Arborist and Tree Preservation Report

John Brebeuf Place
R3L 1M1, Winnipeg, Manitoba

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Date: Mar 9, 2022

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Limitation of the Assignment

The assessment is based solely on a visual inspection of the trees during our site visit. This inspection was conducted from ground level. We do not conduct aerial inspections, soil tests or below grade root examinations to assess the condition of tree root systems unless specifically contracted to do so.

The assessment in this inventory is valid only at the time of inspection.

Only trees within the site boundaries and at the periphery were assessed. Locations of trees are plotted using GPS coordinates collected by a mobile device and are subject to satellite accuracy.

A. Introduction

Green Drop Tree Care was hired by Susan Russell, of McGowan Russell Group to complete an Arborist and Tree Preservation report for the site at John Brebeuf Place. Our site inspection and tree assessment were conducted on Monday, Feb 23, 2022.

This report is prepared according to the requirements set by the Urban Planning & Design Division, City of Winnipeg[1].

B. Objectives

The objectives of this report are:

- To Identify trees to preserve and protect
- To propose tree to be removed and reasons why;
- To outline specific tree protection methods and treatments before, during and after construction on this site

C. Summary

In summary, on the west side we are recommending the removal of 4 trees that are in fair condition but in close proximity to construction. We are recommending to remove an additional 3 trees in poor condition on the west side. Of the 3 trees that are in poor condition, one of them falls in close proximity to construction, while the other two are leaning. The other poor trees on the west property line identified in orange and blue are to be preserved and protected. The plan is to monitor and replace these trees over the next couple years.

On the east side, we are recommending the removal of 25 trees that are in poor condition and also in close proximity to construction. An additional 10 trees in fair condition but in close proximity to construction are recommended to be removed. In the green space area 3 trees are recommended to be removed as they are in poor condition structurally. We are also recommending to preserve and protect 7 poor trees identified in orange and blue. The plan here is to monitor and replace these trees over the next couple years.

D. Methodology

Trunk diameter was measured using a calibrated diameter tape. The measurement was taken at 1.4 meters above ground level, generally referred to as the diameter at breast height (DBH).

The condition rating composes the heath, structure and form of the tree is based on the Guide for Plant Apprisal[3], 10th edition published by the Council of Tree and Landscape Appraiser. The structures of the trees are assessed according to the Tree Risk Assessment Manual[4], 2nd edition published by the International Society of Arboriculture.

Rating category	Condition components		
	Health	Structure	Form
Excellent	High vigor and nearly perfect health with little or no twig dieback, discoloration, or defoliation.	Nearly ideal and free of defects.	Nearly ideal for the species. Generally symmetric. Consistent with the intended use.
Good	Vigor is normal for the species. No significant damage due to diseases or pests. Any twig dieback, defoliation, or discoloration is minor.	Well-developed structure. Defects are minor and can be corrected.	Minor asymmetries/deviations from species norm. Mostly consistent with the intended use. Function and aesthetics are not compromised.
Fair	Reduced vigor. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Twig dieback, defoliation, discoloration, and/or dead branches may comprise up to 50% of the crown.	A single defect of a significant nature or multiple moderate defects. Defects are not practical to correct or would require multiple treatments over several years.	Major asymmetries/deviations from species norm and/or intended use. Function and/or aesthetics are compromised.
Poor	Unhealthy and declining in appearance. Poor vigor. Low foliage density and poor foliage color are present. Potentially fatal pest infestation. Extensive twig and/or branch dieback.	A single serious defect or multiple significant defects. Recent change in tree orientation. Observed structural problems cannot be corrected. Failure may occur at any time.	Largely asymmetric/abnormal. Detracts from intended use and/or aesthetics to a significant degree.
Very poor	Poor vigor. Appears to be dying and in the last stages of life. Little live foliage.	Single or multiple severe defects. Failure is probable or imminent.	Visually unappealing. Provides little or no function in the landscape.

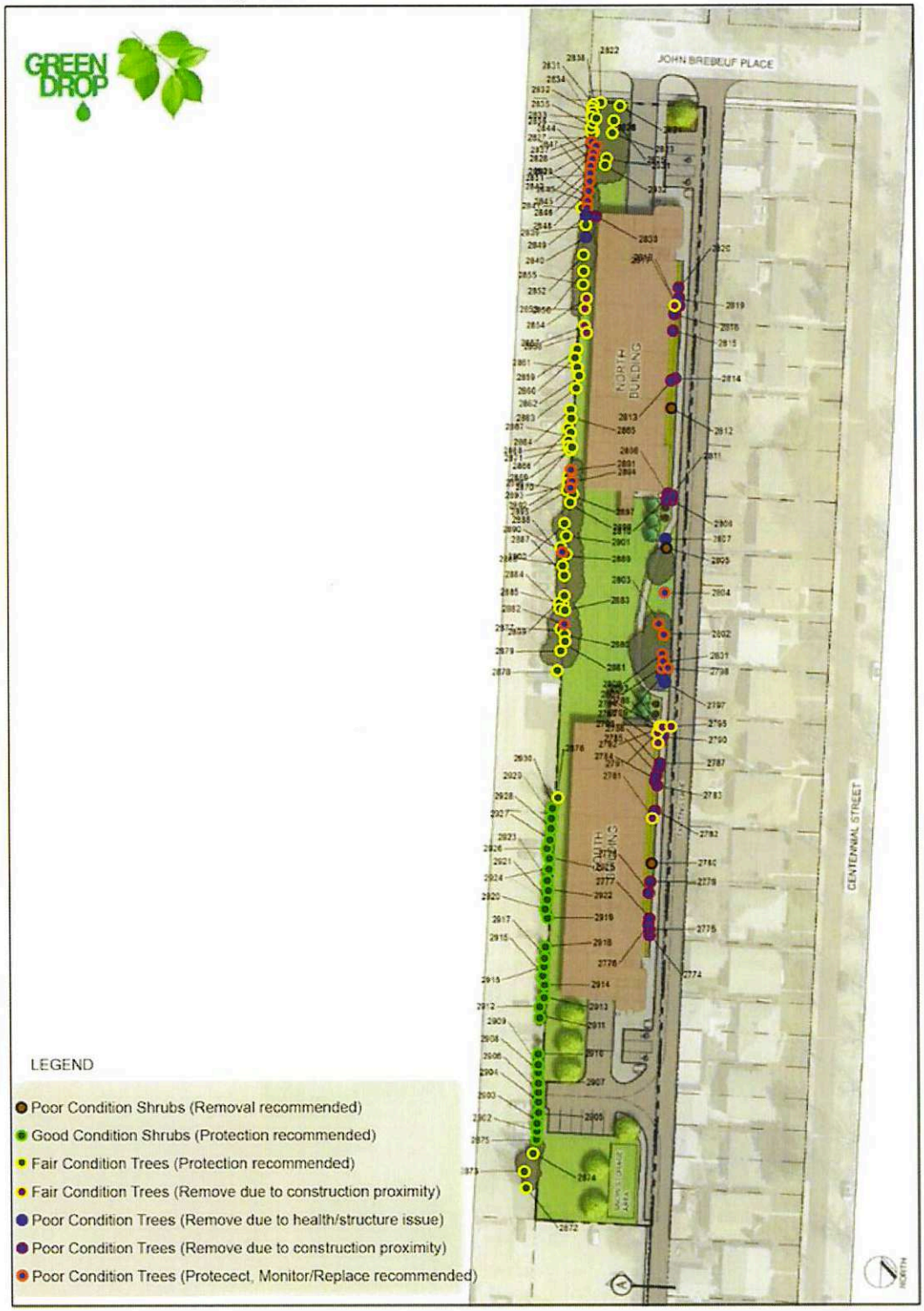
Table source: Guide for Plant Appraisal 10th Edition, Council of Tree and Landscape Appraiser

E. Tree-by-Tree Inventory

See Appendix II.

