

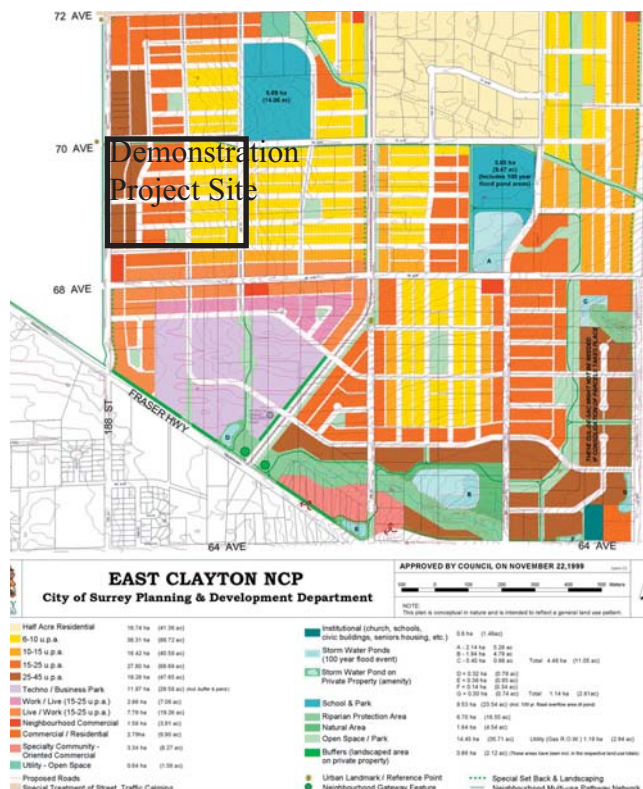
The Headwaters Project: A Sustainable Community Development in Surrey, B.C.

PART IV: DEMONSTRATION PROJECT:

SITE SELECTION

After considering various potential sites for a demonstration development project, a 50-acre development site in the East Clayton neighbourhood was selected to accommodate the first development project in East Clayton (see Map 1). A site in the East Clayton area was deemed suitable for a demonstration project to put the principles and alternative development standards into practice because:

- * It has major drainage constraints which needed effective and alternative ways to overcome.
- * There are significant costs associated with servicing the site – cost savings could be explored in the context of a demonstration project.
- * Surrey has an established leadership role in promoting sustainable development and Surrey City Council and staff had exposure and experience with sustainable development planning practices through the Clayton General Land Use Plan process and previous Surrey charrettes.
- * Local resident groups and the City were mobilized and most stakeholders were prepared to participate.

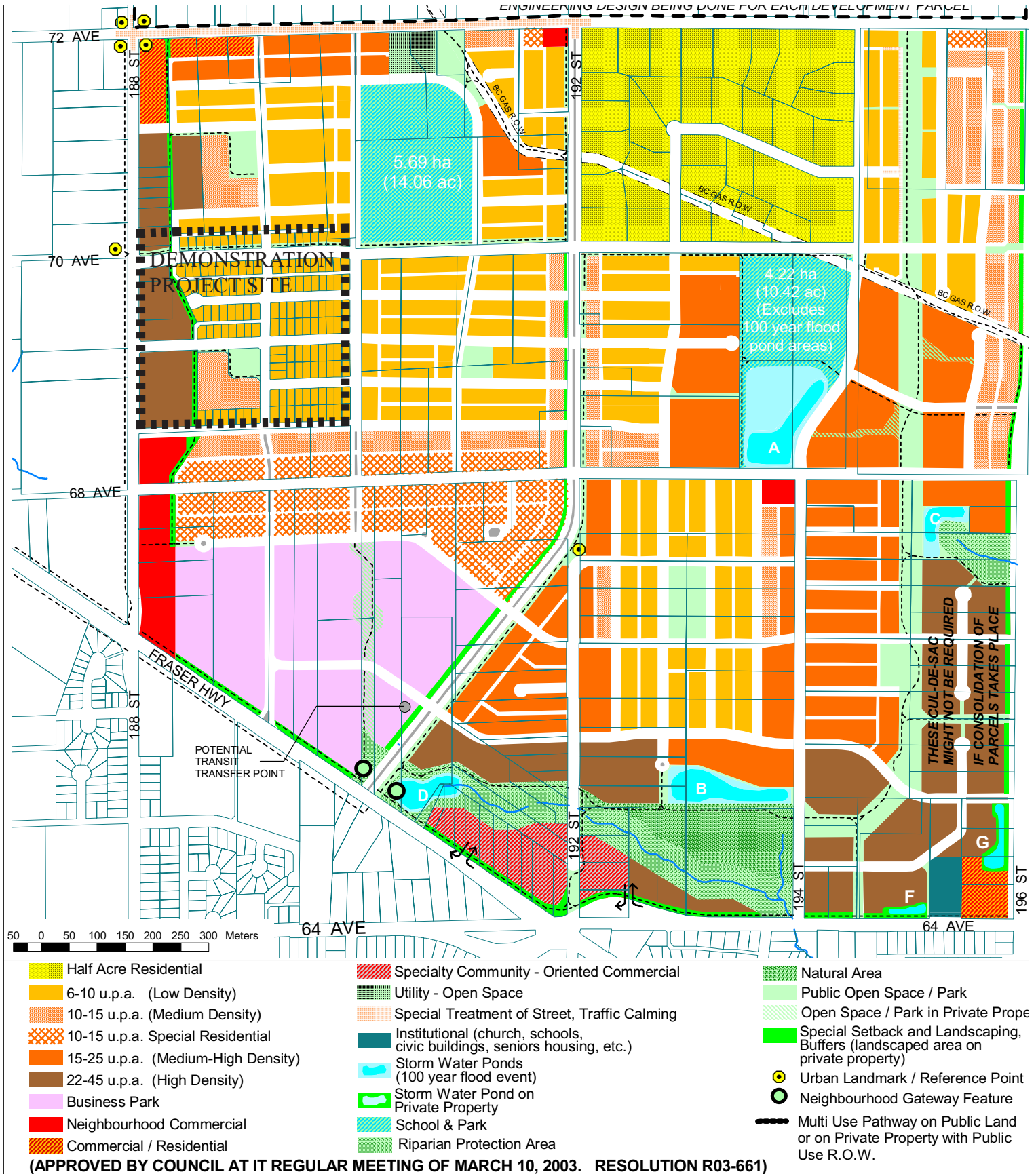


The site is located immediately east of an existing high school and community park area and west of a future elementary school. It is located within the northwest portion of the NCP area very close to the future community commercial precinct in the centre of the entire Clayton area. The formal application (first phase) submitted for rezoning and subdivision approval consisted of 142 lots on about 25 acres, including a small park (0.75 acres) and a north-south greenway. The project received approval to proceed by City Council on March 4, 2002.

Generally, the demonstration project includes:

- * 142 lots ranging from 322 to 498 square metres in size and two multiple residential sites
- * a net density of 26.96 lots per hectare (10.91 lots per acre)
- * 30% lot coverage on the residential lots
- * provision for coach houses in some and secondary suites in all of the homes
- * 50% lane access lots
- * no garage-dominated streets
- * a grid road pattern
- * a tree replacement plan
- * a major greenway, and
- * several “green” (more than average urban forested) streets.

CURRENT EAST CLAYTON LANDUSE PLAN: CITY OF SURREY 2003



The Headwaters Project: A Sustainable Community Development in Surrey, B.C.

MAJOR PARTICIPANTS IN THE DEMONSTRATION PROJECT

The Developer

The site for the Demonstrated Development Project is held outright or with options by a development company (the Developer) which is a large and respected development firm specializing in conventional single-family development and building. This particular site and Developer were chosen due to various constraints, as mentioned in the section above, including the location of sewer lines and the need to address the termination of stormwater flows on this site. The Developer is very active in the development of new urban areas in Surrey and other cities and municipalities in the Region. Representatives of the Developer were closely involved with the preparation of the East Clayton NCP both as an owner on the Citizen Advisory Committee, and as a developer on the Design Team. It is estimated that the Developer has an interest in approximately 150 acres in the entire East Clayton Area.

