



Elmira Southwood Subdivision, 1065-1103 Listowell Road

Tree Management Plan

Prepared for:

Schlegel Urban Developments
325 Max Becker Drive, Suite 201
Kitchener, ON
N2E 4H5

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NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

Elmira Southwood Subdivision, 1065-1103 Listowell Road

Tree Management Plan

Project Team

Jessica Linton	Senior Biologist, Project Advisor
Robert Pivar	Terrestrial & Wetland Biologist, Project Manager
Jeremy Bannon	Terrestrial & Wetland Biologist, Certified Arborist
Kaitlin Filippov	GIS Analyst

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Jeremy Bannon, B.E.S.

Terrestrial and Wetland Biologist / Certified Arborist

Table of Contents

1.0	Introduction	1
2.0	Tree Inventory Methodology.....	2
2.1	Air Spading	3
3.0	Summary of Tree Inventory Findings.....	4
4.0	Tree Retention Analysis and Compensation.....	5
4.1	Retention Analysis	5
4.2	Compensation	6
5.0	Protection Measures and Recommended Mitigation	8
5.1	Prior to Construction	8
5.1.1	Timing Windows	8
5.2	Post-Construction	9
6.0	Summary.....	10
7.0	References.....	11

List of Tables

Table 1.	Retention and Removal Analysis.....	6
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List of Appendices

Appendix I Tree Inventory Data

Appendix II Tree Health and Potential for Structural Failure Assessment Criteria

Appendix III Conditions of Tree Assessment

Appendix IV Tree Data and Summary Tables

Maps

Map 1. Study Area and Natural Features

Map 2. Tree Inventory and Preservation Plan

1.0 Introduction

Natural Resource Solutions Inc. (NRSI) was retained by Schlegel Urban Developments (herein referred to as the Client) in July 2022 to complete a Tree Management Plan (TMP) for a proposed residential development, located at 1065-1103 Listowel Road and 354 Arthur Street, Elmira, within the Region of Waterloo (referred to here as the subject property).

The subject property is largely agricultural, with a recreational trail, isolated trees, hedgerows, and a maintenance facility, and is bound by residential lots to the west, north, and east, and by Listowel Road to the south.

The Region does not have a tree by-law, but the Township of Woolwich, where Elmira resides, does contain tree protection provisions. In the Township's Official Plan (2022), Chapter 13, subsection 13.15.10 states that:

“The Township shall require, as necessary, the preparation of a Tree Management Plan prior to consideration of a development application, with an aim to preserve and protect significant individual trees, tree stands, hedgerows, woodlots and forested areas within the township.”

The Township has also developed design guidelines (2022), which outline practices regarding tree protection (including minimum Tree Protection Zones (TPZs) and fencing specifications), tree replacement, and report standards. The guidelines state that:

“An Arborist Report is required: where multiple trees are involved in a Capital Project, a Municipal Consent, and/or a planning application; and an Arborist Report is mandatory to initiate a Tree Protection Zone Encroachment Permit or a Tree Protection Agreement.”

This report has been prepared to adhere to these policies and guidelines.

The report summarizes the following:

- Findings of the tree inventory;
- Assessment of overall health and potential for structural failure of inventoried trees;
- Tree retention analysis based on details of the proposed development;
- Protection measures for trees to be retained; and
- Recommended mitigation and replacement considerations.

2.0 Tree Inventory Methodology

A comprehensive inventory and assessment of trees within the subject property was completed by NRSI Certified Arborists between February 2, 2023 and June 10, 2024. Trees located at the boundary of the subject property, as well as trees adjacent to the subject property with the potential to be impacted by the proposed development, were included in the inventory and assessment. Trees outside of the subject property to the north, which contained overlapping crowns, were surveyed through way of dripline delineation.

The inventory included the tagging and assessment of all trees $\geq 10\text{cm}$ in diameter at breast height (DBH) within and adjacent to the limits of grading associated with the proposed development. The locations of trees inventoried were surveyed by Certified Arborists using a GPS unit, which provides mapping grade, sub-meter accuracy. A complete list of assessed trees and their overall health and potential for structural failure is included in Appendix I.

Inventoried trees and delineated natural features are shown on Map 1. A complete list of the trees that were assessed and their overall health is included in Appendix I. The following information was recorded for inventoried trees:

- Tree location;
- Tag number/alphanumeric identifier;
- Species (common and scientific name);
- DBH (cm);
- Number of stems;
- Crown radius (metres);
- General health (Excellent, Good, Fair, Poor, Very Poor, Dead);
- Potential for structural failure (Improbable, Possible, Probable, Imminent); and
- General comments (i.e., disease, aesthetic quality, development constraints, prune to reduce structural failure, sensitivity to development, etc.).

The overall health of each tree and potential for structural failure was assessed based on the criteria outlined in Appendix II (Dunster 2009, Dunster et al. 2013). In carrying out these assessments, NRSI has exercised a reasonable standard of care, skill and diligence as would be customarily and normally provided in carrying out these assessments. The assessments have been made using accepted arboricultural techniques. These include a visual examination of each tree for structural defects, scars, external indications of decay such as fungal fruiting

bodies, evidence of insect attack, the condition of any visible root structures, the degree and direction of lean (if any), the general condition of the tree(s) and the surrounding site, and the current or planned proximity of property and people. None of the trees examined were dissected, cored, probed or climbed and detailed root examinations involving excavation were not undertaken, with the exception of the below air spading activities. The conditions for this assessment, including restrictions, professional responsibility and third-party liability can be found in Appendix III.

2.1 Air Spading

The subject property contains trees and hedgerows straddling the subject property, or just within the subject property, that the development team identified as priority features for retention. Retention of these trees, though not necessarily required, is intended to achieve a more desirable neighbourhood design by incorporating mature trees and natural screening into the proposed site plan lotting.

Many of these isolated trees and hedgerows are adjacent to historically agricultural lands, which inhibit the development of roots through regular ploughing. To properly map the extent of the root zone of these trees, NRSI Certified Arborists completed an air spade investigation. Air spading is a non-invasive arboricultural practice that uses pneumatic pressure to excavate portions of a root zone with practically no impacts to the roots it exposes.

NRSI Certified Arborists used a 2000 Series Airspade with a maximum operating pressure of 150 psi. Linear radial trenches were excavated at decreasing distances from the stem (starting outside the dripline), each to a depth of approximately 6 inches until roots approximately 0.5 cm or thicker were observed. Once the root zone was identified, it was mapped using a GPS unit, which provides mapping grade, sub-meter accuracy. This root zone limit has been used to inform the limit of the proposed site plan, and to determine whether those plans will ultimately result in impacts to the trees, or not.

All trenches were backfilled by hand using a suitable topsoil media, and if applicable, topped with existing sod that may have been separated during the excavation process. This topsoil replacement is required due to the spraying of soil during excavation, and is considered restorative for the root zone, enhancing the soil structure and nutrient availability of the root zone when compared to post-treatment conditions. The extent of the realized root zones can be seen on Map 2.

3.0 Summary of Tree Inventory Findings

In total, 281 trees were inventoried, comprising 30 species, the majority of which are located within hedgerows around the perimeter of the subject property. Of the trees inventoried and assessed, 146 (52%) are native species and 135 (48%) are non-native.

None of the tree species observed are regionally significant or protected under the *Species at Risk Act* (2002) or *Endangered Species Act* (2007).

A complete list of inventoried trees is provided in Appendix I and tree locations are shown on Map 2. Appendix IV includes both a list of tree species inventoried, their health, and whether they are native or non-native, as well as a summary of the overall health of the trees inventoried and their potential for structural failure.

4.0 Tree Retention Analysis and Compensation

4.1 Retention Analysis

The overall health and/or potential for structural failure was compared to the proposed development layout to determine whether existing trees would be impacted by the proposed undertaking. Avoidance, mitigation, and protection measures for trees were examined to determine which trees would be impacted and which could be retained. The retention analysis presented below is based on the proposed concept plan prepared by GSP Group provided to NRSI in June 2025 (Map 2).

Several trees have the potential to be boundary trees due to their stem being in close proximity to the subject property boundary. If the main stem of any tree is located on multiple properties, it is considered a boundary tree, and all owners of those properties must be consulted before any tree removal occurs. Removal, pruning or injury of roots of boundary, or off-property trees will require the permission of all owners involved, as per the Forestry Act (R.S.O. 1990, c. F.26).

Accurately determining ownership is an intensive process that requires detailed staking and assessment. For the purposes of this report, any trees situated near the subject property boundary have been assumed co-owned boundary trees as a conservative estimate. Some trees marked as boundary trees through this exercise, if inspected through more detailed surveying and assessment, could be determined to be solely owned by the proponent. This conservative approach ensures no accidental damage to boundary or off-site trees.

Some potential boundary trees are recommended for removal in this report, such as those in the southeast, southwest, and along the southern Listowel Road, the latter of which are public trees. NRSI is not aware of receipt of approval for these removals at this time, and our recommendation for removal should not be inferred to reflect any approval from any parties.

The tree removal and retention analysis in this report is based on the following considerations:

1. Trees identified as being dead, very poor / poor condition with an imminent or probable potential for structural failure. These trees may be proposed for removal, especially if they may result in a risk to existing or proposed targets.
2. Trees that require removal based on the proposed development plan.

Table 1 provides a summary of the analysis determining trees with the opportunity for retention, and trees that will require removal. Appendix I includes a list of trees inventoried, their overall health and potential for structural failure, and recommended action (retain or remove). The retention analysis is shown on Map 2.

Table 1. Retention and Removal Analysis

Proposed Action	Total
Retain	157
Remove	124
Overall Total	281

4.2 Compensation

As outlined in the Township of Woolwich Design Guidelines (2022),

“Privately owned trees to be removed as a result of construction/development activities must receive approval by the Township Planning Section. If approval is granted for removal of trees, the applicant will assume all costs involved and shall either:

- 1) replace the trees at a ratio of 1:1 or*
- 2) pay the amenity value of the tree(s) calculated in accordance with the most recent International Society of Arboriculture Guide for Plant Appraisal; and/or*
- 3) plant the equivalent number of trees based upon a “no net loss or canopy cover” objective as determined by the Township or designate in an alternatively approved location. Where tree relocation is approved, the applicant will assume all relocation and establishment costs.”*

It is expected that the first listed option will be the most suitable for this situation. Therefore, it is recommended that 124 compensation trees be incorporated into the detailed design plans for the property, and that these plantings be part of the conditions of approval. This number may change if the detailed design of the site requires more or less removals than are expected at this design stage.

