



112-2021 ADDENDUM 1

PROFESSIONAL CONSULTING SERVICES FOR COOLING UPGRADES – WATER PUMPING STATIONS

URGENT

PLEASE FORWARD THIS DOCUMENT TO WHOEVER IS IN POSSESSION OF THE BID/PROPOSAL

ISSUED: April 23, 2021
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THIS ADDENDUM SHALL BE INCORPORATED INTO THE BID/PROPOSAL AND SHALL FORM A PART OF THE CONTRACT DOCUMENTS

Template Version: Add 2021-03-05

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid/Proposal, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid/Proposal may render your Bid/Proposal non-responsive.

PART D – SUPPLEMENTAL CONDITIONS

- Revise D11.3.1(b)(iv) to read: equipment sections;
- Revise D12.4.1(a) to read: installation of cooling upgrades to the five natural gas engine driven pumps at MacLean RPS and McPhillips RPS (MacLean RPS LG-042-PP-22 and LG-046-PP-26 and McPhillips RPS PG-041-PP-1, PG-043-PP-3, and PG-045-PP-5).
- Revise D12.4.1(a)(iii) to read: The new primary and secondary fluid cooling loops shall be sized for simultaneous operation of the three pumps (PG-041-PP-1, PG-043-PP-3, and PG-045-PP-5) at the McPhillips RPS and two pumps (LG-042-PP-22 and LG-046-PP-26) at the MacLean RPS
- Revise: D16.3 to read: As-Built Drawings shall be prepared by the Contract Administrator using information furnished by the contractor, contract change documents, and the Contract Administrator's field staff observations.
- Add: D16.6 Any and all drawings associated with buried infrastructure shall be prepared as record drawings. Record drawings shall reflect Site verified as-constructed conditions, including contractor markups, contract change orders, RFI's, and markups from resident inspection of the work. Reliance solely on contractor markups without Site verification of as-constructed conditions is not satisfactory.
- Revise: D18.1 to read: The Additional Work Allowance of seventy-thousand (\$70,000) dollars is to be used for changes in engineering services that arise due to unforeseen conditions with the Sites, if the existing documentation, and/or the Contract is at variance with any laws, ordinances, rules, regulations or codes of authorities having jurisdiction, or if changes are made to any laws, ordinances, rules, regulations and codes subsequent to the Submission Deadline which require modifications to the Contract. When these circumstances occur, the Consultant shall promptly provide notice thereof to the Project Manager, including:

QUESTIONS AND ANSWERS

Q1: For Hurst, a 60% review meeting is required, whereas for MacLean and McPhillips, 30% AND 60% review meetings are required. Is this difference intentional?

A1: Yes, the request for only a 60% review meeting for Hurst is intentional in order to expedite the issuing of the tender for the chiller replacement.

Q2: In D25.1(c) it states that tender posting of the DBPS Magnetic Drive Cooling Upgrade shall be by June 30, 2022; however, the scope of work in the RFP does not include detailed design of the DBPS mag drive cooling upgrades. Will the detailed design for this work be a separate project? Or potentially added as a change order to this project?

A2: The detailed design and construction administration for DBPS Magnetic Drive Cooling Upgrade will be issued as a subsequent RFP.

Q3: Can the City locate all their private lines at the work area with confidence or should we assume that soft-digging will be required?

A3: The City will locate City owned services on the Sites. Soft digging protocols are required to expose and confirm the actual location of the services within three metres of the centreline of the service prior to any Geotechnical investigations.

Q4: The RFP states to review the contractor's O&M manuals, but does not specifically state that the consultant will need to compile the final O&M manuals for the various sites, however, it seems to be implied as the requirements for the O&M Manuals include various information that the consultant will be responsible to prepare (e.g. design basis, "as-built" (or rather, "record") drawings, etc). Please just confirm that the consultant will need to compile all the documents and submit the final O&M manuals to the City.

A4: The Operations and Maintenance Manuals will be compiled by the Contractor(s) and reviewed by the Consultant. There will several different documents that will have been prepared by the Consultant throughout the project that will have to be turned over to the Contractor for inclusion in the Operations and Maintenance Manuals (e.g. DBM, control narrative, system calculation, As-Built and/or record Drawings, etc.,).

Q5: D15.5 requires the consultant to document equipment deliveries and installations. I'm just wondering why this is under D15 "Commissioning Services"? Is this not something the Resident Contract Administration could/should be doing while at site?

A5: The documentation of equipment deliveries and installations may require the insight and knowledge of a particular engineering discipline which may not be in the purview of the Key Personnel assigned as the Resident Contract Administrator.

Q6: In 11.3.1 (b) (iv) the RFP indicates that the Preliminary Design Report is to include a type of preliminary design drawing called "equipment selections"; can you clarify what is meant by this? This is not a drawing type we recognize. We thought maybe it is referring to layout drawings or equipment lists, but equipment layout drawings are already indicated in (b)(i) and equipment lists are indicated in (d).

A6: The text is to read "equipment sections".

Q7: D8.5(h) Project Closeout meeting – is the intent to hold one closeout meeting for the entire project? Or will there be two close-out meetings: one for Hurst and one for MacLean/McPhillips?

A7: The intent is to hold one (1) closeout meeting between the City and the Consultant for this Scope of Service.

