



Capital Tree Service Inc.

Arborist Report

3117 Blackwood St, Victoria, BC

March 4, 2021

Revised September 27th, 2021

Prepared for:

Jesse Matthewman of Fresh Spaces Victoria

Prepared by:

Capital Tree Service Inc.

Capital Tree Service Inc.

310-777 Royal Oak Dr, PO Box 53512, Victoria BC, V8X 5K2

Ph: 250-217-8370, email: joelcreese@capitaltreeservice.ca

capitaltreeservice.ca

GST # 861289783RT0001

WSBC Account #713323

Liability and Professional E and O, HSM Insurance - \$5 Million

Summary/Scope of Work

Capital Tree Service Inc. (CTS) was contacted by Jesse Matthewman of Fresh Spaces Victoria (Client), a local design and building firm regarding the construction of a New Duplex at 3117 Blackwood St (the Site) in the City of Victoria. The Client indicated he required an Arborist Report and Tree Protection Plan (TPP) to move forward with the permit application.

The Client has requested that CTS provide a Basic Visual Tree Assessment (BVTA) and TPP for the Site. CTS agreed to complete the assessment and provide findings in an Arborist Report Form including a TPP.

Under the current proposal one (1) protected tree is proposed for removal as it falls within the footprint of the New Duplex. A tree inventory is included as **Appendix 'A'** of this report. Photographs and a Site Plan are included as **Appendix 'B'** of this report.

Methodology

The Site was entered on August 14, 2020 by CTS for the purpose of conducting tree assessments and collecting inventory. Joel Creese, consulting arborist and representative of CTS, provided the BVTA for the site. The weather that day was sunny, 18 degrees with an 8 km/hr Easterly breeze.

The Site was assessed from grade. No form of diagnostic tools or invasive techniques were used during the assessment. Tree heights were measured using a Laser Technology TruPulse 200 Laser Range Finder, crowns were inspected using Ricoh Pentax 10x binoculars and diameters were measured using a Richter Diameter Tape. Diameter at Breast Height (DBH) was measured approximately 1.4m above grade. Measurements and observations were recorded with the intent to provide a static representation of the area. A tree inventory is included as **Appendix 'A'** of this report. Photographs and a Site Plan are included as **Appendix 'B'** of this report.

During the assessment, a total of twelve (12) trees were observed – seven (7) of which are protected under the current City of Victoria Tree Protection Bylaw. Trees referenced in **Appendix 'A'** have been tagged. Tags are located approximately 1.5-2m above grade on tree stems and were visible at the time of assessment.

Protected Root Zone calculations are based on the ISA recommended one foot for each one inch of trunk diameter (0.3m for each 2.5 cm). Matheny and Clark's 'Trees and Development' was used to assess relative tolerance to Development Impacts.

Observations/Discussion

During the assessment, a well-established lot and dwelling in a fully developed urban neighborhood was observed. The Site was observed to be partially treed with a variety of coniferous and deciduous trees present. The Site appears to receive plenty of direct sun. One (1) protected tree (D. fir #276) is proposed for removal due to being located within the footprint of the New Duplex. Construction activities will have a '**Low**' to '**Moderate**' impact on the trees proposed for retention.

Tree Dynamics

A tree inventory is included as **Appendix 'A'** (separate attachment) of this report.

Observed Tree Impacts

- Seven (7) trees within the Zone of Impact are protected under the current City of Victoria Tree Protection Bylaw
- One (1) Bylaw protected tree is proposed for removal (D fir #276)
- Replacement trees will be required to be planted at **2:1** ratio for each protected tree removed
- Five (5) Bylaw protected trees will be retained and protected
- Three (3) non-protected trees are proposed for removal
- Construction impact to the retained trees will be '**Low**' to '**Moderate**'
- Assessment of the site may expose further tree issues or conditions. If this occurs the project arborist will contact City staff for further recommendations.

Attention Mitchell Ginter

- Tree #275 will be retained and protected. Only the top layer of organics (50-75mm) will be removed to facilitate installation of the walkway pavers (permeable). This work will be under the supervision of the Project Arborist. The design of the pathway will allow it to be modified as tree roots continue to grow. Excavation for the covered porch/basement area is expected to impact less than 30% of the tree's rooting area. In most cases an impact of 35% or less is acceptable when 'Best Practices' are utilized (ANSI A-300 Standards for Tree Care Operations).

