

RESOLUTION NO. 2546

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BONNEY LAKE, PIERCE COUNTY, WASHINGTON, AUTHORIZING A CONTRACT WITH RH-2 ENGINEERING, INC. FOR SERVICES TO PROVIDE CONSTRUCTION SERVICES AND PROGRAMMING EFFORTS FOR THE GRAINGER SPRINGS UPGRADE PROJECT.

*Amendment No. 2 to the Professional Services Agreement with RH-2 Engineering, Inc on August 11, 2015 (Res. No. 2475)*

WHEREAS, the City opened bids on June 22, 2016 for the Grainger Springs Upgrade Construction and the low bidder was determined to be Northeast Electric for the amount of \$576,836.84 which includes tax;

*- JDE*

WHEREAS, the City Council has approved by Resolution 2545, the agreement with Northeast Electric for the construction of the Grainger Springs Upgrade project; and

WHEREAS, the City approved by Resolution 2545, the allocation of funding for software programming and construction services in the amount of \$104,500.00; and

WHEREAS, the City received a quote from RH-2 Engineering, Inc. to complete software programming effort and construction services as part of the Grainger Springs Upgrade Project in the amount of \$88,500.00;

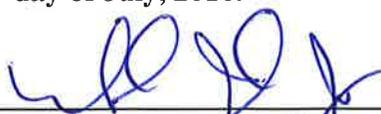
NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF BONNEY LAKE, WASHINGTON DOES HEREBY RESOLVE AS FOLLOWS:

That the City of Bonney Lake Council does hereby authorize the Mayor to sign the attached professional services agreement with RH-2 Engineering, Inc, *approved August 11, 2015.*

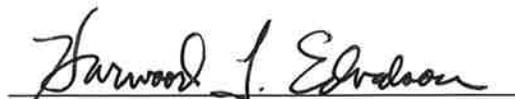
*Amendment No. 2 to the*

PASSED by the City Council this 12<sup>th</sup> day of July, 2016.

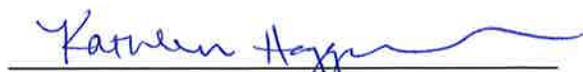
*- JDE*

  
Neil Johnson, Jr., Mayor

AUTHENTICATED:

  
Harwood T. Edvalson, MMC, City Clerk

APPROVED AS TO FORM:

  
Kathleen Haggard, City Attorney

**Contract Amendment No. 2**  
**City of Bonney Lake**  
**Grainger Springs Site Upgrade**  
**Services During Construction and Telemetry and Control Development**  
**RH2 Project No. BON 515.100**

In accordance with our Professional Services Agreement for the Grainger Springs Site Upgrade, dated August 11, 2015, this is an authorization to revise the project Scope of Work, as described below. The work will be performed and invoiced using the terms and conditions listed in the original agreement, plus previous amendments and/or agreements.

**Add the following items to the Scope of Work:**

Reference attached **Exhibit A** and **Exhibit B**.

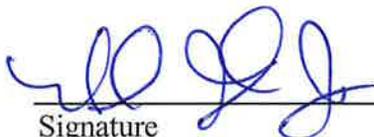
The engineering fee authorization is \$88,500.

Please sign this authorization in the space provided below and mail or fax to RH2 Engineering, Inc., 22722 29<sup>th</sup> Drive SE, Suite 210, Bothell, WA 98021. FAX (425) 951-5401.

RH2 Engineering, Inc.

City of Bonney Lake

  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Signature

Geoffrey G. Dillard, Director  
\_\_\_\_\_  
Print Name/Title

Neil Johnson, Jr., Mayor  
\_\_\_\_\_  
Print Name/Title

6-16-16  
\_\_\_\_\_  
Date

July 12, 2016  
\_\_\_\_\_  
Date

**EXHIBIT A**  
**Scope of Work**  
**City of Bonney Lake**  
**Grainger Springs Site Upgrade**  
**Amendment No. 2**  
**Services During Construction and**  
**Telemetry and Control Development**  
June 2016

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## Background

The first phase of this project included the design of the generator and on-site improvements. During the current phase, RH2 Engineering, Inc., (RH2) will perform services during construction and telemetry and control development for the Grainger Springs Site Upgrade for the City of Bonney Lake (City).

