



# **Corporate** NO: C017

# **Report** COUNCIL DATE: December 11, 2000\_

## **COUNCIL-IN-COMMITTEE**

**TO: Mayor & Council**    **DATE: December 8, 2000**

**FROM: General Manager, Engineering**    **FILE: 2350-011**

**SUBJECT: Campbell Heights Industrial Area - Servicing Plan**

## **RECOMMENDATION**

That Council approve the engineering servicing plan and financial strategies as specified in the Campbell Heights Industrial Area - Servicing Plan Report as the means of managing engineering services for this Industrial Area.

## **INTENT**

The purpose of this report is to provide Council with an overview of the engineering servicing and financial strategies for Campbell Heights.

## **BACKGROUND**

Campbell Heights is the last major undeveloped industrial area in the City of Surrey. Responding to Council's wish to accelerate industrial development and the considerable interest in this area from local and international companies, Land Use and Engineering Servicing Plans have been prepared.

A separate report prepared by the Planning & Development Department outlines the preferred land use for the Campbell Heights Area. This plan, which allows for Hi-Tech business park use including two potential chip plants, was used as the basis for the Engineering Study. Servicing impacts and the associated financial issues were identified and analyzed. The details of the engineering analysis are contained in a separate report available in the Engineering Department.

The engineering services discussed in the report relate only to major infrastructure. Localized site servicing requirements of individual developments are not analyzed in the report as responsibility for their construction rests with the developers.

## **DISCUSSION**

## Sanitary Sewer

Campbell Heights is remote from the nearest sanitary sewer system. The area will be serviced by extending a pressure sewer from Campbell Heights north wards to the GVRD sanitary sewer at 184 Street and 52 Avenue in Cloverdale. Sanitary sewer trunks will generally follow the road grid to service the industrial area. The area south of 28 Avenue will be serviced by sanitary sewer trunks in the road right-of-way and a sanitary sewage lift station. The conceptual layout for the sewer servicing is shown in Figure 7.3.

## Water

The GVRD water system bisects the Campbell Heights area. A reservoir is required to provide balancing flows to the area. A pump station will be required to deliver the water to the area at an appropriate pressure. Water distribution mains will generally follow the road grid to service the properties and are as shown on the attached Figure 6.2.

## Transportation

The Campbell Heights area will require strong transportation links to the municipal arterial and Provincial Highway network. Currently, the area is serviced by two-lane rural roads. A transportation study was completed as part of the engineering report. Arterial and collector roads were reviewed and, where necessary, upgrades and additional elements have been identified. Substantial upgrading of the existing road network is required and is shown on the attached Figure 5.3. These works are over and above what is needed for growth external to Campbell Heights. The identified road system will function together with the future Highway 1-99-U.S. Border connector roads to provide a high level of access to Campbell Heights. However, as the delivery mechanism for the Hwy. 1-99-USA Connector roads has not yet been determined their cost is not included in the overall road costs. As identified in the economic and market analysis, without the high quality access of the Hwy. 1-99-USA Connector road system, the pace of development of Campbell Heights will be significantly reduced.

## Storm Water

A comprehensive storm water study was included as part of the engineering study. Two different storm water management strategies are proposed for Campbell Heights depending on ground conditions. The core area around Latimer Lake (please see the attached Figure 3.3) has a high ground water level and requires a conventional storm sewer and detention pond system. The larger area around the perimeter has conditions very conducive to ground water recharge. Here it is proposed that both the City and private systems be constructed to exfiltrate water into the ground, reducing the size of the storm sewer system and eliminating the need for detention ponds. This approach will recharge the aquifer and maintain the base flows in the streams that emanate from the base of the northwest face of the Campbell Heights slope and, subsequently, feed into the Nicomekl lowlands. This is the same approach that has been used in the neighbouring area of Brookwood in Langley, which has very similar soil conditions. Extensive soils testing has been carried out to confirm the functionality of the proposed infiltration system and the initial construction will be monitored to assess performance and revise the design for future works as appropriate.

The proposed use of groundwater recharge substantially reduces the costs for drainage servicing.

The Ministry of Environment and Department of Fisheries have reviewed the NCP. The proposed storm water management plan has received general support from these agencies. A more detailed review of the environmental issues is included in the report prepared by the Planning and Development Department.

## Development Phasing

The sanitary sewer system is the primary limiting factor to the phasing of development. Since the sanitary sewer will discharge to the north, phasing will more than likely proceed from north to south.

## Regional Servicing Impacts

An area the size of Campbell Heights will have impacts on regional water and sewer servicing. Details on these regional impacts are provided in Appendix 1. Briefly summarized we will not know whether the City will need to allow for funding for sharing on additional water supply capacity until the type and rate of industrial is determined. There will be sufficient time to track the rate of development and include any necessary works in future servicing plans.

For sewer there may be the requirement for heavy water users (i.e. chip plants) to temporarily store on-site waste process water during times of heavy rainfall due to current inflow / infiltration problems combined with extensive regional capacity constraints. Such storage can be achieved by storing the clean process water in a lined open pond. Additional regional capacity is in process and is funded through the overall regional sewer DCC.

