

Project No. TS - 7191

Arborist Report

To: Seattle Public Schools, c/o Ethan Bernau
Site: 7201 Beacon Ave S., Seattle WA 98108

Re: Preliminary Tree Inventory

Date: August 17, 2021

Project Arborist: Josh Petter

ISA Board Certified Master Arborist #PN-8406B

ISA Qualified Tree Risk Assessor

Reviewed By: Katie Hogan

ISA Certified Arborist #PN- 8078A ISA Qualified Tree Risk Assessor

Attached: Table of Trees

Tree Site Map

Summary

We inventoried and assessed 77 trees on this lot, of those 60 are greater than 6 inches diameter at standard height (DSH) and are regulated. Based on city of Seattle Municipal Code (SMC), trees measuring 6 inches or greater DSH are required to be assessed for development projects. We tagged each tree with an aluminum tree tag. Tree identifier corresponds to the number on each tag.

Of the trees assessed, four met the exceptional tree criteria outlined in the Seattle Director's Rule 16-2008.

We found no exceptional tree groves on-site. The City defines an exceptional grove as eight or more trees each with a diameter measuring 12 inches or greater with continuously overlapping canopies.

There were 26 adjacent trees that required documentation for this property; of these, 15 are regulated by Seattle Department of Transportation (SDOT).

Trees on neighboring properties were documented if they appeared to be greater than 6-inches diameter and their driplines extended over the property line. All trees on adjacent properties were estimated from the subject site or public property such as the adjacent right-of-way. We used an alphabetical tree identifier for trees off-site. Two off-site trees were estimated to be exceptional.

Of the total regulated trees on the site 13 are proposed for removal, the remainder are proposed for retention. All the exceptional trees are proposed for retention.

Assignment and Scope of Work

This report documents the visit by Josh Petter and Tyler Bunton, of Tree Solutions Inc., on May 19, 2020 to the above referenced site. We were asked to complete a tree inventory and assessment by Ethan Bernau, of Shield Obletz Johnsen, in preparation for proposed development.

Observations

Site

This property is comprised of two parcels, the western parcel (2824049028) is 162,478 square feet and fronts South Myrtle street; the eastern parcel (5129000050) is 204,182 square feet and fronts both South Myrtle Street and Beacon Ave South.

There are existing school buildings on-site, as well as play structures and a synthetic turf athletic field.

The site has a mix of turf grass, paved surfaces, and ornamental plantings.

According to Seattle Department of Construction and Inspection (SDCI) GIS there are steep slopes on the northwestern portion of the site, just northwest of the existing turf field.

Trees

We have included an annotated survey of the site to serve as the site map and attached a table of trees that has detailed information about each tree.

We tagged 17 trees under 6 inches DSH that appeared on the survey, these trees are not regulated by the city of Seattle.

Trees 123 (Photo 1), 125 (Photo 2), 126 (Photo 3), 129 (Photo 4), are all exceptional by size and regulated per the Directors Rule 16-2008.

Tree 123 is a flowering cherry (*Prunus serrulata*) in fair health and structural condition. This tree has codominant trunks at the base, with decay visible between the union. There are also a number of large old pruning wounds.

Tree 125 is a Kousa dogwood (*Cornus kousa*) in good health and fair structural condition. This tree has a large amount of invasive blackberry (*Rubus bifrons*) and ivy (*Hedera* sp.) at the base; the invasive plants should be carefully removed by hand.

Tree 126 is a Lawson cypress (*Chamaecyparis lawsonia*) in good health and fair structural condition. It is growing next to an existing staircase and pushing against a chain-link fence.

Tree 129 is a burr oak (*Quercus macrocarpa*) in good health and structural condition. This tree is in close proximity to an existing gravel driveway.

Off-site Trees

Trees A through O (TRE-85329 to TRE-85343) are regulated by SDOT and should be protected throughout construction to the greatest extent feasible.

Tree 147 was tagged on a trunk that extended over the property line; however, this tree originated offsite. This tree, as well as trees S and T, were all estimated to be exceptional by size and should be protected throughout construction.

Discussion—Construction Impacts

General tree protection specifications can be found in Appendix F and should be included in the plan set, as well as used to solicit bids for construction.

Regulated trees 130, 131, 137, 139, 141, 144, 146, 149, 165, and 166 are proposed for removal. Additionally, three trees below 6 inches – 140, 142, and 143 – are proposed for removal. These trees are proposed for removal to accommodate new construction and grading.

All retained site and adjacent trees should have 4 inches of coarse arborist woodchip mulch spread within the entire fenced area; woodchips must be kept 1 foot from the trunk of the trees. Supplemental irrigation will be required for retained trees during the dry months (June through September) and saturate the soil to a depth of 8 to 12 inches. Irrigation must be run at least twice a month and should be monitored monthly to determine if adjustments are required.

Tree 129

Tree 129 is an exceptional burr oak that is close proximity to a new entryway and roundabout for bus traffic. There is an existing gravel driveway in a similar location to the proposed entry off of Beacon Ave S. However, the roundabout will be constructed in an area with minimal prior disturbance. Any excavation occurring within the tree protection area (i.e. dripline), particularly if the disturbance is not within the footprint of the existing gravel drive, will require special excavation methods. Pneumatic air excavation will be required for any excavation for the drive in areas that are undisturbed or below existing subgrade. This process shall be monitored by the project arborist to determine which roots are feasible for retention or can be cut cleanly; smaller roots should be pushed down and covered with subgrade fill.

In order to accommodate the roundabout tree 128, a black cottonwood, will have to be removed. This tree is growing adjacent to tree 129 and have shared canopies. This tree must be directionally felled away from the oak to prevent damage to the trunk of the tree. Additionally, the stump must be ground out to prevent disturbance to the root system of the retained tree.

Two catch basins are proposed within the driplines of tree 129. Excavation for the catch basins must be done entirely with hydro excavation. Excavation to connect catch basins must be done with pneumatic air excavation for the top two feet and hydro for the remainder of the excavation. Roots shall be retained to the extent feasible.

Trees 132 to 134

This is a group of bigleaf maple (*Acer macrophyllum*) trees in fair to good health and fair structural condition. These trees are growing along the southeastern property line near an existing chain-link fence. Some of these trees are growing through the fence and removal of the fence will have to be done carefully. In areas where the fence cannot be removed the metal should be cut as close to the tree trunk as possible and left in place. Under no circumstances should the fence be ripped from the trunks of the trees as this can damage the tree.

A new parking area is proposed to the west of these trees, which will be raised to maintain the existing grade to the extent possible. Any excavation for subgrade must be done carefully with a flat-fronted excavation bucket and avoid damaging any roots below the existing grade.

Trees 151 through 164

This is a cluster of trees growing along the northwestern corner of the property. These trees are overhanging an existing parking area and the asphalt is uplifting in places. Asphalt will have to be removed carefully to prevent damage to the roots below. Once the asphalt is removed, no heavy equipment shall drive over the roots to prevent damage to the bark. The tree protection fencing should be adjusted to the extent of the construction entrance and only moved during the grading phase.

