



# KENAI

City of Kenai | 210 Fidalgo Ave, Kenai, AK 99611-7794 | 907.283.7535 | [www.kenai.city](http://www.kenai.city)

## **ADDENDUM NO. 1**

**This addendum consists of 5 pages plus attachments**

**TO:** All Bid Packet Holders

**FROM:** City of Kenai Public Works Department

**DATE:** August 21, 2023

**SUBJECT:** Invitation to Bid – Kenai Vintage Point Housing Boiler & Controls Replacement

**DUE DATE:** ***\*\*REVISED August 28, 2023, by no later than 10:00 AM***

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**Bidders must acknowledge receipt of this Addendum in the appropriate place on the Bid Form. Failure to do so may result in the disqualification or rejection of the bid.**

Note: Information in this addendum takes precedence over original information. All other provisions of the document remain unchanged.

01-01 Plan Holder Question –

“Where is the access to the crawlspace?”

***Response: See the attached drawing indicating multiple access locations.***

01-02 Plan Holder Question –

“What is the vertical height (clearance) of the crawlspace from the bottom of the floor joist to the ground?”

***Response: Record drawings indicate 41.5”, see attached drawing and photos. This appears consistent with some duct work which reduces clearances to 18.5” in some areas.***

01-03 Plan Holder Question –

“For Alt #1- would medium pressure gas be allowed to route through the crawl space to decrease the size of piping- Mega press is allowable by code for medium pressure gas?”

**Response: Medium pressure gas would be acceptable, however, the utility would also need to approve of the change.**

01-04 Plan Holder Question –

“For Alt #1 – is the intent to have the winning contractor remove the tree that possibly encroaches in the foot print of the new emergency generator?”

**Response: Yes.**

01-05 Plan Holder Question –

“Is temporary heat during construction required?”

**Response: Yes.**

01-06 Plan Holder Question –

“Is temporary domestic hot water required during construction?”

**Response: Yes.**

01-07 Plan Holder Question –

“Is there a preferred Controls Contractor for this facility?”

**Response: No. This work is not intended to tie into a full BAS system at this time. The intent is for the boilers integral controls to provide automated local control.**

01-08 Plan Holder Question –

“I was wondering if there's a plan holders list and/or a pre-bid attendance sheet available for the Kenai Vintage Point project?”

**Response: See attached plan holders list. Pre-Bid attendance was not taken.**

01-09 Plan Holder Question –

“I wanted to let you know that the docs are missing Section 260126.

**Response: See attached Section 26 01 26.**

01-10 Plan Holder Question –

“Section 23 11 23, 2.1 Exterior Piping epoxy coating. Can this be a field applied coating?”

**Response: Yes.**

01-11 Plan Holder Question –

“23 21 13, Does the entire heating system have to be flushed, or just the new work?

***Response: Only the extent of piping and system isolated to complete new work. Flushing of the entire heating system is not included with this work, however if the Owner determines sufficient budget exists this may be an item that is discussed with the successful bidder toward the end of the project as additional negotiated cost.***