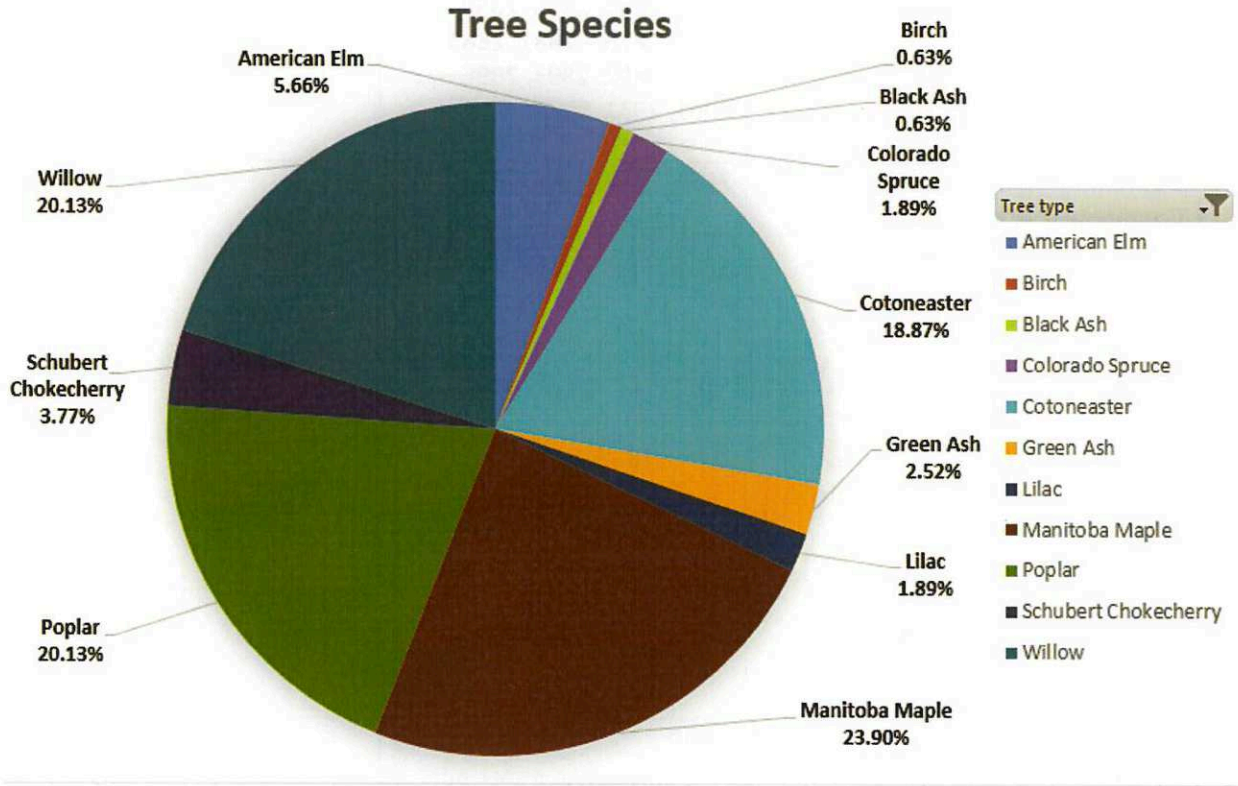
F. Tree Protection and Removal Plan

According to the drawings provided and the condition of the trees recorded, our recommendations are reflected in the drawing below.



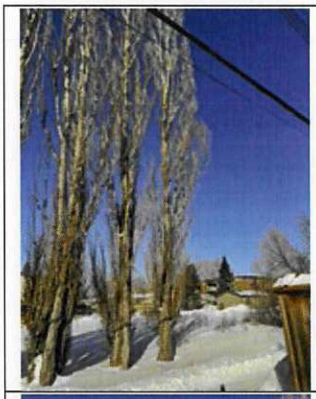
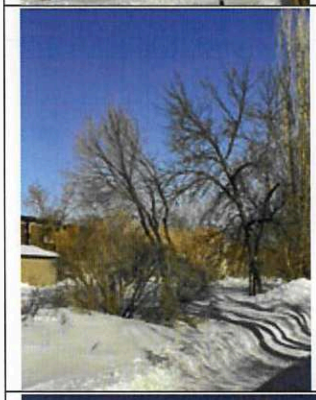
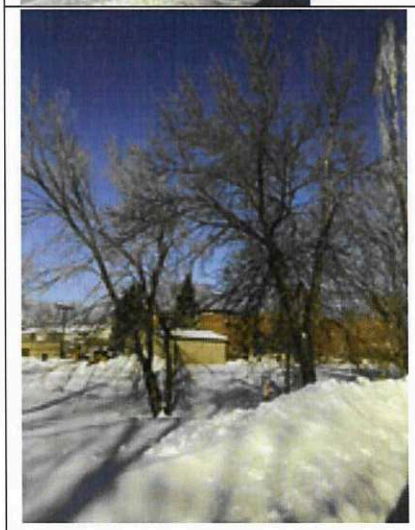
Description	Recommendation	West Side	East Side
Poor Condition Shrubs	Removal recommended		2780, 2805, 2812
Good Condition Shrubs	Protection recommended	Green+Green Circles (All located on the southwest side)	
Fair Condition Trees	Protection recommended	2821 – 2827, 2831 – 2839, 2852, 2855, 2856, 2859 – 2874, 2876 – 2881, 2883 – 2889, 2892, 2893, 2896 – 2901, 2931, 2932.	
Fair Condition Trees	Remove due to construction proximity	2853, 2854, 2587, 2858	
Fair Condition Trees	Remove due to construction proximity		2781, 2789, 2796, 2791, 2792, 2796, 2795, 2793, 2794, 2818
Poor Condition Trees	Remove due to health/structure issue	2840, 2849	
Poor Condition Trees	Remove due to health/structure issue		2807, 2797, 2799
Poor Condition Trees	Remove due to construction proximity	2830	
Poor Condition Trees	Remove due to construction proximity		2774, 2775, 2776, 2777, 2778, 2779, 2782, 2783, 2784, 2785, 2786, 2787, 2788, 2790, 2806, 2808,2810, 2811,2813, 2814, 2815, 2816, 2817, 2819, 2820
Poor Condition Trees	Protect, Monitor/Replace recommended	2828, 2829, 2841, 2842, 2843, 2844, 2845,2846, 2847, 2848, 2850, 2851, 2894, 2895, 2890, 2891, 2882	

Poor Condition Trees	Protect, Monitor/Replace recommended		2804, 2803, 2802, 2801, 2798, 2800, 2809

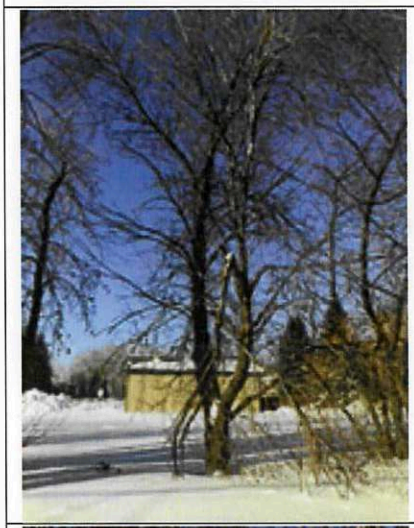
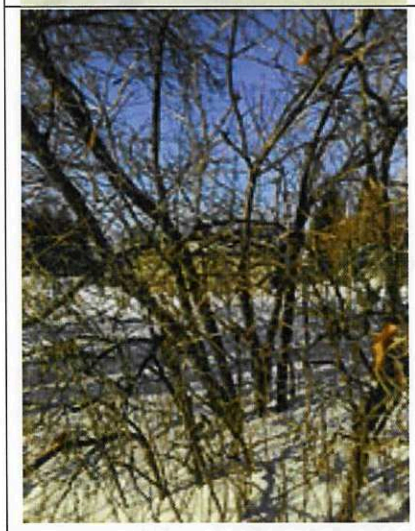


