

NO: R179

COUNCIL DATE: October 3, 2022

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **September 29, 2022**

FROM: **General Manager, Engineering**

FILE: **6022-00/01**

SUBJECT: **Award of Consultant Agreement No. 6022-001 D1
Design of Nicomekl River Sea Dam Replacement**

RECOMMENDATION

The Engineering Department recommends that Council:

1. Award Consultant Agreement No. 6022-001 D1 for the design of the Nicomekl River Sea Dam Replacement to Associated Engineering (B.C.) Ltd. at an estimated fee limit of \$2,542,995.00 (including GST);
2. Set the expenditure authorization limit for Consultant Agreement No. 6022-001 D1 at \$2,797,000.00 (including contingencies and GST);
3. Authorize the General Manager, Engineering to execute Consultant Agreement No. 6022-001 D1; and
4. Authorize the inclusion in the Consultant Agreement an option in favour of the City to retain Associated Engineering (B.C.) Ltd. to provide engineering services for the optional tendering and construction services of the Nicomekl River Sea Dam Replacement at an estimated fee limit of \$1,296,000.00 (including contingencies and GST).

INTENT

The intent of this report is to obtain approval to award an agreement for engineering services for the design of the Nicomekl River Sea Dam Replacement, as illustrated on the map attached to this report as Appendix "I".

BACKGROUND

The Nicomekl River Sea Dam Replacement is included as part of the Surrey Disaster Mitigation and Adaptation Fund ("DMAF") program involving the implementation of a comprehensive flood protection strategy that will seek to reduce Surrey's vulnerability to coastal flooding and sea level rise. This project must be completed by March 2028 in order to remain eligible for the Federal Government contribution grant.

As part of the DMAF program, the Nicomekl River Sea Dam replacement involves the replacement of the over 100-year-old sea dam structure. The existing sea dam structure will be over-topped as a result of projected sea level rise associated with climate change. Furthermore, the existing sea dam structure does not meet current seismic standards and has limited periods of fish passage, as fish passage is only provided during times the sea dam gates are open, which is typically during lower tides.

The new sea dam structure is proposed to be located upstream and adjacent to the existing structure. The new structure will improve seismic resiliency, improve fish passage, and provide protection to surrounding agricultural area from flooding due to tidal surges and future sea level rise associated with climate change.

DISCUSSION

Work within this agreement involves engineering services for the design of the Nicomekl River Water Sea Dam Replacement and associated work. Specifically, this agreement will include engineering services for the following improvements:

- Design for a new sea dam structure that will account for improved seismic and flood resiliency and improved fish passage;
- Relocation of existing Metro Vancouver water main onto the new sea dam structure; and
- A decommissioning plan for the existing sea dam structure, Elgin Road crossing, and associated work.

Due to the location of the new sea dam structure, it will be necessary to permanently close the one-way Elgin Road crossing the Nicomekl River. Pedestrian and cyclist access will be maintained across the new sea dam structure. Local vehicular access will be maintained to area residents from King George Boulevard, which is currently being widened as part of the King George Boulevard Widening and Nicomekl River Bridge Replacement.

At this time, an agreement will be awarded for the design services only, with the option to award construction services upon successful completion of the design phase. The design phase involves overall project management, design works, and acquiring regulatory approvals, while the construction phase includes tendering, contract administration, inspection, and post construction services.

The design work is expected to start in October 2022 and be completed by early 2024. Construction of this project is anticipated to be \$33 million and will be completed before the Federal Government grant contribution deadline of 2028.

EVALUATION

The City invited three pre-qualified engineering consultants to respond to a Request for Proposals (“RFP”):

- Associated Engineering (B.C.) Ltd.;
- Mott MacDonald Canada Limited; and
- Parsons Inc.

The proposals were evaluated using the following criteria:

- Understanding of the assignment;
- Experience relative to the assignment;
- Strength of the project manager and team;
- Work plan and schedule; and
- Financial considerations.

All three submissions were carefully reviewed for accuracy and completeness by a panel of four staff members, following a structured and standard evaluation process.

Associated Engineering (B.C.) Ltd.'s proposal demonstrated a thorough understanding of the scope of work and a strong proposed work plan. Furthermore, Associated Engineering (B.C.) Ltd. have put forth a team with considerable experience related to similar work, as they are currently designing the Serpentine River Sea Dam replacement. Their design fee is also the most competitive and is considered reasonable for this type of engineering assignment. Staff therefore recommend that this assignment be awarded to Associated Engineering (B.C.) Ltd.

SUSTAINABILITY CONSIDERATIONS

The work of this Contract supports the objectives of the City's Sustainability Charter 2.0. In particular, this work relates to Sustainability Charter 2.0 theme of Infrastructure. Specifically, this project supports the following Desired Outcomes ("DO") and Strategic Direction ("SD"):

- All Infrastructure Do1: City facilities and infrastructure systems are well managed, adaptable and long lasting, and are effectively integrated into regional systems;
- All Infrastructure Do3: Infrastructure systems are designed to protect human health, preserve environmental integrity, and be adaptable to climate change impacts; and
- All Infrastructure SD1: Proactively manage community assets to maintain them over the long-term in a state of good repair.

