

ARBORIST REPORT

Zoning By-law Amendment and Official Plan Amendment

284/292 Plains Road East, City of Burlington

13 April 2021 (Updated 9 September 2022)

TERRASTORY
environmental consulting inc.

ARBORIST REPORT

Zoning By-law Amendment and Official Plan Amendment
284/292 Plains Road East, City of Burlington

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9 September 2022

This report has been prepared by Terrastory Environmental Consulting Inc. (hereinafter "Terrastory") for the client. All information, conclusions, and recommendations contained in this report are subject to the scope and limitations set out in the agreement between Terrastory and the client and qualifications contained in this report. This report shall not be relied upon by any third parties without the prior written consent of Terrastory. Terrastory is not responsible for any injury, loss, or damages arising from improper use of this report by third parties. Excerpts of this report or alterations to this report taken without the authorization of Terrastory invalidates the report and any conclusions therein.

Notwithstanding the determinations of tree health and structural integrity made herein (e.g., good, fair, poor), it must be recognized that all trees (in good health or otherwise) have the potential for failure given adverse weather, damage due to mechanical injury, or other factors that cause stress.

Notwithstanding any recommendations concerning tree preservation or removal made herein, this report does not supersede or expunge any civil or common law property rights as they pertain to shared/boundary trees or trees occurring on adjacent properties. This report does not confirm tree ownership nor authorize the client to encroach or enter onto adjacent properties to destroy or injure trees situated on adjacent properties without the owner's consent.

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1 INTRODUCTION

Terrastory Environmental Consulting Inc. (hereinafter "Terrastory") was retained by Corley Developments to prepare this Arborist Report in support of an Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) applications at 284/292 Plains Road East (hereinafter "Study Area") in Burlington. The Study Area consists of two (2) abutting parcels on the south side of Plains Road East just west of Filmandale Road in the community of Aldershot. The northeast parcel (292 Plains Road East) contains a building formerly operated by the Ontario Professional Fire Fighters Association while the southwest parcel (284 Plains Road East) contains a vacant residence.

The applications considered herein will facilitate the construction of a 6-storey, 104-unit residential apartment building supported by two levels of underground parking. The proposed development plan also consists of surface parking, an underground parking ramp, snow storage, and outdoor amenity space.

Several private trees occur within or adjacent to the proposed development area. The purpose of this study is to inventory and characterize trees with the potential to be adversely affected by the proposed development plan (over the short- or long-term), and to provide mitigation measures and other recommendations to address relevant tree protection requirements. The need for this Arborist Report and Tree Preservation Plan (TPP) was specified via City Urban Forestry & Landscape comments stemming from a 3 June 2020 pre-consultation meeting. The scope and approach of this study are considerate of the City's pre-consultation comments (e.g., need to inventory all trees ≥10 cm DBH) along with the City's Private Tree Protection By-law (40-2022) and related policies.

This Arborist Report and accompanying TPP have been revised following receipt of an updated site plan and detailed grading/servicing plans from the project team, and in consideration of comments from City Engineering Services (dated 21 December 2021) on the first application submission.

2 APPROACH AND METHODS

This Arborist Report is composed of three discrete components which are outlined briefly below and further described in the following sections.

- **Conduct a tree inventory and health assessment** for trees that may be impacted by the proposed development plan (see **Section 2.1**).
- **Predict the effects** of the application on the assessed trees and ascertain the net effects once mitigation measures and other technical recommendations are implemented (see **Section 2.2**).
- **Determine whether the application considered herein addresses applicable tree protection and related policies** (see **Section 2.3**).

2.1 Tree Inventory and Health Assessment

A tree inventory and health assessment was carried out by Terrastory's ISA-certified Arborist and ISA-qualified Tree Risk Assessor (T. Knight) on 21 August 2020. All private trees 10 cm diameter at breast height (DBH) or greater and all municipal trees regardless of size (if present), located within or immediately adjacent to the anticipated areas of disturbance (e.g., building envelopes, grading, servicing etc.), were inventoried and assessed from the ground. Trees situated on adjacent private properties near the proposed areas of disturbance were reviewed as necessary and to the extent possible from areas in which access was granted. All assessed trees were: (1) labeled using metal

number-stamped tags, (2) identified to species, (3) measured at breast-height (approximately 1.37 metres above ground) with calipers and/or DBH tape, (4) assessed for crown diameter, and (5) assessed for risk features, indicators of decline, and growth constraints (e.g., open wounds, live crown ratio, disease, etc.). None of the assessed trees were cored, probed, or climbed, nor were their roots exposed for detailed assessment.

A follow-up site assessment was undertaken on 11 February 2022 by two (2) Terrastory certified Arborists (T. Knight and J. Consiglio) to provide a more current (leaf-off) conditions assessment and determine any increases in DBH since the original tree inventory was undertaken in August 2020. Additional information was also collected for neighbouring trees beyond reaching distance of the property line, which are identified with the modifier "NT" (i.e., No Tag) herein.

Based on the information collected an overall visual assessment of tree health and structural integrity as viewed from the ground is provided, supported by preservation/removal direction based on each tree's characteristics (e.g., health, location, ecological value, cultural value, etc.) and the nature of the proposed development plan. Locations of the assessed trees were recorded on-site with a high-accuracy GPS (Mesa II) supported by representative photographs, and were corroborated with the surveyed tree locations (where available).

Notwithstanding the determinations of tree health and structural integrity made herein (e.g., good, fair, poor), it must be recognized that all trees (in good health or otherwise) have the potential for failure given adverse weather, damage due to mechanical injury, or other factors that cause stress.

2.2 Effects Assessment and Mitigation

Trees may be negatively impacted during construction, grading, and/or other activities associated with implementation of the proposed development plan via the following pathways:

- Direct tree removal in areas where trees conflict with the development envelopes or areas of site alteration (e.g., grading, etc.).
- Mechanical injury to the trunk, roots, branches, and/or foliage during construction or grading.
- Soil compaction within the rooting zone.
- Smothering or exposure of roots due to changes in grade.
- Alterations to any biophysical condition or parameter (e.g., light regime, soil moisture regime, etc.) in which a tree was previously accustomed.

An assessment of the potential for tree impacts associated with implementation of the proposed development plan is provided in **Section 4.2**.

2.3 Tree Protection Policy Context

This Arborist Report and accompanying TPP have been prepared to demonstrate consistency of the proposed works with the City of Burlington's tree protection requirements, which include:

- **Private Tree Protection By-law 40-2022** – subject to certain exemptions, this By-law prohibits the injury, destruction, or removal of a tree ≥20 cm diameter at breast height (DBH) without authorization via a Tree Permit secured from the Manager of Urban Forestry. It is understood that the City's Private Tree By-law does not expressly apply to

Planning Act applications (unless trees are proposed to be removed prior to completion of a site plan agreement).

- **Public Tree Protection By-law 68-2013** – this By-law prohibits the injury, destruction, or removal of public trees without authorization via a Tree Permit secured from the City Arborist. The deposition or placement of materials which may impede the free passage of water, air, or nutrients to the roots of a public tree are also prohibited without authorization.
- **Specification No.: SS12A** – this policy supports the implementation of the City's Private Tree Protection By-law (40-2022) and Public Tree Protection By-law (68-2013) by directing activities adjacent to trees within the City's right-of-way.
- **Site Plan Application Guidelines (2019)** – for *Planning Act* applications which are subject to site plan control, the City's Site Plan Application Guidelines specify the content to be incorporated into Arborist Reports (Section 9.0). The guidelines also specify that trees >15 cm DBH are to be replaced via an aggregate caliper formula.

Provincial/federal legislative requirements related to the protection of breeding birds and bird nests apply to on-site trees (and vegetation of any size) pursuant to the *Migratory Birds Convention Act* (for designated migratory birds) and *Fish and Wildlife Conservation Act* (for certain Corvids and other designated non-migratory birds). Several bat species may roost in cracks/crevices and/or foliage of the larger-diameter on-site trees, some of which (particularly Myotis species and Tri-colored Bat) are afforded protection under the provincial *Endangered Species Act*.

Subsection 10(3) of the provincial *Forestry Act* prohibits the injury or destruction of a tree growing on the boundary of an adjoining property without the neighbouring landowners' consent. Per case law in Ontario a tree is considered shared if any portion of its trunk (i.e., area between the root collar and lowest canopy branch) extends across a property line.

The mitigation measures and technical recommendations offered herein are aimed at demonstrating consistency of the application with the aforementioned municipal, provincial, and federal requirements.

3 TREE INVENTORY AND HEALTH ASSESSMENT

A total of 33 trees situated within or adjacent to the anticipated areas of disturbance were inventoried and assessed. An additional five (5) trees (i.e., NT1 to NT5) were assessed to the extent possible from within the boundaries of the Subject Property. The full results of the tree inventory and health assessment are provided in **Appendix 1**. The locations of all trees assessed are shown in **Figure 1**. Select photographs of the assessed trees and Study Area are provided in **Appendix 2**. A brief description of the overall tree composition and conditions observed is provided below and in **Table 1**.

Table 1. Composition and Abundance of Trees within and/or adjacent to the proposed Areas of Development and Disturbance.