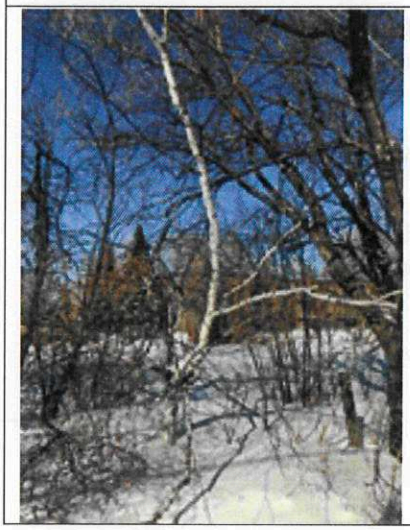
Individual Tree Photos

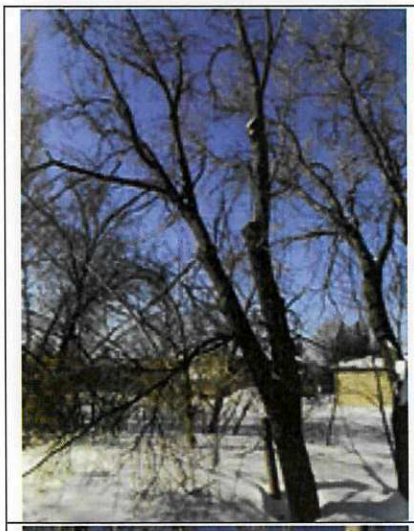
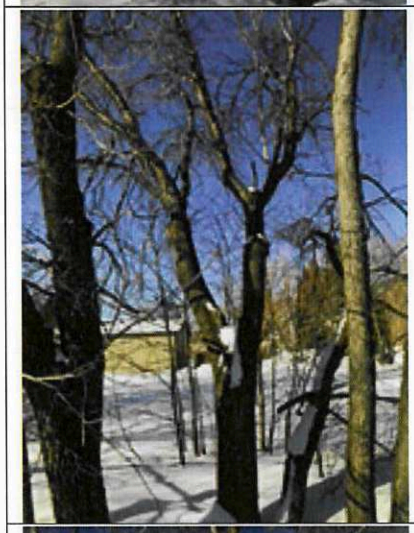
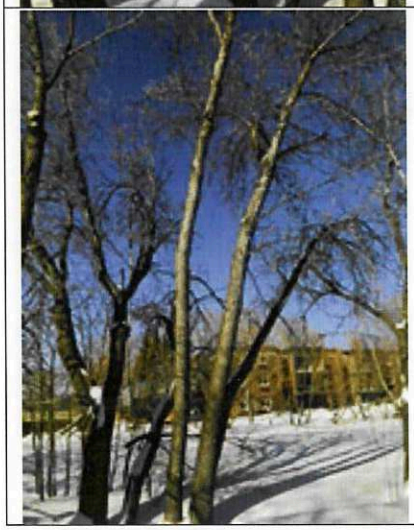
	Tree 2774 *Poplar* The tree has a DBH 50 - 59.9 (cm) and the condition is Poor.
	Tree 2775 *Poplar* The tree has a DBH 60 - 69.9 (cm) and the condition is Poor.
	Tree 2776 *Poplar* The tree has a DBH 40-49.9 (cm) and the condition is Poor.
	Tree 2777 *Poplar* The tree has a DBH 50 - 59.9 (cm) and the condition is Poor. The tree has muti-trunks.

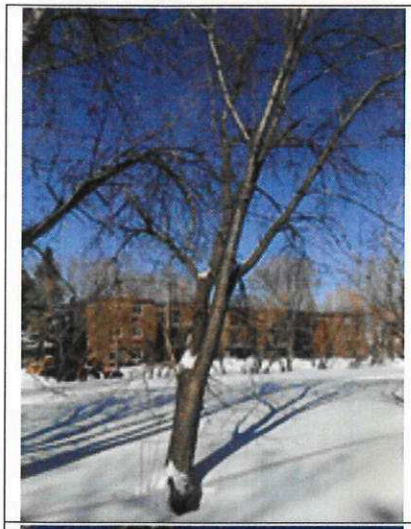
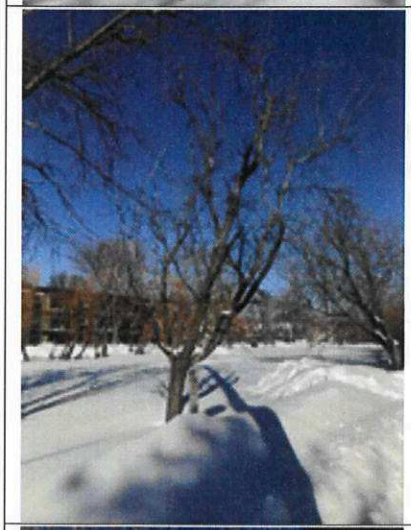
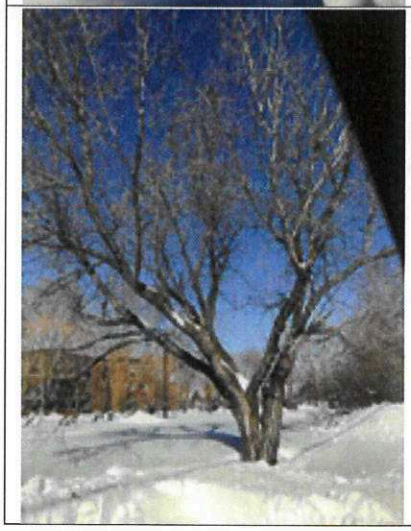
	Tree 2778 *Poplar* The tree has a DBH 40-49.9 (cm) and the condition is Poor. The tree has muti-trunks.
	Tree 2779 *Poplar* The tree has a DBH 40-49.9 (cm) and the condition is Poor.
	Tree 2780 *Lilac* The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2781 Manitoba Maple The tree has a DBH 20-29.9 (cm) and the condition is Fair. The tree has muti-trunks. Tree 2782 Black Ash The tree has a DBH 30-39.9 (cm) and the condition is Poor.

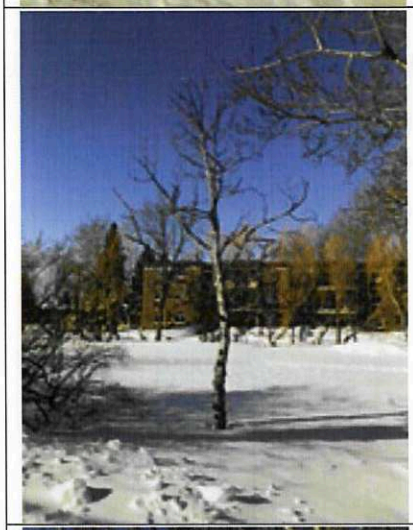
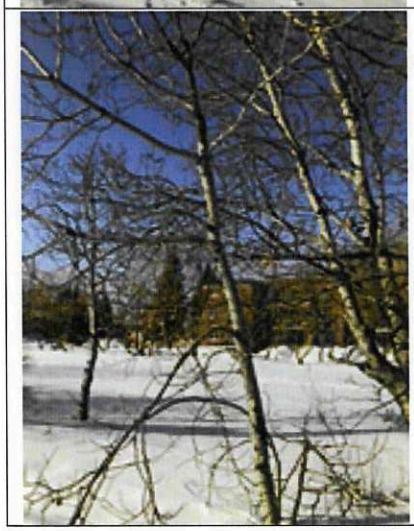
	Tree 2783 *Manitoba Maple* The tree has a DBH 20-29.9 (cm) and the condition is Poor. The tree has muti-trunks. Tree 2784 *Poplar* The tree has a DBH 10-19.9 (cm) and the condition is Poor.
	Tree 2785 *Poplar* The tree has a DBH 50 - 59.9 (cm) and the condition is Poor. The tree has muti-trunks. Tree 2786 *Poplar* The tree has a DBH 20-29.9 (cm) and the condition is Poor. The tree has muti-trunks.
	Tree 2787 *Poplar* The tree has a DBH 40-49.9 (cm) and the condition is Poor. The tree has muti-trunks. Tree 2788 *Green Ash* The tree has a DBH 10-19.9 (cm) and the condition is Poor. Tree 2789 *Manitoba Maple*

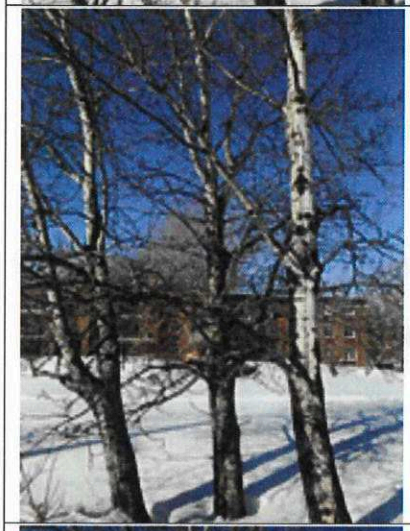
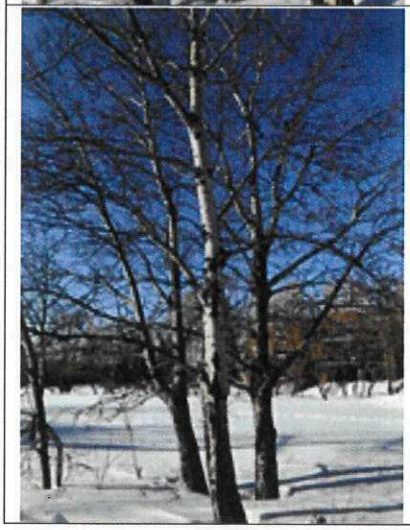
	The tree has a DBH 10-19.9 (cm) and the condition is Fair.
	Tree 2790 *Green Ash* The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2791 *Schubert Chokecherry* The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2792 Schubert Chokecherry The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2793 Schubert Chokecherry The tree has a DBH 1-9.9 (cm) and the condition is Fair.