## FINANCING

### Context

The financing of the servicing for Campbell Heights presents unique challenges compared with other NCP's within the City both in terms of the magnitude of the costs and the fact that there are four major land owners, three of which are the Federal, Provincial and City governments. (Please see attached Figure 7)

The following table summarizes the projected DCC revenues and construction costs for each engineering service. Unlike all other NCP's the costs of the arterial road works (excluding toll road elements) is included in the listing. These have been included due to the significance of transportation for Campbell Heights and its relative isolation. For water and sewer services, the DCC cost includes, where applicable, just the upsizing cost. This is in line with all other NCPs. The revenues are based on the current DCC By-law.

### Projected DCC Revenues and Expenditures at Buildout

|                        | <b>Projected Trunk (DCC) Servicing Costs</b> | <b>Projected DCC Revenues</b> | <b>Balance</b>      |
|------------------------|--|-------------------------------|---------------------|
| Arterial Roads         | 60,000,000                                   | 16,150,000                    | <b>(43,850,000)</b> |
| Major Collectors       | 8,525,000                                    | 3,930,000                     | <b>(4,595,000)</b>  |
| Sanitary Sewer         | 9,000,000                                    | 3,210,000                     | <b>(5,790,000)</b>  |
| Water                  | 8,800,000                                    | 3,440,000                     | <b>(5,360,000)</b>  |
| Storm Water Management | 12,860,000                                   | 24,150,000                    | <b>11,290,000</b>   |
| <b>TOTAL</b>           | 99,185,000                                   |                               | <b>(48,305,000)</b> |

Clearly, the cost of trunk DCC servicing exceeds the potential DCC collections for the area. This is owed in most part to the following:

- The existing undeveloped road network in the area.
- The isolation of Campbell Heights from the nearest sanitary servicing.
- The total lack of existing servicing in the area. Most areas of Surrey have some existing servicing which can be built upon as development proceeds.
- The requirement of a dedicated water reservoir and pump station for the area.

While the costs appear large in comparison to the DCC generation, when looked at in comparison to the overall 1200 acres of developable land, the servicing costs are in the range of \$100,000 per acre. This, when added to the current raw land costs, results in a final serviced land cost in line with other industrial areas. These overall servicing costs allow for two chip plants. If these plants, which are high water users and waste water generators, are not allowed for, then sewer and water costs can be reduced by \$2.5 million.

### Financial Strategies

In view of the above factors and significant costs involved, a different financing strategy is required for Campbell Heights compared with other NCPs. An additional factor is that the time frame involved for build-out of Campbell Heights is anticipated to be in the range of 20 to 30 years, compared with the other NCPs which are in the 5 to 15 year range. Consequently, it is proposed only to include the trunk DCC elements required for the first phase of development in the new 10 Year Servicing Plan. This first phase would include the servicing of the lands along 192 Street from 40 to 32 Avenues and the land immediately south of 32 Avenue from 192 Street to the westerly boundary of the NCP, an area of approximately 400 acres. The cost of these works and the projected DCC revenues are estimated as follows:

|                        | <b>Projected Trunk (DCC)<br/>Servicing Costs</b> | <b>Projected DCC<br/>Revenues</b> |
|------------------------|--|-----------------------------------|
| Arterial Roads         | 6,700,000  | 5,392,000                         |
| Major Collectors       | --   | 1,312,000                         |
| Sanitary Sewer         | 7,300,000  | 1,072,000                         |
| Water                  | 5,300,000  | 1,148,000                         |
| Storm Water Management | 2,500,000  | 8,064,000                         |
| <b>TOTAL</b>           | <b>21,800,000</b>                                | <b>17,000,000</b>                 |

As can be seen from the above table, for servicing to proceed there will have to be a net inflow of DCCs from other areas of Surrey into Campbell Heights. However, DCCs are operated on a municipal wide basis and it is not possible to ensure that there is a perfect balance between DCC revenues and expenditure in all areas of Surrey.

In addition to the above identified, cost of municipal services are the costs to provide electrical transmission lines for large power users such as chip plants. The costs for electrical transmission lines for heavy power users, such as a chip plant, is in the range of \$17 to \$25 million.

Given the significant costs for servicing, preservicing by the City is not recommended at this time. Such pre-servicing funding would require the City to borrow and the pay back through specified (i.e. connector) charges is uncertain. Also the specified charge would increase as interest accumulates with the potential to make the area less marketable.

An alternative option, which is not proposed to be pursued at this time, is the redesignation of some of the industrial lands to residential. A consortium of developers has suggested to the City that this could be a way of front-ending the costs for the initial sewer and water services needed.

The proposed approach is to include the first phase works in the 10 Year Plan and then in conjunction with the Province pursue a major hi-tech industrial development for this area. Once there is a commitment for a first major developer, then the first phase servicing could be coordinated with this developer.

## **CONCLUSION**

The servicing plan for Campbell Heights provides a comprehensive servicing and phasing plan for the area. The engineering plan has been presented to the public and received general support. There still remain issues relating to the significant start-up costs involved, which would require a major development to be able to finance or justify such costs.

Jorgen Johansen, P. Eng.

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PH/MD/brb

Attachment: Appendix I (bound separately) Campbell Heights Industrial Area  
Servicing Plan - New East Consulting Services

c.c. - General Manager, Planning and Development

- General Manager, Finance, Technology & HR

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