

2017 – Prepaid Service Rate Evaluation

Water and Sewer Servicing

Water and Sewer Mains, Trunk Sewers, Primary Water Mains and Lift Stations

- 1) Water, Sewer Mains and Service Connections – A tender has been awarded within the residential neighbourhood of Aspen Ridge as well as a number of small tenders for local services. Past contracts were also analysed within Aspen Ridge. Although a number of contractors have been bidding within Aspen Ridge the cost of servicing has been higher within this area than other areas. Normally costs are averaged among phases and neighbourhoods each year, however, much of the focus in the immediate future will be within the Aspen Ridge neighbourhood where deeper services are needed, rocky conditions are more prevalent, and the McOrmond roadway design has additional services. No major changes were implemented in 2017 to our water and sewer standards although many of the typical components utilized in water and sewer have seen increases in cost including sanitary sewer and storm sewer pipe. Plastic polyethylene has increased by 6.2% this year. The net result is that an increase in the water and sewer rates of 5.0% is warranted in 2017.
- 2) Trunk Sewers and Primary Watermains – primary water mains include the larger piping systems that serve entire neighbourhoods, typically equal or greater than 400 mm in size. Primary water mains have, in most cases, lagged initial development and may include a variety of components that are not necessarily utilized consistently for each job, such as pumped drain structures or concrete bulkheads. A common component is piping, however, this can also vary between sizes, material type, construction required through pavement structures or undeveloped land. Depending on the size and the length of individual pipes needed in any one contract, different types of piping materials are utilized. No change in the primary watermain levy rate is projected for 2017.

Trunk sewers are essential for all sectors and include ponding and piping systems that can include storm pipes up to 3.0m in size and sanitary sewers of 1.2m in diameter constructed 14m deep. The Transportation and Utilities Department has extensive studies and includes large geographic catchment areas to determine the overall city wide rates. Within the Administration's studies, sanitary and storm sewer piping comprises 74.7% of the trunk sewer levy cost. The remaining 25.3% of the levy funds storm ponds, where the primary cost is the excavation of large amounts of earth material. From an evaluation of prices and our studies, an estimate for trunk sewer pricing was derived. This information, along with information from Statistics Canada for items included for these types of projects used during construction derives the trunk sewer rate. During the last two years additional detailed analysis took place within the University Heights Sector. The offsite service levies strive to fund the most economical service possible based on functionality, approved standards

and long term maintenance costs. The open trenching method, which has been used a number of times before in Saskatoon, and is the cheapest method for most piping installations, is primarily utilized. From the results of past information and current cost curves the trunk sewer rate is recommended to increase by 2.2%.

- 3) Lift Stations – This is a smaller levy that funds the construction of lift stations within specific neighbourhoods that utilize lift station services. Some additional costs have been identified in 2017 for the Aspen Ridge Lift Station. The lift station levy is charged only on neighbourhoods that require this service. No lift stations currently are needed within the Industrial area of the City. The change in the lift station levy for this year is 4.5%.

Taken as a whole, the net price change for various services and calculated frontages has resulted in an adjustment for 2017. It is recommended that the general construction rate change by the following percentages, with similar changes noted within Attachment 1 for other zoning classifications:

Water and Sewer Mains	5.0%
Water and Sewer Connections	3.0%
Trunk Sewers	2.2%
Primary Water Mains	0.0%
Lift Stations	4.5%

Roadways

Grading, Sidewalks, Paving, Lanes, Buffers, Fencing and Arterial Roadways

The 2017 program is primarily within the residential neighbourhoods focussing on commercial/institutional direct servicing and arterial roadways. This year, the main projects include McOrmond Drive north of Feheregyhazi Drive and Fedoruk Drive between Evergreen Boulevard and Lowe Road as well as commercial sidewalk and roadway construction in Aspen Ridge. All of the roadwork that was planned for 2017 has now been awarded. Areas of noted significance are as follows:

- 1) Grading and Buffers – This component involves the excavation, transportation and placement of large quantities of dirt to facilitate the overall drainage pattern within a development area. In 2017 various small earthwork projects were analysed that also included fine grade and seeding. Embankment costs continued to be in a slowly rising band with seeding prices increasing overall. In 2017 unit prices for excavation have fluctuated from between \$4.25 and \$5.00 per cubic metre as opposed to last year where the range was \$2.97 to \$4.20. This is still within a range which is lower than 2015 and therefore we are comfortable with leaving the grading rate at its current level after considering frontage and rock excavation.

The main components within the Buffer levy are berming which also utilizes the movement of earth material and fine grade and seeding. As noted previously, excavation costs have been slowly rising within a range. Fine grade and seeding costs are, however, rising while frontage was stable as a percentage of the square metres of buffers required in some of the new neighbourhoods. The net effect will be an increase of 3.1%.

- 2) Sidewalk and Curbing – This service is normally tendered as part of the overall roadway contract. Prices as reported last year continue to be competitive and the rate itself has not increased for a number of years. Different components are included within residential versus multi-family/commercial areas, which are then blended together in arriving at a rate for each classification. As a result, the multi-family/commercial rate, used primarily in suburban areas and on collector roadways, is traditionally 1.7 times greater in cost than the residential rate. In 2017, the expected ratio of the amount of construction between the more expensive separate walk and curb collector street application versus the less expensive local combined walk and curb was lower than normal. When this occurs, as in this year, amounts are applied to normalize the amount of each sidewalk component. In addition, overall unit prices have been stable in 2017 with additional costs of 4% noted primary within the curbing component. The effect will be to leave the existing rate at its current level.
- 3) Paving, Lanes, Arterial Roadways and Interchanges – Unit prices from one direct service tender and the McOrmond and Fedoruk Drive arterial roadway tenders were used to arrive at the arterial roadway rate and paving rates, as well as an analysis of frontage from various neighbourhoods.

