CONSERVATION AUTHORITY REGULATED AREAS ASSESSMENT
251 STONE CHURCH ROAD WEST

Prepared for:

2806131 ONTARIO LIMITED

Prepared by:

Colville Consulting Inc.

C22033
May 2022

COLVILLE
CONSULTING INC.

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1.0 INTRODUCTION

Colville Consulting Inc. was retained by 2806131 Ontario Limited to conduct an assessment of potential Conservation Authority regulated features on the property located at 251 Stone Church Road West, in the City of Hamilton, henceforth referred to as the Subject Property. This report is intended to describe potential regulated features on the property and provide an assessment of these features in the context of the Conservation Authorities Act, Ontario Regulation 161/06 and land use policies of the Hamilton Conservation Authority.

1.1 Background to Subject Property

The Subject Property measures approximately 0.81ha (2.0 acres) in size and is rectangular in shape. The property has been assigned the municipal address of 251 Stone Church Road West, and is located south of Stone Church Road West, approximately 620m east of Garth Street. Adjacent land uses consist of residential to the east and north, with vacant land south and west of the property.

The majority of the Subject Property is relatively flat. The northern portion of the property has been graded to direct water north towards Stone Church Road West, with the southern portion of the lands draining to a watercourse in the southeast corner of the property. Vegetation over the majority of the property consists of manicured lawn and scattered trees, with the rear portion of the property containing meadow marsh and watercourse.

Based on our review of Hamilton Conservation Authority mapping, it is our understanding that mapped Conservation Authority regulated features on the property include a wetland and watercourse, along with adjacent lands associated with these features (see Figure 1).

2.0 STUDY SCOPE

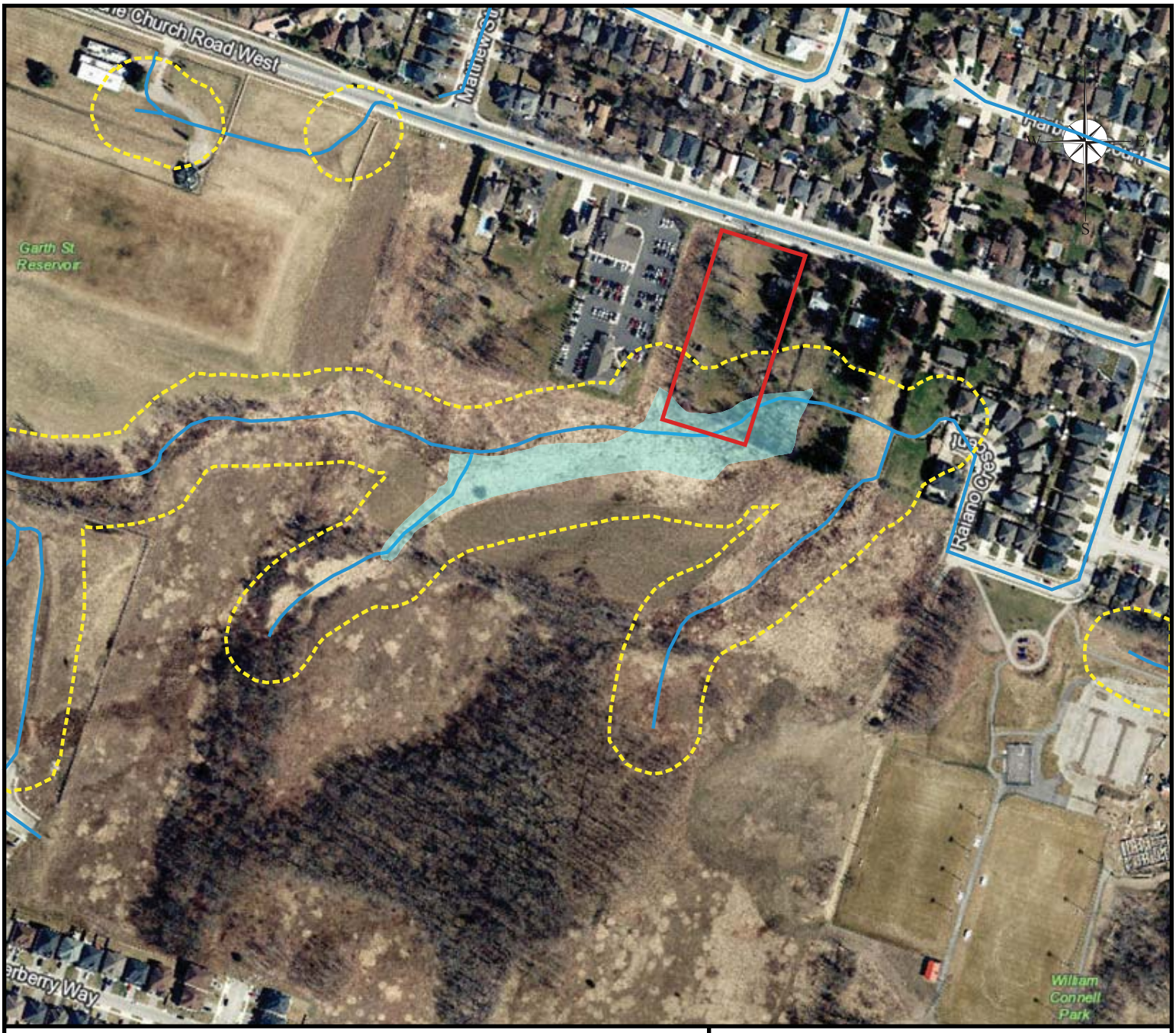
2.1 Applicable Legislation and Policy

The intent of this project is to assess the extent of Conservation Authority regulated features on and adjacent to the Subject Lands, in the context of the Conservation Authorities Act, Ontario Regulation 161/06 and land use policies of the Hamilton Conservation Authority. As indicated above, mapped regulated features on the property include a watercourse, wetland and associated adjacent lands.