Species	Total Assessed	Percentage of Total (%)
Austrian Pine (*Pinus nigra*)	3	7.9
Colorado Blue Spruce (*Picea pungens*)	2	5.3

Species	Total Assessed	Percentage of Total (%)
Eastern White Cedar (*Thuja occidentalis*)	3	7.9
Honey Locust (*Gleditsia triacanthos*)	1	2.6
Magnolia (*Magnolia* sp.)	1	2.6
Norway Maple (*Acer platanoides*)	4	10.5
Norway Spruce (*Picea abies*)	16	42.1
Siberian Elm (*Ulmus pumila*)	2	5.3
White Birch (*Betula papyrifera*)	1	2.6
White Fir (*Abies concolor*)	1	2.6
White Mulberry (*Morus alba*)	4	10.5
TOTAL	**38**	**~100**

Norway Spruce (*Picea abies*) comprises slightly less than half (42.1%) of all inventoried trees and forms a continuous canopy along the rear property boundary. All Norway Spruce plantings are shared assets or entirely situated on neighbouring properties (287/291 Merle Avenue). A few White Mulberry (*Morus alba*) are intermixed along the stand of Norway Spruce, which appeared to be situated wholly within the Study Area. A small grouping of trees occurs near the northeast corner of the Study Area (i.e., Trees #302-305) which is also situated on an abutting parcel (300 Plains Road East).

4 TREE EFFECTS ASSESSMENT AND MITIGATION

4.1 Proposed Development Plan

The following tree effects assessment provides an evaluation of the potential for the proposed development plan to result in negative effects to regulated trees and offers several technical recommendations to mitigate such effects. The effects assessment herein is based on the site plan (SRM Architects) and grading/servicing plans (Odan-Detech) which were overlaid with the assessed tree locations to ascertain retainability. The Tree Preservation Plan (TPP; OMC Landscape Architects) is provided in **Figure 2** while the site plan, functional serving plan, and grading plan are provided in **Appendix 4**.

The proposed development plan contemplates the following built elements:

- 6-storey, 104-unit residential apartment building.
- Vehicle access from Plains Road East near the northern property boundary along with above-ground parking spaces and two levels of underground parking.
- Municipal water and wastewater servicing.
- Outdoor amenity space and landscaping.

The major project phases for which effects on trees are assessed include demolition of the existing buildings, site preparation (e.g., clearing/grubbing, grading, etc.), construction, and servicing.

4.2 Tree Effects Assessment and Technical Recommendations

4.2.1 Shared and Neighbouring Trees

Per case law in Ontario, a tree is considered shared if any portion of its trunk (i.e., area between the root collar and lowest canopy branch) extends across a property line. Section 10(3) of the *Forestry Act* prohibits the injury or destruction of a tree growing on the boundary of adjoining properties (or neighbouring properties) without the adjacent landowners' consent.

Over the course of this study, Terrastory provided feedback to and worked iteratively with the project team to minimize the potential for impacts to regulated trees that occur in proximity to the anticipated areas of disturbance. Terrastory's original Arborist Report (April 2021) was prepared in the absence of detailed grading and servicing plans, as it was understood that such plans were not available for review at that time. Following receipt of City comments on the initial OPA/ZBA application, Terrastory has worked closely with the project team to advance a development plan which avoids anticipated impacts to the 26 shared/neighbouring trees. These 26 shared/neighbouring trees are situated on five (5) different abutting properties:

- 276 Plains Road East
- 287 Merle Avenue
- 291 Merle Avenue
- 295 Merle Avenue
- 300 Plains Road East

In general, tree protection on development sites is effectuated by restricting development and/or site alteration from the prescribed minimum Tree Protection Zone (TPZ). A minimum TPZ is generally accepted to be the minimum setback distance required to maintain the structural integrity of a tree's anchor roots (i.e., "root plate"). In Ontario, minimum TPZs are often established by multiplying a tree's diameter at breast height (DBH) by a factor of 6. Trees with a similar diameter (e.g., 41-50 cm DBH) are lumped into a single size class, with the minimum TPZ established by the largest diameter tree in that size class. For example, all trees which are 41-50 cm DBH would be afforded a 3 m setback as 50 cm is the largest tree in that size class (50 cm x 6 = 300 cm or 3 m). The calculated TPZ represents the radius of a circle that extends from a tree's base to the specified distance (or up to existing hard surfaces, where applicable). The City of Burlington also establishes a Critical Root Zone (CRZ) which involves multiplying DBH by a factor of 10 per Specification No.: SS12A.

To determine an appropriate TPZ radius (to be demarcated by tree protection fencing), Terrastory undertook a detailed impact assessment which considered the likelihood of tree related impacts based on several variables. This analysis considered the following:

- Size of tree (i.e., diameter at breast height).
- Extent of dripline.
- Presence of existing built features which may restrict and/or direct root growth (e.g., pavement).
- Sensitivity of the tree species inventoried to construction impacts as noted in scientific literature (e.g., Matheny and Clark 1998).

- Minimum TPZ and CRZ radii established in the City of Burlington.
- Optimal TPZ distances available from the scientific literature (e.g., Matheny and Clark 1998).
- Anticipated low tolerance for risk of decline and/or structural issues expected by neighbouring owners.

The results of Terrastory's impact assessment for the shared/neighbouring is provided in **Appendix 3**. This analysis establishes that **the tree protection fencing (and by extension the limit of development and disturbance) has been restricted from the CRZ of all neighbouring and boundary trees.** As the limit of development and disturbance has been restricted from the CRZ of all adjacent shared/neighbouring trees, no tree impacts necessitating approval by shared/neighbouring owners is required.

The most effective approach to protecting retainable trees situated in proximity to development and/or site alteration activities is the installation of a tree protection barrier (e.g., hoarding, fencing) consistent with the City's Specification No.: SS12A. The following measures are recommended to protect retainable trees situated near the proposed development limit:

- **Construction activities will treat all trees recommended for retention on Tree Protection Plan as constraints.**
- **Tree protection fence will be installed per the Tree Protection Plan prior to the commencement of site preparation and other construction activities.**
- **A qualified Arborist will inspect the tree protection fence following installation and prior to the commencement of site preparation or other construction activities.**
- **No development, site alteration (e.g., grading, excavation, soil stockpiling), machinery movement, or storage of equipment or materials will occur within any area isolated by tree protection fence.**
- **Tree protection fence will remain in place and be in good condition during implementation of the proposed development plan. Tree protection fence will not be removed until all site disturbances associated with the proposed development plan have concluded.**
- **A Verification of Tree Protection Letter is to be provided to Urban Forestry by a qualified Arborist to confirm that all tree protection measures as shown on the Tree Protection Plan have been implemented.**

As recommended above, areas isolated by tree protection fence are to be protected from development and all construction-related disturbances. These recommendations have been incorporated directly onto the TPP (see **Figure 2**) and grading/servicing plans (see **Appendix 4**).

Trees to be retained may require minor pruning to facilitate clearance (e.g., for construction vehicles), improve crown structure, or eliminate deadwood. Should pruning be deemed necessary, the following measure is recommended.

- **All necessary pruning of branches and/or roots shall be conducted by a qualified Arborist and shall be in accordance with good arboricultural standards and practices.**

Per the assessment in **Appendix 3**, minor development/disturbance would be expected within the "optimal" TPZ of Trees #311, #322, and #326 as established through guidelines outlined in Matheny and Clark (1998). Note that the limit of development/disturbance matches the existing curb (i.e., 6.30 m from the rear property line); dense root growth is not anticipated to extend beneath the existing pavement, so the calculated "optimal" TPZ distances do not accurately reflect the potential for impact for trees along the rear property line. It is further emphasized that an "optimal" TPZ per Matheny and Clark (1998) represents a distance with the lowest potential risk for tree impacts, and often greatly exceeds typical setbacks considered sufficient for trees of similar size in Burlington through development approvals process. Regardless, to further reduce the potential for root impacts/tearing during removal of the existing curb and pavement in the rear of 292 Plains Road East, Terrastory recommends the following measures.

- **The existing curb and pavement adjacent to trees along the rear-property line (#310-#325) will be lifted and removed carefully and in a way which minimizes damage or tearing of any tree roots.**

- **Following curb removal, a qualified Arborist will review the excavation to determine if root pruning is required. If required, the qualified Arborist will supervise the root cutting procedures and examine if any excessive or large structural roots require cutting. All exposed tree roots will be severed cleanly in accordance with standard arboricultural practices. Loss of structural roots may necessitate removal of the subject tree, to be determined by the on-site qualified Arborist.**

4.2.2 Trees to be Removed

Based on the proposed development plans shown in **Figure 2**, a total of six assessed trees (15.8%) require removal to implement the proposed development plan. A rationale for the removal of each individual tree is provided in **Appendix 1**. Tree removals are required to facilitate construction of the building envelope and associated grading. None of the trees proposed for removal (or impact) are shared with neighbouring owners or situated entirely on neighbouring properties.

Given the possibility that nesting birds or roosting bats may occupy on-site trees during their activity periods, the following measures are recommended to guide the necessary tree removals:

- **All necessary tree removals will be completed outside the primary bird nesting and bat activity periods (i.e., to be completed between October 1 and March 31). If limited tree removal is required during this period, a survey will be conducted by a qualified Ecologist within two (2) days of the commencement of tree removal activities to determine habitat suitability and/or confirm the presence/absence of nesting birds and roosting bats.**

- **Should a nesting bird or roosting bat be identified, a mitigation plan must be developed (which may include discussions with relevant agencies) to address regulatory requirements.**

4.2.3 Tree Replacements

Replacement of trees approved for removal is to be undertaken consistent with City policies.