During development of the landscape plans it is recommended that the following criteria be considered:

- The plan should be developed by, or reviewed and approved by an Ontario Landscape Architect (OLA), Certified Arborist, Registered Professional Forester or Restoration Specialist;

- Plantings within naturalized areas should be limited to native, non-invasive tree and shrub species indigenous to Waterloo Region that complement the surrounding natural features;
- Include hardy, native tree and shrub species where feasible that are known to thrive in more urban conditions when placed near to roads, front yards, etc. (i.e. compacted soil, drought, high salt tolerance);
- Include a diversity of trees from several genera to increase disease and pest tolerance and discourage monocultures (no more than 30% from a single genus, 10% from a single species);
- Tree and shrub species to be situated in close proximity to roads should be salt and drought tolerant;
- Avoid Ash (*Fraxinus* spp.) species due to the risk of the Emerald Ash Borer (*Agrilus planipennis*);
- Spacing of plant material should account for the ultimate size and form of the selected species and also the purpose of the planting, whether it be for screening, shade, naturalizing, rehabilitation, etc.;
- Special attention to location and height of trees in proximity to utilities and buildings; and
- Ensure that there is sufficient soil volume for all plantings.

5.0 Protection Measures and Recommended Mitigation

During the construction process, efforts will be made to protect the health and root systems of trees that have been assessed for retention in this plan. The Client, or their designate (e.g. construction inspector or site manager), must ensure that all employees and contractors are informed of the meaning and importance of tree protection measures and the ways in which trees to be retained are identified.

5.1 Prior to Construction

Tree Protection Fencing (TPF) should be situated where trees are adjacent to the limit of disturbance/grading. A combination Erosion and Sediment Control (ESC) fence and TPF may be used where appropriate. The Township's Design Guidelines state that "Trees within or adjacent to a construction site must be protected during construction by means of a barrier", though the materials and specification of the fence is not provided.

The TPF should be installed and maintained by the developer or its designate. Prior to any construction activities (rough grading, vegetation and tree removal), the TPF should be installed at least 1m beyond the dripline of the trees to be retained, where possible, in order to protect the root systems. Prior to works commencing on-site, fence installation and location shall be inspected by a Certified Arborist. In the absence of specifications from the Township, it is recommended that TPF should be at least 1.2 m high on t-bar posts, topped with 2x4s with orange plastic snow fence, or equivalent as approved by the Township.

5.1.1 Timing Windows

Migratory Birds Convention Act

The removal of trees and all vegetated areas (i.e., meadow) within the extent of the disturbance proposed for the development has the potential to disrupt nesting birds. The Migratory Birds Convention Act (MBCA, Government of Canada 1994) identifies a list of migratory bird species that are protected. It prohibits the destruction of nests, individuals and activities that would cause an adult bird to abandon a nest. Tree and vegetation removal is to occur outside of the core nesting period for migratory birds as established by the Canadian Wildlife Service (CWS) which extends from approximately April 1 – August 31 (Government of Canada 2018). Every developer, consultant, contractor, etc. is legally obliged to carry out due diligence to protect migratory birds from harm during all construction projects.

Bat Roosting Habitat

To avoid unintentionally harming species at risk bats during tree removal (thereby ensuring compliance with the ESA), tree removals are recommended to occur between December 1 and March 14, which is the period outside of the active bat season (generally April 1st – September 30th).

5.2 During Construction

The recommended TPF is to be maintained by the Client or its agents during the entire construction period to ensure that trees being retained (including their root systems) are protected. Minor construction damage (e.g., damage to limbs or roots) to trees to be retained must be pruned using proper arboricultural techniques. Root pruning, if necessary, should be performed by a Certified Arborist using an appropriate implement to make proper pruning cuts and encourage callous root growth. Should any of the trees intended to be retained be seriously damaged or die as a result of construction activities, the Client staff should be consulted to determine a plan of action, such as treatment or compensation.

Areas protected by TPF shall remain undisturbed and shall not be used for temporary storage, placement or excavation of fill or top soil, the storage of construction materials or equipment, or the storage of debris. Recognizing the root system of a tree often extends well beyond its dripline (i.e., outside the protected area), construction contaminants such as fuels, oils, etc. should be kept clear of areas protected by the TPF.

5.3 Post-Construction

It is recommended that the TPF be removed upon completion of construction activities and adjacent areas are stabilized with a suitable vegetative cover to the satisfaction of the Environmental Inspector or qualified biologist. Removal of TPF and revegetation will permit increased root development for the remaining trees. A Certified Arborist should inspect all retained trees and their rooting area, and recommend remediation work if conditions require it. A post-construction remediation plan may be required if damage to retained trees is noted. Following remediation activities, if needed, a final assessment should be done to ensure all protocols were met, ensuring final project approval.

6.0 Summary

Natural Resource Solutions Inc. (NRSI) was retained by Schlegel Urban Developments in July 2022 to complete a Tree Management Plan (TMP) for a proposed residential development, located at 1065-1103 Listowel Road and 354 Arthur Street, Elmira, within the Region of Waterloo. The Township's Official Plan (2022), and Design Guidelines (2022), were adhered to.

A comprehensive inventory and assessment of trees within the subject property was completed by NRSI Certified Arborists between February 2, 2023 and June 10, 2024. The existing overall health and/or potential for structural failure was compared to the proposed development layout to determine whether existing trees would be impacted by the proposed undertaking.

Following iterative assessment and catering of the site plan to facilitate maximum retention, it is expected that 124 trees require removal. Removal should occur outside of active wildlife seasons, as outlined for bats and migratory birds.

As outlined in the Township of Woolwich Design Guidelines (2022), compensation shall be at a rate of 1:1. Therefore, 124 trees shall be planted to compensate for this loss.

Some potential boundary trees are recommended for removal in this report. NRSI is not aware of receipt of approval for these removals at this time, and our recommendation for removal should not be inferred to reflect any approval from any parties. Investigation of ownership, and receipt of written approval for removal or impact should be pursued during the next design stage.

7.0 References

- Dunster, J.A. 2009. Tree Risk Assessment in Urban Areas and the Urban/Rural Interface: Course Manual. Silverton, Oregon: Pacific Northwest Chapter, International Society of Arboriculture.
- Dunster, J.A., E.T. Smiley, N. Matheny, and S. Lily. 2013. Tree Risk Assessment Manual. Champaign, Illinois: International Society of Arboriculture.
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- Township of Woolwich. (2022). Landscape and Design Guidelines. Township of Woolwich.
- Township of Woolwich. (2022). Official Plan. Township of Woolwich.
- Watt, R.W. and M.C. Caceres. 1999. Managing for Snags in the Boreal Forests of Northeastern Ontario. OMNR. Northeast Science and Technology. Technical Note- 016. 20p.

Appendix I
Tree Inventory Data

Southwood Subdivision, Elmira
Tree Inventory Data

Tree Number	Common Name	Scientific Name	Native/ Non-native	Stem Count	DBH (cm)	Crown Radius (m)	Potential for Structural Failure Rating	Overall Condition	Proposed Action	Comments
48	Norway Maple	<i>Acer platanoides</i>	Non-native	2	24.0	4.0	Improbable	Poor	Remove	Growing on angle; large wound at base; evidence of pruning.
49	Willow sp.	<i>Salix sp.</i>	Native	2	11.8	3.0	Improbable	Poor	Remove	Multiple smaller stems; aggressive basal shoots; multiple dead leaders.
50	Black Walnut	<i>Juglans nigra</i>	Native	1	29.9	4.0	Improbable	Fair	Retain	Evidence of heavy pruning; twisted leaders.
51	Pin Oak	<i>Quercus palustris</i>	Native	3	26.0	1.5	Improbable	Good	Retain	Dead leaf clusters; evidence of pruning; good form.
52	Manitoba Maple	<i>Acer negundo</i>	Native	1	28.1	3.0	Improbable	Fair	Remove	Numerous basal shoots; growing on dirt pile; epicormic shoots.
53	Manitoba Maple	<i>Acer negundo</i>	Native	2	22.4	3.0	Improbable	Fair	Remove	Small wound at base; few dead branches; growing on dirt pile.
54	Manitoba Maple	<i>Acer negundo</i>	Native	4	20.9	4.0	Improbable	Fair	Remove	One stem growing horizontal above ground; multiple dead branches; few branch failures.
55	Black Walnut	<i>Juglans nigra</i>	Native	1	23.8	4.0	Improbable	Fair	Remove	Poor branch attachment; vine throughout canopy; multiple dead branches.
56	Black Walnut	<i>Juglans nigra</i>	Native	3	15.9	3.0	Improbable	Fair	Remove	Vines throughout canopy; poor branch attachment.
57	Black Walnut	<i>Juglans nigra</i>	Native	1	13.6	3.0	Improbable	Fair	Remove	Vines throughout canopy; some poor branch attachment; overall good form.
58	Manitoba Maple	<i>Acer negundo</i>	Native	5	21.3	4.0	Improbable	Fair	Remove	Some epicormic shoots; overall good form.
59	Manitoba Maple	<i>Acer negundo</i>	Native	4	20.0	4.5	Improbable	Fair	Remove	Epicormic shoots; poor branch attachment; one stem laying on ground.
60	Manitoba Maple	<i>Acer negundo</i>	Native	1	13.5	2.0	Improbable	Fair	Remove	Asymmetrical crown due to competition; curved trunk.
61	Black Walnut	<i>Juglans nigra</i>	Native	1	30.3	4.0	Improbable	Fair	Remove	Poor branch attachment; few branch failures; epicormic shoots.
62	Manitoba Maple	<i>Acer negundo</i>	Native	5	13.9	3.0	Improbable	Fair	Remove	Multiple leaders; poor branch attachment.
63	Manitoba Maple	<i>Acer negundo</i>	Native	7	12.8	3.0	Improbable	Fair	Remove	Multiple smaller stems; poor branch attachment; evidence of branch failures.
64	Norway Maple	<i>Acer platanoides</i>	Non-native	1	32.9	5.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; few dead branches; slight curve.
65	Norway Maple	<i>Acer platanoides</i>	Non-native	1	33.6	5.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; few dead branches; few wounds up trunk.
66	Norway Maple	<i>Acer platanoides</i>	Non-native	1	28.2	5.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; few dead branches; curved leader; few dead branches.
67	Norway Maple	<i>Acer platanoides</i>	Non-native	1	48.6	5.0	Improbable	Fair	Remove	Multiple leaders; evidence of pruning; poor large branch attachment; few dead branches.
68	Norway Maple	<i>Acer platanoides</i>	Non-native	1	34.4	5.0	Improbable	Fair	Remove	Burl just above dbh; two leaders; few dead branches.
69	Norway Maple	<i>Acer platanoides</i>	Non-native	1	34.3	5.0	Improbable	Fair	Remove	Multiple leaders; few dead branches; slight curve in trunk.
70	Norway Maple	<i>Acer platanoides</i>	Non-native	1	35.0	5.0	Improbable	Fair	Remove	Wound up base of trunk, healing; three leaders; poor branch attachment; evidence of pruning.
71	Norway Maple	<i>Acer platanoides</i>	Non-native	1	20.5	4.0	Improbable	Very Poor	Remove	Possible dead; numerous dead branches; no visible buds.
72	Common Pear	<i>Pyrus communis</i>	Non-native	1	15.0	4.0	Improbable	Poor	Remove	Numerous dead branches; suppressed crown.
73	Manitoba Maple	<i>Acer negundo</i>	Native	1	26.6	5.0	Improbable	Fair	Remove	Basal shoots; multiple dead branches; some poor branch attachment.
74	Cherry species	<i>Prunus sp.</i>	Non-native	1	14.9	3.0	Improbable	Fair	Remove	Large burl at base; evidence of pruning.
75	Cherry species	<i>Prunus sp.</i>	Non-native	2	22.3	3.0	Improbable	Fair	Remove	Evidence of pruning; aggressive epicormic shoots.
76	Cherry species	<i>Prunus sp.</i>	Non-native	2	18.8	3.0	Improbable	Fair	Remove	Evidence of pruning; overall good form.
77	Black Locust	<i>Robinia pseudoacacia</i>	Non-native	1	26.6	3.0	Improbable	Fair	Remove	Evidence of pruning; slight lean; aggressive epicormic shoots.
78	Norway Maple	<i>Acer platanoides</i>	Non-native	1	32.7	5.0	Improbable	Fair	Remove	Evidence of pruning; epicormic shoots from prune wounds; wound at base; slight lean.

