the geotechnical design information for the NE 47th Avenue pump station will be delivered.
4. One (1) electronic copy of comments from the 90% design review of drawings and specifications will be provided to BES.
5. Written (e-mail) responses to questions from prospective bidders that are related to the recommended geotechnical design criteria and details.
6. Written (e-mail) responses for up to three (3) RFIs.

**Task 4 – Services During Construction**

In addition to presently scoped services, the Contractor will provide one (1) additional site visit for each of the two pump station sites, and attend one (1) additional progress meeting per site.

#### IV PAYMENT SCHEDULE – Project Task Budget Adjustments

TASK	DESCRIPTION	Current Task Budget Amounts (includes Amendment 1)	Amendment No. 2 Amounts	Adjusted Task Budget Amounts
1.0	Project Management	\$ 2,760	\$ 2,390	\$ 5,150
2.0	Structural Design Services	\$ 42,076	\$ 7,845	\$ 49,921
3.0	Geotechnical Services	\$ 0	\$ 36,000	\$ 36,000
4.0	Services during Construction	\$ 3,038	\$ 3,670	\$ 6,708
<b>Total Contract Amounts</b>		<b>\$ 47,874</b>	<b>\$ 49,905</b>	<b>\$ 97,779</b>

Summary of the Originally Authorized Contract amount, and Approved and Proposed Amendments		Percentage of the original Authorized Contract Amount
Original Contract No. 37735	\$ 28,086	100%
Amendment No. 1, authorized by Ordinance No. 183102, passed by Council September 16, 2009.	\$ 19,788	70.46%
Proposed Amendment No. 2	\$ 49,905	177.69%
<b>Total Amount of Approved and Proposed Contract Amendments</b>	<b>\$ 97,779</b>	<b>348.14%</b>

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


Contract No. 37735 Amendment/Change Order No. 2Contract Title: SOUTH AIRPORT BASIN PHASE IV PUMP STATIONS

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.

**CONTRACTOR SIGNATURE:**

KPFF

By:  Date: 8/02/10Name: CURTIS C. VANDERZANDENTitle: PRINCIPALAddress: 111 SW 5TH AVE., SUITE 2500, PORTLAND, OR 97204Telephone: 503 227-3251

184151

Contract No. 37735

Amendment/Change Order No. 2

Contract Title: SOUTH AIRPORT BASIN PHASE IV PUMP STATIONS

**CITY OF PORTLAND SIGNATURES:**

By: \_\_\_\_\_  
Purchasing Agent

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

DM

By: \_\_\_\_\_  
Elected Official

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

Approved:

By: \_\_\_\_\_  
Office of City Auditor

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

Approved as to Form:

By: \_\_\_\_\_  
Office of City Attorney  
APPROVED AS TO FORM  
CITY ATTORNEY

Date: 9/2/10