Any roots that must be cut should be cut cleanly with a sharp implement, such as a reciprocating saw, under arborist supervision. If the excavation is not backfilled immediately, wet down the roots and cover them with burlap or plastic to keep them from desiccating. Any root 2 inches or greater should be assessed for retention and documented to assess the impacts to the structural stability of the tree.

If large roots are encountered near the bottom of excavation, root shaving may allow for the retention of part of the root.

Root shaving is sometimes recommended when $\frac{1}{2}$ of the root diameter or less is proposed to be shaved down. Ideally, no greater than $\frac{1}{3}$ of the diameter will be lost. Shaving allows roots to be retained to provide structural support for tree stability. However, there is concern that decay can enter into the exposed area, and if not done properly the root callusing can result in continued conflict.

This method should be used when pavement must be installed to the same level from where it is being removed and no other methods exist for retaining undamaged roots. For mature trees this approach is best done for roots 4 inches in diameter and greater. Ideally no more than $^1/_3$ of the root's diameter should be shaved down but, where necessary and approved by the project arborist, as much as $\frac{1}{2}$ of the diameter can be removed. This is best done by using a planer or debarking tool. The remaining portion of the root should be shaved smoothly and not torn or shredded.²

Done properly, shaved roots will develop reaction wood around the wound. Fastening a steel plate (described below in greater detail) to the root will cause the new growth to spread laterally to the plate and reduce the likelihood of future cracking of the pavement. Paving materials can be placed over the plate.

If paving materials will be applied directly over the shaved roots a layer of foam board, washed gravel, or expandable spray foam can be placed on the roots before the paving material is applied. This will reduce further damage to the roots and allow for new growth to expand.

Steel Plates guide new root development laterally and downward and prevent the upward growth of roots by attaching a 10-guage steel plates to roots using minimum 3/8ths inch lag bolts. Pilot holes are drilled through the plates and into the roots before attaching. This can be done to roots that are shaved or the plates can be bent to form around the tree roots. ³

Tree Solutions Inc., Consulting Arborists

¹ Costello, Laurence Raleigh, and Katherine S. Jones. "Reducing infrastructure damage by tree roots." (2003).

² Smiley, E. Thomas. Sidewalk Repair Near Trees

³ The Bloomington, Illinois Department of Public Works, *A Master Plan For Sidewalks*, October 12, 2015.

Base rock can be placed over and around the steel plates to reach the correct grades needed for paver installation. Angular gravel with no fines is the preferred material to allow for water drainage and air space. Paving material such as concrete or asphalt can be poured over the steel plates or gravel.³

Trees A through O

Trees A through O (TRE-85329 to TRE-85343) are regulated by SDOT and must be protected throughout the duration of the project. In areas there is uplift from the tree roots. In many areas the existing hardscapes are proposed for removal and replacement. The construction of new hardscapes should follow the recommendations detailed above, implementing root shaving, selective root pruning, and reinforced hardscapes. New concrete installation should be reinforced with rebar to ensure future damage is limited.

Recommendations

- Add tree numbers (replace survey callouts, e.g. 19" Tree), dripline measurements (per table of trees), and tree protection to all plan sheets.
- All retained trees must have woodchip mulch, chain-link fencing, and supplemental irrigation.
 - Add 4 inches of woodchip mulch to tree protection area, keep mulch 1 foot from the trunks of the trees.
 - Use 6-foot tall chain-link fencing with tree protection signage.
 - Provide supplemental irrigation during the dry months of construction (June through September) for all retained trees. The irrigation must be run twice a month and saturate the soil to a depth of 8 to 12 inches. This should be monitored at the beginning of each month to ensure adequate soil moisture.
- The project arborist shall monitor all excavation within the dripline of tree 129 and approve the excavation method.
- No new irrigation can be trenched within the tree protection areas.
- Site planning around exceptional trees must follow the guidelines outlined in SMC 25.11.050.⁴
- All pruning should be conducted by an ISA certified arborist and following ANSI A300 specifications.⁵

Respectfully submitted, Josh Petter, Consulting Arborist

⁴ Seattle Municipal Code 25.11.050. General Provisions for Exceptional Trees

⁵ Accredited Standards Committee A300 (ASC 300). <u>ANSI A300 (Part 1) Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning)</u>. Londonderry: Tree Care Industry Association, 2017.

Appendix A Photographs



Photo 1. Exceptional tree 123, the yellow circle shows an old branch tear out.



Photo 2. Exceptional tree 125 is in close proximity to an existing staircase and has a large amount on ivy on the trunk



Photo 3. Exceptional tree 126, is in close proximity to an existing staircase and abutting the fence.



Photo 4. Arrow pointing to exceptional tree 129 is in close proximity to an existing gravel driveway.

Appendix B Glossary

ANSI A300: American National Standards Institute (ANSI) standards for tree care

DBH or DSH: diameter at breast or standard height; the diameter of the trunk measured 54 inches (4.5 feet) above grade (Council of Tree and Landscape Appraisers 2019)

ISA: International Society of Arboriculture

Regulated Tree: A tree required by municipal code to be identified in an arborist report.

Visual Tree Assessment (VTA): method of evaluating structural defects and stability in trees by noting the pattern of growth. Developed by Claus Mattheck (Harris, *et al* 1999)

Appendix C References

Accredited Standards Committee A300 (ASC 300). <u>ANSI A300 (Part 1) Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning)</u>. Londonderry: Tree Care Industry Association, 2017.

Council of Tree and Landscape Appraisers, <u>Guide for Plant Appraisal</u>, <u>10th Edition</u>, <u>Second Printing</u>. Atlanta, GA: The International Society of Arboriculture (ISA), 2019.

Mattheck, Claus and Helge Breloer, <u>The Body Language of Trees.</u>: A Handbook for Failure Analysis. London: HMSO, 1994.

Seattle Municipal Code 25.09.070. Standards for Trees and Vegetation in Critical Areas.

Seattle Municipal Code 25.11.050. General Provisions for Exceptional Trees.

Sugimura, D.W. "DPD Director's Rule 16-2008". Seattle, WA, 2009

Appendix D Assumptions & Limiting Conditions

- Consultant assumes that the site and its use do not violate, and is in compliance with, all applicable codes, ordinances, statutes or regulations.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 E **Methods**

Measuring

I measured the diameter of each tree at 54 inches above grade, diameter at standard height (DSH). If a tree had multiple stems, I measured each stem individually at standard height and determined a single-stem equivalent diameter by using the method outlined in the city of Seattle Director's Rule 16-2008 or the <u>Guide for Plant Appraisal</u>, 10th <u>Edition Second Printing</u> published by the Council of Tree and Landscape Appraisers. A tree is regulated based on this single-stem equivalent diameter value. Because this value is calculated in the office following field work, some trees in our data set may have diameters smaller than 6 inches. These trees are included in the tree table for informational purposes only and not factored into tree totals discussed in this report.

Tagging

I tagged each tree with a circular aluminum tag at eye level. I assigned each tree a numerical identifier on our map and in our tree table, corresponding to this tree tag. I used alphabetical identifiers for trees off-site.

Evaluating

I evaluated tree health and structure utilizing visual tree assessment (VTA) methods. The basis behind VTA is the identification of symptoms, which the tree produces in reaction to a weak spot or area of mechanical stress. A tree reacts to mechanical and physiological stresses by growing more vigorously to re-enforce weak areas, while depriving less stressed parts. An understanding of the uniform stress allows the arborist to make informed judgments about the condition of a tree.