Southwood Subdivision, Elmira
Tree Inventory Data

Tree Number	Common Name	Scientific Name	Native/ Non-native	Stem Count	DBH (cm)	Crown Radius (m)	Potential for Structural Failure Rating	Overall Condition	Proposed Action	Comments
79	Norway Maple	<i>Acer platanoides</i>	Non-native	1	46.9	5.0	Improbable	Fair	Remove	Evidence of pruning; epicormic shoots from prune wounds; wound at base; multiple dead branches.
80	Norway Maple	<i>Acer platanoides</i>	Non-native	1	26.5	5.0	Improbable	Fair	Remove	Evidence of pruning; epicormic shoots from prune wounds; multiple dead branches.
81	Red Maple	<i>Acer rubrum</i>	Native	2	22.3	5.0	Improbable	Fair	Remove	Evidence of pruning; epicormic shoots; curved leaders.
82	Sugar Maple	<i>Acer saccharum</i>	Native	1	22.0	4.0	Improbable	Fair	Remove	Epicormic growth; poor branch attachment; multiple leaders.
83	Sugar Maple	<i>Acer saccharum</i>	Native	1	30.5	4.0	Improbable	Fair	Remove	Epicormic growth; poor branch attachment; evidence of branch failures.
84	Sugar Maple	<i>Acer saccharum</i>	Native	1	24.2	4.0	Possible	Very Poor	Remove	Bark peeling from trunk and branches; numerous dead branches ; few buds.
85	Sugar Maple	<i>Acer saccharum</i>	Native	1	24.1	4.0	Improbable	Fair	Remove	Lean in trunk; epicormic shoots; very poor branch attachment.
86	Red Maple	<i>Acer rubrum</i>	Native	1	28.1	4.0	Improbable	Fair	Remove	Large wound up trunk; evidence of pruning.
87	Red Maple	<i>Acer rubrum</i>	Native	3	33.4	6.0	Improbable	Poor	Remove	Evidence of pruning; large wound at stem connection, showing rot; epicormic shoots.
88	Red Maple	<i>Acer rubrum</i>	Native	1	34.9	6.0	Improbable	Fair	Remove	Evidence of pruning; three leaders, poor branch attachment.
89	Black Locust	<i>Robinia pseudoacacia</i>	Non-native	1	31.1	5.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; aggressive basal shoots; evidence of branch failures.
90	Black Locust	<i>Robinia pseudoacacia</i>	Non-native	1	33.3	5.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; aggressive basal shoots; evidence of branch failures.
91	Black Locust	<i>Robinia pseudoacacia</i>	Non-native	1	24.1	3.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; aggressive basal shoots; epicormic shoots; evidence of branch failures.
92	Black Locust	<i>Robinia pseudoacacia</i>	Non-native	1	31.1	4.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; aggressive basal shoots; epicormic shoots; evidence of branch failures.
93	Black Locust	<i>Robinia pseudoacacia</i>	Non-native	1	24.8	3.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; aggressive basal shoots; epicormic shoots; evidence of branch failures.
94	Black Locust	<i>Robinia pseudoacacia</i>	Non-native	1	27.8	4.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; aggressive basal shoots; epicormic shoots; evidence of branch failures.
95	Red Maple	<i>Acer rubrum</i>	Native	1	38.7	4.0	Improbable	Fair	Remove	Multiple leaders; poor branch attachment; few dead branches.
96	Red Maple	<i>Acer rubrum</i>	Native	1	43.5	6.0	Possible	Fair	Remove	Two leaders, very poor attachment; large wound at leader attachment; eventual split.
97	Red Maple	<i>Acer rubrum</i>	Native	1	10.7	1.0	Improbable	Fair	Remove	Good form.
98	Red Maple	<i>Acer rubrum</i>	Native	1	11.9	1.0	Improbable	Fair	Remove	Good form; surrounded by storage bins.
99	Red Maple	<i>Acer rubrum</i>	Native	1	11.9	1.0	Improbable	Fair	Remove	Aggressive basal shoots; overall good form.
100	Sugar Maple	<i>Acer saccharum</i>	Native	1	39.4	5.0	Improbable	Fair	Remove	Some poor branch attachment; few epicormic shoots.
101	Black Locust	<i>Robinia pseudoacacia</i>	Non-native	1	14.5	2.0	Improbable	Fair	Remove	Some poor branch attachment; overall good form.
102	Sugar Maple	<i>Acer saccharum</i>	Native	1	39.6	5.0	Improbable	Fair	Remove	Some poor branch attachment; few epicormic shoots.
103	Sugar Maple	<i>Acer saccharum</i>	Native	1	29.1	5.0	Improbable	Fair	Remove	Some poor branch attachment; few epicormic shoots; overall good form.
104	Freeman's Maple	<i>Acer x freemanii</i>	Native	1	35.9	5.0	Improbable	Fair	Remove	Some poor branch attachment; few epicormic shoots; damage on some branches; overall good form; damage at base.

Southwood Subdivision, Elmira
Tree Inventory Data

Tree Number	Common Name	Scientific Name	Native/ Non-native	Stem Count	DBH (cm)	Crown Radius (m)	Potential for Structural Failure Rating	Overall Condition	Proposed Action	Comments
105	Freeman's Maple	<i>Acer x freemanii</i>	Native	1	35.1	5.0	Improbable	Fair	Remove	Some poor branch attachment; few epicormic shoots; damage on some branches; knots all over branches..
106	Black Locust	<i>Robinia pseudoacacia</i>	Non-native	1	10.1	2.0	Improbable	Poor	Remove	Additional smaller stem; top completely broken in half.
107	Black Locust	<i>Robinia pseudoacacia</i>	Non-native	1	14.8	1.0	Improbable	Fair	Remove	Some poor branch attachment; overall good form.
108	Freeman's Maple	<i>Acer x freemanii</i>	Native	1	47.5	7.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; evidence of branch failures.
109	Freeman's Maple	<i>Acer x freemanii</i>	Native	1	42.0	6.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; evidence of branch failures.
110	Sweet Cherry	<i>Prunus avium</i>	Non-native	1	48.0	6.0	Improbable	Fair	Remove	Evidence of pruning; poor branch attachment; evidence of branch failures.
111	Manitoba Maple	<i>Acer negundo</i>	Native	1	63.2	7.0	Improbable	Fair	Remove	Evidence of pruning; basal shoots; evidence of branch failures; few dead branches.
112	Freeman's Maple	<i>Acer x freemanii</i>	Native	1	89.1	11.0	Improbable	Fair	Remove	Evidence of pruning; basal shoots; evidence of branch failures; few dead branches; overall good form and attachment.
113	Sugar Maple	<i>Acer saccharum</i>	Native	1	84.2	9.0	Improbable	Fair	Remove	Curve in lower trunk; poor attachment of main stems; girdling roots; poor branch attachment; evidence of branch failures.
114	Blue Spruce	<i>Picea pungens</i>	Non-native	1	30.3	2.0	Improbable	Fair	Remove	Thinner canopy due to suppressed crown; self pruning.
115	Blue Spruce	<i>Picea pungens</i>	Non-native	1	16.3	1.0	Improbable	Poor	Remove	Canopy almost completely suppressed.
116	Blue Spruce	<i>Picea pungens</i>	Non-native	1	31.1	2.0	Improbable	Fair	Remove	Canopy suppressed; self pruning.
117	Blue Spruce	<i>Picea pungens</i>	Non-native	1	19.0	4.0	Improbable	Fair	Remove	Canopy suppressed; self pruning.
118	Blue Spruce	<i>Picea pungens</i>	Non-native	1	26.6	4.0	Improbable	Poor	Remove	Canopy asymmetrical and suppressed; self pruning.
119	Blue Spruce	<i>Picea pungens</i>	Non-native	1	18.9	3.0	Improbable	Poor	Remove	Canopy very asymmetrical and suppressed; self pruning.
120	Blue Spruce	<i>Picea pungens</i>	Non-native	1	43.0	4.0	Improbable	Fair	Retain	Evidence of pruning; self pruning; growing into shed.
121	Blue Spruce	<i>Picea pungens</i>	Non-native	1	28.4	4.0	Improbable	Fair	Retain	Canopy suppressed; self pruning.
122	White Spruce	<i>Picea glauca</i>	Native	1	24.5	3.0	Improbable	Fair	Retain	Canopy suppressed; self pruning.
123	White Spruce	<i>Picea glauca</i>	Native	1	30.8	3.0	Improbable	Fair	Retain	Canopy suppressed; self pruning.
124	White Spruce	<i>Picea glauca</i>	Native	1	27.5	3.0	Improbable	Fair	Retain	Canopy suppressed; self pruning.
125	White Spruce	<i>Picea glauca</i>	Native	1	41.9	3.0	Improbable	Fair	Remove	Canopy suppressed; self pruning.
126	White Spruce	<i>Picea glauca</i>	Native	1	23.4	3.0	Improbable	Fair	Remove	Canopy suppressed; self pruning.
127	White Spruce	<i>Picea glauca</i>	Native	1	20.6	3.0	Improbable	Fair	Remove	Canopy suppressed; self pruning.
128	White Spruce	<i>Picea glauca</i>	Native	1	22.7	2.0	Improbable	Fair	Remove	Canopy suppressed; self pruning.
129	White Spruce	<i>Picea glauca</i>	Native	1	28.5	3.0	Improbable	Fair	Remove	Canopy suppressed; self pruning.
130	White Spruce	<i>Picea glauca</i>	Native	1	17.4	4.0	Improbable	Poor	Remove	Canopy suppressed; self pruning.
131	White Spruce	<i>Picea glauca</i>	Native	1	10.2	1.0	Improbable	Poor	Remove	Canopy suppressed; self pruning.
132	White Spruce	<i>Picea glauca</i>	Native	1	21.1	2.5	Improbable	Fair	Remove	Canopy suppressed; self pruning.
133	White Spruce	<i>Picea glauca</i>	Native	1	24.0	2.5	Improbable	Dead	Remove	No needles
134	White Spruce	<i>Picea glauca</i>	Native	1	25.0	2.5	Improbable	Fair	Retain	Suppressed crown; self pruning.
135	White Spruce	<i>Picea glauca</i>	Native	1	36.7	3.0	Improbable	Fair	Retain	Suppressed crown; self pruning.
136	White Spruce	<i>Picea glauca</i>	Native	1	31.5	3.0	Improbable	Fair	Retain	Suppressed crown; self pruning.
137	Blue Spruce	<i>Picea pungens</i>	Non-native	1	28.2	2.0	Improbable	Fair	Retain	Suppressed crown; self pruning.
138	White Spruce	<i>Picea glauca</i>	Native	1	24.5	2.0	Improbable	Fair	Retain	Suppressed crown; self pruning.
139	White Spruce	<i>Picea glauca</i>	Native	1	30.2	2.0	Improbable	Fair	Retain	Suppressed crown; self pruning.
140	White Spruce	<i>Picea glauca</i>	Native	1	30.5	4.0	Improbable	Fair	Retain	Suppressed crown; self pruning.
141	White Spruce	<i>Picea glauca</i>	Native	1	24.8	4.0	Improbable	Fair	Retain	Suppressed crown; \$burl at dbh; branch failures; self pruning.
142	Blue Spruce	<i>Picea pungens</i>	Non-native	1	12.5	1.0	Improbable	Fair	Retain	Asymmetrical crown; being supported by rope teather.
143	Blue Spruce	<i>Picea pungens</i>	Non-native	1	14.4	1.0	Improbable	Fair	Retain	One side of tree has very little needles; burl at base.
144	Blue Spruce	<i>Picea pungens</i>	Non-native	1	13.8	1.0	Improbable	Fair	Retain	One side of tree has very little needles; burl at base.

