

MEMORANDUM

To: Mary Dickinson, MCIP, RPP
Planner
Development Review West
City of Ottawa

Date: June 16, 2017

Job No.: 27296-01

From: Karla Ferrey, P.Eng.

CC: Bliss Edwards, MCIP, RPP
Senior Director - Planning
Dymon Group of Companies

RE: 1375 Clyde Avenue Redevelopment
Dymon Group of Companies
Zoning By-Law Amendment Application
Servicing Letter

INTRODUCTION

Dymon Group of Companies (Dymon) has retained the services of J.L. Richards & Associates Limited (JLR) to prepare a servicing letter in support of a Zoning By-law Amendment Application for their redevelopment of the 1.14 ha property located at 1375 Clyde Avenue in the City of Ottawa. This servicing letter outlines the proposed servicing strategy for redeveloping the subject lands. This letter has been prepared in accordance with the latest City of Ottawa Design Guidelines and associated Technical Bulletins.

SITE DESCRIPTION AND BACKGROUND

The subject property is located within the urban limits of the City of Ottawa. As illustrated below in Figure 1 – Site Location, the subject site consists of one retail building along the south limit of the property. As depicted on Figure 1, the subject site is bounded by Baseline Road to the north, Clyde Avenue to the west, existing commercial/retail developments to the south and undeveloped arterial mainstreet lands to the east.



Figure 1 - Site Location

Dymon wishes to redevelop the above-described 1.14 ha property with a five-storey storage facility building with a covered drive-through garage and additional retail area at the ground floor. In addition, it is proposed to maintain the majority of the existing retail building while adding a second retail unit to the east of the existing building. There is also a drive-through restaurant proposed at the north end of the site along Baseline Road, as depicted on the attached Site Plan (refer to Attachment A).

WATER SERVICING

Potable water supply for the proposed site can be provided by the following existing watermains surrounding the site (refer to Attachment B for background drawings):

- The existing 305 mm diameter PVC watermain along Clyde Avenue; and
- The existing 406 mm diameter cast iron watermain along Baseline Road.

The two watermains stated above fall within two separate City of Ottawa water distribution pressure zones; the Baseline Road watermain is within the Carlington Heights low pressure zone while the Clyde Avenue watermain is within the Meadowlands high pressure zone (refer to City of Ottawa information provided in Attachment C).

The existing site is currently serviced via two (2) 152 mm diameter water service laterals serviced off the existing 305 mm diameter watermain along Clyde Avenue, part of the Meadowlands high pressure zone. It will be determined during construction whether the conditions of the existing water services are able to be reused for the redevelopment.

Water servicing specifics such as hydrant spacing, watermain looping, and sizing of the internal site watermains will be addressed in greater detail with a hydraulic network analysis (HNA) during the engineering detailed design stage. The HNA will demonstrate how the proposed watermain sizing can deliver the water demands during the peak hourly and maximum day plus fire flow conditions while meeting the pressure requirements prescribed in the City of Ottawa Water Distribution Design Guidelines (July 2010) and the Technical Bulletin issued on May 27, 2014 (ISDTB-2014-02). If applicable, the analysis will include an assessment of system pressures during low demand conditions (i.e., high pressure check) to ensure that the maximum pressure requirements are not exceeded, per the Ontario Building Code (OBC) and Ministry of the Environment (MOE).

SANITARY SERVICING

The wastewater servicing for the proposed site will be provided by the local 200 and 300 mm diameter sanitary sewers on Clyde Avenue and Baseline Road, respectively (refer to Attachment B for background drawings).

Currently, the location of the existing sanitary service to the site is unknown; however, it is anticipated to be outletting to the 200 mm sanitary sewer along Clyde Avenue similar to the water and storm services. At detailed design, the existing service will be located and the condition assessed as to the possibility of reusing it for redevelopment. The wastewater flows from the proposed site is proposed to be discharged to the municipal system via the existing sanitary service or a newly installed service to the local sewers on Clyde Avenue and Baseline Road, if required.

During the detailed design, the wastewater flows from the site will be investigated using two (2) approaches:

- Peak flow calculations based on the design value of 50,000 L/ha/day for commercial developments as well as applicable design parameters in accordance with the City of Ottawa Sewer Design Guidelines (October 2012) and associated Technical Bulletins:
 - Site of ± 1.14 ha , 50,000 L/ha/day, peak factor 1.5 per City of Ottawa Design Guidelines
 - Average wastewater flow = 1.32 L/s (assuming 12 hour operation)
 - Peak Design Flow = 2.30 L/s commercial flow, including a infiltration flow of 0.28 L/s/ha
 - Existing Area = Foundation Drain Allowance of 5.0 L/s/gross ha
- Peak flow calculation based on actual mechanical fixture counts.

