



EAST CLAYTON NCP ENGINEERING SERVICING PLAN

Prepared for:

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March, 2000

Project No. 36502-02

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**East Clayton NCP
Engineering Servicing Plan Report
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EXECUTIVE SUMMARY

East Clayton Neighbourhood (East Clayton NCP) comprises the southeastern sector of the Clayton Neighbourhood. This NCP area is approximately 250 ha and is bounded by 196 Street to the east (the east/west boundary between the City of Surrey and Township of Langley); to the north by 72 Avenue; to the west by 188 St.; and to the south by Fraser Highway and 64 Avenue.

Currently the area is substantially rural (except for the Aloha subdivision of urban acreage properties). The area is serviced by rural roadways, surface / ditch storm drainage systems, individual septic disposal systems and a limited grid of watermains. The proposed land use plan for East Clayton is shown in the attached *Figure (Plate 1.)* When that land use plan is fully implemented, it will increase the area's population by about 9,000 to 15,000, depending on the final build-out density (3,300 to 5,800 units). The area will also include a business park of over a million square feet.

To effectively service this development, the municipal infrastructure comprising urban roads, sanitary sewerage, water distribution system and stormwater drainage will need to be put in place. This report contains the proposed servicing plan for the above components. The salient features of these components and the process of their evolutionary development are briefly presented below.

Integrated Planning Process: The servicing plan is a result of an extensive interactive effort of a multi-disciplinary design team for the purpose of incorporating principles of sustainability and complete communities in East Clayton. As a result, the servicing plan includes innovative concepts for the roadways, and drainage management within the lots and along roadways. All of the proposed design elements in this plan are inter-related. Consequently, changes in one element will impact the other elements.

Transportation: The Transportation Network comprises of arterial, collector and local roads, back lanes, bicycle paths and pedestrian ways. The longitudinal and sectional layout of these transportation elements was extensively reviewed during the Charette process. The resulting roadway network plan provides a roadway hierarchy system and a variety of roadway sections to be implemented in East Clayton to support the sustainability objectives for the area. Thus, the roadway corridors will be designed to allow the placement of roadside swales, trees and bushes, and perforated storm sewer systems, and bio-filtration ditches/watercourses, so as to achieve an appropriately integrated servicing and landscaping scheme. These components are further described in Section 6.2 of the report.

Sanitary Servicing: East Clayton is located at the 'upper-end' of the Cloverdale Sanitary Servicing basin, developed as part of the Citywide servicing strategy. The area will be serviced by gravity sewers. There are two off-site receiving systems; one is along the Langley Bypass route to the south with a connection at 196 Street / 64

Ave. approximately and the other to the east at 188 St. / 68 Avenue approximately. The Langley By-pass trunk sewer is yet to be constructed. The 68 Avenue trunk sewer is presently, on an interim basis, discharging into the Clayton pump station; ultimately it will be connected to the future 'deep trunk' along 177 Street, for gravity servicing. Thus the progressive servicing of East Clayton is closely tied to the completion of off-site systems with adequate capacity. The recommended servicing scheme is presented in Section 6.3 of this report.

Water Supply: The total East Clayton area is within one pressure zone. A limited grid of watermains presently services the area. The majority of existing mains within this area are smaller diameter local mains (<300mm) that will have to be upgraded. The recommended network of grid and feeder watermains is presented in Section 6.4.

Stormwater Drainage: The drainage-servicing scheme for the area is significantly constrained by the limitations of the downstream lowland areas to handle increased flows from East Clayton as well as concerns regarding sustainability of fish habitat downstream and within the NCP area. The pursuit of sustainable development principles requires the implementation of alternative standards for the drainage system components. Resulting from the above, an advanced stormwater management scheme has been developed to meet infiltration, water quality and hydrological performance standards. It incorporates best management practices of facilitating active infiltration of stormwater runoff within each lot, along streets, as well as through deep infiltration wells and stormwater detention ponds with controlled outfalls into the downstream systems. The servicing scheme is presented in Section 6.5.

Implementation: Supporting the sustainable development objectives has resulted in the integration of innovative measures to the standard servicing practices and measures, as presented under each of the above four municipal infrastructure components, and the neighbourhood development plan.

To effectively implement these modified practices, the development review / approval process as well as the relevant development standards have to be updated and put into practice. Section 6.6 provides a brief discussion of the related issues.

Development Phasing and Financing: The implementation of the proposed development plan depends on the ability of developers to finance the required infrastructure to service their particular area, as well as the status of off-site sanitary system capacity. All servicing components impose different levels of constraints to various parts of the NCP area. DCC projections, based on the medium density outcome, indicate that revenues will exceed expenditures for the roadway, water supply, sanitary and stormwater servicing components. The issues related to the development phasing and the DCC financing are discussed in Section 7.0 of this report.

