CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF DECEMBER 11, 2012

Item 4, Report No. 6, of the Priorities and Key Initiatives Committee, which was adopted without amendment by the Council of the City of Vaughan on December 11, 2012.

4 VAUGHAN METROPOLITAN CENTRE SERVICING STRATEGY CLASS ENVIRONMENTAL ASSESSMENT STUDY NOTICE OF STUDY COMPLETION WARD 4

The Priorities and Key Initiatives Committee recommends:

1) That the Vaughan Metropolitan Centre Sub-committee recommendation of November 22, 2012, be approved; and

2) That the report of the City Clerk, dated November 26, 2012, be received.

Recommendation

The City Clerk, on behalf of the Vaughan Metropolitan Centre Sub-Committee forwards the following recommendation from its meeting of November 22, 2012 (Item 3, Report No.5), for Council's consideration:

The Vaughan Metropolitan Centre Sub-Committee recommends:

1) That the presentation by the Director of Development/Transportation Engineering and C2, presentation material, be received; and

2) That Council approve the Draft Vaughan Metropolitan Centre Servicing Strategy in principle, and direct staff to issue a Notice of Study Completion following finalization of the study report;

Report of the Commissioner of Engineering and Public Works, dated November 22, 2012

Recommendation

The Commissioner of Engineering and Public Works, in consultation with the Commissioner of Finance / City Treasurer, recommends the following recommendation be forwarded to the Priorities and Key Initiatives Committee meeting of November 26, 2012 for consideration:

1. That Council approve the Draft Vaughan Metropolitan Centre Servicing Strategy in principle and direct staff to issue a Notice of Study Completion following finalization of the study report.

Contribution to Sustainability

In considering the objectives of the City's Community Sustainability and Environmental Master Plan (Green Directions Vaughan), the Vaughan Metropolitan Centre (VMC) Servicing Strategy will assist in:

- Minimizing greenhouse gas emissions and the movement towards carbon neutrality for City facilities and infrastructure
- Ensuring efficient and appropriate use of potable water
- Achieving sustainable growth and development
- Creating a City with sustainable built form
- Sharing sustainable best practices and ideas between and among municipal staff and the community

…/2

Implementation of the recommended infrastructure will advance water conservation and efficiency initiatives and the reduction of inflow and infiltration within the wastewater collection system.

Economic Impact

The VMC Servicing Strategy identifies the required improvements and expansions to the City's watermain, sanitary sewer and stormwater management systems necessary to support the planned growth in the Vaughan Metropolitan Centre. The total cost of these growth-related improvements is valued at approximately $27 million as detailed in this report.

Much of the required infrastructure improvements will be designed, constructed and funded by private Developers in conjunction with the servicing of individual development applications. Funding for the balance of the improvements, in particular the stormwater management ponds and specific watermain links external to the development areas, will be included as growth related projects in the draft City Development Charge and Background Study, which is currently under review.

Until the City's Development Charge By-law has been updated, development approvals in the VMC will be conditional on the developer providing the City with proportional financial contributions towards the broader infrastructure improvements that are necessary to service the development.

Once implemented, the recommended infrastructure improvements will incur normal expenses associated with annual operating, maintenance and life cycle costs. Life cycle costs will be detailed further in conjunction with capital funding requests for individual components of the Strategy.

Communications Plan

A comprehensive public consultation program to obtain input from all affected stakeholders was completed as part of the Study. The main components undertaken include:

- Notice of Study Commencement
- Two Public Information Forums
- Various individual stakeholder meetings with local landowners
- Notice of Study Completion (to be released Q1-2013)

All notification related to the Study was directly mailed to affected stakeholders on the project mailing list, advertised in local newspapers and posted on the City website.

A final Notice of Study Completion will be issued in Q1-2013. Upon issuance of this notice, the final Study Report will be placed on public record for a 30-day review period in accordance with the requirements of the Municipal Class Environmental Assessment process. Comments received through the review period will be considered in the subsequent implementation phase of each project.

Purpose

The purpose of this report is to highlight the conclusions and recommendations of the VMC Servicing Strategy for Council's approval in principle so the Notice of Study Completion can be issued in accordance with the Municipal Class Environmental Assessment process.

Background - Analysis and Options

Vaughan Metropolitan Centre Secondary Plan to accommodate a population of approximately 50,000 residents creating 12,000 jobs

The VMC is designated as a Regional Centre in the Regional Official Plan, and identified in the Provincial Growth Plan for the Greater Golden Horseshoe (Places to Grow) as an Urban Growth Centre and Intensification Corridor.