STORM SERVICING AND STORMWATER MANAGEMENT

Storm runoff generated by the proposed site will be collected by an on-site storm sewer system that will be discharged into the existing Clyde Avenue 375 mm diameter storm sewer system, which will eventually outlet to the Ottawa River via the Pinecrest Creek, approximately 5.7 km downstream (refer to Attachment B for background drawings). Based on the review of the SWM Guidelines for the Pinecrest/Westboro area document provided by the City, it was confirmed by the City that the subject property was excluded from the recommendations of this document.

Storm servicing developed for the proposed site shall be designed to comply with the storm criteria provided by the City and the RVCA, which consists of the following (refer to Attachment 'D'):

- Storm runoff from the site to be limited to the existing 1:2 year peak flow, which shall be calculated using the lesser of the existing runoff coefficient (C-Factor) or a C of 0.5;
- The calculated 1:2 year peak flow to be based on a calculated time of concentration reflecting the existing condition and shall not be less than 10 minutes;
- Runoff in excess of the 1:2 year peak flow and up to the 1:100 year recurrence shall be retained on site;
- Runoff generated by the subject site is currently collected by the Clyde Avenue 375 mm diameter storm sewer and conveyed to the Ottawa River 5.7 km downstream. In terms of water quality requirements, the City has advised that the collected runoff for all asphalted areas shall meet an enhanced protection level (TSS removal of 80%) prior to leaving the site. In order to fulfill this requirement, a hydrodynamic separator (HDS) is envisioned.

As noted above, storm servicing and stormwater management for the subject site is to be controlled to the existing 1:2 year peak flow, which is to be calculated based on the lesser of the existing C-Factor or 0.5. Based on the review of the aerial photo, the subject site is virtually fully impervious with either asphalted parking surfaces or rooftop. Given the existing condition, it is assumed the allowable peak flow shall be estimated based on a C-Factor of 0.50. Based on the existing on-site infrastructure, the runoff is collected and conveyed to the 375 mm diameter Clyde Avenue storm sewer system. A time of concentration of less than 10 minutes was estimated based on the existing flow paths; hence, a minimum time of concentration of 10 minutes was applied and using the Rational Method, an allowable release rate (1:2 year) of 121.71 L/s was

calculated. Based on the above calculations, the 1:100 year post-development peak flows from the subject site must be limited to the allowable peak flow of 121.71 L/s by means of on-site storage measures such as parking lot detention, rooftop detention, and/or underground storage.

The storm servicing for the subject site will be developed to meet the above criteria.

CONCLUSION

The proposed redevelopment at 1375 Clyde Avenue will be serviced by existing infrastructure as follows:

- Water supply will be provided by existing watermains on Clyde Avenue and Baseline Road,
- Sanitary servicing will be provided by existing sanitary sewers on Clyde Avenue and Baseline Road,
- Stormwater servicing will be provided by the existing storm sewer on Clyde Avenue. Stormwater management, both quantity and quality controls will be provided on site.

J.L. RICHARDS & ASSOCIATES LIMITED

Prepared by:



Karla Ferrey, P.Eng.

Reviewed by:



