

# Corporate Report

NO: C008

COUNCIL DATE: July 26, 2004



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## COUNCIL-IN-COMMITTEE

TO: **Mayor & Council** DATE: **July 21, 2004**

FROM: **General Manager, Engineering** FILE: **6520-20(WN)**

SUBJECT: **West Newton/Highway 10 Neighbourhood Concept Plan (NCP)  
Servicing Plan Report**

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## RECOMMENDATION

That Council adopt the engineering servicing and financial strategies as outlined in this report and as specified in West Newton/Highway 10 Master Servicing Plan as the means of providing engineering services for this neighbourhood.

## INTENT

The purpose of this report is to provide Council with an overview of the engineering servicing and financial strategy for West Newton/Highway 10 Neighbourhood Concept Plan (NCP) Study Area and seek Council approval.

## BACKGROUND

The Proposed Land Use Concept Plan for the West Newton/Highway 10 (Stage 2 NCP) Study Area is being presented for approval in a separate Corporate Report from the General Manager of the Planning & Development Department.

This Corporate Report outlines the engineering servicing issues and financial issues that are included in the Engineering Servicing Plan. As a result of the Stage 1 NCP Study, a number of engineering and financial issues were identified as needing resolution in the Stage 2 Study.

## DISCUSSION

The Stage 2 Engineering Servicing Plan for the West Newton/Highway 10 Study Area is now available in the Engineering Department. This report includes engineering services layouts and analysis and a financial plan and analysis.

The engineering services discussed in the report relate to major infrastructure. Only those works which could be added to the 10-Year Plan and funded through Development Cost Charge (DCC) program, such as major trunk sewer and water grid mains, major collector and arterial roads and major stormwater management infrastructure (trunk storm sewer and major canal work) are discussed in detail in the report. Local site servicing requirements of individual developments were analyzed and considered in the report.

## Transportation

The current City road network in this area easily accommodates the demand with very good levels of service at the intersections. Full development of the West Newton/Highway 10 NCP area will more than double the area's population. However, even with overall growth in and around the area, traffic volumes on the collector and arterial roads in this area are expected to remain relatively low.

Signalization and intersection improvements at 60 Avenue/128 Street and 60 Avenue/132 Street will be required by 2021 but additional through lanes will not be needed. In conjunction with the Highway 10 widening project, access from driveways and local roads will be eliminated or restricted to right-in/right-out only. 124A Street and 125 Street will be closed at Highway 10. Access to the Major Collector Roads (124 Street and 136 Street) from Highway No. 10 are planned as right-in/right-out/left-in only.

The Highway 10 Project Team has provided the City with the additional road allowance requirements in this area for their widening project. As outlined in the report from the Planning and Development Department, a 15-metre wide landscaped buffer area is proposed in the NCP along the north side of Highway 10. This will provide for a multi-use trail and buffering of the impacts of the Highway on the neighbourhood to the north of the Highway. Any future land use plan on the south side of Highway 10 should identify similar buffer areas along the Highway.

In keeping with the objective of a bicycle and pedestrian friendly City, improvements such as traffic calming, bicycle lanes and improved pedestrian crossings are proposed. Traffic calming/improved pedestrian crossings have been identified for 124 Street, 60 Avenue and local roads. Local and Collector road upgrading will be done in conjunction with development of the NCP. The arterial roads would be monitored and upgraded when warranted. Traffic calming on 124 Street/Boundary Drive would be initiated in the short term. Details of the proposed transportation network are shown in Figure 2.1.2 in Appendix I.

## Drainage

The study area is divided into two major catchments, namely, Eugene Creek and Peacock Brook. The dividing line between the two catchment areas is along 128 Street north of 61 Ave and a little west of 128 Street to the south and shown in Figure 2.2.1 in Appendix I. The entire Panorama drainage area, which includes the Eugene Creek and Peacock Brook catchments, drains to the lowland to the Colebrook Pump Station and discharges into Mud Bay.

In order to accommodate the increased flows associated with the proposed higher density housing, additional capacity will be required for the storm trunk system. This involves the following key storm trunk additions/replacements: approximately 900 m of 750 mm to 900 mm storm trunk along the north side of Highway 10, 650/750 mm diameter storm trunk crossings under Highway 10, and 380 m of 600 mm diameter storm trunk along 128 Street south of Highway 10. In order to mitigate the impact of larger volumes of runoff into the lowlands, the Eugene Creek Tie-in Project must be completed. This project has been designed and budgeted but construction is pending some downstream right-of-ways, which to date, the City has been unable to acquire. Staff will review options to deal with this situation.