A current draft of the VMC Secondary Plan and study boundaries are shown on Attachment No. 1. The goal of the VMC Secondary Plan is to create a vibrant and sustainable downtown that serves all Vaughan citizens. The extension of the Spadina Subway to Vaughan and the Highway 7 Rapidway, combined with the need to accommodate a balanced mix of residents and jobs in the VMC, sets the stage for a vibrant and sustainable downtown. The projected population of the VMC area to 2031 is 25,000 residents and 11,500 new jobs. Under ultimate build-out (2051), the VMC will accommodate approximately 50,000 residents and create approximately 12,000 new jobs.

The City's Servicing Strategy identifies key municipal servicing improvements necessary to service planned development

The Municipal Infrastructure Group (TMIG) was retained by the City to undertake a servicing strategy study in accordance with the Municipal Class Environmental Assessment process. The draft Servicing Strategy was completed in April 2012. It assesses municipal servicing improvements and/or modifications required to the existing water, wastewater and stormwater systems to implement the development objectives outlined in the VMC Secondary Plan. The Strategy is key to ensuring infrastructure is comprehensively planned and delivered in a timely manner and will facilitate the development review and approvals process. An Executive Summary of the Study is provided in Attachment No. 2. The key findings and recommendations of the Study are outlined below.

The overall servicing framework has been coordinated with on-going revisions to the Secondary Plan, the Toronto-York Spadina Subway Extension and the Highway 7 Bus Rapidway projects

The draft Study identifies the overall skeleton servicing network and associated design criteria necessary to facilitate ultimate build-out of the Plan. The Strategy has been closely coordinated with the on-going detailed design of the Toronto-York Spadina Subway Extension and Highway 7 Rapidway projects.

For the purpose of finalizing the draft Study, the September 2010 Council endorsed VMC Secondary Plan version has been used as the base road network and land use plan. Although revisions to the Secondary Plan continue, the overall impact of these changes on the conclusions and recommendations of the Study is negligible given the high-level nature of the Servicing Strategy. Any necessary modifications to the Strategy will be addressed in conjunction with the development review and approvals process.

The VMC area is well served by the existing municipal water supply system

The VMC area lies within Pressure District 6 (PD-6) of the York Region Water Supply System consisting of City-operated distribution mains and Regional transmission mains. The Vaughan PD-6 service area throughout the VMC is currently well served with Regional water supply.

The water supply system analysis completed as part of the study identifies the Regional supply system is adequate to accommodate ultimate build-out. This will be confirmed by York Region through upcoming Regional Master Plan updates. As a result, major system improvements are not required.

As redevelopment occurs, construction of local distribution watermains along new roads will be required to facilitate growth and provide municipal water to the VMC area. Existing watermains will be utilized where possible. In some areas, existing watermains will be replaced with larger diameter pipes to address ultimate system requirements. Attachment No. 3 graphically identifies the proposed key water distribution system network components recommended by the Study.

The existing Jane Street Collector sanitary trunk sewer can accommodate the planned development in the VMC

The VMC area lies within the City's Jane Street Collector sanitary trunk sewer service area. Portions of this 900 millimetre diameter trunk sewer are located within the VMC area along the Jane Street corridor. This sewer system discharges to York Region's Black Creek Sewage Pumping Station, which is located in the vicinity of Jane Street and Highway 407. The Jane Street Collector also serves the greater part of the existing industrial lands south of Rutherford Road and east of Highway 400.

The sanitary servicing system analysis completed as part of the Study confirms the 900 millimetre diameter trunk is adequately sized to accommodate full build-out of the VMC area. Accordingly, sanitary sewer system improvements are not required to the City's trunk sewer. The Region will be reviewing the capacity of the Regional Black Creek Pumping Station in conjunction with their next Water & Wastewater Master Plan Update.

As development occurs, the recommended network of sanitary sub-trunk sewers will be constructed as necessary to accommodate development phasing. The recommended sanitary servicing improvements are graphically identified in Attachment No. 4.

The three existing stormwater management ponds in the VMC need improvements

The VMC area generally drains in a southerly direction and is tributary to the Black Creek sub-watershed. The Study recommends a stormwater management strategy consistent with the current drainage patterns and compliant with the recently completed Black Creek Optimization Master Plan Study.

