

APPENDIX F

Arborist Report

Arborist Report DRAFT

TO: Judd Eddy – B+H Architects
SITE: 1522 5th Ave, Seattle, WA 98101
RE: Tree Inventory and Assessment
DATE: September 25, 2019
PROJECT ARBORIST: Tyler Bunton
ISA Certified Arborist #PN-8715A, ISA Qualified Tree Risk Assessor
Josh Petter
ISA Certified Arborist #PN- 8406A, ISA Qualified Tree Risk Assessor
ATTACHED: Table of Trees, Tree Site Map
REFERENCED DOCS: 30% Street Improvement Plan (dated 6/18/2019)

This report documents the site visit by Tyler Bunton of Tree Solutions Inc. on September 18, 2019 to the above referenced site. I was asked to complete a tree inventory and assessment by Judd Eddy for development planning purposes.

I inventoried and assessed five (5) trees in the right-of-way (ROW) adjacent to this property, which may be impacted by development. I used the Seattle Department of Transportation (SDOT) tree inventory identification numbers as tree identifiers.

A summary of my recommendations are:

- All canopy and root pruning should be conducted by an International Society of Arboriculture (ISA) certified arborist and following ANSI A300 specifications¹.
- Pneumatic air excavate for installation of new water and gas utilities.
- Leave existing sidewalk in place for as long as possible.

Observations

Site

The 14,400 square foot site fronts 5th Avenue in downtown Seattle. Two multistory commercial buildings currently exist on site.

¹ ANSI A300 (Part 1) – 2017 American National Standards Institute. American National Standard for Tree Care Operations: Tree, Shrub, and Other Woody Plant Maintenance: Standard Practices (Pruning). New York: Tree Care Industry Association, 2017.

Proposed Plans

The 30 percent Street Improvement Plan (SIP) proposes new water lines between trees 96314 and 96315, and a new gas line between trees 96316 and 96318.

Trees

The five street trees are located along 5th Avenue. They are all Norway maples (*Acer platanoides*) in fair health and fair to good structural condition.

I have included a marked up 30 percent SIP to serve as the site map and attached a table of trees that has detailed information about each tree.

Discussion—Construction Impacts

According to the 30 percent SIP new water service and gas lines are proposed within the critical root zones, defined by SDOT as one half of the dripline, of trees 96314, 96315, and 96318. Excavation for these lines within critical root zones must be done by pneumatic air excavation to a depth of 3 feet cutting no roots greater than 2 inches in diameter. If excavation must occur deeper than 3 feet a hydrovac truck may be used for the remainder of excavation. All exposed roots must be wrapped in burlap prior to hydrovac excavation to protect them from any accidental damage from being sprayed with high pressure water. The gas and water lines must be placed below roots without damaging them, unless root cuts are necessary to place the lines in the trench.

Excavation for the installation of the water utility vaults must be done by pneumatic air excavation to a depth of 3 feet at the edge of excavation to cut roots cleanly.

Existing sidewalk pavement must be left in place as long as possible to protect existing soils from further compaction, and prevent damage to tree roots below the pavement.

This report is preliminary as we have reviewed preliminary design and construction plans for this area.

Recommendations

- All pruning should be conducted by an ISA certified arborist and following ANSI A300 specifications².
- Pneumatic air excavate for installation of new water and gas utilities.
- Leave existing sidewalk in place for as long as possible.

Respectfully submitted,

Tyler Bunton, Certified Arborist

² ANSI A300 (Part 1) – 2017 American National Standards Institute. American National Standard for Tree Care Operations: Tree, Shrub, and Other Woody Plant Maintenance: Standard Practices (Pruning). New York: Tree Care Industry Association, 2017.

Photographs



Photo 1. Tree 96318 with lion-tailed branches that have little taper.

Appendix A - Assumptions & Limiting Conditions

1. Consultant assumes that the site and its use do not violate, and is in compliance with, all applicable codes, ordinances, statutes or regulations.
2. The consultant may provide a report or recommendation based on published municipal regulations. The consultant assumes that the municipal regulations published on the date of the report are current municipal regulations and assumes no obligation related to unpublished city regulation information.
3. Any report by the consultant and any values expressed therein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event, or upon any finding to be reported.
4. All photographs included in this report were taken by Tree Solutions, Inc. during the documented site visit, unless otherwise noted. Sketches, drawings and photographs (included in, and attached to, this report) are intended as visual aids and are not necessarily to scale. They should not be construed as engineering drawings, architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by the consultant as to the sufficiency or accuracy of the information.
5. Unless otherwise agreed, (1) information contained in any report by consultant covers only the items 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, climbing, or coring.
6. These findings are based on the observations and opinions of the authoring arborist, and do not provide guarantees regarding the future performance, health, vigor, structural stability or safety of the plants described and assessed.
7. Measurements are subject to typical margins of error, considering the oval or asymmetrical cross-section of most trunks and canopies.
8. Tree Solutions did not review any reports or perform any tests related to the soil located on the subject property unless outlined in the scope of services. Tree Solutions staff are not and do not claim to be soils experts. An independent inventory and evaluation of the site's soil should be obtained by a qualified professional if an additional understanding of the site's characteristics is needed to make an informed decision.
9. Our assessments are made in conformity with acceptable evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.

