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CORPORATE REPORT

NO: R183 COUNCIL DATE: September 23, 2024

REGULAR COUNCIL

TO:	**Mayor & Council**	DATE:	**September 18, 2024**
FROM:	**General Manager, Engineering**	FILE:	**5210-01**
SUBJECT:	**Engineering Servicing Impacts for Small Scale Multi-Unit Housing Developments**		

RECOMMENDATION

The Engineering Department recommends that Council:

1. Receive this report for information;

2. Endorse the development of a proposed Development Cost Charge rate structure approach for incorporation in the next revision of the Surrey Development Cost Charge Bylaw, as generally discussed in this report; and

3. Endorse the proposed updates to the *Waste Management Regulations and Charges Bylaw, 2015, No. 18412*, as outlined in this report.

INTENT

The purpose of this report to is to outline the engineering service impacts to local water, sewer, and drainage utilities and waste collection services for Surrey neighbourhoods with the incremental development of Small Scale Multi-Unit Housing ("SSMUH") developments, and to recommend an approach to modify Development Cost Charges ("DCCs") and solid waste fees accordingly from these types of developments to support infrastructure needs.

BACKGROUND

In late 2023, the Provincial Government introduced Bill 44 – 2023 Housing Statutes (Residential Development) Amendment Act, 2023. This legislation introduced measures for BC municipalities to provide for small-scale, multi-unit housing, including: secondary suites, garden suites, laneway homes, and/or houseplexes in their Zoning Bylaws. Under this change, up to six units could be permitted on lands previously zoned as single detached residential zones. Given that the Provincial legislation required municipalities amend all zoning of these lands, municipalities no longer have an ability to assess impacts from growth through rezoning as these developments would typically go straight to a building permit.

DISCUSSION

In Surrey, large developments are typically subject to a number of steps and processes that could include rezonings, subdivision, or development permits. In these types of projects, there are requirements for the proposed development to assess the impact of growth on existing infrastructure (water, sewer, drainage, roads, etc.) and ensure that where there are capacity issues, the proposed development addresses these capacity issues.

For more simple development, where an old building is replaced or renovated with a similar type of building, only a building permit is required and there are no requirements to assess the impact on engineering infrastructure, since it is not providing a greater number of dwellings. Under a building permit, there are more modest requirements for developments to asses and potentially renew water, sewer, and drainage service connections, ensure that driveways and access meet current standards, and in some cases provide sidewalks. Due to Bill 44, Surrey has amended the Zoning Bylaw so that it will be possible to obtain a building permit to construct duplexes, and houseplexes with accessory garden suites or coach houses to four units and a maximum of six units.

In addition, implementing SSMUH requirements will necessitate modifications to onsite drainage management requirements and curbside residential waste collection service, as housing density and associated waste volumes will increase at these properties. Staff have completed an impact analysis on the permitting of SSMUH to determine the extent of changes required to the waste collection service. The analysis concluded that the City's current waste cart allocations and associated utility fees need to be expanded to accommodate the various new housing combinations.

Utilities Demands

Existing water, sewer, and drainage servicing plans and models were utilized to assess the potential impact to infrastructure service levels due to this type of incremental and unplanned development.

Water System

For the City's water system, the peak capacity is often dictated by water required for fire protection. The standard for fire protection in Surrey is to provide: 60 L/s in detached single-family neighbourhoods; 90 L/s for duplexes; 120 L/s for townhomes; and 200 L/s for high density residential. To evaluate the total impact of SSMUH, the water system was evaluated for fire flows of 90 L/s in all residential neighbourhoods, as the housing form and setbacks closely match duplexes.

The evaluation found that smaller water mains (150 mm diameter) and areas with lower pressure would not likely be able to sustain fire flows of 90 L/s and still meet pipe velocity criteria, particularly for long or dead-end mains (i.e., cul-de-sacs). The highest priority water mains for upgrading will be unlooped 150 mm diameter pipes or smaller, and there is an estimated 260 km of this type of watermain in the SSMUH zoned area. Upgrading for these water mains has an estimated cost of $520 million, which would need to be incorporated in the long-range asset replacement strategy over approximately 40 to 50 years and prioritized based on the location and number of SSMUH being constructed.

Sewer System

For the sewer system, an evaluation was made using population increases of roughly three times in residential neighbourhoods over current zoning densities. The results found that there was a total of approximately 100 km of smaller diameter sewers that would exceed capacity in future years based on this higher density form. 100 km is approximately 6.0% of the total inventory of sanitary sewers and would be on the order of about $300-350 million to upgrade over 40-50 years, based on the particular size and depth of the sewer.

Sewer system flows are driven by population or users, and unfortunately there are no measures that can be incorporated into home design to limit the impacts of population. In addition, the estimate of total capacity limitation is based on the entire network and overall buildout of Surrey. The immediate need to upgrade sewer systems will be based on both the rate of adoption of SSMUH and the specific location and number of SSMUH. For instance, if SSMUH is proposed in an area with an appropriately sized water main and sewer, then there will be no immediate impact. However, should SSMUH be constructed in an area with small local water and sewer mains, it will be necessary to prioritize these areas for replacement. It will become necessary for staff to regularly assess and prioritize the 10-Year Servicing Plan to meet the pattern and distribution of SSMUH development.