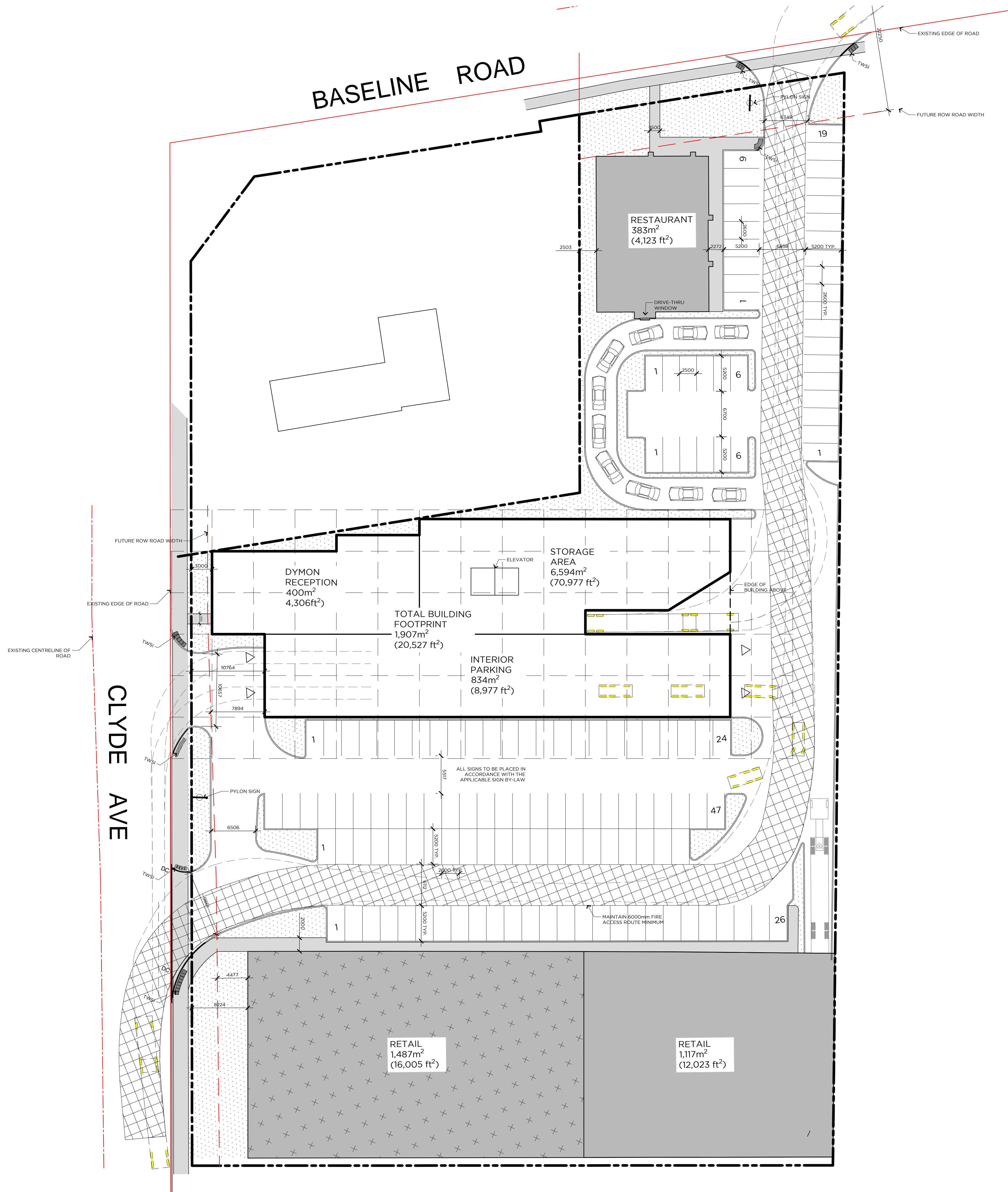
Guy Forget, P.Eng.

ATTACHMENT A

Dymon Self Storage – 1375 Clyde Avenue

Preliminary Site Plan – D1

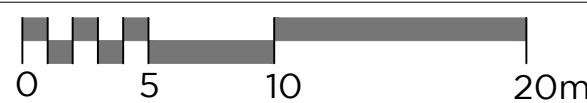
Rev 16 – dated June 14, 2017



NOTES:
BASE MAPPING INFORMATION WAS ACQUIRED FROM A SCREEN SHOT OF THE ON-LINE MAP SYSTEM. ALL DIMENSIONS AND AREAS RELATED TO THE BASE MAP SHOULD BE CONSIDERED APPROXIMATE.

BUILDING STATISTICS

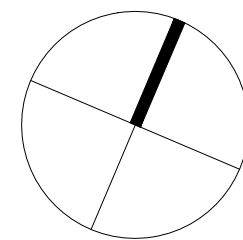
STAND ALONE RETAIL	398 m ² (4,284 sf)	
STAND ALONE RETAIL	1,117 m ² (12,023 sf)	
STAND ALONE RETAIL	1,487 m ² (16,005 sf)	
BUILDING FOOTPRINT	1,907 m ² (20,527 sf)	
DYMON RECEPTION	400 m ² (4,306 sf)	5%
INTERIOR PARKING	834 m ² (8,977 sf)	11%
STORAGE AREA	6,594 m ² (70,977 sf)	84%
TOTAL AREA	7,828 m ² (84,260 sf)	100%



LEGEND	
	PROPERTY LINE
	BUILDING ENTRY/EXIT
	CONCRETE PAVING (LIGHT DUTY)
	CONCRETE PAVING (HEAVY DUTY)
	NEW CURB
	NEW DEPRESSED CURB
	FIRE HYDRANT
	SIAMESE CONNECTION
	CATCH BASIN
	MANHOLE (STORM)
	MANHOLE (SANITARY)
	EXISTING TREE TO REMAIN
	NEW DECIDUOUS TREE
	NEW CONIFEROUS TREE
	NEW SHRUB PLANTINGS
	NEW PERENNIALS & GRASS PLANTINGS
	SOD

16	FOR CONSULTATION	06/14/17	BL
15	FOR CONSULTATION	06/09/17	BL
1	FOR CLIENT REVIEW	08/30/16	GV
No.	REVISION	DATE	BY

FOTENN



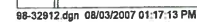
PROJECT / LOCATION / PROJET / ENDROIT
**DYMON
SELF STORAGE**
1375 CLYDE
OTTAWA, ONTARIO

DRAWING / DESSIN
**PRELIMINARY SITE
PLAN**


DESIGNED BY / CONCU PAR	G.V.	SHEET NO. / FEUILLE No.
DRAWN BY / DESSINE PAR	B.L.	D1
CHECKED BY / VERIFIE PAR	M.T.	
SCALE / ECHELLE	1:300	

ATTACHMENT B

Background Drawings



THE INFORMATION SHOWN ON THE AS-BUILT DRAWINGS WAS COLLECTED BY CITY STAFF DURING CONSTRUCTION. R.V. ANDERSON ASSOCIATES LIMITED CONVERTED THE HARD COPY INFORMATION INTO THE ELECTRONIC VERSION AS DEPICTED ON THESE DRAWINGS. SUCH AS R.V. ANDERSON ASSOCIATES LIMITED CANNOT VERIFY THE ACCURACY OF INFORMATION AS PROVIDED BY THE CITY AND ASSUMES NO RESPONSIBILITY FOR ANY INACCURACIES.