Appendix B – Tree Protection Specifications

- **Tree Protection Fencing:** All trees planned for retention or on neighboring properties that overhang the site shall be protected for the entire duration of the construction project. Tree protection fencing shall consist of high visibility mesh or chain link fencing installed at the extent of the tree protection area. Where trees are being retained as a group the fencing should encompass the entire area.
- **Soil Protection:** No parking, materials storage, or dumping (including excavated soils) are allowed within the tree protection area. Any heavy machinery should remain outside of the protection area unless soils are protected from the load. Acceptable methods of soil protection include applying 1 inch plywood over 3 to 4 inches of wood chip mulch, or use of Alturna mats (or equivalent product).
- **Duff/Mulch:** Retain and protect as much of the existing duff and understory as possible. Retained trees in areas where there are exposed soils shall have 4 to 6 inches of wood chips applied to help prevent water evaporation and compaction. Keep mulch 1 foot away from the base of the tree.
- **Excavation:** Excavation done at or within the tree protection area should be carefully planned to minimize disturbance. Where feasible consider using alternative methods such as pneumatic excavation which uses pressurized air to blow soil away from the root system, directional drilling to bore utility lines, or hand excavation to expose roots. Excavation done with machinery (backhoe) in proximity of trees should be performed slowly with flat front buckets, removing small amounts of soil at a time with one person on the ground spotting for roots. When roots are encountered, excavation should stop and roots should be cleanly pruned as needed so they are not ripped or torn.
- **Root Pruning:** Root pruning should be limited to the extent possible. All roots shall be pruned with a sharp saw making clean cuts. Avoid fracturing and breaking roots with excavation equipment. Root cuts shall be immediately covered with soil or mulch and kept moist.
- **Irrigation:** Retained trees will require supplemental water if construction occurs during summer drought periods.
- **Pruning:** Any pruning required for construction and safety clearance shall be done with a pruning specification provided by the project arborist in accordance with American National Standards Institute ANSI A300 Standard Practices for Pruning. Use of an arborist with an International Society of Arboriculture Certification to perform pruning is strongly advised.

DSH (Diameter at Standard Height) is measured 4.5 feet above grade.

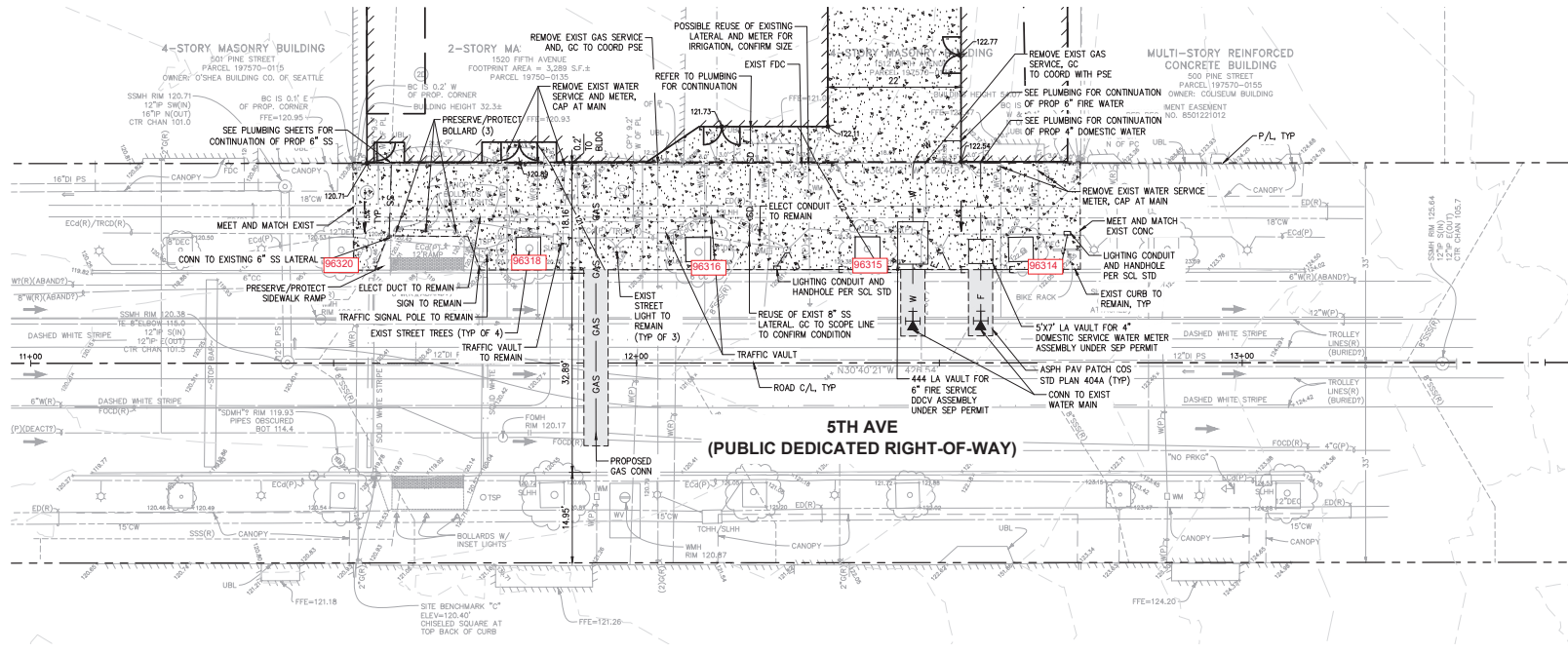
Multi-stem trees are noted; and a single stem equivalent is calculated using the method defined in the Director's Rule 16-2008