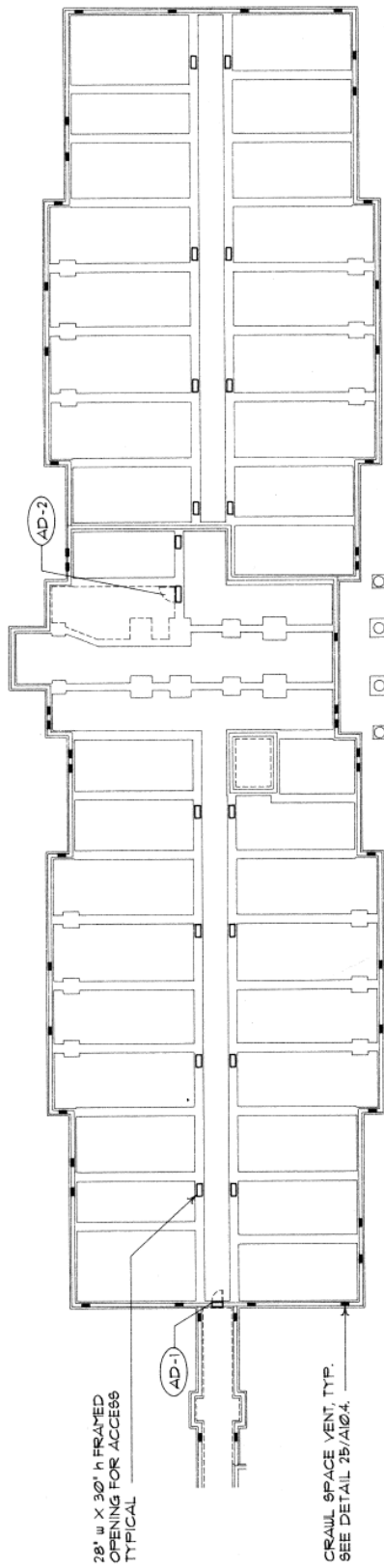
01-12 Clarification –

***The Owner’s intent with the boilers basis of design is to utilize the boilers onboard integral controls as much as possible. We are not looking to remotely control these boilers through a 3<sup>rd</sup> party BAS system like Siemens or Johnson Controls as example. The Aerco and Lochinvar units have the ability to control their own sequencing. I would consider this automated local control. They both have features where alarms can be forwarded to a cell phone or email address, we would like to enable those features.***

01-13 Clarification –

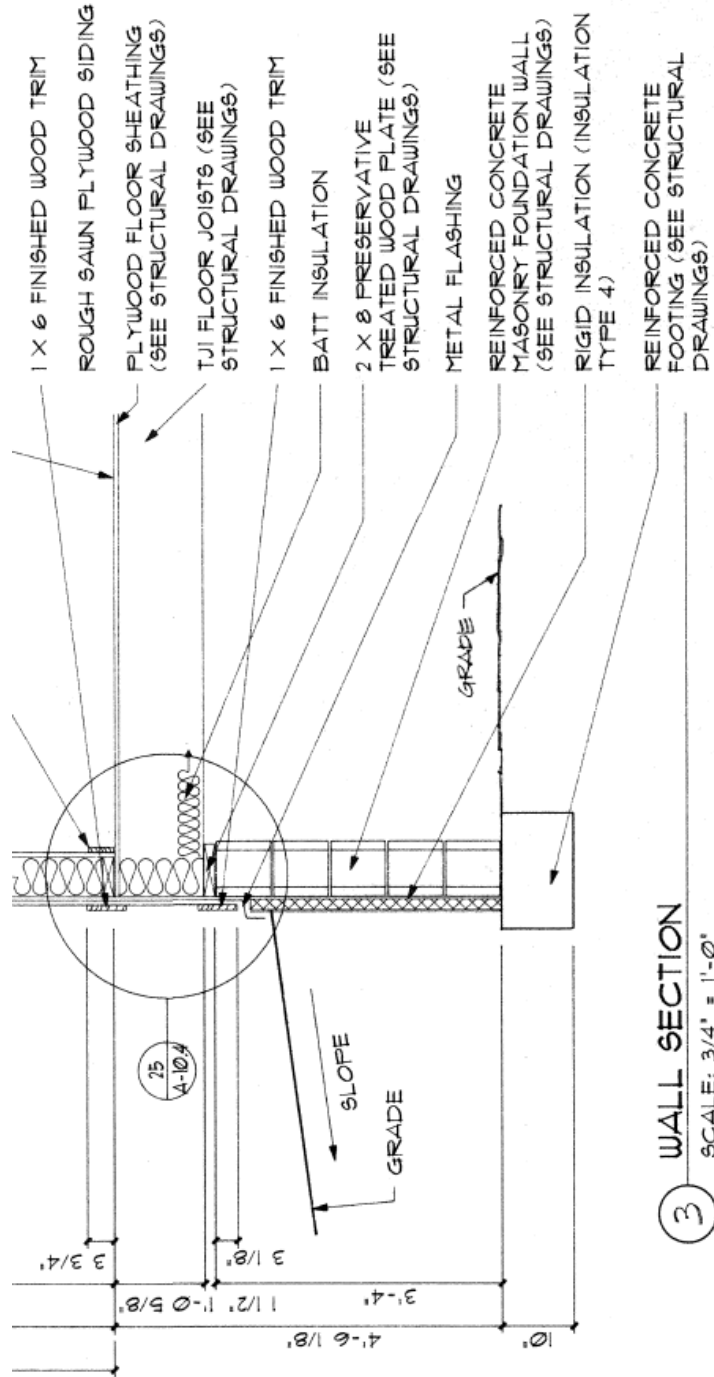
***Please note the revised Bids Due date is now August 28, 2023 by 10:00am***

***End of Addendum 1***



16 CRAWL SPACE ACCESS & VENTILATION PLAN

SCALE: 1/16" = 1'-0"



3 WALL SECTION

SCALE: 3/4" = 1'-0"



*Typical crawl space access and view into crawl space. There is an access in boiler room and another one in the utility room ten feet from the electrical panel.*

**SECTION 26 01 26 - MAINTENANCE TESTING OF ELECTRICAL SYSTEMS**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Feeder Megohm Testing.
- B. Receptacle Branch Circuit Testing.
- C. Ground Fault Circuit Interrupter Testing.
- D. Phase Rotation.
- E. Additional Testing and Maintenance Requirements in Individual Equipment and System Sections.

