CITY OF NANAIMO

BUSINESS CASE – Engineering Department: Utilities Engineer

CURRENT OVERVIEW

The Infrastructure Planning group is responsible for planning and establishing the policies and standards required to support safe, efficient and sustainable water distribution, sanitary sewer collection and storm drainage infrastructure that meets existing service needs and accommodates future growth.

The Infrastructure Planning group currently consists of:

- Manager, Municipal Infrastructure
- Senior Engineering Services Technologist
- Engineering Services Technologist (2)

The City manages over $4.8 billion (2021) in infrastructure assets and is experiencing increasing pressure from population growth, new development, climate-change-related impacts, aging infrastructure, and evolving regulatory requirements.

The Infrastructure Planning group is responsible for the development and maintenance of utility master plans, implementation of asset management initiatives, capital project prioritization, risk management activities, and planning support for the Engineering and Public Works capital program. These responsibilities require ongoing analysis and long-term planning to ensure the City's water, sanitary sewer and storm drainage infrastructure can meet existing service needs while accommodating future growth.

BUSINESS ISSUE

Over the past several years, the workload of the Infrastructure Planning group has increased significantly while staffing levels have remained unchanged. The current team of four staff members is responsible for an expanding portfolio of utility master plans, development application reviews, capital planning, risk management activities, climate adaptation initiatives, asset management programs, grant applications, and engineering studies.

Currently, the Infrastructure Planning group's studies and master planning backlog continues to grow each year. Delays in studies and master plans impact capital project planning and limit the City's ability to accurately forecast future infrastructure and asset management needs. Given the significant cost of infrastructure renewal and replacement, there is considerable benefit in identifying capital projects in a timely manner and maximizing the service life of existing assets. This can only be achieved through the timely completion of master plans, supporting studies, and a well-considered approach to risk management.

As infrastructure ages and the City grows, the backlog of risk assessments and planning activities is expected to continue to increase. The likelihood of infrastructure-related failures and potential damage claims also increases when risks are not consistently identified, evaluated, and managed.

Additional engineering capacity is needed to support implementation of the City's asset management and risk management initiatives, undertake critical utility studies and master plans, and ensure infrastructure investment decisions are based on sound technical analysis.

Existing staff are operating at full capacity and are increasingly required to prioritize immediate operational and development-related demands, including a growing number of a high volume of development application reviews and servicing assessments, over long-term strategic planning initiatives. This has resulted in delays in utility master plans, risk assessments, capital planning activities, policy development, and implementation of asset management programs.

Without additional resources:

- Completion of utility master plans and infrastructure studies will continue to be delayed.
- Development application reviews and servicing assessments may continue to experience longer response times, delaying decisions for applicants, internal departments, and other affected stakeholders.
- Infrastructure risks may not be identified and mitigated in a timely manner.
- Capital project prioritization will continue to rely on limited staff resources.
- Opportunities to proactively address infrastructure resiliency and climate adaptation challenges may be missed.
- Existing staff workload will continue to increase, impacting service delivery, succession planning, staff retention, and overall organizational resilience.

The City's growing infrastructure responsibilities, coupled with increasing planning, asset management, and risk management requirements, have created a need for an additional Utilities Engineer position to ensure critical initiatives can be completed in a timely and effective manner.

EXPECTED OUTCOME

The Utilities Engineer position would provide additional professional engineering capacity within the Infrastructure Planning group to support the delivery of utility planning, asset management, risk management, and capital planning initiatives.

Increased capacity is anticipated to:

- Accelerate completion of utility master plans and infrastructure studies.
- Improve the City's ability to identify, assess, and manage infrastructure risks.
- Strengthen implementation of asset management best practices and long-term infrastructure planning.

- Improve response times for development application reviews and servicing assessments by providing dedicated engineering support for the growing volume of applications.
- Support delivery of climate adaptation and infrastructure resiliency initiatives.
- Facilitate more timely identification and prioritization of capital projects.
- Provide additional professional engineering expertise and project management capacity.
- Reduce workload pressures on existing staff and improve overall service delivery.

OPTIONS

Option #1 –Add a Utilities Engineer
Create a permanent full-time Utilities Engineer position reporting to the Manager, Municipal Infrastructure.

Benefits:

- Provides immediate engineering capacity to assist with utility planning, high-volume development application reviews, capital planning, and asset management activities.
- Supports timely completion of utility master plans and infrastructure studies required to address growth, climate change, and aging infrastructure.
- Enhance implementation of infrastructure risk assessment programs.
- Improves the City's ability to proactively identify infrastructure deficiencies and prioritize capital projects.
- Increases internal expertise and organizational knowledge related to municipal utility systems.
- Improves responsiveness to internal departments, developers, consultants, senior management, and Council.
- Provides long-term continuity and institutional knowledge that cannot be achieved through consultant resources alone.
- Reduces workload pressures on existing staff and supports succession planning within the Infrastructure Planning group.

Weaknesses:

- Increase to the annual operating budget.

Financial Analysis:

- The position is anticipated to be at management level 5, with an annual salary of approximately $129,900 plus benefits. 2027 budget impact including benefits is estimated at $123,000 based on an April 1st start date, 2028 budget impact is estimated at $173,700.
- Additional annual costs are anticipated at $5,000 for professional development, membership fees, and computer charges.
- One-time costs upon the creation of the position are projected at $12,200. This includes the purchase of a desk phone, computer, monitors and office furnishings.

- The estimated 2027 property tax impact is 0.08%.

Option #2 – Status Quo
Continue with current organizational structure.

Benefits:

- No impact to the operating budget.

Weaknesses:

- Delays in utility master plans, servicing studies, and long-range planning initiatives will continue.
- Existing staff workload will remain unsustainable and may continue to increase as growth pressures intensify.
- Reduced ability to proactively address infrastructure risks and asset management priorities.
- Slower response times to development applications and servicing requests will continue, increasing workload pressure on existing staff and delaying decisions.
- Increased risk that critical infrastructure projects and planning initiatives will be deferred.
- Limited capacity to address climate change adaptation, regulatory requirements, and emerging infrastructure issues.
- Potential impacts to staff recruitment, retention, and succession planning.

RECOMMENDATION
Option #1 is recommended.