The City of Surrey

The Planning and Development Department led a team of City staff in participating in the design sessions and charrettes associated with designing and reviewing the early proposals for the demonstration development project. Present at the sessions were senior staff from the Planning and Development Department, the Engineering Department and the Parks, Recreation and Culture Department (managers, planners, urban designers, engineers and arbourists). Having senior staff in attendance aided in achieving focused and real results at the sessions due to the ability of the City teams to make decisions at the table.

The James Taylor Chair in Landscape and Liveable Environments

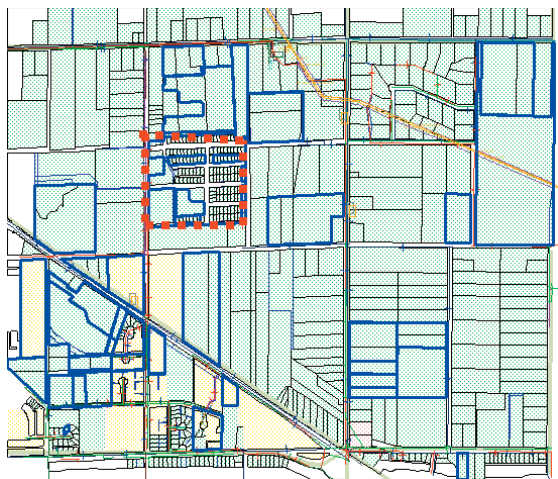
The James Taylor Chair (JTC) provided leadership and technical expertise on principles of sustainable urban design and the use of the design charrette method for the demonstration development project. A representative of the Pacific Resources Centre assisted in facilitating the charrette sessions and ensured that the process was fair and efficient. Staff from the JTC took notes on all of the charrette sessions and ensured that the follow up actions and responsibilities assigned were carried out by the specified parties. As Chair of the Headwaters Advisory Committee, the JTC also kept the Committee updated on the progression of the demonstration project and relayed the advice and comments of the Committee to the demonstration project teams. There were also a number of technical experts on the project team, including engineers (both the Developer's and the consultants engaged by the City), architects and a hydrologist.

The Headwaters Project: A Sustainable Community Development in Surrey, B.C.

ACHIEVING 7 SUSTAINABILITY PRINCIPLES

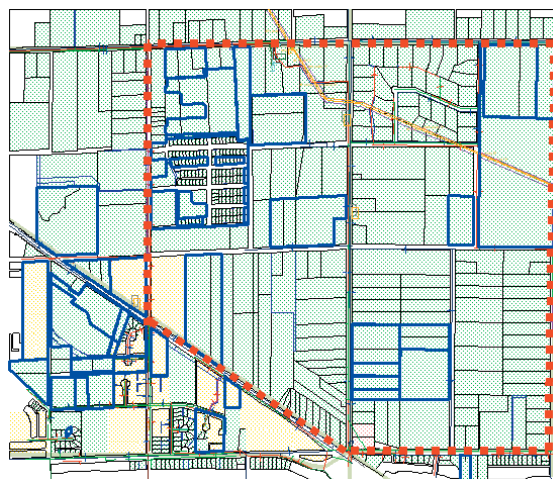
It is recognized and expected that the experience gained from this project and the process leading to the project approval and construction will result in more fuller achievement of the sustainable development objectives in the future projects in East Clayton and elsewhere. The following pages provide tables detailing how the Demonstration Project has satisfied the NCP's 7 sustainability principles and the associated objectives and performance standards relevant to the Project site. These tables include details of specific methods used to meet each principle and lessons learned along the way, such as the need to seek external funding for the construction of more 'risky' sustainable infrastructure. As mentioned in the following tables, success in sales of the development (100 of 142 lots sold since the project completion in January 2003) has already convinced developers of future phases and City of Surrey staff of the viability of alternative infrastructure.

DEMONSTRATION PROJECT: CONSTRUCTION PHASE 1



Blue areas currently under official subdivision permit process

FUTURE CONSTRUCTION PHASES OVER NEXT 10 YRS



Principle No. 1

Increase density to conserve energy by the design of compact walkable neighbourhoods to encourage pedestrian activities where basic services (e.g. schools, parks, transit, shops, etc.) are within a 5 to 6 minute walking distance from their homes.



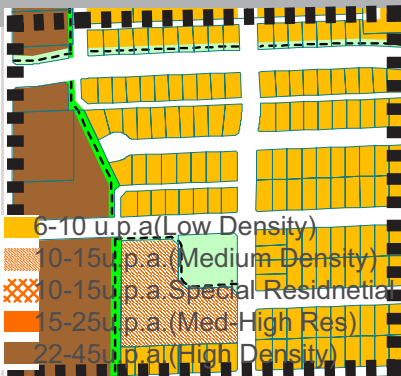
New residential East Clayton street with compact townhomes.

NCP OBJECTIVES

PROJECT RESULTS

COMMENTS/LESSONS

1.1



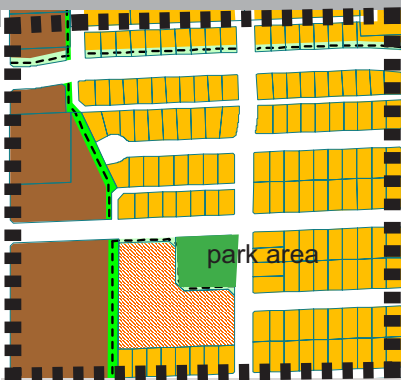
Average Gross Residential Density of 10 units per acre.



Achieved, densities ranging between 6 to 10 units per acre for low density, 10 to 15 for medium and 22-45 for high density.

- In the initial phase, the proposed lots range in size from approx. 322 sq. m./3,446 sq. ft. to 498 sq.m./5,3000 sq.ft.
- See Table 1 on following page detailing standards developed by City to act as incentives for meeting density targets.

1.2



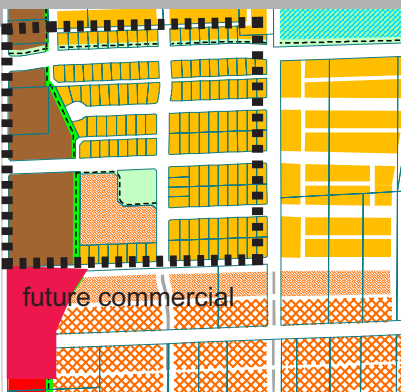
The first project should have access to a park.



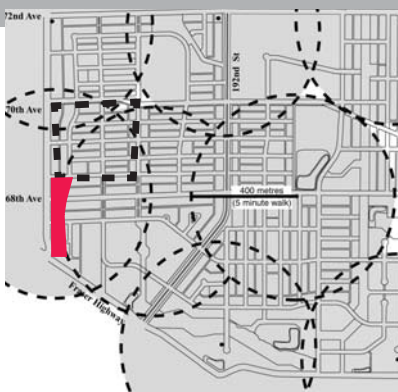
Achieved, park area located on the corner of 189th St and 69th Avenue.

- The total area of both the park shown in this phase located at 189th St and the park planned above 70th Avenue, will comprise 5% of the area under the current and future phases.

1.3



All residential units located no more than a 5 minute walk from a neighbourhood commercial area.



Achieved with future construction phases.

- Commercial not planned for this Phase, however will be included in future phase, located as shown at left within 400m/5min walk from all residences in Phase 1.

Affordability and Choice Today (ACT) Program: Phase E: Final Report

To encourage the proponents of development projects to meet the density (and diversity) targets, the City developed a model set of standards which will act as an incentive for proponents to propose higher densities and a range of housing and tenure types. The model incentive standards are illustrated in Table 1.

