RICHCRAFT HOMES

DEC 2020 DSEL 14-733

Appendix A

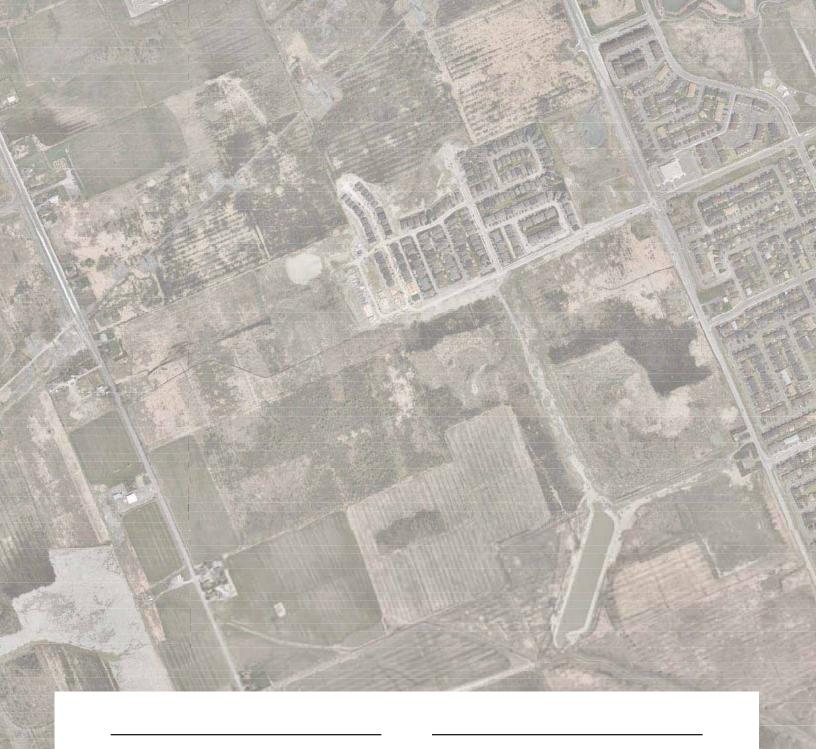
•	EUC Mixed Use Centre CDP – Terms of Reference (Fotenn, June 2014)	A1-A19
•	Development Concept (Fotenn, Nov 2020)	A20-A25
•	Development Servicing Study Checklist (DSEL, October 2018)	A26-A29
•	RVCA Comment Letter (RVCA, March 7 2019)	A30-A35
•	RVCA Review of Slope Stability Assessment (RVCA, February 11, 2019)	A36-A37
•	Third Party Review of Geotechnical Investigation (Gemtec, April 5, 2019)	A38-A42
•	RVCA Comment Letter (RVCA, January 17, 2020)	A43-A46
•	RVCA Review of Slope Stability Assessment (RVCA, February 16, 2020)	A47-A48
•	SNC Comment Letter (SNC, January 28, 2020)	A49-A50



Mixed Use Centre CDP Terms of Reference



2014



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Introduction

The East Urban Community (EUC) Mixed Use Centre straddles across Mer Bleue Road, south of Innes Road. The lands that surround the *Mixed Use Centre* designation to the north are generally designated *Employment Area* with an *Arterial Mainstreet* designation on a portion of Innes Road. The lands to the south are generally designated *General Urban Area*. Please note that consolidated mapping to reflect the recently adopted Official Plan Amendment 150 is not currently available.

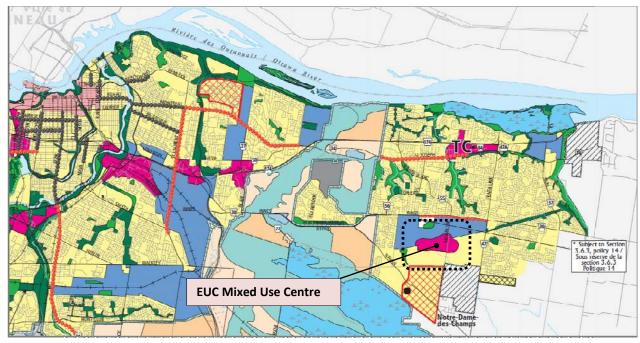


Figure 1: East Urban Community Mixed Use Centre

Policies in the Official Plan stipulate that development in the *Mixed Use Centre* both east of and west of Mer Bleue Road will be permitted only upon completion of a Community Design Plan (CDP) and its adoption as a Secondary Plan. Official Plan policies permit landowners to initiate and coordinate a CDP for an eligible area with the participation and collaboration of the City.

A CDP was completed in 2006 for the portion of the *Mixed Use Centre* designation east of Mer Bleue Road and south of the future Transitway (Mer Bleue CDP). A CDP was completed in 2005 for the lands to the south of the Mixed Use Centre designation (EUC Phase 1 CDP). Richcraft Homes (Richcraft) wishes to initiate a CDP process for the remaining *Mixed Use Centre* lands located east and west of Mer Bleue Road (see Figure 2).

This document outlines the Terms of Reference (TOR) under which the CDP process is proposed to be undertaken. The Official Plan policies in Section 2.5.6 regarding the preparation of Community Design Plans have been reviewed in the preparation of this TOR. Any proposed changes or additions to policies in the Official Plan Amendment approved by Council on November 26th, 2013, for the Comprehensive Official Plan Review, have also been reviewed.



This TOR consists of the following components:

- Study Area Boundaries;
- CDP Purpose and Objective;
- CDP Organization;
- Work Program and Deliverables.

Study Area Boundaries

As illustrated in Figure 2, the CDP Study Area is anchored by the *Mixed Use Centre* designation on Schedule B of the Official Plan. A portion of the surrounding *Employment Area* lands are also included within the Study Area. Figure 3 provides detail of the Study Area at a property level and shows the relationship of the Study Area to the completed CDPs to the east (Mer Bleue CDP) and to the south (EUC Phase 1 CDP). The EUC Phase 2 CDP is located further south and is currently in progress. The Mer Bleue Expansion Area CDP is also in progress.

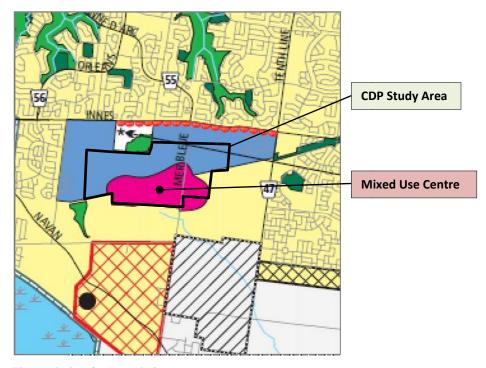


Figure 2: Study Area & Context

The CDP Study Area boundaries were identified using the following rationale:

Lands within the <u>Mixed Use Centre</u> designation. The Land Use Concept for the Mer Bleue CDP (2006) proposes General Urban Area uses south of Brian Coburn Blvd. The Council-approved OPA for the Comprehensive Official Plan Review (November 26, 2013) proposes re0designating this portion of lands to reflect the approved CDP. For this reason, this portion is excluded from the Study Area. The OPA also proposes adding the small triangle of General Urban Area land located



immediately west of Gerry Lalonde Drive to the *Mixed Use Centre* designation and is therefore included in the Study Area Boundary.

- 2. Lands generally <u>south</u> and <u>southeast</u> of the <u>Mixed Use Centre</u> designation are subject to completed CDPs: Mer Bleue CDP (2006) to the southeast and EUC Phase 1 CDP (2005) to the south. The EUC Phase 2 CDP is located further south and is currently in progress. The approval of these CDPs resulted in modifications to the <u>Mixed Use Centre</u> designation and thus the southern boundary of the Mixed Use Centre has been already refined through these secondary planning processes. Therefore, these lands that are part of other CDPs are not included in the Study Area.
- 3. Lands to the north of the Hydro One utility easement are subject to the Orleans Industrial Park Land Use and Design Study: Urban Design Guidelines, completed in 2003. These lands include the northern portion of the Mixed Use Centre designation. The Design Study states that the "geographic boundaries of the Mixed Use Centre will be fine-tuned through the secondary planning process." Therefore, some of these lands closest to the northern boundary of the MUC have been included in the Study Area.
- 4. Policies in Section 2.5.6 of the Official Plan state the importance of secondary planning exercises around transit stations to support a mix of land uses and higher densities of development. The Council-approved OPA (November 26, 2013) for the Official Plan Comprehensive Review states that the planning area is to be initially defined within a walking distance of the rapid transit station, and then adjusted to include land suitable for intensification. The OPA defines an 800 m walking distance whereas the current Official Plan defines a generalized 600m radius from the station. A 600m and 800m radius is provided on Figure 3 for reference purposes, although it is recognized that lands considered for intensification and/or a greater mix of uses will vary according to the alignment of roads.
- 5. Some of the lands within the *Employment Area* designation north of the Future Transitway are included in the Study Area Boundary. Properties along Innes Road are beyond the Study Area Boundary and not included in this study. The easterly Study Area Boundary follows the boundary of the property of the future Hydro One Networks Inc (HONI) electrical sub-station. These *Employment Area* lands are brought into the Study Area to explore the refinement of the *Mixed Use Centre designation* (as referenced in the Orleans Industrial Park Land Use and Design Study) and to study opportunities for higher intensity development and/or mix of uses within the 800 m walking distance of the future rapid transit stations in line with the accepted TOD guidelines/policies. This is consistent with a new policy in Section 3.6.2, policy 7, subsection c) that reads:

Notwithstanding the designation of the Mixed use Centre on Schedule B, the boundary of the Mixed Use Centre may be expanded to encompass part of the surrounding Employment Area where this expansion is supported by the findings of the proposed Employment Lands Study and the secondary planning exercise for the community design plan (CDP) and where it can be demonstrated that the employment targets for the existing employment area and the Mixed Use Centre, respectively will be achieved.



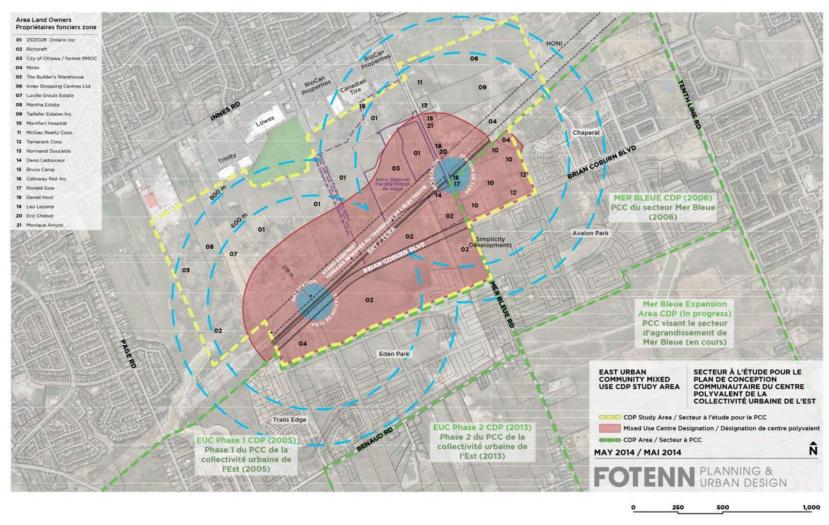


Figure 3: CDP Study Area

CDP Purpose & Objective

This CDP process represents a prime opportunity to guide future development to achieve the policy directions of the *Mixed Use Centre* land use designation, permit appropriate density to support planned transit infrastructure, and ensure sensitive interface with adjacent development. The Study Area for the CDP includes some of the surrounding *Employment Area* lands so that an appropriate CDP Boundary and *Mixed Use Centre* boundary can be explored through the planning process. The Study Area Boundary is not intended to define the future Mixed Use Centre boundary. The CDP will achieve a comprehensive vision and servicing strategy to create a complete community with a mix of uses and jobs focused around the future transit stations. The collaboration involved in the process ensures that the vision and priorities of the local community are incorporated into the plan and transit-oriented development realized. The EUC Mixed Use Centre CDP is a landowner initiated and funded project that is supported by the City of Ottawa.

