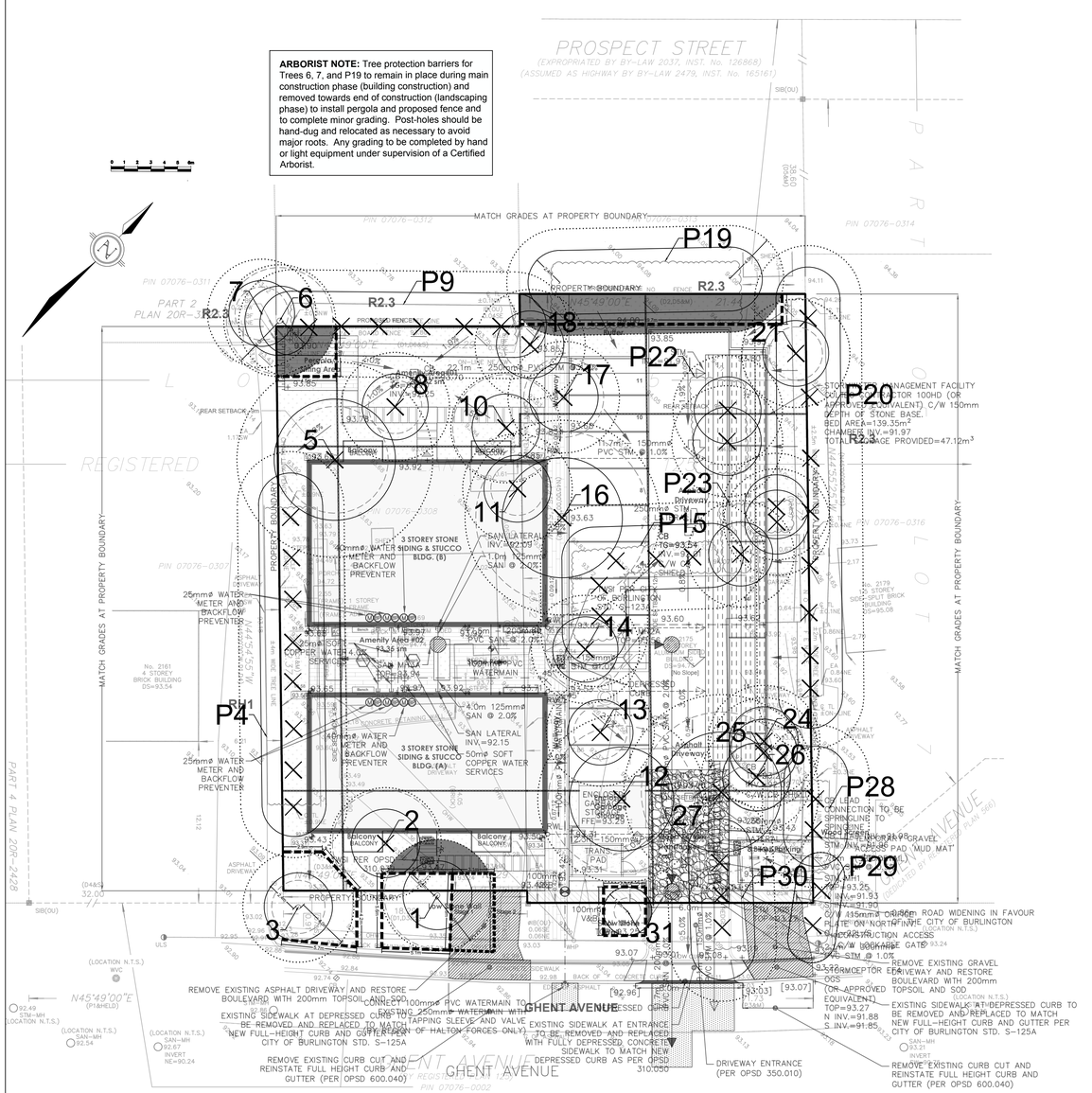
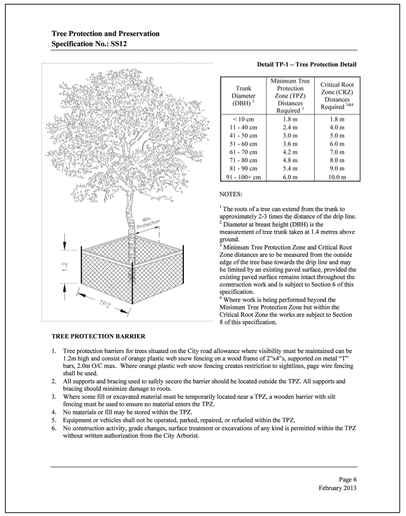