The major elements of this Scope of Work are summarized in the following tasks:

### Task 1 – Services During Construction

**Objective:** This Scope of Work identifies the services and tasks the City has requested RH2 provide during the construction phase of this project. It is intended that RH2 will be the main point of contact for the contractor with regard to design technical issues, and RH2 will take the lead on submittal reviews and requests for information (RFIs). It is anticipated that RH2 will assist the City in the following activities:

- Submittal reviews.
- RFI assistance.
- On-site observation during major construction activities.
- Assistance during startup and testing.
- Pre-construction conference.
- Provide record drawings.

### Approach:

1.1 **Submittal Reviews** – Perform submittal reviews up to the amount budgeted in the attached **Exhibit B**. In the event that additional submittal review assistance is needed, the City will provide specific authorization to RH2. The attached **Exhibit B** anticipates that only the following submittals are to be reviewed:

- Crushed Surfacing
- Paving (Asphalt)
- Fencing
- Demolition Plan
- Concrete Mix Design
- Admixture Data
- Masonry Mortar and Grout
- Reinforcing Steel Shop Drawings

- CMU
  - Letter of Certification for Masonry Prism Testing
  - Shop Drawings
  - Concrete Anchors
  - Trusses
  - Caulk
  - Roofing System
  - Insulation Systems
  - Painting and Coating
  - Equipment Signs
  - Pipe Markings
  - Danger Signs
  - Wiring Diagram or Connection Schematic
  - Interconnection Diagram
  - Branch Circuit Panelboard
  - Conduit and Fittings
  - Outlet and Junction Boxes
  - Electrical Handholes and Vaults
  - Wire and Cables
  - Switches and Receptacles
  - Light Fixtures
  - Automatic Transfer Switch
  - Electrical Grounding Equipment
  - Engine Generator Set
  - Control Panel Modification Hardware
  - Programmable Logic Controllers (PLC)
  - Ethernet Network Switches
  - Fiber Optic Patch Panels
  - Operator Interfaces (OI)
  - Network Equipment Enclosure
  - Hardware Submittals
  - System Plan Submittals
  - As-built Plans
- 1.2 **RFIs** – Respond to RFIs during the construction phase of the project, provide design clarification with support from the City, and provide up to thirty-eight (38) hours of assistance in providing design and clarification(s) on an on-call basis, as reflected in the attached **Exhibit B**. In the event that additional assistance is needed, the City will provide specific authorization to RH2.
- 1.3 **On-site Observation** – Provide on-site observation visits during this project (not including the startup and testing visit included in subtask 1.4 or the control and instrumentation observations included in Task 2). It is anticipated that full-time observation will be necessary during access road construction, and part-time observation will only be necessary during the other portions of the

project. Ten (10) days of full-time observation (eight (8) hours per day) and twenty-five (25) days of part-time observation (four (4) hours per day) has been budgeted for this effort. Prepare written records of observations, progress, and discussions that took place during the observation visits.

- 1.4 **Startup and Testing Services** – Coordinate with the City and the manufacturer’s representative for testing and startup activities. Review the testing protocols developed by the contractor and manufacturer’s representative, and assist with the functional startup troubleshooting process, up to the amount budgeted in the attached **Exhibit B**. *Exhibit B* assumes one (1) day of on-site support during startups.
- 1.5 **Pre-construction Conference** –Attend the pre-construction meeting.
- 1.6 **Record Drawings** – Coordinate with the contractor to obtain field records, review field records, and revise contract drawings to prepare as-built records.

**Assumptions:**

- *Submittals and submittal-related communications will be directed through RH2.*
- *Submittals will be submitted electronically.*
- *RH2 will manage (log, inventory, and track) RFI response.*
- *RH2 will review each submittal no more than two (2) times.*
- *RH2 will provide a representative at weekly construction progress meetings.*
- *RH2 will perform a final walkthrough with the contractor and the City.*
- *RH2 will procure the services of a special inspection/testing company for concrete and soil testing.*
- *RH2 will coordinate with the contractor and manufacturer’s representative for testing and startup activities.*

**RH2 Deliverables:**

- Electronic responses to reviewed submittals.
- Electronic responses to RFIs and change orders.
- Construction observation reports for RH2 on-site visits.
- Meeting agenda and minutes for the pre-con meeting.
- 3 hard copies of plan and specifications for the contractor.
- Half-size hard copy of record drawings.

