

# **Contract Amendment One**

## **City of Camas**

### **544 Foot Pressure Zone Project**

CITY and ENGINEER agree that the following provisions, changes and modifications are made a part of the AGREEMENT dated January 16, 2013 between CH2M HILL Engineers, INC., ("ENGINEER"), and The City of Camas, Washington (City).

#### **Contract Amendment One**

The scope of work described in this contract amendment is in addition to the work described in Attachment A and the level of effort presented in Attachment B to the Agreement dated January 16, 2013 between CH2M HILL Engineers and the City of Camas for:

Design and permitting services for the 544 Foot Pressure Zone Project consisting of a new 2.2 mgd slow sand filter plan and approximately 20,000 feet of new 12 inch water pipeline in existing rights of way in Clark County, Washington.

The original contract is a time and materials contract with a multiplier of 3.3 times raw salary with a not to exceed budget of \$747,911. The scope of work included as Attachment A to the original contract did not include a budget for bid and construction phase services or design of the two pipelines described above. In addition, this amendment addresses the additional out of scope effort needed to complete land use permitting, building permitting, and geotechnical investigations during the design phase.

This contract amendment authorizes an additional budget of \$786,113 to provide for services and associated fees for work CH2M HILL will provide under Contract Amendment One for:

1. Completion of design phase services for the City of Camas Slow Sand Water Treatment Plant
2. Bid and construction phase services for the City of Camas Slow Sand Water Treatment Plant
3. Design and construction phase services for three projects
  - a. A new 12 inch treated water pipeline with a length of approximately 7,400 feet following the alignment of the existing raw water pipeline from the Chlorine Station at the intersection of NE Ireland Road and NE 312 Avenue to the intersection of NW 292<sup>nd</sup> Avenue and NE Stauffer Road.
  - b. A new raw water pipeline with an approximately length of 7,800 feet from the Boulder Creek Intake to the new Slow Sand Water Treatment Plant.
  - c. Completion of bidding documents for the Camp Currie Well.

#### **Completion of Design Phase Services**

In order to complete design and permitting of the 544 Foot Pressure Zone Project, CH2M HILL performed work in addition to that described in the scope of work described in Attachment A and the anticipated level of effort described in Attachment B to the original contract. The additional work and the expected fee impact were described in letters to the City of Camas transmitting invoices for work performed by CH2M HILL. At the terms of the original contract, the fee for these additional services would be approximately \$470,000. This contract amendment provides \$195,000 in payment for those additional services. CH2M HILL will submit an invoice documenting these additional charges for approval and payment by the City of Camas.

The additional work completed by CH2M HILL included:

1. On behalf of the City, CH2M HILL paid \$459 to Clark County for the septic tank site application fee.
2. On behalf of the City of Camas, CH2M HILL paid \$500 to Washington DOT for a right-of-way occupancy application fee.