Historically, the City has required one (1) replacement tree for every 10 cm of DBH removed, or (where insufficient room for replacement trees is available) $400 per tree removed. The City's Site Plan Application Guidelines restrict the need for tree replacements to deciduous trees ≥15 cm DBH and coniferous trees >4.5 m tall via an aggregate caliper formula. Alternatively, the City's recently updated Private Tree Protection By-law (40-2022) provides the following tree replacement ratios:

- 20 to 35 cm DBH = 2:1 replacement ratio
- 36 to 74 cm DBH = 3:1 replacement ratio
- ≥75 cm DBH = 4:1 replacement ratio

Applying the above two (2) tree replacement methodologies gives the following tree replacement requirements per **Table 2** below.

Table 2. Tree Replacement Requirements.

Tag No.	Diameter at Breast Height	Compensation Ratio per Site Plan Guidelines (1 new tree per 10 cm DBH removed)	Compensation Ratio per Private Tree By-law 40-2022
301	66	6.5	3
327	42	4	3
328	39	4	3
329	38	4	3
332	45	4.5	3
TOTAL	**n/a**	**32**	**15**

The replacement calculations in **Table 2** above are provided for reference only. City Urban Forestry staff is to confirm the number of replacement trees necessary. Trees which cannot be replaced on-site are to be addressed via cash-in-lieu. It is understood that a fulsome Landscape Plan will be prepared at Site Plan Approval (SPA).

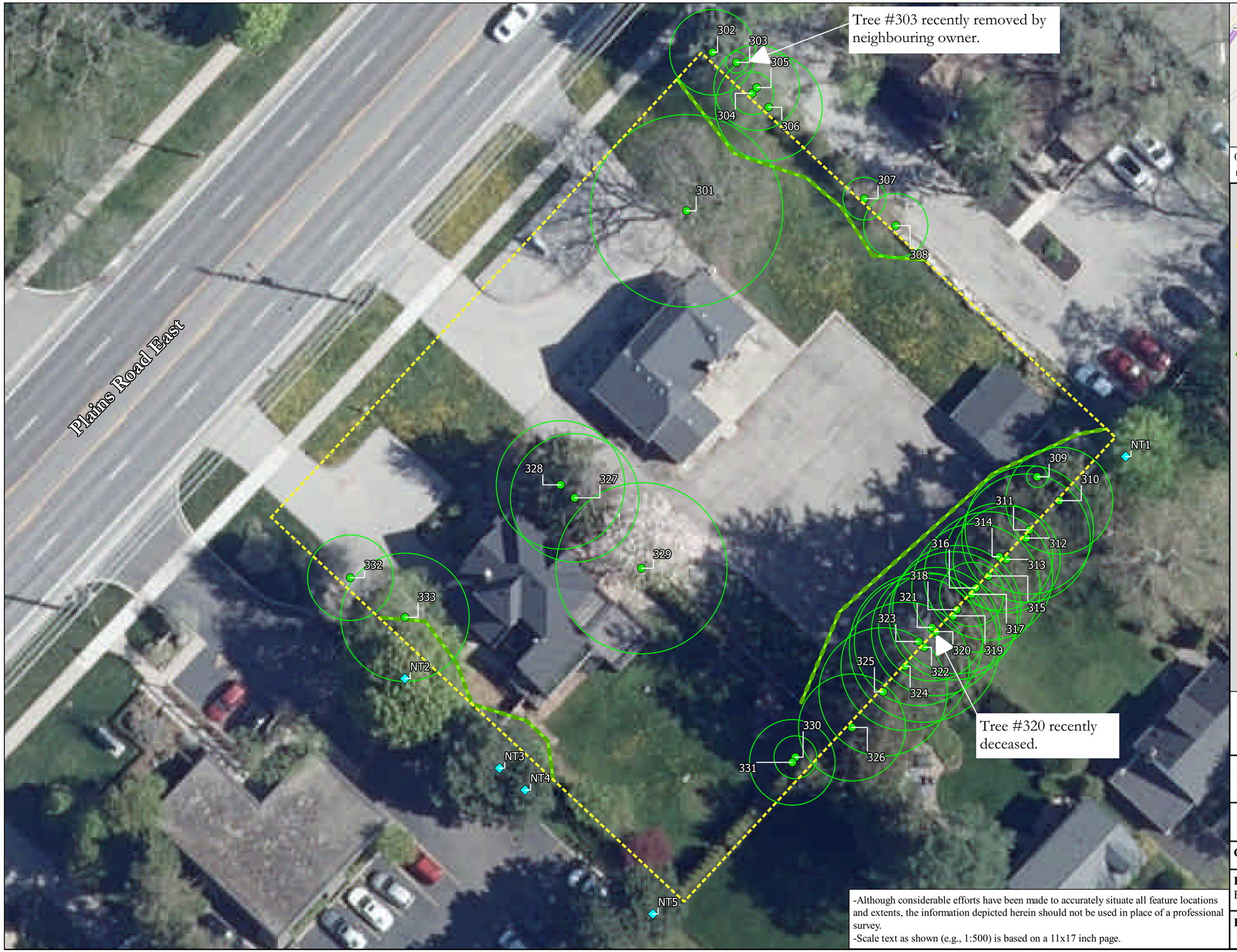
5 CONCLUSIONS

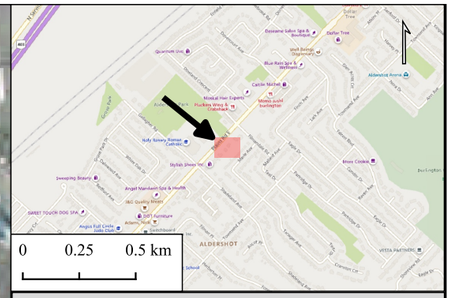
A total of 38 trees were inventoried and assessed at or adjacent to 284/292 Plains Road East in Burlington. Of these, a total of six assessed trees require removal to support the proposed development plan (all occur within the Subject Property), which involves the construction of a six-storey apartment building, above- and below-ground parking, and related uses. Several additional trees (particularly shared and neighbouring trees) have the potential for injury given their close proximity to areas in which development or site alteration are proposed.

The proposed development plans (site plan, functional servicing plan, grading plan) have been substantially revised since first submission to accommodate protection of all shared or neighbouring trees occurring on adjoining parcels. As shown in **Appendix 3**, no development or disturbance is proposed within the Critical Root Zone of any shared or neighbouring tree. Several mitigation measures have been offered to further minimize the potential for impacts to shared/neighbouring tree (e.g., installation of tree protection fencing, root assessment following curb removal) and to protect nesting birds and/or roosting bats during tree removal.

Provided that the technical recommendations offered herein are implemented in full, Terrastory is satisfied that anticipated and potential tree impacts will be adequately addressed and that the application meets relevant tree protection policies in force with the City of Burlington. All approved tree removals must be addressed consistent with City requirements. As part of the application review process, all technical recommendations offered herein should be incorporated into any necessary planning approvals that facilitate implementation of the proposed development plan.

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Legend

Study Area
- Study Area

Tree Inventory
- Tree
- Tree on Adjacent Parcels (not tagged)
- Dripline
- Greatest Dripline Extent of Neighbouring/ Shared Trees

-Although considerable efforts have been made to accurately situate all feature locations and extents, the information depicted herein should not be used in place of a professional survey.
-Scale text as shown (e.g., 1:500) is based on a 11x17 inch page.

