

July 28, 2022

RE: Arborist Report for 1273508 B.C. LTD - For property located at 3390 Lancaster St., Port Coquitlam, BC

Applicant: 1273508 B.C. LTD
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Further to the Arborist Report dated February 10, 2022, this is to serve as another revision. Due to a rezoning application and a townhouse development proposal, it was requested that a report be compiled discussing trees located at and adjacent to the address named above. This site was inspected on November 4, 2020. Thirty-one trees were assessed; they have been numbered 1 – 31 for the purpose of this report. Twelve photographs, a copy of the site survey, site plan, landscape plan, a preliminary tree replacement plan and civil drawings have been included as part of this report. The feasibility of retaining any trees will need to be reassessed once all the details of the development have been provided.

An original large scaled copy of the site plan indicating trees marked for removal, and the locations of Tree Protection Zone fencing has *not* been included with this report; this will be provided by the applicant if required.

GENERAL CONSTRUCTION & LANDSCAPING NOTES:

- Any permitted tree removal(s) must be performed by qualified professional to avoid contravention of Work Safe BC regulations.
- No grade changes are to occur within the Critical Root Zones of any retained trees. Any roots exposed from lines of excavation must be covered with burlap and then poly plastic in an effort to prevent desiccation of exposed roots; this root curtain must be removed prior to backfilling. Trees must be adequately watered during the entire construction process.
- The removal of existing organics within the Critical Root Zones of retained trees must be performed manually. When installing new plant material within the Critical Root Zones of retained trees, if large roots (1.5” diameter and larger) are encountered, then new plantings and must be shifted to accommodate. No more than 3” of additional soil for new landscaping may be added within any Critical Root Zone.
- Any excavation or work within the Protection Zone of retained trees requires the supervision of a Certified Arborist. This includes, but is not limited to; demolition, the installation or removal of any permeable or impermeable surfaces (concrete, asphalt, pavers, etc.), installation of permanent or temporary services (gas, sewer, storm, sanitary, communications, electrical, irrigation, etc.), during the installation of patios, driveways or any hardscape, during the installation of footings for fences, walls, decorative walls, retaining walls, decks and deck footings.
- Construction materials must not be stored within the Tree Protection Zones (TPZ) of trees to be retained, and TPZ fencing is to remain intact for the entire construction process. Signage must be clearly posted on each side of the barrier indicating ‘TREE PROTECTION ZONE – DO NOT ENTER OR MODIFY’. Contact your project Arborist for any TPZ barrier issues.

Limitations: This report is based on a visual assessment, from the ground only. No core or tissue samples were taken; no root crown excavations were performed. This report provides no undertakings regarding the future condition or behaviour of the trees reviewed in it. Tree hazards and conditions do change over time, and the evaluation period for this report is valid for the day on which it was performed only. Recommendations are to serve only as a guideline for the care, retention and protection of the tree(s), and are made according to commonly accepted arboricultural practises, and do not guarantee the survival and/or safety of the specimen(s). No responsibility is assumed for any legal matters as a result of this report. The consultant shall not be required to give testimony or attend court by any reason of this report unless subsequent contractual arrangements are made, including payment of additional fees for such services. Loss or alteration of any part of this report invalidates the entire report. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without verbal or written consent of the consultant. No part of this report shall be conveyed by anyone to the public by any means without prior written consent of the consultant.

Yours truly,



Laura Leigh – sent electronically
Consulting Arborist
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<u>TREE</u>	<u>SPECIES</u>	<u>DBH</u>	<u>HEIGHT</u>	<u>CRZ</u>	<u>Condition</u>	<u>OBSERVATIONS & RECOMMENDATIONS</u>
#		(cm)	(m) est.	radius (ft.)		

1	Bigleaf maple (<i>Acer macrophyllum</i>)	70/survey	15	14.1'	Good	
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This tree has three stems commencing at 8ft. It has a low and wide spreading canopy. The crown is asymmetrical and is heavily weighted to the east; it lacks canopy spread on the west side due to the encroaching canopy of the adjacent tree. There is minimal branch and twig dieback throughout the canopy. There is also blackberry surrounding the base of the stem. There is an existing fence 6ft from the west of the stem; it is to be removed. The Critical Root Zone radius is 14.1ft. The proposed building is 19ft from the west side, the proposed new watermain is 13ft from the east side and the proposed electrical room is 16ft from the south side of the stem, not including the excavation required. The road dedication and new laneway are 3ft from the east side, the proposed corner cut is 4ft from the northeast side, the proposed patio is 5ft from the west side and there is also a proposed fence, lawn and landscaping within the Critical Root Zone; the laneway will likely require grading.

RECOMMENDATIONS:

RETAIN. One large zone shall protect Trees #1, #30 and #31. Install Tree Protection Zone fencing 16ft from the base of the stem on the south and west sides of Tree #1, 14ft from the base of the stem on the south and west sides of Tree #30, adjacent to Gail Ave, on the north side of Trees #1, #30 and #31 and adjacent to the laneway on the east side of Tree #1.

Any excavation for the proposed building, electrical room and staircase that encroaches into the TPZ must be supervised by a Certified Arborist; all exposed roots will be pruned.

The proposed courtyard that encroaches into the TPZ must installed at or near existing grade and must consist of a permeable surface; no further excavation can occur. Geogrid or geotextile fabric must be laid down first, then three to five inches of 3/4" - 1.5" clear crushed gravel and then the permeable surface installed over top.

Any excavation into the TPZ for the proposed landscaping and pillar must be performed manually; if large roots (1.5" diameter and larger) are encountered, the posts and planting must be shifted to accommodate and placed offset from the stems of the retained tree. The proposed lawn that encroaches into the TPZ must installed at or near existing grade; the landscaping and lawn must be installed at least 3 ft from the base of the stem of the retained tree. No more than 3" of additional good quality landscape soil (not construction grade fill) may be added into this Zone. Absolutely no further grade changes are to occur within this zone; the exiting grade cannot be altered (raised or lowered).

Removal of the existing fence within the TPZ and any excavation into this zone for the proposed fence posts and vehicular gate entry must be performed

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#		(cm)	(m) est.	radius (ft.)		
						<p>manually, if large roots (1.5" diameter and larger) are encountered, then the posts must be shifted to accommodate and placed offset from the stems of the retained trees.</p> <p>Any excavation for the proposed watermain and proposed new laneway within the CRZ of Tree #1 on City property must be performed as directed by City staff.</p>
2	Horse Chestnut (<i>Aesculus hippocastanum</i>)	30/survey	12	6.2'	Fair	<p>This tree has a corrected lean and an asymmetrical and heavily weighted canopy to the southwest. There is minimal branch and twig dieback throughout the canopy. There are multiple large diameter surface roots exposed, which have sustained damage likely due to lawn maintenance equipment; these wounds have not callused over and decay is present. There is blackberry surrounding the base of the stem. There is also evidence of sapsucker damage. There is an existing fence adjacent west of the stem. The Critical Root Zone radius is 6.2ft. This tree is within the proposed visitor parking.</p> <p>RECOMMENDATIONS: REMOVE. Removal is necessary to enable the proposed parking.</p>
3	Pine (<i>Pinus sp.</i>)	25/survey	7	5'	Declining	<p>This tree is in decline. The top of the stem has failed at 25ft. The canopy is sparse and lacks vigor. There is branch dieback throughout the canopy and the foliage has begun to shed. There is blackberry surrounding the base of the stem. There is an existing fence 6.5ft from the west of the stem. The Critical Root Zone radius is 5ft. This tree is within the proposed visitor parking.</p> <p>RECOMMENDATIONS: REMOVE. Remove tree, it is in decline. Removal is also necessary to enable the proposed parking.</p>
4	Apple (<i>Malus sp.</i>)	21	4	4.3'	Poor	<p>This tree has a moderate corrected lean to the northeast. The crown has been significantly modified. It has been previously topped at multiple heights and cut back hard on all sides to contain. The crown is sparse and lacks vigor. There is branch and twig dieback throughout the canopy. There is a large wound on the north side of the trunk commencing at the base to where the tree has been topped; the wound has not callused over and the exposed wood is desiccated. There are fungal fruiting bodies present along several limbs. The Critical Root Zone radius is 4.3ft. This tree is within the proposed drive isle. Also, the proposed building is 6ft from the north side of the stem, not including the excavation required.</p> <p>RECOMMENDATIONS: REMOVE. Remove tree due to poor structure and condition. The canopy has been mutilated to the extent that it is beyond restorative pruning and is likely to suffer from disease or die prematurely. Also, the presence of fungal activity puts this tree at risk of failure. Removal is also necessary to enable</p>