Stormwater drainage within the area is divided into four quadrants. Three of the four quadrants are currently serviced by existing stormwater management ponds. Improvements to these facilities are necessary to meet the design criteria established by the Black Creek Optimization Master Plan Study. The existing facilities are located in the north-east, north-west and south-west quadrants of the VMC area. Refer to Attachment No. 5.

A new stormwater management pond is required in the south-east quadrant of the VMC

The existing industrial lands in the south-east quadrant of the VMC area are currently not serviced by a stormwater management facility. Storm drainage from this area is released essentially uncontrolled directly to the receiving watercourse. Accordingly, a new stormwater management pond is proposed for the south-east quadrant to provide both quantity and quality control for the redevelopment of the area as shown on Attachment No. 5.

The existing storm sewer system throughout the VMC area is generally adequate to convey flows from redevelopment of the area. The conveyance capacity and layout of the current and future

storm sewer network will be assessed in greater detail in conjunction with the development review and approvals process.

The recommended infrastructure improvements are valued at approximately $27 million

A summary of the preliminary estimated capital costs associated with the recommended infrastructure improvements for all City growth related infrastructure is provided below. These costs exclude land requirements necessary for the construction of a new stormwater management pond in the south-east quadrant of the Plan.

GROWTH RELATED
INFRASTRUCTURE IMPROVEMENT COSTS

ITEM	DESCRIPTION	COST (Millions)
1	Watermains	$9
2	Sanitary Sewers	$2
3	Stormwater Management	$16
	TOTAL	**$27**

The design and construction of these infrastructure improvements will be carried out either through private development, or as City initiated capital projects with funding from Development Charges.

Developers' Group agreements should be established based on approved precinct plans thereby providing the basis for coordinated implementation strategies, funding and phasing plans.

Improvements to the existing Highway 7 / Jane Street stormwater management pond and the Black Creek channel are key priorities

As a follow up to the Black Creek Optimization Study, the City is currently undertaking a Class Environmental Assessment (EA) Study for the improvements and renewal of the Black Creek stream corridor extending through the VMC Plan area along the east side of Jane Street. This study is anticipated to be completed by Q2-2013. Improvements to this reach of Black Creek are necessary to increase stormwater conveyance capacity and to address the existing flood risk. Once the Black Creek Renewal Class EA Study is complete, detailed design may commence for the improvements to the Black Creek corridor and to the City's existing Highway 7 and Jane Street stormwater management pond.

The detailed design and construction of these projects will consider the overall urban design, landscape and open space objectives of the VMC Secondary Plan. Early implementation is necessary to help stimulate development of the VMC area. Subject to capital budget approval and available funding, detailed design could commence in Q3-2013 with property acquisition and construction in subsequent years. Funding for this work has been included in the City's Draft 2013-2016 Capital Budget for Council's consideration.

Regional Implications

Regional staff has been involved throughout the duration of the Study and is supportive of the

study findings and recommendations. Regional comments have been received on the draft Study document and will be addressed prior to finalizing the study report.

Relationship to Vaughan Vision 2020/Strategic Plan

In consideration of the strategic priorities related to Vaughan Vision 2020, the recommendation of this report will assist in:

- The pursuit of excellence in service delivery
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The recommendations of this report will assist in advancing the City's Strategic Plan initiative to establish "city-wide master phasing and servicing allocation plans".

This report is therefore consistent with the priorities previously set by Council.

Conclusion

The draft VMC Servicing Strategy Study has been completed. It identifies the required improvements and expansions to the City's watermain, sanitary sewer and stormwater management systems necessary to support the planned growth in the Vaughan Metropolitan Centre.

Preliminary estimates value the recommended infrastructure improvements at approximately $27 million. The design and construction of this work will be carried out either through private development, or as a City initiated capital project with funding from Development Charges.

The approval in principle of the Draft Vaughan Metropolitan Centre Servicing Strategy will ensure infrastructure is comprehensively planned and delivered in a timely and efficient manner to support the planned development, and will enable staff to take the next steps towards implementing the Strategy.