 **RV Anderson Associates Limited**
consulting engineers, architects, technology managers
RVA 4925
1750 Courtwood Crescent, Suite 220, Ottawa, Ontario, Canada, K2C 2B8

KPT	AS BUILT RECORD	MARCH 18 2003
WJC	ISSUED FOR TENDER	MARCH 02 1999
By	Description	Date

Scales	HORIZ.	1:250
	VERT.	1:50

Project Title

PART B

CLYDE AVENUE

AS BUILT

305mm WATERMAIN

STA. 0+007.63

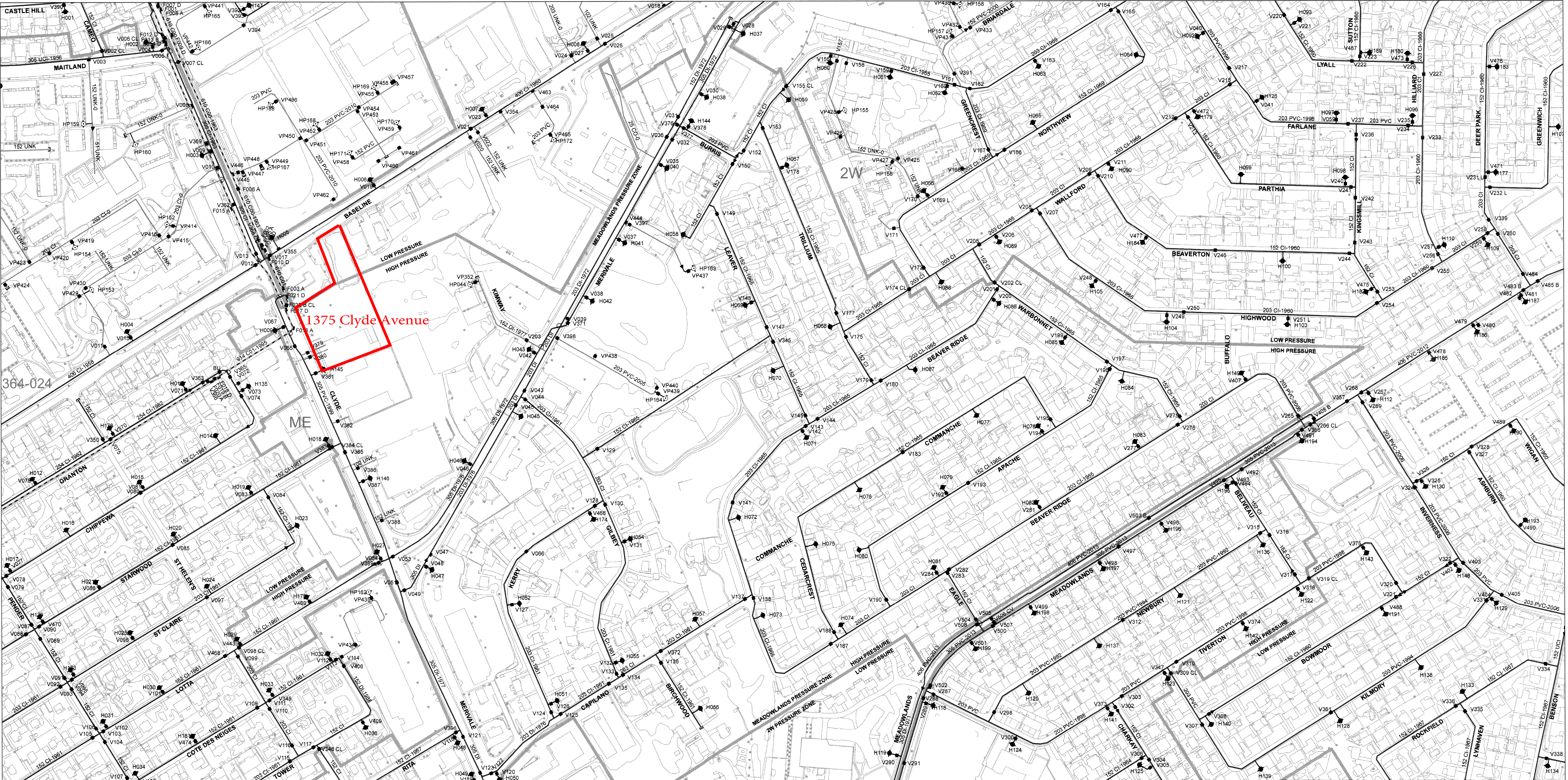
to

STA. 0+100.00

Drawing No.:	68-32912	Sheet No.:	12
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ATTACHMENT C

City of Ottawa Water Distribution System Plans



2014 Water Distribution System

Department of Infrastructure Services

This map was compiled from existing & collected engineering information from the City of Ottawa Geographic Information System and is protected by copyright. The location of infrastructure is approximate and should not be used for construction purposes.