Density Range as per NCP	Base Density/Zone Permitted ³	Density Permitted if Both Additional Density and Diversity are Proposed	Zones Permitted if Both Additional Density and Diversity are Proposed ⁴
Half-acre Residential (Aloha Estates)	RH	4 upa	one coach house per lot RH, RH-G
6-10 upa Note: minimum density must be achieved in all designations	6 upa/RF	8, 9 & 10 upa permitted if there is a minimum of 20% mix of unit types provided (20% of the unit types on a block or development project must be other than the type allowed in the base zone (i.e., detached single family home in RF Zone); this does not apply to secondary suites (RF-SS); single detached homes regardless of the zone, are considered to be one unit type	Coach houses on every corner lot (zone & regulations impending) RF, RF-G, RF-12, RF-SD, RM-D, RM-10, RF-12C
10-15	10 upa/RF-12	11, 12 upa permitted if minimum 10% mix of unit types provided	Coach houses on every corner RF-12, RF-9, RF-SD, RM-D, RM-10, RF-12C
		13, 14, 15 upa permitted if minimum 20% mix of unit types provided	Coach houses on every corner RF-12, RF-9, RF-SD, RM-D, RM-10, RM-15, RM-19, RF-12C
15-25	15 upa/RM-15	16 - 19 upa	Coach houses encouraged on SF lots RF-12, RF-9, RF-SD, RM-D, RM-10, RM-15, RM-19, RF-12C
		20 - 25 upa	Coach houses encouraged on any SF lots RF-12, RF-9, RF-SD, RM-D, RM-10, RM-15, RM-19, RM-30, RF-12C
25-45	25 upa/RM-30	26 - 30 upa	RF-12, RF-9, RF-SD, RM-D, RM-10, RM-15, RM-19, RM-30, RM-45, RF-12C
		31 - 45 upa	ALL + RM-45

* Net density excludes roads, watercourses and other undevelopable lands.

Principle No. 2

Provide different dwelling types (a mix of housing types, a broad range of densities from single family homes to apartment buildings) in the same neighbourhood and even on the same street.

2



East Clayton residential streets with a range of housing types, including townhouses, small and medium single family and detached strata homes, all in a two block area.

NCP OBJECTIVES

PROJECT RESULTS

COMMENTS/LESSONS

2.1



Mixed housing types to allow a wide range of incomes, ownership and rental options.



Achieved, as seen above, various housing types included in a two block area.

•The first project includes townhomes, small and medium single family and strata homes. Subsequent projects will include higher ratios of multi-family developments.

2.2



Secondary suites and coach houses are to be planned for in low and medium density projects.



Achieved, as all single family houses have been built to accommodate rental units.

•Single family houses have been designed to include units which can be converted into secondary suites, which are legal by right in single family homes. Densities in this phase will therefore increase with the gradual inclusion of secondary suites.

Affordability and Choice Today (ACT) Program: Phase E: Final Report

To achieve a variety of lot sizes and housing types, the City also undertook a review of its Zoning Bylaw with a view to creating a series of new small lot zones to ideally be utilized most predominantly in East Clayton. The new zones and their associated development standards are outlined in Table 2.

Table 2: Small Lot Zones

Zone	Lot Size	Max. No. Units Per Acre	Frontage	Dwelling Unit Size	Maximum Lot Coverage	Comments ^o
RF Single Family	6,000 sq.ft.	6	50 ft.	2,800 sq.ft.	40% buildings only	Standard lot
RF-SS Single Family Secondary Suite	6,000 sq.ft.	n/a	50 ft.	suite max. = 968 sq.ft.	40% buildings only	
RF-G Single		7.5 with	40 ft. - 50% can be	0.55 FAR incl. 300	45%	15% open space
RM-15 Multiple Residential 15 Strata	0.5 ac. (for strata)	15	100 ft. (for strata)	n/a 0.6 FAR for entire lot	45% (strata over 2.5 acres in size)	strata (townhouse); indoor and outdoor amenity space required
RM-19 Multiple Residential 19	1,800 sq.ft.	19	20 ft.	0.90 FAR for interior lot	55% internal unit 45% end unit	fee-simple rowhouses
RM-30 Multiple Residential 30 Strata	0.5 ac. (for strata)	30	100 ft. (for strata)	0.9 FAR for entire lot	45% (strata over 2.5 acres in size)	apartments & townhouses; indoor/ outdoor amenity space required
RM-45 Multiple Residential 45 Strata	0.5 ac. (for strata)	45	100 ft. (for strata)	1.3 FAR for entire lot	45%	medium rise apartments; indoor/ outdoor amenity space required

Principle No. 3

Communities designed for people; therefore all dwellings present a friendly face to the street to promote social interaction.

3



Homes designed with 4 meter setbacks and front porches to aid in neighbourhood interaction.

NCP OBJECTIVES



Front yard setbacks should be reduced to 4 meters for single family lots and elevated front porches should be encouraged.

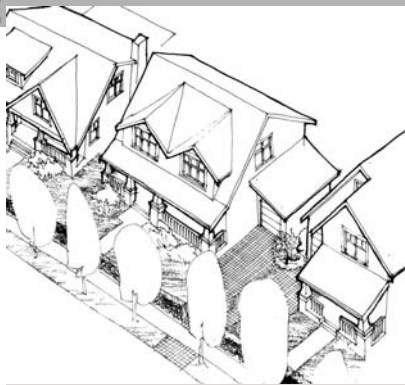
PROJECT RESULTS



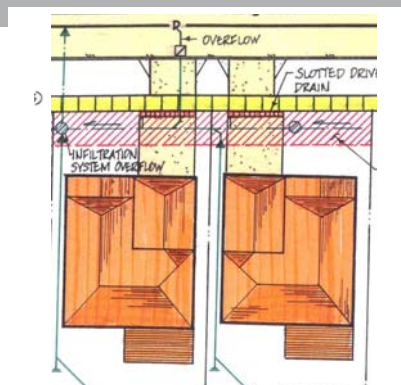
Achieved, as seen in picture above, 4 meter standard setbacks have been followed and front porches included.

COMMENTS/LESSONS

- Residential development has taken place within the RF-12 Zone, which allows 4 meter setbacks, front porches and a further front setback of 2 meters in possible.
- RF-12 also requires that front garages be designed to be ancillary in the overall house design, and a 2 meter setback was enforced for front access garages from the primary facade of a house.



For blocks with no lanes, shared driveways should be provided to reduce the number of curb cuts.



Partially achieved; for blocks with no lanes, it was decided that driveways would instead be by paired.

- Although paired driveways are a departure from shared driveways, they continue to minimize curb cuts.
- The decision to provide paired instead of shared driveways was an attempt by the developer to compensate for the perceived risk involved in reduced front setbacks and lot sizes.
- Success in sales so far, over 100 lots sold since January 2003, has encouraged developers in future phases to accept universal lane access and will eliminate environmental, social and transportation safety issues consequent to driveways.

Principle No. 4

Car storage and services handled in lanes at the rears of dwellings.

4



East Clayton back lane providing rear vehicle access to residences.

NCP OBJECTIVES



Car storage and services are handled at the rear of dwellings.

PROJECT RESULTS



Out of 8 blocks, 5 blocks have access to rear lands and portions of 3 blocks have private rear access easements.

COMMENTS/LESSONS

- The success of the current phase, over 100 lots sold since January 2003, has convinced all developers involved in future phases to implement lane access housing to full standards.