Attachments

1. Vaughan Metropolitan Centre Secondary Plan / Study Boundaries
2. Executive Summary – The Municipal Infrastructure Group Ltd.
3. Proposed Water Distribution System
4. Proposed Sanitary Sewer System
5. Proposed Stormwater Management Scheme

Report prepared by:

John Britto, Assistant City Clerk

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)

PRIORITIES AND KEY INITIATIVES COMMITTEE – NOVEMBER 26, 2012

VAUGHAN METROPOLITAN CENTRE SERVICING STRATEGY
CLASS ENVIRONMENTAL ASSESSMENT STUDY
NOTICE OF STUDY COMPLETION
WARD 4

Recommendation

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Regional Implications

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Relationship to Vaughan Vision 2020/Strategic Plan

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Conclusion

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Report prepared by:

John Britto, Assistant City Clerk

Respectfully submitted,

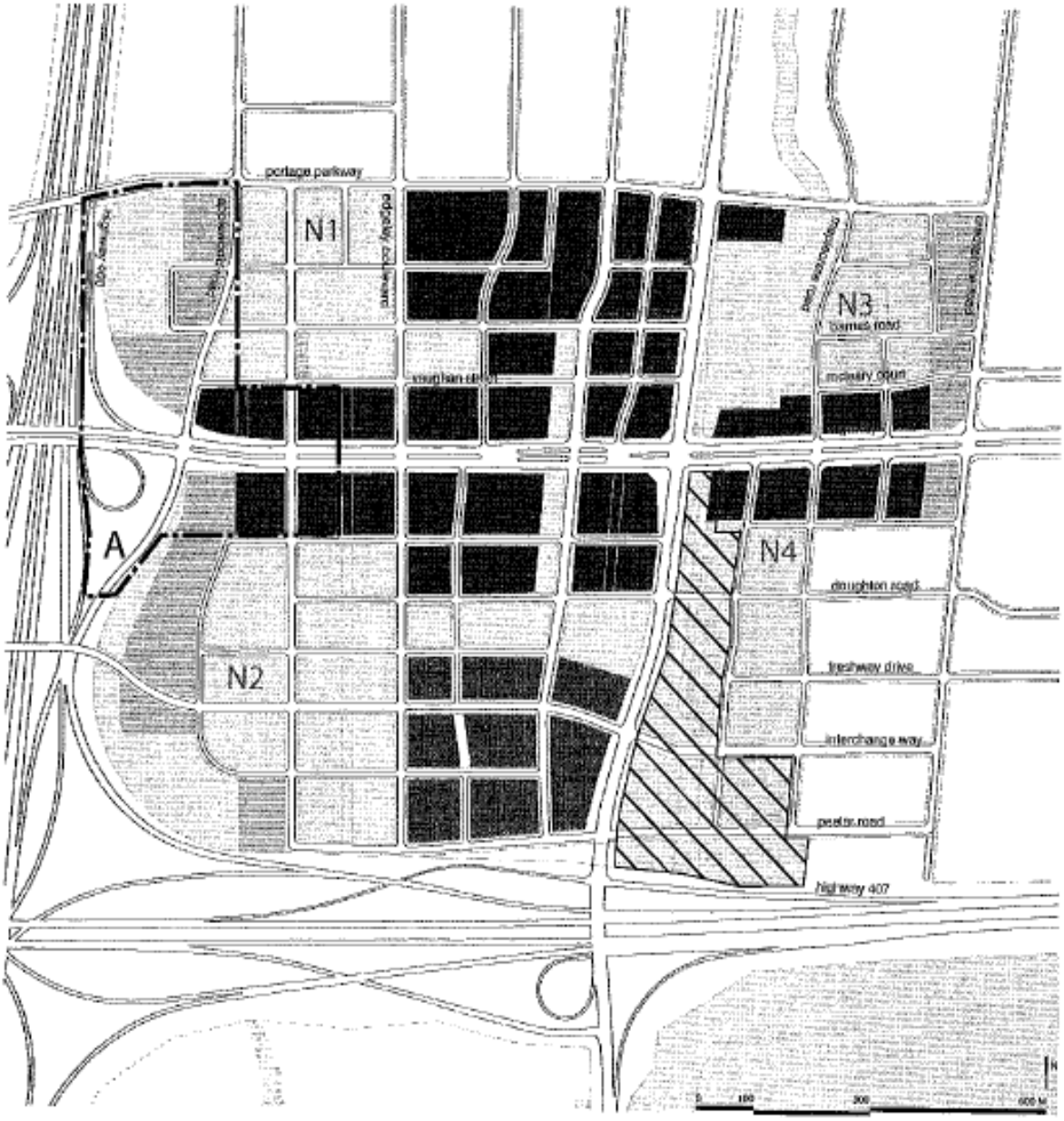
Jeffrey A. Abrams, City Clerk

ATTACHMENT NO. 1
VMC SECONDARY PLAN/STUDY BOUNDARIES

DRAFT REVISIONS NOVEMBER 5 2012
SCHEDULE F > LAND USE PRECINCTS

LEGEND

- station precinct
- south precinct
- neighbourhood precincts
- technology / office precincts
- major parks and open spaces
- special study area A (See Policies 4.3.10 and 8.1.15)
- land use designations subject to results of the VMC Black Creek Renewal EA (Stages 3 & 4) and final results of the VMC Servicing and Stormwater Management Master Plan