Attention Engineering

- The waterline has been located under the driveway to reduce impacts to retained trees critical root zones.

Common and Latin Names

Horse chestnut – *Aesculus hippocastanum*

Hawthorne – *Crataegus spp.*

Western hemlock – *Tsuga heterophylla*

Grand fir – *Abies grandis*

European ash – *Fraxinus excelsior*

Douglas fir – *Pseudotsuga menziesii*

Red maple – *Acer rubrum*

Pear – *Pyrus spp.*

Tree Condition Ratings Summary

Health Condition:

- Poor - significant signs of visible stress and/or decline that threaten the long-term survival of the specimen
- Fair - signs of stress
- Good - no visible signs of significant stress and/or only minor aesthetic issues

Structural Condition:

- Poor - Structural defects that have been in place for a long period of time to the point that mitigation measures are limited
- Fair - Structural concerns that are possible to mitigate through pruning
- Good - No visible or only minor structural flaws that require no to little pruning

Tree Protection Plan

Utilize Tree Protection Fencing (TPF) to restrict access to Tree Protection Zones. Provide signage on fencing which states: Tree Protection Area – No Admittance. Signage must be in a visible location attached to the fence. Signage must be attached to the outside of each Tree Protection Fencing area.

Contact CTS to mark locations for the Tree Protection Fencing. All Tree Protection Fencing must be installed in the locations indicated by CTS. CTS must provide inspection and verification of the fencing detail for District approval.

Each Tree Protection Zone (TPZ) must be vacated of all construction materials and/or equipment. At no time may the fencing be removed or modified unless the Project Arborist is contacted and approval given. In such cases the Project Arborist must assist fence removal and assess combined impacts which are required for construction completion. Joel Creese 250-217-8370 – Three business days notice required.

Landing/Storage Area

All construction materials will be stored in areas identified as 'Landing\Storage' in site plans. These locations are indicated on the Site Plan.

Access

A single point of access shall be utilized. This shall be in the location marked 'Access' on the Site Plan. Contractors and workers shall be made aware of the Tree Protection Zones and Measures in place. **Tree Protection Zones and areas of the Site not under construction or within the Zone of Impact will be strictly off limits.** It is the responsibility of the Client to schedule a pre-job meeting with the Project Arborist to discuss Tree Protection Plans, Zones and requirements.

Three business days notice required. Joel Creese, Project Arborist. 250-217-8370

Compaction Reduction

In areas where it is not practical to restrict access to the entire PRZ through the use of fencing two (2) layers of ¾" plywood **must** be placed along the construction access route for access and egress over the PRZ of retained trees. Alternatively the Client may choose to utilize 'hog-fuel' (or similar – wood chips etc.) for compaction reduction. Hog-fuel or similar to be placed and maintained at a depth of not less than 20cm throughout the course of construction.

Remediation

- Provide a deep soaking to retained trees twice weekly during dry summer months
- Upon construction completion provide aeration to the top of soil grade with the use of a plug type aeration machine within the PRZ of retained trees. The aeration should coincide with the fertilization.
- Provide a supplemental fertilization in Fall 2021. Apply (broadcast) a complete granular fertilizer (5-15-10) with a micronutrient addition. Apply within the PRZ of retained trees.

Root Assessment and Observation

The Project Arborist must be on site for observation and assessment when working within the Protected Root Zone of any Protected Trees. This shall include trees:

- #270
- #271
- #275
- #277
- #278
- #279
- #280

Tree Pruning

Tree pruning required for access and egress, tree health and safety shall be performed by an International Society of Arboriculture (ISA) Certified Arborist without the use of climbing spurs. All tree pruning shall be performed in accordance with ANSI A-300 Standards for Tree Care Operations.

- Tree #270 must be pruned to provide 5m clearance above the existing driveway to facilitate access and egress

Blasting

The use of blasting for removal of rock may cause serious damage or death to nearby trees if not managed appropriately. Should blasting become necessary the Project Arborist must be notified. A removal plan for the rock will be developed with the blasting contractor and the Project Arborist. It is recommended that this plan is created prior to the blasting contractor providing a cost estimate.