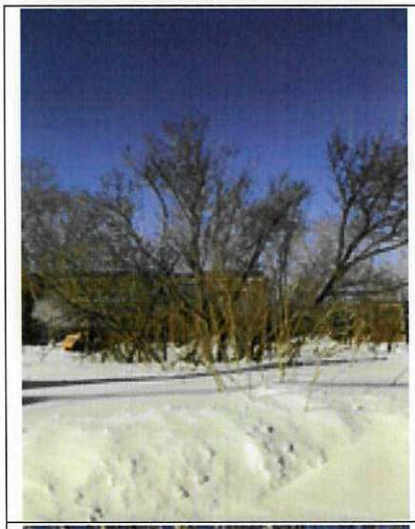
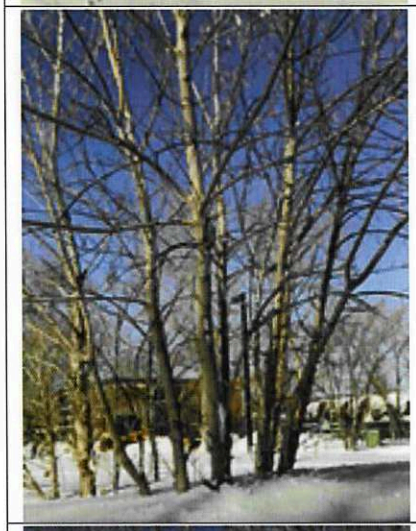
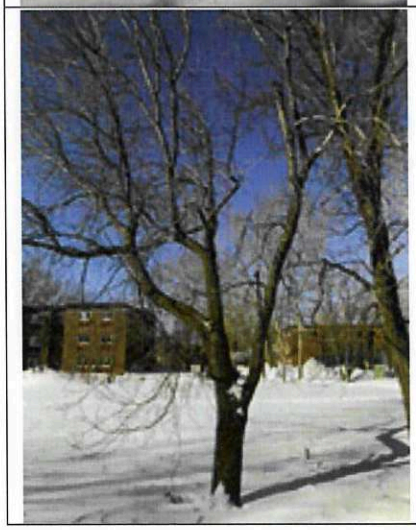
	Tree 2794 *Schubert Chokecherry* The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2795 Schubert Chokecherry The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2796 Schubert Chokecherry The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2797 *Birch* The tree has a DBH 10-19.9 (cm) and the condition is Poor.

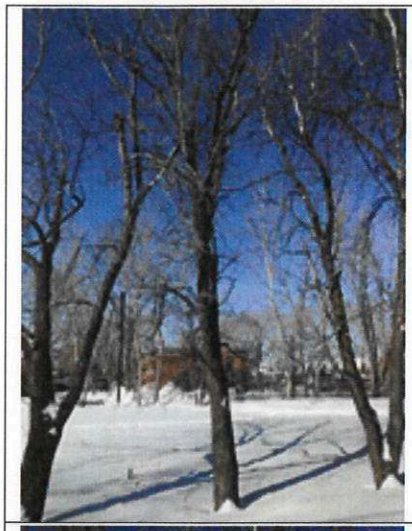
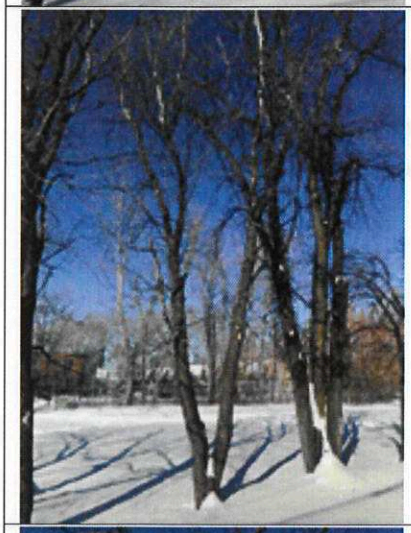
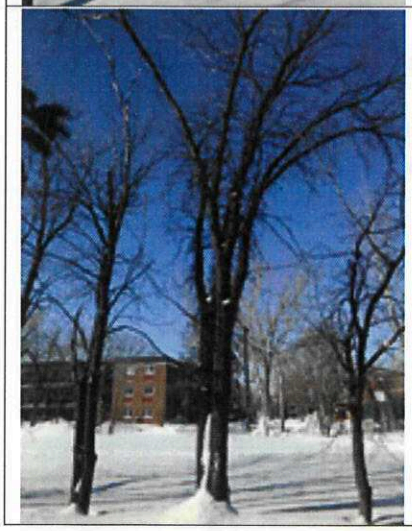
	Tree 2798 *Manitoba Maple* The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2799 *Manitoba Maple* The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2800 Manitoba Maple The tree has a DBH 20-29.9 (cm) and the condition is Fair. The tree has muti-trunks.
	Tree 2801 *Green Ash* The tree has a DBH 20-29.9 (cm) and the condition is Poor. The tree has muti-trunks.

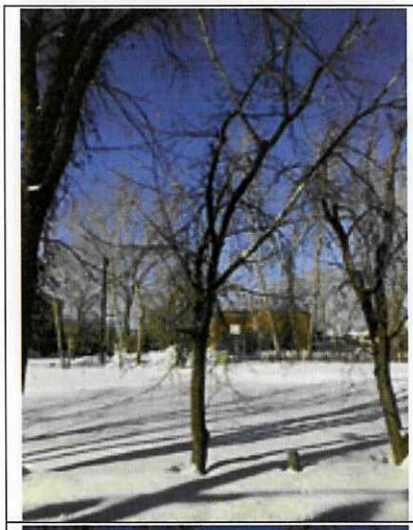
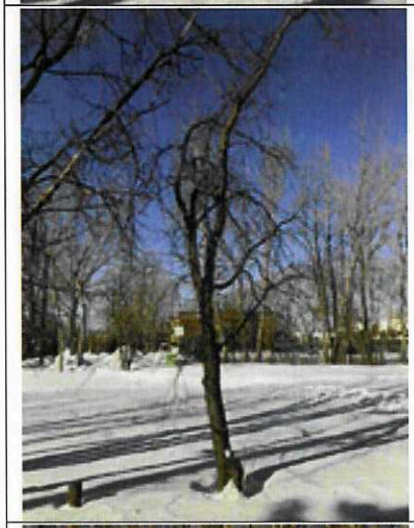
	Tree 2802 *Manitoba Maple* The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2803 *Manitoba Maple* The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2804 *Manitoba Maple* The tree has a DBH 50 - 59.9 (cm) and the condition is Poor. The tree has muti-trunks.

	Tree 2805 *Lilac* The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2806 *Poplar* The tree has a DBH 10-19.9 (cm) and the condition is Poor.
	Tree 2807 *Poplar* The tree has a DBH 10-19.9 (cm) and the condition is Poor.

	Tree 2808 *Poplar* The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2809 *Poplar* The tree has a DBH 30-39.9 (cm) and the condition is Poor. The tree has muti-trunks. Tree 2810 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2811 *Poplar* The tree has a DBH 10-19.9 (cm) and the condition is Poor.

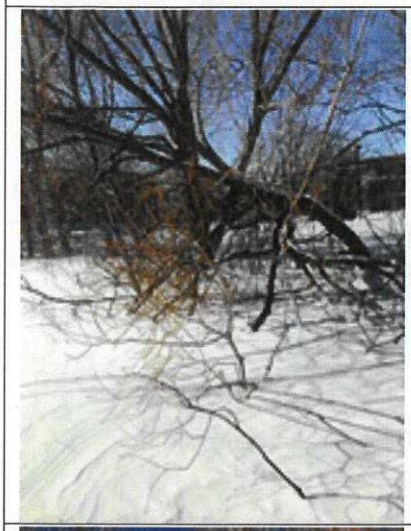
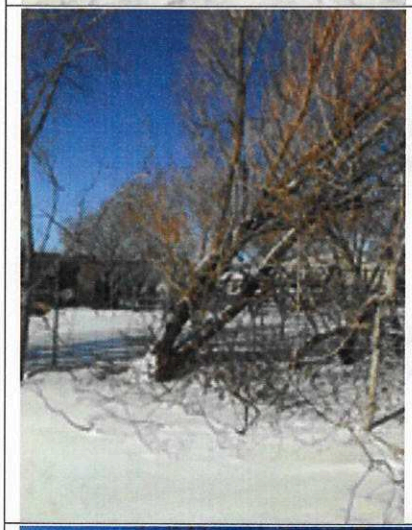
	Tree 2812 *Lilac* The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2813 *Green Ash* The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2814 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Poor.
	Tree 2815 *Manitoba Maple* The tree has a DBH 20-29.9 (cm) and the condition is Poor.