3. On behalf of the City of Camas, CH2M HILL paid a \$530 processing fee to obtain the Clark County Health Department signature on the final plat.
4. On behalf of the City of Camas, CH2M HILL paid a \$51 filing fee to the Clark County Clerk for additional processing needed to accommodate a Longview signature in the required 1-inch margin area of the plat dedication.
5. Additional geotechnical work was completed to analyze slope stability at the water treatment plant site. The additional geotechnical work was performed by Columbia West Engineering under a subcontract to CH2M HILL. The additional effort added estimated \$39,920 to our scope of work. An initial geotechnical investigation concluded that the treatment plant site may have been a depositional area created by a landslide. Additional investigation was needed to map the bedrock surface at the site and to determine if the soil at the site was derived from bedrock or if it originated at another location and was transported to the site. The additional geotechnical work resulted in recommendations for construction at the site, including restrictions on which portions of the site could be used for construction and required setbacks from unstable slopes. The geotechnical investigation also concluded that the soils at the site are unsuitable for use as structural fill, which resulted in a change from treatment basins constructed using lined earthen embankments to concrete basins. The concrete basins provide the same treatment capacity in with a smaller footprint, increasing the setback from the slide area identified on the western edge of the property.
6. CH2M HILL completed additional cultural resources surveys to satisfy the requirements of the lender. The fee for the additional work totaled approximately \$15,200.
7. CH2M HILL completed a large amount of unexpected work to complete the land use and short platting processes. A key assumption stated in our original proposal was that the project could be completed in the first half of 2013. The land use permitting was finally completed in January Of 2015. Clark County required many unanticipated submittals, including a shoreline permit application for the entire 241 acre tract from which the 12 acre parcel for the treatment plant was subdivided, which resulted in a determination that the project was exempt from shoreline permitting.
8. There were \$1,245 in additional surveying costs associated with meeting Clark County submittal requirements and multiple review cycles.
9. CH2M HILL completed additional pipeline permitting as a result of delays in obtaining a response from Washington DOT regarding the right of way application.
10. Construction phase services for construction of the pipelines designed in the original contract. Construction phase services for the pipelines were not included in our original scope of work.
11. CH2M HILL received comments on the supervisory control and data acquisition (SCADA) system from another contractor working for the City after CH2M HILL had completed design drawings and specifications for the SCADA system. CH2M HILL revised the drawings and specifications to address the other contractor's comments. Had the comments been received earlier in the design process as requested by CH2M HILL, the comments would have been addressed in the original design.
12. CH2M HILL had additional costs related to addressing comments from Clark County Community Development regarding the building permit submittal, which ultimately resulted in the County concluding that the permit submittal was approvable.
13. CH2M HILL redesigned the treatment plant to provide concrete tankage in place of lined earthen embankments. The initial design was based on use of lined earthen embankments for treatment basins. As a result of the recommendations resulting from the geotechnical investigation, the design was changed to provide for the use of concrete tankage. In addition to the additional costs for structural design of the concrete tankage, the site plan needed to be revised, and the land use permits amended to reflect the changed design.
14. CH2M HILL originally budgeted project management time for a 6 month project duration. The design phase ultimate required 24 months to complete, which increased project management costs.

## **Construction Phase Services**

CH2M HILL will provide office services, responses to requests for information, submittal review, and occasional site visits during construction of the slow sand filter water treatment plant. After construction is

completed, CH2M HILL will prepare construction record drawings using a markup containing consolidated notes made by the construction contractor and City. The budget for construction phase services for the slow sand water treatment plant is shown in Table C-1. CH2M HILL will provide up to 1,944 hours of labor for construction phase services, as shown in Table C-1.

The following assumptions were made in developing the estimate for construction phase services:

1. The City will provide all construction management services, including coordination with S&B Engineering, Clark County Community Development, Clark Public Utilities, Clark County Public Works, and other entities whose support is needed during construction.
2. No additional work is needed by CH2M HILL to obtain permits for the project.
3. Construction will be substantially complete by February 28, 2016.
4. A certificate of final completion will be issued by July 1, 2016.
5. The City of Camas will provide full-time construction inspection.
6. CH2M HILL will prepare a set of conformed contract documents which will be distributed in pdf format (no paper copies).
7. CH2M HILL will review a maximum of 115 contractor submittals. CH2M HILL assumes that the Contractor will prepare the submittals to meet contract requirements. As a result, CH2M HILL assumes that 50 percent of the submittals will meet contract requirements on the first submittal and can be approved or approved as noted. For the remaining 50 percent of submittals, CH2M HILL assumes that the Contractor will revise and resubmit the submittals to meet the requirements of the contract documents. CH2M HILL assumes that no submittal will require more than two rounds of review.
8. CH2M HILL assumes that the Contractor will carefully prepare submittals. As a result, no more than 4.5 hours of staff time will be required to complete review of any one submittal.
9. CH2M HILL assumes that all submittals will be made electronically in Adobe Acrobat pdf format and that each submittal will be made as one composite document. Comments will be returned as markups to the pdf documents.
10. CH2M HILL assumes that there will be no more than 50 requests for information (RFIs), inclusive of field design changes (FDCs).
11. CH2M HILL will provide occasional site visits when requested by the City of Camas totaling no more than 200 hours. CH2M HILL also assumes that the Contractor will provide scaffolding, ladders, shoring, and other equipment needed to safely gain access to the portions of the project being observed.
12. CH2M HILL assumes that site visit reports can be made in email format and that formal reports will not be required. CH2M HILL will issue notifications of non-conformance with design formally.
13. Because the need for assistance with claims, disputes, and change orders cannot be foreseen, the budget does not include time to resolve claims and disputes that may arise between the Contractor and the City. The budget does not include time to assist with negotiation of change orders. In the event the City requests assistance from CH2M HILL in resolving claims or disputes or negotiating change orders, CH2M HILL and the City will negotiate the scope of services and additional payment.
14. CH2M HILL assumes no more than 225 hours of a mid-level engineer's labor will be needed during plant startup.