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#		(cm)	(m) est.	radius (ft.)		
						the lines of excavation, the proposed building and drive isle.
5	Mountain ash (<i>Sorbus sp.</i>)	20/survey	8	4.1'	Fair	<p>This tree is tall and spindly and has been suppressed due to the spreading canopy of the adjacent tree. It has a phototropic lean and an asymmetrical canopy to the east. There is minor branch dieback throughout the crown. There is evidence of sapsucker damage. There is also blackberry surrounding the base of the stem. The existing fence is 3.6ft from the north side of the stem. The Critical Root Zone radius is 4.1ft. This tree is within the proposed drive isle. There is also a proposed fence adjacent to the south side of the stem.</p> <p>RECOMMENDATIONS: REMOVE. Removal is necessary to enable the proposed drive isle. The stump cannot be removed with excavation equipment. The stump must be cut to grade and the remainder removed using a stump grinder.</p>
6	Cedar (<i>Thuja plicata</i>)	52	16	10.7'	Good	<p>These trees belong to the neighbouring property. They are somewhat stressed. They form part of a group. Tree #7 has been slightly suppressed due to the proximity of the adjacent trees. Trees #6 - #8 have a slight corrected lean to the south. The south side of the lower canopies have been cut and trimmed back to provide clearance to the adjacent parking lot on the neighbouring property. The north side of the canopies have also been pruned back to provide clearance to the existing building, which is 14.5ft – 15ft from the stems. The foliage of each tree is somewhat pale and chlorotic. The Critical Root Zone radius for each tree has been indicated in the CRZ radius column. The proposed drive isle is 2 – 2.5ft away and there is also a proposed fence adjacent to the north side of the stem of each tree.</p> <p>RECOMMENDATIONS: RETAIN. One large zone shall protect Trees #6 - #8. Install Tree Protection Zone fencing 13ft from the base of the stem on the north side and 15ft from the base of the stem on the east side of Tree #6 and 13ft from the base of the stem on the north side and 15ft from the base of the stem on the west side of Tree #8. Demolition of the existing foundation adjacent to this zone must be supervised by a Certified Arborist.</p> <p>The proposed drive isle that encroaches into the TPZ must be installed at or near existing grade and must consist of a permeable surface; no further excavation can occur. The existing organics within this zone must be removed manually and must be supervised by a Certified Arborist; no further excavation can occur. Geocells must be laid down first, then three to five (or more) inches of ¾" – 1.5" clear crushed gravel and then the permeable surface installed over top. Any grading, levelling and sloping of the drive isle must be achieved by using gravel (not construction fill); gravel is to be compacted using a vibrating plate tamper only. No</p>
7	Cedar	60	16	12.4'	Good	
8	Cedar	63 combined (46+17)	17	12.9'	Good	

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#		(cm)	(m) est.	radius (ft.)		
						<p>other grade changes (increase or decrease in grade) can occur within this Zone. All prep work and installation of material for the proposed drive isle that encroaches into the Tree Protection Zone must be supervised by a Certified Arborist.</p> <p>Any excavation into the TPZ for fence posts must be performed manually; if large roots (1.5" diameter and larger) are encountered, then the posts must be shifted to accommodate and placed offset from the stems of the retained trees.</p> <p>The feasibility of retaining any trees will need to be reassessed once all the details of the development have been provided.</p>
9	Maple (<i>Acer sp.</i>)	31	10	6.4'	Good/fair	<p>This tree is tall and spindly and has been suppressed due to the proximity of the adjacent trees. The stem of this tree has a slight torqued form. It has a phototrophic lean and an asymmetrical and heavily weighted canopy to the north. The crown has been raised to provide clearance to the existing building and raised concrete patio, which are 8ft from the north side of the stem; there is a 2ft grade difference between the base of the stem and the top of the patio. The crown is somewhat sparse and there is branch dieback throughout the canopy. The Critical Root Zone radius is 6.4ft. This tree is within the proposed drive isle.</p> <p>RECOMMENDATIONS: REMOVE. Removal of Trees #9 & #10 is necessary to enable the proposed drive isle. The stumps cannot be removed with excavation equipment. The stumps must be cut to grade and the remainder removed using a stump grinder.</p>
10	Douglas fir (<i>Pseudotsuga menziesii</i>)	66	20	13.6'	Good	<p>This tree forms part of a group. The crown has been raised to provide clearance to the existing building, which is 8.5ft away and the existing raised concrete patio, which is about 5ft from the north side and the adjacent parking lot on the neighbouring property on the south side of the stem; the grade difference between the base of the stem and the top of the patio is about 2ft. The foliage is slightly pale and chlorotic. There is minor branch dieback and limb shed throughout the canopy; heavy coning was also observed. The Critical Root Zone radius is 13.6ft; this is inadequate considering the height of this tree. This tree is within the proposed drive isle.</p> <p>RECOMMENDATIONS: REMOVE. See recommendations for Tree #9.</p>
11	Dogwood (<i>Cornus sp.</i>)	19	10	3.9'	Fair	<p>This tree is tall and spindly and has been suppressed due to the canopy spread of the adjacent trees. This tree has a phototrophic lean and an asymmetrical and heavily weighted canopy to the south. The crown has been raised to provide clearance to the adjacent parking lot on the neighbouring property on the south side of the stem. The crown is sparse and lacks vigor. There is minor branch dieback throughout the canopy. The Critical Root Zone of</p>