Executive Summary

The Vaughan Metropolitan Centre (VMC) is an area of approximately 190 hectares, presently comprised of mixed use development and vacant lots centred on the Highway 7 corridor east of Highway 400. The VMC is a designated urban growth centre, as identified by Ontario's Growth Plan, with a vision for redevelopment that has been detailed in both the City of Vaughan Official Plan and the VMC Secondary Plan.

The Secondary Plan has advanced a vision for the VMC that includes a distinct downtown containing a mix of uses, civic attractions, and a critical mass of people. In accordance with the overall objectives of the Places to Grow framework, the plan is optimized to complement existing and planned investments in rapid transit, including the Spadina Subway extension to its terminus at the planned Vaughan Metropolitan Centre Station, and the Region's Highway 7 Bus Rapid Transit system. The projected population of the VMC area to 2031 is 25,000 residents and 6,500 new jobs (for a total of 11,500 jobs). The projected population under ultimate build-out (2051) is 50,609 residents and 12,345 jobs.

The form of growth anticipated to occur within the VMC will result in greater population densities, enhanced transportation networks, and an increase in the extent of hard surfaces. These changes will lead to an increased demand for water, increased wastewater production, and an increase in surface runoff during rain events.

Assessment of the state of infrastructure present within the VMC indicates that the planned growth cannot be accommodated by the existing infrastructure systems. Therefore, this *Municipal Servicing Class Environmental Assessment Master Plan* has been undertaken to identify and evaluate alternatives for the provision of water, wastewater, and stormwater servicing to support the redevelopment objectives established by the VMC Secondary Plan, culminating in a series of recommended infrastructure improvements. This Class EA Master Plan fulfills the Phase 1 and Phase 2 requirements of the Municipal Class EA process.

The Class EA Master Plan process includes public and review agency consultation, an assessment of the problem and opportunities, evaluation of alternative solutions, assessment of potential effects on the environment, and identification of reasonable measures to mitigate any adverse effects. The preferred solution(s) have been determined based on engineering requirements, environmental considerations, public input, and information gathered during the study.

Opportunities and Constraints

A review of the factors affecting infrastructure planning was undertaken to establish the opportunities and constraints requiring consideration in the implementation of the VMC Secondary Plan. Some of these factors included:

- existing structures, and the associated difficulty in anticipating the phasing of redevelopment;
- features and functions associated with the existing natural environment, existing drainage patterns, and existing subsurface conditions;
- existing and proposed street patterns;
- existing and future watercourse alignments;
- existing stormwater management facilities; and,
- the proposed TTC and BRT alignments and related works.

Recommended Water Servicing Strategy

The analysis of future water demands in relation to existing supply revealed that the Regional supply will be adequate for the redevelopment of the VMC lands, and therefore no major system improvements are necessary. However, new watermains will be required along the new roads identified by the Secondary Plan. The recommended water servicing projects include:

Project	Street	From	To	Diam. [mm]	Length [m]
W-01	Commerce St	Portage Pkwy	Interchange Way	400	1,090
W-02	Exchange Ave	Interchange Way	Jane St	400	1,000
W-03	Interchange Way	Interchange Way	Exchange Ave	300	270
W-04	Doughton Road	Interchange Way	Millway Ave	300	300
W-05	Millway Ave	Highway 7	Exchange Ave	300	700
W-06	Portage Parkway	Jane St	Creditstone Rd	400	570
W-07	Maplecrete Rd	Portage Pkwy	Highway 7	400	450
W-08	Maplecrete Rd	Hwy 7	Peelar Rd	400	600
W-09	Creditstone Rd	Doughton Rd	Peelar Rd	300	440
W-10A	Peelar Rd	Jane St	Maplecrete Rd	400	285
W-10B	Peelar Rd	Maplecrete Rd	Creditstone Rd	300	285

Recommended Sanitary Servicing Strategy

The evaluation of the existing sanitary sewer system revealed that the Regional system provides sufficient capacity for the proposed redevelopment of the VMC lands. However, conveyance of local flows to the sanitary trunk sewer and across the TTC subway alignment required an evaluation of alternative approaches, culminating in a recommendation to construct a single, deeper crossing of the subway corridor.