New storm sewers will be required along the local and collector roads to service the street and abutting lot drainage. These storm sewers will be funded and installed by developers.

## Sanitary Sewer

All sanitary flows from the developing areas will be conveyed by gravity via a network of proposed 200 mm diameter pipes to existing and proposed 300 mm diameter trunk mains along the north side of Highway 10 as shown in Figure 2.3.1 in Appendix I.

The extension of 58B Avenue from 133B Street to 135 Street will require a sewer extension along Highway 10 from 132 Street in order to service the southern lots on the proposed south cul-de-sac. It may not be economic to develop these lots at the proposed density considering the high cost of the sanitary sewer required to service it. Pumped services may be considered.

As development proceeds and sanitary sewer lines are extended, existing residential pockets are expected to remove their septic fields and connect to the sewer. This would be accomplished through resident initiated local

improvement projects.

## Water

Many of the needed upgrades to the water distribution for this area are currently in the City's 10-Year Servicing Plan. Other key upgrades that will be necessary are:

- 450 mm diameter watermains along 128 Street and Hwy 10 east of 128 Street
- 250 mm watermain on 58B Avenue and Hwy 10 between 124A St and 128 Street
- 200 mm watermains along 58A Avenue, 131A Street, 135A Street, Hwy 10 (124 to 124A Street)

These improvements will create a looped network of 200 mm diameter watermains, which is necessary for adequate pressure for the centre of the study area as shown in Figure 2.4.1 in Appendix I..

## Phasing

Most of the major infrastructure necessary to service the NCP currently exists, except for specific watermains, sanitary sewers and storm sewer upgrades along Highway 10. Local servicing must also be constructed as development proceeds.

Key major water feeder mains, storm trunks and Major Collector Roads will need to be added to the 10-Year Capital Plan to facilitate development of the area. DCC rebates may be utilized for developers that wish to accelerate the program by front ending major infrastructure costs.

## Existing Local Improvement

A sewer local improvement extension (LIP) along 124A Street between 58A Avenue and 5977 - 124A Street was completed in 2001. Assignment of costs was on the basis of the zoning at the time, which meant that there will be no further subdivision potential on the east side of the street. The land use in the NCP report is being densified in this area and now allows for cluster housing (10 units per acre) for this part of the street. At the open house, one of the benefiting property owners in the LIP had requested for revisiting the original agreement. The cost-sharing scheme was based on the best information at the time of the LIP by-law adoption and a majority of the benefiting owners had agreed on the original cost-sharing scheme. The Legal Division has also confirmed that there is no requirement or mechanism under the Local Government Act to reopen the existing LIP agreements because it is impractical to re-compute each and every LIPs and secure agreements from the benefiting owners every time an unanticipated land use change occurs. Consequently the City will not recalculate the cost-sharing scheme for this LIP.

## Alternate Road/Lot Layout

The Planning Department has developed two options land use and road/lot layout for the area bounded by 59 Avenue, Highway 10, 129 Street and 130 Street. However, it only affects the local servicing works constructed by developers. There would be no impact on the major engineering infrastructure.

## Financing

A detailed financial analysis is included in the engineering servicing report available in the Engineering Department.

The following table summarizes the projected DCC revenues and construction costs for each engineering service at full build-out. The DCC revenues in this table are based on the current DCC rates.

Services	Projected DCC Revenues	Projected DCC Expenditures	Surplus/(Deficit) Balance
Sanitary Sewer	\$709,686	\$0	\$709,686
Drainage	\$1,933,654	\$799,000	\$1,134,654
Water	\$801,346	\$651,000	\$150,346

Major Collector Rd	\$1,165,778	\$1,344,000	(\$179,000)
Arterial Road	\$4,617,084	\$1,261,000	\$3,356,084

The above table demonstrates that the financial strategy for this NCP is in accordance with Council's policy respecting the developer-pay principle and requiring each NCP to be financially self-sufficient. DCC's are collected on a city wide basis not an NCP basis, thus while a considerable surplus is demonstrated in some services, these funds will offset shortfalls elsewhere in the City for these services.

## CONCLUSION

The West Newton/Highway 10 Master Servicing Plan report provides a comprehensive servicing and financial plan for the area. The report demonstrates that this NCP will be self funding so that major servicing costs are not borne by the existing taxpayers. As a result of this NCP a number of additions to the 10-Year Plan will be made at the next update anticipated for the end of this year.

Paul Ham, P.Eng.  
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PH/VL/JB/rdd/kjj/brb

## Attachments

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# APPENDIX I

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# **West Newton/Highway 10 NCP Proposed Servicing Plan Maps**