CDP Roles

The CDP planning process will involve the participation of many players in the process, including the landowners, City Staff & Council, Provincial Agencies and Ministries, and residents of Ottawa. Various members of each group are further refined below:

City of Ottawa Staff & Council	 Ward Councillors & Staff Urban Design and Area Planning (internal project manager) Infrastructure Planning Environmental Management Infrastructure Approvals Parks Planning Transportation Planning 	 Forestry Public Health Traffic and Parking Operations Parks and Recreation Branch Infrastructure Services Utility Services Branch Transit Services (OC Transpo) Development Approvals Economic Development Rural Affairs Office
Landowners	 Richcraft Homes Shenkman Corporation Minto Land Development Corporation The Builder's Warehouse Inc. Mantha, Laurenda Estate; Mantha, Juliette Estate Estate of Lucille Groulx 	 Innes Shopping Centres Limited McGiac Realty Corporation Santé Montfort Tamarack Corporation City of Ottawa A number of small lot landowners along Mer Bleue Road

Community Organizations/Associations	 The Heart of Orleans Business Improvement Association Orleans Chamber of Commerce Local Community Associations
School Boards	 Ottawa-Carleton District School Board Ottawa Catholic School Board Conseil des ecoles catholiques du Centre-Est Conseil des ecoles publiques de l'Est de l'Ontario
Consulting Team	 FOTENN – Land Use Planning (Consulting Team Lead) Paterson Group – Geotechnical CastleGlenn Consultants Inc. / Parsons - Transportation Niblett Environmental Associates Inc. – Environmental David Schaeffer Engineering Ltd. – Civil Engineering Annis, O'Sullivan, Vollebekk Ltd. – Surveyor Malone Given Parsons Ltd. – Marketing, Growth Management Golder Associates Ltd. – Archaeology / Heritage
Provincial Agencies & Ministries	 Ontario Ministry of the Environment Rideau Valley Conservation Authority

Although all will be involved at varying degrees throughout the process, the identification of a Core Project **Team (CPT)** to handle the day to day activities is necessary. The CPT will consist of:

- Landowners' and/or Landowners' Agent(s);
- Consultant Lead (FOTENN Consultants);
- Consulting Team
- City's Representative.

The City of Ottawa will assign a staff member to liaise with the landowners and their agent, to represent the City's interests and to co-ordinate City responses.

A Technical Advisory Committee (TAC) will also be established to review critical deliverables and provide input throughout the design process. Representatives of the following organizations have been invited to participate.

- **CPT Members**
- Landowners (as needed)
- City of Ottawa Departments
- Consulting Team Members
- Ontario Ministry of the Environment (MOE)
- Rideau Valley Conservation Authority (RVCA)



CDP Work Program & Deliverables

The East Urban Community Mixed Use Centre CDP general work schedule is expected to take twelve to eighteen (12 to 18) months to complete. It is understood that this CDP study will be informed by the City's 2014 Employment Land Review, which is scheduled to be completed in 2015. The overall work program will be completed under nine (9) different tasks, as described in the following sections. Consultation events are identified in the Tasks where consultation is appropriate, however, consultation events will be confirmed in Task 2 - Consultation Strategy. A preliminary Schedule for the described Tasks is attached as **Appendix A**.

The Municipal Class Environmental Assessment (EA) process will be followed in conjunction with the planning approvals for the Community Design Plan. All tasks required for the determined phase under the Municipal Class EA process will be followed, including:

- Integration of EA requirements with CDP process;
- Public notification;
- Public open houses & meetings.

The consultant team will manage the public notification requirements to ensure they meet both the requirements of Council and the Municipal Class EA process.

Task 1 - Landowners' Appointment of Agent(s)

Since the CDP lands impact multiple landowners, landowners will need to collaborate on the preparation of the plan and to agree on how parks, stormwater ponds and any other infrastructure and facilities are located and agree on how the costs for these common elements will be shared. The landowners will appoint an Agent or Agents to represent their common interests and to hire experts to conduct the necessary studies required to develop the CDP. A Financial Implementation Plan will be required as part of the implementation process.

Task 2 - Consultation Strategy

The CDP process will include a comprehensive consultation process with the community to identify issues and potential solutions. The nature and extent of the consultation will be determined in conjunction with the Ward Councillor(s) and City Staff. The Strategy will specify the number of meetings and approximate timing.

Task 3 – CDP Start-up

A meeting with City staff will be held to initiate the CDP process. The meeting and follow-up will confirm the following:

- City appointment of a representative to participate on the CDP Core Project Team (CPT). The representative will coordinate City input and responses throughout the CDP process.
- The Consultation Strategy;



 Studies to be undertaken to support the CDP process. Studies completed to date, studies to be updated, and additional studies required will be confirmed. A list of potential studies is listed below:

Studies are to include, but not limited to:

- Planning Rationale (with an Integrated Environmental Review Statement)
- Market Study
- Master Servicing Study & Site Servicing Report
- Environmental Impact Statement
- Environmental Management Plan or Subwatershed Plan
- Community Transportation Study
- Archaeological Resources Assessment
- Geotechnical Study / Slope Stability Study
- Phase 1 & 2 Environmental Site Assessment

Task 4 - Existing Conditions & Constraints

The intent of this task is to document, in accordance with Figure 2.5.6 (B) of the Official Plan, the qualities and resources in the community that may impact on the spatial form of the community, that describe the character of the community or that set some enduring components of the community. Existing Conditions & Constraints will be defined for each of the following areas:

Land Use:

- Current policy and regulatory framework;
- Council-approved Official Plan Amendment (Comprehensive Official Plan Review);
- Summary of existing land uses within and adjacent to the CDP Study Area;
- Review of planning initiatives in the area (e.g. EUC Phase 2 CDP); and
- Review of market, job potential, and employment strategy.

Community

- Cultural heritage features and archaeological potential of the lands;
- Documentation of views, vistas, landscapes, features, landmarks;
- Boundaries of community & definition of entryways;
- Relationship to adjacent communities;
- Existing community resources such as schools, community centres, parks; and other greenspace;
- Existing built form and open space context.

Environmental Features:

 Vegetation: The vegetation communities within the Study Area will be documented in descriptive form and on figures;



- Wildlife: A summary of the field inventory surveys will be presented in table format and lists. The significance on a national, provincial, and regional level will be determined;
- Natural Areas: A literature review of existing information on natural areas within the Study Area will be completed;
- Hazard & Constraint Areas: floodplains, unstable slopes, contamination, geotechnical and other
 constraints, building upon the work done in the Master Servicing Study for the surrounding
 lands;
- Review of watershed or sub-watershed plans, hydrological resources, and ground water conditions.

Transportation:

- Current policy and regulatory framework:
 - Transportation Master Plan (TMP);
 - Ottawa Pedestrian Plan (OPP);
 - Ottawa Cycling Plan (OCP);
- Review of Environmental Project Report (EPR) for Cumberland Transitway West of Tenth Line;
- Review intersection volumes and Levels of Service for the existing road network in the Study Area (Innes Road, Mer Bleue Road, Brian Coburn Blvd);
- Overview of current transit service, including existing ridership and modal share where appropriate;
- Overview of existing pedestrian and cycling networks, and linkages to adjacent communities.

Infrastructure:

- Current policy and regulatory framework:
 - o Infrastructure Master Plan (IMP);
- Review existing conditions within and adjacent to the CDP Study Area, and the systems with which future development may connect;
- Provide an overview of planned infrastructure improvements;
- Summarize soils information; and
- Review previously-completed servicing reports, such as the Master Servicing Study.

If it is determined that information gaps exist, the impact of the gaps and how they will be addressed will be defined in this task of the work program. A **CPT Workshop** and **two (2) TAC Meetings** are proposed during this task to review consultant mapping and reports.

Deliverable:

Preliminary Existing Conditions & Constraints Report



Task 5 - Vision, Objectives & Targets

The intent of this task is to establish the Vision, Objectives & Targets for the CDP, in accordance with Figure 2.5.6 (C) of the Official Plan. The objectives and targets will address employment and housing intensification, housing mix, affordability, amount and distribution of greenspace, protection of natural areas, on-site stormwater retention, modal split for transit, cycling and walking (based on population, density, and employment projections), and other such objectives pursuant to the Official Plan and the unique circumstances of the lands. The Draft Vision, Objectives & Targets will be generated from the results of a CPT Workshop and vetted through a TAC Meeting.

A Public Open House will be held to introduce the CDP process, present findings to date (i.e. Vision, Objectives & Targets & Preliminary Existing Conditions and Constraints), and to elicit input and further interest in participating (i.e. future workshop participants).

Deliverables:

Vision, Objectives & Targets **Existing Conditions & Constraints Report**

Task 6 - Alternative Concept Plans & Preliminary Design Guidelines

Three (3) Alternative Concept Plans conforming to the Vision, Objectives & Targets will be produced by the Consulting Team and reviewed and refined through a CPT Workshop. At this time, broad preliminary design guidelines that support the initial Concept Plans will be prepared. The City's Urban Design Guidelines, in particular those for Greenfield Development and Transit-Oriented Development, will form the basis for preparing these guidelines. Following the CPT Workshop, changes will be made to the Draft Concept Plans and then presented at a TAC Meeting to obtain their comments and feedback. A Public Open House & Workshop would then be held with the general public to obtain their comments and explore any other alternative concepts. Working from the results of the TAC and public meetings, in conjunction with additional technical analysis by the consulting team, CPT, and TAC as required, the Alternative Concept Plans will be evaluated by the Consulting Team. A Preferred Concept Plan will be recommended by the Consulting Team to CPT.

Deliverable:

Alternative Concept Plans **Preliminary Design Guidelines**

Task 7 - Preferred Concept Plan, Demonstration Plan & Detailed Design **Guidelines**

In this task, the Preferred Concept Plan will be refined, a Demonstration Plan conceived and detailed Design Guidelines prepared. The Concept Plan is not to be viewed as the final detailed blueprint for the future development, as it is anticipated that the CDP will be implemented over a number of years. As such, flexibility in final subdivision design must be retained. Phasing and implementation of future development will be addressed in the CDP Implementation Strategy. A Demonstration Plan will be prepared to interpret and illustrate the Urban Design Guidelines and the resulting built form massing of development envisioned.



The Concept Plan will illustrate:

- Land use and density of development, with recommended minimum and maximum building heights and densities;
- Open space network, including parks, natural heritage systems, community focal points, etc;
- Transportation network, including roadways, transit, multi-use pathways, etc;
- Integration with surrounding areas / communities;
- Major infrastructure facilities, which may impact community design, such as stormwater ponds or servicing corridors.

The **Demonstration Plan** will:

- Demonstrate potential built form;
- Illustrate streetscape configuration and relationship to built form.

Urban Design Guidelines will address:

- Community land use structure;
- Landscape;
- Open space network;
- Built form and streetscapes;
- Road cross-sections for various road types illustrating relationships between the different users (pedestrians, cyclists, buses, private vehicles).

The Preferred Concept Plan will be produced by the Consulting Team in consultation with the CPT. The Preferred Concept Plan will be analyzed to ensure integration of detailed transportation and infrastructure servicing requirements, including the stormwater management system. It will also be assessed to ensure it meets the intent of the previously-determined Vision, Objectives & Targets.

The Preferred Concept Plan will include visual maps / diagrams / illustrations and supporting documentation addressing land use planning and technical information (i.e. transportation, servicing, stormwater, internal environment, parks and open space). It is the intent that the Preferred Concept Plan with supporting documentation will form the basis of the Final CDP produced in Task 7. The Preferred Concept Plan and Detailed Design Guidelines will be presented and reviewed in a TAC Meeting.

Deliverable:

Preferred Concept Plan Demonstration Plan Detailed Design Guidelines



Task 8 - Final Community Design Plan

The CDP is to be a comprehensive document that will clearly illustrate achievement of the CDP's Vision, Objectives & Targets. The CDP is to be produced by the Consulting Team in consultation with the CPT. The CDP will include a main planning document with a supporting land use plan, demonstration plan, potential number of jobs and dwelling units, and design guidelines. There will also be discipline-specific supporting documents, including: Transportation, Infrastructure / Servicing, and Natural Environment. Open Space and Parks supporting information will be included in either the main CDP document or, if warranted, as a specific supporting document.