To be consistent with definitions in the Conservation Authorities Act, this assessment considers a watercourse to mean an identifiable depression in the ground in which a flow of water regularly or continuously occurs.

Also for the purposes of this assessment, a wetland is considered to mean land that,

a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface,
b) directly contributes to the hydrological function of a watershed through connection with a surface watercourse,
c) has hydric soils, the formation of which has been caused by the presence of abundant water, and
d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water.



Legend

- Subject Property
- Mapped Extent of Regulated Wetlands
- Watercourses
- Extent of HCA Mapped Regulated Area

Figure 1
Mapped HCA Regulated Areas on the Subject Property

Conservation Authority Regulated Areas Assessment
251 Stone Church Road East

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3.0 STUDY FINDINGS

3.1 Botanical Inventories and Vegetation Mapping

A detailed botanical inventory of the 243 Stone Church Road West property was conducted on October 20, 2021, which included an assessment of vegetation on and adjacent to the 251 Stone Church Road West Property. A subsequent botanical assessment of the 251 Stone Church Road West property was conducted on May 11, 2022. Vegetation communities (ELC units – following Lee et al. 1998) were mapped and described, and a vascular plant checklist was compiled. Species status was assessed for Ontario (Oldham and Brinker 2009) and the City of Hamilton (Goodban 2014). Vegetation communities on the property are described below and mapped on Figure 2. A vascular plant checklist is provided in Appendix A and photos of the property and adjacent lands are provided in Appendix B.

3.1.1 Botanical Inventories

A total of 68 plant species were documented on and adjacent to the property during botanical inventories. None of the species observed are considered at risk provincially or considered to be locally rare or uncommon.

3.1.2 Vegetation Communities

Vegetation over much of the Subject Property consists of manicured lawn, with scattered trees primarily located on the southern portion of the property. Vegetation within the lawn area consisted primarily of Kentucky Blue Grass, with a mix of additional herbaceous species such as Common Dandelion, Sedge species and turf grass species. Lands to the south of the property were not surveyed extensively as part of this project, however vegetation over much of those lands appears to consist of meadow and meadow marsh. Further description of vegetation comminutes on and adjacent to the property are provided below.

Dry-Moist Old Field Meadow Type (CUM1-1)

Located in the southern portion of the property, as well as lands west of the property, are areas described as Dry-Moist Old Field Meadow Type (CUM1-1). This vegetation community was dominated by Tall Goldenrod and Canada Goldenrod, with New England Aster, Kentucky Blue Grass, Curly Dock, Garlic Mustard and White Sweet-clover also occurring.

Although mapped as a separate vegetation community, the meadow west of the Subject Property contains a small area of Dry - Fresh Black Locust Deciduous Forest Type. Young Black Locust trees dominate this portion of the adjacent lands.

One soil core was completed in the meadow community are the rear of the Subject Property to assist in distinguishing vegetation communities. The effective texture of the deep soils are composed of silty clay, with mottles at 55cm and gley at 90cm, resulting in a moisture regime of (4) or Moist.

Reed-canary Grass Mineral Meadow Marsh Type (MAM2-2)

Located on and adjacent to the southern portion of the property is an open meadow marsh community, which was described as a Reed-canary Grass Mineral Meadow Marsh Type (MAM2-2), with complexes of Forb Mineral Meadow Marsh Type (MAM2-10). This vegetation community generally occurs in association with a watercourse, and based on air photo interpretation, extends throughout much of the watercourse south of the property. Reed Canary Grass, Purple Loosestrife and Tall Goldenrod are abundant, with Agrostis species and Grass-leaved Goldenrod forming close to 100% vegetation cover in the ground layer. Reed Canary Grass is the dominant species throughout much of this community,

Legend

	Subject Property
CUM1-1	Dry - Moist Old Field Meadow Type
FOD7	Fresh - Moist Lowland Deciduous Forest Ecosite
FODM4-11	Dry - Fresh Black Locust Deciduous Forest Type
MAM2-2	Reed-canary Grass Mineral Meadow Marsh Type
	Watercourses

Figure 2
Extent of Vegetation Communities on the Subject Property

Conservation Authority Regulated Areas Assessment
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however areas where the above noted forbs are co-dominant with Reed Canary Grass were described as Forb Mineral Meadow Marsh Type (MAM2-10).

Scattered tall thickets of Wooly-headed Willow and Ashy Willow also occur in this community, forming less than 10% vegetation cover. Saplings, or small trees, of Cottonwood, White Willow and White Elm also occur forming less than 10% cover in the 2-10m height layer.

A single soil core was assessed in this community. The effective texture of the deep soils in this area are composed of silty clay, with mottles at 40cm and gley at 90cm, resulting in a moisture regime of (5) or Moist.

Fresh – Moist Lowland Deciduous Forest Ecosite (FOD7)

The rear portion of the property east of the Subject Property was described as Fresh – Moist Lowland Deciduous Forest Ecosite (FOD7). The canopy in this community consists of Red Oak and Black Cherry, with lesser amounts of Sugar Maple, Norway Spruce, Shagbark Hickory and Bur Oak forming up to 60% vegetation cover.