Scale 1:2,500

Legend

Public Hydrant

Private Hydrant

Summer only Flusher Hydrant

Flusher Hydrant

Acoustic Fibre Optic

Gate Valve

Tapping Valve

Butterfly Valve

Buried Valve

Drain Pipe

Check Valve

Closed Valve

Drain-Out Valve

Left Hand Valve

Spot Elevation

Pressure Reducing Valve

Air Relief Valve

Bypass Valve

Feedermain Valve

Inspection Plate

Cap

Reducer

Jump

Water Meter

Water Service

Backbone Pipe

Watermain with Pipe Diameter, Material and Install Year

Pipe Casing

Pressure Zone Delineation and Identifier

Well

Elevated Tank

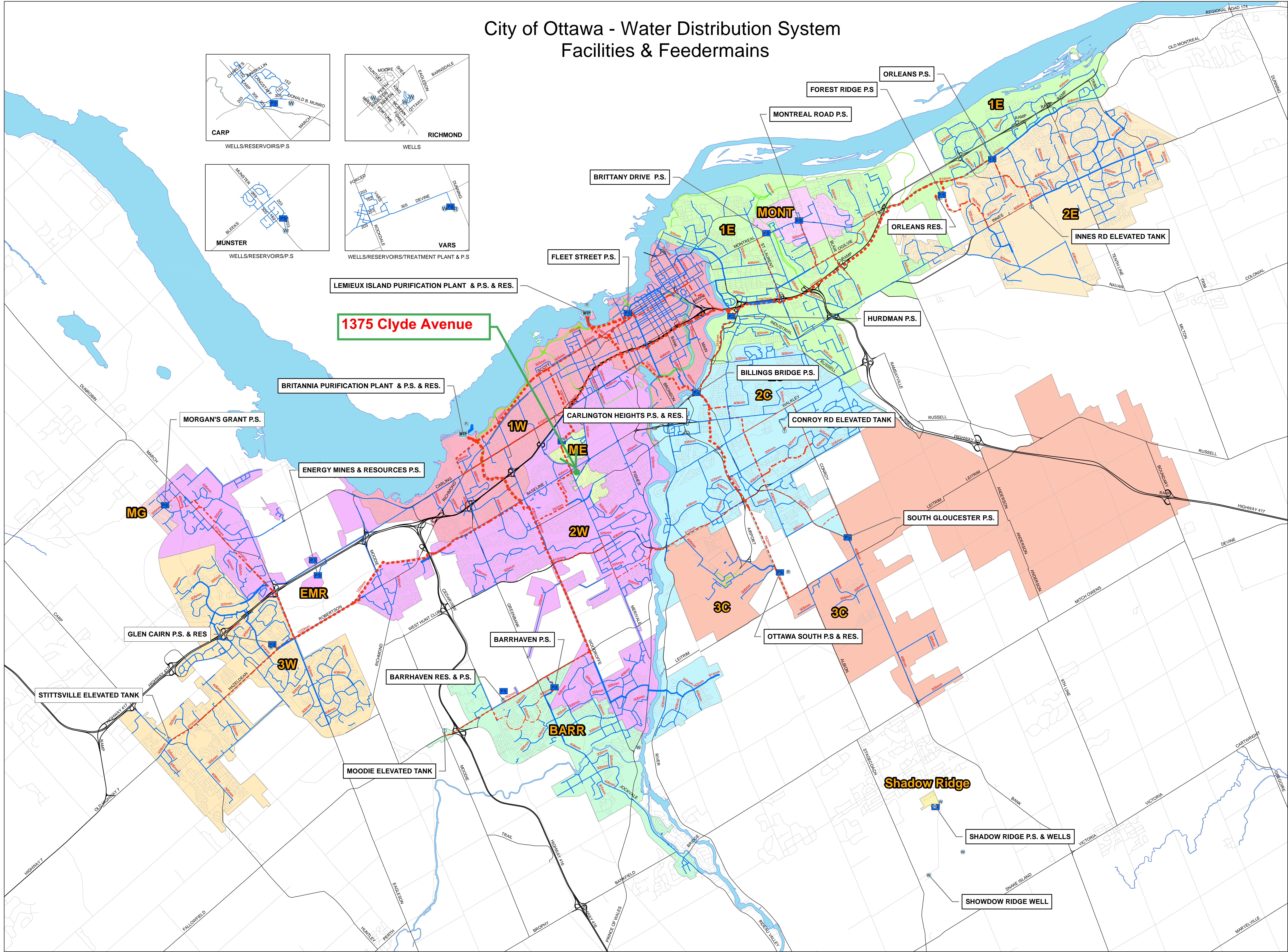
Water Pumping Station

Water Reservoir

Water Treatment Plant

Pipe Equivalents						Pipe Materials		362-026	364-026	366-026
nominal (mm)	actual (mm)	nominal (mm)	actual (mm)	nominal (mm)	actual (mm)	A - ASBESTOS				
100	4	675	27	1800	72	CI - CAST IRON				
150	6	750	30	1950	78	CO - COPPER				
200	8	825	33	2025	80	CO1 - AWWA C300				
250	10	900	36	2100	84	CO2 - AWWA C301				
300	12	975	39	2250	90	CO3 - AWWA C302				
375	15	1050	42	2400	96	DI - DUCTILE IRON				
400	16	1200	48	2550	102	PE - POLYETHYLENE (DR11 TO DR21)				
450	18	1350	54	2700	108	PVC - POLYVINYL CHLORIDE				
525	21	1500	60	2850	114	STC - CONCRETE LINED STEEL PIPE				
600	24	1650	66	3000	120	UCI - UNLINED CAST IRON				
						UNK - UNKNOWN MATERIAL				

City of Ottawa - Water Distribution System
Facilities & Feeder mains



Legend

Water System Structure

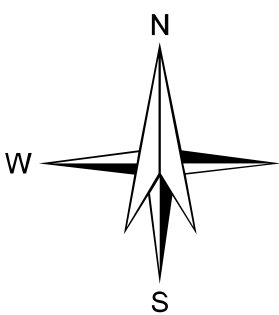
- Pump Station
- Water Treatment Plant
- Well
- Elevated Tank
- Reservoir

WATERMAINS

- 305mm - 406mm Backbone
- 407mm - 762mm Backbone
- 763mm - 1067mm Backbone
- 1068mm - 1372mm Backbone
- 1373mm - 1981mm Backbone
- 305mm - 406mm Feedermain
- 407mm - 762mm Feedermain
- 763mm - 1067mm Feedermain
- 1068mm - 1372mm Feedermain
- 1373mm - 1981mm Feedermain

PRESSURE ZONES

- 1E
- 1W
- 2C
- 2E
- 2W
- 3C
- 3W
- BARR
- EMR
- ME
- MG
- MONT
- SHAD



Infrastructure Services & Community Sustainability