FUNDING

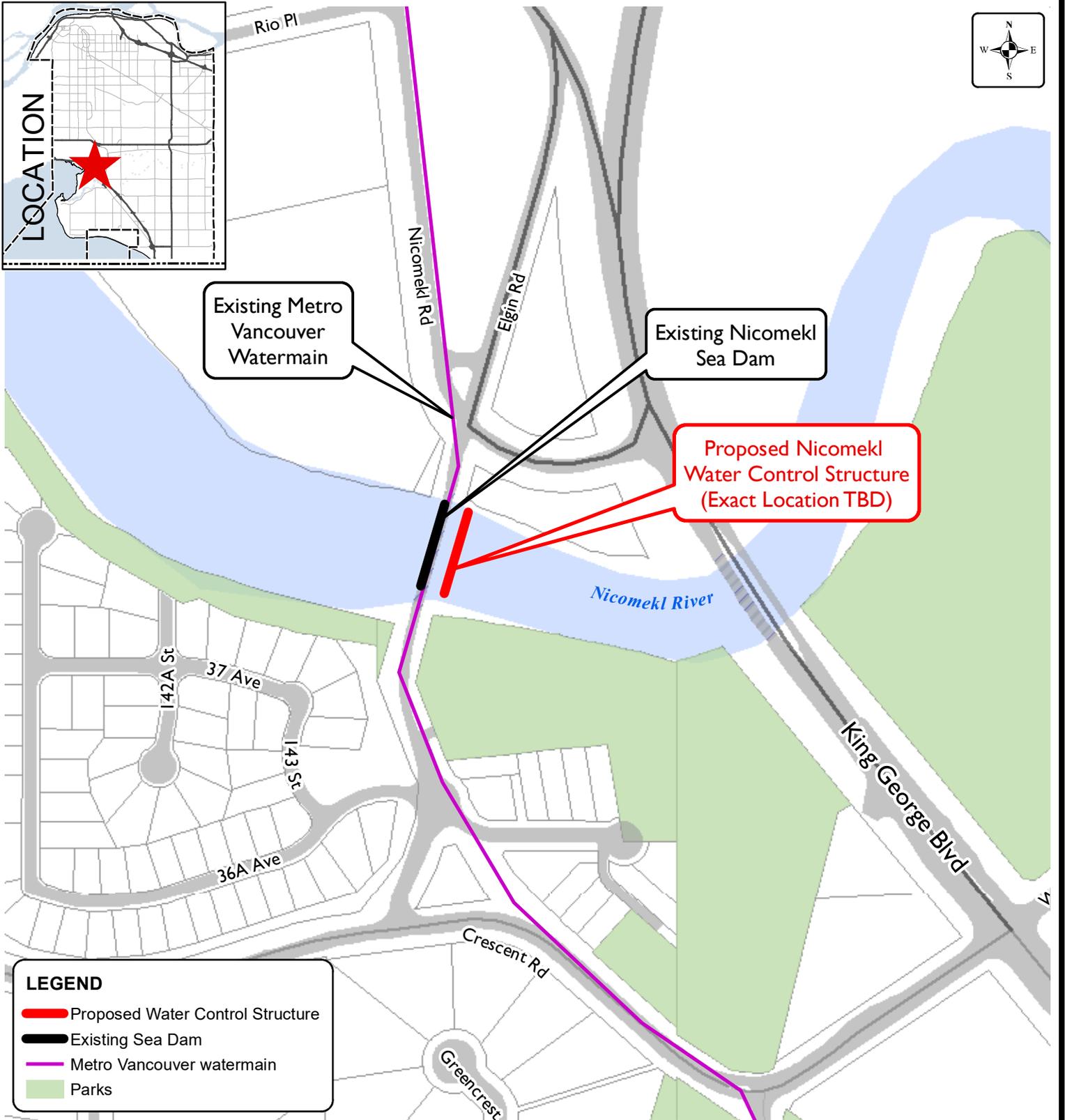
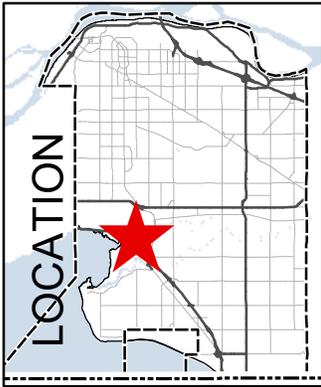
Funding for this Consultant Design Agreement is being phased over a three-year design period. With funding available this year within the 2022 Drainage Budget and the remaining funding being allocated in the 2023 and 2024 Drainage Budget. Furthermore, for the sea dam, 40% of the project funding is to be contributed under the Federal government contribution grant through the DMAF program.

Funding for the remaining costs in subsequent years have been included in the Engineering 10-Year Servicing Plan.

Scott Neuman, P.Eng.
General Manager, Engineering

VJ/AP/cc

Appendix "I" –Map of Project Location – Contract No. 6022-001 D1



Produced by GIS Section: 23-Sep-2022, JJR

Scale: 1:3,000 0 30 M



**Consulting Agreement No. 6022-001-D1
Design Services for
Nicomekl Water Control Structure**

**ENGINEERING
DEPARTMENT**

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, Legal descriptions and encumbrances must be confirmed at the Land Title Office.