The CDP (Main Volume) is to include:

- An overview of the planning process;
- Summary of the Existing Conditions & Constraints Report;
- Vision, Objectives & Targets;
- Policies and strategies to address the Vision, Objectives & Targets of the community;
- Concept Plan that illustrates on one or more plans the following:
 - Land Uses (with summary table, including densities);
 - Open Space and Recreation Network;
 - Transportation Network;
- Demonstration Plan:
- Design Guidelines;
- Guidelines for Development Review; and
- Implementation Strategy:
 - Phasing strategy for development;
 - o Financial Implementation Plan;
 - Official Plan Amendment and direction on zoning provisions;
 - Circumstances under which changes to the CDP would require approval of Council;
 - o Roles and responsibilities in implementation.

Supporting Document –Community Transportation Study is to:

- Identify required transportation infrastructure to support the CDP;
- Identify which transportation improvements are forecast in the 2013 Transportation Master Plan, and which additional improvements are required as a result of the Final CDP;
- · Address implementation, phasing, and costing; and
- Transit strategy and goals.



Supporting Document – Master Servicing Study (This CDP process will draw on the conclusions of the surrounding Master Servicing Studies) is to:

- Review the recommendations of previously completed servicing reports for the area;
- Confirm with the City the downstream constraints of existing infrastructure;
- Identify water, wastewater, and stormwater management systems needed to implement to the CDP;
- Identify the impacts and thresholds on the existing and proposed infrastructure contained in the previously completed servicing reports;
- Contain and summarize the previously completed servicing reports;
- Identify servicing improvements in addition to projects identified in the City of Ottawa Master Servicing Plan; and
- Address implementation, phasing, and costing.

The CDP, with supporting documentation, will be presented at a final **CPT/TAC Meeting**. Following TAC review, the CDP will be finalized in order to be brought forward to Planning Committee, followed by City Council approval.

Accessibility of Documents:

In line with the City of Ottawa's Accessibility Policy approved by City Council on April 11, 2012 the East Urban Community MUC CDP will be delivered in accordance with the established principles.

- Web content controlled directly by the City of Ottawa or through a contractual relationship that
 allows for modification of the product shall conform to the World Wide Web consortium Web
 Content Accessibility Guidelines (WCAG) 2.0, at Level A and AA in accordance with the schedule
 set out in the AODA Integrated Accessibility Standards.
- This requirement means that any material (PDF's of display boards, comment sheets, booklets, reports and draft and final documents) must be created in an accessible format to be posted on the City's website. PDF formats provided for posting must include the PDF checker certification. This is required for both English and French documents. For final reports, all source files will be provided to the City of Ottawa in order to make changes to the content if required.
- All material for use at open houses will be translated into both English and French, and relevant visuals made accessible to those who may be visually impaired. The final CDP document will also be made available in both official languages.

Deliverable:

Final CDP (English/French), with supporting documents



Task 9 - Implementation

Following City Council approval of the CDP, the CDP will be implemented as a Secondary Plan by amendment to the Official Plan, pursuant to Policy 7 in Section 2.5.6 of the Official Plan. The associated Zoning By-law Amendment will also be prepared at this time.

A Financial Implementation Plan will be prepared showing how the proposed development in the area will financed (eg. Development Charges).

The City will require that a landowners' agreement addressing legal matters and costs associated with infrastructure and common elements be prepared and executed prior to the review of future development applications.



APPENDIX A - PRELIMINARY SCHEDULE



REVISED SCHEDULE						2014		0	COMPLETION DATE	ETION	DATE				2015			H		
	Responsibility	APR	MAY	NO	JUL.		SEP	OCT I	VOV	DEC	JAN	FEB	MAR	AF	MAY		NOF	JUL	AUG	Deliverable / Event T1 = Project Initiation; T2 = Understanding philosticus and challenges:
CITY OF OTTAWA EMPLOYMENT LAND STUDY TIMELINE	CITY	7		Т2			Т3	Т4				15			Т6		77			T3 = Completion of demand assessment; T4 = Prioritize Issues and Solutions; T5 = Draft options for solutions;
																				T6 = Finalize stratefy and implementation plan; T7 = Complete final report.
TASK 1 - Landowners' appointment of agent(s)	-				Ц				H			\vdash	Ħ	ಠ	Ħ	H	H	П		
1.1 Landowners' meeting	Landowners			11	${\downarrow}$			<u>/////////////////////////////////////</u>	Ŧ		+	₽	Ħ	Ħ	H	+	Ŧ	Į	H	Land Owners Meeting
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2.1 Final Consultation Strategy	CPT							1gs	1		-	-	1		t	-				Final Consultation Strategy
TASK 3 - CDP Start-Up	,			┨	\exists			tir	Ħ		H	H	Ħ	Ħ	Ħ	H	H	\sharp	Ш	
3.1 Project initiation Meeting 3.2 Identify problems/opportunities/needs	CPT			‡	‡			ee	ŧ	#	+	+	Ŧ	#	士	+	4	#	1	
3.3 Confirm studies to be undertaken	CPT							M	H				Ħ		H		H	Ц		
3.4 Consultant Team Conference Call	CPT							ic					ļ			╁	-			
4.1 Confirm the problem/opportunity/need	Consulting Team						ret	ub	ļ					t		+	-	t		
nd Documentation & Field Wo	CPT							P												
4.3 CPT Workshop #1 (Existing Conditions & Guiding Principles)	CPT			\$				Vo	-			-	ļ	İ		+				CPT Workshop # 1
4.5 Circulate Updated Existing Conditions Mapping to TAC	FOTENN/ City Staff				1				1	1	+	-	1	1	t	+		1		
4.6 TAC Meeting #1 (Existing Conditions Mapping & Draft VOT - see Task 5.3)	TAC			M1				on	H				Ħ		H		H	Ц		
4.7 Present Draft Existing Conditions Report to CPT 4.8 PDT Morkehon #3.10 Before Vision Objectives and Taxaste and Baseline conditions	FOTENN				3			ti	ļ				ļ		t					TAC Meeting #1
4.9 Circulate Draft Existing Conditions Report to TAC	FOTENN/City Staff							le								H				
4.10 TAC Meeting #2 (Review Existing Conditions Report for Finalizing) 4.11 Finalize Existing Conditions Report	Consulting Team				M2								I		t					TAC Meeting #2 Final Existing Conditions Report
TASK 5 - Vision, Objectives & Targets								ip												
5.1 Circulate VOT to CPT	FOTENNICES STAFF			t				nic	ŀ			<u> </u>	ļ			+	-	t		
5.3 TAC Meeting #1 (Draft VOT) (As Per 4.6 above)	TAC			M ₁				Λu	1				1	1		+	_	1		TAC Meeting #1 contd.
5.4 Public Consultation Open House #1 (Process, Existing Conditions, VOT, EA)	Consulting Team/ City			P1				V					L			-				Public Open House #1
5.6 TAC Meeting #2 to finalize VOT (As Per 4.10 above)	Consulting Team/ City				M2								ļ			-				TAC Meeting #2 contd.
5.7 Finalized VOT	Consulting Team					>							Ħ							Guiding Principles
TASK 6 - Alternative Concept Plans & Preliminary Design Guidelines																				
6.1 CPT Workshop #3 to Develop Draft Alternative Concept Plans & Prelim Design Guidelines 6.2 Circulate Draft Alternative Concent Plans & Prelim Design Guidelines to TAC	Consulting Team			t		M3			-				ļ	1		+	+	Ţ		CPT Workshop #3
	Consulting Team			1		2	/3		H					1	\exists	+				TAC Meeting #3
6.4 Public Workshop and/or Open House # 2 (Draft Concept Plans, Guidelines, EA)	CPT			H	H		P2		H		H	H				\mathbf{H}				Public Workshop / Open House #2
6.5 Assessment and Evaluation of Alternative Solutions	Consulting Team												l			+				Formal Comments
7 1 PPT Workshop # 4 to select Professed Concent Dian & refine Design Guidelines	Consulting Team / TAC				ļ			200 200 3	1			-	Ī	İ	\dagger	╁	1			CPT Workshop #A
7.2 Refine Preferred Land Use Plan with Preliminary Design Guidelines & Preferred Alternative Solutions	Consulting Team			1	1				•		-	-	1	1	t	-				Refine Preferred Concept Plan
TAC Meeting # 4 to Review Preferred Concept Plan and Design Guid	TAC								Z.							H				TAC Meeting #4
7.4 Public Open House #3 (Preferred Concept Plan, Demonstration Plan, Guidelines, EA)	City / Consulting Team										ŭ		ļ		t					Public Workshop / Open House #3
8.1 CPT Meeting #5 to review Final Draft CDP and Supporting Documents	CPT										+	N N			t					CPT Workshon #5
8.2 Prepare of Final Draft CDP and Supporting Documents & circulation to TAC	Consulting Team											.	1		1	+				or a sectional party
8.3 TAC Meeting #5 to review Final Draft CDP and Supporting Documents	TAC				H				H		H	Z	П		H	H	Н			TAC Meeting #5
8.4 Prepare Final CDP and Supporting Documents	FOTENN/Consulting Team												Þ							Land Use Plan
9.1 Prepare Draft Implementing OPA & ZBLA & FIP	FOTENN / CPT			1	1				1	1	1	-	Į		1	+	1	1	1	
9.2 Circulate Draft OPA & ZBIA & FIP for comment	FOTENN / City			H	Ħ				H				П	Ħ		+	H			
9.3 Prepare Final OPA & ZBLA & FIP	FOTENN / CPT			ļ	ļ				ļ						^	H				Final OPA and Secondary Plan
9.4 Planning Committee - Final Draft CuPr, OFA & ZBLA and Class EA (Public Meeting #4) 9.5 Revisions (as required) and Final CDP, OPA & ZBLA and Class EA circulated	FOTENN / CRY			ļ									1	1			Þ	1		Final OPA and Secondary Plan w Revisions
9.6 City Council Review - CDP, OPA & ZBLA and Class EA	City																			
9.7 Passage of By-laws, Notice of Decision & Appeal Period	City								H			H				H			•	Appeal Period Expired. CDP and SP In force.
LEGEND																				
CDP = Community Design Plan CDT = Core Project Team CA = E-store project Team																				
EA = Environmental Assessment FIP = Finandal Implementation Plan																				
M = Meeting OPA = Official Plan Amendment																				
PC= Planning Committee P = Public Consultation																				
T# = Task as listed in the Employment Study Terms of Reference TAC = Technical Advisory Committee																				