Southwood Subdivision, Elmira
Tree Inventory Data

Tree Number	Common Name	Scientific Name	Native/ Non-native	Stem Count	DBH (cm)	Crown Radius (m)	Potential for Structural Failure Rating	Overall Condition	Proposed Action	Comments
145	Blue Spruce	<i>Picea pungens</i>	Non-native	1	10.6	1.0	Improbable	Fair	Retain	One side of tree has very little needles; thin canopy..
146	Red Maple	<i>Acer rubrum</i>	Native	1	71.4	6.0	Improbable	Poor	Retain	Evidence of branch failures; evidence of pruning; poor branch attachment; peeling bark on trunk and branches; epicormic shoots.
147	Paper Birch	<i>Betula papyrifera</i>	Native	2	33.4	6.0	Improbable	Fair	Retain	Gulls on branches; evidence of pruning; epicormic shoots; good form.
148	Red Maple	<i>Acer rubrum</i>	Native	1	24.5	4.0	Improbable	Fair	Retain	Large wound at base, healing; slight curve in trunk.
149	Red Maple	<i>Acer rubrum</i>	Native	3	75.7	6.0	Probable	Poor	Retain	Large branch failures; evidence of pruning; peeling bark; large branch failures; numerous dead branches; wildlife feeding holes; branches growing into itself.
150	Blue Spruce	<i>Picea pungens</i>	Non-native	1	43.4	4.0	Improbable	Fair	Retain	Evidence of pruning ; self pruning; some lost canopy due to maple; overall good form;.
151	Blue Spruce	<i>Picea pungens</i>	Non-native	1	57.0	5.0	Improbable	Fair	Retain	Evidence of pruning ; self pruning; some lost canopy due to other spruce ; overall good form;.
152	Norway Maple	<i>Acer platanoides</i>	Non-native	1	59.1	5.0	Improbable	Fair	Retain	Poor branch attachment; few dead branches; evidence of branch failures.
153	Norway Maple	<i>Acer platanoides</i>	Non-native	1	63.7	6.0	Improbable	Fair	Retain	Large burl at dbh; d taken just below dbh; poor branch attachment; few dead branches; evidence of branch failures; evidence of pruning.
154	Norway Maple	<i>Acer platanoides</i>	Non-native	1	72.7	6.0	Possible	Very Poor	Retain	Exposed core from base up into one leader; poor branch attachment; epicormic shoots; evidence of pruning; twisted limbs; multiple dead branches.
155	Norway Maple	<i>Acer platanoides</i>	Non-native	1	31.3	6.0	Improbable	Fair	Retain	Poor branch attachment ; slight lean; growing close to house.
156	Norway Maple	<i>Acer platanoides</i>	Non-native	1	15.4	4.0	Improbable	Fair	Retain	Multiple dead branches ; overall good form.
157	Black Walnut	<i>Juglans nigra</i>	Native	1	13.5	2.0	Improbable	Fair	Retain	Lost leader; strong replacement; vines within lower canopy.
158	Black Walnut	<i>Juglans nigra</i>	Native	1	12.4	3.0	Improbable	Good	Retain	Evidence of pruning; good form.
159	Black Walnut	<i>Juglans nigra</i>	Native	1	14.3	3.0	Improbable	Fair	Remove	Evidence of pruning; good U double leader attachment; vines entangled from base to canopy..
160	Black Walnut	<i>Juglans nigra</i>	Native	2	33.3	4.0	Improbable	Fair	Remove	Larger stem just two morphed smaler trunks; poor branch attachment; branches growing into one another; evidence of pruning.
161	Norway Maple	<i>Acer platanoides</i>	Non-native	2	58.0	7.0	Possible	Fair	Remove	Evidence of pruning; large branch failures; poor branch attachment; branches growing into one another; large wounds on main branches; epicormic shoots; girdling roots.
162	Manitoba Maple	<i>Acer negundo</i>	Native	1	75.5	8.0	Improbable	Fair	Remove	Basal shoots; epicormic shoots; evidence of large branch failures; few dead branches.
164	Black Walnut	<i>Juglans nigra</i>	Native	2	20.6	4.0	Improbable	Fair	Remove	Poor branch attachment; evidence of pruning; few dead branches.
165	Black Walnut	<i>Juglans nigra</i>	Native	1	15.0	3.0	Improbable	Fair	Remove	Good form; evidence of pruning;.
166	Black Walnut	<i>Juglans nigra</i>	Native	1	16.7	3.0	Improbable	Fair	Remove	Good U attachment of leaders; neighbouring branches rubbing on limbs; evidence of pruning.
167	Black Walnut	<i>Juglans nigra</i>	Native	1	21.5	4.0	Improbable	Fair	Remove	Evidence of pruning; some poor branch attachment; rubbing branches.
168	Manitoba Maple	<i>Acer negundo</i>	Native	3	18.8	6.0	Improbable	Fair	Remove	Evidence of pruning; some poor branch attachment; aggressive basal shoots and epicormic shoots.
169	Black Walnut	<i>Juglans nigra</i>	Native	1	16.5	4.0	Improbable	Fair	Remove	Scaffold branches from near base; crowded by manitoba maples; fair attachment.