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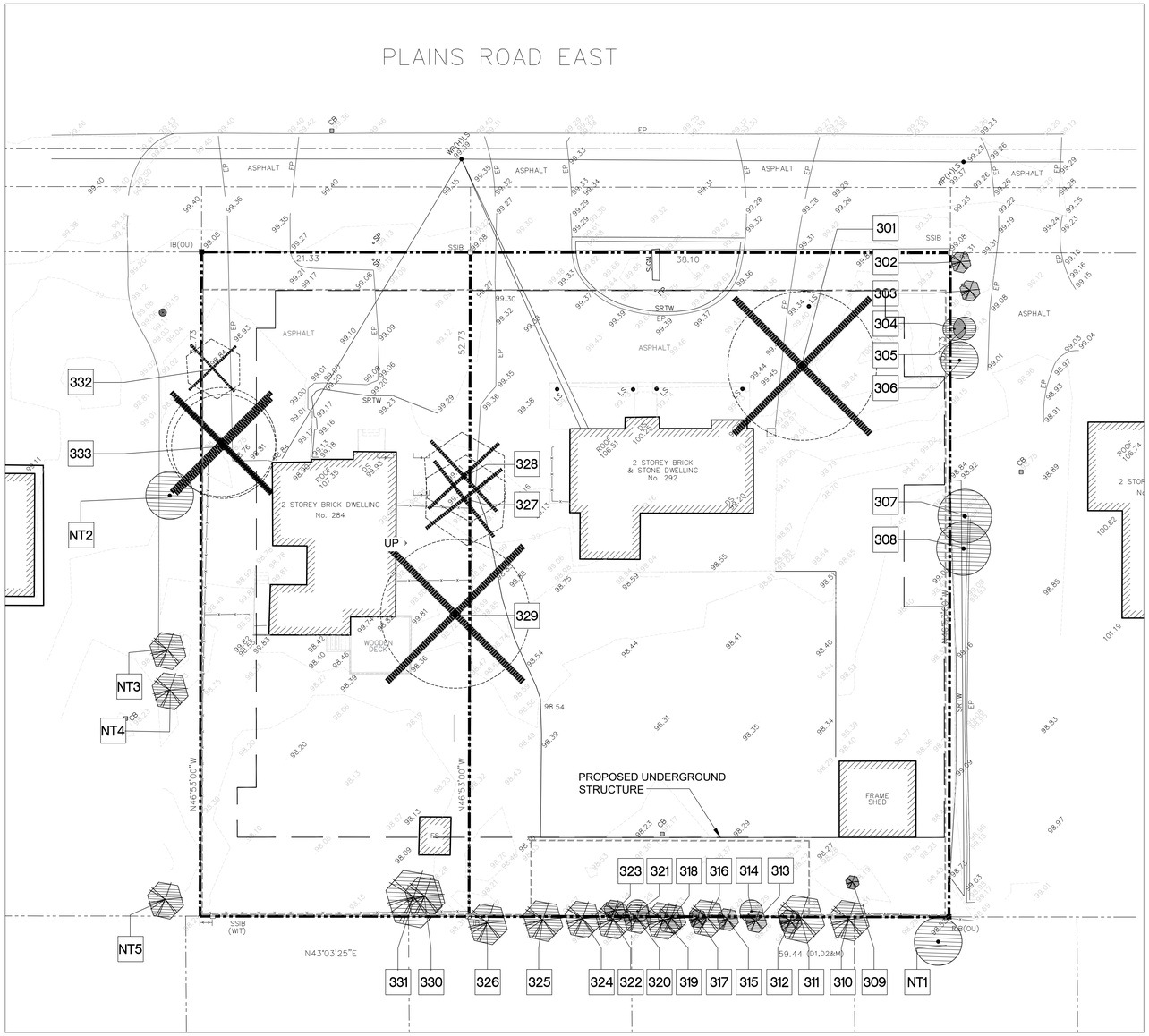
1:350	0 5 10 15 m

N	Project No.: 2066	By: TK	Date: 2022-09-01

Orthophotograph Date: May 2015 (SCOOP).

Location: 284-292 Plains Road East, City of Burlington.

Figure 1. Tree Inventory.



TREE PROTECTION FENCE

- Construction activities will treat all trees recommended for retention on Tree Protection Plan as constraints.
- Tree protection fence will be installed per the Tree protection Plan prior to the commencement of site preparation and other construction activities.
- A qualified arborist will inspect the tree protection fence following installation and prior to the commencement of site preparation or other construction activities.
- No development, site alteration (e.g. grading, excavation, soil stockpiling), machinery movement, or storage of equipment or materials will occur within any area isolated by tree protection fence.
- Tree protection fence will remain in place and be in good condition during implementation of the proposed development plan. Tree protection fence will not be removed until all site disturbances associated with the proposed development plan have concluded.
- A verification of Tree Protection Letter is to be provided to Urban Forestry by a qualified Arborist to confirm that all tree protection measures as shown on the Tree Protection Plan have been implemented.

PRUNING

- All necessary pruning of branches and/or roots shall be conducted by a qualified Arborist and shall be in accordance with good arboricultural standards and practices.

ROOT ASSESSMENT

- The existing curb and pavement adjacent to trees along the rear-property line (#310-#325) will be lifted and removed carefully and in a way which minimizes damage or tearing of any tree roots.
- Following curb removal, a qualified Arborist will review the excavation to determine if root pruning is required. If required, the qualified Arborist will supervise the root cutting procedures and examine if any excessive or large structural roots require cutting. All exposed tree roots will be severed cleanly in accordance with standard arboricultural practices. Loss of structural roots may necessitate removal of the subject tree, to be determined by the on-site qualified Arborist.

TREE REMOVALS

- All necessary tree removals will be completed outside the primary bird nesting and bat activity periods (i.e., to be completed between October 1 and March 31). If limited tree removal is required during this period, a survey will be conducted by a qualified Ecologist within two (2) days of the commencement of tree removal activities to determine habitat suitability and/or confirm the presence/absence of nesting birds and roosting bats.
- Should a nesting bird or roosting bat be identified, a mitigation plan must be developed (which may include discussions with relevant agencies) to address regulatory requirements.

Burlington

TREE PROTECTION ZONE (TPZ)

No equipment or vehicles shall be operated, parked, repaired or refueled within the Tree Protection Zone.

No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.

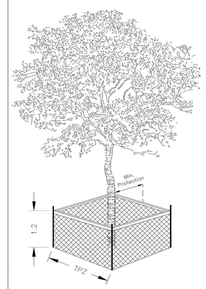
No materials or fill may be stored within the Tree Protection Zone.

This tree protection barrier must not be removed prior to the completion of construction without written authorization from the City of Burlington, Urban Forestry Department.

For information, contact:
City of Burlington, Development and Infrastructure Division,
905-335-7642.

Tree Protection and Preservation
Specification No.: SS12A

Detail TP-1 – Tree Protection Detail.

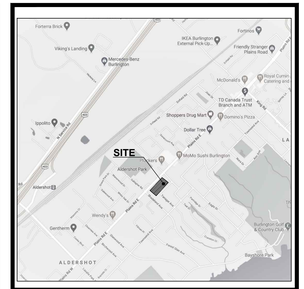


Trunk Diameter (DBH) [2]	Minimum Tree Protection Zone (MTPZ) Distances Required [3]	Critical Root Zone (CRZ) Distances Required [3&4]
< 10 cm	1.8 m	1.8 m
11 - 40 cm	2.4 m	4.0 m
41 - 50 cm	3.0 m	5.0 m
51 - 60 cm	3.6 m	6.0 m
61 - 70 cm	4.2 m	7.0 m
71 - 80 cm	4.8 m	8.0 m
81 - 90 cm	5.4 m	9.0 m
91 - 100+ cm	6.0 m	10.0 m

NOTES:
[2] The roots of a tree can extend from the trunk to approximately 2-3 times the distance of the drip line.
[3] Diameter at breast height (DBH) is the measurement of tree trunk taken at 1.4 metres above ground.
[3] Minimum Tree Protection Zone and Critical Root Zone distances are to be measured from the outside edge of the tree base towards the drip line and may be limited by an existing paved surface, provided the existing paved surface remains intact throughout the construction work and is subject to Section 6 of this specification.
[4] Where work is being performed beyond the Minimum Tree Protection Zone but within the Critical Root Zone the works are subject to Section 8 of this specification.

TREE PROTECTION BARRIER

1. The required barrier is a 1.2 metre (4 ft) high orange plastic web snow fencing on 2" x 4" frame. Where orange plastic web snow fencing creates a restriction to sightlines, pige wire fencing with reflective tape can be used.
2. Tree protection barriers are to be erected prior to the commencement of any construction or grading activities on the site and are to remain in place throughout the entire duration of the project. The barriers shall be maintained erect and in good repair throughout the duration of construction operations with breaks and unsupported sections repaired immediately. Tree protection may be not be removed prior to the completion of construction without written authorization from the Manager of Urban Forestry or designate.
3. All supports and bracing used to safely secure the barrier should be located outside the MTPZ. All supports and bracing should minimize damage to roots.
4. Where some fill or excavated material must be temporarily located near a MTPZ, a wooden barrier with silt fencing must be used to ensure no material enters the MTPZ.
5. No materials or fill may be stored within the MTPZ.
6. Equipment or vehicles shall not be operated, parked, repaired, or refueled within the MTPZ.
7. No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the MTPZ without written authorization from the Manager of Urban Forestry or designate.
8. A laminated Minimum Tree Protection Zone sign (See Detail TP-3 – Minimum Tree Protection Zone Sign) must be attached to the side of the Tree Protection where it will be visible by persons entering the site. Minimum size must be 10"x14".



KEY-PLAN

LEGEND

- EXISTING PROPERTY LINE
- EXISTING DECIDUOUS TREE TO BE RETAINED
- EXISTING CONIFEROUS TREE TO BE RETAINED
- EXISTING SHRUBS TO BE RETAINED
- EXISTING DECIDUOUS TREE TO BE REMOVED
- EXISTING CONIFEROUS TREE TO BE REMOVED
- EXISTING SHRUBS TO BE REMOVED
- 0 EXISTING VEGETATION INVENTORY
- PROPOSED TREE HOARDING FENCE
- PROPOSED UNDERGROUND STRUCTURE

SOURCE OF BASE INFORMATION:
Provided by: SRM Architects Inc. - June 2020.

Field work completed by:
Tristan Knight of Terrastory Environmental Consulting Inc. - February 2021

PLOT DATE: September 07, 2022

No.	DATE	DESCRIPTION	BY
2	09/01/22	ISSUED FOR OPA / ZBA	mm
1	04/12/21	ISSUED FOR OPA / ZBA	SP

REVISIONS

OMC LANDSCAPE ARCHITECTURE
Innovative, outside thinking. SINCE 1994
270 Sherman Avenue North, Suite 315-MILL, Hamilton, ON L8L 6N4
Telephone: 905.681.7604 Fax: 905.681.2944 www.omcla.ca
LANDSCAPE ARCHITECTURE ENVIRONMENTAL PLANNING RESOURCE ANALYSIS

284-292 PLAINS RD. E.