**1.2 REFERENCES**

- A. NETA ATS 2021 - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- B. ANSI/IEEE Std 81-1983 Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System.

**1.3 SUBMITTALS**

- A. Submit data under provisions of Division 01 and Section 26 05 00.
- B. Product Data: Submit technical information for each test instrument to include manufacturer, model number, serial number, ratings, accuracy, and National Institute of Standards and Technology (NIST) Traceable calibration certification.

**1.4 CLOSEOUT SUBMITTALS**

- A. Operation and Maintenance Data: Submit Test Reports per Section 26 05 00.

**1.5 COORDINATION**

- A. Provide written 72 hours advance notice of all tests to be performed to allow Owner's Representative to witness testing.

**1.6 REQUIRED TEST INSTRUMENTS**

- A. MEGOHMMETER.
  - 1. Product Description: 1000 Volt DC, portable, insulation and resistance test Megohmmeter.
  - 2. Equipment Accuracy:
    - a. 2000 Megohm Range - 3% of full Scale.
- B. BRANCH CIRCUIT ANALYZER

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1. Product Description: Branch circuit analyzer capable of receptacle testing of voltage drop under load, hot-neutral-ground conductor impedances, common mode (N-G) Voltage, and G.F.C.I. trip point.
2. Manufacturer: Ideal SureTest. Model: 61-164 Circuit Analyzer or approved equal.
3. Equipment Accuracy:
  - a. AC Voltage and Frequency accuracy: 1% full scale  $\pm$  1 digit True RMS.
  - b. Impedance 0.00 – 1.99 Ohms: 5.0% accuracy.
  - c. Ground-Neutral Voltage 0.0 – 24.0V: 2.0% accuracy.
  - d. % Voltage Drop 12A, 15A, 20A load tests: 5.0% accuracy.
  - e. GFCI Test Current/Time 6.0 – 9.0mA/0.00 – 6500mS: 2% accuracy.

**C. MULTIMETER**

1. Product Description: Digital True RMS Multimeter.
2. Equipment Accuracy:
  - a. AC Voltage Range: 0.75%  $\pm$  3 last single digits at 60 Hz.
  - b. AC Current Range: 0.90%  $\pm$  3 last single digits at 60 Hz.
  - c. DC Voltage Range: 0.25%  $\pm$  1 last single digit.
  - d. DC Current Range: 0.75%  $\pm$  1 last single digit.
  - e. Resistance Ranges: 0.50%  $\pm$  1 last single digit.
  - f. Frequency Range: 0.10%  $\pm$  1 last single digit @ 60 Hz.

**1.7 TEST INSTRUMENT CALIBRATION**

- A. All test equipment shall be in good mechanical and electrical condition.
- B. Provide calibration for each test instrument directly traceable to the National Institute of Standards and Technology (NIST) of higher accuracy than that of the instrument tested.
- C. Provide calibration labels visible on all test equipment. Records, which show date and results of instruments calibrated or tested, shall be kept up-to-date.
- D. Calibrate instruments in accordance with the following frequency schedule:
  1. Field instruments: 12 months maximum.
  2. Up-to-date instrument calibration instructions and procedures shall be maintained for each test instrument with the equipment.

**1.8 MINIMUM REPORT INFORMATION**

- A. Report Criteria: After each test, promptly submit one copy of report to the Owner's Representative. provide form with the minimum following information:
  1. Date issued.
  2. Project title and number.

3. Name and Model of Tester and witnesses.
  4. Date and time of sampling or inspection.
  5. Identification of product and specifications section.
  6. Type of inspection or test.
  7. Date of test.
  8. Results of tests.
  9. Indicate compliance or non-compliance with Contract Documents.
  10. Final adjustment setting values where applicable.
- B. Submit copy of all tests performed in the O&M manual.