Southwood Subdivision, Elmira
Tree Inventory Data

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170	Sugar Maple	<i>Acer saccharum</i>	Native	2	102.5	6.5	Improbable	Fair	Remove	Very poor branch attachment; all branches twisted into one another; number of dead branches; rot between two stems; possible bat habitat; active squirrel nest.
171	Black Cherry	<i>Prunus serotina</i>	Native	1	53.5	6.0	Possible	Very Poor	Remove	Number of main leaders dead w bark peeled; evidence of branch failures; peeling bark.
172	Sugar Maple	<i>Acer saccharum</i>	Native	1	65.5	6.0	Possible	Fair	Remove	Evidence of numerous large branch failures; poor branch attachment, tangled branches.
173	Black Walnut	<i>Juglans nigra</i>	Native	1	24.3	3.0	Improbable	Fair	Remove	Some poor branch attachment; few dead branches; dead lower branches.
174	Manitoba Maple	<i>Acer negundo</i>	Native	2	18.0	3.0	Improbable	Fair	Remove	Poor branch attachment; slight lean; vines within branches.
175	Black Walnut	<i>Juglans nigra</i>	Native	1	14.3	2.0	Improbable	Fair	Remove	Some poor branch attachment; peeling bark at limb attachment; overall good form.
A	Eastern White Cedar	<i>Thuja occidentalis</i>	Native	1	11.0	1.0	Improbable	Fair	Retain	A part of cedar hedgerow; slightly overcrowded.
AA	Silver Maple	<i>Acer saccharinum</i>	Native	1	52.3	6.0	Improbable	Fair	Remove	Multiple leaders; epicormic shoots; evidence of branch failures; poor branch attachment.
AB	Silver Maple	<i>Acer saccharinum</i>	Native	2	28.4	5.0	Improbable	Fair	Remove	Aggressive basal and epicormic shoots; poor branch attachment; evidence of branch failures.
AC	Silver Maple	<i>Acer saccharinum</i>	Native	1	54.6	5.5	Improbable	Fair	Remove	Epicormic shoots; double leader; evidence of branch failures; evidence of pruning.
AD	Silver Maple	<i>Acer saccharinum</i>	Native	1	45.5	5.5	Improbable	Fair	Remove	Aggressive basal shoots; multiple leaders; poor branch attachment, good attachment of leaders; lean in trunk.
AE	Silver Maple	<i>Acer saccharinum</i>	Native	1	52.3	6.5	Improbable	Fair	Remove	Slight lean in trunk; evidence of large branch failures; epicormic shoots; some poor branch attachment.
AF	Silver Maple	<i>Acer saccharinum</i>	Native	1	27.5	4.0	Improbable	Fair	Remove	Slight lean in trunk; evidence of second removal/pruning; epicormic shoots; evidence of branch failures.
AG	Silver Maple	<i>Acer saccharinum</i>	Native	1	55.9	6.0	Improbable	Fair	Remove	Multiple leaders; few dead branches; epicormic shoots; wounds on few of large branches.
AH	Silver Maple	<i>Acer saccharinum</i>	Native	1	52.5	6.0	Improbable	Fair	Remove	Double leader with good attachment; epicormic shoots; evidence of branch failures; overall good form.
AI	Silver Maple	<i>Acer saccharinum</i>	Native	1	61.3	6.5	Improbable	Fair	Remove	Double leader with good attachment; epicormic shoots; evidence of branch failures.
AJ	Silver Maple	<i>Acer saccharinum</i>	Native	1	75.5	7.0	Improbable	Fair	Remove	Multiple leaders; evidence of branch failures; epicormic shoots; poor branch attachment; slight lean.
AK	Silver Maple	<i>Acer saccharinum</i>	Native	1	53.3	6.0	Improbable	Fair	Remove	Slight lean in trunk; large basal shoot from base; fair branch attachment; evidence of branch failures; few dead branches.
AL	Blue Spruce	<i>Picea pungens</i>	Non-native	1	18.0	2.0	Improbable	Fair	Retain	Good form; crowded by cedar
AM	Blue Spruce	<i>Picea pungens</i>	Non-native	1	21.0	3.0	Improbable	Fair	Retain	Good form.
AN	Norway Maple	<i>Acer platanoides</i>	Non-native	1	28.0	3.0	Improbable	Fair	Retain	Poor branch attachment; evidence of pruning.
AO	Norway Maple	<i>Acer platanoides</i>	Non-native	1	28.0	3.0	Improbable	Fair	Retain	Some poor branch attachment; evidence of pruning; overall good form.
AP	Blue Spruce	<i>Picea pungens</i>	Non-native	1	17.9	3.0	Improbable	Fair	Retain	Evidence of branch pruning; self pruning.
AQ	Blue Spruce	<i>Picea pungens</i>	Non-native	1	28.0	3.0	Improbable	Fair	Retain	Evidence of branch pruning; self pruning.
AR	American Elm	<i>Ulmus americana</i>	Native	1	35.0	6.0	Improbable	Fair	Retain	Cannot see base of trunk due to fence; overall good form.
AS	Sugar Maple	<i>Acer saccharum</i>	Native	1	45.0	6.0	Improbable	Fair	Retain	Multiple dead branches; poor attachment of main leaders.
AT	Red Maple	<i>Acer rubrum</i>	Native	1	16.5	2.0	Improbable	Fair	Retain	Aggressive basal shoots; overall good form.
AU	Norway Maple	<i>Acer platanoides</i>	Non-native	1	20.0	2.5	Improbable	Fair	Remove	Evidence of pruning ; good form.

Southwood Subdivision, Elmira
Tree Inventory Data

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AV	English Oak	<i>Quercus robur</i>	Non-native	2	18.0	4.0	Improbable	Fair	Retain	Evidence of pruning; good form.
AW	English Oak	<i>Quercus robur</i>	Non-native	2	24.0	3.5	Improbable	Fair	Remove	Evidence of pruning; good form; some poor branch attachment
AX	Silver Maple	<i>Acer saccharinum</i>	Native	2	40.0	6.0	Improbable	Fair	Retain	Some epicormic shoots; moss on trunk; minor branch failures.
AY	White Ash	<i>Fraxinus americana</i>	Native	1	25.0	3.0	Improbable	Fair	Retain	Basal shoots; some peeling bark; overall good form; few dead branches.
AZ	White Spruce	<i>Picea glauca</i>	Native	1	15.0	1.0	Improbable	Fair	Retain	Close to shed; self pruning; dieback.
B	Eastern White Cedar	<i>Thuja occidentalis</i>	Native	3	11.0	1.5	Improbable	Fair	Retain	A part of cedar hedgerow; slightly overcrowded.
BA	Manitoba Maple	<i>Acer negundo</i>	Native	2	33.1	4.0	Improbable	Fair	Retain	Debris amongst roots; basal shoots; lean into field.
BB	Manitoba Maple	<i>Acer negundo</i>	Native	2	29.2	4.0	Improbable	Fair	Retain	Aggressive basal shoots; one stem leaning into cedars.
BC	Tamarack	<i>Larix laricina</i>	Native	1	25.0	3.0	Improbable	Poor	Retain	Growing within manny's; on lean; crowded crown canopy.
BD	Black Walnut	<i>Juglans nigra</i>	Native	1	28.7	4.0	Improbable	Fair	Retain	Tools on root zones; crowded crown nopy; asymetrical crown toward building.
BE	Eastern White Cedar	<i>Thuja occidentalis</i>	Native	1	12.7	1.0	Improbable	Good	Retain	Leader crushed by mani; growing on slight angle.
BF	Eastern White Cedar	<i>Thuja occidentalis</i>	Native	1	14.1	2.0	Improbable	Fair	Retain	Self pruning; overall good form.
BG	Eastern White Cedar	<i>Thuja occidentalis</i>	Native	1	10.7	2.0	Improbable	Fair	Retain	Self pruning; overall good form.
BH	Eastern White Cedar	<i>Thuja occidentalis</i>	Native	1	12.0	2.0	Improbable	Fair	Retain	Self pruning; overall good form.
BI	Trembling Aspen	<i>Populus tremuloides</i>	Native	1	13.6	3.0	Improbable	Fair	Retain	Crowded by cedar; overall good form.
BJ	Trembling Aspen	<i>Populus tremuloides</i>	Native	1	38.7	5.0	Improbable	Fair	Retain	Few dead branches ; evidence of branch failures; evidence of pruning; growing beside storage shed.
BK	Norway Maple	<i>Acer platanoides</i>	Non-native	1	19.5	3.0	Improbable	Fair	Retain	Multiple dead branches ; overall good form;support strap between teee and cedar.
BL	Eastern Red Cedar	<i>Juniperus virginiana</i>	Native	3	26.0	4.0	Improbable	Fair	Retain	Being supprted via straps to nm; slight slant; overall good form.
BM	Norway Maple	<i>Acer platanoides</i>	Non-native	1	12.0	2.0	Improbable	Fair	Retain	Wound at base; good form;.
BN	Sugar Maple	<i>Acer saccharum</i>	Native	1	18.0	2.5	Improbable	Fair	Retain	Wound at base; good form;.
BO	Sugar Maple	<i>Acer saccharum</i>	Native	1	18.0	2.5	Improbable	Fair	Retain	Wound at base; good form; epicormic growth.
BP	Blue Spruce	<i>Picea pungens</i>	Non-native	1	35.0	4.0	Improbable	Fair	Retain	Evidence of pruning; one side slightly crowded.
BQ	White Spruce	<i>Picea glauca</i>	Native	1	20.0	4.0	Improbable	Fair	Retain	Evidence of pruning; crown crowded
BR	Blue Spruce	<i>Picea pungens</i>	Non-native	1	37.0	4.0	Improbable	Fair	Retain	Evidence of pruning; crown crowded
BS	Blue Spruce	<i>Picea pungens</i>	Non-native	1	28.0	4.0	Improbable	Fair	Retain	Evidence of pruning; crown crowded
BT	Blue Spruce	<i>Picea pungens</i>	Non-native	1	22.0	3.0	Improbable	Fair	Retain	Evidence of pruning; crown crowded
BU	Blue Spruce	<i>Picea pungens</i>	Non-native	1	20.0	3.0	Improbable	Fair	Retain	Evidence of pruning; crown crowded
BV	Blue Spruce	<i>Picea pungens</i>	Non-native	1	40.0	4.0	Improbable	Fair	Retain	Evidence of pruning; crown slightly crowded
BW	White Spruce	<i>Picea glauca</i>	Native	1	4.0	3.0	Improbable	Fair	Retain	Evidence of pruning; crown slightly crowded
BX	Black Walnut	<i>Juglans nigra</i>	Native	1	57.0	7.0	Improbable	Good	Retain	Full crown; somewhat asymmetrical to field due to crown competition; codominant leaders.
BY	Sweet Cherry	<i>Prunus avium</i>	Non-native	1	29.0	6.0	Improbable	Fair	Retain	Crown highly asymmetrical towards field; ; phototropic lean; twig dieback; exposed roots with surface damage.
BZ	American Basswood	<i>Tilia americana</i>	Native	9	30.0	7.0	Improbable	Good	Retain	Multistem with weak attachment; minor twig dieback.
C	Eastern White Cedar	<i>Thuja occidentalis</i>	Native	2	14.0	1.5	Improbable	Fair	Retain	A part of cedar hedgerow; slightly overcrowded.
CA	American Basswood	<i>Tilia americana</i>	Native	4	35.0	6.5	Possible	Poor	Retain	Multistem with several pruned stems at base; cankers along all trunks; stunted leaved; fairly sparse crown; basal shoots.
CB	Norway Maple	<i>Acer platanoides</i>	Non-native	1	15.0	3.0	Improbable	Fair	Retain	Crown asymmetrical to field due to crown competition; fence posts stacked at base; some stripped bark at mid trunk.