Q8: D12.3.1 (c) indicates : "installation of two new air-cooled condensing units, refrigerant piping systems and new DX coils installed in the roof top air handling units". Further, the sub-paragraph (i) indicates: "for the air cooled condensing units ensure the entire system has adequate capacity in the event of either independent system fails". As we understand it, this means that in case of a DX coil failure in any one of the AHUs, the other DX coil from the other AHU shall take over, continue with the operation and be able to compensate for the loss of cooling, up to the total building design capacity. It appears the two paragraphs are in conflict and limiting due to AHU limited air flow rate; limited cooling capacity of the DX section in the AHU; and consequently limited capacity of the respective condensing unit.

A8: The two McQuay air handling units located on the roof of Hurst RPS were sized at the time of the installation to be able to cool the RPS pump floor and electrical areas independent of each other. In the event of a failure of one air handling unit the second unit can energize to maintain the operation of the RPS. Neither of the two air handling units are used in the conditioning of the external stairwell to the roof, the Chlorine Tonner Room, Chlorinator Room, or the Control Room.

Q9: D12.4.1 (iv) indicates: "For fluid coolers and back-up cooling heat exchangers provide one fluid cooler and heat exchanger per circuit per natural gas engine pump. The pipe circuiting should be configured to allow circulation from any engine to any fluid cooler". Does this mean that every cooler/radiator shall be oversized in order to accommodate the cooling needs all three gas engines operating at the same time, in case any of the other coolers/radiators fails? Or is the intent to just provide the flexibility to cool any one engine using any of one the three radiators (i.e. each radiator is sized for the largest engine)? Our understanding is the latter. Please confirm.

A9: The intent to just provide the flexibility to cool any one engine using any of one the radiators/fluid coolers installed in the system. Note that separate circuits will be required for the primary cooling loop and auxiliary cooling loop as the two circuits have different operating temperatures.

Q10: D12.4.1 (vi) indicates: "The system design shall provide for future consideration of heat recovery within the RPS during heating season operation". We understand this means to only provide tie-ins on the cooler/radiators piping loop at this time (i.e. no heat exchanger or building heating loop piping yet). Please confirm.

A10: The future consideration would be tie-in points in the fluid cooler/radiator piping loop.

Q11: D17.3(a) indicates "provision of inspection services, at the request of the City, during the warranty period..." It is understood that these inspection requests would be in addition to the final inspection near the end of the warranty period described in 17.3(h). It is difficult to budget for these additional inspections without knowing/assuming the quantity of inspections that will be requested. Can you please provide clarification on the number of additional inspection requests that are to be expected/assumed?

A11: Prior to issuing the City's Certificate of Acceptance at the end of the one-year warranty period for each site an inspection will be required to determine any warranty items that the contractor needs to address. As such allow one warranty inspection for each of the three RPS.

Q12: Form B, Item 8 indicates the approximate quantity is 20 and the units given is months. We think this was meant to be in weeks, not months, because the allowance for Resident CA time is only 900 hours, which works out to 20 weeks based on 45 hrs/week. Please confirm the units should be revised to "weeks".

A12: The quantity in Form B, Item 8 is 20 months. The 900 hours indicated for Contract Administration - Resident Services is an estimate to be used for the RFP purposes. The hours are based on the different complexities of the construction works, the design/tender documents completed to a professional level, and the repetition of works at the different sites. The hours are based on not requiring full time Residence Services during all the construction.

Q13: Appendix G Part B PLC Programs (sections: B1, B2, B3, B4, B5, B6, B7, and B8): please clarify if scope noted in these sections will be executed under City's approved "program system integrator" or is it expected to be included in the Consultant's scope.

A13: The work is expected to be executed under the Consultant's Scope of Services.

Q14: Appendix G section C2.3 Instrument segment drawings. Please clarify if field instruments are expected to be PROFIBUS instruments or hard wire.

A14: The City does not anticipate any PROFIBUS instruments will be used at these facilities.

Q15: Describe the engine mounted cooling circuits for the four Waukesha engines and the single Caterpillar engine.

A15: The four Waukesha engines have a primary loop (heat exchanger, pump, expansion tank, piping system) which is used to cool the jacket cooling stream and an auxiliary loop (heat exchanger, pump, expansion tank, piping system) which is used to cool the intercooler and lube oil systems. These systems are represented in P&ID 1-0630M-P0004, 1-0630M-P0008, 1-0640M-P0004, and 1-0640M-P0006. The one Caterpillar engine has a primary loop (heat exchanger, pump, expansion tank, piping system) which is used to cool the jacket cooling stream and an auxiliary loop (two heat exchangers, pump, expansion tank, piping system) which is used to cool intercooler and lube oil systems. This system is represented in P&ID 1-0640M-P0002, **NOTE** the auxiliary loop is improperly labeled on this drawing as an oil only cooling loop.

Q16: What are the estimated construction timeframes for the PLC upgrades which are part of Tender 805-2019?

A16: McPhillips November 2022 to February 2023

MacLean March 2023 to July 2023

Hurst RPS August 2023 to October 2023

Deacon BPS December 2023 to March 2024

Q17: Is there any existing geotechnical or foundation information available at any of the sites? Such as exiting drawings or borehole logs?

A17: An existing geotechnical report for Hurst pumping station can be found in Appendix A of the https://www.winnipeg.ca/finance/findata/matmgt/documents/2020/224-2020/224-2020_Tender.pdf