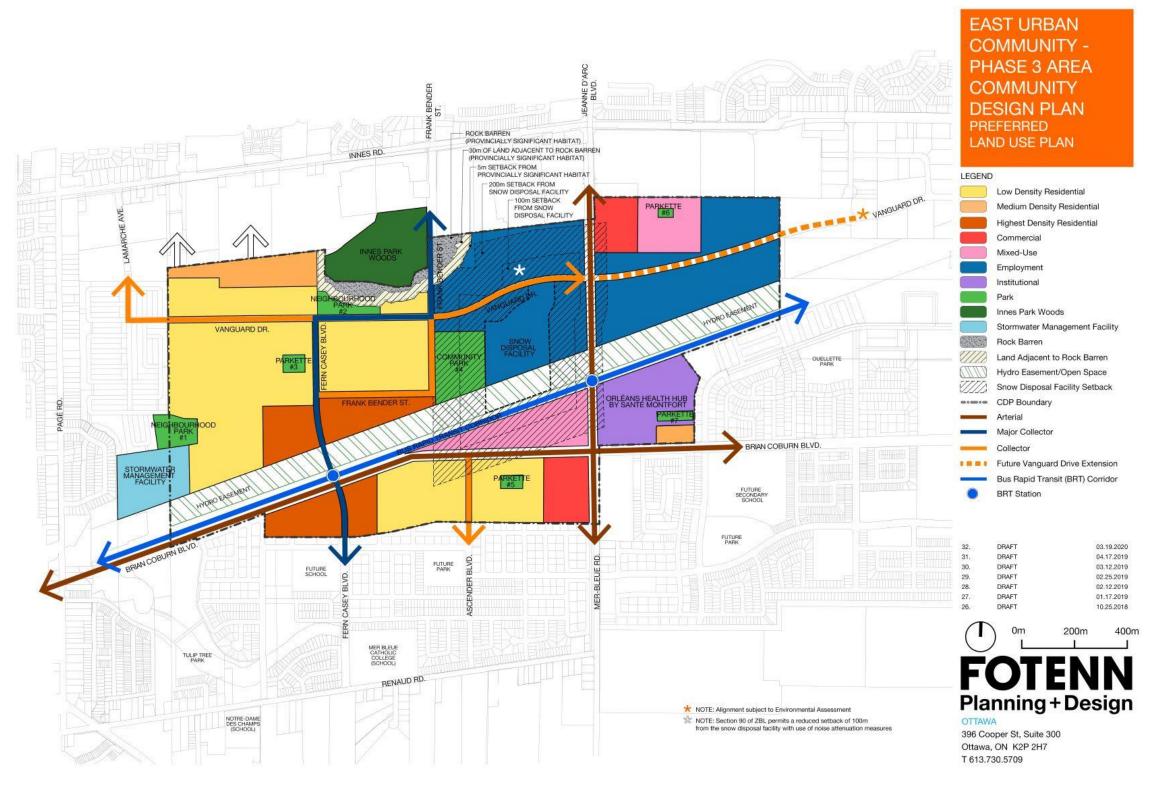


Figure 7. Land Use Plan

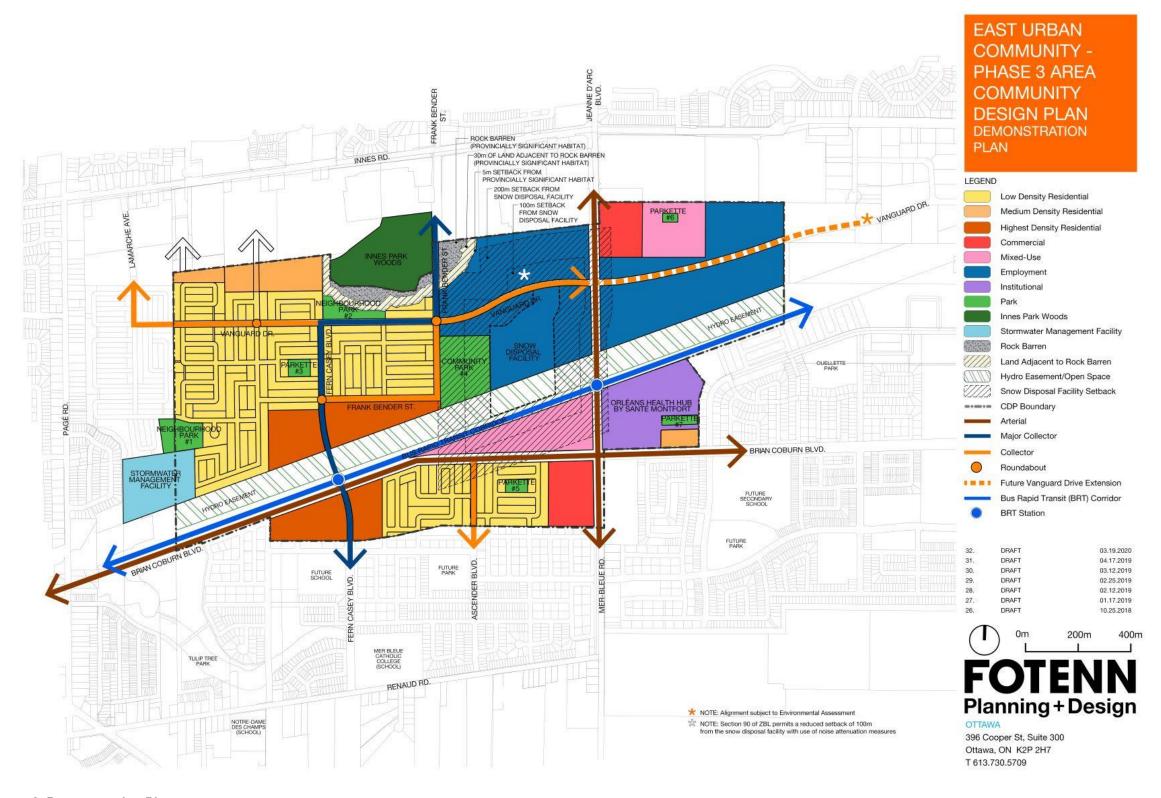


Figure 8. Demonstration Plan

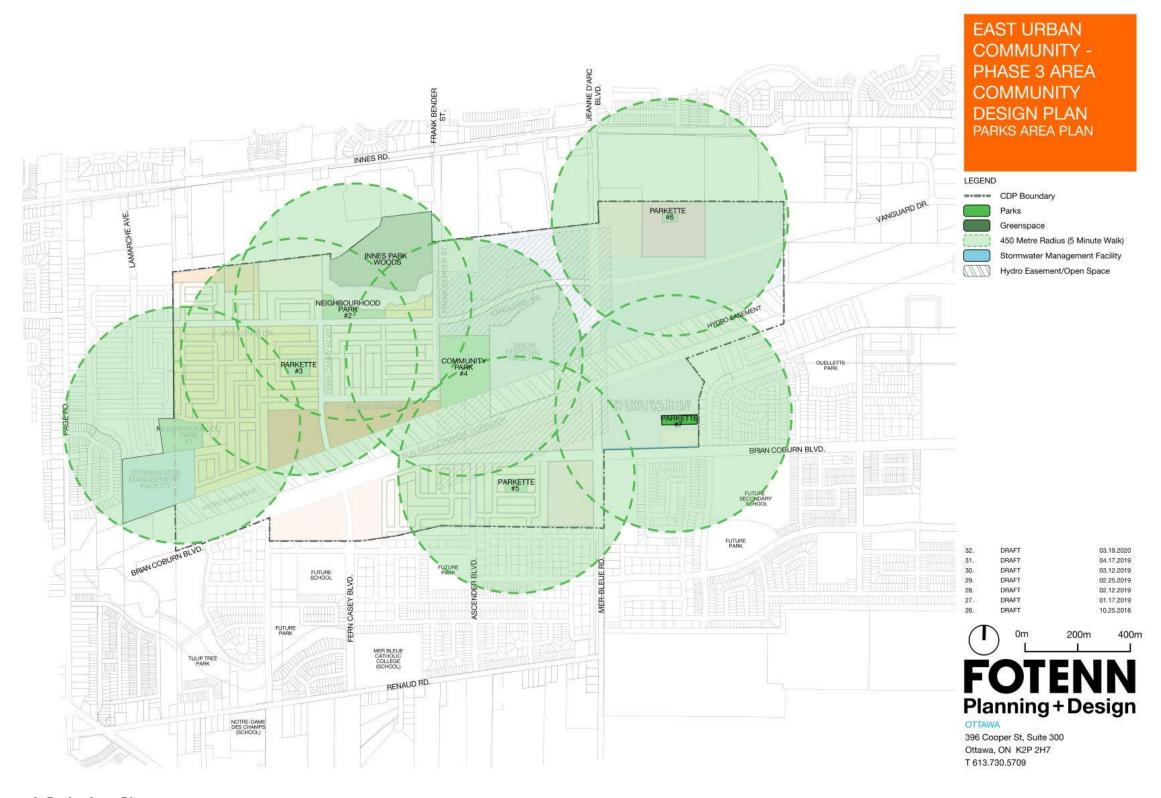


Figure 9. Parks Area Plan

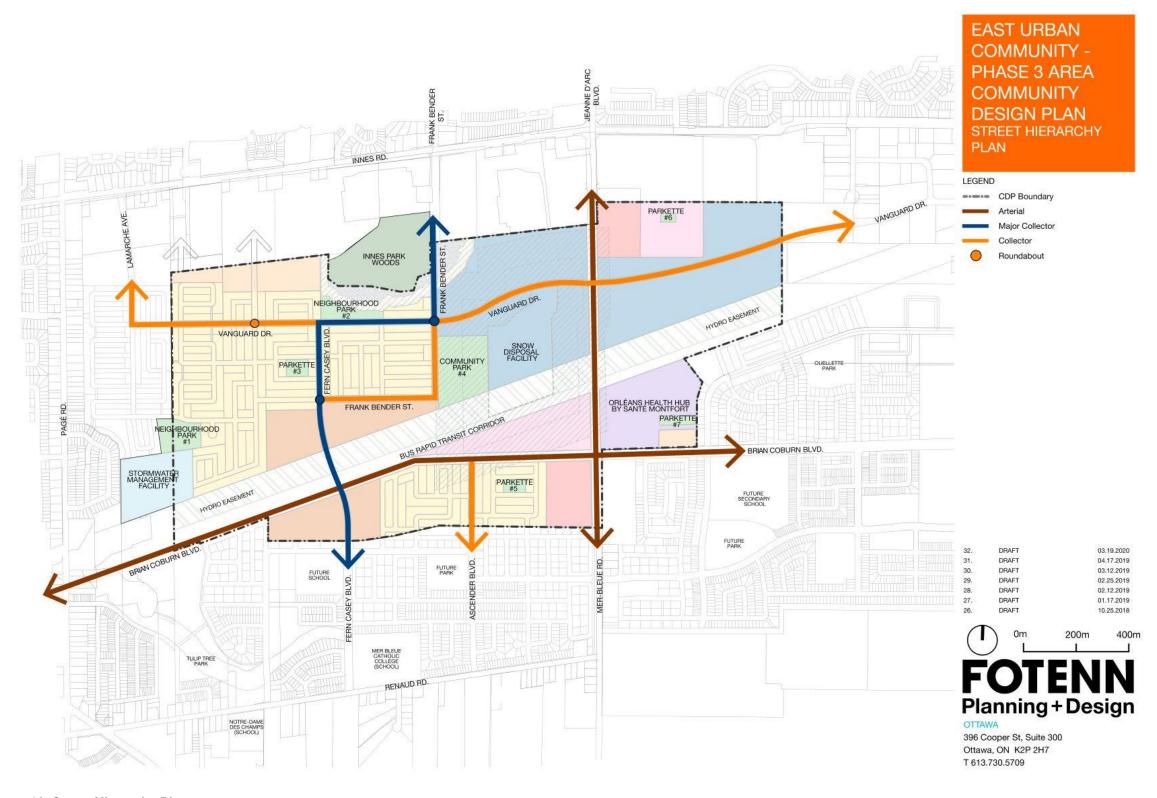
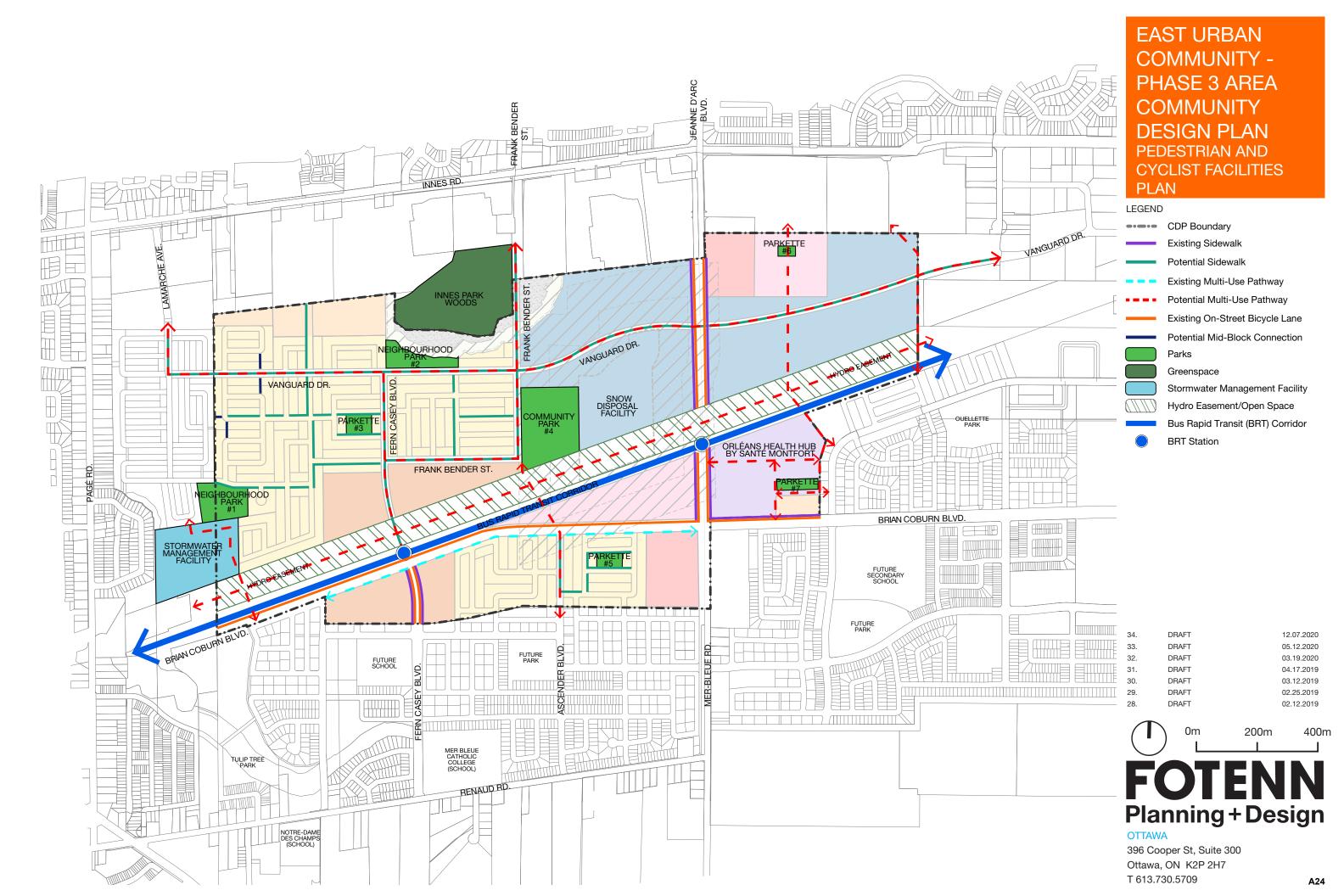