Southwood Subdivision, Elmira
Tree Inventory Data

Tree Number	Common Name	Scientific Name	Native/ Non-native	Stem Count	DBH (cm)	Crown Radius (m)	Potential for Structural Failure Rating	Overall Condition	Proposed Action	Comments
CC	Norway Maple	<i>Acer platanoides</i>	Non-native	1	14.5	3.5	Improbable	Fair	Retain	Crown asymmetrical to field due to crown competition; fence posts stacked at base; some stripped bark at mid trunk.
CD	Sweet Cherry	<i>Prunus avium</i>	Non-native	1	31.0	6.0	Improbable	Fair	Retain	Crown asymmetrical to field due to crown competition; fence posts stacked at base; Longitudinal wound along lower trunk sealed, some gummosis.
CE	Sweet Cherry	<i>Prunus avium</i>	Non-native	1	22.0	4.0	Improbable	Fair	Retain	Tall narrow crown, spreading at top; epicormic shoots minor twig dieback.
CF	Sweet Cherry	<i>Prunus avium</i>	Non-native	1	20.0	2.5	Improbable	Fair	Retain	High crown; minor dead twigs; minor epicormic shoots.
CG	Sweet Cherry	<i>Prunus avium</i>	Non-native	1	26.0	6.0	Improbable	Fair	Retain	Crown asymmetrical to field due to crown competition; twig dieback.
CH	American Basswood	<i>Tilia americana</i>	Native	1	36.5	7.0	Improbable	Fair	Retain	Crown asymmetrical to field due to crown competition; crown full; one overextended low branch.
CI	Sugar Maple	<i>Acer saccharum</i>	Native	1	13.5	2.5	Improbable	Good	Retain	Base in contact with adjacent basswood; crown competition; erect form, full crown.
CJ	American Basswood	<i>Tilia americana</i>	Native	8	35.0	6.0	Improbable	Good	Retain	Multistem, stems fusing; vigorous crown; competition towards field.
CK	Norway Maple	<i>Acer platanoides</i>	Non-native	1	36.5	6.0	Improbable	Fair	Retain	Planted in row; full dense crown; trunk and major branch wounds with moderate response growth.
CL	Norway Maple	<i>Acer platanoides</i>	Non-native	1	32.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; girdling roots.
CM	Norway Maple	<i>Acer platanoides</i>	Non-native	1	40.0		Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots; branch rub.
CN	Norway Maple	<i>Acer platanoides</i>	Non-native	1	39.5	6.0	Improbable	Fair	Remove	Planted in row; full dense crown; swooped trunk (phototropic lean); construction materials at base; large wound at 2m with wound wood and decay.
CO	Norway Maple	<i>Acer platanoides</i>	Non-native	1	45.0	5.5	Improbable	Fair	Remove	Planted in row; full dense crown; large girdling roots.
CP	Norway Maple	<i>Acer platanoides</i>	Non-native	1	37.7	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
CQ	Norway Maple	<i>Acer platanoides</i>	Non-native	1	32.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
CR	Norway Maple	<i>Acer platanoides</i>	Non-native	1	31.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
CS	Norway Maple	<i>Acer platanoides</i>	Non-native	1	32.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
CT	Norway Maple	<i>Acer platanoides</i>	Non-native	1	33.5	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
CU	Norway Maple	<i>Acer platanoides</i>	Non-native	1	39.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
CV	Norway Maple	<i>Acer platanoides</i>	Non-native	1	32.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
CW	Norway Maple	<i>Acer platanoides</i>	Non-native	1	33.5	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
CX	Norway Maple	<i>Acer platanoides</i>	Non-native	1	32.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots; shed on west side.
CY	Norway Maple	<i>Acer platanoides</i>	Non-native	1	37.5	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
CZ	Norway Maple	<i>Acer platanoides</i>	Non-native	2	39.5	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
D	Eastern White Cedar	<i>Thuja occidentalis</i>	Native	1	11.0	1.5	Improbable	Fair	Retain	A part of cedar hedgerow; slightly overcrowded.
DA	Norway Maple	<i>Acer platanoides</i>	Non-native	2	26.5	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
DB	Norway Maple	<i>Acer platanoides</i>	Non-native	1	32.5	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
DC	Norway Maple	<i>Acer platanoides</i>	Non-native	1	30.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
DD	Norway Maple	<i>Acer platanoides</i>	Non-native	1	24.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots; small broken secondary stem at base.
DE	Norway Maple	<i>Acer platanoides</i>	Non-native	1	31.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
DF	Norway Maple	<i>Acer platanoides</i>	Non-native	1	31.0	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots; severely leaning east.
DG	Norway Maple	<i>Acer platanoides</i>	Non-native	1	35.5	5.0	Improbable	Fair	Retain	Planted in row; full dense crown; large girdling roots.
DH	Hawthorn sp.	<i>Crataegus sp.</i>	Native	1	11.5	4.0	Improbable	Fair	Retain	Heavy lean to east; major branch grafted serviceberry; suppressed.

Southwood Subdivision, Elmira
Tree Inventory Data

Tree Number	Common Name	Scientific Name	Native/ Non-native	Stem Count	DBH (cm)	Crown Radius (m)	Potential for Structural Failure Rating	Overall Condition	Proposed Action	Comments
DI	Paper Birch	<i>Betula papyrifera</i>	Native	1	26.0	5.0	Improbable	Fair	Retain	Minor dead branches; good form.
DJ	Norway Maple	<i>Acer platanoides</i>	Non-native	2	44.0	6.0	Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches
DK	Norway Maple	<i>Acer platanoides</i>	Non-native	1	33.5	4.0	Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches; dense crown.
DL	Norway Maple	<i>Acer platanoides</i>	Non-native	1	20.0	5.0	Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches: dense crown.
DM	Norway Maple	<i>Acer platanoides</i>	Non-native	1	23.0	4.0	Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches: dense crown; asymmetrical crown W.
DN	Norway Maple	<i>Acer platanoides</i>	Non-native	1	43.5	6.0	Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches: dense crown; large pruning cuts with minor reaction wood.
DO	Norway Maple	<i>Acer platanoides</i>	Non-native	1	40.5	6.0	Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches: dense crown.
DP	Norway Maple	<i>Acer platanoides</i>	Non-native	1	20.5	3.0	Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches: dense crown.
DQ	Norway Maple	<i>Acer platanoides</i>	Non-native	2	35.0		Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches: dense crown.
DR	Norway Maple	<i>Acer platanoides</i>	Non-native	2	25.5	3.0	Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches: dense crown; asymmetrical crown W.
DS	Norway Maple	<i>Acer platanoides</i>	Non-native	1	29.0	3.0	Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches: dense crown; asymmetrical crown W; moderate included bark.
DT	Norway Maple	<i>Acer platanoides</i>	Non-native	1	43.0	3.0	Improbable	Fair	Retain	Girdling roots; planted in row; minor dead branches: dense crown.
DU	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	29.0	3.0	Improbable	Fair	Retain	planted in row; minor dead branches: minor epicormic growth.
DV	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	23.5	3.0	Improbable	Fair	Retain	planted in row; minor dead branches: minor epicormic growth.
DW	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	22.0	4.0	Improbable	Fair	Retain	planted in row; minor dead branches: minor epicormic growth.
DX	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	26.0	4.0	Improbable	Fair	Retain	planted in row; minor dead branches: minor epicormic growth.
DY	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	20.5	4.0	Improbable	Fair	Retain	planted in row; minor dead branches: minor epicormic growth.
DZ	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	24.5	4.0	Improbable	Fair	Retain	planted in row; minor dead branches: minor epicormic growth.
E	Norway Maple	<i>Acer platanoides</i>	Non-native	1	25.0	3.5	Improbable	Fair	Retain	Double leader; poor branch attachment; full form.
EA	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	27.5	5.0	Improbable	Fair	Retain	planted in row; minor dead branches: minor epicormic growth.
EB	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	30.0	4.0	Improbable	Fair	Retain	planted in row; minor dead branches: minor epicormic growth.
EC	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	13.0	3.0	Improbable	Fair	Retain	planted in row; minor dead branches: minor epicormic growth.
ED	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	20.5	4.0	Improbable	Fair	Retain	planted in row; minor dead branches: minor epicormic growth.
EE	Thornless Honey Locust	<i>Gleditsia triacanthos var. inermis</i>	Non-native	1	27.0	4.0	Improbable	Fair	Remove	planted in row; minor dead branches: minor epicormic growth; poor pruning cuts.
EF	Norway Maple	<i>Acer platanoides</i>	Non-native	1	38.0	4.0	Improbable	Fair	Retain	planted in row; minor dead branches; girdling roots; asymmetrical crown; curved trunk.

Southwood Subdivision, Elmira
Tree Inventory Data

Tree Number	Common Name	Scientific Name	Native/ Non-native	Stem Count	DBH (cm)	Crown Radius (m)	Potential for Structural Failure Rating	Overall Condition	Proposed Action	Comments
EG	Norway Maple	<i>Acer platanoides</i>	Non-native	3	16.0	4.0	Improbable	Fair	Retain	planted in row; minor dead branches; girdling roots; asymmetrical crown; debris around base; epicormic shoots.
EH	Norway Maple	<i>Acer platanoides</i>	Non-native	1	35.5	4.0	Improbable	Fair	Retain	planted in row; minor dead branches; girdling roots.
EI	Norway Maple	<i>Acer platanoides</i>	Non-native	1	25.5	4.0	Improbable	Fair	Remove	planted in row; minor dead branches; girdling roots; debris at base; slightly asymmetrical E.
EJ	English Oak	<i>Quercus robur</i>	Non-native	1	38.0	6.0	Improbable	Fair	Retain	Asymmetrical crown east; moderate dead lower branches.
EK	Norway Maple	<i>Acer platanoides</i>	Non-native	1	32.0	5.0	Improbable	Fair	Retain	Slightly asymmetrical to east; codominant leaders.
EL	Little-leaf Linden	<i>Tilia cordata</i>	Non-native	1	29.5	4.0	Improbable	Fair	Retain	Asymmetrical crown west; sparse but healthy crown.
EM	Norway Maple	<i>Acer platanoides</i>	Non-native	1	42.0		Improbable	Good	Retain	Dense full crown.
EN	Little-leaf Linden	<i>Tilia cordata</i>	Non-native	1	37.5	6.0	Improbable	Good	Retain	Asymmetrical crown east; minor dead branches; old pruning cuts.
EO	American Basswood	<i>Tilia americana</i>	Native	1	40.0	5.0	Possible	Fair	Retain	Fruiting bodies at base; retrenchment; small crown.
EP	American Basswood	<i>Tilia americana</i>	Native	1	11.0	4.0	Possible	Fair	Retain	Clonal stand of young individuals.
EQ	American Basswood	<i>Tilia americana</i>	Native	1	12.0	4.0	Possible	Fair	Retain	Clonal stand of young individuals.
ER	American Basswood	<i>Tilia americana</i>	Native	1	13.0	4.0	Possible	Fair	Retain	Clonal stand of young individuals.
ES	American Basswood	<i>Tilia americana</i>	Native	1	11.0	4.0	Possible	Fair	Retain	Clonal stand of young individuals.
ET	American Basswood	<i>Tilia americana</i>	Native	1	14.0	4.0	Possible	Fair	Retain	Clonal stand of young individuals.
EU	American Basswood	<i>Tilia americana</i>	Native	1	14.0	4.0	Possible	Fair	Retain	Clonal stand of young individuals.
EV	American Basswood	<i>Tilia americana</i>	Native	1	14.0	4.0	Possible	Fair	Retain	Clonal stand of young individuals.
EW	American Basswood	<i>Tilia americana</i>	Native	1	13.0	4.0	Possible	Fair	Retain	Clonal stand of young individuals.
EX	American Basswood	<i>Tilia americana</i>	Native	1	12.0	4.0	Possible	Fair	Retain	Clonal stand of young individuals.
F	Manitoba Maple	<i>Acer negundo</i>	Native	1	25.0	4.5	Improbable	Fair	Retain	Evidence of pruning; basal shoots; few branch failures; poor attachment of double leaders.
G	Norway Spruce	<i>Picea abies</i>	Non-native	1	60.0	6.0	Improbable	Good	Retain	Evidence of pruning; few needleless small branches; overall good form.
H	Manitoba Maple	<i>Acer negundo</i>	Native	1	24.9	4.0	Improbable	Fair	Retain	Mechanical damage at base; poor branch attachment; epicormic shoots.
I	Norway Maple	<i>Acer platanoides</i>	Non-native	1	18.2	3.0	Improbable	Fair	Retain	Mechanical damage at base; poor branch attachment, limbs growing into one another.
J	Cherry species	<i>Prunus sp.</i>	Non-native	2	22.5	3.0	Improbable	Fair	Retain	Mechanical damage at base; numerous smaller stems; basal shoots.
K	Manitoba Maple	<i>Acer negundo</i>	Native	1	35.5	4.5	Improbable	Fair	Retain	Mechanical damage at base; evidence of pruning; poor branch attachment.
L	Norway Maple	<i>Acer platanoides</i>	Non-native	1	55.5	7.0	Improbable	Poor	Retain	Evidence large branch failures; large girdling roots; numerous dead branches; mechanical damage at base.
M	Siberian Elm	<i>Ulmus pumila</i>	Non-native	2	27.4	5.0	Improbable	Fair	Remove	Poor branch attachment; overlapping limbs; evidence of branch failures.
N	Siberian Elm	<i>Ulmus pumila</i>	Non-native	1	70.0	7.0	Possible	Fair	Remove	Two stems above dbh; poor branch attachment, overlapping limbs; evidence of branch failures.
O	Norway Maple	<i>Acer platanoides</i>	Non-native	1	60.0	6.0	Possible	Poor	Retain	Two stems above dbh; poor branch attachment, overlapping limbs; evidence of branch failures; large open found up trunk from base.
P	Norway Maple	<i>Acer platanoides</i>	Non-native	1	50.0	6.0	Improbable	Fair	Retain	Aggressive girdling roots; some poor branch attachment; few dead branches.
Q	Black Walnut	<i>Juglans nigra</i>	Native	2	16.0	2.0	Improbable	Fair	Remove	Poor branch attachment; epicormic shoots; overlapping limbs.
R	Sugar Maple	<i>Acer saccharum</i>	Native	1	33.0	3.0	Improbable	Fair	Remove	Poor branch attachment; evidence of pruning; rubbing limbs.

