



Plant Healthcare Consultants

American Society of Consulting Arborist • International Society of Arboriculture
Massachusetts Arborist Association • Massachusetts Tree Wardens and Foresters Association
TREE INVENTORIES • APPRAISALS • DIAGNOSIS • TREE RISK ASSESSMENTS



Tree Study – Elm Street – North Reading Drainage Improvement Project

Prepared for:

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Summary

Upon inspection of 27 trees along the planned work zone of Elm Street, North Reading, MA, I have recommended the removal of three trees, pruning (a combination of canopy and root pruning) for 18 trees and no action for 5 trees. All the details are included in this report as well as the companion GIS map located at: <https://arcg.is/0i8O4q>.

Introduction

On October 27, 2020 Mr. Peter Ellison, Director of Strategic Land Planning for The Engineering Corp (“TEC”), contacted my office inquiring about my services as a consulting arborist. Mr. Ellison explained that his firm was retained by the Town of North Reading, MA to perform a drainage improvement project on Elm Street. Mr. Ellison explained further that as part of the project they would need the services of a consulting arborist to inspect the trees along the work zone of Elm Street and determine health and condition of the trees and make recommendations based on the plans for the project.

I presented Mr. Ellison a proposal for the services and on December 16, 2020 we executed the agreement.

Background & History

Assignment

The scope of the tree study was to; identify the trees along Elm Street, North Reading, MA, that would be impacted by the drainage improvement project, assess their health and condition, and make recommendations as to what trees should be removed and what other actions should be taken.

The information is gathered and compiled in this report and the companion GIS map.

Limits of Assignment

The recommendations and conclusions provided in this report are based on visual observations only. No examinations of the plant’s interiors were taken nor were and soil or plant tissue taken and submitted for laboratory testing.

Purpose and Use of Report

This report is meant to provide a guide to TEC as to the best course of action for the trees along Elm Street, North Reading. The recommendations are based on the location, condition and overall scope of the project.

This report is the property of TEC and may be used and shared as they deem necessary.

Observations

On January 6, 2021 I performed a site visit in North Reading. I inventoried the trees along Elm Street, within the project limits. I gathered the following information:

1. Location
2. Species (Common and Latin)
3. Diameter at Breast Height (“DBH”)
4. Height
5. Condition
6. Recommendations for Actions
7. Photograph

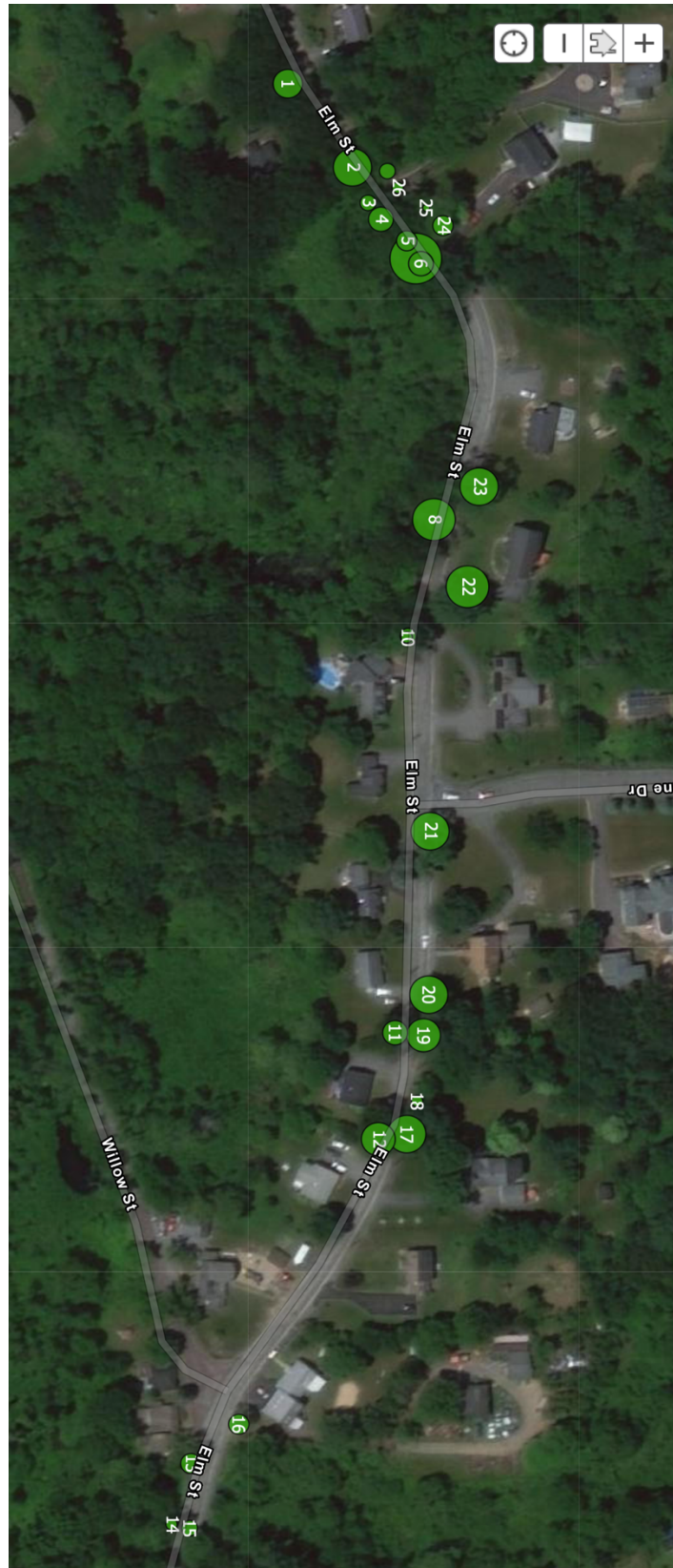
The information is presented in the following table as well as interactive GIS map meant to be a companion to this report. The map can be viewed at <https://arcg.is/0i8O4q>