Letters are used to identify trees on neighboring property with overhanging canopies

Dripline is measured from the center of the tree to the outermost extent of the canopy.

Tree ID	Scientific Name	Common Name	DSH (inches)	Health Condition	Structural Condition	Dripline Radius (feet)				Exceptional Threshold	Exceptional by Size	Notes
						N	E	S	W			
96314	<i>Acer platanoides</i>	Norway maple	11.3	Fair	Good	11.5	10.5	14.5	18.5	30.0	-	Little taper in branches; small leaves; little shoot extension; surface roots
96315	<i>Acer platanoides</i>	Norway maple	14.3	Fair	Fair	13.6	13.6	18.6	21.6	30.0	-	Little taper in branches; circling roots; lion-tailed; small leaves; little shoot extension; approximately 10 percent dieback; symptoms of drought stress
96316	<i>Acer platanoides</i>	Norway maple	15.7	Fair	Fair	20.7	17.7	20.7	20.7	30.0	-	Little taper in branches; landscape fabric around base; lion-tailed; little shoot extension
96318	<i>Acer platanoides</i>	Norway maple	16.8	Fair	Fair	18.7	13.7	14.7	22.7	30.0	-	Little taper in branches; circling roots; lion-tailed; approximately 5 percent dieback; little shoot extension
96320	<i>Acer platanoides</i>	Norway maple	14.0	Fair	Good	17.6	14.6	18.6	19.6	30.0	-	Little shoot extension

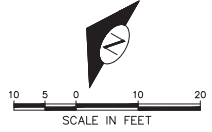
30% Complete Street Improvement Plan Not For Construction



Tree Solutions Inc.
Arborist: Tyler Buntun
206-528-4670

Tree Inventory
September 25, 2019

Tree inventory took place on September 18, 2019 and included all street trees within the right of way which may be impacted by development. Dripline measurements and other tree specifics are listed in the tree table produced by Tree Solutions Inc. and should be added to this drawing prior to any design relating to tree protection.



DATE	MARK	MADE	CHECKED	REV'D



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bellevue, wa 98004

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REVIEWED BY SPU/WATER ENGINEERING	20.....
REVIEWED BY SPU/DRAINAGE	20.....
APPROVED BY SDOT STREET IMPROVEMENT PERMITTING	20.....

DESIGNED: <i>APD</i>	INITIALS AND DATE
CHECKED: <i>BCA</i>	REVIEWED:
DRAWN: <i>APD</i>	PROJECT MANAGER
CHECKED: <i>BCA</i>	REVISED AS-BUILT
DESIGN REVIEW	

City of Seattle
Seattle Department of Transportation

SCALE: H. V. INSPECTOR'S BOOK

1518 5TH AVE
5TH AVE

DPD PROJECT # XXXXXXX	SDOT PROJECT NO. -
	Vault PLAN NO.
	Vault SERIAL NO.
	SHEET OF 4