15. CH2M HILL shall not be responsible for the means, methods, techniques, sequences or procedures of the contractor, nor shall the Consultant be responsible for the contractor's failure to perform in accordance with the contract documents.
16. CH2M HILL is not responsible for health or safety precautions of construction workers. Consultant is not responsible for the contractor's compliance with the health and safety requirements in the contract for construction, or with federal, state, and local occupational safety and health laws and regulations.
17. The operations and maintenance manual prepared by CH2M HILL will consist of a data compilation of operations and maintenance information collected by the Contractor from equipment suppliers.
18. Automation startup and programming services will be provided by another contractor working for the City.
19. CH2M HILL will prepare construction record drawings after construction is complete. CH2M HILL assumes that the City and the construction contractor will mark up drawings to show changes during construction. After construction is completed, CH2M HILL will use these markups to prepare construction record drawings. CH2M HILL assumes that the construction record drawings will not require review and revision.

Table C-1 provides a summary of the level of effort that will be provided to support this task.

## **Design of Two Additional Pipelines and Camp Currie Well**

CH2M HILL will provide preliminary design and design services for three projects:

- a) Approximately 7,400 feet of 12 inch water pipeline from NE 292<sup>nd</sup> Avenue to NE following the alignment of the existing raw water pipeline from the Chlorine Station at the intersection of NE Ireland Road and NE 312 Avenue to the intersection of NW 292<sup>nd</sup> Avenue and NE Stauffer Road.
- b) A new raw water pipeline with an approximately length of 7,800 feet from the Boulder Creek Intake to the new Slow Sand Water Filter Treatment Plant.
- c) Completion of bidding documents for the 5 gpm Camp Currie well. It is assumed that the improvements will include a shallow well with screen, submersible well pump, pitless adapter, pump controls, pressure tank, prefabricated well house, fence, one faucet for customer service, and a buried electrical service. It is assumed that the City of Camas will separately contract with S&B Engineering for design and installation of the SCADA system for the well. It is also assumed that a site survey is not needed to complete this design.

CH2M HILL assumes that the pipelines will be bid as one project and that the Camp Currie Well will be bid as a second project including all components of the project. It is assumed that the City of Camas will provide construction and permanent easements for the facility.

During preliminary design, CH2M HILL will participate in three meetings with City of Camas staff at Camas City Hall and one field trip to the project sites to finalize pipeline routing and construction alternatives, and details of the Camp Currie Well. CH2M HILL will prepare draft final preliminary design reports for review by the City of Camas, one for both pipelines and one for the Camp Currie Well. Final preliminary design reports will be prepared after receiving written comments from the City of Camas.

CH2M HILL will hire a subconsultant to complete a design survey for approximately 15,200 feet of pipeline. CH2M HILL assumes that the City of Camas will obtain permission to enter the properties for the survey. The design survey will include:

1. A topographic survey for a corridor approximately 50 feet wide centered on the existing or proposed pipeline alignment.
2. One-foot contours will be generated and the associated surface files will be provided.
3. Existing driveways, gates, fences, and other features will be located.

4. Existing utilities will be shown based upon surface structures, utility paint markings and as-builts.
5. Trees, 6-inch diameter and larger will be depicted.
6. If found, existing monuments will be located.
7. Horizontal Datum will be Washington South Zone or other approved datum.
8. Vertical Datum will be Clark County or other approved datum.
9. Deliverables will include AutoCAD drawings and electronic plots and signed.
10. Up to 80 crew hours and 40 office hours to establish survey reference points, clearing limits, centerlines of roads and pipelines, and setting toe of fill and top of cut stakes.

The survey work includes easement definition and right of way resolution does not include boundary or right of way delineation.

CH2M HILL assumes that construction staking will be provided by the Construction Contractor.

CH2M HILL assumes that no permits will be needed to conduct the survey.