Rating

When rating tree health, I took into consideration crown indicators such as foliar density, size, color, stem and shoot extensions. When rating tree structure, I evaluated the tree for form and structural defects, including past damage and decay. Tree Solutions has adapted our ratings based on the Purdue University Extension formula values for health condition (*Purdue University Extension bulletin FNR-473-W - Tree Appraisal*). These values are a general representation used to assist arborists in assigning ratings.

<u>Excellent</u> - Perfect specimen with excellent form and vigor, well-balanced crown. Normal to exceeding shoot length on new growth. Leaf size and color normal. Trunk is sound and solid. Root zone undisturbed. No apparent pest problems. Long safe useful life expectancy for the species.

<u>Good</u> - Imperfect canopy density in few parts of the tree, up to 10% of the canopy. Normal to less than ¾ typical growth rate of shoots and minor deficiency in typical leaf development. Few pest issues or damage, and if they exist they are controllable or tree is reacting appropriately. Normal branch and stem development with healthy growth. Safe useful life expectancy typical for the species.

<u>Fair</u> - Crown decline and dieback up to 30% of the canopy. Leaf color is somewhat chlorotic/necrotic with smaller leaves and "off" coloration. Shoot extensions indicate some stunting and stressed growing conditions. Stress cone crop clearly visible. Obvious signs of pest problems contributing to lesser condition, control might be possible. Some decay areas found in main stem and branches. Below average safe useful life expectancy

<u>Poor</u> - Lacking full crown, more than 50% decline and dieback, especially affecting larger branches. Stunting of shoots is obvious with little evidence of growth on smaller stems. Leaf size and color reveals overall stress in the plant. Insect or disease infestation may be severe and uncontrollable. Extensive decay or hollows in branches and trunk. Short safe useful life expectancy.

Appendix F Tree Protection Specifications

The follow is a list of protection measures that must be employed before, during and after construction to ensure the long-term viability of retained trees.

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.

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.

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 AlturnaMats TM (or equivalent product).

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.

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.

Irrigation

Retained trees will require supplemental water if construction occurs during summer drought periods.

Canopy 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.



Arborist: JP TB

Date of Inventory: 05.19.2020 **Table Prepared:** 08.17.2021

DSH (Diameter at Standard Height) is measured 4.5 feet above grade, or as specified in the <u>Guide for Plant Appraisal, 10th Edition</u>, published by the Council of Tree and Landscape Appraisers. DSH for multi-stem trees are noted as a single stem equivalent, which is calculated using the method defined in the <u>Director's Rule 16-2008.</u>

Letters are used to identify trees on neighboring properties with overhanging canopies. Dripline is measured from the center of the tree to the outermost extent of the canopy.

Dripline Radius (feet)

	I	1	1	1	T	1				et)			I D	le.
Tree ID	Scientific Name	Common Name	(inches)	DSH Multistem	Health Condition	Structural Condition	N	E	S	W	Exceptional Threshold	Exceptional by Size	Proposed Action	Notes
103	Cornus florida	Eastern flowering	7.4		good	fair	10.8	7.3	8.3	11.3	12.0	-	Retain	1 foot wound on south side; 25
	, , , , , , ,	dogwood							-					percent circumference of trunk
104	Cornus florida	Eastern flowering	10.3		fair	poor	13.4	9.4	8.9	9.9	12.0	-	Retain	Measured at narrowest point
	, , , , , , ,	dogwood												below union; wound on south side,
														approximately 1 foot and 10 per
														circumference of the trunk; large
														amount of decay between union;
														large wound and bark sloughing on
														north side
105	Cornus florida	Eastern flowering	8.9		good	fair	11.4	11.4	9.9	9.9	12.0	-	Retain	Wound and decay cavity on south
		dogwood												side, 3 feet tall, 6 inches wide, few
														inches deep
108	rhododendron	Tree rhododendron	6.0	2.3,2.2,2.8,	good	good	5.3	5.3	7.8	2.8	11.3	-	Retain	
				4.3										
110	Cedrus libani	Cedar of Lebanon	24.7		good	good	18.0	18.5	18.0	23.0	30.0	-	Retain	Blue atlas; partially buried root
														flare; add woodchip mulch and
														understory plants if retaining
111	Cornus florida	Eastern flowering	9.0	5.6,4.4,5.5	good	good	10.4	11.9	10.9	7.4	12.0	-	Retain	Old stub cut pruning wounds on
		dogwood												northeast side
112	Cornus florida	Eastern flowering	10.0	5.1,5.3,4.9,	good	good	13.4	11.4	9.4	10.9	12.0	-	Retain	Minor decay near old pruning
		dogwood		4.6										wounds
113	Fagus sylvatica	European beech	23.5		good	good	19.0	19.0	21.0	22.0	30.0	-	Retain	Measured at narrowest point
														below union; crowded scaffolding
														branches with Included bark, but
														branches are grafting; unions look
														ok; minor wounding in some lateral
														branches, possibly from climbing or
														maintenance; hypericum at base
117	Camellia japonica	Japanese camellia	9.8	4.4,4.9,4.5,	good	good	11.4	11.4	7.4	7.4	30.0	-	Retain	Blackberry at base
				5.7	8000	8000								
118	Camellia japonica	Japanese camellia	6.8	4.9,4.7	good	good	10.3	9.3	6.3	5.3	30.0	-	Retain	Bindweed at base
120	Camellia japonica	Japanese camellia	12.6	3.6,5,4.3,2.	good	good	11.5	11.5	7.5	7.5	30.0	-	Retain	Bindweed and blackberry at base
				9,4.2,2.5,2.										
				5,3,2.9,3.1,										
				3.1,3.6,4										
121	Camellia japonica	Japanese camellia	7.8	2.5,3.5,3.2,	good	good	9.8	7.3	4.8	5.8	30.0	-	Retain	Bindweed at base; minor wounding
				2.7,3.2,3.8										on two lateral branches, potentially
														from lawn maintenance