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#		(cm)	(m) est.	radius (ft.)		
						<p>the tree is 3.9ft. The proposed BC Hydro Transformer is 2.5ft from the north side of the stem, not including the excavation required; it is within the lines of excavation. Also, the existing watermain is also to be replaced and installed 6.5ft from the west side of the stem, not including the excavation required.</p> <p>RECOMMENDATIONS: REMOVE. Removal is necessary to enable the lines of excavation, proposed transformer and replacement of the watermain.</p>
12	Spruce (<i>Picea sp.</i>)	43	16	8.7'	Declining	<p>This tree is mostly dead. It has a moderate corrected lean to the southwest. The west side of the canopy has been cutback to provide clearance to the single-phase Hydro line, reduction lines and communication cables. The canopy is sparse and lacks vigor; the foliage in the upper and mid-section of the canopy has shed exposing the branches, which are desiccated. The top of the stem is dead and there is extensive branch dieback throughout the remaining canopy. The bark is also cracked and sloughing on the trunk. The Critical Root Zone is 8.7ft. The proposed BC Hydro Transformer is adjacent to the north side of the stem, not including the excavation required; it is within the lines of excavation.</p> <p>RECOMMENDATIONS: REMOVE. Remove tree, it is almost dead. Also, its removal is necessary to enable the lines of excavation and the proposed transformer.</p>
13	Atlas Cedar (<i>Cedrus sp.</i>)	47	20	9.7'	Good/fair	<p>This tree forms part of a group. It is tall and spindly due to the proximity of the adjacent trees. This tree has a dogleg bend in the stem at 25ft. The west side of the canopy has been cutback to provide clearance to the single-phase Hydro line, reduction lines and communication cables. There is an existing walkway 8ft from the north side the stem. The Critical Root Zone is 9.7ft; this is inadequate considering the height of this tree. It is within the footprint of the BC Hydro Transformer. Also, the existing watermain is to be replaced and installed 4.9ft from the west side of the stem, not including the exaction requires.</p> <p>RECOMMENDATIONS: REMOVE. Removal of this tree is necessary to enable the lines of excavation, the proposed transformer and replacement of the watermain.</p>
14	Spruce (<i>Picea sp.</i>)	40	6	8.2'	Dead	<p>This tree belongs to the City. It is dead; the foliage has shed, and the exposed branches are completely desiccated.</p> <p>RECOMMENDATIONS: REMOVE. Obtain consent from the City and remove tree; it is dead.</p>
15	Douglas fir (<i>Pseudotsuga menziesii</i>)	66	21	13.6'	Fair	<p>These trees form part of a group. Both trees have a corrected lean to the southeast. They somewhat lack basal flare. They are within a slightly raised garden bed that has been contained by a rock border, which</p>

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#		(cm)	(m) est.	radius (ft.)		
16	Atlas Cedar (<i>Cedrus sp.</i>)	54	21	11.1'	Fair	<p>is within the Critical Root Zone on all sides of the stems; there is less than a 1ft grade difference. The west side of the canopies have been cutback to provide clearance to the single-phase Hydro line, reduction lines and communication cables. There is minimal branch dieback throughout the canopies. There are multiple large diameter surface roots exposed due to soil erosion; several roots have sustained minor surface bark damage. The Critical Root Zone radius for Tree #15 is 13.6ft and 11.1ft for Tree #16; this is inadequate considering the height of each tree. The existing water main is to be replaced and installed 4.5-6.5ft from the west side of the stems, not including the excavation required. The proposed City sidewalk is 11.5ft from the west side of the stem of each tree; this will likely require grading. The proposed drive aisle is 13ft from the south side of Tree #15. There is a proposed walkway 12.5ft – 13.5ft from the east side of the stems. Both trees are within the proposed play area. There is also a proposed fence, lawn and landscaping within the Critical Root Zones.</p> <p>RECOMMENDATIONS: REMOVE. Removal of Trees #15 and #16 is necessary to enable site grading, the new watermain and the proposed City sidewalk. The excavation required for the watermain would result in extensive Critical Root loss causing instability and will also likely cause this tree to decline over time.</p>
17	Spruce (<i>Picea sp.</i>)	31	17	6.4'	Fair	<p>This tree forms part of a group. It has been suppressed due to the proximity of the adjacent trees. This tree has a corrected lean to the northwest. It somewhat lacks basal flare. It is within a slightly raised garden bed that has been contained by a rock border, which is within the Critical Root Zone on all sides of the stem; there is less than a 1ft grade difference. The west side of the canopy has been cut back to provide clearance to the single-phase Hydro line, reduction lines and communication cables. The canopy is sparse and there is branch and twig dieback throughout the crown. There are multiple large diameter surface roots exposed due to soil erosion; several roots have sustained minor surface bark damage. The Critical Root Zone radius is 6.4ft; this is inadequate considering the height. The existing watermain is to be replaced and installed 4.9ft from the west side of the stem, not including the excavation required. The proposed City sidewalk is 6.5ft from the west side of the stem; this will likely require grading. There is a proposed fence, play area, lawn and landscaping within the Critical Root Zone.</p> <p>RECOMMENDATIONS: REMOVE. Removal of this tree is necessary to enable site grading, the new watermain and the proposed City sidewalk. The excavation required for the watermain would result in extensive Critical Root loss causing instability and will also likely cause this tree to decline over time.</p>

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#		(cm)	(m) est.	radius (ft.)		
18	Spruce (<i>Picea sp.</i>)	48	16	9.9'	Fair/poor	<p>This tree forms part of a group. It is tall and spindly and has been suppressed. It has a corrected lean to the southeast. The west side of the canopy has been cutback to provide clearance to the single-phase Hydro line, reduction lines and communication cables. The crown is sparse and lacks vigor. There is moderate branch dieback and limb shed throughout the canopy. There are multiple large diameter surface roots exposed due to soil erosion; several roots have sustained minor damage. There is an existing asphalt driveway 9ft from the north side of the stem; the roots have caused the surface to heave and crack. The Critical Root Zone radius is 9.9ft; this is inadequate considering the height. The existing watermain is to be replaced and installed 10ft from the west side of the stem, not including the excavation required. The proposed staircase is 12ft from the east side and the proposed pillars are 5ft from the west and northwest sides of the stem, not including the excavation required. The proposed walkway is adjacent to the north side of the stem and there is also a proposed play area, fence, lawn and landscaping within the Critical Root Zone.</p> <p>RECOMMENDATIONS: REMOVE. Removal of this tree is necessary to enable the new watermain. The excavation required would result in extensive Critical Root loss causing instability and will also likely cause this tree to decline over time.</p>
19	Spruce (<i>Picea sp.</i>)	22	15	4.5'	Fair/poor	<p>This tree forms part of a group. It is tall and spindly and has been suppressed. It has a corrected lean to the southeast. The west side of the canopy has been cutback to provide clearance to the single-phase Hydro line, reduction lines and communication cables. The crown is sparse and lacks vigor. There is moderate branch dieback and limb shed throughout the canopy. There are multiple large diameter surface roots exposed due to soil erosion; several roots have sustained minor damage. There is an existing asphalt driveway 2.5ft from the south side of the stem; the roots have caused the surface to heave and crack. The Critical Root Zone radius is 4.5ft; this is inadequate considering the height of each tree. It is within the proposed corner cut/road dedication. There is also a proposed fence, lawn and landscaping within the Critical Root Zone.</p> <p>RECOMMENDATIONS: REMOVE. Remove tree due to poor condition. Also, the adjacent trees are proposed for removal; once these trees are removed, this tree will be newly exposed and prone to failure, due to windthrow.</p>
20	Douglas fir (<i>Pseudotsuga menziesii</i>)	67	26	13.8'	Fair/poor	<p>This tree forms part of a group. It is stressed. The west side of the canopy has been raised and cutback to provide clearance to the single-phase Hydro line, reduction lines and communication cables. The canopy is sparse and lacks vigor. The foliage is pale and chlorotic and has begun to shed. There is moderate branch dieback and limb shed throughout the canopy. A bird's nest was observed within the</p>