BURLINGTON, ON

TREE PRESERVATION PLAN

ISSUED FOR OPA / ZBA

SCALE : 1:200	CHECKED : MM
DATE : Jan. 28, 21	DRAWING : L1
DRAWN : SP	PROJECT : 1454

Issued for Review - September 7, 2022

Date: Sep. 07, 2022 4:55 pm Plotted by: dplore Last Saved By: dplore Filename: N:\0 PROJECTS\1454 - 284-292 Plains Rd E\3 Working Dwgs\1454 - L1 - TREE PRES PLAN 2022.dwg

Appendix 1. Tree Inventory and Health Assessment

Tag No.	Common Name	Scientific Name	Ownership[1]	DBH (cm)	Crown Radius (m)	Risk Features, Decline Indicators, and Growth Constraints	Health Condition[2]	Structural Condition[2]	Minimum TPZ (m) per Spec	Critical Root Zone (m) per	Tree Preservation Direction
301	Honey Locust	*Gleditsia triacanthos*	Applicant	66	9	minor epicormic shoots in lower canopy	80%	80%	4.20	7.00	**Remove** - within limit of proposed building envelope.
302	Colorado Blue Spruce	*Picea pungens*	300 Plains Road East	45.5	4		80%	80%	3.00	5.00	Retain - neighbouring, tree protection fence recommended.
303	Colorado Blue Spruce	*Picea pungens*	300 Plains Road East	n/a	n/a	RECENTLY REMOVED BY NEIGHBOURING OWNER	n/a	n/a	n/a	n/a	n/a
304	Siberian Elm	*Ulmus pumila*	300 Plains Road East	11	2	insect defoliation, abrasion against Tree #305, stem asymmetric	60%	60%	2.40	4.00	Retain - neighbouring, tree protection fence recommended.
305	White Mulberry	*Morus alba*	300 Plains Road East	12.5, 11 (16.7)	4	splitting at base from included bark	80%	20%	2.40	4.00	Retain - neighbouring, tree protection fence recommended.
306	Siberian Elm	*Ulmus pumila*	300 Plains Road East	20, 13 (23.9)	5	included bark, bacterial wetwood, insect exit holes	20%	20%	2.40	4.00	Retain - neighbouring, tree protection fence recommended.
307	Norway Maple	*Acer platanoides*	300 Plains Road East	16.5	2	leaf scorch, growing between armourstone	20%	20%	2.40	4.00	Retain - neighbouring, tree protection fence recommended.
308	Norway Maple	*Acer platanoides*	300 Plains Road East	15	3	leaf scorch, growing between armourstone	20%	20%	2.40	4.00	Retain - neighbouring, tree protection fence recommended.
309	Eastern White Cedar	*Thuja occidentalis*	Applicant	14	1		80%	80%	3.00	5.00	Retain - within limit of tree protection fence.
310	Norway Spruce	*Picea abies*	Shared with 291 Merle Avenue	46	5	stem growth soon restricted by adjacent fence, appears topped	60%	60%	3.00	5.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
311	Norway Spruce	*Picea abies*	Shared with 291 Merle Avenue	57.5	6	stem pushing against chain-link fence, appears topped	60%	60%	3.60	6.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
312	Norway Spruce	*Picea abies*	291 Merle Avenue	33	6		80%	80%	2.40	4.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
313	Norway Spruce	*Picea abies*	291 Merle Avenue	31	5		80%	80%	2.40	4.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
314	White Mulberry	*Morus alba*	Applicant	19	5	phototropic lean, base bulbous, growing against fence	60%	20%	2.40	4.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
315	Norway Spruce	*Picea abies*	Shared with 291 Merle Avenue	23	6		80%	80%	2.40	4.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.

Tag No.	Common Name	Scientific Name	Ownership[1]	DBH (cm)	Crown Radius (m)	Risk Features, Decline Indicators, and Growth Constraints	Health Condition[2]	Structural Condition[2]	Minimum TPZ (m) per Spec	Critical Root Zone (m) per	Tree Preservation Direction
316	Norway Spruce	*Picea abies*	Shared with 291 Merle Avenue	50.5	6		80%	80%	3.00	6.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
317	Norway Spruce	*Picea abies*	Shared with 291 Merle Avenue	15.5	3	overtopped, small crown	20%	20%	2.40	4.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
318	Norway Spruce	*Picea abies*	Shared with 291 Merle Avenue	43	6		80%	80%	3.00	5.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
319	Norway Spruce	*Picea abies*	Shared with 291 Merle Avenue	46	6		80%	80%	3.00	5.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
320	Norway Spruce	*Picea abies*	Shared with 291 Merle Avenue	DEAD	n/a	TREE RECENTLY DECEASED	n/a	n/a	n/a	n/a	n/a
321	White Mulberry	*Morus alba*	Applicant	14	5	phototropic lean	60%	60%	2.40	4.00	Retain - within limit of tree protection fence.
322	Norway Spruce	*Picea abies*	287 Merle Avenue	57	7		80%	80%	3.60	6.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
323	White Mulberry	*Morus alba*	Applicant	24	6	lean	60%	60%	2.40	4.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
324	Norway Spruce	*Picea abies*	287 Merle Avenue	35	6		80%	80%	2.40	4.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
325	Norway Spruce	*Picea abies*	287 Merle Avenue	53	6		80%	80%	3.60	6.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
326	Norway Spruce	*Picea abies*	287 Merle Avenue	55.5	5	significant dieback	60%	60%	3.60	6.00	Retain - neighbouring, tree protection fence and root assessment during excavation recommended.
327	Norway Spruce	*Picea abies*	Applicant	42	6	significant dieback, pruned	40%	40%	3.00	5.00	**Remove** - within limit of proposed building.
328	Norway Spruce	*Picea abies*	Applicant	39	6	sloughing bark, pruned	60%	60%	2.40	4.00	**Remove** - within limit of proposed building.
329	Magnolia	*Magnolia* sp.	Applicant	38	8	callused wound at base, some exposed heartwood at branch stubs with rot	80%	70%	2.40	4.00	**Remove** - within limit of proposed building.

Tag No.	Common Name	Scientific Name	Ownership[1]	DBH (cm)	Crown Radius (m)	Risk Features, Decline Indicators, and Growth Constraints	Health Condition[2]	Structural Condition[2]	Minimum TPZ (m) per Spec	Critical Root Zone (m) per	Tree Preservation Direction
330	Eastern White Cedar	*Thuja occidentalis*	Applicant	13	2		80%	80%	2.40	4.00	Retain - within limit of tree protection fence.
331	Eastern White Cedar	*Thuja occidentalis*	Applicant	22	4		80%	80%	2.40	4.00	Retain - within limit of tree protection fence.
332	White Fir	*Abies concolor*	Applicant	45	4	significant dieback	20%	20%	3.00	5.00	**Remove** - poor condition.
333	White Birch	*Betula papyrifera*	Applicant	23, 14, 18, 26 (41.5)	6	poor stem attachment for all stems at base, some open wounds	70%	20%	3.00	5.00	**Remove** - poor structural condition, significant root impacts anticipated, close proximity of proposed building envelope.
NT1	Norway Maple	*Acer platanoides*	295 Merle Avenue	40 to 49	5	detailed assessment not undertaken, tree appears generally in good condition	80%	80%	3.00	5.00	Retain - neighbouring
NT2	Norway Maple	*Acer platanoides*	276 Plains Road East	50 to 59	6	detailed assessment not undertaken, tree appears generally in good condition	80%	80%	3.60	6.00	Retain - neighbouring
NT3	Austrian Pine	*Pinus nigra*	276 Plains Road East	50 to 59	5	detailed assessment not undertaken, tree appears generally in good condition	80%	80%	3.60	6.00	Retain - neighbouring
NT4	Austrian Pine	*Pinus nigra*	276 Plains Road East	30 to 39	4	detailed assessment not undertaken, tree appears generally in good condition	80%	80%	2.40	4.00	Retain - neighbouring
NT5	Austrian Pine	*Pinus nigra*	276 Plains Road East	40 to 49	4	detailed assessment not undertaken, tree appears generally in good condition	80%	80%	3.00	5.00	Retain - neighbouring

[1] - All determinations of tree ownership are based on the survey (David B. Searles Surveying Ltd., 1 February 2018) and have been made in the absence of on-site property boundary markers or other direction from a licensed surveyor.

[2] - Notwithstanding the determinations of tree health and structural integrity made herein (e.g., good, fair, poor), it must be recognized that all trees (in good health or otherwise) have the potential for failure given adverse weather, damage due to mechanical injury, or other factors that cause stress.