### **1.9 GENERAL REQUIREMENTS**

- A. Include a copy of each test result in the O&M manual.
- B. Provide qualified personnel at site to perform all testing.
- C. Perform specified testing of products in accordance with specified standards or as denoted in this specification whichever is more stringent.
- D. Promptly notify Owner's Representative of irregularities or non-conformance of Work or products.
- E. Perform additional tests when test is performed incorrectly, deemed inaccurate, or incorrectly documented.
- F. The Contractor shall provide all forms, instrumentation and test equipment, loads, and other consumables required to demonstrate the systems to Owner's Representative satisfaction.
- G. Perform and submit all testing prior to substantial completion and system acceptance.
- H. Retest all material, cables etc. that are disturbed after testing.
- I. Replace and retest all material installed which does not meet or exceed the minimum acceptable limits set forth in this specification in accordance with the contract original requirements at no additional charge to Contract Sum/Price.

## **PART 2 - PRODUCTS**

Not Used

## **PART 3 - EXECUTION**

### **3.1 FEEDER CONDUCTOR TEST**

- A. Tests Criteria:
  1. Use Megohm meter to test all conductors sized #6AWG and larger.



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**MAINTENANCE TESTING**  
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2. Perform insulation-resistance test on each conductor with respect to ground and adjacent conductors. Applied potential 1000 volts DC for 600 volt rated cable.
3. Perform test immediately after installation.
4. Clean exposed cable ends with clean cloth and alcohol.
5. Test duration shall be one minute.
6. Disconnect conductors from all equipment.
7. Record the resistance of the insulated conductor under test with all other conductors connected together and to ground (metallic raceway, grounding conductor, etc).
8. Perform continuity test to insure correct cable connection.
  - a. Submit test results to Owner's Representative.

B. Test Values:

1. Minimum insulation-resistance value: 50 megohms.
2. Investigate deviations between adjacent phases.

**3.2 RECEPTACLE GROUND FAULT CIRCUIT INTERRUPTER TEST**

A. Test Criteria:

1. Use Branch Circuit Analyzer to perform test of each GFCI protected receptacle.
2. Record trip level in ma for each outlet.
3. Submit test results to Owner's Representative.

B. Test Values:

1. Trip Range: Between 6-9 mA.

**3.3 PHASE ROTATION TEST**

- A. Test each three-phase circuit and feeder for consistent phase rotation for the entire power system with a phase rotation meter.
- B. Bump test each motor for proper rotation prior to use.
- C. Correct conductor phase relationship to provide proper phase rotation.
- D. Submit test results to the Owner's Representative.

**3.4 PHASE LOAD BALANCE TEST**

- A. After energizing building loads conduct a phase load balance test for each new or remodeled panelboard with a clamp on ammeter.
- B. Notify Owner's Representative at least 72 hours in advance before test.

END OF SECTION

City of Kenai Plan Holder's List

Project: Vintage Point Housing Boiler & Controls Replacement

Date: August 21, 2023

Company	Contact Name	Contact Email
Builders Exchange of Wash.	Taylor Morales Victoria Oaks	<a href="mailto:taylor@bxwa.com">taylor@bxwa.com</a> <a href="mailto:victoria@bxwa.com">victoria@bxwa.com</a>
AGC Plans	Elizabeth Carter	<a href="mailto:agcplans@gmail.com">agcplans@gmail.com</a>
NorCoast Mechanical	Steve Cox	<a href="mailto:steve@norcoastmechanical.com">steve@norcoastmechanical.com</a>
Orion Construction	Patrick Merow Stacey Goss	<a href="mailto:PatrickM@orionconstruction.com">PatrickM@orionconstruction.com</a> <a href="mailto:Staceyg@orionconstruction.com">Staceyg@orionconstruction.com</a>
Peninsula Plumbing	Gene Friendshuh	<a href="mailto:GF@penph.com">GF@penph.com</a>
Legacy Electric	Chris Cruickshank	<a href="mailto:chris@legacyelectricak.com">chris@legacyelectricak.com</a>
Preferred Plumbing	Todd Smith	<a href="mailto:Todd@pphak.com">Todd@pphak.com</a>
RSA Engineering	Milaud Baumgartner	<a href="mailto:mbaumgartner@rsa-ak.com">mbaumgartner@rsa-ak.com</a>
City of Kenai	Scott Curtin	<a href="mailto:scurtin@kenai.city">scurtin@kenai.city</a>
City of Kenai	Lisa List	<a href="mailto:llist@kenai.city">llist@kenai.city</a>
Ameresco	Jerome Mikos	<a href="mailto:jmikos@ameresco.com">jmikos@ameresco.com</a>