Arborist: JP TB

Date of Inventory: 05.19.2020 **Table Prepared:** 08.17.2021

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	N	E	S	w	Exceptional Threshold	Exceptional by Size	Proposed Action	Notes
123	Prunus serrulata	Flowering cherry	23.3	19,13.5	fair	fair	19.0	17.5	16.0	13.0		Exceptional	Retain	Codominant trunks at base; decay between union; 10 inch pruning wound with decay column on east side of trunk; old branch tear out on west side
124	Betula pendula	European white birch	21.0		fair	poor	21.9	19.9	19.4	20.4	24.0	-	Retain	Measured at narrowest point below union; lots of low scaffold branches; unusual form for this tree; pruning wounds and decay present
125	Cornus kousa	Kousa dogwood	22.2		good	fair	20.9	18.9	15.9	16.9	12.0	Exceptional	Retain	Check on species; ivy climbing the trunk; blackberry at base; close to existing trunk; some minor dieback cherry laurel near base; old dead leader, approximately 3 in diameter should be removed; wound at base
126	Chamaecyparis lawsoniana	Lawson cypress	30.3	23,19.8	good	fair	14.3	11.8	14.3	14.3	30.0	Exceptional	Retain	Some decay between union; wound on inside of north trunk
127	Chamaecyparis lawsoniana	Lawson cypress	16.7		good	fair	9.7	8.7	12.7	15.7	30.0	-	Retain	Ivy on trunk; dead trunk on east at base
128	Populus trichocarpa	Black cottonwood	54.0		good	good	33.8		46.8		Exceptional except in grove	-	Retain	Populus deltoidies; large amount of ivy in trunk which limited assessment; some deadwood under 2 inches; while it looks good this species is known for dropping branches; i would not build too closely to this tree; we were only able to measure half diameter and double it due to access, fence against the trunk of tree; must remove ivy climbing into canopy
129	Quercus macrocarpa	Burr oak	36.8		good	good	20.5	28.5	39.5	21.0	30.0	Exceptional	Retain	Ivy climbing trunk
130	Acer macrophyllum	Bigleaf maple	27.0		good	fair	24.6	25.1	12.1	28.6	30.0	-	Remove	Trunk enveloping the fence; may have to remove trunk for stability; diameter estimated due to the fence; ivy at base; included bark in all unions:
131	Acer macrophyllum	Bigleaf maple	27.0	21,17	poor	poor	9.1	20.1	17.6	21.1	30.0	-	Remove	Two trunks entirely dead; heavy dieback; Ganoderma applanatum fungal fruiting body at base
132	Acer macrophyllum	Bigleaf maple	24.7	10,16,15,5. 5	good	fair	13.5	29.0	15.0	23.0	30.0	-	Retain	larger ruiting body at base lvy climbing into canopy; limited assessment; narrow unions between trunks; growing close to fence



Table of Trees Van Asselt Elementary School Seattle, WA

Arborist: JP TB

Date of Inventory: 05.19.2020 **Table Prepared:** 08.17.2021

Tree	Scientific Name	Common Name	DSH	DSH	Health	Structural	N	E	S	w	Exceptional	Exceptional	Proposed	Notes
ID			(inches)	Multistem	Condition	Condition					Threshold	by Size	Action	
133	Acer macrophyllum	Bigleaf maple	21.6	12,18	good	fair	14.9	11.4	11.4	21.9	30.0	-	Retain	Narrow unions between trunks; ivy
														growing into canopy; starting to
														grow over fence
134	Acer macrophyllum	Bigleaf maple	25.3	16.8,18.9	fair	fair	17.6	28.1	24.1	20.1	30.0	-	Retain	One central dead trunk; decay
														cavity below it; good wildlife
														habitat if nothing is nearby;
														blackberry and ivy at base
135	Acer macrophyllum	Bigleaf maple	17.3	10.2,14	good	fair	22.7	17.2	15.7	17.2	30.0	-	Retain	Diameter estimated on 2nd trunk
														due to access; trunk growing
														through fence which is impacting
														the structure; cherry laurel at base
136	Acer macrophyllum	Bigleaf maple	16.6	7.5,3,3.4,5.	good	fair	15.7	14.7	10.7	16.7	30.0	-	Retain	Many trunks at base; growing
		0		5,3.9,4.5,6.	0									through fence; diameter estimated;
				8,4.6,8										heavy ivy on trunks
137	Acer macrophyllum	Bigleaf maple	8.4	5.8,6.1	poor	poor	17.9	12.9	6.4	10.4	30.0	-	Remove	Two trunk sprouts growing through
		0												fence; base is off property and
														heavily decayed; not a long term
														viable tree
138	Pseudotsuga menziesii	Douglas-fir	10.0		good	good	12.9	9.4	6.4	9.4	30.0	-	Retain	Behind fence; unable to access; not
	J				0	0								tagged
139	Pyrus sp.	Pear	6.6	5,3,3	good	fair	10.3	10.8	5.3	6.3	30.0	-	Remove	Behind fence; growing through
														fence; tagged on this side of fence
141	Cuprocyparis leylandii	Leyland cypress	7.2	5.4,4.8	good	good	9.3	9.3	9.3	9.3	30.0		Remove	Some type of golden cultivar,
	cuprocypans regionali	Leyiana cypress	/	3.4,4.0	Bood	Bood	3.3	3.3	3.5	3.5	30.0		nemove	maybe 'Golconda'
144	Acer platanoides	Norway maple	7.7		good	good	15.8	16.8	14.8	9.8	30.0	_	Remove	White pith in leaf petiole
145	Acer macrophyllum	Bigleaf maple	18.4	13.2,8,10	good	good	17.3	_	_	17.8		_	Retain	Heavy ivy in trunk that limited
	,	-0		,-,	8	8								assessment; diameter estimated;
														growing across fence line
146	Ulmus 'Homestead'	Homestead elm	7.8		good	good	16.8	14.3	12.8	12.3	29.5	-	Remove	Elm with small leaf's; insect
					0	0								damage; blackberry at base
148	Malus domestica	Apple	7.2	4.4,3.7,4.4	fair	fair	10.3	5.3	9.3	5.3	20.0	-	Retain	Tip dieback; covered in blackberry
		' '		' '										and ivy
149	Betula pendula	European white birch	10.0		good	good	14.4	16.4	13.4	14.9	24.0	-	Remove	Limited soil volume; growing
					-									against concrete planter
150	Malus domestica	Apple	8.3		fair	fair	1.3	1.3	14.3	7.3	20.0	-	Retain	Old branch tear out approximately
														3 in diameter; heavy ivy in canopy
151	Acer macrophyllum	Bigleaf maple	10.4		good	good	11.4	17.4	18.4	12.4	30.0	-	Retain	Phototropic to east; ivy in canopy
152	Acer macrophyllum	Bigleaf maple	17.1		good	good	11.7	_	13.7	_	30.0	-	Retain	Codominant trunks; measured as
		0			0.22	3,22					1			one trunk because they are
														growing together; ivy into canopy
153	Acer macrophyllum	Bigleaf maple	12.8		good	good	8.5	7.5	15.5	11.5	30.0	-	Retain	Ivy in canopy
154	Crataegus monogyna	Common hawthorn	7.2	6,3.9	fair	fair	9.3	7.3	8.3		16.2	-	Retain	Suppressed; engulfed in ivy;
	3 3, -			'						1				codominant trunks at 3 feet
155	Acer macrophyllum	Bigleaf maple	10.3	9,5	good	good	10.4	7.4	9.4	20.4	30.0	-	Retain	Phototropic west; ivy in canopy