As with sidewalks mentioned previously, an analysis was performed and costs were again averaged between local residential roadways and multi-family/commercial rates. The amount of multi-family/commercial roadways constructed this year in Aspen Ridge, as a ratio to narrower residential roads, is different than the historical average and will result in additional adjustments being applied. Prices as a whole for this component have increased from the lower levels experienced in 2015 & 2016 for residential and commercial properties as well as arterial roadways. Some of the changes are fairly substantial within the last year, and this rate had the largest swings concerning unit prices. For example base material utilized as a layer under the asphalt showed an average -9.6% decrease, while subbase which is used below the base material indicated an increase of 17.6%. Asphalt also increased within our prepaid service contracts an average of 5.8%.

The structure for roadways was modified in 2015 as we previously reported to not only mitigate the problems encountered previously due to wet conditions, but also increase the useful life of the City's roadways. This change in standard was approved by City Council in the fall of 2014 with the adoption of New Pavement Design Guidelines effective for all new contracts in 2015. These guidelines incorporate the standards set by the American Association of State Highway & transportation Officials (AASHTO) in their 1993 Guide for Design of new

Pavement Structures. The main difference between roadway calculated rates from previous years is that we are now custom designing our pavement structures based on the parameters within the new guidelines. Structures have been increased and the City has integrated a two lift pavement design on all local roadways and rear lanes as well as a three lift pavement design on arterial roadways. The end result of the custom design is always based on an analysis of the cheapest alternative given the total roadway strength required to be obtained. Road structure changes has resulted in road material on average 25% greater than experienced for arterial roadways over roadways constructed before 2015.

These increased structures will cost more in initial capital cost than previous roadways, however, the expected decrease in maintenance costs and added longevity have been previously recommended.

The interchange levy is one source of funding for the construction of interchanges where the construction benefits new land development. Additional design information for some of the interchanges included within the rate together with frontage analysis from the five existing sectors was conducted. The net result, after also analysing revenues and costs to date, is an adjustment to the global interchange rate. Within the Administration’s study areas, costs have been extrapolated to determine a projected value for nine interchanges identified as requiring funding from the interchange levy. After analysis of the recently tendered interchanges at McOrmond and Boychuk Drive it was decided that a decrease was warranted in the rate of -.9%. The current City traffic model is currently being studied further to update the amount of traffic generated from future growth.

The net effect on the prepaid service rates for this category is as follows:

Grading	0.0%
Buffers	3.1%
Sidewalks and Curbing	0.0%
Paving	2.3%
Arterial Roadways	3.1%
Interchanges	-0.9%
Lanes	0.0%

Utilities

Street Lighting, Gas and Underground Electrical

City developed land includes a prepaid levy for street lighting, gas and underground electrical servicing. Private developers contract directly with the respective crown corporation for telephone and gas servicing. A data base exists that includes three decades of street lighting service applications where costs and revenues are tracked. Street lighting service is provided exclusively from Saskatoon Light & Power. Labour costs represent a predominate portion of the street lighting rate which has not changed

in 2017. Material price changes have also been minimal this year with a small increase in the price of copper utilized in cable and therefore no change in the street lighting rate is suggested for this year.

The Saskatchewan Energy Corporation provides natural gas servicing to all classifications of property. The gas servicing levy is composed of a header allocation charge that is calculated by the utility for each neighbourhood, as well as a gas distribution charge. Sask Energy absorbs a portion of these costs by applying a capital contribution investment charge of \$1,145 per lot which has not changed in 2017. Sask Energy also charges a lane stubbing cost of \$1,200 per lot. In 2017/2018 a majority of the city developed residential property will include laned lots. A contingency within the rate will be used as well as an increase in the rate itself to cover the cost of the current program.

New underground electrical service within Saskatoon is almost entirely provided by the Saskatchewan Power Corporation. In 2017, a number of applications have been received for underground electrical servicing. Both the crown corporation and the City also provide a \$1,300 per lot capital contribution in each of their respective franchise areas. The Administration's model indicates that the current rate of \$1,847 per lot should be adequate for the 2017 construction season.

The recommended change to the utility rates is as follows:

Street Lighting	0.0%
Gas Servicing	23.0%
Underground Electrical Servicing	0.0%

Administration

Planning, Municipal Administration, Servicing Agreement Fees, Inspection

The servicing fees for the administration of the land development program are increased each year in tandem with the changes to the standard collective agreement and the car allowance rate, where applicable. For 2017, there is no change in the cost for these services.

Parks and Recreation Levy, Community Centres

The Parks and Recreation Levy is a significant portion of the total offsite levies and is submitted as a separate report from the Community Services Department. The inclusion within this report is to illustrate completeness of the prepaid service rate schedule.

The levy for community centres has been implemented as a separate charge per residential neighbourhood, calculated on a front metre basis for all saleable property. This levy will also be reported on by the Community Services Department.