| Tree Number | Common Name | Scientific Name | Condition | Action | DBH | Height |
|-------------|---------------|------------------|-----------|--------------|-----|--------|
| 1 | Red Oak | Quercus rubra | Poor | Remove | 34 | 45 |
| 2 | Red oak | Quercus rubra | Good | Root Prune | 45 | 50 |
| 3 | Red maple | Acer rubrum | Poor | Remove | 20 | 45 |
| 4 | White oak | Quercus Alba | Good | Canopy Prune | 28 | 55 |
| 5 | White oak | Quercus alba | Good | Root Prune | 25 | 55 |
| 6 | Red oak | Quercus rubra | Poor | Remove | 28 | 55 |
| 7 | Red oak | Quercus rubra | Fair | Canopy Prune | 82 | 55 |
| 8 | Red oak | Quercus rubra | Fair | Canopy Prune | 55 | 55 |
| 9 | Red oak | Quercus rubra | Good | No Action | 22 | 50 |
| 10 | Red oak | Quercus rubra | Good | No Action | 12 | 50 |
| 11 | Red oak | Quercus rubra | Good | Canopy Prune | 30 | 55 |
| 12 | Red oak | Quercus rubra | Good | Canopy Prune | 38 | 55 |
| 13 | White oak | Quercus alba | Fair | Canopy Prune | 24 | 45 |
| 14 | White oak | Quercus alba | Fair | No Action | 15 | 45 |
| 15 | Norway maple | Acer platanoides | Good | Canopy Prune | 18 | 45 |
| 16 | Norway spruce | Picea abies | Fair | Root Prune | 23 | 45 |
| 17 | Sugar maple | Acer saccharinum | Fair | Root Prune | 48 | 50 |
| 18 | Red maple | Acer rubrum | Good | No Action | 12 | 45 |
| 19 | White pine | Pinus strobus | Fair | Canopy Prune | 40 | 55 |
| 20 | Norway spruce | Picea abies | Good | Root Prune | 48 | 55 |
| 21 | Norway maple | Acer platanoides | Good | Remove | 44 | 45 |
| 22 | White pine | Pinus strobus | Good | Canopy Prune | 55 | 55 |
| 23 | Silver maple | Acer saccharum | Good | Root Prune | 50 | 55 |
| 24 | Red maple | Acer rubrum | Fair | Root Prune | 24 | 45 |
| 25 | Sugar maple | Acer saccharinum | Good | No Action | 6 | 35 |
| 26 | Red oak | Quercus rubra | Good | Root Prune | 12 | 45 |
| 27 | Red maple | Acer rubrum | Good | Root Prune | 22 | 45 |