The sub-canopy layer in this community supports an abundance of Common Buckthorn and Manitoba Maple, forming greater than 60% vegetation cover. The understory or regeneration layer supports Green Ash saplings, Common Buckthorn and Grey Dogwood, forming less than 60% cover. The ground layer is dominated by Common Buckthorn and Green Ash seedlings, *Carex* species, Avens, Common Strawberry, One-sided Aster, Tall Goldenrod, Common Cinquefoil, Heal-all and mosses forming greater than 60% vegetation cover.

Adjacent Lands

Although a detailed assessment of the 305 Stone Church Road West property was not completed as part of this project, a botanical inventory and assessment was completed in 2013 as part of the EIS for that property. At that time, vegetation communities on the 305 Stone Church Road West property were described as follows.

MAM2-2 Reed Canary Grass Mineral Meadow Marsh Type

Reed Canary Grass (*Phalaris arundinacea*) is the dominant species in much of the wetland area. Other common species include Tall White Aster (*Aster lanceolatus*), Purple Loosestrife (*Lythrum salicaria* +), Grass-leaved Goldenrod (*Euthamia graminifolia*), Retrorse Sedge (*Carex retrorsa*) and Orange Touch-me-not (*Impatiens capensis*).

MAM2-10 Forb Grass Mineral Meadow Marsh Type

Small patches of forb-dominated meadow marsh were also mapped. The main plant species include Tall White Aster (*Aster lanceolatus*), Purple Loosestrife (*Lythrum salicaria* +), Purple-stemmed Aster (*Aster puniceus*) and Orange Touch-me-not (Impatiens capensis).

CUM1-1 Dry-Moist Old Field Meadow Type

Old field meadow patches occur on the uplands over much of the site. Tall Goldenrod (*Solidago altissima*) and Canada Goldenrod (*Solidago canadensis*) are the dominant ground covers. Other species include New England Aster (*Aster novae-angliae*), Kentucky Blue Grass (*Poa pratensis*), Curly Dock (*Rumex crispus* +), White Sweet-clover (*Melilotus alba* +), Annual Sow-thistle (*Sonchus oleraceus* +), Meadow Goat's-beard (*Tragopogon pratensis ssp. pratensis* +), Garlic Mustard (*Alliaria*

petiolata +), Red Clover (Trifolium pratense +) and White Vervain (*Verbena urticifolia* +). Scattered saplings include Black Walnut and Black Locust (*Robinia pseudoacacia* +).

3.2 Watercourses

As illustrated in Figure 1, a watercourse is located in the southeast corner of the property. From a review of background mapping, this watercourse originates approximately 700m southwest of the property and is considered to be part of the Upper Ottawa sub-watershed. This feature drains an area of approximately 26ha and conveys this water to a storm sewer located approximately 130m downstream of the property. This water is ultimately conveyed to the Red Hill Creek via this storm sewer, however the actual outlet location is not known.

The watercourse channel on the property measures approximately 1 meter in width and is generally well defined (see Photos 3 and 4 in Appendix B). Channel substrates consist primarily of silty clay, with little instream vegetation present on the property. Riparian vegetation on much of the property consists primarily of grasses and sedges, which are periodically mowed. Riparian vegetation south of mowed lawn on the property consisted of species described in the MAM2-2 community above, and also included Silver Maple and Eastern Cottonwood,

Through this assessment, as well as previous assessments, it was determined that flow in this watercourse is ephemeral, typically only occurring during snow melt and major precipitation events. Shallow standing water was present in defined portions of the channel during the May 11, 2022 site visit, however very little flow was observed.

Due to the ephemeral nature of the system and the relatively low gradient of the watercourse on the 305 Stone Church Road West property, the channel south of the property is generally poorly defined and braided. No pools were previously observed in association with the watercourse on the 305 Stone Church Road West property, however there were some isolated pockets of standing water in vehicle ruts on the property.

4.0 ASSESSMENT OF REGULATED FEATURES

4.1 Wetlands

Our assessment indicates that vegetation over much of the property consists of manicured lawn. This vegetation community is not consistent with a wetland.

Located south of the manicured lawn and fence on the property is a small portion of the Reed-canary Grass Mineral Meadow Marsh Type (MAM2-2) community which extends onto the 305 Stone Church Road West property. This vegetation community is dominated by Reed Canary Grass, Purple Loosestrife and Tall Goldenrod, with Agrostis species and Grass-leaved Goldenrod also occurring. Based on an assessment of soils, the moisture regime in this community was determined to be Moist (5).

From our assessment, this vegetation community satisfies the hydric soils and water tolerant plants criteria listed in the above definition of wetland (see Section 2.1). It is also our assessment that the portion of the MAM2-2 community containing the watercourse channel will meet the seasonally covered by shallow water criteria in the definition (see Table 1). Since the Reed Canary Grass in this community will extend up-slope and away from the periodically wetted channel of the watercourse, lands not typically inundated by seasonal flows would not meet the criteria of being seasonally covered by shallow water.

Although a portion of the MAM2-2 community appears to meet three of the four criteria in the wetland definition, the watercourse associated with this vegetation community outlets to the municipal storm sewer approximately 130m downstream of the property. Water from this watercourse mixes with water in the municipal storm sewer and is suspected to be conveyed approximately 5.5 to 6km to Red Hill Creek.