Infrastructure Services Branch
Infrastructure Management Division

0 1,000 2,000 4,000 6,000
Meters

FIGURE 1-1

DRAWN BY: D. HESS

DATE: Oct 6/09

ATTACHMENT D

City of Ottawa Correspondence – Storm Criteria

Karla Ferrey

From: Surprenant, Eric <Eric.Surprenant@ottawa.ca>
Sent: June 14, 2017 8:22 AM
To: Guy Forget
Cc: Dickinson, Mary; Karla Ferrey; Lucie Dalrymple
Subject: RE: 1375 Clyde - preconsultation follow up

Hi Guy,

Stormwater management criteria is to be based on a calculated time of concentration which cannot be less than 10 minutes.

Thanks

*Eric Surprenant, C.E.T. / 613 580-2424 ext.:27794
Project Manager, Infrastructure Approvals
Development Review Suburban Services Branch
Planning, Infrastructure and Economic Development Dept.*

Gestionnaire de projets, Approbation de l'infrastructure
Examen des demandes d'aménagement (Services Suburbains Ouest)
Services de la planification, de l'infrastructure et du développement économique

City of Ottawa | Ville d'Ottawa
☎ 613.580.2424 ext./poste 27794

ottawa.ca/planning / ottawa.ca/urbanisme

From: Guy Forget [mailto:gforget@jlrichards.ca]
Sent: June 13, 2017 1:40 PM
To: Surprenant, Eric
Cc: Dickinson, Mary; Karla Ferrey; Lucie Dalrymple
Subject: RE: 1375 Clyde - preconsultation follow up

Eric,

Given other similar project, can we assume that the 2 year pre-development should be calculated based on the existing time of concentration and shall not be less than 10 minutes.

Guy

Guy Forget, P.Eng., LEED AP
Associate
Senior Water Resources Engineer

J.L. Richards & Associates Limited
864 Lady Ellen Place, Ottawa, ON K1Z 5M2
Tel: 613-728-3571 Fax: 613-728-6012



**J.L. Richards
& Associates Limited**
ENGINEERS • ARCHITECTS • PLANNERS



From: Lucie Dalrymple
Sent: June 13, 2017 1:05 PM
To: Surprenant, Eric
Cc: Dickinson, Mary; Karla Ferrey; Guy Forget
Subject: RE: 1375 Clyde - preconsultation follow up

Thank you Eric for the clarification/confirmation.