Figure 10. Street Hierarchy Plan



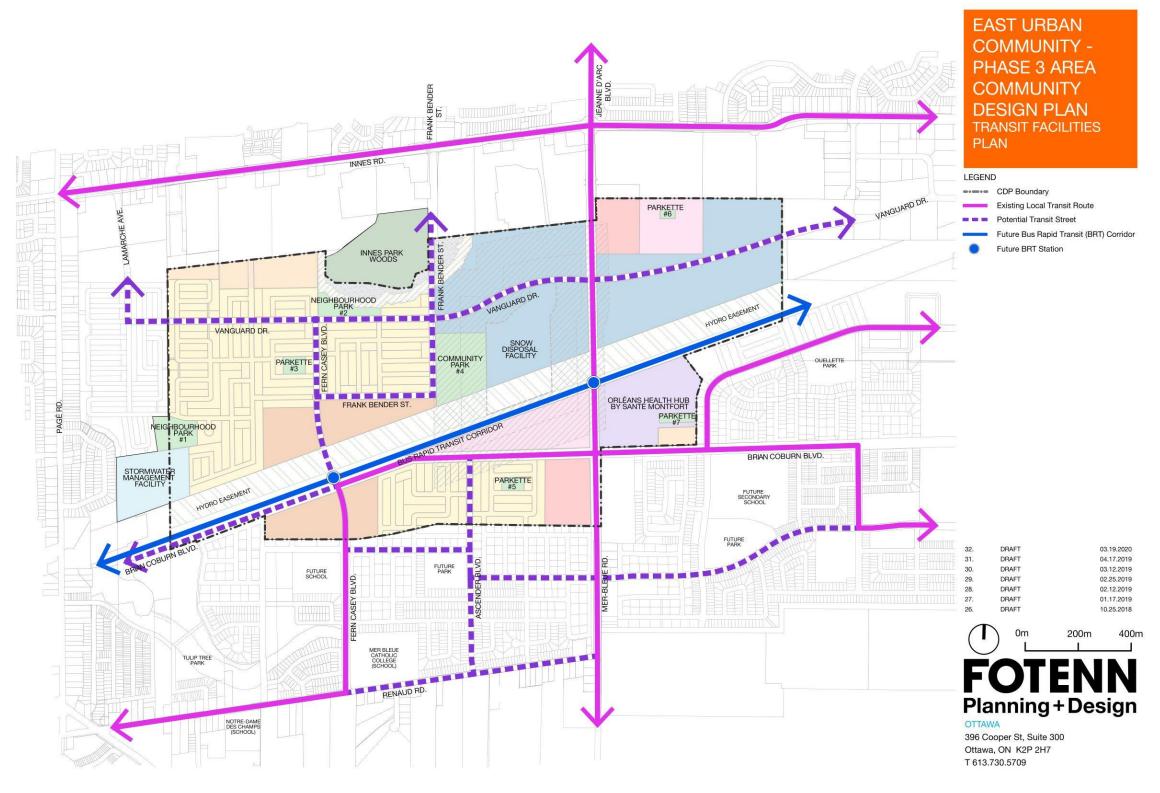


Figure 12. Transit Facilities Plan

DEVELOPMENT SERVICING STUDY CHECKLIST

1 1	General Content	
4.1		N1/A
	Executive Summary (for larger reports only).	N/A
	Date and revision number of the report.	Title Page
	Location map and plan showing municipal address, boundary, and layout of proposed development.	Drawing 1
	Plan showing the site and location of all existing services.	Drawing 7
	Development statistics, land use, density, adherence to zoning and official plan, and reference to applicable subwatershed and watershed plans that provide context to applicable subwatershed and watershed plans that provide context to which individual developments must adhere.	Section 7
	Summary of Pre-consultation Meetings with City and other approval agencies.	Section 3
	Reference and confirm conformance to higher level studies and reports (Master Servicing Studies, Environmental Assessments, Community Design Plans), or in the case where it is not in conformance, the proponent must provide justification and develop a defendable design criteria.	All sections
	Statement of objectives and servicing criteria.	Section 1
	Identification of existing and proposed infrastructure available in the immediate	Sections 9, Section 10, and
	area.	Section 11
	Identification of Environmentally Significant Areas, watercourses and Municipal Drains potentially impacted by the proposed development (Reference can be made to the Natural Heritage Studies, if available).	Section 4
	Concept level master grading plan to confirm existing and proposed grades in the development. This is required to confirm the feasibility of proposed stormwater management and drainage, soil removal and fill constraints, and potential impacts to neighbouring properties. This is also required to confirm that the proposed grading will not impede existing major system flow paths.	Drawing 2
	Identification of potential impacts of proposed piped services on private services (such as wells and septic fields on adjacent lands) and mitigation required to address potential impacts.	To be addressed in at detailed design.
	Proposed phasing of the development, if applicable.	N/A. Depends on landowners' preferred timing
	Reference to geotechnical studies and recommendations concerning servicing.	Section 4 & Section 11
	All preliminary and formal site plan submissions should have the following information: -Metric scale -North arrow (including construction North) -Key plan -Name and contact information of applicant and property owner -Property limits including bearings and dimensions -Existing and proposed structures and parking areas -Easements, road widening and rights-of-way -Adjacent street names	Drawing Package
	4.2 Development Servicing Report: Water	
	Confirm consistency with Master Servicing Study, if available	Section 9.2.2, 9.3.2, 9.4.2 & 9.5.2
	Availability of public infrastructure to service proposed development	Section 9.2.1, 9.3.1, 9.4.1 & 9.5.1
	Identification of system constraints	Section 9.2.2, 9.3.2, 9.4.2 &

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*Extracted from the City of Ottawa-Servicing Study Guidelines for Development Applications

Identify boundary conditions

9.5.2

Section 9.1 & Appendix B

Confirmation of adequate domestic supply and pressure	Section 9.6 & Appendix B
Confirmation of adequate fire flow protection and confirmation that fire flow is	
calculated as per the Fire Underwriter's Survey. Output should show available	Section 9.6 & Appendix B
fire flow at locations throughout the development.	
Provide a check of high pressures. If pressure is found to be high, an assessment is required to confirm the application of pressure reducing valves.	Section 9.6 & Appendix B
Definition of phasing constraints. Hydraulic modeling is required to confirm servicing for all defined phases of the project including the ultimate design	N/A. Depends on landowners' preferred timing
Address reliability requirements such as appropriate location of shut-off valves	N/A. High level analysis.
Check on the necessity of a pressure zone boundary modification	MSU.
Reference to water supply analysis to show that major infrastructure is capable of delivering sufficient water for the proposed land use. This includes data that shows that the expected demands under average day, peak hour and fire flow conditions provide water within the required pressure range	Section 9.6 & Appendix B
Description of the proposed water distribution network, including locations of proposed connections to the existing system, provisions for necessary looping, and appurtenances (valves, pressure reducing valves, valve chambers, and fire hydrants) including special metering provisions.	Drawing 6, Section 9.2.2, 9.3.2, 9.4.2 & 9.5.2
Description of off-site required feedermains, booster pumping stations, and other water infrastructure that will be ultimately required to service proposed development, including financing, interim facilities, and timing of implementation.	Section 9.2.2, 9.3.2, 9.4.2 & 9.5.2
Confirmation that water demands are calculated based on the City of Ottawa Design Guidelines.	Section 9.1
Provision of a model schematic showing the boundary conditions locations, streets, parcels, and building locations for reference.	Appendix B
4.3 Development Servicing Report: Wastewate	er
Summary of proposed design criteria (Note: Wet-weather flow criteria should not deviate from the City of Ottawa Sewer Design Guidelines. Monitored flow data from relatively new infrastructure cannot be used to justify capacity requirements for proposed infrastructure).	Section 10.1
Confirm consistency with Master Servicing Study and/or justifications for deviations.	Section 10.2.2, 10.3.2, 10.4.2 & 10.5.2
Consideration of local conditions that may contribute to extraneous flows that are higher than the recommended flows in the guidelines. This includes groundwater and soil conditions, and age and condition of sewers.	Section 10.1
Description of existing sanitary sewer available for discharge of wastewater from proposed development.	Section 10.2.1, 10.3.1, 10.4.1 & 10.5.1
Verify available capacity in downstream sanitary sewer and/or identification of upgrades necessary to service the proposed development. (Reference can be made to previously completed Master Servicing Study if applicable)	Appendix D. Section 10.2.2, 10.3.2, 10.4.2 & 10.5.2.
Calculations related to dry-weather and wet-weather flow rates from the development in standard MOE sanitary sewer design table (Appendix 'C') format.	Section 10.1
Description of proposed sewer network including sewers, pumping stations, and forcemains.	Drawing 5, Appendix D, Section 10.2.2, 10.3.2, 10.4.2 & 10.5.2.
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Pumping stations: impacts of proposed development on existing pumping stations or requirements for new pumping station to service development.	Appendix D, Section 10.2.2, 10.3.2, 10.4.2 & 10.5.2.
Forcemain capacity in terms of operational redundancy, surge pressure and maximum flow velocity.	Appendix D, Section 10.2.2, 10.3.2, 10.4.2 & 10.5.2.
Identification and implementation of the emergency overflow from sanitary pumping stations in relation to the hydraulic grade line to protect against basement flooding.	Appendix D, Section 10.2.2, 10.3.2, 10.4.2 & 10.5.2.
Special considerations such as contamination, corrosive environment etc.	Appendix D, Section 10.2.2, 10.3.2, 10.4.2 & 10.5.2.
4.4 Development Servicing Report: Stormwater Ch	ecklist
Description of drainage outlets and downstream constraints including legality of outlets (i.e. municipal drain, right-of-way, watercourse, or private property)	Section 11.2.1, 11.3.1, 11.4.1 & 11.5.1
Analysis of available capacity in existing public infrastructure.	Appendix E, Section 11.2.2, 11.3.2, 11.4.2 & 11.5.2
A drawing showing the subject lands, its surroundings, the receiving watercourse, existing drainage patterns, and proposed drainage pattern.	Drawing 4 & Figure 2
Water quantity control objective (e.g. controlling post-development peak flows to pre-development level for storm events ranging from the 2 or 5 year event (dependent on the receiving sewer design) to 100 year return period); if other objectives are being applied, a rationale must be included with reference to hydrologic analyses of the potentially affected subwatersheds, taking into account long-term cumulative effects.	Section 11.2.4, 11.3.4, 11.4.4 & 11.5.4
Water Quality control objective (basic, normal or enhanced level of protection based on the sensitivities of the receiving watercourse) and storage requirements.	Appendix E, Section 11.2.2, 11.3.2, 11.4.2 & 11.5.2
Description of the stormwater management concept with facility locations and descriptions with references and supporting information	Drawing 4, Appendix E, Section 11.2.2, 11.3.2, 11.4.2 & 11.5.2
Set-back from private sewage disposal systems.	N/A
Watercourse and hazard lands setbacks.	Section 4.5.3
Record of pre-consultation with the Ontario Ministry of Environment and the Conservation Authority that has jurisdiction on the affected watershed.	Section 3.0, Appendix A
Confirm consistency with sub-watershed and Master Servicing Study, if applicable study exists.	Appendix E, Section 11.2.2, 11.3.2, 11.4.2 & 11.5.2
Storage requirements (complete with calculations) and conveyance capacity for minor events (1:5 year return period) and major events (1:100 year return period).	Appendix E, Section 11.2.4, 11.3.4, 11.4.4 & 11.5.4
Identification of watercourses within the proposed development and how watercourses will be protected, or, if necessary, altered by the proposed development with applicable approvals.	Section 4.5.2
Calculate pre and post development peak flow rates including a description of existing site conditions and proposed impervious areas and drainage catchments in comparison to existing conditions.	Appendix E
Any proposed diversion of drainage catchment areas from one outlet to another.	Appendix E
Proposed minor and major systems including locations and sizes of stormwater trunk sewers, and stormwater management facilities.	Drawing 5, Appendix E, Section 11.2.2, 11.3.2, 11.4.2 & 11.5.2
If quantity control is not proposed, demonstration that downstream system has adequate capacity for the post-development flows up to and including the 100-year return period storm event.	N/A
Identification of potential impacts to receiving watercourses	Section 4.0