Since this situation is not typical, it is important to consider the intent of Conservation Authorities' regulation of wetlands. In 1998, amendments were made to the Conservation Authorities Act which expands Conservation Authorities' powers to regulate development and activities in wetlands. Wetlands were added to Conservation Authorities' jurisdiction because of their ability to store water and mitigate floods. The regulation governing the content of Conservation-Authority-specific regulations came into effect in 2004, and Conservation-Authority-specific regulations (in this case Ontario Regulation 161/06) were approved by the province in 2006.

Based on our assessment, vegetation in the MAM2-2 community on and upstream of the property potentially provides a minor flow attenuation function, as part of an ephemeral watercourse. However, due to the connection to the municipal storm sewer, this community does not directly contribute to the hydrologic function of the watershed, through connection with a surface watercourse. As a result, the MAM2-2 community on the property is not considered to meet the Conservation Authorities Act definition of a wetland.

Table 1. Assessment of Conservation Authorities Act Wetland Criterion in the MAM2-2 Community.

Criterion	**Representation on Subject Property**	**Conclusion**
Shallow Surface Water/Surficial Water Table	Shallow surface water present seasonally in watercourse channel, but not over the complete extent of the MAM2-2 vegetation community. Water table not near surface based on soil conditions.	Criteria satisfied in a portion of the MAM2-2 community.
Hydrologic Function	Wetland provides a minor flow attenuation function, however the watercourse downstream of property enters the municipal storm sewer, and therefore does not contribute directly to the hydrologic function of a watershed, through connection with a surface watercourse.	Criteria not satisfied.
Hydric Soils	Soils in the MAM2-2 community considered hydric based on limited samples.	Criteria satisfied.
Hydrophytic/Water Tolerant Plants	MAM2-2 community dominated by water tolerant plants.	Criteria satisfied.

4.2 Watercourses

As illustrated in Figure 3, a watercourse is located on the southeast corner of the Subject Property. Our assessment confirms that this feature meets the watercourse definition provided in the Conservation Authorities Act. This watercourse was determined to be an ephemeral watercourse, which conveys surface water from the property and upstream areas to the storm sewer located on the 213 Stone Church Road West property, approximately 130m downstream of the Subject Property. It is understood that water from the site is conveyed via the storm sewer approximately 5.5 to 6km to Red Hill Creek, however the actual outlet location is not known. As this feature is ephemeral and only provides flow to a storm sewer, it is our assessment that no fish habitat is present on the property and the watercourse is providing limited hydrologic functions to the watershed.

5.0 ENVIRONMENTAL POLICY

5.1 Hamilton Conservation Authority

The intent of this assessment is to delineate the extent of potential regulated features on and adjacent to the property, in an effort to inform future development plans for this parcel. Regulated features on and adjacent to the property are limited to a watercourse, which contributes flow to the storm sewer downstream of the property. The refined extent of HCA regulated features are illustrated in Figure 3.

The Hamilton Conservation Authority (HCA) is responsible for reviewing development applications within its jurisdiction pursuant to Ontario Regulation 161/06. To assist in the administration of this regulation, the HCA has developed Planning & Regulation Policies and Guidelines (HCA 2011), which are intended to provide guidance for development applications that are located in and adjacent to natural heritage features and hazard lands.

Our assessment indicates that HCA regulated features on the property are limited to a watercourse. Polices related to the management of watercourses are included in Section 2.1.3 of the HCA policy document and state that any alteration to a watercourse within the jurisdiction of the Authority must be in accordance with the following policies and guidelines and must be to the satisfaction of the Authority. Policies relevant to the property are as follows

c. Alterations to a watercourse will be evaluated on an individual basis, having consideration for the following:
    i) No negative impacts on the natural features or on the ecological functions, including fish and wildlife requirements as set out by other federal, provincial or municipal legislation/plans/technical guidelines and a net environmental benefit is achieved;
    ii) Maintenance of the natural topography of the watercourse system, flood conveyance and flood storage;
    iii) No adverse impacts upstream and/or downstream of the proposed works in respect to fluvial geomorphological processes, storage capacity of the flood plain, flood plain elevations, flood frequency, erosion rates or erosion frequency along either side of the watercourse;
    iv) No adverse impacts on ground water features and recharge/discharge;
    v) Geotechnical issues are addressed to the satisfaction of the Authority; and
    vi) Adequate erosion and sediment control measures are incorporated and utilized during the construction phase

Legend

- Subject Property
- Watercourses

Figure 3
Refined Extent of HCA Regulated Features on the Subject Property

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HCA policies related to the management of Fish Habitat are included in Section 3.1.3, however it is our assessment that the watercourse does not provide any measurable fish habitat function due to the contribution to the storm sewer downstream of the property.

6.0 DISCUSSION

As described above, HCA regulated features on and adjacent to the property are limited to an ephemeral watercourse. The proposed development plan for this property anticipates that water from the drainage area and watercourse upstream of the property will be captured in a stormwater management pond on the 305 Stone Church Road West property, with the pond discharging directly to the stormwater management system associated with Stone Church Road West. It is also expected that the watercourse downstream of 305 Stone Church Road West would be decommissioned after redirection of surface flows from the catchment area. Accordingly, the proposed development intends to capture stormwater from the property and redirect to the storm sewer associated with Stone Church Road West. A copy of the proposed development plan is provided in Appendix C for reference.

Based on our assessment of the watercourse on and adjacent to the property, this watercourse is primarily functioning as a water conveyance channel, with very little direct ecological functions provided by the watercourse on the property. Any ecological and hydrological contributions to the downstream watershed are also limited, due to the connection to the municipal storm sewer system.