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#		(cm)	(m) est.	radius (ft.)		
						<p>west side of the lower canopy. The existing asphalt driveway 8.9ft from the south side of the stem; the roots have caused the surface to heave and crack. The Critical Root Zone radius is 13.8ft; this is inadequate considering the height. This tree is within the proposed corner cut/road dedication. The existing watermain is to be replaced and installed at 8ft from the west side of the stem, not including the excavation required. The proposed City sidewalk is 6.5ft from the west side of the stem; this will likely require grading. There is also a proposed fence, lawn and landscaping within the Critical Root Zone.</p> <p>RECOMMENDATIONS: REMOVE. Removal of this tree is necessary to enable site grading, the new watermain and the proposed City sidewalk. The excavation required for the watermain would result in extensive Critical Root loss causing instability and will also likely cause this tree to decline over time.</p>
21	Cedar (<i>Thuja plicata</i>)	61	18	12.6'	Good	<p>These trees form part of a group. The lower stem of each tree is somewhat abnormal and swollen. There are several roots from each tree exposed due to soil erosion. The existing asphalt driveway is 8.5ft – 9ft from the south side of the stems; the roots have caused the surface to heave and crack. The Critical Root Zone of Tree #21 is 12.6ft and 10.1ft for Tree #22. These trees are within the proposed road dedication. The proposed building is 17ft from the south side of both trees, not including the excavation required. The proposed patio is 7ft from the south side of Trees #21 and #22 and there is also a proposed fence, lawn and landscaping within the Critical Root Zone of both trees.</p> <p>RECOMMENDATIONS: RETAIN. One large zone shall protect Trees #21 - #23 and #26. Install Tree Protection Zone fencing 13ft from the base of the stem on the south and west sides of Tree #21, 13ft from the base of the stem on the south side and 11ft from the base of the stem on the east side of Tree #26, and adjacent to the Gail Ave., on the north side of Trees #21 - #23 and #26.</p> <p>Removal of the existing driveway and any excavation for the proposed building and staircases that encroach into the TPZ must be supervised by a Certified Arborist; all exposed roots will be pruned.</p> <p>The proposed patio and walkways that encroach into the TPZ must be install at or near existing grade and must consist of a permeable surface; no further excavation can occur. Geogrid or geotextile fabric must be laid down first, then three to five inches of ¾” – 1.5” clear crushed gravel and then the permeable surface installed over top.</p> <p>Any excavation into the TPZ for the proposed landscaping, pillar and fence posts must be performed manually; if large roots (1.5” diameter and larger) are encountered, then the posts and plantings must be shifted to accommodate and</p>
22	Cedar	49	18	10.1'	Good	

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						<p>placed offset from the stems of the retained trees. The proposed lawn that encroaches into the TPZ must be installed at or near existing grade; the landscaping and lawn must be installed at least 3ft from the base of the stem of any retained tree. No more than 3" of additional good quality landscape soil (not construction grade fill) may be added into this Zone. Absolutely no further grade changes are to occur within this zone; the existing grade cannot be altered (raised or lowered).</p> <p>Raise the canopy of these trees to 7m, to allow more light into the complex and provide sufficient clearance for construction activities and the new building. This must be performed by a Certified Arborist using spurless climbing and prior to any construction.</p>
23	White oak (<i>Quercus alba</i>)	30	16	6.2'	Good/fair	<p>This tree is tall and spindly and has been suppressed due to the proximity of the adjacent trees. This tree lacks adequate trunk taper and basal flare. It has a phototropic lean and an asymmetrical and heavily weighted canopy to the south. The existing asphalt driveway 8.5ft the south side of the stem; the roots have caused the surface to heave and crack. The Critical Root Zone of the tree is 6.2ft; this is inadequate considering the height. This tree is within the proposed road dedication. The proposed patio is 8ft from the south side of the stem and there is also a proposed fence, lawn and landscaping within the Critical Root Zone.</p> <p>RECOMMENDATIONS: RETAIN. See recommendations for Tree #21. One large zone shall protect Trees #21 - #23 and #26.</p>
24	Dogwood (<i>Cornus sp.</i>)	37 combined (19+18)	12	7.6'	Fair	<p>This tree is tall and spindly and has been suppressed due to the proximity of the adjacent trees. This tree has a phototropic lean and an asymmetrical and heavily weighted canopy to the north. There is an existing asphalt driveway 4.9ft – 6.9ft from the south side and 2.6ft from the east side of the stem; the roots have caused the surface to heave and crack. The Critical Root Zone radius is 7.6ft. This tree is within the proposed road dedication. There is also a proposed fence, lawn and landscaping within the Critical Root Zone.</p> <p>RECOMMENDATIONS: REMOVE. This tree is suppressed due to competition from adjacent trees. Removal will reduce competition for the adjacent retained trees. The stump cannot be removed with excavation equipment. The stump must be cut to grade and the remainder removed using a stump grinder.</p>
25	Dogwood (<i>Cornus sp.</i>)	17	12	3.5'	Fair	<p>This tree is tall and spindly and has been suppressed due to the proximity of the adjacent trees. It has a phototropic lean and an asymmetrical and heavily weighted canopy to the east. There is an existing asphalt driveway 4.9ft – 6.9ft from the south side of the stem; the roots have caused the surface to heave and crack. The Critical Root Zone radius is 3.5ft.</p>

<u>TREE</u>	<u>SPECIES</u>	<u>DBH</u>	<u>HEIGHT</u>	<u>CRZ</u>	<u>Condition</u>	<u>OBSERVATIONS & RECOMMENDATIONS</u>
#		(cm)	(m) est.	radius (ft.)		
						<p>This tree is within the proposed road dedication. There is also a proposed fence, lawn and landscaping within the Critical Root Zone.</p> <p>RECOMMENDATIONS: REMOVE. Remove tree to allow space for the adjacent trees to thrive. The stump cannot be removed with excavation equipment. The stump must be cut to grade and the remainder removed using a stump grinder.</p>
26	Sequoia (<i>Sequoia sempervirens</i>)	50	18	10.9'	Good	<p>This tree forms part of a group. It appears typical of the species. There is an existing asphalt driveway 6ft from the south and east sides of the stem. The Critical Root Zone radius is 10.9ft. This tree is within the proposed road dedication. The proposed staircase is 12ft from the south side and the proposed pillars are 6ft and 8ft from the southeast side of the stem, not including the excavation required. The proposed walkway is 3.5ft from the east side and the proposed landing is 7ft from the south side of the stem. There is also a proposed fence, lawn and landscaping within the Critical Root Zone.</p> <p>RECOMMENDATIONS: RETAIN. See recommendations for Tree #21. One large zone shall protect Trees #21 - #23 and #26.</p>
27	Holly (<i>Ilex sp.</i>)	39 combined (17+13+9)	7	8'	Good	<p>This tree has two stems commencing at base. It has been previously topped and maintained as a shaped specimen; otherwise, it appears typical of the species. The Critical Root Zone is 8ft. This tree is within the footprint of the proposed building.</p> <p>RECOMMENDATIONS: REMOVE. Removal is necessary to enable the proposed building.</p>
28	Fir (<i>Abies sp.</i>)	76	22	15.7'	Good/fair	<p>This tree appears to have shed its original top at 55ft; there is one stem commencing at this point, which has a dogleg bend in the stem above the union. It has a corrected lean to the northeast. The canopy is somewhat sparse; the foliage within sections of the crown has begun to shed. The Critical Root Zone radius is 15.7ft; this is inadequate considering the height. This tree is within the footprint of the proposed building.</p> <p>RECOMMENDATIONS: REMOVE. Removal is necessary to enable the proposed building.</p>
29	White oak (<i>Quercus alba</i>)	29	11	6'	Good	<p>This tree is tall and spindly and has been suppressed due to the proximity of the adjacent trees. This tree has a phototropic lean and an asymmetrical and heavily weighted canopy to the west. There is an existing fence 3.9ft from the north side of the stem. The Critical Root Zone is 6ft. The proposed service connection is 12ft from the west side, and the proposed staircase is 11ft away and the proposed pillar is 8ft from the southwest side of the stem, not including the excavation required. The proposed walkway is 6.5ft from the south side and the proposed walkway is 9ft from the west side of the</p>

<u>TREE</u>	<u>SPECIES</u>	<u>DBH</u>	<u>HEIGHT</u>	<u>CRZ</u>	<u>Condition</u>	<u>OBSERVATIONS & RECOMMENDATIONS</u>
#		(cm)	(m) est.	radius (ft.)		

stem. There is a proposed fence, lawn and landscaping within the Critical Root Zone. This tree is also within the proposed road dedication.