Tree Protection Plan

- i. Provide a detailed sign specifying that tree protection measures are in place and will be followed during the project. Fines will be posted for malicious acts and can be placed on individuals who disregard the tree protection plan and its guidelines. Signs will be placed at each entrance of the project detailing what is expected when working in potentially high impact tree protection zones.
- ii. Provide tree protection fencing for all trees identified with protection requirement in this report. This fencing shall be four (4ft) feet in height and made of orange plastic. If required, header and footer boards will be used to secure the protective fencing.
- iii. Tree protection and root protection signs will be placed on the fencing. No entry will be allowed, unless specified by the Project Arborist and in their presence while on site.
- iv. Restrict vehicle traffic to designated access routes and travel lanes to avoid soil compaction and vegetation disturbances.
- v. Make all necessary precautions to prevent the storage of material, equipment, stockpiling of aggregate or excavated soils within tree protection areas. No dumping of fuels, oils or washing of concrete fluids will be allowed in tree protection zones.
- vi. Provide an onsite arborist when a risk of root damage, root cutting, or limb removal is required within the tree protection zone.
- vii. Avoid alterations to existing hydrological patterns to minimize vegetation impacts to the site.
- viii. The use of a Project Arborist is required to provide layout of tree protection zones. The Project Arborist(s) will provide pre-construction information to all parties involved with the project. The Project Arborist must be notified 72hrs prior to construction activities in sensitive areas. The Project Arborist should be used to provide root and branch pruning when diameters are greater than 6cm.
- ix. At no time will tree protection zones be removed from the project unless approved by the Project Arborist

Excavation Process Plan

1. Provide and schedule Project Arborist to assess site prior to construction.
2. Inventory and identify trees and hazards which could complicate excavation process.
3. Utilize hand tools and cutting equipment when large tree roots are anticipated.
4. When possible, utilize small, rubberized track excavation equipment which will reduce soil compaction.
5. Excavator operator must be well informed about dig site and goal to complete project.
6. Use shallow excavation sweeps across the site to establish a depth which roots can be easily identified. (3cm to 5cm in depth of soil for each sweep across the soil face)
7. Roots greater than 6cm in diameter shall be preserved and inspected by the Project Arborist. The project arborist will determine if roots should be pruned or cut.
8. All roots greater than 6cm in diameter should be identified and documented for project records.
9. Photos are highly recommended for documentation purposes.

Assessment of the site may expose further tree issues or conditions. If this occurs the project arborist will contact City Staff for further recommendations.

Role of the Project Arborist

As well as creating the Tree Preservation Plan, the Project Arborist must be on site to supervise work within or immediately adjacent to the tree protection areas identified on the attached tree plan. **This will include sidewalk, driveway and any improvements proposed for the municipal boulevard.**

The Project Arborist will be present to supervise landscaping operations and activity within the tree protection areas.

At completion of the project, the Project Arborist will confirm that any tree protection or remediation related deficiencies have been addressed by the owner and building contractor. Once all deficiencies (if any) have been remedied, the Project Arborist shall prepare a letter to the City of Victoria confirming completion of the project.

The following is a summary of key roles of the Project Arborist.

- Participation in a site meeting prior to the commencement of works adjacent to Tree Protection Zones to discuss the preservation plan and tree protection measures in place. **It is the responsibility of the Client to schedule a pre-work site meeting. *72 hrs Notice Required. CTS 250-217-8370***
- The meeting will review the Tree Protection Plan, Tree Protection Zones and the specific measures required to protect the trees during the site preparation, construction and landscape phases of construction.
- The Project Arborist will inspect the Tree Protection Fencing and any other tree protection measures prior to a tree permit being issued by the District and prior to work commencing on site.
- The Project Arborist will be on site during the following work within or immediately adjacent to the Tree Protection Areas as indicated on the attached Site Plan:
 - ❖ demolition
 - ❖ grading
 - ❖ excavation
 - ❖ rock removal or blasting
 - ❖ trenching for underground services and utilities
 - ❖ preparation of grade for the proposed driveways and parking areas
 - ❖ site inspections to insure adherence to Tree Protection Measures

Although this site has been assessed trees in the landscape are dynamic and changes could occur. This report is a static representation of the site during our assessment.