The person you were speaking with was Karla Ferrey.

Overall, Karla, Guy and myself will be involved with this project, but with Karla being the PM and main point of contact.

Thanks again,

Lucie

Lucie Dalrymple, P.Eng.
Associate
Senior Civil Engineer

J.L. Richards & Associates Limited
864 Lady Ellen Place, Ottawa, ON K1Z 5M2
Tel: 613-728-3571 Fax: 613-728-6012



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& Associates Limited**
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From: Surprenant, Eric [<mailto:Eric.Surprenant@ottawa.ca>]
Sent: June 13, 2017 1:01 PM
To: Lucie Dalrymple
Cc: Dickinson, Mary
Subject: RE: 1375 Clyde - preconsultation follow up

Lucie,

Hope things are good.

I spoke with someone from your office yesterday who is working with you on the above site. Following the discussion I had a closer look at the design requirements for sites within the Pinecrest Creek drainage area. In this case although the site is close to the study area boundary and the Pinecrest Creek contributing area, the site is considered to be outside the limits and therefore in this particular case we will not require you to design to the Pinecrest Creek study criteria. That being said due to the age of the receiving storm sewer the requirements for storm release rate which you will need to control to will be 100 year post to the 2 year pre-development flows, while using the more stringent of either the calculated C value or a 0.5 C value.

Merci

Eric Surprenant, C.E.T. / 613 580-2424 ext.:27794
Project Manager, Infrastructure Approvals
Development Review Suburban Services Branch
Planning, Infrastructure and Economic Development Dept.

Gestionnaire de projets, Approbation de l'infrastructure
Examen des demandes d'aménagement (Services Suburbains Ouest)
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City of Ottawa | Ville d'Ottawa
☎ 613.580.2424 ext./poste 27794

ottawa.ca/planning / ottawa.ca/urbanisme

From: Surprenant, Eric
Sent: June 12, 2017 9:43 AM
To: 'Lucie Dalrymple'
Subject: RE: 1375 Clyde - preconsultation follow up

Hopefully this will be clearer.
Thanks
Eric S.





From: Lucie Dalrymple [<mailto:ldalrymple@jrichards.ca>]

Sent: June 09, 2017 8:21 AM

To: Surprenant, Eric

Subject: RE: 1375 Clyde - preconsultation follow up

Merci Eric. I just left you a voice mail, so when you have a minute please call me.

I tried expanding the snap shot you provided, but unfortunately it is not legible. If there is a way that you could send it in a different format (maybe PDF) it would be appreciated. In my voice mail, I also mentioned the section along Baseline as the property has also frontage along Baseline. Could you also provide a snap shot for this section.

Thanks again for your assistance.

Lucie

Lucie Dalrymple, P.Eng.

Associate

Senior Civil Engineer

J.L. Richards & Associates Limited
864 Lady Ellen Place, Ottawa, ON K1Z 5M2
Tel: 613-728-3571 Fax: 613-728-6012



**J.L. Richards
& Associates Limited**
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From: Surprenant, Eric [<mailto:Eric.Surprenant@ottawa.ca>]
Sent: June 8, 2017 10:42 AM
To: Lucie Dalrymple
Cc: Karla Ferrey; Bliss Edwards; Guy Forget; Dickinson, Mary
Subject: RE: 1375 Clyde - preconsultation follow up

Hi Lucie,

I am providing the below information which was taken from our municipal system. You may need to make additional inquiries to obtain any other missing information.

