

Drainage Design and Construction Update

Recommendation:

That the June 24, 2013, Financial Services and Utilities report CR_107, be received for information.

Report Summary

This report provides an update on Drainage Design and Construction and key considerations for development of future governing policies for the Section.

Report

Drainage Design and Construction provides underground sewer infrastructure design and construction services to City of Edmonton departments and external clients such as private developers, private contractors and other municipalities. It is recognized for its expertise in tunnelling and open cut construction. In the last five years, the Section has completed over \$600 million in Capital Projects with a forecasted \$580 million of Capital Project work in the next 5 years.

Drainage Design and Construction is one of four Sections in the Drainage Services Branch. It is a “non-regulated” arm of the Branch. In 2009, City Council approved the financial segregation of Drainage Design and Construction from the Drainage Services Branch to provide a higher degree of transparency. City Council also directed Drainage Design and Construction to operate as a Municipal Enterprise allowing the section to bid on

external work to bring in external revenue streams.

The Drainage Utility is Drainage Design and Construction's largest customer, making up 80 percent of project volume. Some examples of projects include:

- Flood Prevention projects
- Neighbourhood Renewal projects
- Sanitary Servicing Strategy Fund projects
- Pump station, storm outfall and sewer renewal
- Emergency sewer repairs
- Service connections.

The remaining project volume is made up of projects from other City of Edmonton departments such as Transportation Services and Community Services (10 percent), and external clients (10 percent). It is important to note that the work Drainage Design and Construction undertakes for the Drainage Utility and other City of Edmonton departments does not generate any profit, but does cover overhead and shared services costs.

Competitive Advantage

An independent cost comparative survey of tunnel projects completed by Drainage Design and Construction in Edmonton and other tunnelling projects across North America over the last 5 years was conducted.

Since 2008, Drainage Design and Construction has completed 13 tunnel projects, with a total length of 17 kilometres, for the City of Edmonton with various sizes (600 mm to 3,500 mm in diameter), depths and lengths. Seventeen external tunnelling projects

across North America with similar project parameters were selected for comparison purposes. The external projects are located in Ontario (7 projects), Saskatchewan (1 project), Alberta (not built by Drainage Design and Construction – 5 projects), and the United States (4 projects). Refer to Attachment 1, table 1 and 2, for the list of internal and external projects.

Many factors affect the cost of tunnel projects such as size and length of the tunnel, liner system, geotechnical condition, construction method, and regional influence. One of the more common comparative measures used in tunnel projects is the unit cost per linear meter of tunnel constructed.

The average unit cost per meter for City of Edmonton projects constructed by Drainage Design and Construction is about \$10,100 per meter while the average unit cost for the 17 external tunnel projects is about \$13,000 per meter; a saving of over \$2,900 per meter in average unit cost of tunnel constructed. For the 17 kilometres of tunnel constructed by Drainage Design and Construction in the last 5 years, a total value around \$49 million in savings has been realized.

Another indicator of competitiveness is the bid success rate. From 2004 to 2013, a total of 27 external bid/proposal submissions were made by Drainage Design and Construction. Six of these submissions have either been cancelled, delayed or still awaiting results. Of the remaining 21 submissions, Drainage Design and Construction was successful in 15 bids; a 70 percent success rate.

Drainage Design and Construction provides a stable internal workforce that can complete projects effectively and efficiently. The utilization of an internal workforce provides worker stability and can also minimize inflation volatility associated with economic market swings.

Transformation Initiative

In 2012, Drainage Design and Construction had a total staff complement of 426 including permanent and temporary employees. This consists of 393 unionized employees and 33 management employees. The span of control is approximately 12 workers for every manager. In the past five years Drainage Design and Construction has seen a 36 percent increase in workers (full time and temporary). This increase in staff was necessary to keep up with project work load.

Between 2003 and 2007, the average volume of work was approximately \$55 million per year. Between 2008 and 2012 the average volume of work was approximately \$127 million per year, more than double the preceding 5 years. This has resulted in a lack of resources dedicated to proactive planning functions such as long term business and program planning, business development strategy, succession planning, knowledge transfer and asset management.

In 2012, Drainage Services began undertaking a transformation initiative of Drainage Design and Construction. The initiative involves a review of internal functions, organizational design, and the role and relationship with Drainage Services and other internal and external

clients. The outcome of this initiative is to identify and implement strategy, structure, process, competency and cultural improvements to build a much more responsive organization to meet the changing economic environment and market. Some of the change imperatives identified from the review are more client and project management focus, clearer roles, accountabilities and responsibilities, more appropriately distributed decision making at all levels, and building an environment that easily promotes a constructive and professional culture.

Policy Considerations

Drainage Design and Construction operates as an enterprise within the City of Edmonton. All funding is through construction projects performed on behalf of various internal and external clients. The majority of all construction work is performed on behalf of Drainage Services. Other clients include other City departments and external clients as work is obtained. External work is obtained as capacity is available within the existing workforce.

Currently, Drainage Design and Construction operates without City Council directed policies surrounding fiscal management. Administration has been practicing fiscal management of the enterprise prior to bringing Policy considerations to Council for consideration. There are currently three key fiscal practices related to profit, dividend, and reserves.

Profit

On work performed for internal clients, independent of the funding source, Drainage Design and Construction does not make any profit. Costs are sufficient

to cover all full cost expenses, including Shared Services and Corporate Governance. Profit is included on external projects unrelated to the City of Edmonton.

Policy Consideration: Should Drainage Design and Construction continue to perform all internal work at full cost without any profit, independent of funding source?

Dividend

The Drainage Design and Construction budget includes the provision of a dividend to the City of Edmonton. This is calculated based on 25 percent of net profit. The actual amount of the annual dividend is based on the volume of external work completed, and the profit margin included in the bid price. The profit calculation is based on analysis of the market conditions at the time of bid. The split between profit retained in the Enterprise and that appropriated by the City should be reviewed every 3 years.

Policy consideration: What percentage of net income on external work should Drainage Design and Construction pay as a dividend to the City?

Reserves

Reserve policies are currently being considered by Administration for financial risk mitigation.

Policy

The City operates within the framework of the Council approved 2004-2014 Drainage Master Plan, ISO 9001, ISO 14001 and the 10-year Approval-to-Operate (2005-2015) issued and regulated by the Province of Alberta.

Corporate Outcomes

Establishment of governing policies for Design and Construction supports City Council's goal to Ensure Edmonton's Financial Stability as outlined in *The Way We Finance*.

Attachments

1. Drainage Design and Construction Competitiveness Study Excerpts