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DEVELOPMENT SERVICING STUDY CHECKLIST

Identification of municipal drains and related approval requirements.	N/A
Descriptions of how the conveyance and storage capacity will be achieved for	
	Appendix E
·	
	Drawing 2, Appendix E
grading.	0 / 11
Inclusion of hydraulic analysis including hydraulic grade line elevations.	Appendix E
Description of approach to erosion and sediment control during construction for	N/A at NACC lavel
the protection of receiving watercourse or drainage corridors.	N/A at MSS level
Identification of floodplains – proponent to obtain relevant floodplain	
information from the appropriate Conservation Authority. The proponent may	
be required to delineate floodplain elevations to the satisfaction of the	Section 4
Conservation Authority if such information is not available or if information	
does not match current conditions.	
Identification of fill constraints related to floodplain and geotechnical	N/A
investigation.	14/17
	Section 13.3
•	
except in cases of dams as defined in the Act.	
· ·	
Application for Certificate of Approval (CofA) under the Ontario Water	Section 13.3
Application for Certificate of Approval (CofA) under the Ontario Water Resources Act.	
Application for Certificate of Approval (CofA) under the Ontario Water Resources Act. Changes to Municipal Drains.	Section 13.3 N/A
Application for Certificate of Approval (CofA) under the Ontario Water Resources Act. Changes to Municipal Drains. Other permits (National Capital Commission, Parks Canada, Public Works and	
Application for Certificate of Approval (CofA) under the Ontario Water Resources Act. Changes to Municipal Drains.	N/A
Application for Certificate of Approval (CofA) under the Ontario Water Resources Act. Changes to Municipal Drains. Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.)	N/A
Application for Certificate of Approval (CofA) under the Ontario Water Resources Act. Changes to Municipal Drains. Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.) 4.6 Conclusion Checklist	N/A Section 13.3
Application for Certificate of Approval (CofA) under the Ontario Water Resources Act. Changes to Municipal Drains. Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.) 4.6 Conclusion Checklist Clearly stated conclusions and recommendations	N/A
Application for Certificate of Approval (CofA) under the Ontario Water Resources Act. Changes to Municipal Drains. Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.) 4.6 Conclusion Checklist Clearly stated conclusions and recommendations Comments received from review agencies including the City of Ottawa and	N/A Section 13.3 Section 15.0
Application for Certificate of Approval (CofA) under the Ontario Water Resources Act. Changes to Municipal Drains. Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.) 4.6 Conclusion Checklist Clearly stated conclusions and recommendations Comments received from review agencies including the City of Ottawa and information on how the comments were addressed. Final sign-off from the	N/A Section 13.3
Application for Certificate of Approval (CofA) under the Ontario Water Resources Act. Changes to Municipal Drains. Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.) 4.6 Conclusion Checklist Clearly stated conclusions and recommendations Comments received from review agencies including the City of Ottawa and	N/A Section 13.3 Section 15.0
	the development. 100 year flood levels and major flow routing to protect proposed development from flooding for establishing minimum building elevations (MBE) and overall grading. Inclusion of hydraulic analysis including hydraulic grade line elevations. Description of approach to erosion and sediment control during construction for the protection of receiving watercourse or drainage corridors. Identification of floodplains – proponent to obtain relevant floodplain information from the appropriate Conservation Authority. The proponent may be required to delineate floodplain elevations to the satisfaction of the Conservation Authority if such information is not available or if information does not match current conditions. Identification of fill constraints related to floodplain and geotechnical

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Conservation Partners Partenaires en conservation







File: 18-CUM-CDP

March 7th, 2019

City of Ottawa Planning, Infrastructure and Economic Development Department 110 Laurier Avenue West, 4th Floor Ottawa, ON K1P 1J1

Attention:

Robin Van de Lande

Subject:

EUC Phase 3 CDP and MSS

Dear Mr. van de Lande:

The Conservation Partners Planning and Development Review Team has completed a review of the most recent information provided for the EUC Phase 3 Community Design Plan as well as the draft Master Servicing Study.

We have undertaken our review within the context of Sections 1.6.6 Sewage, Water and Stormwater, 2.1 Natural Heritage, 2.2 Water and 3.1 Natural Hazards of the Provincial Policy Statement, 2014 issued under Section 3 of the *Planning Act*, and from the perspective of the Conservation Authority regulations. The following comments are offered for your consideration.

Community Design Plan

Section 4.1 Study Area Constraints Pg. 13.

The first paragraph acknowledges that assessments have been completed on the headwater drainage features. However, the paragraph does not acknowledge that there were some mitigation measures required for some of the headwater features. There needs to be a reference in this section that all headwater drainage features which require mitigation measures will be implemented as part of the Master Servicing Study.

Recommended Wording:

Headwater drainage features which require mitigation measures as identified in the Niblett Environmental Associates Inc. memo dated March 12th, 2018 shall be implemented through the Master Servicing Study.

While geotechnical constraints in reference to grade raises have been identified, this section does not acknowledge that there are environmental and geotechnical setbacks which would be a constraint for the stormwater management block, specifically as it relates to Reach 7 and Reach 12 (Kilgour & Associates Ltd. report). The report "Environmental Impact Statement for SWM Expansion in East Urban Community Mixed Use Centre" dated September 5th, 2018, prepared by Kilgour & Associates Ltd. has specified environmental setbacks for Reach 7 and Reach 12, while the geotechnical report by Golder Associates Ltd. has provided recommendations on geotechnical setbacks. This section must reference these requirements.

Section 5.2.8 Stormwater Management Facilities

This section should acknowledge that there are mitigation measures required as a result of the Headwater Drainage Feature Assessments that must form part of the stormwater management strategy.

Section 7.10 Permitting Requirements Pg. 56

In the "Timing/Process/Permits and Approval" section in the table for Headwater Drainage Features, there should be reference to the specific regulation requirements:

Recommended wording:

Approvals under Ontario Regulation 174/06 "Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation" under Section 28 of the Conservation Authorities Act (RVCA Watershed).

Slope Stability Assessment

The RVCA has completed a review of the report "Slope Stability Assessment – Reaches 7 and 12, Stormwater Management Pond Block, 3490 Innes Road Development, Ottawa, Ontario" dated June 2018, prepared by Golder Associates Ltd. The review was completed by Terry K. Davidson, P.Eng, RVCA Director of Regulations (see memo attached). Based on the review, it appears that the assessment has not included a 6.0 metre access erosion allowance on the assumption that the access to the slope will be unrestricted. While it is acknowledged that the adjacent lands will form part of the stormwater management block, the 6.0 metre access erosion limit of 6.0 metres needs to be included to ensure that the location of the proposed stormwater management pond will not interfere with the access.

For example, on Figure 1 it appears that the proposed stormwater management pond would be within the 6.0 metre access erosion allowance near cross section 'D' thereby impeding access to the slope. A figure which clearly delineates the geotechnical hazard limits (including the access

erosion allowance) and the setbacks as recommended by Kilgour & Associates Ltd. is required. We note that the pond shape differs between the Golder Report and the Kilgour report. Therefore, clarification in this regard is also required.

Master Servicing Study

The RVCA has completed a preliminary review of the draft master servicing study. It is our understanding that the report is to include the recommendations made in the Mud Creek Cumulative Impact Study. Based on the most recent information provided, one of the recommendations coming from the study is to have the first 10mm of rainwater infiltrate the site through Low Impact Development techniques. The draft report does not provide any details as to how this will be achieved. Therefore, the report needs to be amended to incorporate this recommendation.

As noted in our comments for the Community Design Plan, the mitigation measures for the watercourses assessed in the Headwater Drainage Feature Assessment needs to be implemented through the MSS. Specifically, Reaches 7 and 12 require hydration to be maintained. It is acknowledged that some of the hydration issues for Reach 7 were dealt with as part of an adjacent plan of subdivision, however the MSS must make reference to how these issues were dealt with and whether additional measures are required for the portions of Reach 7 not within the plan of subdivision. In addition, there needs to be a strategy for maintaining hydration to Reach 12. Therefore, the MSS needs to be amended to include these components and any necessary recommendations. Any loss of flows (%) needs to be included as part of any amendment to the MSS.

EUC Pond 1

The report makes reference to the proposed level of water quality protection being normal (70% TSS Removal). The report also cites that this is approved by the RVCA. While the RVCA did accept normal level of protection for the recent works undertaken to the South Main Cell and South Forebay, it was done so reluctantly only after it was demonstrated that it was not reasonably feasible to amend the design to the current water quality standard of enhanced (80% TSS Removal). Given the large scope of the proposed North Cell and Main Cell expansion, the RVCA recommends that the design should explore ways to achieve the current standard of enhanced (80% TSS removal).

North East Quadrant Preferred Stormwater Management Plan

The report makes reference to the MSU prepared by Stantec (2006) for this quadrant which directs flows to Bilberry Creek via a storm sewer on Wildflower Drive. The report acknowledges that there are existing erosion issues in Bilberry Creek, and may require mitigation measures

greater than this MSS. The report also makes reference to reviewing established quantity control targets at the detailed design stage and possible mitigation measures outlined in the Bilberry Creek Geomorphic Systems Master Implementation Plan (GHD, May 2014).

In 2017, there were several slope failures within the Bilberry Creek valley lands which resulted in significant remedial measures required to render portions of the valley lands stable. The slope failures are an indication that the assumptions of the original MSU and the Geomorphic Systems Master Implementation Plan may no longer be valid and that the MSU study needs to be revisited to ensure that the slope and erosion issues along Bilberry Creek are not further aggravated as development proceeds within the quadrant.

The MSS report needs to fully acknowledge the risks of proceeding under the current MSU and make recommendations within this context. We have some concerns with the assumption that this can be dealt with at the detailed design stage, as it is an issue that requires consideration of cumulative impacts which are more appropriately addressed though a larger scale study such as an MSS or other applicable study. Given the significant risks to public health and safety along the Bilberry Creek valley system, development contributing flows to Bilberry Creek should be placed on hold until such time there is a full understanding of the risks and a proper assessment of the servicing strategy for this drainage area is developed.

General Comments

There has been very little detail on sediment storage areas. It is our experience that sediment storage areas are typically desired as part of the pond's operation and maintenance. Therefore, a better understanding as to where and how sediment storage areas will be dealt with needs to be identified. It is important that the location chosen does not interfere with the required environmental and geotechnical setbacks.

Associated Drawings For the MSS

We note that the drawings illustrate the general location of the proposed pond expansion, and in Figure 3, the pond is shown at a larger scale. There are environmental and geotechnical setbacks required from Reach 7 and Reach 12 as noted in the Kilgour & Associates Ltd. and Golder Associated Ltd. reports. These constraints need to be clearly shown on Figure 3 to ensure that the pond is not encroaching into these setbacks save and except the location where the pond ties into existing North Main Cell. This will also need to take into account for the need of the 6.0 metre access erosion allowance which the Golder Associates Ltd. has not provided in their report.

