

1 **CITY OF HOMER**
2 **HOMER, ALASKA**

3
4 City Manager
Public Works Director

5 **RESOLUTION 23-086**

6
7 A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA
8 APPROVING A CONTRACT WITH HDR ENGINEERING INC IN THE
9 NOT TO EXCEED AMOUNT OF \$15,061 TO ASSIST WITH THE
10 PROCUREMENT OF MEMBRANE FILTER TRAINS FOR THE WATER
11 TREATMENT PLANT AND AUTHORIZING THE CITY MANAGER TO
12 NEGOTIATE AND EXECUTE THE APPROPRIATE DOCUMENTS.
13

14 WHEREAS, The City's water is treated with a sophisticated system of long, small-
15 diameter hollow threads, which, when connected together in a frame, comprise a "membrane
16 filter", referred to as a "train"; and
17

18 WHEREAS, The Water Treatment Plant (WTP), built in 2007, has room for five membrane
19 filter trains, which have a predicted life span of 10-15 years; and
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21 WHEREAS, The WTP currently has four filter trains operating and a fifth one will likely
22 be needed to expand capacity in the next five years; and
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24 WHEREAS, It is time to procure replacements for the four that are currently operating
25 and past their expected useful life as well as plan for the procurement of the fifth train that will
26 be needed in the future; and
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28 WHEREAS, The FY24 Capital Budget includes \$80,000 to procure one membrane filter
29 train, the FY25 Capital Budget includes \$80,000 for the buy a second one, and we expect to ask
30 Council for authorization to buy one each in FY 26, FY 27 and FY 28; and
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32 WHEREAS, We need professional help to develop specifications for the membranes to
33 ensure they are compatible with our existing system as well as help us identify manufacturers
34 and negotiate terms and conditions for the procurement; and
35

36 WHEREAS, HDR Engineering Inc. (HDR) provided the original design for the WTP, has on
37 staff, a membrane expert, Nathan Kutil, who can help us with this process, and submitted a
38 proposal to help us specify performance standards for the new membrane filter trains and
39 negotiate with potential vendors; and
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41 WHEREAS, HDR has submitted a proposal to help us for the not to exceed price of
42 \$15,061; and
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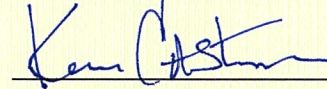
44 WHEREAS, The strategy would be to negotiate a procurement for all five trains so we
45 lock in the prices, but the payment schedule would be contingent upon future Council
46 authorizations.

47
48 NOW THEREFORE BE IT RESOLVED that the Homer City Council hereby authorizes
49 issuance of a Task Order to HDR Engineering Inc., in the not to exceed amount of \$15,061 to
50 assist with the procurement of membrane filter trains for the Water Treatment Plant.

51
52 PASSED AND ADOPTED by the Homer City Council this 14th day of August, 2023.

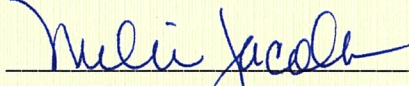
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CITY OF HOMER

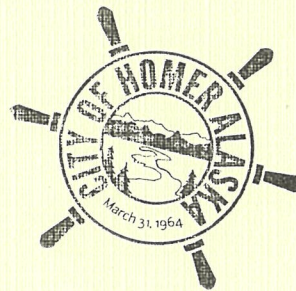


KEN CASTNER, MAYOR

59 ATTEST:

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62 MELISSA JACOBSEN, MMC, CITY CLERK





MEMORANDUM

Resolution 23-086, A Resolution of the City Council of Homer, Alaska Awarding a Contract to HDR Engineering, Inc in the amount of \$15,061 to Assist with the Procurement of Membrane Filter Trains for the Water Treatment Plant and Authorizing the City Manager to Negotiate and Execute the Appropriate Documents. City Manager/Public Works Director.

Item Type: Backup Memorandum
Prepared For: City Council
Date: July 26, 2023
From: Janette Keiser, PE, Public Works Director/City Engineer
Through: Rob Dumouchel, City Manager

I. Issue: The purpose of this Memorandum is to recommend award of a Task Order to HDR to help with the procurement/installation of membrane filter trains at the Water Treatment Plant.