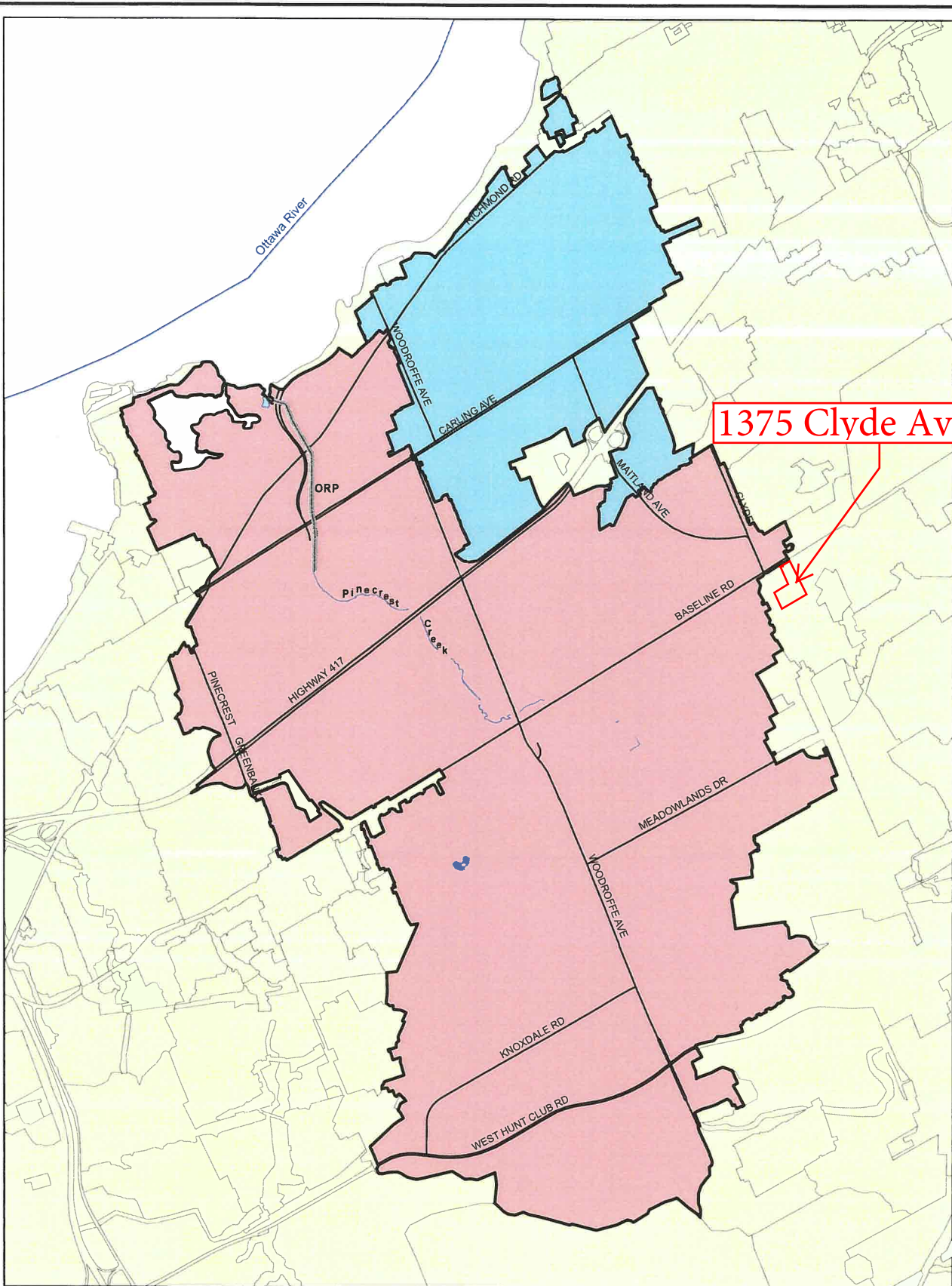
Following up on the pre-application consultation for the 1375 Clyde, apologies as design guidelines affecting the stormwater design for the proposed site had not been attached to the previous information I had provided. This site actually drains to the Pinecrest Creek and I've obtained the final draft Stormwater Management Guidelines for the Pinecrest Creek/ Westboro Area (June 2012) and have the following information to convey to the applicant:

- Storm Water Quantity – The more stringent of the following criteria will govern:
 - i. Developments draining to Pinecrest Creek shall control the 1:100 year discharge from the site to a maximum rate of 33.5 L/s/ha; this unit flow target has been set based on the hydrologic (SWMHYMO) modelling conducted for the Pinecrest Creek/Westboro Stormwater Management Retrofit Study (May 2011); or
 - ii. Requirements of section 8 of the Ottawa Sewer Design Guidelines;
- Storm Water Quality – The equivalent of an enhanced level of treatment (TSS removal of 80%) is required for institutional/commercial/industrial sites draining to Pinecrest Creek; the proponent may wish to consult with the conservation authority to confirm that no additional requirements are applicable.

Particular measures for controlling stormwater release to the receiving storm sewer in Clyde would have been required being that the receiving storm sewers had been constructed pre-1970, however in this case the above Pinecrest Creek criteria is the criteria which would apply.

As it relates to Sanitary and Watermain public services analysis for Zoning , please ensure that existing uses and flows are compared against proposed development requirements, i.e.(fire flow requirements and confirming sanitary flows all versus existing.

If you require any additional information, please don't hesitate to contact me.



LEGEND:

- Ottawa River Parkway Pipe (ORP)
- Roads_Clipper
- Main Roads
- Pinecrest Creek
- Britannia/SWM/pond
- Ottawa River
- Westboro Study Area
- Pinecrest Study Area
- Stormwater_Outlets

CLIENT:



BY:



NOTES:

- The background data was provided by the City of Ottawa

PROJECT STORMWATER MANAGEMENT
GUIDELINES FOR THE
PINECREST CREEK / WESTBORO AREA

TITLE

Study Area

PROJECT No. 741(02)

DESIGN KM

GIS KM

CHECK JFS

REVIEW JFS

FIGURE 1.1

MAP REF

741_02DesignGISMapofStudyArea_revised2012_v4.mxd



NOV 2011

REV. 4