As this watercourse is a feature regulated by the HCA, a permit will be required for any modification of the channel or development adjacent to the watercourse, however it is our opinion that any modifications to this section of watercourse will not be contrary to any of the policies listed in Section 2.1.3c.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Colville Consulting Inc. was retained by 2806131 Ontario Limited to complete an assessment of potential Conservation Authority regulated features on and adjacent to the 251 Stone Church Road West property. Based on our assessment, regulated features on the property are limited to an ephemeral watercourse, which conveys flow to the storm sewer approximately 130m downstream of the property. Our assessment also indicates that a Reed-canary Grass Mineral Meadow Marsh Type (MAM2-2) is located south of the property, however this vegetation community does not satisfy the definition of wetland contained in the Conservation Authorities Act, and therefore is not considered to be a wetland that is regulated by the HCA. Because the watercourse on this property serves only as a flow conveyance channel to the storm sewer downstream of the property, no site-specific management considerations are required for this watercourse. Provided that flow continues to be directed to the municipal storm sewer, the ecological and hydrological functions of this watercourse will be maintained.

Please do not hesitate to contact the undersigned should be require further clarification regarding this report.

Respectfully submitted by:

Ian Barrett, M.Sc.
Colville Consulting Inc.

8.0 LITERATURE CITED

Goodban, A.G. 2014. The Vascular Plants of Hamilton, Ontario. pp. 1 to 91, In: Schwetz, N. (ed.), Hamilton Natural Areas Inventory Project 3rd Edition, Nature Counts 2, Species Checklist Document. Hamilton Conservation Authority, Ancaster, Ontario.

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Lee, H.T., W.D. Bakowsky, J.L. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological Community Classification for Southern Ontario: First Approximation and Its Application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.

Oldham, M.J. and S.R. Brinker. 2009. Rare Vascular Plants of Ontario, Fourth Edition. Ontario Ministry of Natural Resources, Peterborough, Ontario. 188 pp.

Appendix A

List of botanical species

Plant List for 251 Stone Church Road West and Adjacent Lands.

ScientificName	CommonNames	CC	CW	GRank	COSEWIC	COSSARO	SRank	Lrare	MAM2	CUM1-1/Lawn	FOD7	Notes
Acer negundo	Manitoba Maple	0	-2	G5			S5				x	
Acer saccharinum	Silver Maple	5	-3	G5			S5		x		x	
Agrimonia gryposepala	Tall Agrimony	2	2	G5			S5				x	
Agrostis gigantea	Redtop Grass	0	0	G4G5			SE5		x			
Agrostis stolonifera	Creeping Bent Grass	0	-3	G5			S5		x			
Aster lanceolatus ssp. lanceolatus	Panicled Aster	3	-3	G5			S5		x		x	
Aster lateriflorus var. lateriflorus	One-sided Aster	3	-2	G5			S5				x	
Aster novae-angliae	New England Aster	2	-3	G5			S5		x			
Aster puniceus var. puniceus	Purple-stem Aster	6	-5	G5			S5		x			
Aster urophyllus	Arrow-leaved Aster	6	5	G4			S4				x	
Carex rosea	Stellate Sedge	5	5	G5			S5				x	
Carex spp	Sedge Species								x	x	x	
Carex vulpinoidea	Fox Sedge	3	-5	G5			S5		x			
Carya cordiformis	Bitternut Hickory	6	0	G5			S5				x	
Carya ovata	Shagbark Hickory	6	3	G5			S5				x	
Cirsium vulgare	Bull Thistle	0	4	G5			SE5		x	x		
Cornus foemina ssp. racemosa	Grey Dogwood	2	-2	G5			S5		x	x	x	
Cornus stolonifera	Red-osier Dogwood	2	-3	G5			S5		x			
Crataegus mollis	Downy Hawthorn	4	-2	G5			S5		x			
Daucus carota	Wild Carrot	0	5	G?			SE5		x	x		
Dipsacus fullonum ssp. sylvestris	Common Teasel	0	5	G?			SE5		x	x		
Echinocystis lobata	Wild Cucumber	3	-2	G5			S5		x			
Erythronium americanum	Yellow Trout-lily	5	5	G5			S5			x		
Euthamia graminifolia	Grass-leaved Goldenrod	2	-2	G5			S5		x			
Fragaria virginiana ssp. virginiana	Common Strawberry	2	1	G5			S5		x	x	x	
Fraxinus pennsylvanica	Red Ash	3	-3	G5			S5				x	
Geum sp	Avens Species										x	
Glechoma hederacea	Ground Ivy	0	3	G?			SE5				x	
Hesperis matronalis	Dame's Rocket	0	5	G4G5			SE5				x	
Impatiens capensis	Spotted Touch-me-not	4	-3	G5			S5				x	
Juglans nigra	Black Walnut	5	3	G5			S4				x	
Juncus dudleyi	Dudley's Rush	1	0	G5			S5		x			
Lonicera morrowii	Morrow's Honeysuckle	0	5	G?			SE3				x	
Lythrum salicaria	Purple Loosestrife	0	-5	G5			SE5		x			
Maianthemum racemosum	False Solomon's Seal	3	3	G5T5			S5			x		
Moss sp	Moss Species										x	
Muscari botryoides	Grape Hyacinth	0	2	GNR			SNR			x		
Narcissus pseudonarcissus	Common Daffodil	0	2	GNR			SNR			x		
Ostrya virginiana	Hop Hornbeam	4	4	G5			S5				x	
Phalaris arundinacea	Reed Canary Grass	0	-4	G5			S5		x			
Phragmites australis	Common Reed	0	-4	G5			SE5		x			
Picea abies	Norway Spruce	0	5	G?			SE3				x	
Picea pungens	Blue Spruce			G?			SE?				x	
Poa pratensis ssp. pratensis	Kentucky Blue Grass	0	1	G?			S5		x	x		
Populus deltoides ssp. deltoides	Eastern Cottonwood	4	-1	G5			S5		x			
Potentilla simplex	Common Cinquefoil	3	4	G5			S5			x	x	
Prunella vulgaris ssp. lanceolata	Heal-all	5	5	G5			S5				x	