Tree Protection and Preservation
Specification No.: SS12

Detail TP-1 – Tree Protection Detail

Trunk Diameter (DBH)[1]	Minimum Tree Protection Zone (TPZ) Distances Required [2]	Critical Root Zone (CRZ) Distances Required [2&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:
[1] The roots of a tree can extend from the trunk to approximately 2-3 times the distance of the drip line.
[2] 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. Tree protection barriers for trees situated on the City road allowance where visibility must be maintained can be 1.2m high and consist of orange plastic web snow fencing on a wood frame of 2"x4"'s, supported on metal "T" bars, 2.0m O/C max. Where orange plastic web snow fencing creates restriction to sightlines, page wire fencing shall be used.
2. All supports and bracing used to safely secure the barrier should be located outside the TPZ. All supports and bracing should minimize damage to roots.
3. Where some fill or excavated material must be temporarily located near a TPZ, a wooden barrier with silt fencing must be used to ensure no material enters the TPZ.
4. No materials or fill may be stored within the TPZ.
5. Equipment or vehicles shall not be operated, parked, repaired, or refueled within the TPZ.
6. No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the TPZ without written authorization from the City Arborist.

Page 6
February 2013

DRAFT Table 1. Detailed Tree Inventory

Location: 2169 and 2175 Ghent Avenue, Burlington Date: 13 December 2023 Surveyors: AC