	Tree 2816 *Manitoba Maple* The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2817 *Manitoba Maple* The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2818 *American Elm* The tree has a DBH 20-29.9 (cm) and the condition is Fair. The tree has muti-trunks.

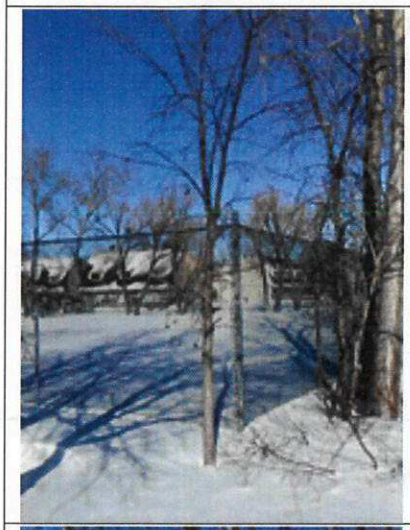
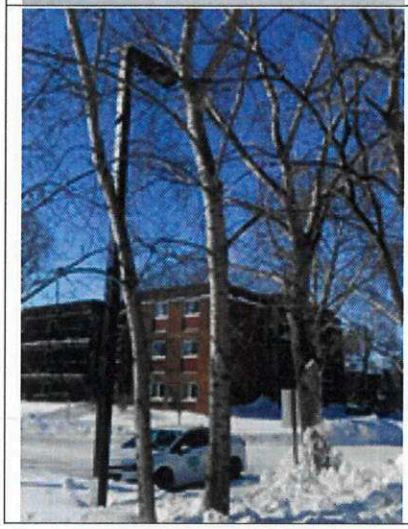
	Tree 2819 *Manitoba Maple* The tree has a DBH 1-9.9 (cm) and the condition is Poor.
	Tree 2820 *Manitoba Maple* The tree has a DBH 10-19.9 (cm) and the condition is Poor.
	Tree 2821 *Manitoba Maple* The tree has a DBH 10-19.9 (cm) and the condition is Fair. Tree 2822 American Elm The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2823 Manitoba Maple

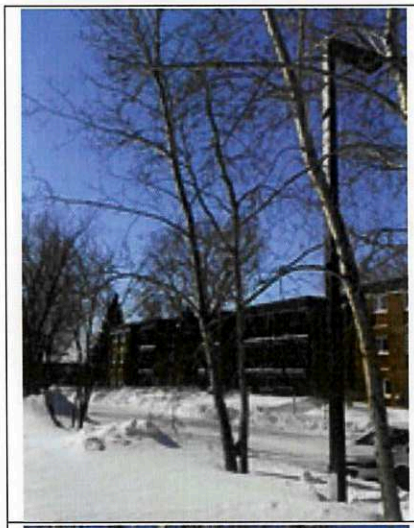
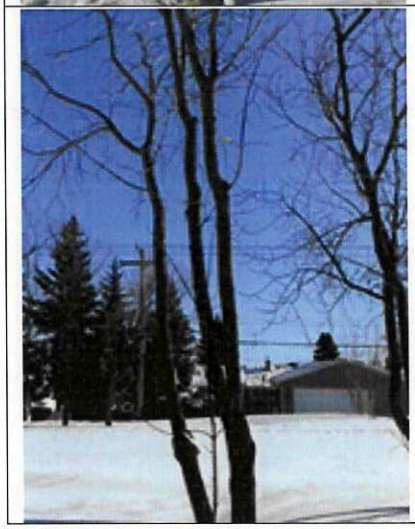
	The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2824 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2825 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2826 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2827 *Willow* The tree has a DBH 20-29.9 (cm) and the condition is Fair. Tree 2828 Willow The tree has a DBH 30-39.9 (cm) and the condition is Poor. Tree 2829 Willow The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2830 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor.

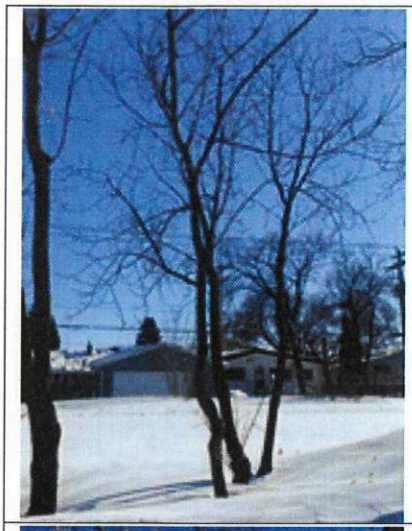
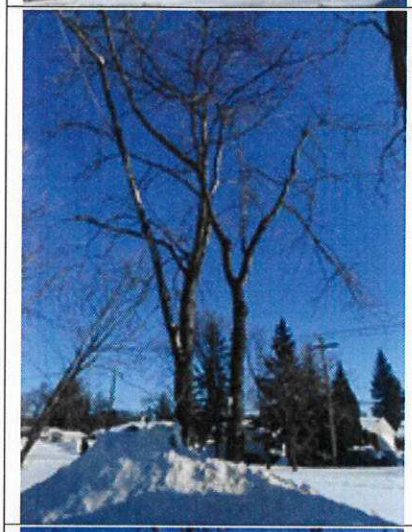
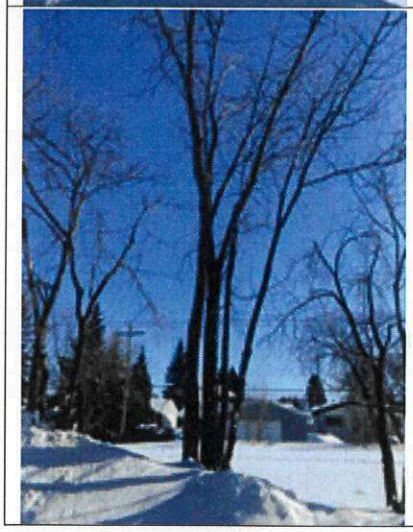
	Tree 2831 Willow The tree has a DBH 20-29.9 (cm) and the condition is Fair. Tree 2832 Willow The tree has a DBH 20-29.9 (cm) and the condition is Fair. Tree 2833 Willow The tree has a DBH 20-29.9 (cm) and the condition is Fair. Tree 2834 Willow The tree has a DBH 20-29.9 (cm) and the condition is Fair. Tree 2835 Willow The tree has a DBH 20-29.9 (cm) and the condition is Fair. Tree 2836 Willow The tree has a DBH 20-29.9 (cm) and the condition is Fair. Tree 2837 Willow The tree has a DBH 20-29.9 (cm) and the condition is Fair. Tree 2838 Willow

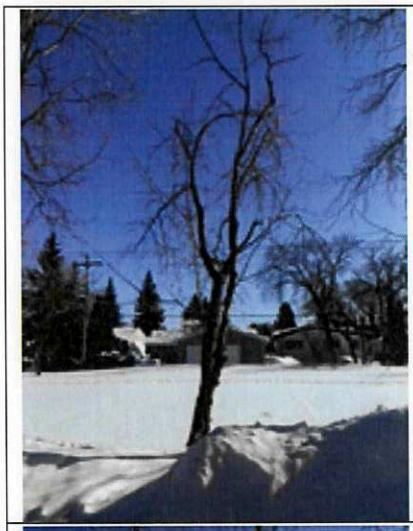
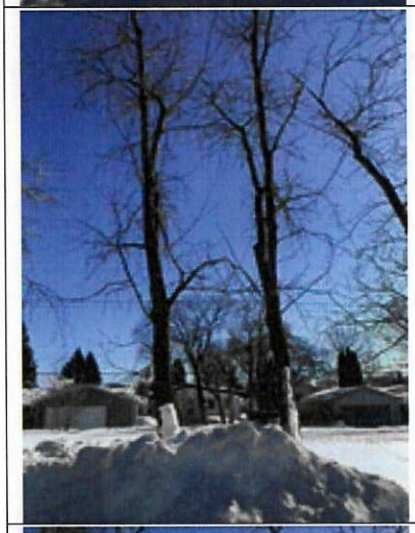
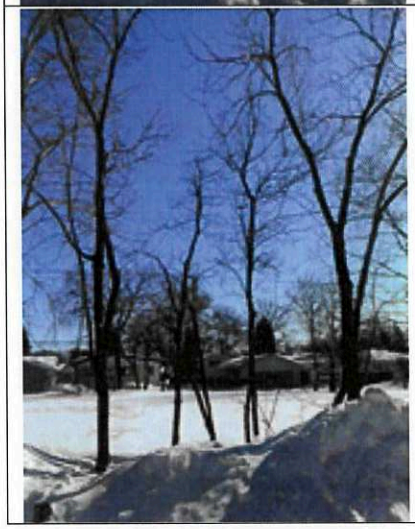
	The tree has a DBH 20-29.9 (cm) and the condition is Fair.
	Tree 2839 *American Elm* The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2840 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2841 *Poplar* The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2842 *Poplar* The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2843 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor.