Joel Creese

Joel Creese, 2021-03-04

Capital Tree Service Inc.

ISA CA, TRAQ, US PN-8800AU
BC Danger Tree Risk Assessor P-2498
CUA-00010-TT-14

Capital Tree Service Inc. (CTS)

CONDITIONS OF ASSESSMENT AGREEMENT

This Conditions of Assessment Agreement is made pursuant to and as a provision of CTS, providing tree assessment services as agreed to between the parties, the terms and substance of which are incorporated in and made a part of this Agreement (collectively the "Services").

Trees are living organisms that are subject to stress and conditions and which inherently impose some degree or level of risk. Unless a tree is removed, the risk cannot be eliminated entirely. Tree conditions may also change over time even if there is no external evidence or manifestation. In that CTS provides the Services at a point in time utilizing applicable standard industry practices, any conclusions and recommendations provided are relevant only to the facts and conditions at the time the Services are performed. Given that CTS cannot predict or otherwise determine subsequent developments, CTS will not be liable for any such developments, acts, or conditions that occur including, but not limited to, decay, deterioration, or damage from any cause, insect infestation, acts of god or nature or otherwise. Unless otherwise stated in writing, assessments are performed visually from the ground on the above-ground portions of the tree(s). However, the outward appearance of trees may conceal defects. Therefore, to the extent permitted by law, CTS does not make and expressly disclaims any warranties or representations of any kind, express or implied, with respect to completeness or accuracy of the information contained in the reports or findings resulting from the Services beyond that expressly contracted for by CTS in writing, including, but not limited to, performing diagnosis or identifying hazards or conditions not within the scope of the Services or not readily discoverable using the methods applied pursuant to applicable standard industry practices. Further, CTS' liability for any claim, damage or loss caused by or related to the Services shall be limited to the work expressly contracted for. In performing the Services, CTS may have reviewed publicly available or other third- party records or conducted interviews and has assumed the genuineness of such documents and statements. CTS disclaims any liability for errors, omissions, or inaccuracies resulting from or contained in any information obtained from any third- party or publicly available source.

Except as agreed to between the parties prior to the Services being performed, the reports and recommendations resulting from the Services may not be used by any other party or for any other purpose. The undersigned also agrees, to the extent permitted by law, to protect, indemnify, defend and hold CTS harmless from and against any and all claims, demands, actions, rights and causes of action of every kind and nature, including actions for contribution or indemnity, that may hereafter at any time be asserted against CTS or another party, including, but not limited to, bodily injury or death or property damage arising in any manner from or in any way related to any disclaimers or limitations in this Agreement.

By accepting or using the Services, the customer will be deemed to have agreed to the terms of this Agreement, even if it is not signed.

Acknowledged by:

Name of Customer: Jesse Matthewman of Fresh Spaces Victoria, 3117 Blackwood St, Victoria, BC