## Task 2 – Telemetry and Control Software Development

**Objective:** This Scope of Work identifies the services and tasks the City has requested RH2 to provide during the construction phase of this project for telemetry and control system software development of the telemetry panel. It is anticipated that RH2 will assist the City in the following activities:

- Coordinate with the City's master telemetry and human machine interface (HMI) control system integrator for modifying and incorporating the telemetry system upgrades into the City's existing control system.
- Provide software development for converting the Grainger Springs Pump Station and Treatment Plant programmable logic controller (PLC) software from RSLogix 500 to RSLogix 5000.
- Provide software development for converting the Grainger Springs Pump Station and Treatment Plant OI software from the older Panelview software to the upgraded FactoryTalk View software.
- Perform field testing of the upgraded telemetry panels.
- Provide the City with training and operations and maintenance (O&M) documentation for the telemetry software.

### Approach:

- 2.1 **Coordination with the City's Master Telemetry and HMI Integrator** – Provide the City and the City's master telemetry and HMI integrator, Parametrix, with data point definition for control components in the design. *This data will be used by RH2 for software development purposes and will be used by Parametrix for integrating the facility controller with the City's HMI computer systems.* Meet with the City and Parametrix up to one (1) time for control system coordination.
- 2.2 **PLC Software Development** – Perform PLC software development for converting PLC software. *The PLC will be an Allen-Bradley L2 Series CompactLogix controller.*
- 2.3 **Operator Interface Software Development** – Perform OI software development for converting the OI software. *The OI will be an Allen-Bradley PanelView Plus 7.*
- 2.4 **Control System Field Testing and Startup** – Perform control system field testing and startup services for the PLC and OI software.
- 2.5 **Training and Operations and Maintenance Documents** – Provide software training and O&M material for the PLC and OI software. *PLC and OI code will be provided to the City on a CD-ROM as part of the O&M material.*

**Assumptions:** *The City's master telemetry and HMI computer system integrator, Parametrix, will be responsible for software modifications at the City's master telemetry panel and HMI computer system for integrating the upgrades into the City's existing supervisory control and data acquisition (SCADA) system. Facility data point definitions will be provided by RH2 to Parametrix at least one (1) month in advance of subtask 2.4: Control System Field Testing and Startup.*

### RH2 Deliverables:

- O&M material.
- PLC and OI code on CD.

**EXHIBIT B**

City of Bonney Lake

Grainger Springs Site Upgrade

Amendment No. 2

SDC and Telemetry and Control Development

Fee Estimate

	Description	Total Hours	Total Labor	Total Expense	Total Cost
<b>Task 1</b>	<b>Services During Construction</b>				
1.1	Perform submittal reviews	66	\$ 11,394	\$ 45	\$ 11,439
1.2	Respond to requests for information	38	\$ 6,508	\$ 9	\$ 6,517
1.3	Provide on-site construction observation	180	\$ 27,000	\$ 1,339	\$ 28,339
1.4	Assist with startup and testing services	16	\$ 2,691	\$ 54	\$ 2,745
1.5	Attend pre-construction conference	8	\$ 1,395	\$ 459	\$ 1,854
1.6	Prepare as-builts	68	\$ 10,692	\$ 120	\$ 10,812
	<b>Subtotal</b>	<b>376</b>	<b>\$ 59,680</b>	<b>\$ 2,026</b>	<b>\$ 61,706</b>
<b>Task 2</b>	<b>Telemetry and Control Software Development</b>				
2.1	Coordinate with the City's Master Telemetry and HMI Integrator	8	\$ 1,632	\$ 41	\$ 1,673
2.2	Develop PLC software	36	\$ 7,344	\$ 184	\$ 7,528
2.3	Develop Operator Interface Software	20	\$ 4,080	\$ 102	\$ 4,182
2.4	Perform Control System field testing and startup	50	\$ 9,736	\$ 732	\$ 10,468
2.5	Provide training and O&M documents	14	\$ 2,632	\$ 312	\$ 2,944
	<b>Subtotal</b>	<b>128</b>	<b>\$ 25,424</b>	<b>\$ 1,370</b>	<b>\$ 26,794</b>
<b>AMENDMENT NO. 2 TOTAL</b>		<b>504</b>	<b>\$ 85,104</b>	<b>\$ 3,396</b>	<b>\$ 88,500</b>