II. Background:

The City's water is treated with a sophisticated system of long, small-diameter hollow threads, which, when connected together in a frame, comprise a "membrane filter". The entire frame structure when hung with these threads, looks like a huge rack of drying angel hair pasta and is colloquially referred to as a "train". Water flows through the membrane filter train, which removes organic and inorganic particles. The entire system has room for five of these filter trains.¹ They were installed when the Water Treatment Plant (WTP) was built in 2007 and have a predicted life span of 10-15 years. Over time, the membranes become brittle, get holes and need to be repaired. The crew has done this multiple times. The process involves injecting a polymer into the tiny hollow threads with a syringe. This is delicate, time consuming work. Plus, the effectiveness of the membranes is degraded because the polymer blocks the flow of water through the repaired membranes. It is time to replace them. Since they are very expensive, our strategy is to do this one at a time.

The FY24 Capital Budget includes \$80,000 to procure one membrane filter train and the FY25 Capital Budget includes \$80,000 for the buy a second one. We expect to ask Council for authorization to buy one in FY 26, FY 27 and FY 28. At that point, we'll be good for another 10-15 years.

¹ Currently we are using four trains, but expected to need the 5th within the next five years as water demands continue to grow.

We need professional help to develop specifications for the membranes we need to make sure they are compatible with our existing system. Plus, we would benefit from professional help, experienced in this highly technical industry, to identify manufacturers and negotiate terms and conditions for the procurement. HDR Engineering Inc. (HDR) provided the original design for the WTP and has on staff, a membrane expert, Nathan Kutil, who can help us with this process. We asked HDR for a proposal to help us specify performance standards for the new membrane filter trains and negotiate with potential vendors. The strategy would be to negotiate a procurement for all five trains so we lock in the prices. The payment schedule would be contingent upon future Council authorizations. HDR has submitted a proposal for these services for the not to exceed price of \$15,061.

III. RECOMMENDATION: That the City Council award a Task Order to HDR Engineering Inc. in the Not To Exceed amount of \$15,061.



July 26, 2023

Jan Keiser, PE
Director of Public Works
City of Homer
3575 Heath Street
Homer, Alaska 99603

Subject: Proposal for Homer WTP Membrane Replacement

This proposal is for professional services to assist the City of Homer (City) with replacement of membranes for the City water treatment plant (WTP). This work will be performed under the 2022 Master Service Agreement (signed 5/17/2022 and effective through 5/16/2025).

The City WTP was constructed in 2007 and uses membrane filtration to treat city drinking water. There are five membrane filtration trains with 48 filtration modules per train. Membrane filtration modules have an average expected life of 10-15 years. The City's filtration modules are approaching end of life and need to be replaced.

Scope

HDR will support procurement of new membranes for the City on a time and materials (T&E) basis. Services provided will include two tasks:

Task 1: Project kickoff, requirements gathering, and establishing technical specifications.

Task 2: Communication and coordination with membrane vendors leading to one (1) purchase order agreement for the five membrane filtration modules, to be executed on a delivery and payment schedule mutually agreed upon by the City and the vendor.

Assumptions: Homer Water Utility staff will take delivery and perform installation of membrane modules.

Additional Services

Task 3 (Additional Services): Upon written authorization from the City, HDR will provide additional support services for further contract negotiation with membrane vendor(s) to support the City with procurement of membranes, on an as-needed T&E basis.

Schedule

It is assumed the project will occur over a one-year timeframe after notice to proceed. The project will involve a one-time negotiation with manufacturers leading to one (1) purchase order agreement

for the five membrane filtration modules, on a delivery and payment schedule mutually agreed upon by the City and the vendor.

Fee

The estimated fee for the services provided in Task 1 and Task 2 is \$15,061 on a time and expense basis. HDR will notify the City in writing when the fee under the T&E contract for Tasks 1 & 2 is 75% spent. The estimated fee for optional additional services under Task 3 is \$13,911. The breakdown of costs and estimated labor hours are shown on the attached Cost Estimate spreadsheet. Invoices for the work performed will be submitted monthly.

Thank you again for this opportunity to work on behalf of the City of Homer.

Sincerely,



Nathan Kutil
Senior Professional Associate
Project Manager



Matthew Stone
Vice President
Alaska Area Operations Manager

Attachments:

Detailed Fee Spreadsheet for Homer Membrane Replacement, dated 07/26/2023