Appendix 2. Representative Photographs

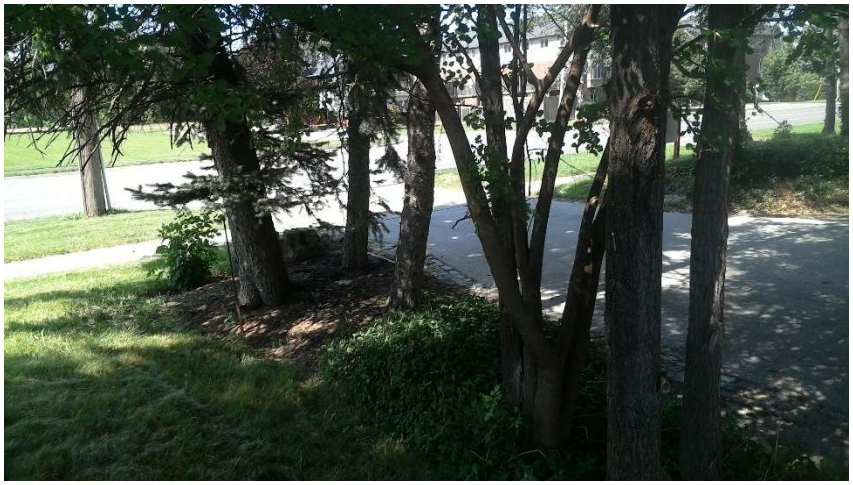


Photo 1. Trees #302-305 looking north towards Plains Road East (21 August 2020).



Photo 2. Tree #307 growing through armourstone on 300 Plains Road East (21 August 2020).



Photo 3. Shared/neighbouring trees along the rear property boundary (21 August 2020).



Photo 4. Shared/neighbouring trees along the rear property boundary (21 August 2020).



Photo 5. Existing buildings within the Study Area (21 August 2020).



Photo 6. Tree #333 looking northwest towards Plains Road East (21 August 2020).

Appendix 3. Tree Protection Zone Assessment for Shared and Neighbouring Trees

Tree No.	Common Name	Scientific Name	DBH (cm)	Minimum TPZ (m) per Spec No. SS12A	Critical Root Zone (m) per Spec No. SS12A	Optimal TPZ (m) per Matheny and Clark 1998[1]	TPZ (m) achieved by Development Plan	TPZ Meets or Exceeds Critical Root Zone?
302	Colorado Blue Spruce	*Picea pungens*	45.5	3.00	5.00	**5.46**	5.50	YES
303	Colorado Blue Spruce	*Picea pungens*	TREE RECENTLY REMOVED					
304	Siberian Elm	*Ulmus pumila*	11	2.40	4.00	0.66	4.00	YES
305	White Mulberry	*Morus alba*	12.5	2.40	4.00	1.13	4.00	YES
306	Siberian Elm	*Ulmus pumila*	20	2.40	4.00	1.80	4.00	YES
307	Norway Maple	*Acer platanoides*	16.5	2.40	4.00	1.98	4.00	YES
308	Norway Maple	*Acer platanoides*	15	2.40	4.00	1.80	4.00	YES
310	Norway Spruce	*Picea abies*	46	3.00	5.00	5.52	6.30	YES
311	Norway Spruce	*Picea abies*	57.5	3.60	6.00	6.90	6.30 (limit of pavement)	YES
312	Norway Spruce	*Picea abies*	33	2.40	4.00	3.96	6.30 (limit of pavement)	YES
313	Norway Spruce	*Picea abies*	31	2.40	4.00	3.72	6.30 (limit of pavement)	YES
315	Norway Spruce	*Picea abies*	23	2.40	4.00	2.76	6.30 (limit of pavement)	YES
316	Norway Spruce	*Picea abies*	50.5	3.00	6.00	6.06	6.30 (limit of pavement)	YES
317	Norway Spruce	*Picea abies*	15.5	2.40	4.00	1.86	6.30 (limit of pavement)	YES
318	Norway Spruce	*Picea abies*	43	3.00	5.00	5.16	6.30 (limit of pavement)	YES
319	Norway Spruce	*Picea abies*	46	3.00	5.00	5.52	6.30 (limit of pavement)	YES
320	Norway Spruce	*Picea abies*	DEAD					
322	Norway Spruce	*Picea abies*	57	3.60	6.00	6.84	6.30 (limit of pavement)	YES
324	Norway Spruce	*Picea abies*	35	2.40	4.00	4.20	6.30 (limit of pavement)	YES
325	Norway Spruce	*Picea abies*	53	3.60	6.00	6.36	6.30 (limit of pavement)	YES
326	Norway Spruce	*Picea abies*	55.5	3.60	6.00	6.66	6.30	YES
NT1	Norway Maple	Acer platanoides	40 to 49	3	5	**~5.5**	7.00	YES
NT2	Norway Maple	Acer platanoides	50 to 59	3.6	6	**~7**	7.00	YES
NT3	Austrian Pine	Pinus nigra	50 to 59	3.6	6	**~7**	6.00	YES
NT4	Austrian Pine	Pinus nigra	30 to 39	2.4	4	**~5**	6.00	YES
NT5	Austrian Pine	Pinus nigra	40 to 49	3	5	**~5**	6.00	YES

[1] - Relative tolerance to development impact assessed per p. 173 of Matheny and Clark 1998. All trees herein are assigned a status of either "Mature" (i.e., 20-80% of life expectancy) or "Young" (i.e., <20% of life expectancy) for the purposes of determining optimal TPZ per p. 74 of Matheny and Clark 1998.

Appendix 4. Proposed Development Plans



1 FLOOR PLAN - LEVEL 1
1 : 150

Gross Construction Area	
Level	**Area**
Not Placed	0.00 m²
PARKING P2	2314.55 m²
PARKING P1	2314.55 m²
LEVEL 1	1044.33 m²
MEZZANINE	238.49 m²
LEVEL 2	1569.36 m²
LEVEL 3	1537.27 m²
LEVEL 4	1484.63 m²
LEVEL 5	1378.59 m²
LEVEL 6	1272.83 m²
MECH. PENTHOUSE	474.32 m²
	13628.92 m²

Project North

True North

GENERAL NOTES

1. **DO NOT SCALE DRAWINGS**. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
2. ALL WORK SHALL COMPLY WITH THE 2012 ONTARIO BUILDING CODE AND AMENDMENTS.
3. CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND SPECIFICATIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
4. ALL CONTRACTORS AND SUB-CONTRACTORS SHALL HAVE A SET OF APPROVED CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.
5. ALL DOCUMENTS REMAIN THE PROPERTY OF THE ARCHITECT. UNAUTHORIZED USE, MODIFICATION, AND/OR REPRODUCTION OF THESE DOCUMENTS IS PROHIBITED WITHOUT WRITTEN PERMISSION. THE CONTRACT DOCUMENTS WERE PREPARED BY THE CONSULTANT FOR THE ACCOUNT OF THE OWNER.
6. THE MATERIAL CONTAINED HEREIN REFLECTS THE CONSULTANTS BEST JUDGEMENT IN LIGHT OF THE INFORMATION AVAILABLE TO HIM AT THE TIME OF PREPARATION. ANY USE WHICH A THIRD PARTY MAKES OF THE CONTRACT DOCUMENTS, OR ANY RELIANCE ON/OR DECISIONS TO BE MADE BASED ON THEM ARE THE RESPONSIBILITY OF SUCH THIRD PARTIES.
7. THE CONSULTANT ACCEPTS NO RESPONSIBILITY FOR DAMAGES, IF ANY, SUFFERED BY ANY THIRD PARTY AS A RESULT OF DECISIONS MADE OR ACTIONS BASED ON THE CONTRACT DOCUMENTS.

No.	Date	Revision
4	2022-08-26	ISSUED FOR REZONING APPLICATION No. 2
3	2022-05-27	CLIENT REVISIONS
2	2022-05-04	CLIENT REVISIONS
1	2021-09-14	ISSUED FOR REZONING APPLICATION

srm ARCHITECTS INC.

Project No 20042
Project Date 2021-04-22
Drawn by SDF
Checked by MES
Plot Date / Time 2022-08-30 9:47:53 AM