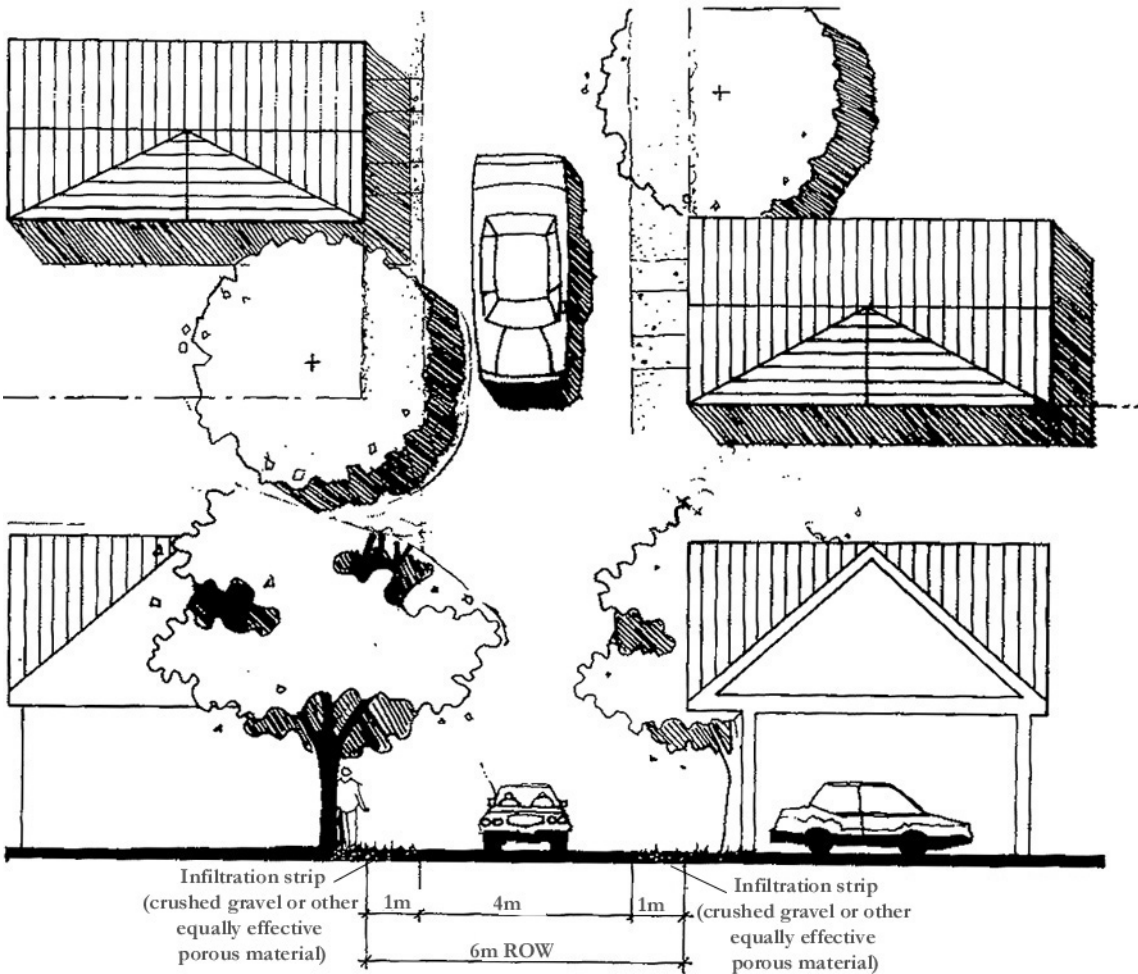


Diagram of rear lanes to be integrated into community.

Principle No. 5

Interconnected street network to insure that every trip, whether on foot, bike, or by car, is via the shortest possible route to disperse traffic congestion; and public transit to connect East Clayton with the surrounding region.



Interconnected street network for East Clayton working off existing arterials.

NCP OBJECTIVES



Cross roads or mid block connections should be no greater than 100-150 meters apart (or every two blocks).

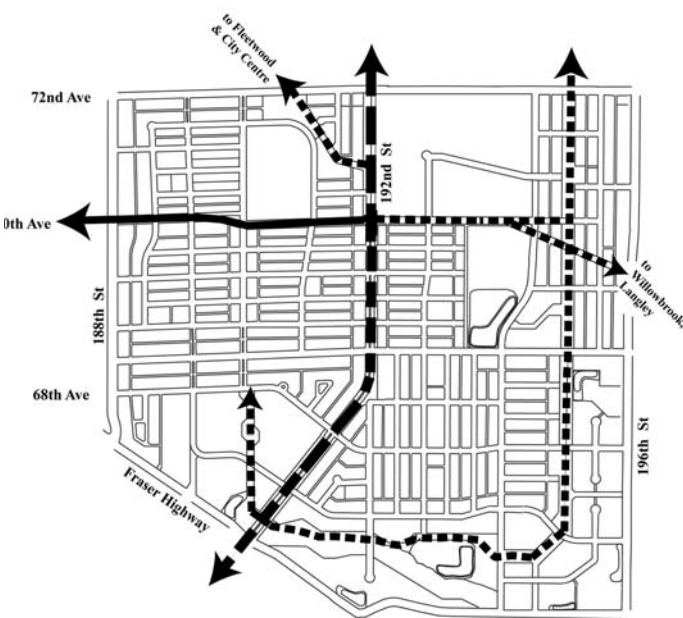
PROJECT RESULTS



Achieved, building on existing defined arterial and major collector road network as much as possible, using the modified "grid" system of streets with short blocks and rear lanes to provide multiple route choices and a more refined pedestrian/cyclist network.

COMMENTS/LESSONS

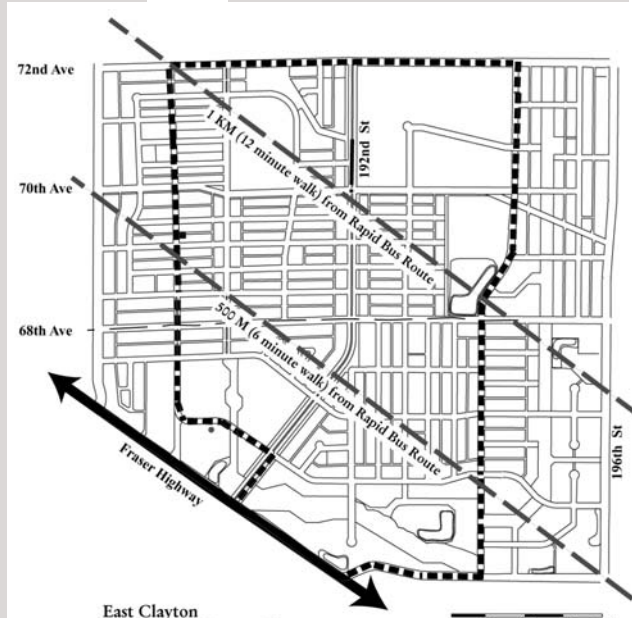
- 188 A Street has been eliminated in favour of a north-south multi-use corridor between the single family lots and multiple residential sites. Therefore, the interconnectivity is maintained for pedestrian and bicycle traffic.
- Street network has been designed to accommodate transit routes, respect the continuity of greenspace, drainage requirements, land use/topography conflicts, and existing property lines.



East Clayton Neighbourhood Concept Plan

- Dedicated Greenway with Multi-use Path
- Riparian Parkway
- 70th Avenue Greenway

Diagram of Greenways, Dedicated greenways with multi-use paths, and riparian parkways.



East Clayton Neighbourhood Concept Plan

- Rapid Bus Every 10 Minutes
- Potential Future Bus Loop
- Potential Future Bus Transfer Point

Diagram of bus route with stops within walking distance of all households.

Principle No. 6

Narrow streets shaded by rows of trees to save costs and to provide a greener and friendlier environment.

6



Residential street with generous tree boulevard.

NCP OBJECTIVES

PROJECT RESULTS

COMMENTS/LESSONS

6.1



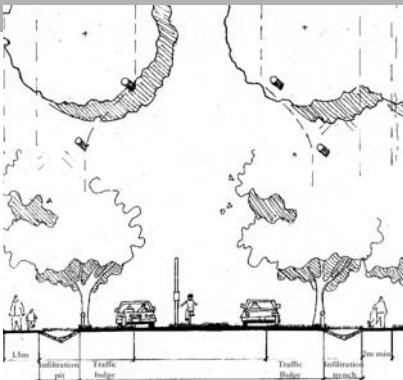
Canopy of street trees should cover at least 60% of the street surface at full maturity.



Achieved, as seen above in wide tree boulevards lining residential streets.

•Shade trees are closely spaced and 25 foot queing streets mean narrower width to shade. Streets with lanes present no problems for planting. The paired drive-ways used in phase 1 continue to maintain tree planting rhythm.

6.2



Street rights of way are to be no more than 50% impermeable surface.



Partially achieved, in planted boulevards and crossings with interlocking pavers.

•Street rights of way for the first phase have been paved with asphalt, however 50% permeability standards will be upheld in future construction phases, as made possible by grants described in section 7.

Principle No. 7

Preservation of the natural environment and promote natural drainage systems where storm-water is held on the surface and permitted to seep naturally into the ground.



Left: infiltration devices in the form of crushed stone and clean out basins incorporated into front lawns. Right: topsoil to be replaced at double depth to absorb water.