Authorized Signature: _____

Date: 2021-03-04

Appendix 'B' Photos and Site Plan

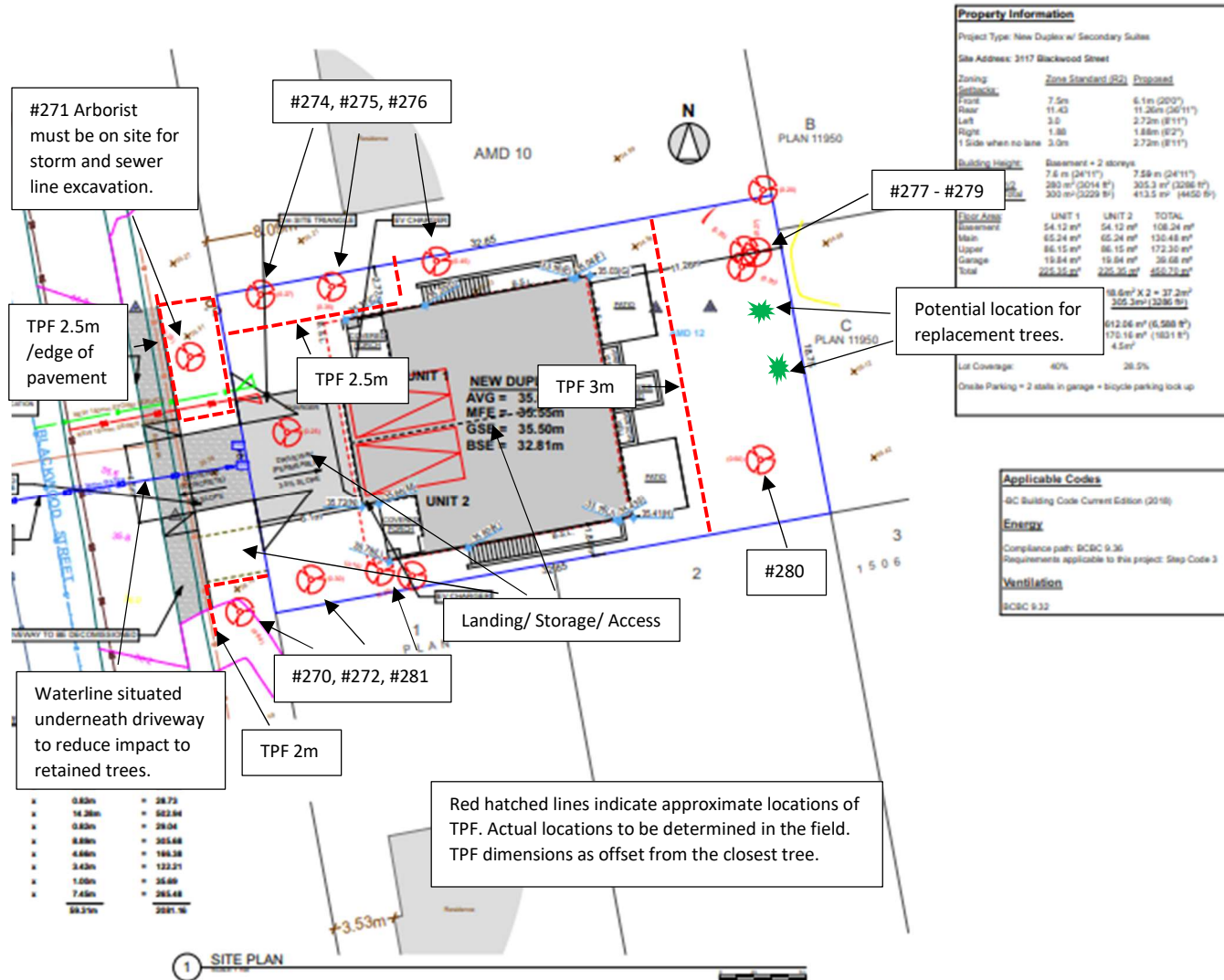
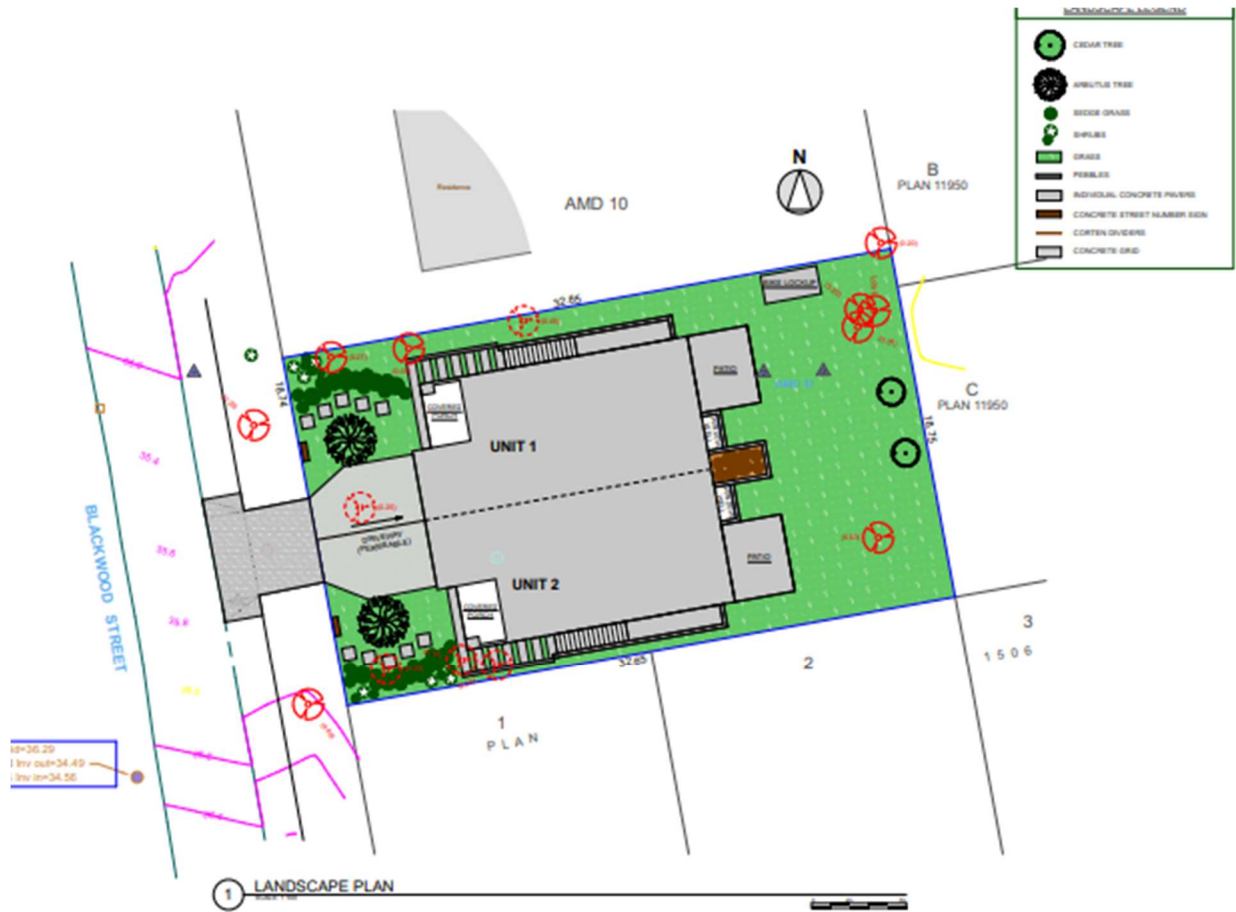