RECOMMENDATIONS:
REMOVE. Remove tree to allow space for the adjacent trees to thrive.

30	Cedar (<i>Thuja plicata</i>)	72	13	14.9'	Good	<p>This tree appears typical of the species. There is an existing fence 4.3ft from the north side of the stem. The Critical Root Zone of the tree is 15ft. The proposed building is 13.5ft away, the proposed staircase is 13.5ft away and the proposed pillar is 11ft from the southwest side of the stem, not including the excavation required. The proposed courtyard is 8ft from the south side, the proposed walkway is 13ft from west side and 7ft from the southwest side and there is a proposed fence, lawn and landscaping within the Critical Root Zone. This tree is also within the proposed road dedication.</p> <p>RECOMMENDATIONS: RETAIN. See recommendations for Tree #1. One large zone shall protect Trees #1, #30 and #31.</p>
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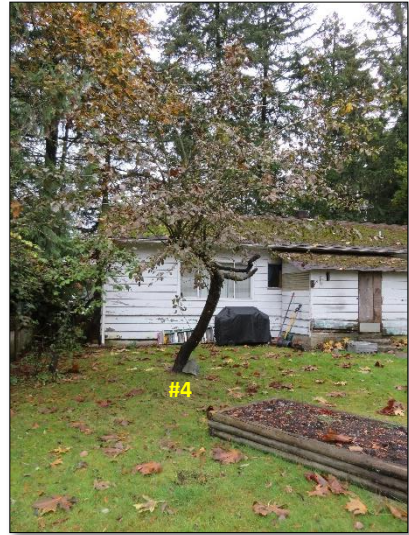
31	Dogwood (<i>Cornus sp.</i>)	22	12	4.5'	Good/fair	<p>This tree is tall and spindly and has been suppressed due the proximity of the adjacent trees. It has a phototropic lean and an asymmetrical canopy to the east. There is an existing fence 4.5ft from the north side and 5.5ft from the east side of the stem. The Critical Roo Zone of the tree is 4.5ft. There is a proposed fence, lawn and landscaping within the Critical Root Zone. This tree is within the proposed road dedication.</p> <p>RECOMMENDATIONS: RETAIN. See recommendations for Tree #1. One large zone shall protect Trees #1, #30 and #31.</p>
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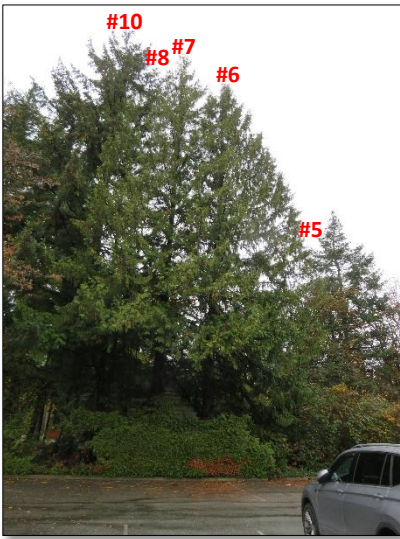
Tree #1