Affordability and Choice Today (ACT) Program: Phase E: Final Report

NCP OBJECTIVES



Impermeable surfaces (e.g., roof areas) are to drain to permeable areas and/or on-site infiltration devices constructed by the developer.

PROJECT RESULTS



Achieved, in the form of crushed stone and clean out basins built into front lawns, designed to ensure 12 to 24mm/day infiltration and 30 years operation.

COMMENTS/LESSONS

•For the purposes of monitoring in the first phase, 50% of lots have been installed with infiltration devices and 50% without. Locations of devices, monitoring stations and initial results included on following pages of this section. Initial results indicate viability of devices, therefore all future lots will be installed with infiltration devices.

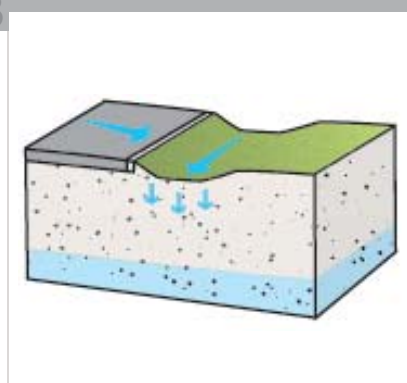


Native top-soil removed for construction of services, roadways, lanes, etc. is to be replaced on the lots during or following construction.

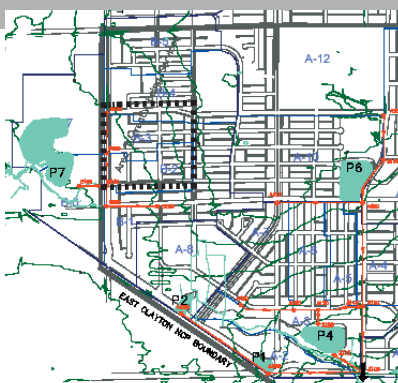


Achieved, with no top-soil removed from site and replacement at double depth to absorb water.

•In areas where topsoil depth was greater than .5 meter, at least the first .5 meters of topsoil was stockpiled for later distribution over the areas of the site intended for permeable surfaces. As a result, yards and boulevards will absorb more water and provide a better medium for tree growth when this project is completed than the site does at present.



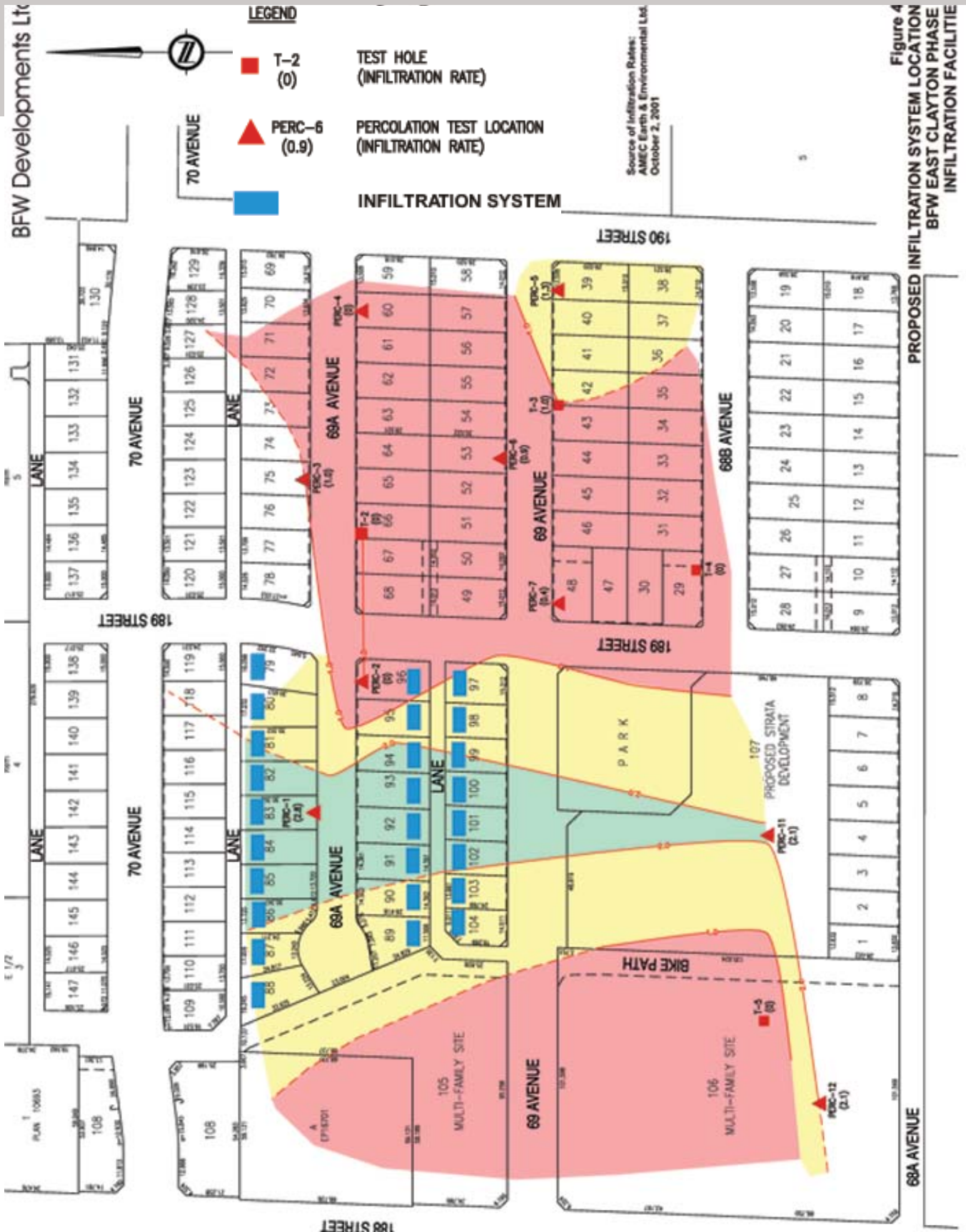
Incorporate streets into a network of swales which will absorb most street runoff, and when saturated drain into retention/treatment ponds or artificial wetlands.



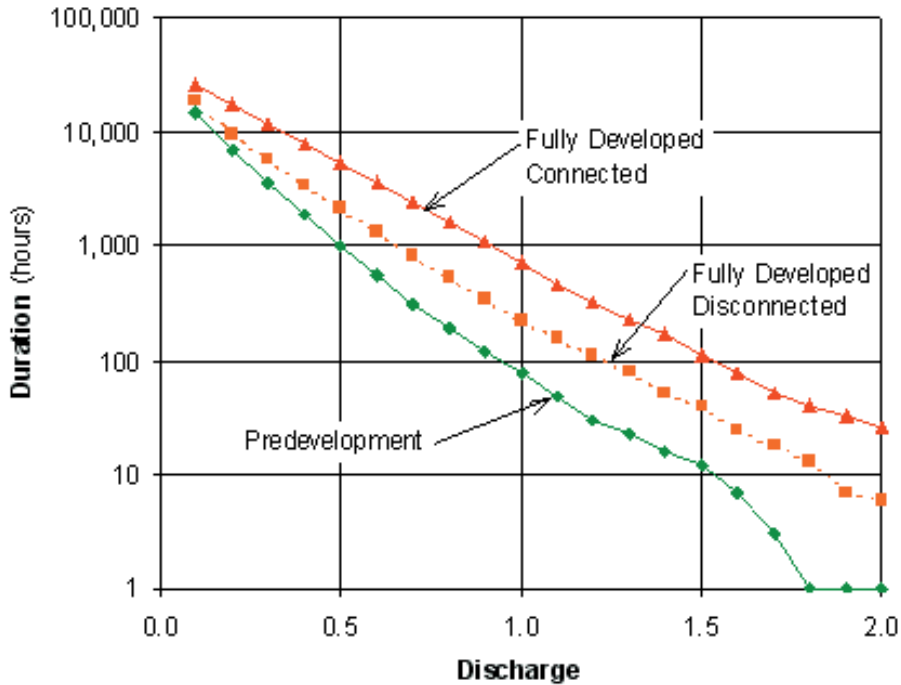
To be introduced with future construction phases. Treatment ponds on different areas of East Clayton shown in green above.