The recommended sanitary servicing strategy provides the main sub-trunk sewer locations through the redeveloped VMC, which can be phased as individual properties redevelop. The recommended sanitary servicing projects include:

Project	Project	From	To	Diam. [mm]	Length [m]
SA-01	Interchange Way Upgrades	North of Highway 7	Jane Street Trunk	450-600	820
SA-02	Barnes Court Upgrade	Barnes Ct	Jane Street Trunk	525	65
SA-03	Doughton Road Upgrade	Maplecrete Rd	Jane St	450	160

While not specifically addressed in this Master Plan, additional local sewers will be required to connect the individual future buildings to these sub-trunks. The exact locations and sizing of these connections can be addressed at the design review stage without any impact to the recommendations presented in this document.

Depending on the phasing of the redevelopment, it is possible that a parcel will propose redevelopment in advance of the reconstruction of the street and sub-trunk that is intended to service that particular property. In that instance, the City can consider slight modifications to this recommendation, such as shifting a recommended sub-trunk one street over from the identified location. These modifications should only be considered in conjunction with an updated system analysis using the Master Plan model. There would be no significant change to the technical, environmental, socio-economic, or financial impacts by installing a sub-trunk in an alternate location in conjunction with a road reconstruction.

Stormwater Management

The stormwater management analysis considered two facets: refinement of drainage patterns within the VMC area to direct all runoff to end-of-pipe treatment facilities, and the provision of suitable stormwater management controls in conjunction with redevelopment to mitigate the environmental impacts of urban runoff.

The VMC area falls entirely within the Black Creek subwatershed, and generally drains in a southerly direction towards the main and west branches of Black Creek. Four distinct drainage areas comprise the VMC area, generally delineated by Highway 7 along the east-west axis and Jane Street along the north-south axis. The north-west, north-east, and south-west quadrants presently drain to existing stormwater management wet ponds. The south-east quadrant presently discharges directly to the main branch of Black Creek without stormwater management controls.

Runoff from the Jane Street and Highway 7 rights-of-way are presently directed, via roadside ditches and culverts, to either the west or main branch of Black Creek.

The recommended future condition for redevelopment of the VMC area includes a drainage regime that is largely consistent with the existing drainage patterns. The recommended stormwater management strategy for the VMC area includes the following components:

- On-site control for each development and redevelopment block. The peak release rate is controlled to the 2-year post development flow rate, based on an 80% level of imperviousness, with the 100-year less the 2-year excess runoff stored on-site.
- On-site retention of 15mm over the building footprint, and an additional 15mm on-site retention over landscaped areas. Capture and utilization of 15mm of every rainfall event to be achieved through the implementation of low impact development measures.
- Remaining runoff from development blocks, rights-of-way, and other uncontrolled areas directed via a dual-drainage storm network to end-of-pipe stormwater management facilities, which discharge to the main and west branches of Black Creek.
- The three existing stormwater management ponds will be retrofitted to satisfy current criteria and targets, with a fourth new pond proposed for the south-east quadrant.

The recommended stormwater management facility projects include:

Project	Project	Location
SF-01	Retrofit of SWM Pond P1	North-east corner of Jane St and Hwy 7
SF-02	Retrofit of SWM Pond P2	South of Portage Pkwy, east of Hwy 400
SF-03	Retrofit of Interchange SWM Pond	South-west corner of VMC, north of Hwy 400 ramp
SF-04	New SWM Pond in SE Quadrant	East of Jane St and the Black Creek main branch, north of Hwy 407 and south of Peelar Road

Conceptual configurations for each stormwater management facility have been developed as part of this study, based on current City of Vaughan design criteria. Design of these facilities should be undertaken as a multi-disciplinary effort that incorporates technical, ecological, and urban design considerations.