ScientificName	CommonNames	CC	CW	GRank	COSEWIC	COSSARO	SRank	Lrare	MAM2	CUM1-1/Lawn	FOD7	Notes
Prunus serotina	Black Cherry	3	3	G5			S5				x	
Quercus macrocarpa	Bur Oak	5	1	G5			S5		x			
Quercus rubra	Red Oak	6	3	G5			S5				x	
Rhamnus cathartica	Common Buckthorn	0	3	G?			SE5		x		x	
Rhus typhina	Staghorn Sumac	1	5	G5			S5		x	x		
Robinia pseudo-acacia	Black Locust	0	4	G5			SE5		x	x		
Rosa multiflora	Multiflora Rose	0	3	G?			SE4		x	x	x	
Rubus allegheniensis	Common Blackberry	2	2	G5			S5			x	x	
Rumex crispus	Curly Dock	0	-1	G?			SE5		x	x		
Salix alba	White Willow	0	-3	G5			SE4		x			
Salix cinerea	Ashy Willow	0	5	G5			SE2		x			
Salix eriocephala	Woolly-headed Willow	4	-3	G5			S5		x			
Salix X rubens	Hybrid White Willow	0	-4	G?			SE4				x	
Sambucus canadensis	Common Elderberry	5	-2	G5			S5		x			
Solidago altissima var. altissima	Tall Goldenrod	1	3	G?			S5		x		x	
Taraxacum officinale	Common Dandelion	0	3	G5			SNA			x		
Ulmus americana	White Elm	3	-2	G5?			S5		x	x		
Verbena hastata	Blue Vervain	4	-4	G5			S5		x			
Viburnum opulus	European Highbush Cranberry	0	0	G5			SE4		x		x	
Viola sp	Violet Species										x	
Vitis riparia	Riverbank Grape	0	-2	G5			S5		x		x	

Legend

CC- Coefficient of Conservatism. Scores for each species range from 0 (low conservatism) to 10 (high conservatism).
A conservatism value of 0 indicates species is widespread. A value of 8, 9 or 10 indicates that a species is a habitat specialist.
CW - Coefficient of Wetness
5 - Almost always occur in upland areas
4, 3, 2 - Usually occur in upland areas
1, 0, -1 - Found equally in upland and wetland areas
-2, -3, -4 Usually occur in wetlands
-5 Almost always occur in wetlands

Grank - Global Rank G1 — Critically Imperiled, G2 — Imperiled, G3 — Vulnerable, G4 — Apparently Secure, G5 — Secure
COSEWIC - Committee on the Status of Endangered Wildlife in Canada
COSSARO - Committee on the Status of Species at Risk in Ontario

Srank - Subnational Rank
S1 — Critically Imperiled - Critically imperiled in the province because of extreme rarity, (often 5 or fewer occurrences)
S2 — Imperiled - Imperiled in the province because of rarity due to very restricted range, very few populations (often 20 or fewer)
S3 — Vulnerable - Vulnerable in the province due to a restricted range, relatively few populations (often 80 or fewer)
S4 — Apparently Secure - Uncommon but not rare
S5 — Secure - Common, widespread, and abundant in the province
SE — Exotic
Lrank - Local Rank
R - Rare, U - Uncommon

Appendix B

Site Photos

Photo 1. Example of vegetation conditions in the mowed lawn on the southern portion of the Subject Property. Photo from west property line facing east.

Photo 2. Example of vegetation conditions in the mowed lawn on the southern portion of the Subject Property. Photo from south end of property facing north.

Photo 3. Example of vegetation conditions adjacent to the watercourse on the southern limit of the property. Photo from south property line facing northeast.

Photo 4. Example of vegetation conditions adjacent to the watercourse on property. Photo from the southern portion of the property facing north.

Photo 5. Example of vegetation conditions adjacent to the watercourse on property. Photo from the southern portion of the property facing southeast.