•Alternative drainage systems were difficult to implement under existing City of Surrey standards. The project was therefore granted \$862,000 by senior governments in Spring 2002, for the development of the innovative stormwater drainage system in the form of lot future phases. Developers have agreed to build all future streets in East Clayton to NCP infiltration standards and treatment ponds on various parts of the site will be constructed incrementally with each successive phase.

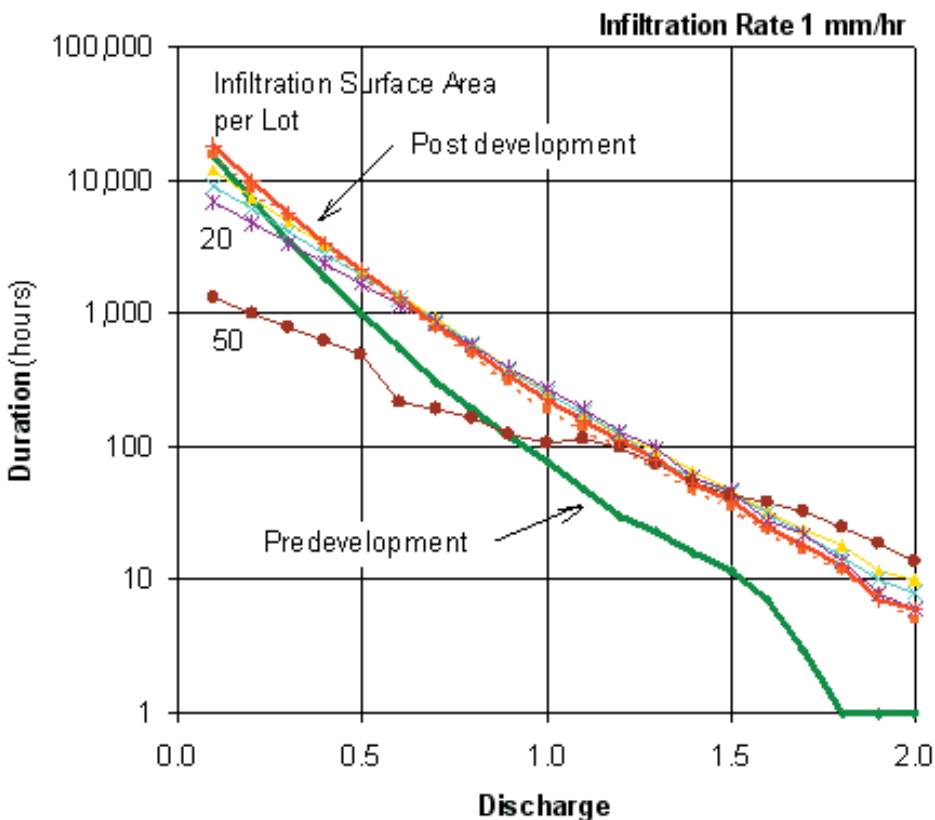
Infiltration device and test locations for phase 1.



Infiltration monitoring: concept used in testing stormwater flow for various conditions and below, results of preliminary tests on infiltration sites, showing positive relationship between pre-development flow and post-development flow, a result of infiltration devices.