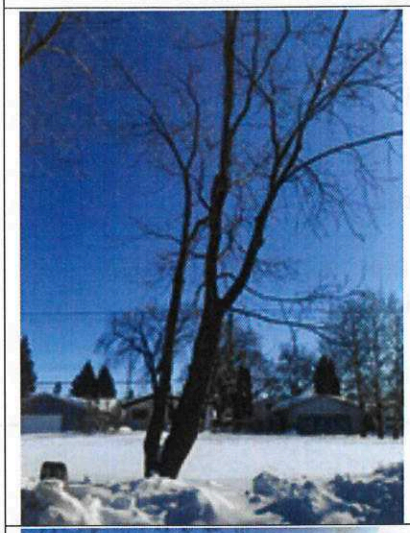
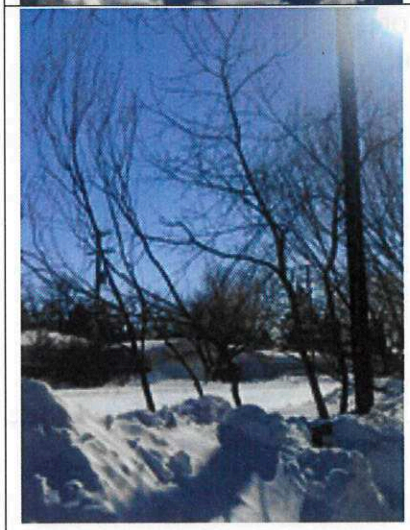
	Tree 2844 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2845 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2846 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2847 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2848 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2849 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2850 Poplar The tree has a DBH 20-29.9 (cm) and the condition is Poor. Tree 2851 Poplar

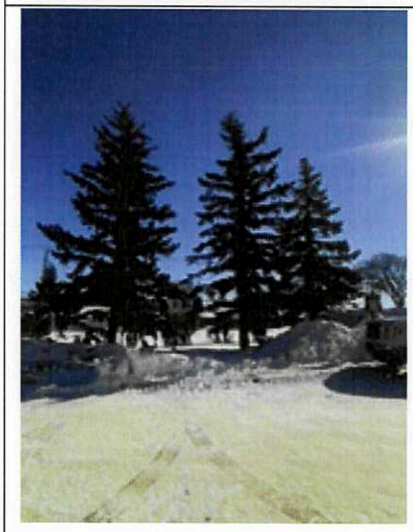
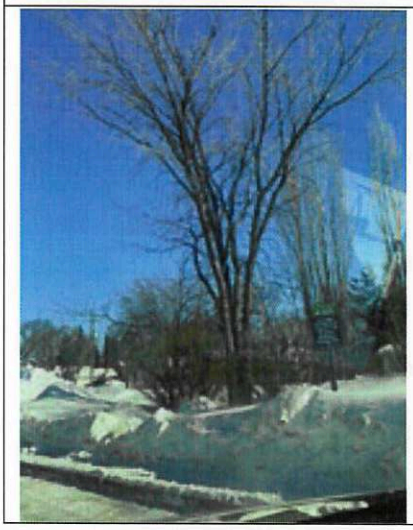
	The tree has a DBH 20-29.9 (cm) and the condition is Poor.
	Tree 2852 *American Elm* The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2853 *Poplar* The tree has a DBH 20-29.9 (cm) and the condition is Fair. The tree has muti-trunks. Tree 2854 Poplar The tree has a DBH 10-19.9 (cm) and the condition is Fair.

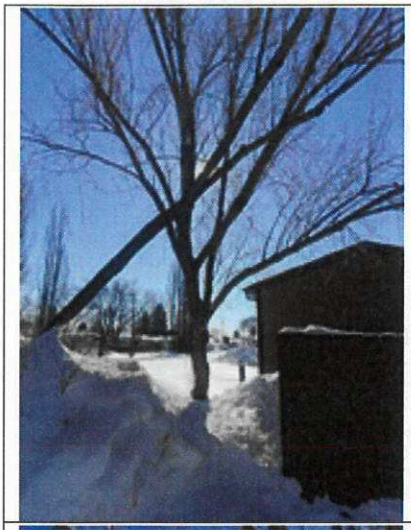
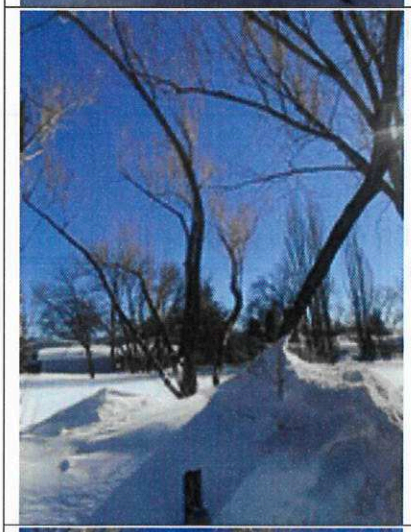
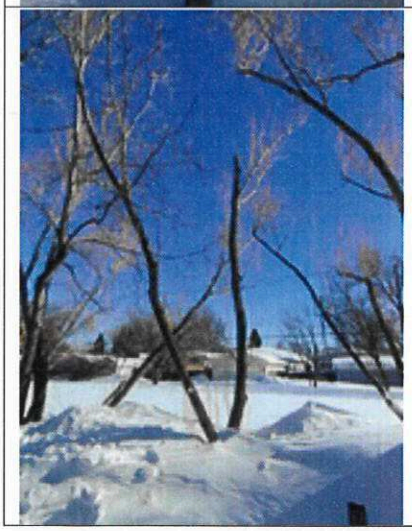
	Tree 2855 *Poplar* The tree has a DBH 20-29.9 (cm) and the condition is Fair.
	Tree 2856 *Manitoba Maple* The tree has a DBH 20-29.9 (cm) and the condition is Fair.
	Tree 2857 *Manitoba Maple* The tree has a DBH 10-19.9 (cm) and the condition is Fair.

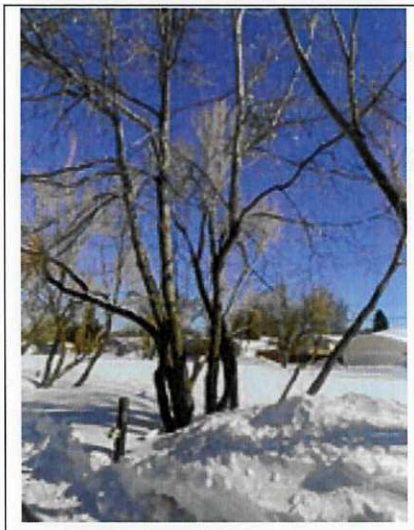
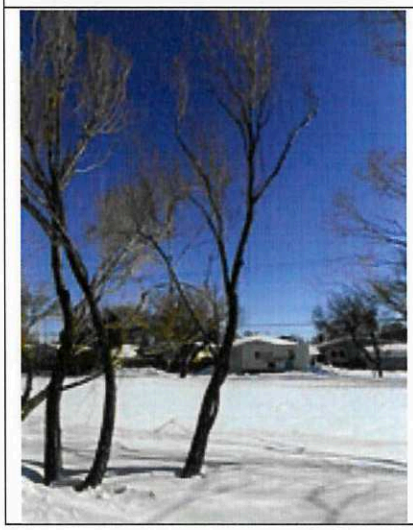
	Tree 2858 *Manitoba Maple* The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2859 *Manitoba Maple* The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2860 *American Elm* The tree has a DBH 10-19.9 (cm) and the condition is Fair.