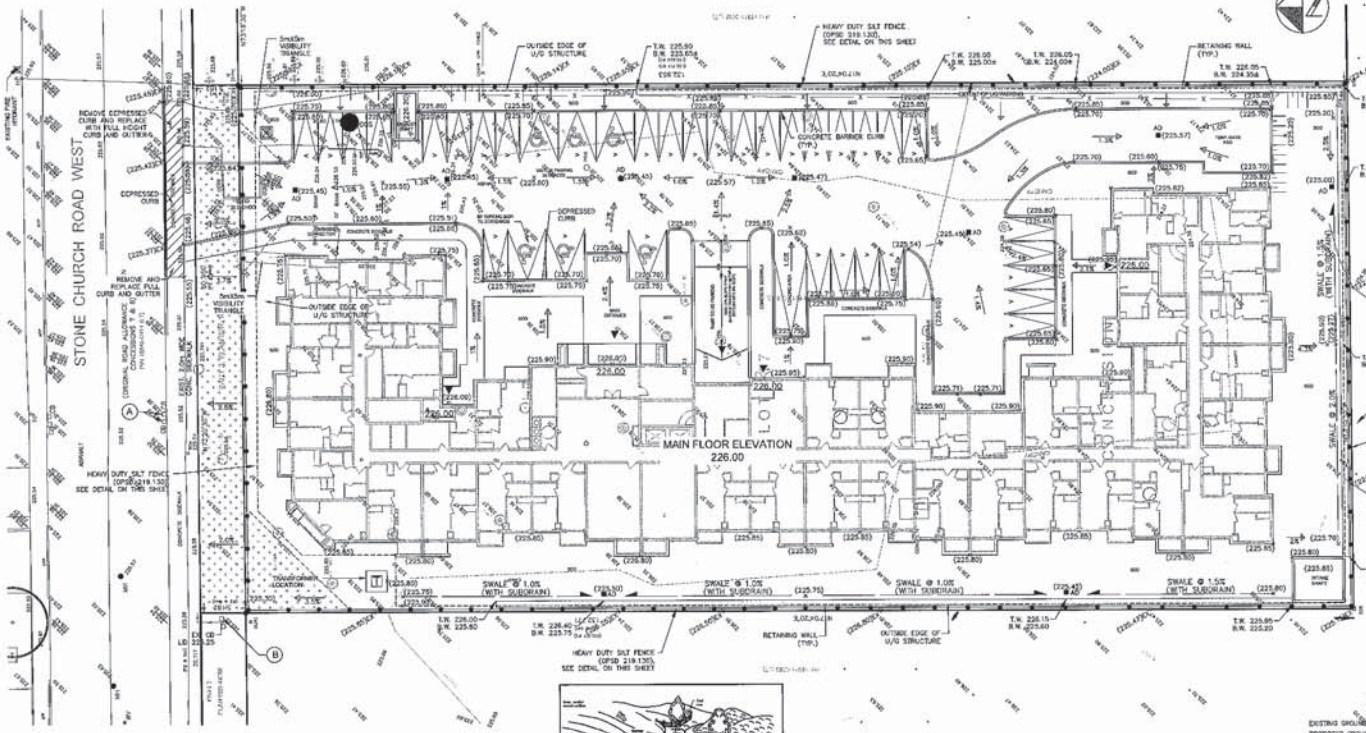
Photo 6. Example of vegetation conditions in the MAM2-2 community south of the property. Photo from south property line facing east.

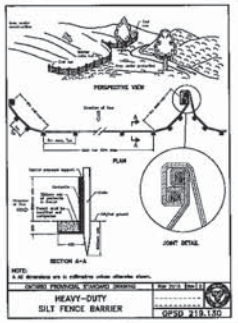
Photo 7. Example of vegetation conditions in the MAM2-2 community south of the property. Photo from southwest corner of the property facing southeast.

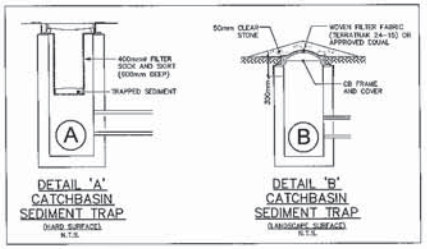
Photo 8. Example of vegetation conditions in the MAM2-2 community southwest of the property.

Appendix C

Proposed Development Plan







LEGEND

EXISTING GROUND ELEVATION	x(100.00)
PROPOSED GROUND ELEVATION	x(100.00)
PROPOSED GROUND ELEVATION TO MATCH EXISTING GRADE	x(100.00)EX
PROPOSED SWALE ELEVATION	x(100.00)SW
DIRECTION OF SURFACE DRAINAGE SWALE	
DIRECTION OF SHEET FLOW	
MANHOLE	
CATCHBASIN	
HYDRANT	
HYDRO PADMOUNT TRANSFORMER	
LIGHT STANDARD & LIGHT BOLLARD	
EXISTING MANHOLE	
EXISTING CATCHBASIN	
EXISTING DOUBLE CATCHBASIN	
EXISTING HYDRANT	
EXISTING LIGHT STANDARD	
EXISTING HYDRO POLE	
EXISTING HYDRO VAULT	
MAJOR OVERLAND FLOW ROUTE	
SEDIMENT CONTROL FENCE	
TEMPORARY SEDIMENT TRAP, TYPE A (HARD SURFACE)	A