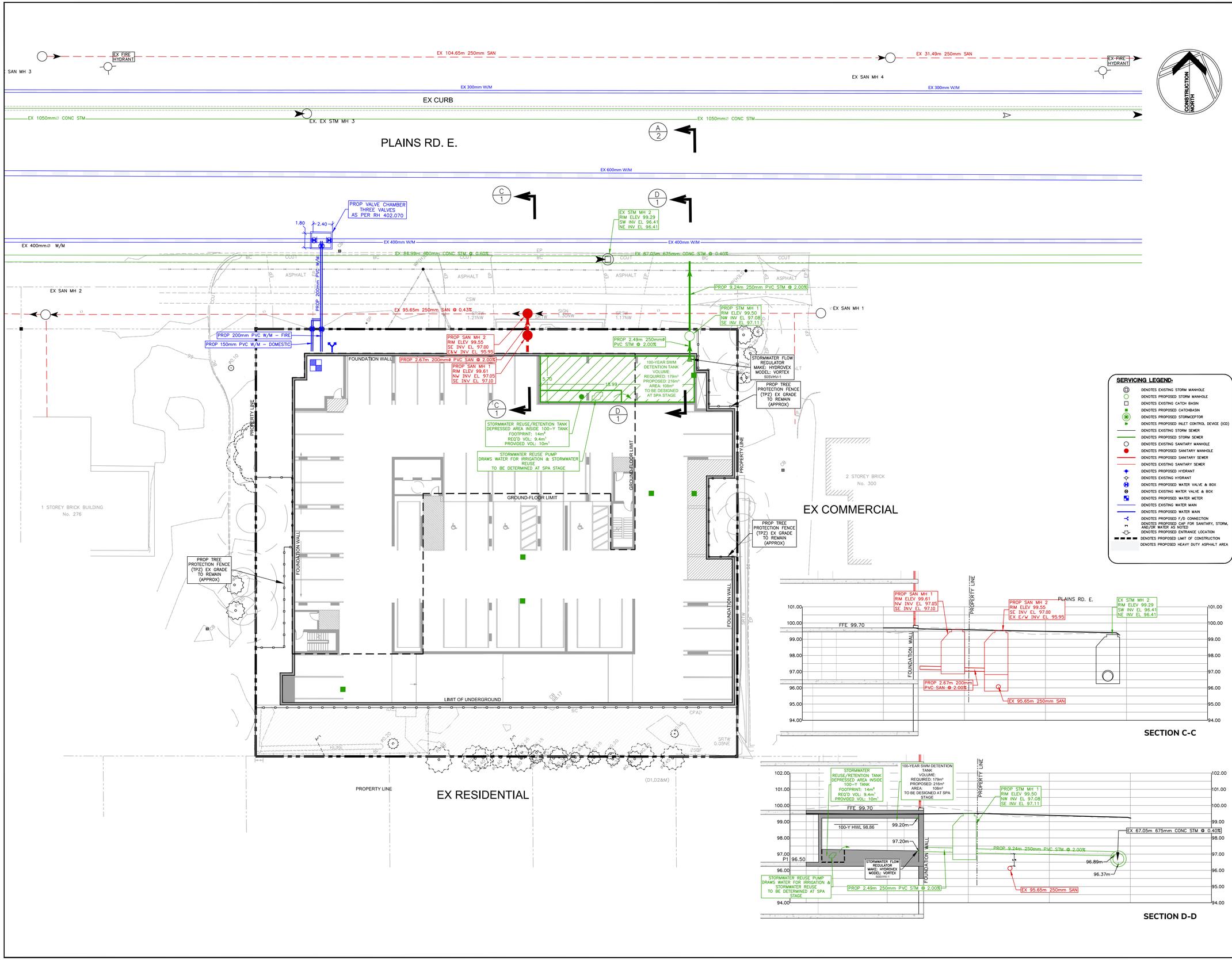
284-292 PLAINS RD. E, BURLINGTON

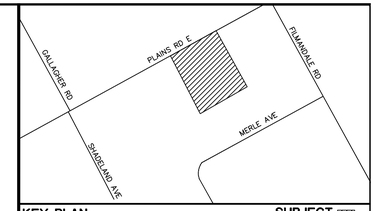
LEVEL 1

Drawing Scale 1 : 150
Status ISSUED FOR REZONING APPLICATION NO. 2
Drawing No. D2.2 - r4
Revision No.

Do not scale drawings. Contractors must check and verify all dimensions and report any discrepancies to the Architect before proceeding with the work. All documents remain the property of the Architect. Unauthorized use, modification, and/or reproduction of these documents is prohibited without written permission. The Contract Documents were prepared by the Consultant for the account of the Owner.
The material contained herein reflects the Consultants best judgement in light of the information available to him at the time of preparation. Any use which a third party makes of the Contract Documents, or any reliance on or decisions to be made based on them are the responsibility of such third parties. The Consultant accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on the Contract Documents.

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KEY PLAN Scale : N.T.S.

SUBJECT LANDS

NOTES:

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND UNDERGROUND AND ABOVE GROUND UTILITIES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING THE WORK, THE CONTRACTOR SHALL CONFIRM OF THE EXACT LOCATION OF ALL UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO THE ARCHITECTS/ENGINEERS BEFORE PROCEEDING WITH THE WORKS.

ALL DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND THE PROPERTY OF THE ENGINEER WHICH MUST BE RETURNED AT THE COMPLETION OF WORK.

THIS DRAWING IS NOT TO BE SCALED. CONTRACTOR TO USE DIGITAL FILES FOR LAYOUT PROVIDED BY ENGINEER. THIS PLAN MUST NOT BE USED TO SITE THE PROPOSED BUILDINGS.

THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S CONTRACTOR FROM OBTAINING, BUT NOT LIMITED TO THE FOLLOWING PERMITS: ROAD CUT, SEWER PERMITS, RELOCATION OF SERVICES, ENCROACHMENT AGREEMENTS, APPROACH APPROVAL PERMITS, ETC..

EXISTING TOPOGRAPHICAL INFORMATION SUPPLIED BY KRCMAR SURVEYORS LTD. IN THEIR BOUNDARY AND TOPOGRAPHIC SURVEY OF JANUARY 2020

BENCH MARK:

ELEVATIONS ARE REFERRED TO THE CITY OF BURLINGTON BENCHMARK NO. BM1075, BEING A BRASS CAP SET HORIZONTALLY IN NORTH WALL AT NORTHEAST CORNER OF ALDERSHOT ARENA. HAVING AN ELEVATION OF 92.67M

VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928.
(1978 SOUTHERN ONTARIO READJUSTMENT)

BEARING NOTE:

BEARINGS ARE GRID BEARINGS DERIVED FROM GPS OBSERVATIONS USING THE SMARTNET NETWORK AND ARE REFERRED TO THE CENTRAL MERIDIAN OF UTM ZONE 17 (81°00' WEST), NAD83 (CSRS 2010).

BEARINGS ON PLAN 20R–791 (P1) AND PLN OF SURVEY BY A.J. CLARKE AND ASSOCIATES O.L.S. DATED MARCH 18, 1981 (P3) HAVE BEEN ROTATED 0°48'05" COUNTERCLOCKWISE TO MAKE COMPARISONS.

BEARINGS ON REGISTERED PLAN 873 (P2), INSTRUMENT 213867 (D1), INSTRUMENT 688195 (D2) HAVE BEEN ROTATED 0°46'35" COUNTERCLOCKWISE TO MAKE COMPARISONS.

DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY A COMBINED SCALE FACTOR OF 0.99972.

SERVICING LEGEND:

- DENOTES EXISTING STORM MANHOLE
- DENOTES PROPOSED STORM MANHOLE
- DENOTES EXISTING CATCH BASIN
- DENOTES PROPOSED CATCHBASIN
- DENOTES PROPOSED STORMCEPTOR
- DENOTES PROPOSED INLET CONTROL DEVICE (ICD)
- DENOTES EXISTING STORM SEWER
- DENOTES PROPOSED STORM SEWER
- DENOTES EXISTING SANITARY MANHOLE
- DENOTES PROPOSED SANITARY MANHOLE
- DENOTES PROPOSED SANITARY SEWER
- DENOTES EXISTING SANITARY SEWER
- DENOTES PROPOSED HYDRANT
- DENOTES EXISTING HYDRANT
- DENOTES PROPOSED WATER VALVE & BOX
- DENOTES EXISTING WATER VALVE & BOX
- DENOTES PROPOSED WATER METER
- DENOTES EXISTING WATER MAIN
- DENOTES PROPOSED WATER MAIN
- DENOTES PROPOSED F/D CONNECTION
- DENOTES PROPOSED CAP FOR SANITARY, STORM, AND/OR WATER AS NOTED
- DENOTES PROPOSED ENTRANCE LOCATION
- DENOTES PROPOSED LIMIT OF CONSTRUCTION
- DENOTES PROPOSED HEAVY DUTY ASPHALT AREA

SECTION C-C

SECTION D-D

METRIC NOTE:
DISTANCES AND ELEVATIONS ON THIS PLAN ARE TYPICALLY SHOWN IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NO.	REVISIONS	DATE	BY
5.	ISSUED FOR REZONING SUBMISSION	SEP 9/22	MHH
4.	ISSUED FOR REZONING SUBMISSION	SEP 17/21	DB
3.	ISSUED FOR REZONING SUBMISSION	APR 22/21	DB
2.	ISSUED FOR REZONING SUBMISSION	APR 16/21	DB
1.	ISSUED FOR REZONING SUBMISSION	DEC 23/20	DB

SCALE(S): 1:200

0 5 10 20

DRAWING TITLE:

FUNCTIONAL SERVICING PLAN

PROJECT:

PROPOSED RESIDENTIAL DEVELOPMENT
284–292 PLAINS RD. E.
BURLINGTON, ON

CLIENT:

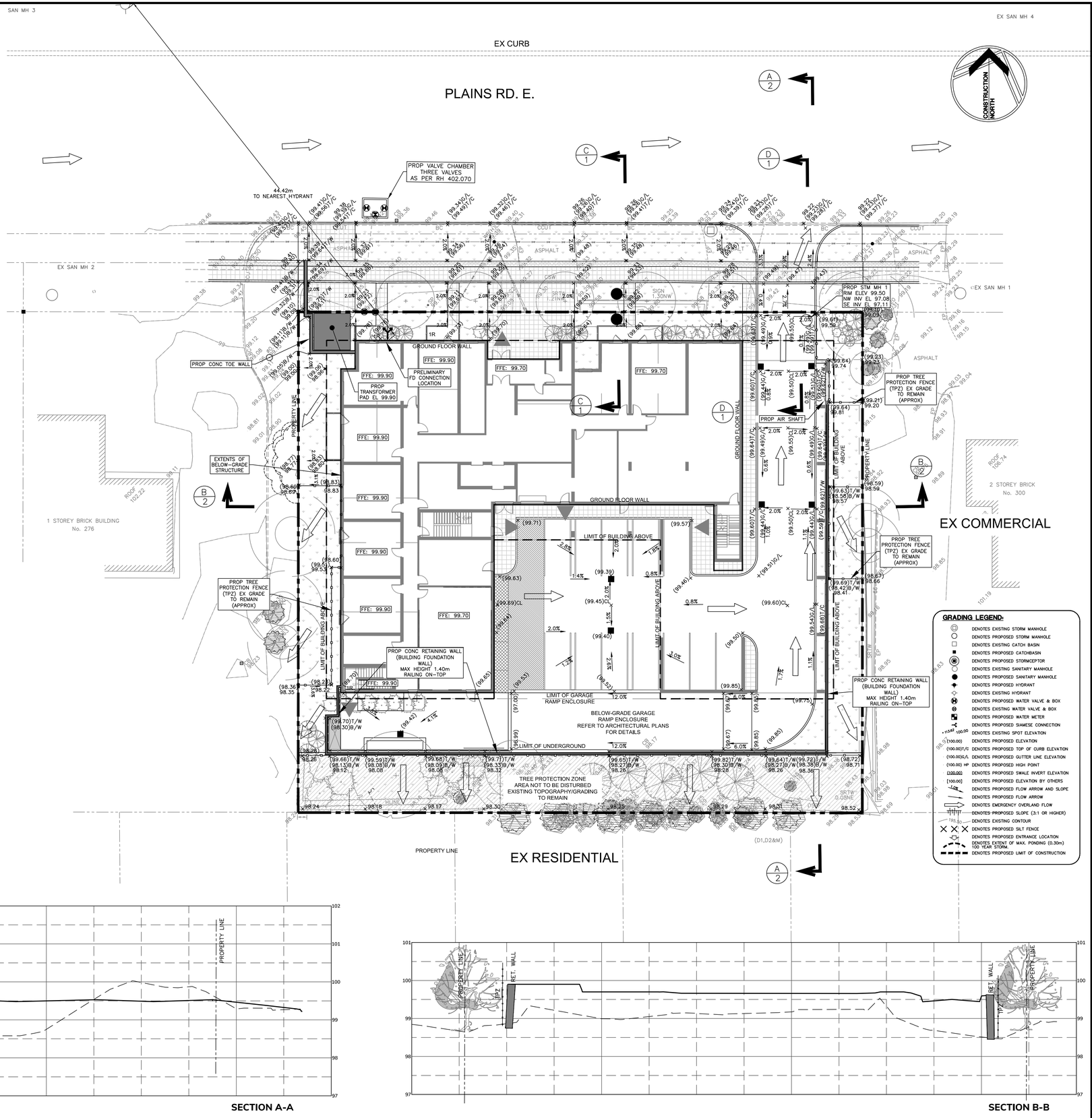
BROOKLYN CONTRACTING INC

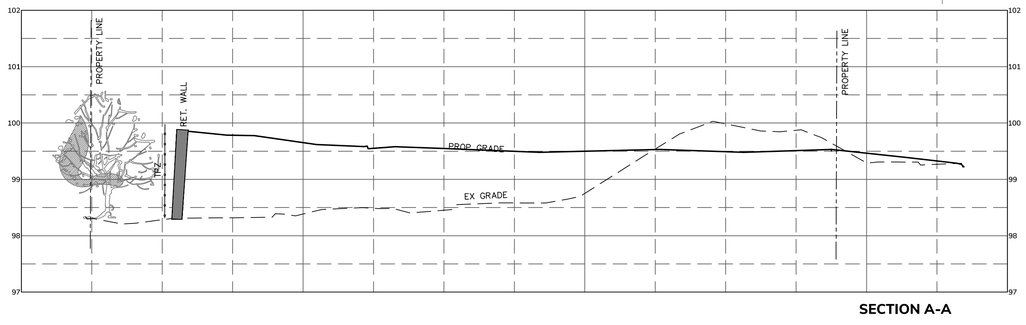
ODAN·DETECH CONSULTING ENGINEERS
The Odan/Detech Group Inc. P: (905) 632-3811 F: (905) 632-3363
5230 SOUTH SERVICE ROAD, BURLINGTON, ONTARIO, L7L 5K2

SEPT 9/22

DESIGNED BY:	PROJECT No.:
P.H.	20223
DRAWN BY:	
D.B.	
CHECKED BY:	DATE:
M.H.H.	DEC 2020
APPROVED BY:	DRAWING No.:
P.H.	1 OF 2

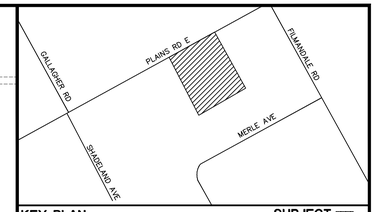
ENGINEER





SECTION A-A

SECTION B-B



KEY PLAN
Scale : N.T.S.

SUBJECT LANDS

NOTES:

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND UNDERGROUND AND ABOVE GROUND UTILITIES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING THE WORK, THE CONTRACTOR SHALL CONFIRM OF THE EXACT LOCATION OF ALL UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO THE ARCHITECTS/ENGINEERS BEFORE PROCEEDING WITH THE WORKS.

ALL DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND THE PROPERTY OF THE ENGINEER WHICH MUST BE RETURNED AT THE COMPLETION OF WORK.

THIS DRAWING IS NOT TO BE SCALED. CONTRACTOR TO USE DIGITAL FILES FOR LAYOUT PROVIDED BY ENGINEER. THIS PLAN MUST NOT BE USED TO SITE THE PROPOSED BUILDINGS.

THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S CONTRACTOR FROM OBTAINING, BUT NOT LIMITED TO THE FOLLOWING PERMITS: ROAD CUT, SEWER PERMITS, RELOCATION OF SERVICES, ENCROACHMENT AGREEMENTS, APPROACH APPROVAL PERMITS, ETC..

EXISTING TOPOGRAPHICAL INFORMATION SUPPLIED BY KRCMAR SURVEYORS LTD. IN THEIR BOUNDARY AND TOPOGRAPHIC SURVEY OF JANUARY 2020

BENCH MARK:

ELEVATIONS ARE REFERRED TO THE CITY OF BURLINGTON BENCHMARK NO. BM1075, BEING A BRASS CAP SET HORIZONTALLY IN NORTH WALL AT NORTHEAST CORNER OF ALDERSHOT ARENA, HAVING AN ELEVATION OF 92.67M

VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928.
(1978 SOUTHERN ONTARIO READJUSTMENT)

BEARING NOTE:

BEARINGS ARE GRID BEARINGS DERIVED FROM GPS OBSERVATIONS USING THE SMARTNET NETWORK AND ARE REFERRED TO THE CENTRAL MERIDIAN OF UTM ZONE 17 (81°00' WEST), NAD83 (CSRS 2010).

BEARINGS ON PLAN 20R-791 (P1) AND PLN OF SURVEY BY A.J. CLARKE AND ASSOCIATES O.L.S. DATED MARCH 18, 1981 (P3) HAVE BEEN ROTATED 0°48'05" COUNTERCLOCKWISE TO MAKE COMPARISONS.

BEARINGS ON REGISTERED PLAN 873 (P2), INSTRUMENT 213867 (D1), INSTRUMENT 688195 (D2) HAVE BEEN ROTATED 0°46'35" COUNTERCLOCKWISE TO MAKE COMPARISONS.

DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY A COMBINED SCALE FACTOR OF 0.99972.

METRIC NOTE:

DISTANCES AND ELEVATIONS ON THIS PLAN ARE TYPICALLY SHOWN IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NO.	REVISIONS	DATE	BY
5.	ISSUED FOR REZONING SUBMISSION	SEP 9/22	MHH
4.	ISSUED FOR REZONING SUBMISSION	SEP 17/21	DB
3.	ISSUED FOR REZONING SUBMISSION	APR 22/21	DB
2.	ISSUED FOR REZONING SUBMISSION	APR 16/21	DB
1.	ISSUED FOR REZONING SUBMISSION	DEC 23/20	DB

SCALE(S): 1:200

0 5 10 20

DRAWING TITLE:

FUNCTIONAL GRADING PLAN

PROJECT:

PROPOSED RESIDENTIAL DEVELOPMENT
284-292 PLAINS RD. E.
BURLINGTON, ON

CLIENT:

BROOKLYN CONTRACTING INC

ODAN·DETECH
CONSULTING ENGINEERS
The Odan/Detech Group Inc. P: (905) 632-3811 F: (905) 632-3363
5230 SOUTH SERVICE ROAD, BURLINGTON, ONTARIO, L7L 5K2

SEPT 9/22

DESIGNED BY:	PROJECT No.:
P.H.	20223
DRAWN BY: D.B.	
CHECKED BY: M.H.H.	DATE: DEC 2020
APPROVED BY: P.H.	DRAWING No.: 2 OF 2

ENGINEER