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Tree	Scientific Name	Common Name	DSH	DSH	Health	Structural	N	E	S	W	Exceptional	Exceptional	Proposed	Notes
ID			(inches)	Multistem	Condition	Condition					Threshold	by Size	Action	
156	Acer macrophyllum	Bigleaf maple	16.2	12.5,10.3	good	good	10.7	14.7	12.7	16.7	30.0	-	Retain	Codominant at base with good
	, ,													union; ivy into canopy
158	Acer macrophyllum	Bigleaf maple	17.8	15.9,8.1	good	good	17.7	23.7	18.7	29.7	30.0	-	Retain	Codominant at base; ivy in canopy
160	Acer macrophyllum	Bigleaf maple	9.3		good	good	12.4	16.9	8.4	8.4	30.0	-	Retain	Ivy on trunk; suppressed
161	Acer macrophyllum	Bigleaf maple	12.3	7.4,6.5,7.4	good	good	15.5	20.0	14.5	9.5	30.0	-	Retain	Scotch broom at base; ivy in
														canopy; phototropic east; 3 trunks
														at base with good unions
162	Acer macrophyllum	Bigleaf maple	15.7	12.4,9.6	good	good	12.7	21.7	10.7	15.7	30.0	-	Retain	Larger trunk is two trunks that have
														grown together; codominant at
														base; ivy on trunk
163	Acer macrophyllum	Bigleaf maple	12.1	9.2,7.8	good	good	12.5	19.5	6.5	13.5	30.0	-	Retain	Codominant trunks at base; ivy on
														trunk
164	Thuja plicata	Western redcedar	9.5		good	good	12.4	9.4	9.4	9.4	30.0	-	Retain	Phototropic to north; debris at
														base; blackberry and ivy at base
165	Betula populifolia	Gray birch	9.2	8.3,4	fair	fair	19.9	7.4	7.4	22.4	15.1	-	Remove	Codominant at base; old trunk
														removed at base; minor tip
														dieback; probably has bronze birch
														borer
166	Betula populifolia	Gray birch	7.4		poor	fair	12.3	17.3	6.3	1.3	15.1	-	Remove	Found d-shaped holes of bronze
														birch borer; major dieback; one
														trunk dead; unlikely to recover
169	Prunus x subhirtella	Autumn flowering	7.5		fair	fair	6.8	8.3	6.3	8.8	15.8	-	Retain	40 percent dieback
	'Autumnalis Rosea'	cherry												
171	Davidia involucrata	Dove tree	12.9	7.4,9.2,5.3	good	good	13.0	15.5	15.0	14.5	14.3	-	Retain	Dove tree; minor lawn mower
														damage at base; needs mulch
172	Alnus rubra	Red alder	30.4		fair	fair	18.3	22.3	21.3	26.3	Not	-	Retain	Large dead leader; fence at base;
											Exceptional			holly; blackberry at base
											unless in grove			
173	Populus trichocarpa	Black cottonwood	37.3		fair	poor	24.6	20.6	17.6	18.6	Not	-	Retain	Large decay cavity on northeast
											Exceptional			side; large growth deficit on south
											except in grove			side; straddles property line;
														recommend removal
174	Acer macrophyllum	Bigleaf maple	19.5	18.5,5.2,3.5	good	fair	23.8	24.8	18.8	20.8	30.0	-	Retain	Wound on east side and narrow
														unions with included bark
175	Populus trichocarpa	Black cottonwood	13.9		good	good	14.1	16.6	16.6	14.6	Not	-	Retain	Growing in cluster of cottonwood;
											Exceptional			blackberry at base
											except in grove			
176	Populus trichocarpa	Black cottonwood	11.7		good	good	12.5	32.5	17.5	3.5	Not	-	Retain	Growing in cluster of cottonwood;
											Exceptional			blackberry at base; phototropic to
											except in grove			the east



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ID			(inches)	Multistem	Condition	Condition					Threshold	by Size	Action	
177	Populus trichocarpa	Black cottonwood	9.3		good	good	4.4	15.4	19.4	12.4	Not Exceptional except in grove	-	Retain	Growing in cluster of cottonwood; blackberry at base
178	Populus trichocarpa	Black cottonwood	13.1		good	good	5.5	16.5	24.5	19.5	Not Exceptional except in grove	-	Retain	Growing in cluster of cottonwood; blackberry at base
179	Populus trichocarpa	Black cottonwood	17.4	14.3,10	good	good	17.7	9.7	16.7	20.7	Not Exceptional except in grove	-	Retain	Growing in cluster of cottonwood; blackberry at base
					Tre	es tagged und	er 6 inch	es DSI	Н					
102	Cornus florida	Eastern flowering	5.8		good	good	10.2	9.2	9.2	7.2	12.0	-	Retain	Raised planter; surface roots;
		dogwood												stump to northwest
106	rhododendron	Tree rhododendron	3.7		good	good	6.7	6.7	6.7	4.7	11.3	-	Retain	
107	rhododendron	Tree rhododendron	4.6	3.6,2.4,1.7	good	good	2.7	3.2	7.2	5.2	11.3	-	Retain	
109	rhododendron	Tree rhododendron	5.0		good	good	3.7	5.2	4.7	2.7	11.3	-	Retain	Pruning wounds near base with decay
114	Malus 'Prariefire'	Prariefire crabapple	4.0		good	good	7.2	9.2	9.2	8.2	30.0	-	Retain	Minor lawnmower damage at base; purple leaf crab apple
115	Camellia japonica	Japanese camellia	5.0		good	good	6.2	10.2	6.7	2.2	30.0	-	Retain	Camelia japonica; wound on northwest side at base, looks to be from an old trunk removed
116	Sorbus aucuparia	European mountain ash	4.1		good	fair	5.7	6.7	7.2	7.2	29.0	-	Retain	Lawn mower damage around majority of base; need better mulch circle and understory planting
119	Malus 'Prariefire'	Prariefire crabapple	4.6		good	good	11.2	9.7	11.2	8.7	30.0	-	Retain	Diditilie
122	Sorbus aucuparia	European mountain ash	4.9		good	good	7.7	7.2	7.7	8.2	29.0	-	Retain	Minor lawn mower damage at base; narrow unions between branches
140	Calocedrus decurrens	Incense cedar	4.3		good	good	4.2	4.2	4.2	4.2	30.0	-	Remove	
142	Populus nigra 'Italica'	Lombardy poplar	5.7	4,4	fair	fair	8.2	9.2	4.2	2.2	30.0	-	Remove	In row of dead poplars; ivy and blackberry at base
143	Acer rubrum	Red maple	5.5		fair	fair	8.2	9.2	7.2	8.2	25.0	-	Remove	Wounding and cracking at base to 3 feet on south side
157	Thuja plicata	Western redcedar	5.9		fair	fair	7.7	8.2	7.2	5.7	30.0	-	Retain	Top dead; likely due to shading; could recover with more sunlight; ivy climbing trunk
159	Acer macrophyllum	Bigleaf maple	5.5		good	good	8.2	1.2	7.2	15.2	30.0	-	Retain	Hawthorn at base; ivy on trunk
167	Malus 'Prariefire'	Prairie fire crabapple	5.3		good	good	10.2	12.7		_		-	Retain	Crab apple; not 100 percent sure
168	Malus 'Prariefire'	Prairie fire crabapple	3.4		good	good	9.1	9.1	9.1	9.1	30.0	-	Retain	Purple leaf crab apple; not 100 percent sure on id
170	Malus 'Prariefire'	Prairie fire crabapple	3.2	1	good	good	7.1	7.1	7.1	7.1	30.0	-	Retain	Crab apple
	1		12			Trees with ov	_	_	_		1 - 1 - 2	·		1 10