Conclusion

In conclusion, the RVCA has provided recommendations for the CDP and MSS for consideration. The RVCA asks to be kept informed of any amendments or revisions to each document so that we can continue our review. For any questions regarding the information contained in this letter, please feel free to contact me.

Respectfully,

Jamie Batchelor, MCIP, RPP Planner, Planning and Watershed Science Rideau Valley Conservation Authority 613-692-3571 ext. 1191

Jamie.batchelor@rvca.ca

Cc: Amy MacPherson: City of Ottawa

Darlene Conway: City of Ottawa Ted Cooper: City of Ottawa

Brad Wright: South Nation Conservation

Laura Maxwell: DSEL Fairouz Wahab: Richcraft

Julie Carrara: FoTenn Consultants



Watershed Science and Engineering Services - Technical Review Memorandum

February 11, 2019

To: Jamie Batchelor

From: Terry K. Davidson

Subject: Slope Stability Assessment

Reach 7 and 12

Storm Water Management Pond Block

3490 Innes Road Ottawa, Ontario

As requested, I have reviewed the report "Slope Stability Assessment" by Golder Associates dated June 2018 (Report No. 1660030-03).

The report appears to have been completed primarily for the purpose of determining the stability of the existing slope along ravines and establishing a Limit of Hazard Lands for developable lands. The analysis and supporting field work have been carried out an appropriate level of detail for that purpose. The report has documented the present geometry of the slope in sufficient detail, and suitable methods have been used to characterize the soil characteristics The report from the consultant makes reference to reviewing, the lands along the slope as "Hazard Lands, as defined by the "MNR Technical Guide for River and Stream Systems: Erosion Hazard Limit" as the primary technical reference for delineating hazard lands and addressing the natural hazards provisions of the Provincial Policy Statement under the Planning Act.

The report from the consultant indicates that they analyzed the site at seven (7) locations. The results of the analysis indicated a Factor of Safety less than 1.5.

The consultant has indicated the Limit of Hazard Lands for two areas as follows: Reach 7 and Reach 12 as identified on the Site Plan by Golder date June 7, 2018.

For Reach 7, the consultant has indicated the Limit of Hazard Lands as a 11 metre setback, and was based on the following:

1. A stable slope allowance based on stability analysis using the Morgenstern Price method of 6 metres.

- 2. A toe erosion allowance of 5 metres was determined based on "Table: Minimum Toe Erosion Allowance" of the "Natural Hazards Technical Guide".
- 3. No 6 metre access erosion allowance was required. However, the RVCA is not prepared to accept this assumption as no legal property survey was provided indicating development restrictions or setbacks at this time.

4.

For Reach 12, the consultant has indicated the Limit of Hazard Lands as a 3 metre setback, and was based on the following:

- 1. A stable slope allowance based on stability analysis using the Morgenstern Price method of 2 metres.
- 2. A toe erosion allowance of 1.0 metres was determined based on "Table: Minimum Toe Erosion Allowance" of the "Natural Hazards Technical Guide". The consultant indicated there was no evidence of active erosion on August 28, 2017.
- 3. No 6 metre access erosion allowance was required. However, the RVCA is not prepared to accept this assumption as no legal property survey was provided indicating development restrictions or setbacks at this time.

In summary, the Report No. 1660030-03 and the Site Plan dated June 7, 2018 by GOLDER Associates has not provided the Limit of Hazard Lands which would include the 6 metre Access Allowance.

Also, the policy of the Rideau Valley Conservation Authority is to require a minimum 15 metre setback from the crest of the slope for conservation of land, therefore the consultant should be required to delineate this on the Site Plan.

I trust this is satisfactory for your present purposes. Please call if you have any questions.

Terry K. Davidson, P.Eng. <u>terry.davidson@rvca.ca</u>

Date: 07/03/2019 page 2/2



acie Drive 613.836.1422 I, Canada ottawa@gemtec.ca K2K 2A9 www.gemtec.ca

April 5, 2019 File: 64850.02

City of Ottawa 110 Laurier Avenue West Ottawa, Ontario K1P 1J1

Attention: Mr. Michel Kearney, P.Geo.

Re: Third Party Review of Geotechnical Investigation

East Urban Community Mixed Use Centre (EUC MUC) Master Servicing Study

INTRODUCTION

This letter provides a technical review of the following documents:

- Geotechnical Existing Conditions Report for the EUC MUC CDP, prepared by Paterson Group, dated June 28, 2018, Report # PG3130-2 Revision 1.
- Section 4.2 and Appendix G (EUC Phase 3, Area CDP, by Paterson Group Memorandum, Report #PG3130-MEMO.02) of the Draft Master Servicing Study for East Community Phase 3, Area Community Design Plan, Richcraft Homes, prepared by DSEL, dated October 2018, Project #14-733.
- DSEL Drawing #2 (Grading Plan showing grade raises) and Drawing #3 (trunk sewer profiles showing depth of infrastructure)
- Slope Stability Assessment, Reaches 7 and 12, Strom Water Management Pond Block, prepared by Golder, dated June 2, 2018, Report #1660030-03.

COMMENTS

Geotechnical – Existing Conditions Report (June 28, 2018)

1) Section 5.0 indicates that the report provides preliminary design information and a detailed geotechnical investigation is recommended once the proposed design is finalized. Is it possible that there may be other softer silty clay areas, which will only be identified with further investigation? Could these affect the permissible grade raise? Should this be identified as a possible risk to the development? Comments should be provided on whether the guidelines and recommendations could change as more information becomes available during future investigations.

- 2) The legend for Drawing No. PG3130-7 is missing the symbol for the boreholes advanced as part of the current investigation (PG3130).
- 3) The legend for Drawing No. PG3130-7 is missing the symbol for the boreholes advanced by others.
- 4) Drawing Nos. PG3130-6 and PG3130-7 show the location of test pits advanced by the Paterson Group (PG0961). The logs for these test pits are not included in the report.
- 5) Drawing No. PG3130-7 shows a grade raise restriction of 2 metres within the northern portion of the site. In this area, the subsurface conditions generally consist of surficial organic soil underlain by silty sand and/or clayey silt followed by shallow bedrock. With the exception of few test holes in the northeast corner, sensitive silty clay deposits were not encountered within this area. It is our opinion that further review/discussion of the permissible grade raise restriction for the northern portion of the site is needed.
- 6) Section 4.2 states that unacceptable settlements could be induced by significant lowering of the groundwater level. For preliminary design purposes, it is understood that a post-development groundwater lowering of 0.5 metres was assumed; however, the report states that consideration should be given to accounting for a larger groundwater lowering in order to reduce potential long term liabilities. It is our opinion that further review/discussion of the assumed groundwater drawdown used in the analysis is needed. In particular, the following should be addressed:
 - a) Is the assumed amount reasonable given the high groundwater conditions, foundation drainage measures around conventional foundations (in some areas, the drained basements may extend below the groundwater level), and the site servicing and drainage requirements?
 - b) What are the potential risks if the groundwater drawdown is actually in excess of the assumed amount?
 - c) Does the assumed groundwater drawdown include the effects of seasonal fluctuations (lows) in groundwater levels?
 - d) Comment should be provided on whether groundwater level monitoring is required for the development and in particular near the stormwater management pond.
- 7) Section 4.2 of the report indicates that clay dykes can be placed within service trenches to reduce the impacts of the proposed development on the long term groundwater level. Given the relatively high groundwater levels, the groundwater drawdown due to foundation drains, and the need to prevent groundwater drawdown in excess of that assumed in design, are any special measures required for the clay dykes (e.g., decreased spacing)? Are there any specific requirements for the water tightness of new sewers? Are additional measures required to limit infiltration at manhole connections?



- 8) Expansion of an existing stormwater management pond is proposed for the development. The invert of the inlet will be about 6 to 7 metres below existing grade, well below the groundwater level. Significant groundwater drawdown should be expected near the pond. Comment should be provided on whether the assumed amount of groundwater drawdown is suitable near the ponds, and whether the permissible grade raise should be reduced for structures, services and roads near the proposed pond? Should development be set back from the proposed pond and, if so, how far? Comment should be provided on the effects of the proposed pond on existing developments.
- 9) Institutional and commercial developments are also planned for this area. Preliminary design bearing values for commercial and residential buildings are presented in Table 1 of the report. Comment should be provided on the feasibility of supporting institutional and commercial buildings on spread footings, including foundation options where spread footing foundations are not feasible.
- 10) The report does not comment on roadway pavement design considerations. Does the grading restrictions impact on the design and construction of the roadway pavement structures? What pavement component thicknesses are anticipated for local and collector roads?
- 11) The City of Ottawa's Geotechnical Investigation and Reporting Guidelines for Development Applications states that the stress increase in clay soils be maintained below about 80 percent of the available preconsolidation (i.e., overconsolidation). This guideline accounts for the phenomenon of secondary compression whereby a clay soil will start to creep and compress even at stress levels slightly below, but close to, the preconsolidation pressure. This guideline also provides a margin against uncertainty in the evaluation of the current stress level in the ground, the predicted future lowest sustained groundwater level, and the estimated or measured preconsolidation pressure, which could vary across the site. Section 4.2. of the report states that the stress increase on the soil should not exceed the available preconsolidation. Was the allowable stress increase due to grade raise filling, foundation loads, and groundwater lowering calculated assuming that the stress increase on the soil cannot exceed 80 percent of the available preconsolidation?

DESL Drawing #2 and #3

12) The profiles show that portions of the trunk sewers will be installed at the minimum permissible slope (i.e., 0.1 percent). Sewers installed at the minimum permissible slope are sensitive to total and differential settlements. It is our opinion that further review/discussion of the settlement of the services is needed (e.g., is it feasible to maintain the minimum slope given the subsurface conditions at the site).



Paterson Group Memorandum, Report #PG3130-MEMO.02

- 13) The memorandum provides a review of the DESL Drawing No. 2 dated July 2018. The memorandum, and attached plans, should be updated to reflect the grading plan dated October 2018.
- 14) The memorandum states that EPS or preloading/surcharging could be considered for the proposed roadways, where the grade raises exceed the preliminary permissible grade raise. It is our opinion that further discussion on the use of EPS within the City of Ottawa Right-of-Way is needed.
- 15) The memorandum provides plans outlining the anticipated LWF/Surcharge areas. On Plan G4, should the highlighted area within the southwest corner of the site be extended further to the west, to connect with the isolated area identified within the northwest corner of the site?
- 16) The memorandum includes 3 attached plans. Is the plan showing the LWF/Surcharge areas with an additional 0.5 metres above the proposed grades missing for the portion of the site west of the hydro corridor?

Section 4.2 of the Draft Master Servicing Study

17) Section 4.2 states that bedrock ranges from 1 to 25 metres below ground surface. The results of the investigation indicate that inferred bedrock was encountered at depths greater than 25 metres.

Slope Stability Assessment

- 18) Section 5.2.2 states that the subsurface stratigraphy used in the analysis was based on boreholes 16-19 and 09-Q24. Boreholes 16-19 and 09-Q24 indicate that the stiff weathered crust extends to 3 metres depth; however, Figures 9 to 12 indicate that the subsurface stratigraphy was modelled using a 4 metre thick layer of stiff weathered crust. It is our opinion that further review/discussion of the subsurface stratigraphy used in the analysis is needed.
- 19) Section 5.2.2 states that a horizontal seismic coefficient of 0.19 was used for the analyses. It appears that the amplification of earthquake accelerations was considered when selecting this coefficient. Confirmation of the Site Class used to determine the horizontal seismic coefficient should be added to the report.
- 20) As indicated in Section 5.2.3, a 5 metre Erosion Allowance was considered for Reach 7. The MNR guidelines state that a minimum Erosion Allowance of 5 to 8 metres is required for clay soils where there is evidence of active erosion. It is our opinion that further review/discussion of the Erosion Allowance is needed (e.g., why the more conservative Erosion Allowance of 8 metres was not considered?).