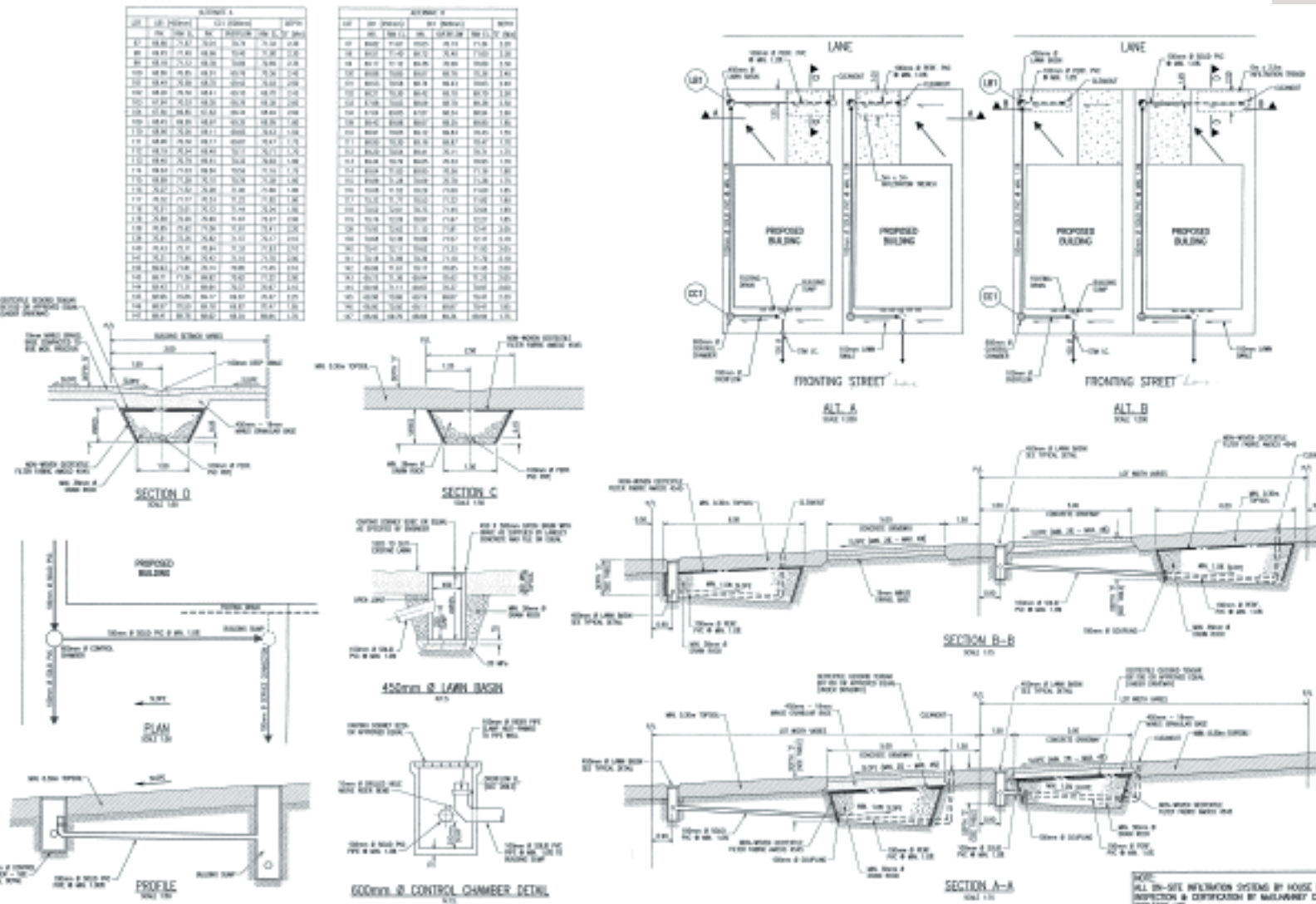
FLOW DURATION CONCEPT



FLOW DURATION RESULTS

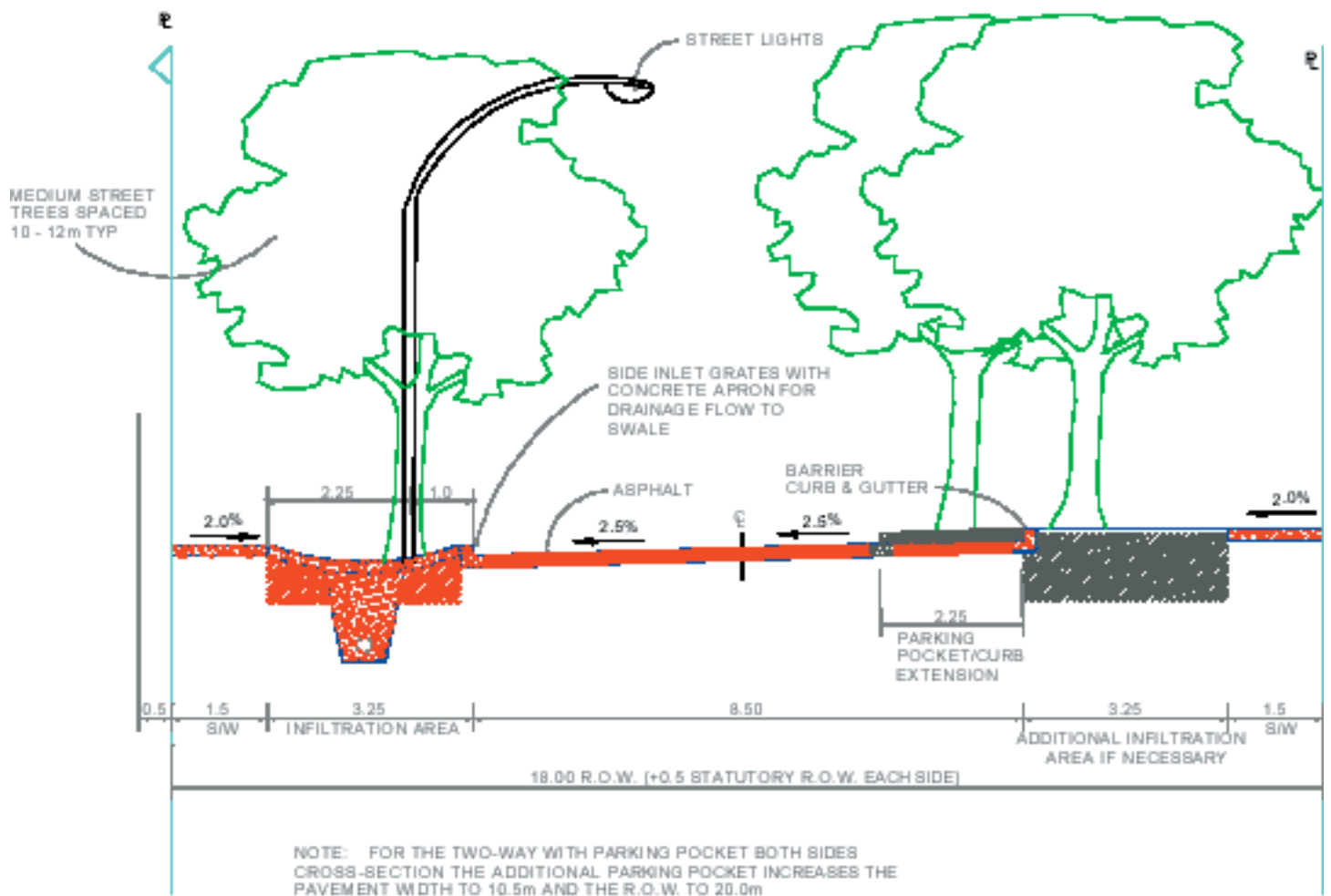
Affordability and Choice Today (ACT) Program: Phase E: Final Report

Infiltration design details. In most cases infiltration pits are located at front, rear or side property lines and as far from the building foundations as is practical so that there is at least one metre of undisturbed parent material between infiltration pits and foundation excavation. Infiltration pits can be filled with ¾ inch crushed rock or prefabricated infiltrators. Grass filter strips and elevated yard drain inlets should be used to prevent siltation.



<p>DATE: 10/10/02</p> <p>PROJECT: 7801-0188-00</p> <p>CLIENT: BFW DEVELOPMENTS LTD.</p> <p>LOCATION: LOTS 97-104, 109-119 & 136-147 INCLUSIVE</p> <p>PROJECT NO: 7801-0188-00</p> <p>DATE: 10/10/02</p> <p>BY: [Signature]</p> <p>CHECKED: [Signature]</p>	<p>McElhanney</p> <p>McElhanney Consulting Services Ltd.</p> <p>12000-100 Ave., Suite 100, Edmonton, Alberta T5A 0A6</p> <p>TEL: 780-443-1111</p> <p>FAX: 780-443-1112</p> <p>WWW.MCELHANNERY.COM</p>	<p>BFW DEVELOPMENTS LTD.</p> <p>12000-100 Ave., Suite 100, Edmonton, Alberta T5A 0A6</p> <p>TEL: 780-443-1111</p> <p>FAX: 780-443-1112</p> <p>WWW.BFWDEVELOPMENTS.COM</p>
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Construction details for future swale lined two-way queuing streets. Figure shows a swale drainage system which will improve infiltration thereby reducing the total drainage flow through the storm sewer system. Narrow pavement widths with landscaped curb extensions which will also increase the infiltration opportunity for road drainage.



The Headwaters Project: A Sustainable Community Development in Surrey, B.C.

LESSONS LEARNED

Early Development Proposals

The Project Team relied on the Developer, who actively participated all along in the design and consultation process, to submit the first development proposal to be heralded as the demonstration project. The project was intended to set an example for others to follow in pursuing sustainable developments. Through the charrette process and other design team events, the Developer had the benefit of hearing the comments and requirements of the City and other participants well in advance of finalizing a development submission for official review and approval by the City. Upon submission of a preliminary project (before formal application for rezoning and subdivision), several meetings with the Developer representatives were held to discuss the various issues, particularly issues associated with the Developer's reluctance to initially incorporate all of the recommendations on sustainable development design.

The preliminary proposal was not consistent with the approved development concept for East Clayton, and would not have achieved most of the sustainable development principles. A more detailed assessment of this initial proposal was provided in a Corporate Report to City Council, but it was noted that the main concern expressed by the Developer was the anticipated non-marketability of the final product, along with the desire to reduce costs to the lowest level possible. Overriding all of the Developer's (and to some extent the City's) concerns regarding the demonstration project was the "risk" associated with implementing new ideas and systems for site and neighbourhood sustainability.

The "First Development" Problem

At these early stages of project development (pre-application), it was the opinion of City staff that many of the Developer's issues could be alleviated through adjustments to the proposed project along with some measures to reduce the risk associated with the "first" development in the area. Some possible remediation factors to address the risk issue were explored by City staff, including:

- * Financial incentives or grants from senior governments for the City and/or the Developer to reduce risk
- * A defined and focused partnership between the City and the Developer on a small pilot project (a smaller project would involve less risk)
- * Guaranteed faster approval processes for the demonstration project
- * Involving the Developer in the preparation of the alternative street and drainage standards
- * Canvassing other developers to participate in a demonstration project (several had expressed interest).

The City has pursued the idea of obtaining grants from senior governments to cover some of the risk factors - mainly those associated with the design and construction of stormwater infrastructure and the "safety net" needed to back up the untried natural stormwater systems. Recognizing that incremental and cumulative sustainable development at the local level benefits the regional, provincial, federal and even global environments and communities, the City requested equal "risk management" funding assistance from the GVRD, the Province and the Federal government. Grants were also applied for under the Canada Green Infrastructure Fund to implement a comprehensive sustainable stormwater management program. As of March, 2002 the GVRD has approved the funding formula (which also involved contributions from the City of Surrey) and the grant has been approved by the Federal and Provincial governments (see the 'Public Profile: articles written' on following page).

The Headwaters Project: A Sustainable Community Development in Surrey, B.C.