ATTACHMENT NO. 3 - PROPOSED WATERMAINS

LEGEND

- EXISTING DISTRIBUTION SYSTEM
- PROPOSED TRUNK DISTRIBUTION SYSTEM
- ~~000 mm~~ PROPOSED WATERMAIN UPGRADE

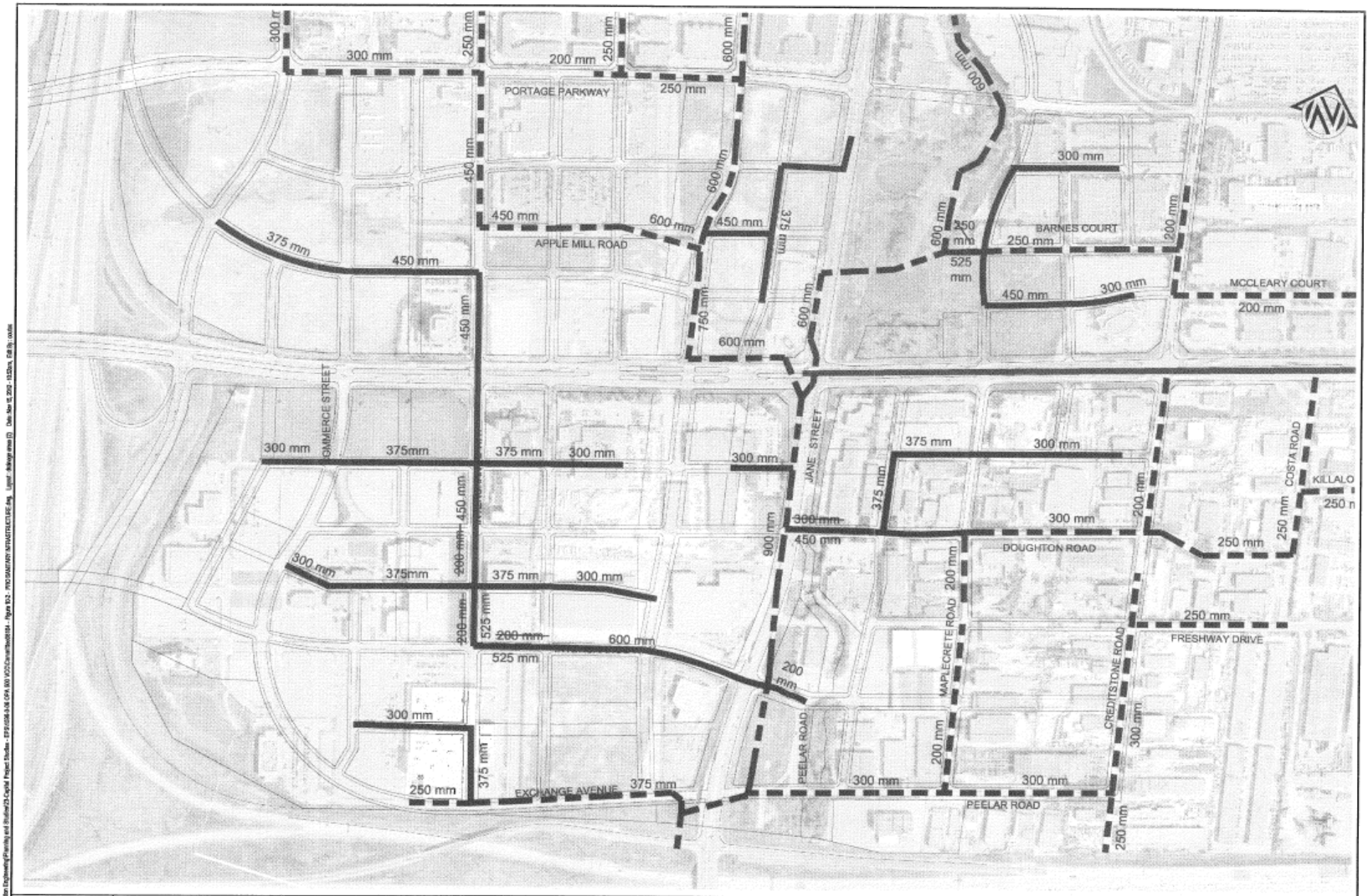
The Municipal Infrastructure Group Ltd.