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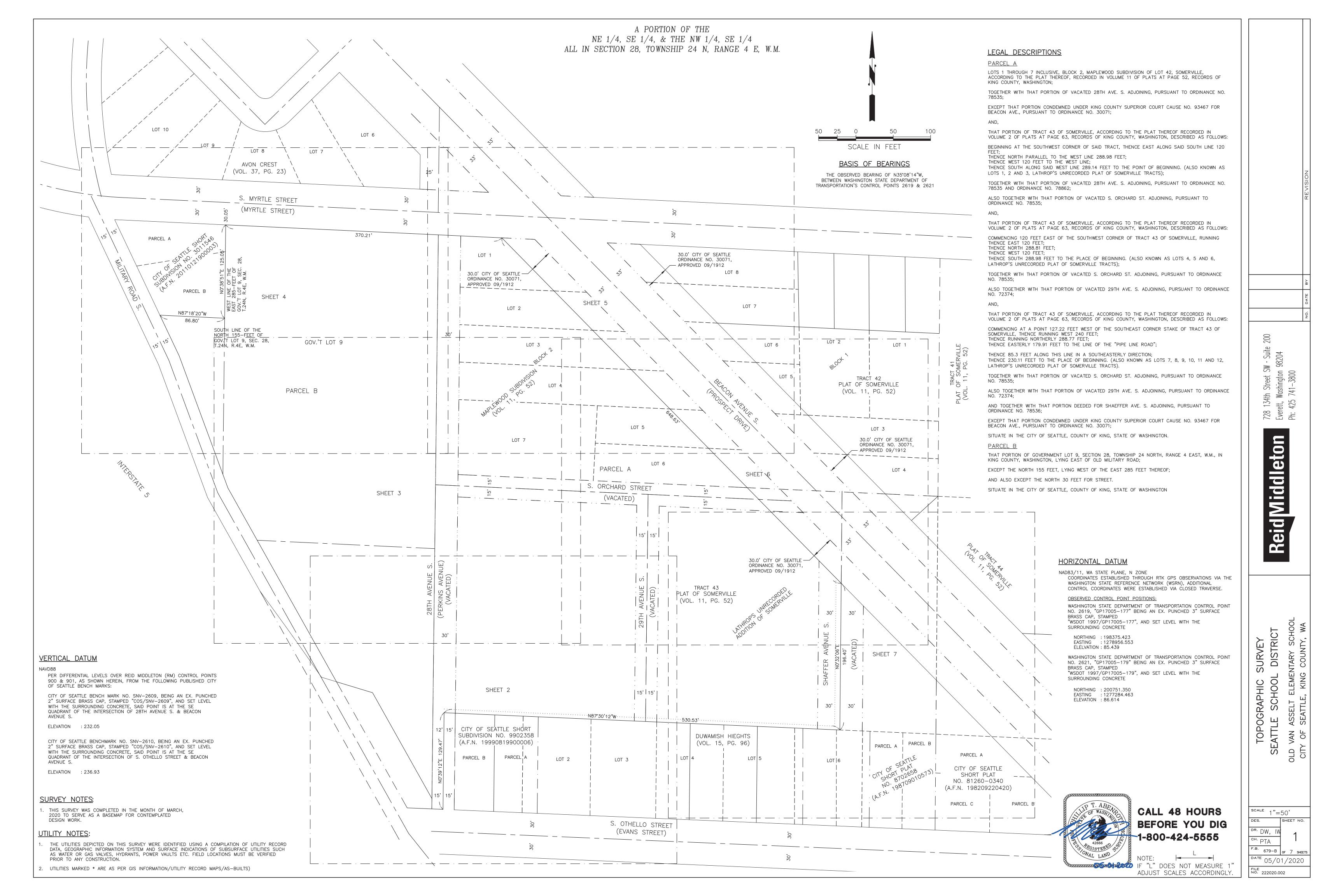
	Scientific Name	Common Name	DSH	DSH	Health	Structural	N	E	S	W	Exceptional	Exceptional	Proposed	Notes
ID			(inches)	Multistem	Condition	Condition					Threshold	by Size	Action	
147	Acer circinatum	Vine maple	8.5	5.5,6.5	good	good	12.9	7.4	10.4	7.4	8.0	Exceptional	Retain	Tagged on trunk on this side of fence, but really originates offsite; ivy and blackberry at base
A (TRE- 85329)	Acer rubrum	Red maple	12.8		good	good	16.5	21.0	13.5	9.5	25.0	-	Retain	Small planter; under powerlines, pruning done for clearance; limited soil volume; surface roots; new sidewalk to south
B (TRE- 85330)	Acer rubrum	Red maple	12.4		good	good	21.5	15.5	16.5	12.5	25.0	-	Retain	Under powerlines; sidewalk raising; codominant trunks at 8 feet; included bark in union
C (TRE- 85331)	Acer rubrum	Red maple	8.7		fair	fair	17.4	12.4	14.9	14.4	25.0	-	Retain	Large wound at base to 3.5 feet, 35 percent circumference of trunk; clearance pruning done for wire clearance
D (TRE- 85332)	Acer rubrum	Red maple	6.7		good	good	11.3	13.3	12.8	11.8	25.0	-	Retain	Surface roots growing over sidewalk with lawnmower damage on roots
E (TRE- 85333)	Acer rubrum	Red maple	9.2		good	good	12.4	13.9	14.4	14.4	25.0	-	Retain	Limited soil volume; pruning for overhead wires previously done
F (TRE- 85334)	Acer rubrum	Red maple	7.0		good	good	17.3	15.3	9.3	10.3	25.0	-	Retain	Needs clearance pruning; surface roots; girdling roots; small wound on east side; 5 percent circumference of trunk
G (TRE 85335)	Acer rubrum	Red maple	11.6		good	good	19.5	18.5	20.5	14.5	25.0	-	Retain	Sidewalk raising; surface roots; sprouting at base
H (TRE- 85336)	Acer rubrum	Red maple	10.1		good	good	15.4	10.4	14.9	14.9	25.0	-	Retain	Sidewalk raising; girdling roots; surface roots;
I (TRE- 85337)	Acer rubrum	Red maple	12.2		good	good	14.5	11.5	19.5	19.5	25.0	-	Retain	Sidewalk raising; girdling roots; surface roots
85338)	Acer rubrum	Red maple	12.3		good	good	13.0		21.0			-	Retain	Sidewalk raising; girdling roots; surface roots
K (TRE- 85339)	Acer rubrum	Red maple	11.9		good	good	15.0	11.5	19.5	23.0	25.0	-	Retain	Sidewalk raising; girdling roots; surface roots;