Southwood Subdivision, Elmira
Tree Inventory Data

Tree Number	Common Name	Scientific Name	Native/ Non-native	Stem Count	DBH (cm)	Crown Radius (m)	Potential for Structural Failure Rating	Overall Condition	Proposed Action	Comments
S	Black Walnut	<i>Juglans nigra</i>	Native	3	14.6	3.0	Improbable	Fair	Remove	Poor branch attachment; evidence of pruning; rubbing limbs; epicormic shoots.
T	Sugar Maple	<i>Acer saccharum</i>	Native	1	35.7	4.0	Improbable	Fair	Remove	Some epicormic shoots; slight trunk lean; some poor branch attachment of main stems.
U	Sugar Maple	<i>Acer saccharum</i>	Native	1	35.2	4.0	Improbable	Fair	Remove	Double leader; some epicormic shoots; slight trunk lean; some poor branch attachment of main stems.
V	Sugar Maple	<i>Acer saccharum</i>	Native	1	34.5	3.5	Improbable	Fair	Remove	Some epicormic shoots; some poor branch attachment of main stems; evidence of pruning.
W	Silver Maple	<i>Acer saccharinum</i>	Native	1	74.8	6.0	Improbable	Fair	Remove	Evidence of pruning; multiple leaders; epicormic shoots; few large branch failures; overall good form.
X	Silver Maple	<i>Acer saccharinum</i>	Native	1	32.5	3.5	Improbable	Fair	Remove	Teisted trunk; large epicormic shoots; poor branch attachment.
Y	Silver Maple	<i>Acer saccharinum</i>	Native	1	48.3	4.0	Improbable	Fair	Remove	Twisted trunk; pile of rocks at base; epicormic shoots; poor branch attachment.
Z	Silver Maple	<i>Acer saccharinum</i>	Native	1	32.5	4.0	Improbable	Fair	Remove	Multiple leaders; epicormic shoots; evidence of branch failures; slight lean in trunk.

Appendix II
Tree Health and Potential for Structural Failure Assessment Criteria

Tree Health Assessment Criteria

Assessment Criteria	Definition ¹
Excellent	Represents a tree in near perfect form, health, and vigour. This tree would exhibit no deadwood, no decline, and no visible defects.
Good	Represents a tree ranging from a generally healthy tree to a near perfect tree in terms of health, vigour and structure. This tree exhibits a complete, balanced crown structure with little to no deadwood and minimal defects as well as a properly formed root flare.
Fair	Represents a tree with minor health, balance or structural issues with minimal to moderate deadwood. Branching structure shows signs of included bark or minor rot within the branch connections or trunk wood. The root flare shows minimal signs of mechanical injury, decay, poor callusing, or girdling roots. Trees in the category require minor remedial actions to improve the vigour and structure of the tree.
Poor	Represents a tree that exhibits a poor vigour, reduced crown size (<30% of crown typical of species caused by overcrowding or decline), extreme crown imbalance, or extensive rot in the branching and trunk wood. Fungus could be seen from these rotting areas, suggesting further decay. These trees have extensive crown die back with a large amount of deadwood, and possibly dead sections. These weakened areas can lead to a potential failure of tree sections. Rooting zones show signs of extensive root decay or damage (fruiting bodies or mechanical damage) or girdling roots. Trees in this category require more extensive actions to prevent failure. A tree identified as poor would be a candidate for removal in the near future.
Very Poor	Represents a tree that exhibits major health and structural defects. Quite often the defects or diseases affecting this tree will be fatal. Large quantities of fungus, large dead sections with possible cavities and bark falling off all are signs that a tree is in a major state of decline and would be identified as very poor. These trees have a probable or imminent potential for structural failure. These trees should be identified for removal.
Dead	Represents a tree that exhibits no sign of new growth, including buds, foliage, or shoot growth. These trees have a probable or imminent potential for structural failure. These trees should be identified for removal.

¹(Dunster 2009)

Potential for Structural Failure Assessment Criteria

Assessment Criteria*	Definition ¹
Improbable	The tree or branch is not likely to fail during normal weather conditions and may not fail in many severe weather conditions within the specified time frame.
Possible	Failure could occur, but it is unlikely during normal weather conditions within the specified time frame.
Probable	Failure may be expected under normal weather conditions within the specified time frame.
Imminent	Failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. This is a rare occurrence for an assessor to encounter, and it may require immediate action to protect people from harm.
*A specified time frame of 1 year will be used when assessing potential for structural failure.	

¹(Dunster et al. 2013)

Appendix III
Conditions of Tree Assessment

Conditions of Tree Assessment

Limitations

This tree inventory and assessment is based on the circumstances and observations by Natural Resource Solutions Inc. (NRSI) as they existed at the time of the site inspection(s) of the Client's Property as described in this report (the "Property") and the trees situated thereon, and upon information provided by the Client to NRSI. The opinions in this assessment are given based on observations made and using generally accepted professional judgment, however, because trees are living organisms and subject to change, damage and disease, the results, observations, recommendations, and analysis as set out in this assessment are valid only at the date any such observations and analysis took place. No guarantee, warranty, representation or opinion is offered or made by NRSI as to the length of the validity of the results, observations, recommendations and analysis contained within this assessment. As a result, the Client shall not rely upon this assessment, save and except for representing the circumstances and observations at the date of site inspection(s), and the analysis and recommendations made in relation to the proposed undertaking. It is recommended that the inventoried trees discussed in this assessment should be re-assessed periodically, where required (i.e., after 2 years).

Further Services

Neither NRSI, nor any assessor employed or retained by NRSI (the "Assessor") for the purpose of preparing or assisting in the preparation of this assessment shall be required to provide any further consultation or services to the Client including, without limitation, acting as an expert witness or witness in any court in any jurisdiction unless the Client has first made specific arrangements with respect to such further services, including providing payment of the Assessor's regular hourly billing fees.

NRSI accepts no responsibility for the implementation of all or any part of this report, unless specifically requested to examine the implementation of such activities recommended herein. Any request for the inspection or supervision of all or part of the implementation shall be made in writing and the details agreed to in writing by both parties.

Assumptions

The Client is hereby notified that where any of the information set out and referenced in this assessment are based on assumptions, facts or information provided to NRSI, NRSI will in no way be responsible for the veracity or accuracy of any such information. Further, the Client acknowledges and agrees that NRSI has, for the purposes of preparing their assessment, assumed that the Property is in full compliance with all applicable federal, provincial, municipal and local statutes, regulations, by-laws, guidelines and other related laws. NRSI explicitly denies any legal liability for any and all issues with respect to non-compliance with any of the above-referenced statutes, regulations, by-laws, guidelines and laws as it may pertain to or affect the Property.

Restriction of Assessment

The assessment carried out was restricted to the areas as described in this report. NRSI is not legally liable for any other trees except those expressly discussed herein. The conclusions of this assessment do not apply to any areas, trees, or any other property not covered or referenced in this assessment.

Professional Responsibility

In carrying out this assessment, NRSI and any Assessor appointed for and on behalf of NRSI to perform and carry out the assessment has exercised a reasonable standard of care, skill and diligence. The assessment has been made using accepted arboricultural techniques. These include a visual examination of each tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of insect attack, discolored foliage (during the leaf-on period), the condition of any visible root structures, the degree and direction of lean (if any), the general condition of the tree(s) and the surrounding site, and the current or planned proximity of property and people. Except where specifically noted in the assessment, none of the trees examined on the property were dissected, cored, probed, or climbed, and detailed root crown examinations involving excavation were not undertaken.

No guarantees are offered, or implied, that trees recommended for retention, or all parts of them, will remain standing. It is professionally impossible to predict with absolute certainty the behaviour of any single tree or group of trees, or all their component parts, in all given circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential to fall, lean, or otherwise pose a danger to property and persons in the event of extreme weather conditions, and this risk can only be eliminated if the tree is removed.