VAUGHAN METROPOLITAN CENTRE
MUNICIPAL SERVICING CLASS
ENVIRONMENTAL ASSESSMENT
MASTER PLAN

PROPOSED WATER
SERVICING STRATEGY

PROJECT No.	DATE:	FIGURE No.
08104	NOV 2012	10-1

ATTACHMENT NO. 4 - PROPOSED SANITARY SEWER SYSTEM



LEGEND

- EXISTING SANITARY SYSTEM
- PROPOSED SANITARY SYSTEM
- 000 mm PROPOSED SANITARY SEWER UPGRADE

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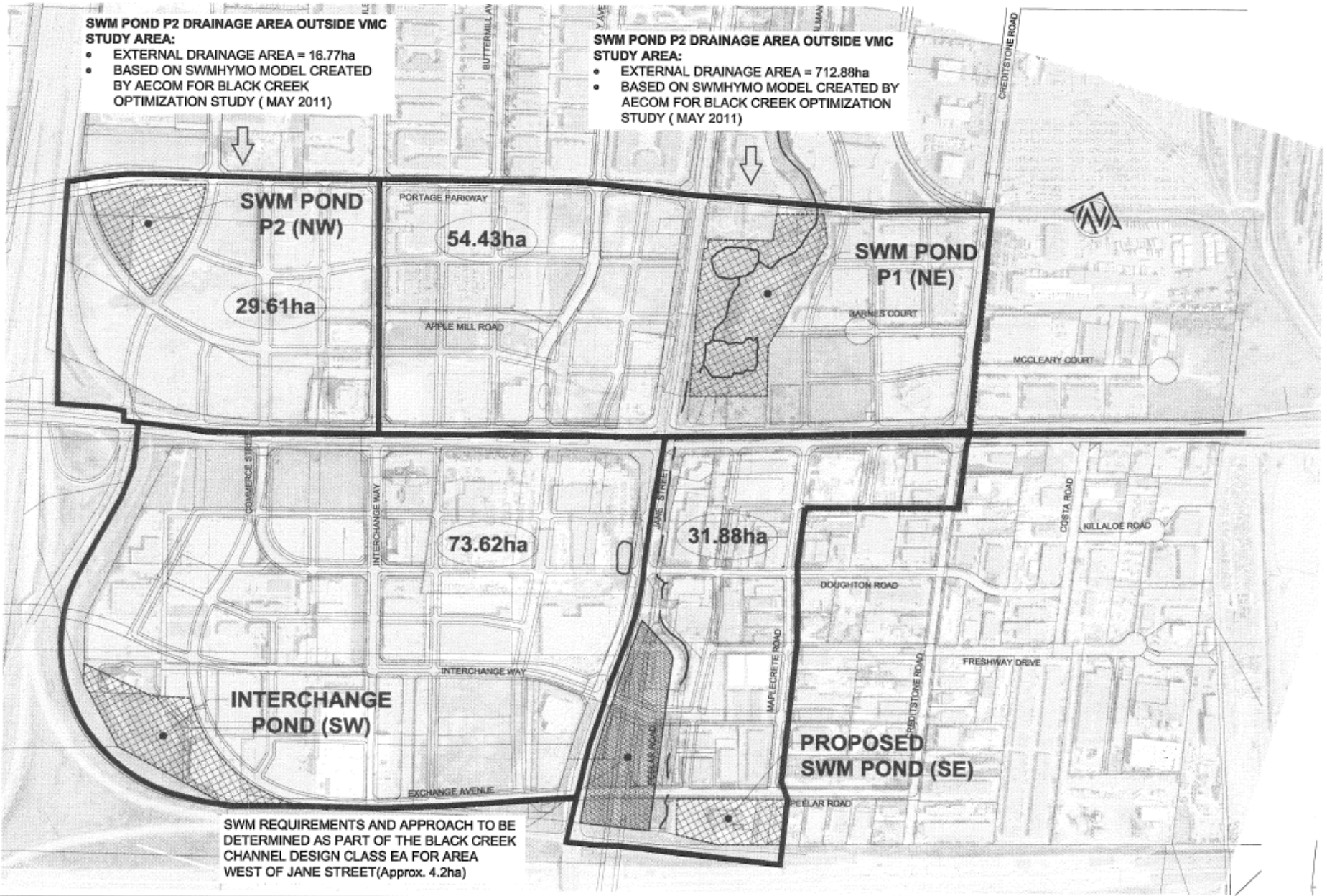
MASTER PLAN

PROPOSED SANITARY
SERVICING STRATEGY

PROJECT No.	DATE:	FIGURE No.
08104	NOV 2012	10-2

ATTACHMENT NO. 5 - PROPOSED STORMWATER MANAGEMENT



LEGEND

- FUTURE REFINEMENTS
- PROPOSED SWM POND BLOCK
- DRAINAGE BOUNDARY
- 35.64ha DRAINAGE AREA WITHIN OPA 500 BOUNDARY
- WATERCOURSE

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PROPOSED PREFERRED STORM DRAINAGE

PROJECT No.	DATE:	FIGURE No.
08104	NOV 2012	11-1