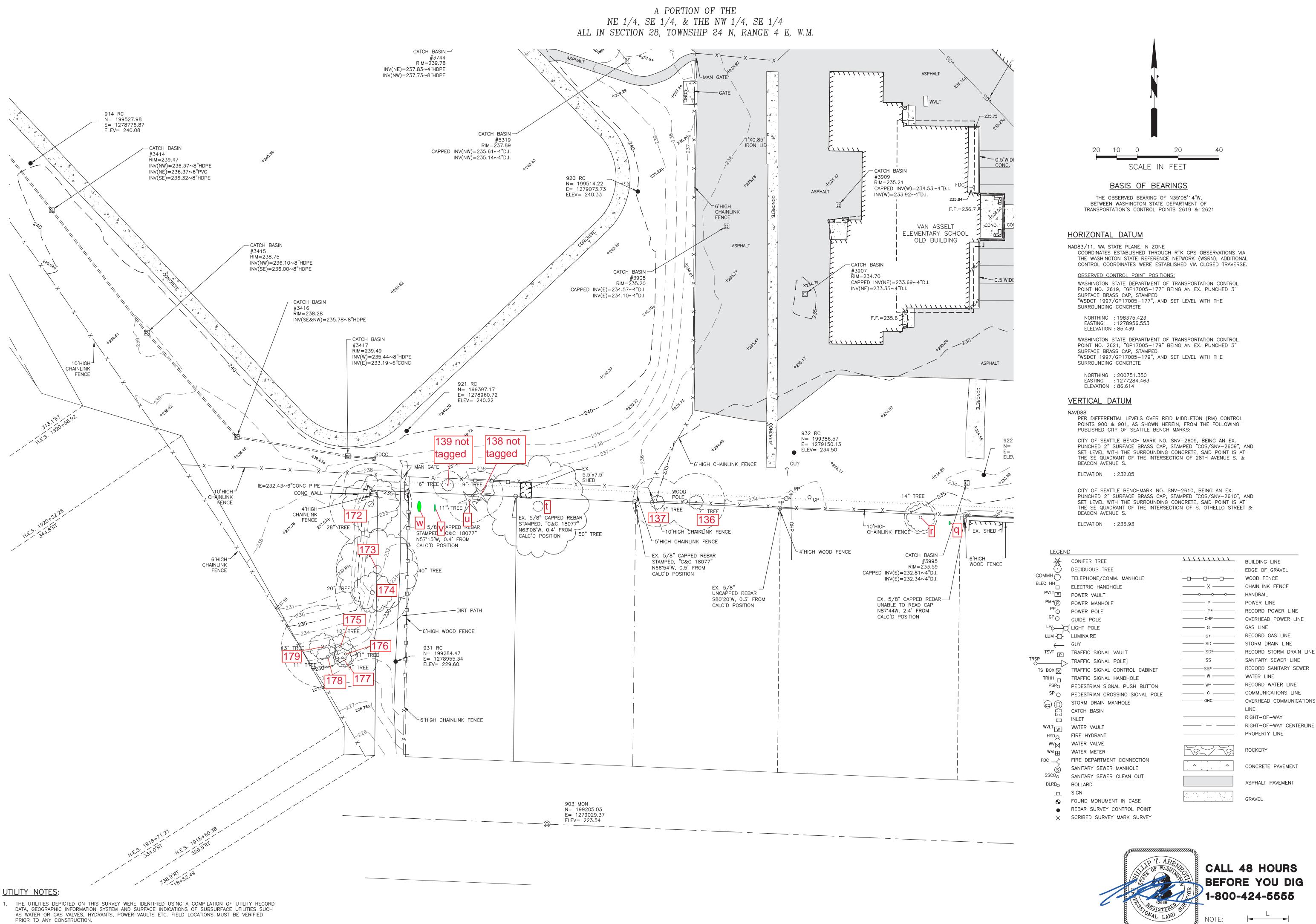


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Tree	Scientific Name	Common Name	DSH	DSH	Health	Structural	N	E	S	w	Exceptional	Exceptional	Proposed	Notes
ID			(inches)	Multistem	Condition	Condition					Threshold	by Size	Action	
L (TRE-	Acer rubrum	Red maple	10.9		good	fair	11.0	15.0	15.5	20.0	25.0	-	Retain	Sidewalk raising; girdling roots;
85340														surface roots; included bark
)														between codominant trunks at 6
														feet, extends for 1 to 2 feet
М	Acer rubrum	Red maple	15.2		good	fair	17.6	15.1	14.1	26.1	25.0	-	Retain	Sidewalk raising; girdling roots;
(TRE-														surface roots; large reduction cuts
85341														for clearance on overhead wires
)														
N (TRE	Acer x Freemanii	Freeman maple	11.4		good	good	14.5	14.5	17.0	15.5	20.8	-	Retain	Sidewalk raising; girdling roots;
85342														surface roots; crowded scaffold
)														branches
O (TRE	Acer rubrum	Red maple	11.8		good	good	14.5	16.5	16.5	23.0	25.0	-	Retain	Sidewalk raising; surface roots;
85343														girdling roots
)														
Р	Acer macrophyllum	Bigleaf maple	25.2	11,17,15	good	fair	26.0	28.5	21.0	25.0	30.0	-	Retain	Growing into fence; maintained as
														an offsite tree by pruning
Q	Populus nigra 'Italica'	Lombardy poplar	12.0		fair	fair	10.5	3.5	14.5	12.5	30.0	-	Retain	Large amount of ivy on one trunk
														which is dead; not on survey
R	Acer macrophyllum	Bigleaf maple	14.0		good	fair	10.6	10.6	12.6	13.6	30.0	-	Retain	Growing through the fence; large
														amount of ivy and blackberry at
														base
S	Acer macrophyllum	Bigleaf maple	31.0		fair	fair	28.3	21.3	21.3	21.3	30.0	Exceptional	Retain	Behind shed; overhang just barely;
														wisteria into canopy; large amount
														of dieback; not on survey
T	Acer macrophyllum	Bigleaf maple	40.0		good	fair	26.7	24.7	29.7	28.7	30.0	Exceptional	Retain	Some old branch tear outs and
														minor deadwood in canopy below 3
														inch diameter
U	Pseudotsuga menziesii	Douglas-fir	9.0		good	good	13.4	6.4	10.4		1	-	Retain	Behind fence; ivy at base
V	Pseudotsuga menziesii	Douglas-fir	8.0		good	good	11.8	10.3	7.3	_	30.0	-	Retain	Ivy at base
W	Pseudotsuga menziesii	Douglas-fir	7.0		good	good	9.3	4.3		11.3		-	Retain	Ivy at base
Х	Acer macrophyllum	Bigleaf maple	22.0	14,17	good	good	18.9	25.9	_	18.9		-	Retain	Ivy at base
Υ	Acer macrophyllum	Bigleaf maple	11.6	3,6,5,7,4	good	fair	12.5	12.5	12.5	12.5	30.0	-	Retain	Ivy on trunk; growing through
														fence





2. UTILITIES MARKED * ARE AS PER GIS INFORMATION/UTILITY RECORD MAPS/AS-BUILTS)

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Reid Middleton

TOPOGRAPHIC SURVEY
EATTLE SCHOOL DISTRICT
VAN ASSELT ELEMENTARY SCHOOL

TOF SEATT

DES. SHEET NO.

DR. DW, IW

CH. PTA

SCALE

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SHEET NO.