Figure 2 – Permeable Driveway



The driveway will be constructed of a permeable material. The decision on what material will be utilized has not been finalized.

Figure 3 – Blackwood St Frontage



City tree #271

Landing/Storage/Access

City tree #270

Figure 4 – Douglas fir #276



Figure 5 – Tree #280



Tree #280 located in back yard. To be retained and protected.

Figure 6 – Trees #277 - #279



Trees #277 - #279 located in back yard. To be retained and protected.

Capital Tree Service Inc.

APPENDIX A - TREE INVENTORY/HAZARD RATINGS SUMMARY

Location: 3117 Blackwood

Date: 2020-08-14

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Conditions: 18 degrees, sunny. 8km/hr breeze east

TAG #	Spec.	DBH (cm)	Ht (m)	PRZ (m)	Cond. G,F,P	Reta in	Rem ove	Prot ecte	Comments/Recommendations
270	H. Chestnut	70	19	8	F/F	X		Y	Retain and protect. City Tree. Tree Protection Fencing (TPF)
271	Hawthorne	23	4	3	P/F-P	X		Y	Retain and protect. City Tree. TPF
272	Hemlock	26	11	3	F/F-P		X	N	Non-protected. Remove.
273	Hemlock	26	10	3	F/F		X	N	Non-protected. Remove.
274	G. Fir	26	15	3	F/F	X		N	Retain and protect. TPF.
275	E. Ash	49	10	6	F/F-P	X		Y	Retain and protect. TPF. 2 x stem
276	D Fir	47	20	6	F/F		X	Y	Remove. Construction impacts.
277	E. Ash	31	13	4	F/F-P	X		Y	Retain and protect. TPF. 2 x stem
278	E. Ash	36	14	4	F/F-P	X		Y	Retain and protect. TPF. 3 x stem
279	Red Maple	23	15	3	F/F-P	X		N	Retain and protect.
280	Pear	57	4	7	F/P	X		Y	Retain and protect. TPF
281	E. Ash	27	18	3	F/F-P		X	N	2 x stem. Remove.