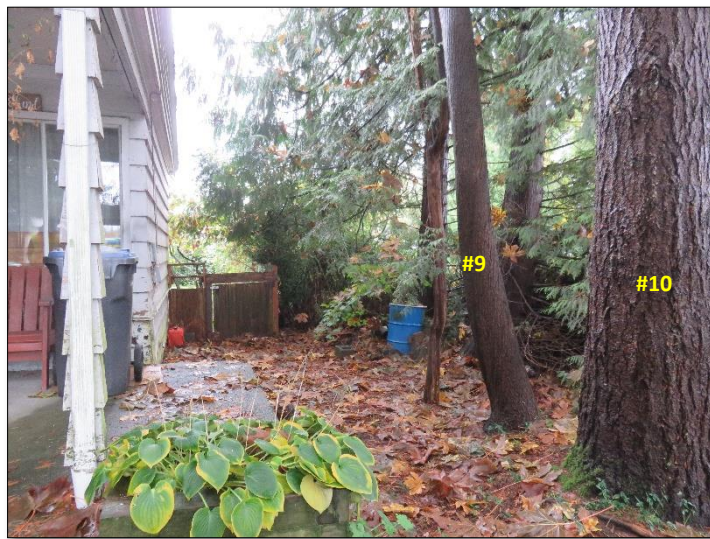
Trees #1 - #3



Tree #4



Trees #5 - #8, #10



Trees #9 & #10



Trees #11- #16



Trees #14 - #18, #20



Trees #20 - #26



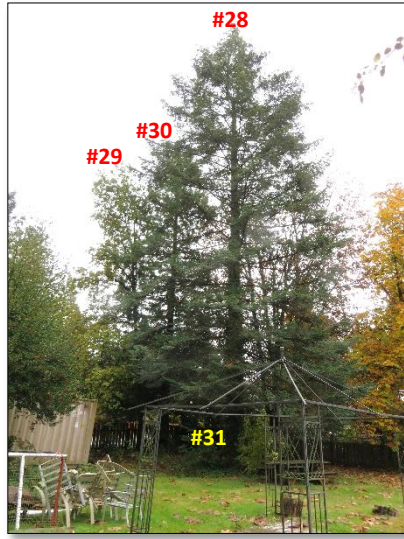
Trees #19 & #21



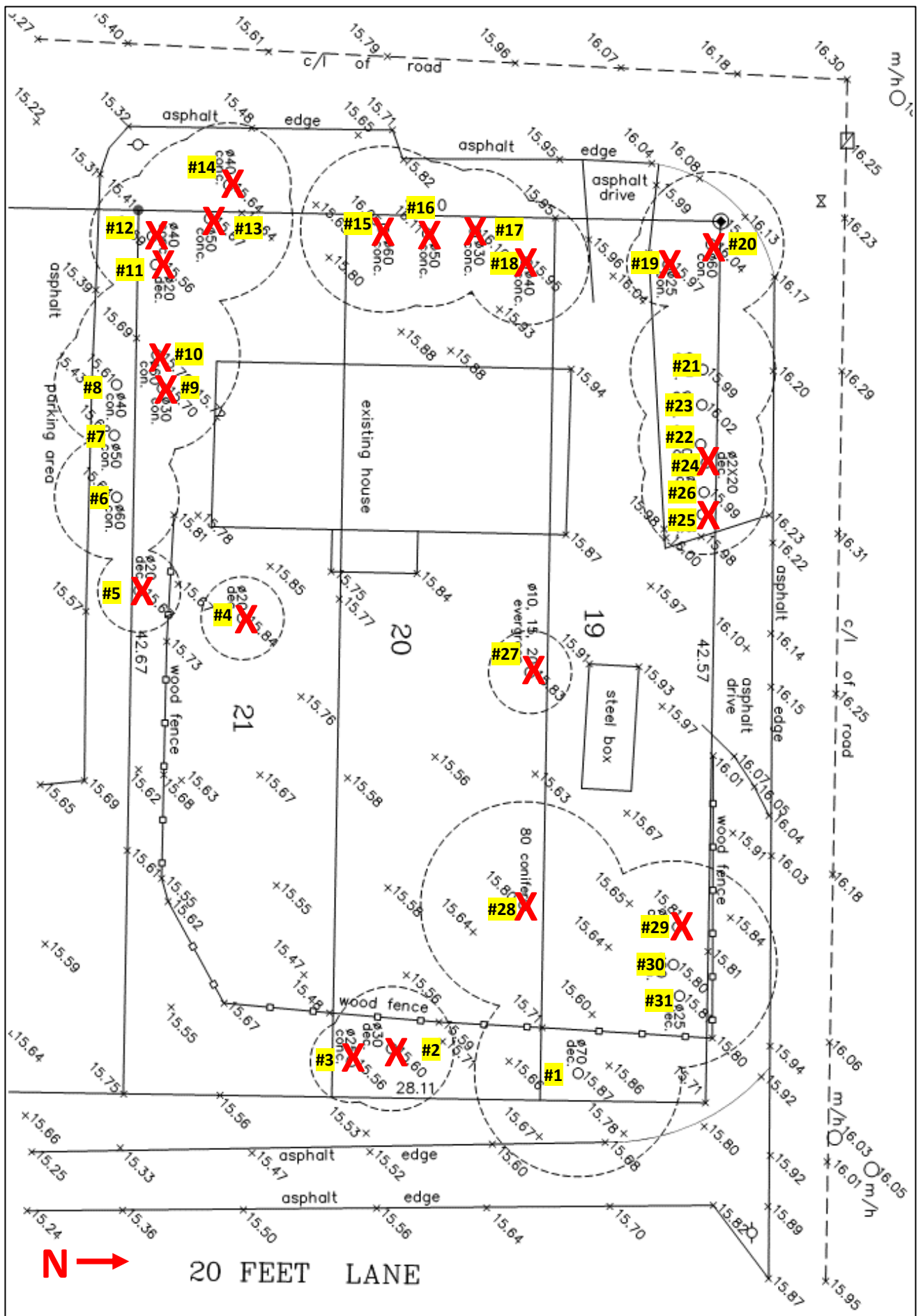
Trees #22 - #23



Tree #27



Trees #28 - #31



Site Survey - Not to Scale

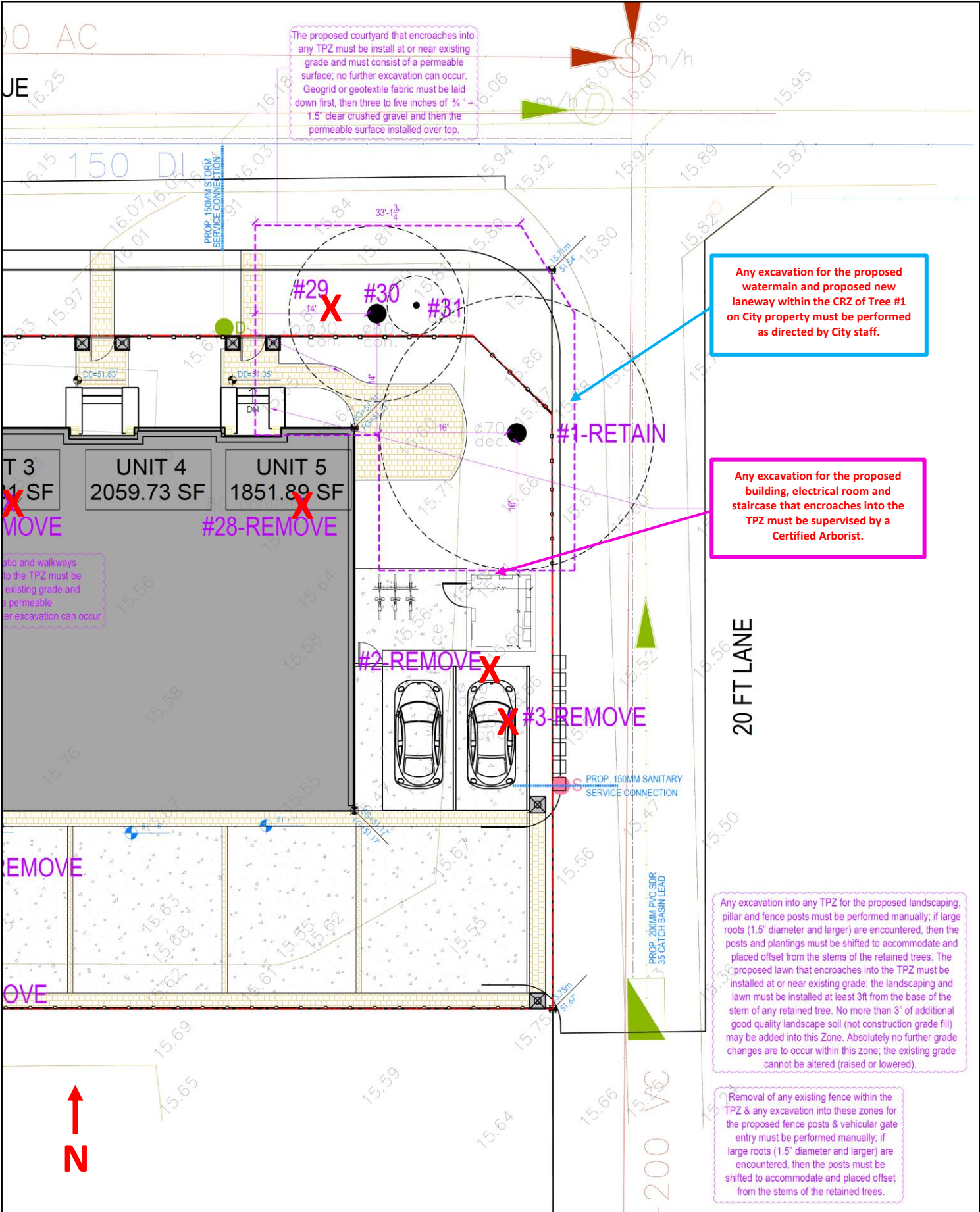
The proposed courtyard that encroaches into any TPZ must be installed at or near existing grade and must consist of a permeable surface; no further excavation can occur. Geogrid or geotextile fabric must be laid down first, then three to five inches of ¾" - 1.5" clear crushed gravel and then the permeable surface installed over top.

Any excavation for the proposed watermain and proposed new laneway within the CRZ of Tree #1 on City property must be performed as directed by City staff.

Any excavation for the proposed building, electrical room and staircase that encroaches into the TPZ must be supervised by a Certified Arborist.

Any excavation into any TPZ for the proposed landscaping, pillar and fence posts must be performed manually; if large roots (1.5" diameter and larger) are encountered, then the posts and plantings must be shifted to accommodate and placed offset from the stems of the retained trees. The proposed lawn that encroaches into the TPZ must be installed at or near existing grade; the landscaping and lawn must be installed at least 3ft from the base of the stem of any retained tree. No more than 3" of additional good quality landscape soil (not construction grade fill) may be added into this Zone. Absolutely no further grade changes are to occur within this zone; the existing grade cannot be altered (raised or lowered).