PUBLIC PROFILE: ARTICLES WRITTEN

Developments in the project's infrastructure funding have been reported in the following article excerpt: "A progressive residential subdivision near Cloverdale has been granted \$862,000 by senior governments for an innovative stormwater drainage system. The East Clayton "sustainable development" project will use a system of natural drainage — through soil enhancement, detention ponds and similar works — to replace conventional storm sewers, thus reducing damage to urban streams. "The storm water technology used in this project, subject to successful performance, could have application throughout the province," said Kevin Falcon, B.C. Liberal MLA for Surrey-Cloverdale. The B.C. and federal governments will each contribute \$431,000 to the drainage project under the Canada-B.C. Infrastructure Program. The program is allocating \$536 million in senior government funding around the province for local works. Surrey taxpayers will pay for the remainder of the local drainage project's \$1.29-million total budget. The East Clayton development, in a largely rural area north of Cloverdale, is also planned as a pedestrian-oriented neighbourhood that could house as many as 14,000 people." Taken from: East Clayton Project Receives \$862,000 Grant: Innovative Drainage system could set provincial standard. The Surrey Leader. June 26, 2002 <http://www.sustainablecommunities.agsci.ubc.ca/newsbody.html>

The Georgia Basin Initiative website also recently ran an article on the project, detailing the profile of the project within the planning and development communities:

The City of Surrey must represent its future constituents and will develop an education package to inform residents about the NCP's green features. "Everything is a special bylaw including zoning, subdivision bylaw, development works bylaw - everything's new," says Wendy Whellen of Surrey's Planning Department. "It will all be specific to East Clayton until it's proven." John Turner points out the developers are taking risks, too. "This is a different style of development and it's more costly. Most planners think that if you give a developer a higher density they'll be happy and that's not necessarily true. The units are worth less and you have to sell more of them. Municipal fees are 50 percent of the cost of developing a lot so you double the density, you double all the fees and levies. That just makes it more difficult to keep the costs of these lots down." But Turner adds, "we had to look for an alternative way of dealing with water and the time was right to do that because it's not just this area. All of the Lower Mainland is going to have to start dealing with drainage in a different way. We could see that was coming and we thought that this was an opportunity to be at the forefront. And I think that it will be to the benefit of the Lower Mainland that we do that." Taken from: Surrey Shifts Sustainability Status Quo with Neighbourhood Concept Plan GBEI Stories From the Basin. by Geoff Gilliard. Environment Canada Georgia Basin Ecosystem Initiative <http://www.sustainablecommunities.agsci.ubc.ca/newsbody.html>

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MEMORANDUM OF UNDERSTANDING

Below is a Memorandum of Understanding and Working Paper created for the project but never executed. It is the opinion of the James Taylor Chair that the process would have been more efficient if the document had in fact been used and we recommend that other Canadian municipalities commit to this kind of round table process in an effort to overcome possible conflicts. The projects subsequently undertaken by the James Taylor Chair, such as SmartGrowth on the Ground project, have benefited from this experience and expect to secure a longer term commitment from future municipal partners, a partnership that will include a process like the one included below.

**Memorandum of Understanding (I) and Working Paper
(II)**

Sustainable Development Demonstration Project – East Clayton

I. Memorandum of Understanding

Memorandum of Understanding between:

- a. The City of Surrey (the City)
- b. the Developer
- c. UBC James Taylor Chair in Landscape and Liveable Environments (Headwaters)

This Memorandum of Understanding (MoU) is to confirm the following understanding:

Objective:

- a. That it is the intention of the Developer to submit an application for the development of land within the boundaries of the East Clayton Neighbourhood Concept Plan (the NCP). Prior to submission of a formal application the City, the Developer and Headwaters herein after referred to as the Parties have the desire to jointly resolve certain outstanding matters regarding implementation of NCP polices and performance standards. These matters are listed in the foregoing. It is also the desire of the Parties to resolve these matters in a collaborative format.

Programme Scope and Stages:

- a. That it is the intention of the Parties to deal with the outstanding matters listed below in accordance with the following programme.
- b. That the programme focus is on resolving matters of two types: (1) preliminary and (2) on-site development. Preliminary matters are those identified as needing to be resolved prior to on-site planning. On-site are those matters that will be dealt with through the actual designing and planning for a specific development.
- c. That preliminary matters will be worked out in preliminary sessions that will include representatives of the Parties, unless the matter can be dealt with through the single action of one party.
- d. That any one Party can convene a preliminary session.

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- e. That matters related to on-site development shall be resolved in a design session format that will involve all participants including others the Parties decide need to be involved.
- f. That the Design Session will be facilitated.
- g. That Educational Programmes will be developed through the outreach programme and will involve the three Parties and other necessary agencies.
- h. That a report back session be held as described below.

Timeframe:

- a. Preliminary sessions dealing with preliminary matters will be completed on or before September 15, 2000.
- b. A Design Session dealing with matters related to on-site development will be held during the day(s) of September 18 and if necessary September 19, 2000.

Outstanding Matters:

- a. That it is the intention of the Parties to resolve the following outstanding matters in accordance with the stated format and timeframe.

Outstanding Matters	Type	Format
Developer Cost Charges and Amenity Rates		
Confirmation of DCC rates at \$13,500 for densities 10+upa net	Preliminary	City Confirmation
Confirmation that there will be no DCC's on house designs with suites		City Confirmation
Doubled amenity rates for Parks since NCP developed		Preliminary Session
Sanitary and Water Rate Reduction with higher densities		
Rates allocated to fire service without new station		
Sustainable Community		
Minimum Criteria	Preliminary	Headwaters completes Matrix
Infiltration and Surface Flow Management System		
Soil Infiltration Standards—Method vs. Performance Standards	Design	Design Session
Infiltration Devices		
Soil Management/Sediment Control		

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Outstanding Matters	Type	Format
Urban Forestry Policy		
Tree Cutting		
Soil impacts		
Tree locations		
Compliance and Maintenance of Performance Objectives		
Developer and Builder Accountability		
Urban Design		
Streetscape	Design	Design Session
Lanes		
Road Cross-Sections (curbs & gutters)		
Flexibility		
Density Blending and Housing Types	Preliminary	Preliminary Session
Work/Live and Live Work—Residential First		
Mini-park location		
Mini-Park Designation 1 st Development	Design	Design Session
Education		
Homeowner Education	Post Design	Joint Session

Roles, Responsibilities and Duties:

That in working towards the above stated objectives it is the understanding of the Parties that:

- a. The City will participate in the collaborative sessions; establish a project team to participate in the development of planning, design and engineering concepts and standards. The City will review and process development application(s) received subsequent to the design session. The City's participation does not impose or imply any obligation on the part of the City to approve any proposed policy, bylaw amendments or development applications arising out of the design session or remove the absolute discretion in any matter that requires the City's approval.
- b. The Developer will participate in the collaborative sessions and be responsible for identifying a parcel/parcels of land to be the subject of a development design intended for submission in

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the form of a formal application to the City for development. The Developer will put forward details on the features of the site and concept proposals relevant to on-site drainage systems and subdivision layout.

- c. Headwaters will participate in the collaborative sessions and be responsible for the establishment of a technical sub-committee composed of appropriate design expertise to provide expert advice to the Parties. Headwaters will set the minimum criteria to achieve a sustainable community in East Clayton and to provide a level of quality assurance in maintaining the principles of sustainability. If necessary, Headwaters will inform the Parties that in its opinion certain design features will limit the ability to declare East Clayton a sustainable urban community.

Participants:

That participants to the collaborative sessions shall include but not be limited to the following:

The City:

- Project Manager
- Senior Planner
- Urban Design
- Engineering & Drainage Engineers
- Parks & Recreation Manager

The Developer:

- Design Consultant
- Engineering Consultant

Headwaters:

- James Taylor Chair
- Urban Design Consultant
- Drainage Consultant
- Transportation Consultant
- Fisheries & Oceans Representative

Participation Guidelines:

- a. The Parties are aware of the outstanding matters and agree to resolve those matters jointly with the Parties to this MoU.
- b. The session(s) including preliminary sessions will involve all the parties although those representing each party may vary depending on who needs to be involved given the subject matter.
- c. Full disclosure of all relevant information is essential including all documents and materials relevant to the issues. The parties understand and acknowledge that any agreement reached as a consequence of the collaborative session may be set aside if full and frank disclosure of all relevant information has not been made.
- d. The Parties agree that decisions reached jointly may only be altered through joint agreement.
- e. Discussion on a matter may be terminated or set aside with the joint agreement of all the parties.
- f. Notwithstanding that the City is the final arbiter on matters related to planning policies and performance standards the parties understand that all decisions are by way of consensual agreement on matters at issue.
- g. All parties understand that the Developer may or may not submit an application for development subsequent to the design session(s).

Communication and Report Back Session:

- a. That joint decisions of the design session participants will be communicated to appropriate authorities if not represented at the Design Session or during negotiations in a timely manner.

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Where there is disagreement or further inquiry is deemed necessary by those authorities such disagreements or inquiries shall be made to a reconvened design session no later than one week after the adjournment of the Design Session.

Signed and Dated:

The City of Surrey

The Developer

Headwaters