- 21) As indicated in Section 5.2.3, a 1 metre Erosion Allowance was considered for Reach 12, since no active erosion was observed along Reach 12 at the time of the site reconnaissance. Section 5.2.1 states that evidence of active erosion was observed at the toes of the slopes, particularly in the areas of Sections A-A, C-C, F-F, and G-G. The areas of the site where active erosion was observed should be clarified (e.g., was active erosion observed at the toes of all slopes, with erosion being more pronounced in the areas of Sections A-A, C-C, F-F, and G-G?).
- 22) Section 5.2.3 states that an Erosion Access Allowance is not required where an "unobstructed corridor" for equipment access is provided. Since an Erosion Access Allowance is by definition an "unobstructed corridor", it is our opinion that additional discussion on the Erosion Access Allowance is warranted. Based on our interpretation of Section 5.2.3, the report suggests that development (e.g., construction of the SWMP) within the Erosion Access Allowance is permitted, provided that the development does not restrict access to the slope (i.e., provided that a 6 metre wide, unobstructed access corridor is maintained).

We trust that this letter is suitable for your current requirements. If you have any questions or comments, contact the undersigned.

Johnathan A. Cholewa, Ph.D., P.Eng. Senior Geotechnical Engineer

Brent Wiebe, P.Eng.

Vice President Operations - Ontario

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Conservation Partners Partenaires en conservation







File: 19-GLO-OPA

January 17th, 2019

City of Ottawa Planning, Infrastructure and Economic Development Department 110 Laurier Avenue West, 4th Floor Ottawa, ON K1P 1J1

Attention: Robin Van de Lande

Subject: Official Plan Amendment D01-01-19-0002

Community Design Plan EUC Phase 3

Environmental Assessment

Master Servicing Study EUC Phase 3

Dear Mr. Van de Lande:

The Conservation Partners Planning and Development Review Team has completed a review of the most recent community design plan for EUC Phase 3. We offer the following comments for your consideration.

Community Design Plan EUC Phase 3

Section 4.1 Study Area Constraints Pg. 11.

The slope stability constraints of the study area have been referenced in this section. The paragraph which references the slope stability constraints relies on the findings of the report "Slope Stability Assessment – reaches 7 and 12 Storm Water Management Pond Block, 3490 Inness Road Development" dated June 2019, prepared by Golder Associates Ltd.

The RVCA has completed a review of the report referenced. The review was completed by Terry K. Davidson, P.Eng, RVCA Director of Regulations and Engineering. As part of the review, discrepancies were noted between the Limit of Hazard Lands calculated in the report and that in the summary text and in Figure 1 for reach 12 (see memo attached).

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In addition, Figure 1 illustrates a portion of the stormwater management facility within the Limit of Hazard Lands for reach 12. Based on the drawings in the MSS, it is our understanding that the pond location illustrated in the geotechnical report is no longer valid and the location of the stormwater management pond is a significant distance from the identified Limit of Hazard Lands. Therefore, the geotechnical report should clarify the discrepancies and update Figure 1 to reflect the current stormwater management pond design.

Master Servicing Study EUC Phase 3

The RVCA has completed a review of the latest draft for the master servicing study (MSS). Please note that South Nation Conservation may provide comments separately as it pertains to the MSS.

Headwater Drainage Features

As part of the Community Design Process headwater drainage features were identified and management recommendations were given for each tributary. Some of the tributaries were given a management recommendation of Mitigation. Within Appendix (H) of the MSS, an explanation is provided on the Mitigation measures proposed for the MSS. While this explanation is acceptable, the RVCA recommends that this information also be represented in Section 11 of the MSS for ease of reference.

EUC Pond 1

The report has indicated that the proposed pond expansion will provide enhanced treatment (80% TSS removal) for all areas that are to be treated by the new North Forebays. The report has also indicated that the combined performance of the EUC Pond 1 will be an average blended rate of 76% average long-term annual TSS removal. The RVCA accepts the proposed water quality targets based on the existing infrastructure in place, previous approvals and the enhanced water quality targets for the North Forebays.

North East Quadrant Preferred Stormwater Management Plan

The report makes reference to the existing erosion issues on Bilberry Creek and cites the need for mitigation measures at a watershed scale. The report recognizes that the water quantity control targets already established may be reviewed by the City or RVCA relative to the established erosion thresholds and erosion characteristics of Bilberry Creek outlined in the Bilberry Creek Geomorphic Systems Master Implementation Plan (GHD, May 2014) and the findings of the Eastern Subwatersheds Stormwater Management Retrofit Study (Morrison Hershfield, December 21, 2018). While the information provided in these reports may provide some information on the Bilberry Creek system, any findings in the reports which were dated prior to 2017 may no longer be valid. In 2017, there were several slope failures within the

Bilberry Creek valley lands which resulted in significant remedial measures required to render portions of the valley lands stable. The slope failures are an indication that any assumptions made by the *Geomorphic Systems Master Implementation Plan* and the *Eastern Subwatersheds Stormwater Management Retrofit Study* may no longer be valid. Therefore, there needs to be recognition that existing conditions may warrant further study of erosion thresholds. It is recommended that the following wording be added to the MSS (underlined):

"As noted in Section 4.4, there are identified erosion.....and any additional studies submitted by the proponent may be reviewed by the City and the RVCA relative to the estimated erosion thresholds and erosion characteristics of Bilberry Creek outlined in the Bilberry Creek Geomorphic Systems Master Implementation Plan (GHD, May 2014) and the findings of the Eastern Subwatersheds Stormwater Management Retrofit Study, (Morrison Hershfield, December 21, 2018) and existing conditions that have changed since previous studies were conducted. Such conditions may require additional studies to determine any new erosion thresholds."

The report acknowledges that Vanguard Drive is expected to act as a drainage split, so that the area to the south may be directed to McKinnon's Creek instead of Bilberry Creek. This will require further input from South Nation Conservation. It is also understood that a detailed stormwater analysis may be required for the North East Quadrant for storage requirements for the major system. These items could be clarified by the inclusion of the following wording (underlined):

"The City has indicated that Vanguard Drive is expected to act as a drainage split, so that the area to the south may be directed to McKinnon's Creek, instead of Bilberry Creek as previously proposed in background studies. This may involve incorporating infiltration measures, surface or underground storage measures, etc., within the lands in the North East quadrant. Regardless of the measures, it is understood that the City is planning to address outlet eligibility and stormwater management requirements through Planning Act approvals for development applications within this area, in conjunction with RVCA, SNC, and affected landowners.

Detailed stormwater analysis is expected to be required in the North East quadrant as part of development applications under the Planning Act."

Conclusion

In conclusion, the Conservation Partners have no objection to the CDP in principle. We have identified some minor issues/amendments related to the supporting documents of the CDP which should be addressed prior to finalization of the CDP document.

The RVCA has no objection to the MSS in principle subject to the minor wording changes recommended in this letter. If you have any questions do not hesitate to contact me. Please keep us informed on the status of these applications.

Respectfully,

Jamie Batchelor, MCIP, RPP

Planner, Planning and Watershed Science

Rideau Valley Conservation Authority

613-692-3571 ext. 1191 Jamie.batchelor@rvca.ca

Cc: James Holland: South Nation Conservation

Laura Maxwell: DSEL

Julie Carrara: FoTenn Consultants

Fairouz Wahab: Richcraft



Watershed Science and Engineering Services - Technical Review Memorandum

February 16, 2020

To: Jamie Batchelor

From: Terry K. Davidson

Subject: Slope Stability Assessment

Reach 7 and 12

Storm Water Management Pond Block

3490 Innes Road Ottawa, Ontario

As requested, I have reviewed the report "Slope Stability Assessment" by Golder Associates dated June 2019 (Report No. 1660030-03 Rev 6).

The report appears to have been completed primarily for the purpose of re-evaluate the stability of the existing slope along ravine to establishing a Limit of Hazard Lands for the SWMP. The analysis and supporting field work have been carried out an appropriate level of detail for that purpose. The report has documented the present geometry of the slope in sufficient detail, and suitable methods have been used to characterize the soil characteristics The report from the consultant makes reference to reviewing, the lands along the slope as "Hazard Lands, as defined by the "MNR Technical Guide for River and Stream Systems: Erosion Hazard Limit" as the primary technical reference for delineating hazard lands and addressing the natural hazards provisions of the Provincial Policy Statement under the Planning Act.

The report from the consultant indicates that they analyzed reach 7 and 12, and both reaches indicated a Factor of Safety greater than 1.5.

For Reach 7, the consultant has indicated the Limit of Hazard Lands as a 11 metre setback, and was based on the following:

- 1. A stable slope allowance based on stability analysis using the Morgenstern Price method.
- 2. A toe erosion allowance of 5 metres was determined based on "Table: Minimum Toe Erosion Allowance" of the "Natural Hazards Technical Guide".
- **3.** A 6 metre access erosion allowance was required

For Reach 12, the consultant has indicated the Limit of Hazard Lands as a 9 metre setback, and was based on the following:

- 1. A stable slope allowance based on stability analysis using the Morgenstern Price method.
- 2. A toe erosion allowance of 1.0 metres was determined based on "Table: Minimum Toe Erosion Allowance" of the "Natural Hazards Technical Guide". The consultant indicated there was no evidence of active erosion in May of 2019.
- 3. A 6 metre access erosion allowance was required.

However, this setback adds up to 7 metres versus the 9 metres in the summary text and indicated on Figure 1.

In summary, the Report No. 1660030-03 Rev 6 needs to address the inconsistency of the Limit of Hazard Lands setback for Reach 12.

The policy of the Rideau Valley Conservation Authority regarding the encroachment of the SWMP into the Limit of Hazard Land as indicated on Figure 1 "Site Plan" dated May 2, 2019 will be to deny this encroachment at time of permitting under Section 28 of the Conservation Authority's Act.

I trust this is satisfactory for your present purposes. Please call if you have any questions.

Terry K. Davidson, P.Eng. *terry.davidson@ryca.ca*

Date: 25/06/2020 page 2/2

Conservation Partners Partenaires en conservation







January 28, 2020

Mr. Robin Van de Lande City of Ottawa Planning, Infrastructure and Economic Development Department 110 Laurier Avenue West, 4th Floor Ottawa, ON K1P 1J1

Dear Mr. Van de Lande:

The Conservation Partners Planning and Development Review Team completed a review of OPA D01-01-19-0002 and the Community Design Plan, and Environmental Assessment for Phase 3 of the East Urban Community on January 17, 2020. The letter noted that additional comments may be provided by South Nation Conservation on the Master Servicing Study.

i. <u>Master Servicing Study for East Urban Community Phase 3 Area Community Design Plan.</u> Prepared by DSEL. Dated October 2019 (2nd Submission).

The above study notes that the outcome of the Vanguard Drive Environmental Assessment and potential diversion of the North East quadrant to McKinnon's Creek may affect grading strategies. It further states that the "City is planning to address outlet eligibility and stormwater management requirements through Planning Act approvals for development applications within this area," and "a detailed stormwater analysis may be required for the North East quadrant as the design process continues to prove storage requirements are met." (page 77).

If a diversion of lands in the EUC Phase 3 North East quadrant is to be pursued, it must be demonstrated how any increased volumes to the Neighbourhood 5 pond or McKinnon's Creek downstream of the pond will be addressed. These studies must address the following:

- 1. Impacts to McKinnon's Creek floodplain, including updating the recently completed McKinnon's Creek Floodplain model to reflect the proposed increase in catchment area.
- 2. Impacts to erosion hazard allowances which examine toe erosion, slope stability, erosion access, and fluvial geomorphological considerations (meander belt width).

Studies addressing these impacts must consider the current SWM design servicing Neighborhood 5 (NH5), future expansion of NH5, future development downstream of NH5 and runoff contributions from the Orleans Family Health Hub at 225 Mer Bleue Road and Blue Sea Village Mer Bleue at 2159 Mer Bleue Road.

It is also recommended that consultation be undertaken with stakeholders of future development relying on the NH5 SWM pond and/or the current floodplain study of McKinnon's creek.

I trust the above is to your satisfaction. If you have any questions, please do not hesitate to call me at 1-877-984-2948 x227.

Yours truly,

James Holland, MSc RPP Watershed Planner

Jan. Hillad

South Nation Conservation

Cc: Laura Maxwell, DESL Jennifer Ailey, DESL

Peter Deir, IBI

Jamie Bachelor, Rideau Valley Conservation Authority