Tree #	Common Name	Scientific Name	Diameter at Breast Height (DBH)[1]	Health	Structure	Crown Dieback	Dripline (radius)	minimum Tree Protection Zone (mTPZ) (radius)[2]	Critical root zone (CRZ) (radius)[2]	Comments	Proposed Action	Preservation Comments[3]	Ownership
			(cm)	%	%	(m)	(m)	(m)	(m)				
1	White Birch	*Betula papyrifera*	9,26,24.5 [37]	75	75		4	2.4	4.0	Union at base with moderate included bark, minor stem wounds with decay, moderate asymmetrical crown due to utility line pruning, minor broken branches, minor deadwood with decay	Preserve - injure	Minor to moderate encroachment into mTPZ (12.5%) and CRZ (26%) to accommodate proposed walkway. Existing asphalt driveay to be carefully removed and area restored.	City ROW
2	White Birch	*Betula papyrifera*	15,16,17,19.5 [34]	75	85		4	2.4	4.0	Union near base with moderate included bark, hanger	Remove		Subject
3	White Spruce	*Picea glauca*	33	70	70		2	2.4	4.0	Moderate vine competition, small root flare, minor lean towards road, moderate asymmetrical crown due to utility line pruning, heavy seed crop	Preserve		City ROW
P4	White Spruce	*Picea glauca*	37.5	90	85		2	2.4	4.0	Small root flare, minor pruning wounds due to raised crown, sweep	Remove		Subject
	White Spruce	*Picea glauca*	35.5	90	90		3	2.4	4.0	Small root flare, minor pruning wounds due to raised crown			
	White Spruce	*Picea glauca*	34	60	80		2	2.4	4.0	Small root flare, minor pruning wounds due to raised crown, moderate sweep towards road, sparse, minor deadwood			
	White Spruce	*Picea glauca*	22.5	85	85		2	2.4	4.0	Small root flare, minor pruning wounds due to raised crown, double leader			
	White Spruce	*Picea glauca*	24.5	70	85		2	2.4	4.0	Small root flare, minor pruning wounds due to raised crown, minor sweep, sparse			
	White Spruce	*Picea glauca*	23	DEAD				2.4	4.0				
	White Spruce	*Picea glauca*	31	80	75	2.5	2.4	4.0		Curved, behind retaining wall, minor pruning wounds due to raised crown			
	White Spruce	*Picea glauca*	16	60	70	1	2.4	4.0		Small root flare, minor pruning wounds due to raised crown, sparse, moderate asymmetrical crown due to competition			
	White Spruce	*Picea glauca*	21	75	70	2	2.4	4.0		Small root flare, minor pruning wounds due to raised crown, sweep/curved, moderate asymmetrical crown due to competition			
	White Spruce	*Picea glauca*	21.5	80	80	2	2.4	4.0		Small root flare, minor pruning wounds due to raised crown, sweep/curved, moderate asymmetrical crown due to competition			
	White Spruce	*Picea glauca*	21	80	80	2	2.4	4.0		Small root flare, minor pruning wounds due to raised crown, sweep/curved, moderate asymmetrical crown due to competition, vine competition			
	White Spruce	*Picea glauca*	35	75	75	2.5	2.4	4.0		Small root flare, minor pruning wounds due to raised crown, moderate vine competition, sweep/curved, missing leader resulting in multiple leaders near top of crown			
5	Basswood	*Tilia americana*	69.5	70	70	4	4.2	7.0		Minor girdling root, moderate stem wound/cavity at base, seams/stem wounds/cavities, moderate epicormic branching, minor lean towards the east, shear crack, minor deadwood	Remove		Subject
6	Norway Maple	*Acer platanoides*	~40	70	85	4	2.4	4.0		Moderately included T-bar at base, minor lean to the east, overextended branch	Preserve - injure	Moderate encroachment into mTPZ (23%) and CRZ (24%) to accommodate proposed fence and pergola.	2172 Prospect Street
7	Red Pine	*Pinus resinosa*	~14	95	85	2	2.4	4.0		Moderate crook, minor lean	Preserve - injure	Minor to moderate encroachment into mTPZ (5%) and CRZ (11%) to accommodate proposed fence and pergola.	735 Pearson Street
8	Tamarack	*Larix laricina*	16	90	70	2	2.4	4.0		Moderate pruning wounds due to a raised crown, small live crown ratio, missing leader resulting in multiple leaders	Remove		Subject
P9	Eastern White Cedar	*Thuja occidentalis*	~5-20, avg. 10	85	65	1.5	2.4	4.0		Approximately 26 trees, several multi-stemmed at base, several previously topped	Remove		2 trees on 2169 Ghent Avenue/ 24 trees on 2172 Prospect Street
10	White Birch	*Betula papyrifera*	27.5	80	90	4	2.4	4.0		Minor broken branches, minor asymmetrical crwon due to competition, minor pruning wounds	Remove		Subject
11	Eastern White Cedar	*Thuja occidentalis*	22	95	65	2	2.4	4.0		Conflict with root of shed resulting in moderate stem wound	Remove		Subject
12	Norway Spruce	*Picea abies*	60	95	90	5.5	3.6	6.0		Minor crook	Remove		Subject
13	Cherry species	*Prunus sp.*	3,6,7 [10]	90	85	2	2.4	4.0		Minor lean, small root flare	Remove		Subject
14	Butternut Hybrid	*Juglans cinerea x Juglans ailantifolia*	8,8 [11]	90	80	3	2.4	4.0		Co-dominant at 0.5m, major vine competition	Remove	Confirmed through DNA testing	Subject
P15	Eastern White Cedar	*Thuja occidentalis*	~15, <4m height	60	40	1.5	2.4	4.0		Approximately 9 trees, previously topopped at 1-2m resulting in poor form, moderate lean	Remove		Subject
16	Norway Spruce	*Picea abies*	61	90	85	6.5	4.2	7.0		Moderate exposed roots, minor pruning wounds due to raised crown, potential missing leader	Remove		Subject
17	Blue Spruce	*Picea pungens*	~37	85	95	3	2.4	4.0		Minor asymmetrical crown due to competition	Remove		Subject
18	Blue Spruce	*Picea pungens*	26	70	80	2	2.4	4.0		Sparse, moderate asymmetrical crown due to competition, crooks	Remove		Subject
P19	Eastern White Cedar	*Thuja occidentalis*	~15-30, avg. 25	90	80	2	2.4	4.0		9 trees, some co-dominant near base, minor pruning wounds due to raised crown, utility line through crown	Preserve - injure	Moderate encroachment into mTPZ (28%) and CRZ (36%) to accommodate proposed fence, parking area, and grading.	2176 Prospect Street
P20	Eastern White Cedar	*Thuja occidentalis*	~5-15, avg. 8	65	65	1.5	2.4	4.0		Approximately 20 trees, previously topped at 1.5m resulting in poor form, moderate lean towards subject property	Remove		Subject/ 2179 Ghent Avenue
	Manitoba Maple	*Acer negundo*	10	70	70	2	1.8	1.8					Subject/ 2179 Ghent Avenue
21	Manitoba Maple	*Acer negundo*	13	65	65	2	2.4	4.0		Moderate lean, multiple branch attachments, minor epicormic branching	Remove		Subject
P22	Manitoba Maple	*Acer negundo*	13,18 [22]	65	65	3	2.4	4.0		Moderate lean towards the west, co-dominant at 1m with moderate included bark, moderate epicormic branching, ribbing at base	Remove		Subject
	Japanese Walnut	*Juglans ailantifolia*	23.5,23 [33]	80	70	3	2.4	4.0		Co-dominant at 0.2m with moderate included bark, minor dead branches, major vine competition		Confirmed through DNA testing	
P23	Manitoba Maple	*Acer negundo*	5,8.5 [10]	70	60	2	2.4	4.0		Crooks, moderate lean towards the west, co-dominant at base	Remove		Subject
	Apple species	*Malus sp.*	~5-12	50	50	3	2.4	4.0		Multi-stemmed at 0.5m, conflict with shed, major epicormic branching			
	Green Ash	*Fraxinus pennsylvanica*	13.5,10.5 [17]	90	80	2.5	2.4	4.0		Co-dominant at 1m with moderate included bark, moderate asymmetrical crown due to competition			
24	Eastern White Cedar	*Thuja occidentalis*	39	10	30	2.5	2.4	4.0		Top dead	Remove		Subject
25	Eastern White Cedar	*Thuja occidentalis*	28	10	30	2.5	2.4	4.0		Top dead	Remove		Subject
26	Eastern White Cedar	*Thuja occidentalis*	21,21 [30]	10	30	2.5	2.4	4.0		Top dead, union near base	Remove		Subject
27	White Pine	*Pinus strobus*	62	90	90	6	4.2	7.0			Remove		Subject
P28	Yew	*Taxus sp.*	~3-12, avg. 8	90	90	1.5	2.4	4.0		4 trees	Remove		2179 Ghent Avenue
	White Mulberry	*Morus alba*	10	90	75	2	1.8	1.8		Moderate lean/bow towards road			
P29	White Cedar cultivar	*Thuja occidentalis var.*	~5-10, avg. 6	90	95	1.5	1.8	1.8		Approximately 3-4 trees	Remove		2179 Ghent Avenue
	Eastern Red Cedar (Juniper)	*Juniperus virginiana*	~10	85	85	2	1.8	1.8			Remove		City ROW
P30	White Cedar cultivar	*Thuja occidentalis var.*	<3m height	90	90	1.5	1.8	1.8		Approximately 4 trees	Remove		3 trees on subject/ 1 tree City ROW
	White Mulberry	*Morus alba*	8,9,8 [14]	85	75	3	2.4	4.0		Minor lean/bow towards road, moderate epicormic branching			Subject
	White Mulberry	*Morus alba*	~10,12,20 [25]	80	80	3	2.4	4.0		Minor lean towards road			City ROW
	Eastern Red Cedar (Juniper)	*Juniperus virginiana*	~5	90	90	1.5	1.8	1.8					City ROW
31	Ohio Buckeye	*Aesculus glabra*	4	95	85	1	1.8	1.8		Minor stem wound	Preserve - injure	Minor encroachment into mTPZ (8%) and CRZ (8%) to accommodate proposed driveway entrance.	City ROW
										END			