Without limiting the foregoing, no liability is assumed by NRSI or its directors, officers, employers, contractors, agents or Assessors for:

- a) Any legal description provided with respect to the Property;
- b) Issues of title and/or ownership with respect to the Property;
- c) The accuracy of the Property line locations or boundaries with respect to the Property; and
- d) The accuracy of any other information provided to NRSI by the Client or third parties;
- e) Any consequential loss, injury or damages suffered by the Client or any third parties, including but not limited to replacement costs, loss of use, earnings and business interruption; and,
- f) The unauthorized distribution of the assessment.

Third Party Liability

This assessment was prepared by NRSI for the Client. The data collected reflect NRSI's best assessment of the inventoried trees situated on the Property with the information available at the time of observation. Data analysis and the assessment of potential impacts to inventoried trees is specific to the proposed undertaking as described in this report. NRSI accepts no responsibility for any damages or loss suffered by any third party or by the Client as a result of decisions made or actions based upon the use of this assessment for purposes unrelated to the proposed undertaking.

General

Any plans and/or illustrations in this assessment are included only to help the Client visualize the issues in this assessment and shall not be relied upon for any other purpose.

This report shall be considered as a whole, no sections are severable, and the assessment shall be considered incomplete if any pages are missing.

Appendix IV
Tree Data and Summary Tables

Summary of Inventoried Trees

Common Name	Scientific Name	Excellent	Good	Fair	Poor	Very Poor	Dead	Total
Native Species								
Black Cherry	<i>Prunus serotina</i>					1		1
Sugar Maple	<i>Acer saccharum</i>		1	16		1		18
White Ash	<i>Fraxinus americana</i>			1				1
Eastern White Cedar	<i>Thuja occidentalis</i>		1	7				8
Manitoba Maple	<i>Acer negundo</i>			18				18
Black Walnut	<i>Juglans nigra</i>		2	18				20
Silver Maple	<i>Acer saccharinum</i>			16				16
Willow sp.	<i>Salix</i> sp.				1			1
American Elm	<i>Ulmus americana</i>			1				1
Pin Oak	<i>Quercus palustris</i>		1					1
Red Maple	<i>Acer rubrum</i>			10	3			13
Freeman's Maple	<i>Acer x freemanii</i>			5				5
White Spruce	<i>Picea glauca</i>			19	2		1	22
Tamarack	<i>Larix laricina</i>				1			1
Trembling Aspen	<i>Populus tremuloides</i>			2				2
Paper Birch	<i>Betula papyrifera</i>			2				2
Eastern Red Cedar	<i>Juniperus virginiana</i>			1				1
American Basswood	<i>Tilia americana</i>		2	11	1			14
Hawthorn sp.	<i>Crataegus</i> sp.			1				1
Total		0	7	128	8	2	1	146
Non-Native Species								
Norway Maple	<i>Acer platanoides</i>		1	64	3	2		70
Norway Spruce	<i>Picea abies</i>		1					1
Cherry species	<i>Prunus</i> sp.			4				4
Siberian Elm	<i>Ulmus pumila</i>			2				2
Blue Spruce	<i>Picea pungens</i>			22	3			25
Common Pear	<i>Pyrus communis</i>				1			1
Black Locust	<i>Robinia pseudoacacia</i>			9	1			10
Sweet Cherry	<i>Prunus avium</i>			6				6
English Oak	<i>Quercus robur</i>			3				3

Common Name	Scientific Name	Excellent	Good	Fair	Poor	Very Poor	Dead	Total
Thornless Honey Locust	<i>Gleditsia triacanthos</i> var. <i>inermis</i>			11				11
Little-leaf Linden	<i>Tilia cordata</i>		1	1				2
Total		0	3	122	8	2	0	135
Overall Total		0	10	250	16	4	1	281

Overall Health of Trees Inventoried

Potential for Structural Failure Rating	Overall Condition						Total
	Excellent	Good	Fair	Poor	Very Poor	Dead	
Improbable		10	236	13	1	1	261
Possible			14	2	3		19
Probable				1			1
Imminent							0
Total	0	10	250	16	4	1	281

Maps

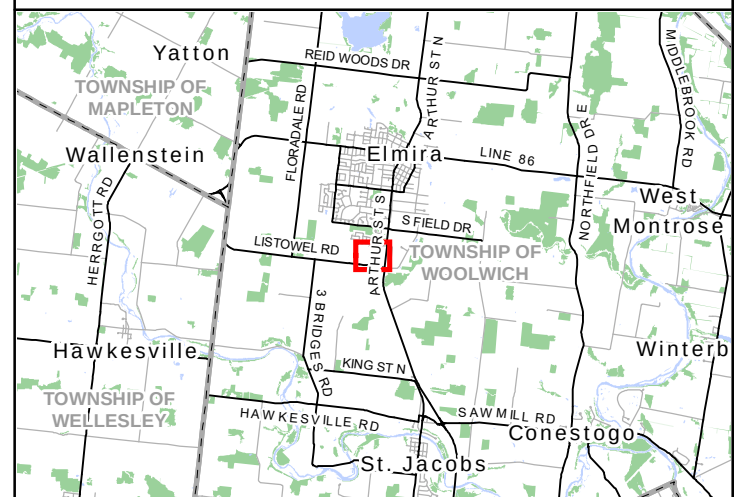
Map 1. Study Area and Natural Features

Map 2. Tree Inventory and Preservation Plan



Path: X:\2935_SchlegelBirdlandElmira\NRSI_2935_Map1_StudyArea_3K_2024_11_18_KEF.mxd

Elmira Southwood Subdivision Study Area



- Legend**
- Subject Property
 - Inventoried Tree (Crown to Scale)
 - Surveyed Dripline (NRSI - August 2022, June 2024)

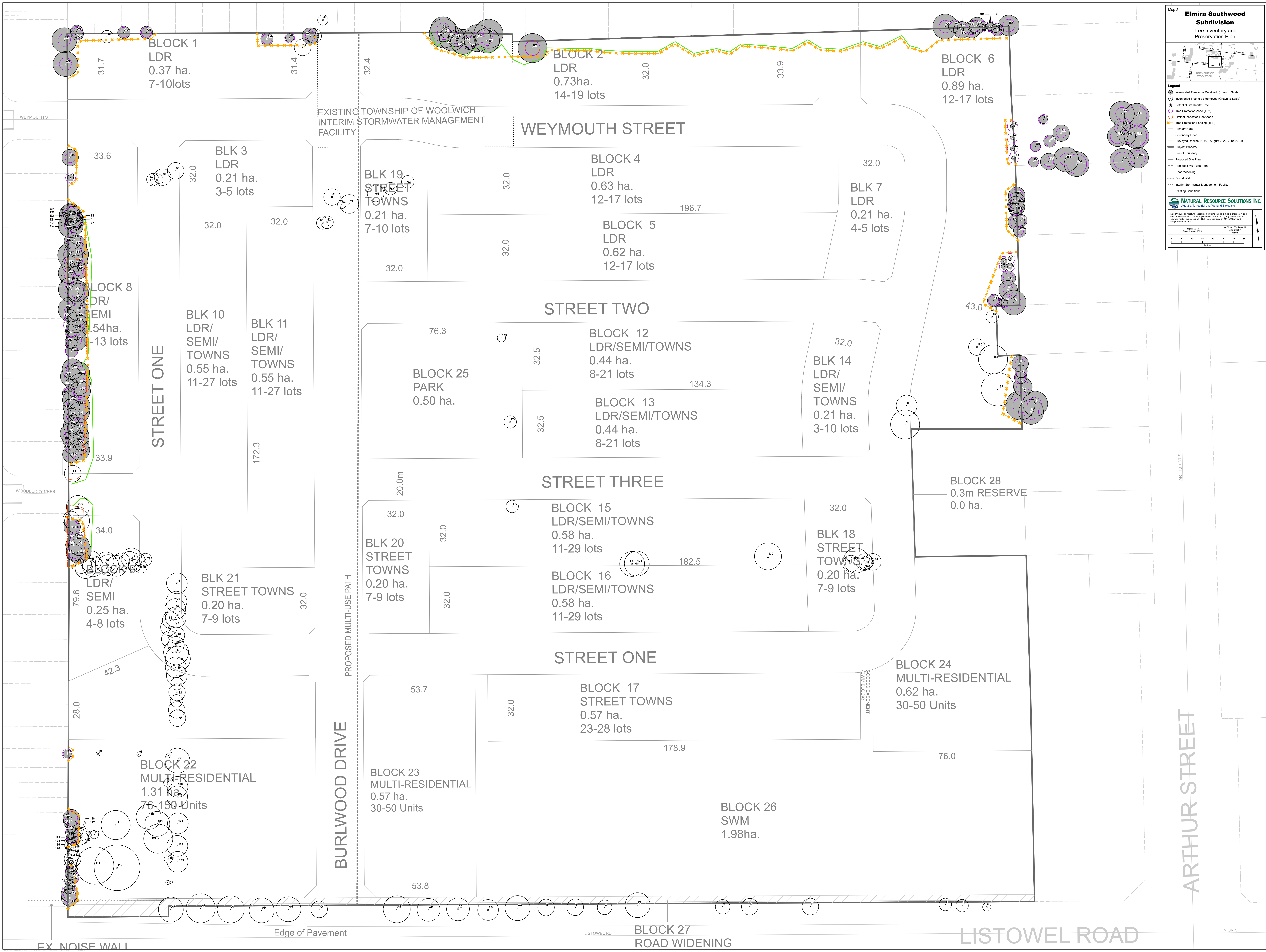
NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

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Project: 2935 Date: December 17, 2024	NAD83 - UTM Zone 17 Size: 11x17" 1:2,500
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0 40 80 120 160 Metres

N



Map 2

Elmira Southwood Subdivision

Tree Inventory and Preservation Plan

Legend

- Invented Tree to be Retained (Crown to Scale)
- Invented Tree to be Removed (Crown to Scale)
- ★ Potential Bat Habitat Tree
- Tree Protection Zone (TPZ)
- Limit of Inspected Root Zone
- ✱ Tree Protection Fencing (TPF)
- Primary Road
- Secondary Road
- Surveyed Easement (NRSI - August 2022, June 2024)
- Subject Property
- Parcel Boundary
- Proposed Site Plan
- Proposed Multi-use Path
- Road Widening
- Sound Wall
- Interim Stormwater Management Facility
- Existing Conditions

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Agricultural, Environmental and Natural Sciences

Project: 2025
Date: June 8, 2025

NAD83 - UTM Zone 17
Scale: 1:500

1 5 10 15 20 25 30 35
Metres

ARTHUR STREET