ISSUED FOR APPROVAL

SCALE VALID ONLY FOR 24"x36" VERSION

No	Date	Drawn	Appr'd	Revisions
1	APR 28, 22	AJC	AJC	ISSUED FOR APPROVAL

APPROVALS

Design	AJC	Checked	AJC
Drawn	AJC	Checked	AJC
Scale	1:250		
Date	APRIL 2022		

LICENSED PROFESSIONAL ENGINEER A. J. OTAKA PROVINCE OF ONTARIO

251 STONE CHURCH ROAD W HAMILTON, ON

2806131 ONTARIO LIMITED

251 STONE CHURCH GRADING PLAN

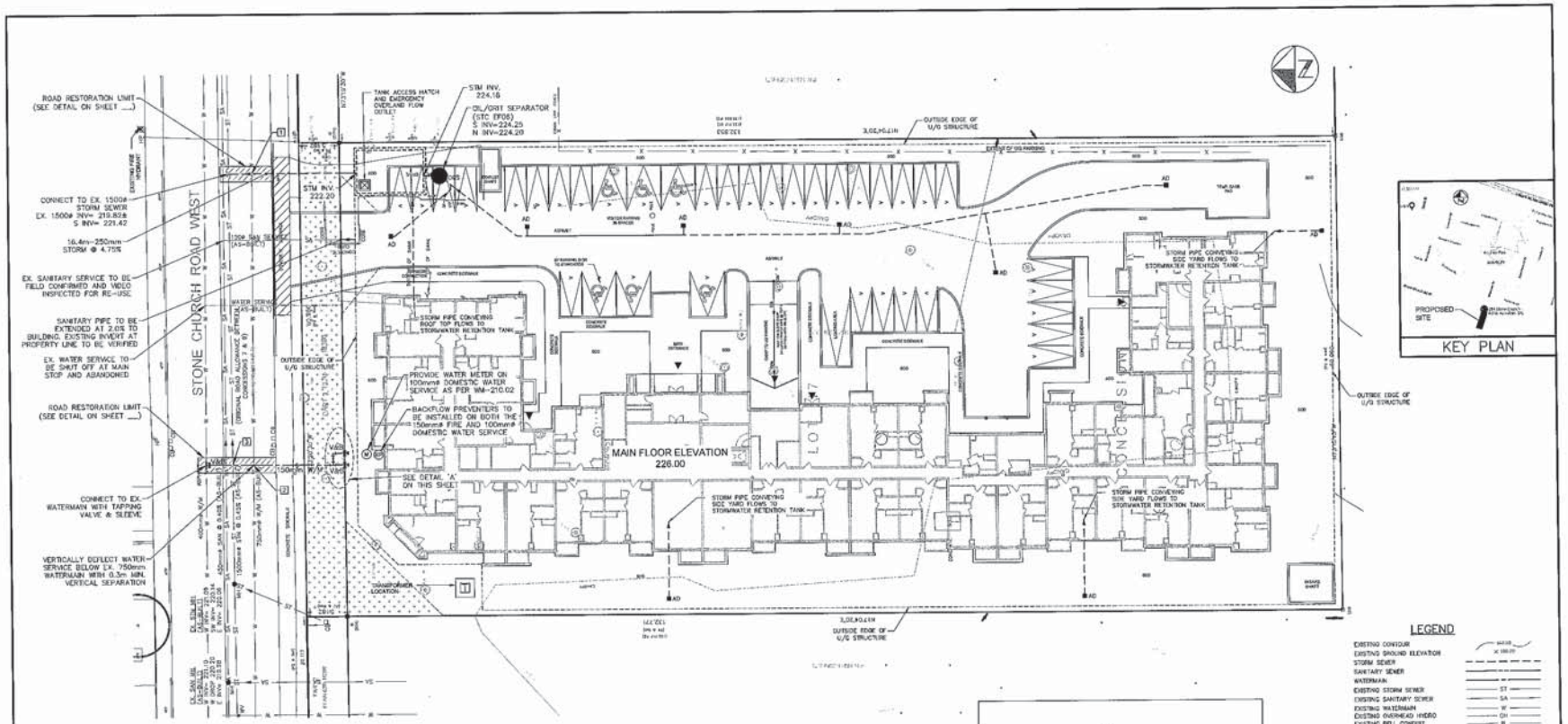
AC GROUP

City File No.

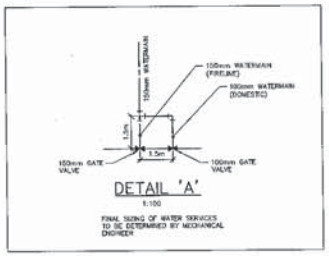
Consultant File No.

Drawing No.

SHEET 4 OF 5



PIPE CROSSING INFORMATION			
LOCATION	INVERT	OBVERT	APPROX. U.S.V. DIFFERENCE
1	223.30± -EX.Wm	221.81 -STM	1.49m
2	223.32± -EX.Wm	223.00 -WS	0.32m MIN.
3	223.60 -WS	221.65± -EX.STM	1.95m (0.5m MIN.)



LEGEND

EXISTING CONTOUR
EXISTING GROUND ELEVATION
STORM SEWER
SANITARY SEWER
WATERMAIN
EXISTING STORM SEWER
EXISTING SANITARY SEWER
EXISTING WATERMAIN
EXISTING OVERHEAD HYDRO
EXISTING BELL CONDUIT
MANHOLE
OIL GRIT SEPARATOR
CATCHBASIN / AREA DRAIN
HYDRANT
WATER VALVE
CURB STOP
PLUG
EXISTING MANHOLE
EXISTING CATCHBASIN/MANHOLE
EXISTING CATCHBASIN
EXISTING DOUBLE CATCHBASIN
EXISTING HYDRANT
EXISTING WATER VALVE
EXISTING WATER VALVE CHAMBER
EXISTING CURB STOP
EXISTING PLUG
EXISTING LIGHT STANDARD
EXISTING PADMOUNT TRANSFORMER
EXISTING POLE
EXISTING BELL PEDESTAL

ISSUED FOR APPROVAL SCALE VALID ONLY FOR 24"x36" VERSION

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251 STONE CHURCH ROAD W
HAMILTON, ON
2806131 ONTARIO LIMITED

251 STONE CHURCH
SERVICING PLAN

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City File No.
Consultant File No.
Drawing No.
SHEET 5 OF 5