Removal of any existing fence within the TPZ & any excavation into these zones for the proposed fence posts & vehicular gate entry must be performed manually; if large roots (1.5" diameter and larger) are encountered, then the posts must be shifted to accommodate and placed offset from the stems of the retained trees.



East Property Tree Management Plan, Scale 1/16" = 1'

48.45m - 200Ø CON

LANCASTER STREET

UNIT 1 1815.21 SF	UNIT 2 2059.73 SF	UNIT 3 2089.31 SF
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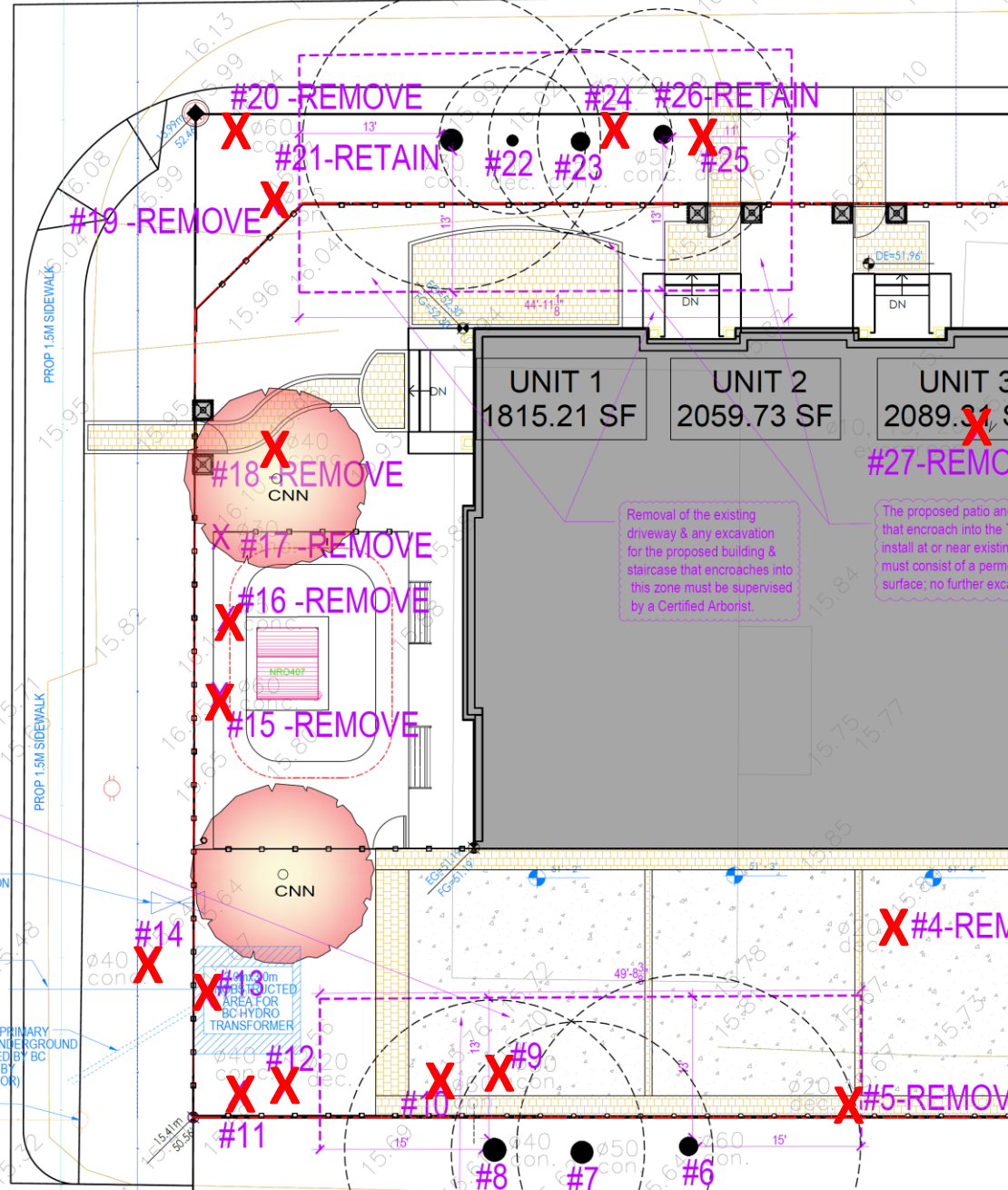
The proposed drive isle that encroaches into the TPZ must be installed at or near existing grade and must consist of a permeable surface; no further excavation can occur. The existing organics within this zone must be removed manually and must be supervised by a Certified Arborist, no further excavation can occur. Geocells must be laid down first, then three to five (or more) inches of 1/4" - 1.5" clear crushed gravel and then the permeable surface installed over top. Any grading, levelling and sloping of the drive isle must be achieved by using gravel (not construction fill); gravel is to be compacted using a vibrating plate tamper only. No other grade changes (increase or decrease in grade) can occur within this Zone. All prep work and installation of material for the proposed drive isle that encroaches into the Tree Protection Zone must be supervised by a Certified Arborist.

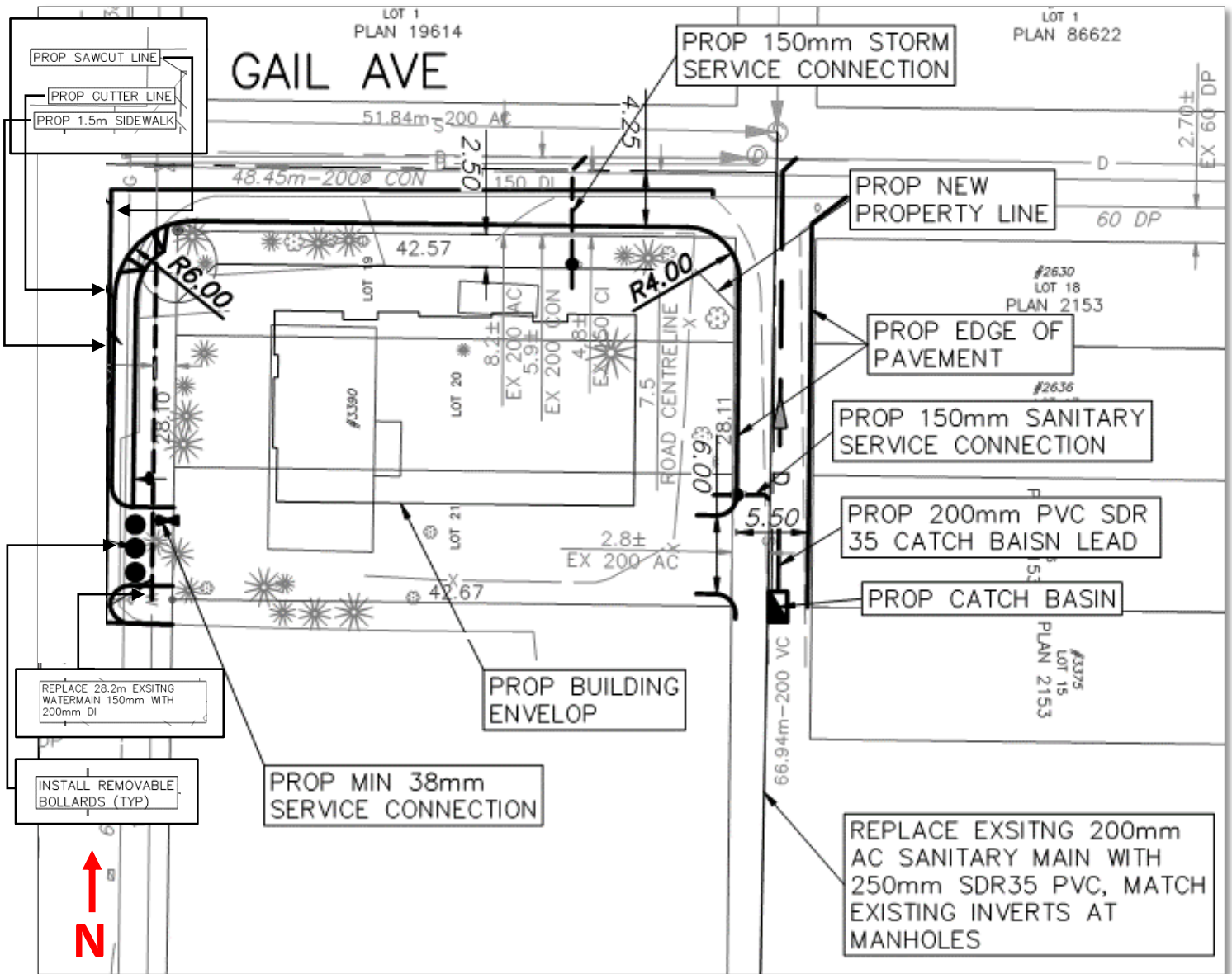
Removal of the existing driveway & any excavation for the proposed building & staircase that encroaches into this zone must be supervised by a Certified Arborist.