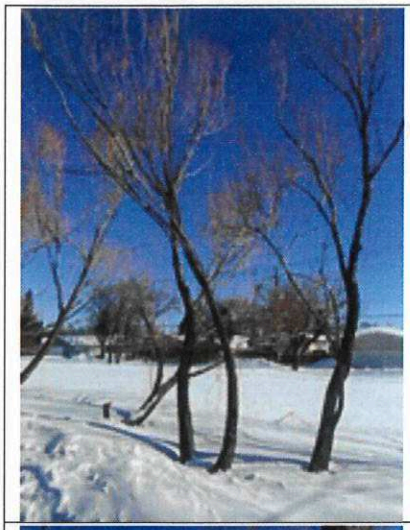
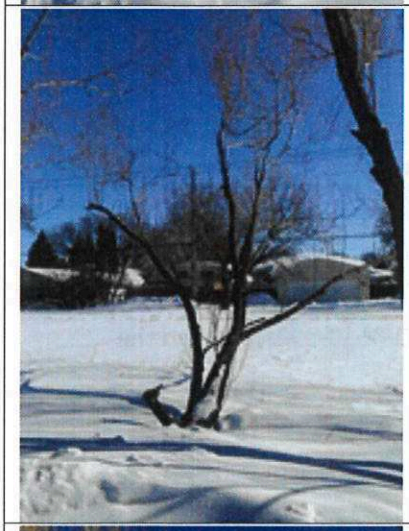
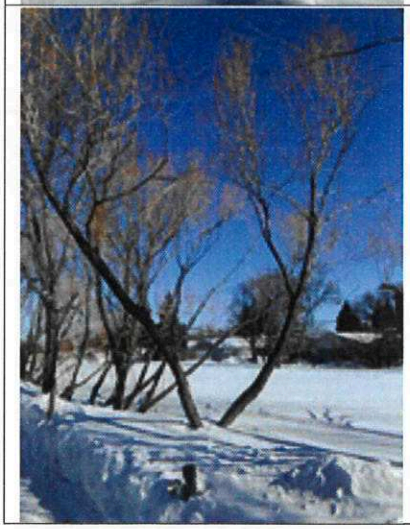
	Tree 2861 *Manitoba Maple* The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2862 *Manitoba Maple* The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2863 *Manitoba Maple* The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2864 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2865 Manitoba Maple

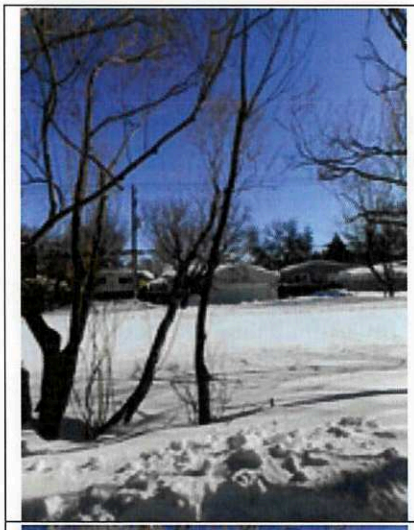
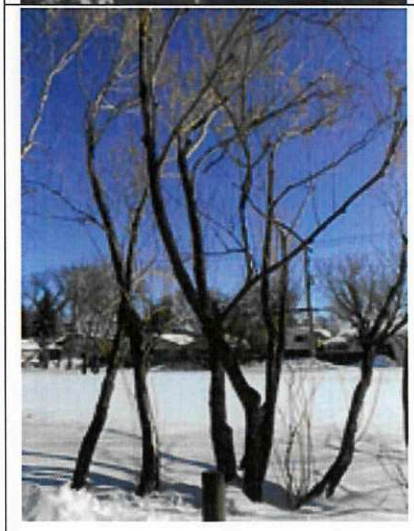
	The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2866 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2867 *American Elm* The tree has a DBH 10-19.9 (cm) and the condition is Fair.
	Tree 2868 *Manitoba Maple* The tree has a DBH 10-19.9 (cm) and the condition is Fair. Tree 2869 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2870 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2871 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Fair.

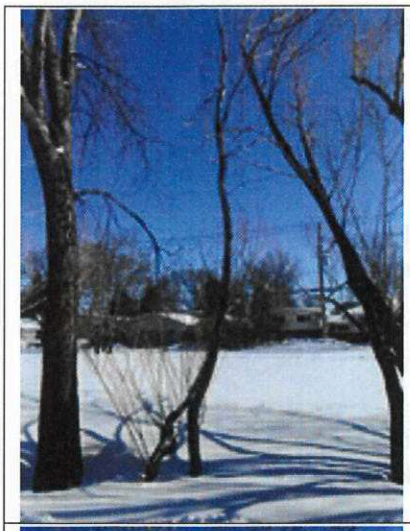
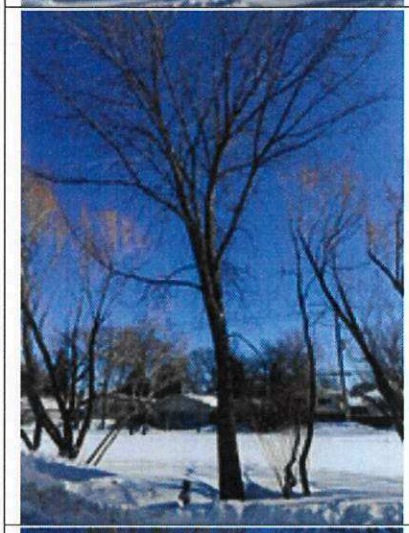
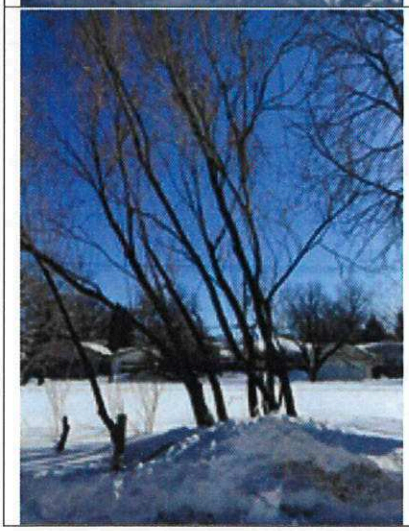
	Tree 2872 *Colorado Spruce* The tree has a DBH 20-29.9 (cm) and the condition is Fair. Tree 2873 Colorado Spruce The tree has a DBH 20-29.9 (cm) and the condition is Fair. Tree 2874 Colorado Spruce The tree has a DBH 20-29.9 (cm) and the condition is Fair.
	Tree 2876 American Elm The tree has a DBH 30-39.9 (cm) and the condition is Fair.

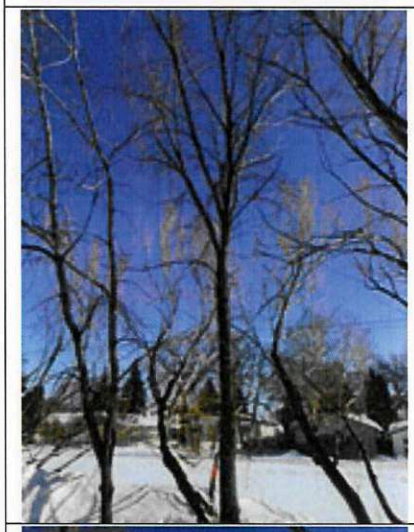
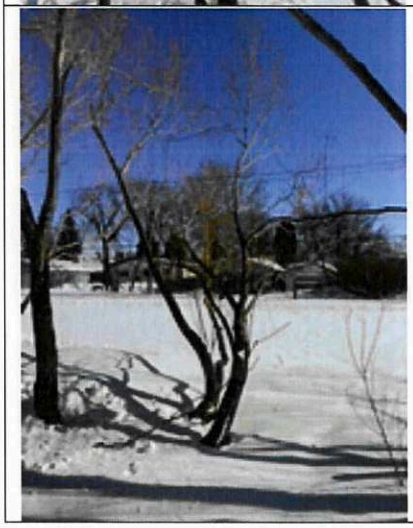
	Tree 2877 *Manitoba Maple* The tree has a DBH 30-39.9 (cm) and the condition is Fair.
	Tree 2878 *Willow* The tree has a DBH 30-39.9 (cm) and the condition is Fair.
	Tree 2879 *Willow* The tree has a DBH 20-29.9 (cm) and the condition is Fair.