**BONNEY**  
*Lake*  
City of Bonney Lake

# Grainger Springs

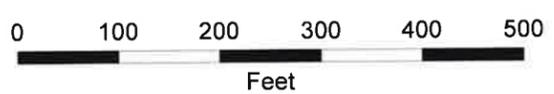
- Grainger Springs City-Owned Property
- Downtown Regional Storm Pond
- Tax Parcel
- Building
- Impervious Surface

**Water System**

- Water Main
- ⊗ Gate Valve
- ⊗ Valve
- Blow Off

**Stormwater System**

- Channel
- Culvert
- Pipe
- Catch Basin
- Manhole
- Dry Well
- Vault



September 25, 2013

Pierce County 2011 Ortho Aerial Image

City of Bonney Lake, Washington  
**City Council Agenda Bill (AB)**

<b>Department/Staff Contact:</b> PW / Douglas Budzynski	<b>Meeting/Workshop Date:</b> 12 July 2016	<b>Agenda Bill Number:</b> AB16-91
<b>Agenda Item Type:</b> Resolution	<b>Ordinance/Resolution Number:</b> 2546	<b>Councilmember Sponsor:</b> Donn Lewis

**Agenda Subject:** Award contract to RH-2 Engineering for programming and construction services as part of the effort of the Grainger Springs Upgrade Project.

**Full Title/Motion:** A Resolution Of The City Council Of The City Of Bonney Lake, Pierce County, Washington, Authorizing A Contract Awarding The Professional Services Agreement To Rh-2 Engineering, Inc To Complete Programming Effort And Construction Services For The Grainger Springs Upgrade.

**Administrative Recommendation:** Recommendation Approval

**Background Summary:** The services to be provided by RH-2 will include completing the telemetry and software development effort and startup support of the new communications at the site, review of material submittals from the Construction Contractor, and provide on-site observation support when requested by the City. The PSA from RH-2 is in the amount of \$88,500. This amount will be paid from the Construction Services, \$104,500.00, portion of the project that was approved in Resolution 2545, the award contract of the construction effort for the Grainger Springs Upgrade.

**Attachments:** Resolution 2546, PSA, Map

BUDGET INFORMATION				
Budget Amount	Current Balance	Required Expenditure	Budget Balance	Fund Source
\$1,116,329.00	\$995,663.00	\$739,019.84	\$256,643.16	<input type="checkbox"/> General <input checked="" type="checkbox"/> Utilities <input type="checkbox"/> Other
<p><b>Budget Explanation:</b> 401.102.034.594.34.62.04 Grainger Springs Upgrade            Construction Contract: \$576,836.84 + 10% Contingency: \$57,683.00 + Programming/Construction Services: \$104,500.00 for Total Amount = \$739,019.84. Revenue Source: Water SDCs</p>				

COMMITTEE, BOARD & COMMISSION REVIEW			
<b>Council Committee Review:</b>	Community Development Approvals:		Yes No
	Date: July 5, 2016	Chair/Councilmember Donn Lewis	<input checked="" type="checkbox"/> <input type="checkbox"/>
		Councilmember Dan Swatman	<input checked="" type="checkbox"/> <input type="checkbox"/>
		Deputy Mayor Randy McKibbin	<input checked="" type="checkbox"/> <input type="checkbox"/>
	Forward to:	Consent Agenda:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Commission/Board Review:</b>			
<b>Hearing Examiner Review:</b>			

COUNCIL ACTION	
Workshop Date(s):	Public Hearing Date(s):
Meeting Date(s): July 12, 2016	Tabled to Date:

APPROVALS		
<b>Director:</b>	<b>Mayor:</b>	<b>Date Reviewed by City Attorney:</b> (if applicable)