Drainage/Stormwater

Drainage is very different from water and sewer, where is it is dependent on the amount of impervious surfaces that will quickly shed rainwater into storm sewers. Presently, an older detached house in Surrey might have about 35% impervious surfaces (e.g., roof, decks, driveway). New homes on smaller lots would likely be between about 45% and 65%, and the current design criteria for storm sewers allows for 65% impervious lot coverage. With the advent of SSMUH, staff expect a typical impervious surface of about 65% or higher, meaning that drainage runoff could easily double in areas where older houses are being developed. This increase in imperviousness will result in much larger runoff across Surrey.

To protect capacity in the City's storm sewers and mitigate impacts to streams, staff have already adopted a rainwater disconnect approach, where rainwater from roofs are directed to splashpads and onto grassed areas with a minimum of 0.45m of absorbent soil. This approach is about 25 years old and has been applied to most new development throughout Surrey as a practical and affordable approach to rainwater management. When implemented well, rainwater can absorb back into the ground at the source, decreasing peak discharge and contributing to groundwater and stream baseflow.

The challenge with SSMUH will be the reduced setbacks around the property and lack of available pervious area to manage rainwater. For these types of developments, staff are proposing to develop more intensive stormwater management facilities, including below ground infiltration chambers and/or detention tanks to hold and infiltrate rainfall more effectively. Staff's initial consideration is to implement this on any SSMUH development with impervious areas higher than 65%, which is the current level to which we evaluate our drainage network. This approach would limit the need for most drainage upgrades, and the areas where additional capacity or detention is needed would be resolved through new storm sewers or upgrades to stormwater ponds. Engineering and Building staff are developing a suite of onsite stormwater management initiatives which could be implemented.

DCC Rate Approach

Presently, DCCs are collected for engineering infrastructure for new subdivisions (for each lot); whereas, DCCs for multiple unit residential buildings and commercial, business, industrial, or institutional buildings are based on the size of the building (i.e., per ft.^{2}).

To address the increased growth and the impact on infrastructure, a DCC rate is being proposed that would be attributed to additional SSMUH units and would be based on the net additional buildable area proposed on the lot. Generally, SSMUH lots can be developed for:

- Principal Uses (e.g. units in a duplex, or houseplex only on lots zoned R3); and
- Garden suites, coach house and secondary suites.

It is proposed that a new DCC rate and calculation approach be introduced in 2025 to address the demands of growth whereby, the principle house would pay DCCs per status quo but each additional unit (secondary suite, garden suite, or coach house) would pay an additional DCC based on a building ft.^{2} basis comparable to a townhouse or condo.

The rate at which SSMUH development occurs will continually inform adjustments to the proposed DCC rates over time, which will likely be needed in the first few years of the program to meet current servicing needs.

Waste Collection Services

The City provides weekly residential curbside organic waste (food and yard waste) collection, along with alternating bi-weekly garbage and recycling collection services. This is done via a fully automated, cart-based collection system for 108,000 single-family households and 35,000 secondary suites. The City offers a standard set of cart sizes to households, and waste collection fees are established based on dwelling type, which falls into two main categories:

1. Single-Family Households (including townhouses that have opted for City service):

    - Pay a standardized 2024 base utility service fee of $337.00; and
    - Receive one 240-litre garbage cart, one 240-litre recycling cart, and one 240-litre organics cart.

2. Single-Family Households with Secondary Suites:

    - Pay a standardized 2024 base annual utility fee of $337.00 plus $168.00 for the secondary suite; and
    - Receive one 360-litre garbage cart, one 360-litre recycling cart, and one 240-litre organics cart.

Households can upsize their garbage carts or increase the number of garbage carts for an additional annual fee, which is added to the waste collection utility fee. Currently, households can order an upsize or additional recycling or organics cart for a one-time fee.

Residential single-family and duplex lots eligible under SSMUH are expected to generate 200-400% more garbage and recycling waste on a bi-weekly collection schedule compared to a lot with a single-family home. This increased demand will require more waste carts than currently allocated; however, organic waste volumes are not expected to increase significantly due to the smaller landscape footprint, which reduces yard waste.

To mitigate this anticipated required increase in waste collection services, staff recommend to:

- Develop a new allocation of garbage and recycling waste carts to require SSMUH developments to have one additional waste cart, including an additional annual fee;
- No additional organic waste cart is recommended for SSMUH, as one cart is deemed sufficient given the reduced volume of yard waste; and
- Cart allocations should account for multiple principal units that may generate more solid waste, requiring more carts compared to lots with smaller secondary suites or coach homes.

Currently, the City provides additional organics and recycling carts to households for a one-time fee, which does not cover the associated collection and disposal costs. Staff recommend introducing an annual fee for households with additional recycling or organics carts above the standard allocation. This ensures that all households equally share the service cost.

Staff recommend the proposed waste collection utility fee approach be implemented in 2025 through the annual Fee Setting Bylaw.

Financial Impact

The advent of SSMUH developments will require Surrey regularly assess capacity of the City's infrastructure to adapt the 10-Year Servicing Plan to meet the changing needs of growth. The approach outlined in this report presents a methodology to introduce new and incremental DCC rates to support the demands on infrastructure.

In addition, staff are recommending that new waste collection fees be established to ensure that all properties, including the various combinations of SSMUH on lots, equally pay for the increased waste tonnage, ensuring fairness and equity for all residents.

CONCLUSION

The impact of SSMUH development could result in substantial need to replace infrastructure, some of which may not have reached the life of expected service life. It will be necessary for staff to closely monitor where SSMUH are being built to understand local spatial needs for infrastructure replacement, and to adapt both the 10-Year Servicing Plan and DCC rates to meet those priorities.

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DM/cc