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Tree Map – Interactive Available at <https://arcg.is/0i8O4q>



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Discussion

I examined the 27 trees that are along the work zone of Elm Street, North Reading, MA. I assessed the health and structural integrity of the trees. I also took into account the proximity of the trees to the work zone in regard to root system and canopy. From this inspection I have determined the following:

1. Four trees (1, 3, 6 & 21) should be removed as they are in poor health and pose a potential risk at the present time or will not survive the construction project. No effort to preserve these trees would be prudent.
2. Nine trees (4, 7, 8, 11, 12, 13, 15, 19 & 22) should have crown cleaning. This is a pruning of the canopy that removes dead and damaged branches that may fall causing damage to vehicular and pedestrian traffic. These trees should also have any lower branches removed (up to a height of 15' minimum) that might be damaged as a result of contact with construction equipment.
3. Nine trees (2, 5, 16, 17, 20, 23, 24, 26 & 27) are in a close proximity to the construction zone. As such, the root systems of these trees are in potential danger of being damaged. Care should be taken to minimize impact to these root zones. Excavation equipment tends to tear and rip roots, leaving the ends susceptible to decay and pest damage. Any roots exposed by excavation should have those roots properly pruned, with clean cuts so the tree can heal the cuts. This work should be performed by a certified arborist, familiar and experienced with this type of work. The root system of these tree that is away from the construction zone should not be disturbed nor have equipment or materials stored on them. *Note-these trees should also have the canopies crown cleaned, if needed, as described in the item #2 above.
4. Five trees (9, 10, 14, 18 & 25) require no special attention or action.

Conclusion

Based on my education, training and years of experience in the field of arboriculture it is my professional opinion that recommendation below will provide the trees along Elm Street, North Reading the best chance of surviving the planed drainage improvement project.

Recommendations

I recommend the following:

Removal of trees 1, 3, 6 & 21 by a certified arborist experienced in this type of tree work.

Crown cleaning pruning of trees 4, 7, 8, 11, 12, 13, 15, 19 & 22 to remove dead, diseased and damaged branches as well as raining the canopy, where applicable, to provide clearance for construction equipment. The work should be performed by a certified arborist experienced in this type of tree work.

Root pruning of trees 2, 5, 16, 17, 20, 23, 24, 26 & 27 (and any pruning as needed). The work should be performed by a certified arborist experienced in this type of tree work.

No action needed for trees 9, 10, 14, 18 & 25.

Assumptions and Limited Conditions

1. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.
2. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
3. The consultant shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
4. Unless required by law, otherwise, possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant.
5. Unless required by law, neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant-particularly as to value conclusions, identity of the consultant, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant as stated in his qualifications.
6. This report expressed herein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
7. Sketches, drawings, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise. The reproduction of any information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is for the express purpose of coordination and ease of reference only. Inclusion of said information on any drawings or other documents does not constitute a representation by *Plant Healthcare Consultants* as to the sufficiency or accuracy of said information.
8. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring unless otherwise specified. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.
9. Loss or alteration of any part of this report invalidates the entire report.

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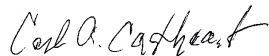
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Certification of Performance

Plant Healthcare Consultants, Inc. certify that:

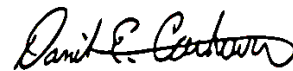
1. We have personally inspected the tree and property referred to in this report and have stated our findings accurately.
2. We have no current or prospective interest in the trees or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
3. The analysis, opinions and conclusions stated herein are our own and are based on current scientific procedures and facts.
4. Our analysis, opinions and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.
5. No one provided significant professional assistance to us, except as indicated within the report.
6. Our compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party or upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

We further certify that Plant Healthcare Consultants is a member in good standing of the Massachusetts Arborist Association, American Society of Consulting Arborists, the International Society of Arboriculture and Massachusetts Tree Wardens and Foresters Association. We have been involved in the field of Arboriculture for over 60 years



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