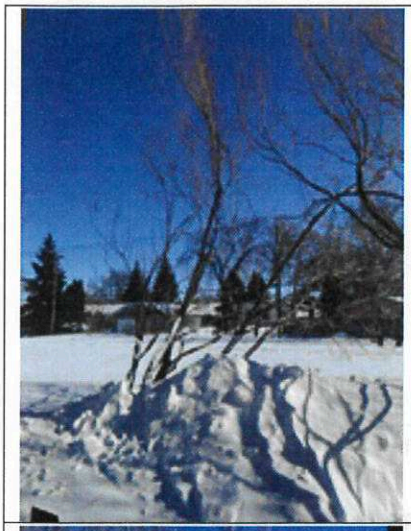
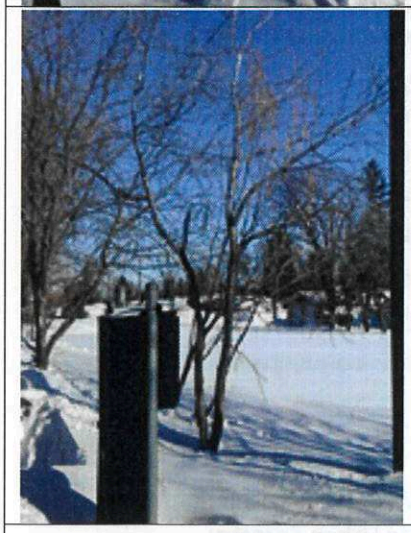
	Tree 2880 *Willow* The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2881 Willow The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2882 Willow The tree has a DBH 1-9.9 (cm) and the condition is Poor.
	Tree 2883 *Willow* The tree has a DBH 30-39.9 (cm) and the condition is Fair.

	Tree 2884 *Willow* The tree has a DBH 30-39.9 (cm) and the condition is Fair. Tree 2885 Willow The tree has a DBH 30-39.9 (cm) and the condition is Fair.
	Tree 2886 *Willow* The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2887 *Willow* The tree has a DBH 20-29.9 (cm) and the condition is Fair.

	Tree 2888 *Willow* The tree has a DBH 20-29.9 (cm) and the condition is Fair.
	Tree 2889 *Willow* The tree has a DBH 10-19.9 (cm) and the condition is Fair. Tree 2890 Willow The tree has a DBH 10-19.9 (cm) and the condition is Poor. Tree 2891 Willow The tree has a DBH 1-9.9 (cm) and the condition is Poor.

	Tree 2892 *Manitoba Maple* The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2893 *American Elm* The tree has a DBH 10-19.9 (cm) and the condition is Fair.
	Tree 2894 *Willow* The tree has a DBH 1-9.9 (cm) and the condition is Poor. Tree 2895 Willow The tree has a DBH 1-9.9 (cm) and the condition is Poor. Tree 2896 Willow

	The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2897 Willow The tree has a DBH 10-19.9 (cm) and the condition is Fair. Tree 2898 Willow The tree has a DBH 20-29.9 (cm) and the condition is Fair.
	Tree 2899 *American Elm* The tree has a DBH 40-49.9 (cm) and the condition is Fair.
	Tree 2900 *Willow* The tree has a DBH 1-9.9 (cm) and the condition is Fair. Tree 2901 *Willow* The tree has a DBH 20-29.9 (cm) and the condition is Fair.

	Tree 2931 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2932 Manitoba Maple The tree has a DBH 1-9.9 (cm) and the condition is Fair.
	Tree 2875, 2902 - 2930 Cotoneaster The tree has a DBH 1-9.9 (cm) and the condition is Good.

G. Construction Guideline

a. Tree Protection Zone[2]

- Protective barriers should be installed around all trees to be retained prior to any construction commencing on site.
- Tree protection barriers are to be located at the outer limit of the minimum Tree Protection Zone (TPZ) and is correlated to trunk diameter (see table).

• Trunk Diameter (DBH)	• Minimum Protection Distances • Required for Private or City Street Trees
• < 10 cm	• 2 m
• 11 – 40cm	• 2.4 m
• 41 – 50 cm	• 3.0 m
• 51 – 60cm	• 3.6 m
• 61 – 70cm	• 4.2 m
• 71 – 80 cm	• 4.8 m
• 81 – 90cm	• 5.4 m
• 91 – 100cm+	• 6 m

- The barriers enclose the tree protection zone (TPZ), within which no construction-related activity is permitted without the permission from City of Winnipeg Urban Forestry Branch or onsite Supervisor regarding private trees. Within the TPZ there is to be,
  - No construction
  - No altering of grade due to cut and fill, surface scraping, excavating, or soil
  - disturbance
  - No storage of construction materials, soil, waste, or debris
  - No disposal of any solid or liquid
  - No parking, operation, or passage of vehicles or equipment
  - No personal access

- Unless otherwise stipulated on the Tress Protection Plan, the barriers are to be 4 feet high, and constructed of high orange plastic web snow fencing on a wood frame or as directed by the City of Winnipeg Urban Forestry Branch in accordance with City of Winnipeg Protection of Existing Tree Specifications. Supports and braces for the barriers must be installed outside the TPZ. The barrier locations can be adjusted to align with curbs and edges at clear path of travel zones.

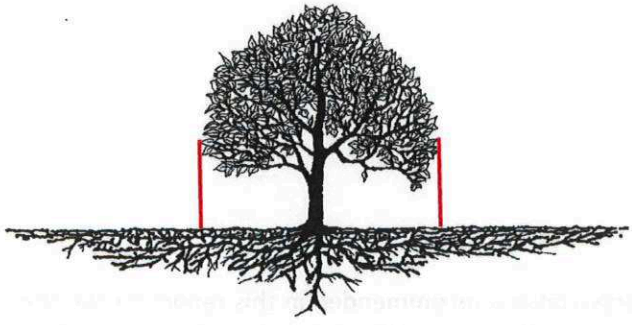
- Tree strapping material will be installed on individual trees where work will be completed within the TPZ.

- An example of tree protection zone and sign is illustrated below



b. Watering of Trees

- It is extremely important to regularly monitor the soil moisture levels within the root zones of the trees during the months from April to November, and to ensure adequate supplemental watering is done promptly as necessary. The objective of the watering is to provide the trees with deep, thorough watering when rainfall is insufficient to keep the soil moist 2" below the surface. This can be done by applying approximately 1-3 inches of water, or 20 – 60 L of water per square metre, throughout the feeder root zone, at least to the drip line (see below).



- It is strongly recommended that an individual who will be on-site for the duration of the project be assigned this responsibility and be given clear instruction on how to check moisture levels, how and where to apply the water and how much.

c. Mulching

- For well-drained sites, apply a 2 to 4 inch (5 to 10 cm) layer of bark or wood chip mulch. Coarse mulches can be applied slightly deeper without harm. Place mulch out to the edge of a tree's crown or beyond. If placed around a smaller tree, consider the mature size of the tree and expand out mulch accordingly.

d. Fertilization

- Fertilization can be completed to encourage growth and increase vigour. Fertilizers should be applied in early spring just before growth occurs.

e. Site Supervision by ISA Certified Arborist

- It is strongly recommended that the client retain a construction-phase project arborist to make routine site inspections to monitor tree protection and tree considerations and provide follow-up summary reports and/or recommendations for tree care or protection related work.
- ISA Certified Arborists can be found in the following website https://www.treesaregood.org/findanarborist/findanarborist

H. Conclusion

The tree preservation prescriptions recommended in this report for the tree to be protected on the site have been prepared following the City of Winnipeg's Tree Protection Zone Guidelines. It is anticipated that, if the minimum tree protection zones are fully heeded, the indicated trees will not be markedly affected by the proposed development. The trees identified for retention are to be protected.
Tree protection zone should be constructed prior to construction and maintained throughout construction. No encroachment into tree protection zones is to occur without arborist supervision.

I. Reference:

1. City of Winnipeg – Arborist/Tree Preservation Report https://www.winnipeg.ca/ppd/Documents/Zoning/DevelopmentApplication/InfoSheet/Arborist%20-Tree-Preservation-Report.pdf. Accessed Dec 1, 2021.

2. City of Winnipeg Tree Planting Details & Specifications Downtown Area and Regional Streets https://winnipeg.ca/publicworks/parksOpenSpace/UrbanForestry/PDF/Principles_and_Guidelines.pdf

3. Council of Tree and Landscape Appraisers. 2018. Guide for Plant Appraisal (10th ed.). International Society of Arboriculture. Champaign

4. Tree Risk Assessment Manual, (2nd ed.). International Society of Arboriculture. Champaign

Appendix I Tree Inventory