[1] The effective DBH of multi-stemmed trees was calculated by taking the square root of the sum of the squares of the DBH of each stem.
[2] MTPZ and CRZ distances are to be measured from the outside edge of the tree base towards the dripline and may be limited by an existing paved surface, provided the existing paved surface remains intact throughout the construction work.
[3] Percentage of encroachment within MTPZ or CRZ shown in brackets.

LEGEND

- 1 — Tree Identification Number*
- Tree Location and Dripline by Arborist
- Minimum Tree Protection Zone (mTPZ)
- Critical Root Zone (CRZ)
- mTPZ/CRZ Encroachment Area
- Required Tree Protection Barrier (snow/wire)
- Required Tree Protection Barrier (solid/silt)
- Required Tree Removals

*Please refer to Table 1 for the detailed tree inventory and minimum tree preservation zone distances. Trees were located using the topographic survey provided, or aerial photo interpretation and estimations made in the field.

Tree Protection Plan Notes

- 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, page wire fencing with reflective tape can be used.
- Tree protection barriers are to be erected prior to the commencement of any construction or grading activities on the site and area 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 the construction operations with breaks and unsupported sections repaired immediately. Tree protection may not be removed prior to the completion of construction without written authorization from the City Arborist.
- 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.
- 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.
- No materials or fill may be stored within the MTPZ.
- Equipment or vehicles shall not be operated, parked, repaired, or refueled within the MTPZ.
- No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the MTPZ without written authorization from the City Arborist.
- A laminated Minimum Tree Protection Zone sign must be attached to the most visible side of the Tree Protection, where it will be visible by those person entering the site. Minimum size must be 10" x 14".
- It is the owners' responsibility to discuss potential impacts to trees located near or wholly on adjacent properties or on shared boundary lines with their neighbours. Should such trees be injured to the point of instability or death the applicant may be held responsible through civil action.

Submission and Revision Notes

No.	Description	Date	By
3			
2			
1	Report and Plan Submission	28 August 2024	AC

Source Data: Mackay, Mackay & Peters Limited (survey), CSPACE Architecture (site plan), Trafalgar Engineering Ltd. (grading and servicing plans)

Project:
2169 and 2175 Ghent Avenue
Burlington, ON

Client:
Ryan Small c/o Corbett Land Strategies
5045 South Service Road, Suite 301
Burlington, ON
L7L 5Y7

Date:
28 August 2024

Amy Choi Consulting
www.achoiconsulting.ca
info@achoiconsulting.ca
647.983.8817
Amy Choi, B.Sc. (Env.), M.Sc.F.
ISA Certified Arborist® #ON-1609A
ISA Tree Risk Assessment Qualified

TREE PRESERVATION PLAN

Figure 1 | Scale 1:200