CH2M HILL's subconsultant will prepare up to 15 construction easements with description and exhibits for the new pipelines using title reports provided by the City of Camas. The easements will be prepared using a centerline description and width. CH2M HILL assumes that no field surveying will be needed to prepare the easements. CH2M HILL assumes that the City of Camas will negotiate with the landowners and obtain the easements. CH2M HILL assumes that no additional permanent easements are needed to construct the pipelines.

CH2M HILL will prepare a total of 20 design drawings for the pipelines and 2 drawings for the Camp Currie Well. CH2M HILL will prepare specifications for the pipelines and Camp Currie Well. The design drawings will include plan profile sheets prepared on 24 inch by 36 inch sheets at a horizontal scale of 1 inch equals 50 feet and a vertical scale of 1 inch equals 10 feet at full scale. The specifications will be prepared as special conditions to be attached to City of Camas standard bidding documents. CH2M HILL will submit review drawings and specifications to the City of Camas at the approximate 60 percent completion point. After receiving written comments, CH2M HILL will prepare final drawings and specifications for review by the City. Upon receiving written approval from the City, CH2M HILL will finalize the design drawings for bidding.

CH2M HILL assumes that the City will assemble, publish, and distribute the bidding documents. CH2M HILL will provide support for up to two addenda during the bidding process and participate in two pre-bid meetings, one for the pipeline contract and a second for the Camp Currie contract.

CH2M HILL assumes that the City will manage the construction contracts and provide construction inspection using City staff. CH2M HILL will provide up to 80 hours of support during the construction phase for the pipeline project and 22 hours of support during the construction phase for Camp Currie.

CH2M HILL assumes that the City will mark up drawings to show changes during construction. After construction is completed, CH2M HILL will use these markups to prepare construction record drawings. CH2M HILL assumes that the construction record drawings will not require review and revision.

CH2M HILL has assumed that no additional land use permitting, shoreline permitting, SEPA permitting, or other permitting will be needed to construct the pipelines. If permitting support is needed, CH2M HILL will provide these services on a time and materials basis after receiving written approval from the City.

CH2M HILL has assumed that the City of Camas will be responsible for utility applications.

No application or permit fees are included in CH2M HILL's scope of work.

## Fee Proposal

Table C-1 presents the estimated level of effort and fee for additional work performed during the design phase and for professional services for construction phase services and design of two pipelines and the Camp Currie well for the 544 Foot Pressure Zone Project. The work will be performed on a time and materials basis with a multiplier of 3.3 times raw salary and subcontractor expenses marked up by 5%, with

a not to exceed budget of \$786,113. If authorized in writing by the City of Camas, additional work will be performed on a time and materials basis with the same terms.

Table C-1

## Estimated level of effort and fee for Contract Amendment 1

Description	Labor hours	CH2M HILL Labor	Expenses	Subtotal
<b>Additional design phase fee</b>	<b>As shown on invoice</b>	<b>As shown on invoice</b>	<b>As shown on invoice</b>	<b>\$195,000</b>
<b>Additional pipelines and Camp Currie well</b>				
Construction phase services for Slow Sand Filter Water Treatment Plant	1,944	\$295,664	\$800	\$296,464
Preliminary design for pipelines and Camp Currie Well	162	\$21,247	\$200	\$ 21,447
Design phase services for pipelines and Camp Currie Well	1,034	\$123,565	\$105,084	\$231,593
Bidding Phase Services for pipelines and Camp Currie Well	50	\$5,143	\$100	\$6,523
Construction phase services for pipelines and Camp Currie Well	102	\$12,915	\$200	\$13,175
Construction record drawings	52	\$6,048	\$100	\$6,148
Project management	100	\$15,583	\$180	<u>\$15,763</u>
<b>Subtotal for additional pipelines and Camp Currie well</b>				<b><u>\$591,113</u></b>
<b>Total estimated fee including construction phase services, pipelines, Camp Currie Well, and additional design phase fee for Slow Sand Filter Water Treatment Plant</b>				<b><u>\$786,113</u></b>

IN WITNESS WHEREOF, the parties execute below:

For OWNER,

dated this \_\_\_\_\_ day of \_\_\_\_\_, 2015

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

For ENGINEER, CH2M HILL Engineers, Inc.,

dated this \_\_\_\_\_ day of \_\_\_\_\_,

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_