The proposed patio area that encroaches into the TPZ must be installed at or near existing grade; the landscaping and lawn that encroaches into this zone must consist of a permeable surface; no further excavation can occur.

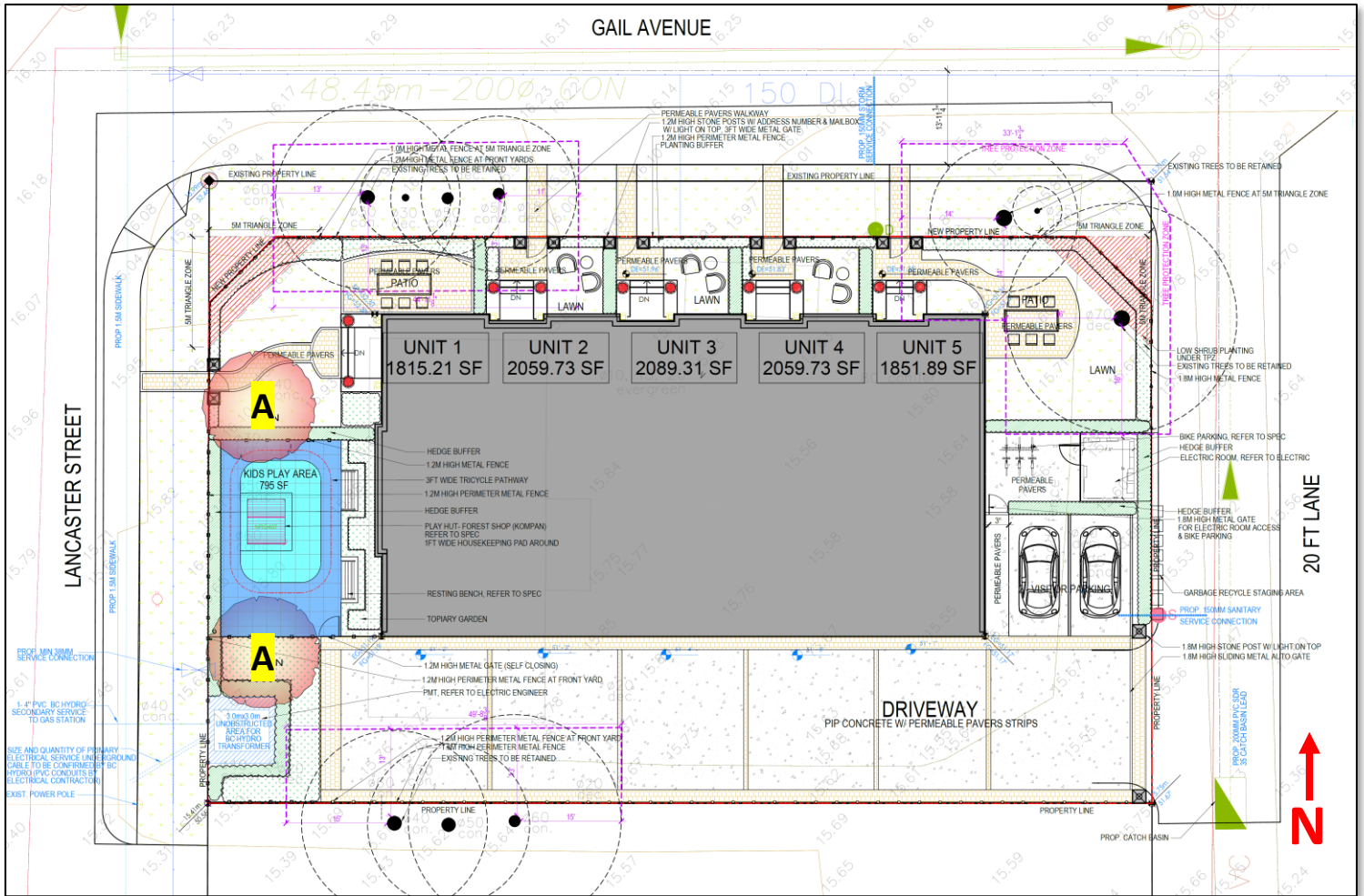
Demolition of the existing foundation adjacent to this zone must be supervised by a Certified Arborist.

Any excavation into any TPZ for the proposed landscaping, pillar and fence posts must be performed manually; if large roots (1.5" diameter and larger) are encountered, then the posts and plantings must be shifted to accommodate and placed offset from the stems of the retained trees. The proposed lawn that encroaches into the TPZ must be installed at or near existing grade; the landscaping and lawn must be installed at least 3ft from the base of the stem of any retained tree. No more than 3" of additional good quality landscape soil (not construction grade fill) may be added into this Zone. Absolutely no further grade changes are to occur within this zone; the existing grade cannot be altered (raised or lowered).





Proposed Civil Plan, Scale 1:500



Preliminary Tree Replacement Plan – Not to Scale

TOTAL OF SIGNIFICANT TREES (60cm DBH or greater) TO BE REMOVED = 4
TOTAL OF NON-SIGNIFICANT TREES TO BE REMOVED = 17

TOTAL PROPOSED REPLACEMENTS = 2
TOTAL REPLACEMENTS REQUIRED = 25

A = 2, 5cm caliper Pacific Dogwood (*Cornus nuttallii*)

Cash in-lieu for the unplanted trees may have to be considered.

Note: Replacement trees should not interfere with driveways, visibility, buildings, services, sidewalks, and the view corridors of adjacent properties. All plant material, topsoil depth, and quality and installation to be to the BC Landscape Standard, recent edition. They should be watered deeply twice per week (depending on natural levels of precipitation) for the first year or until established.

For further information on proper tree planting and tree care please visit the ISA website “Trees are Good”.