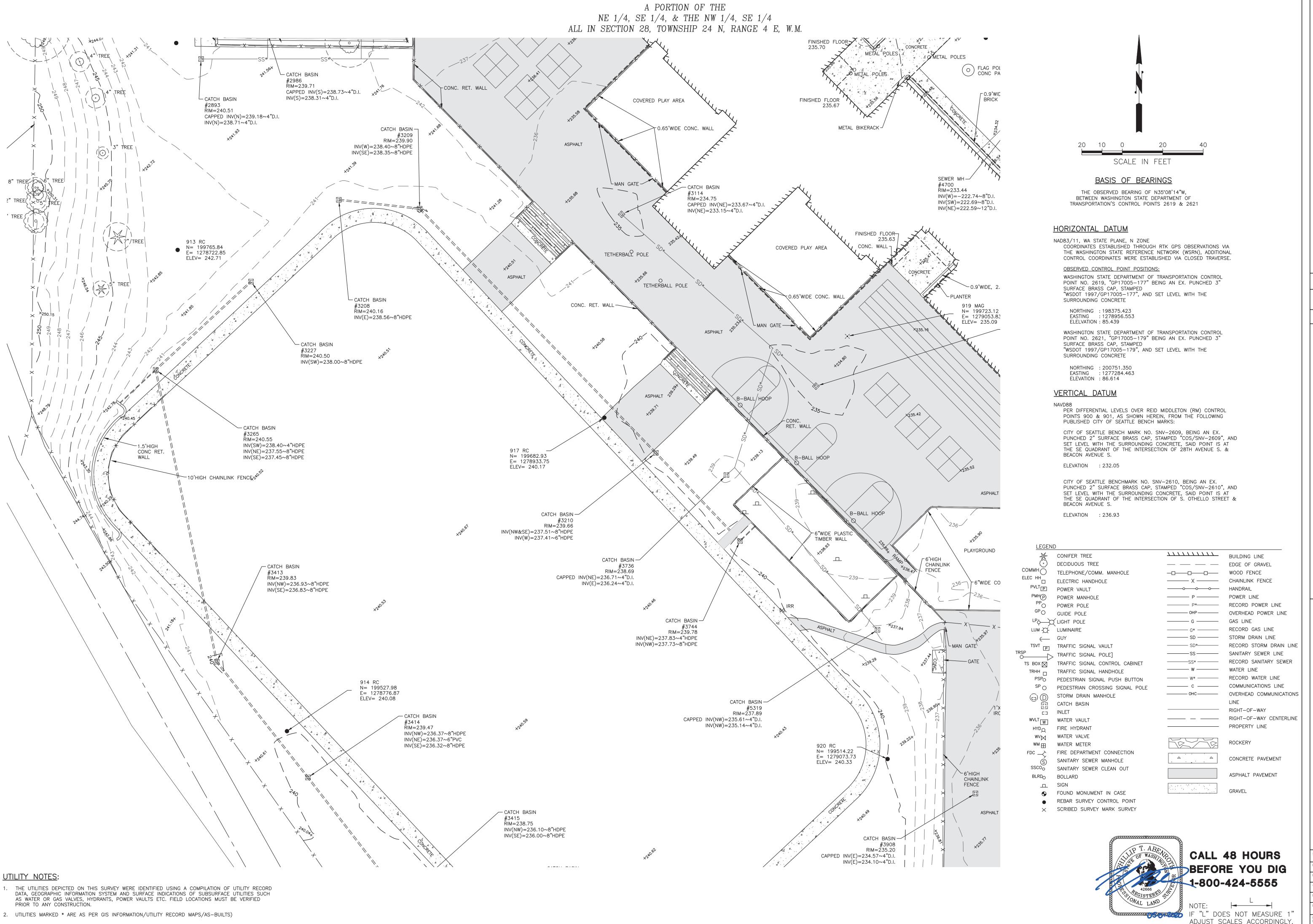
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F.B. 679-B OF 7 SHEETS

DATE 05/01/2020

NOTE: DATE 05/01/
IF "L" DOES NOT MEASURE 1"
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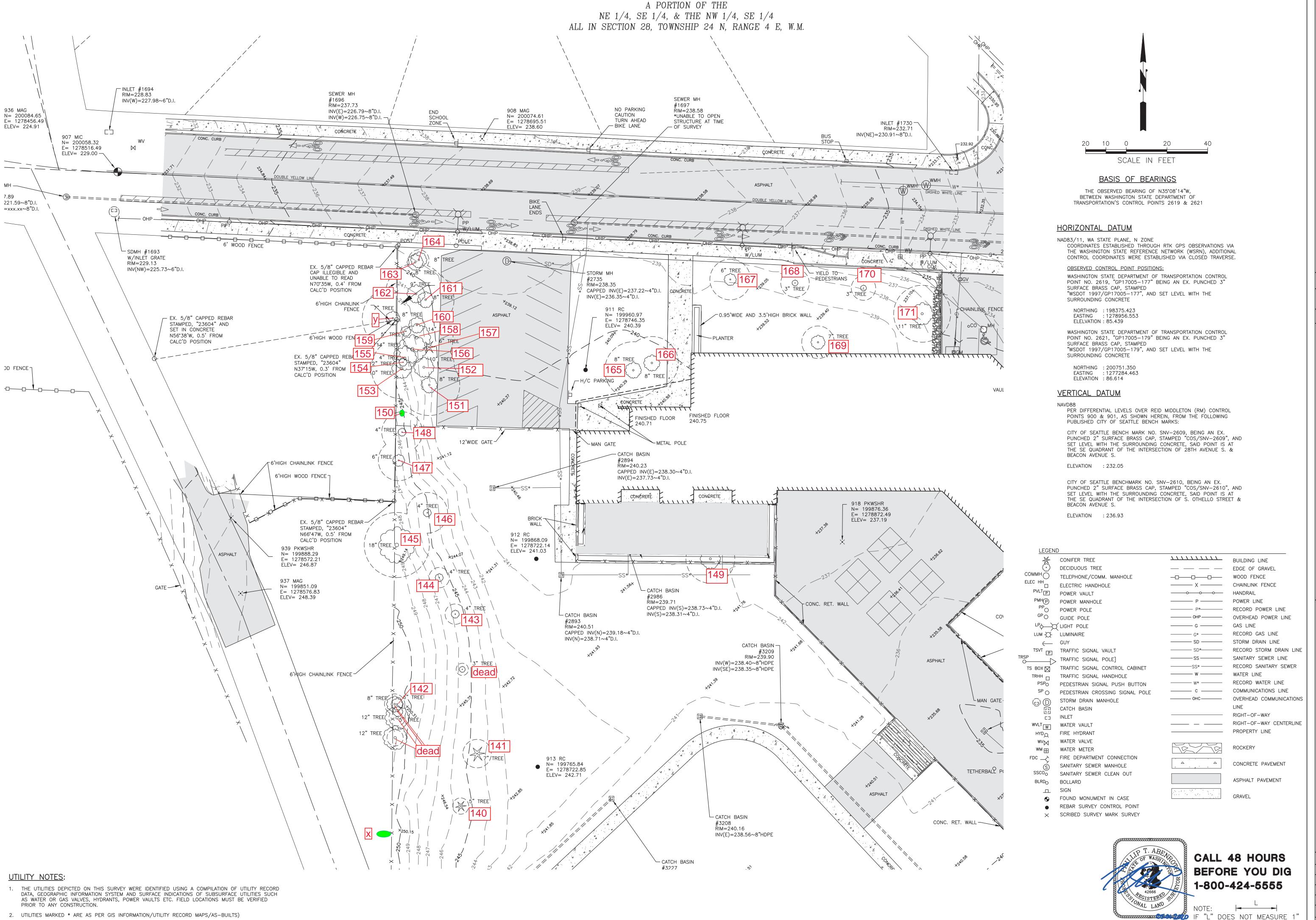
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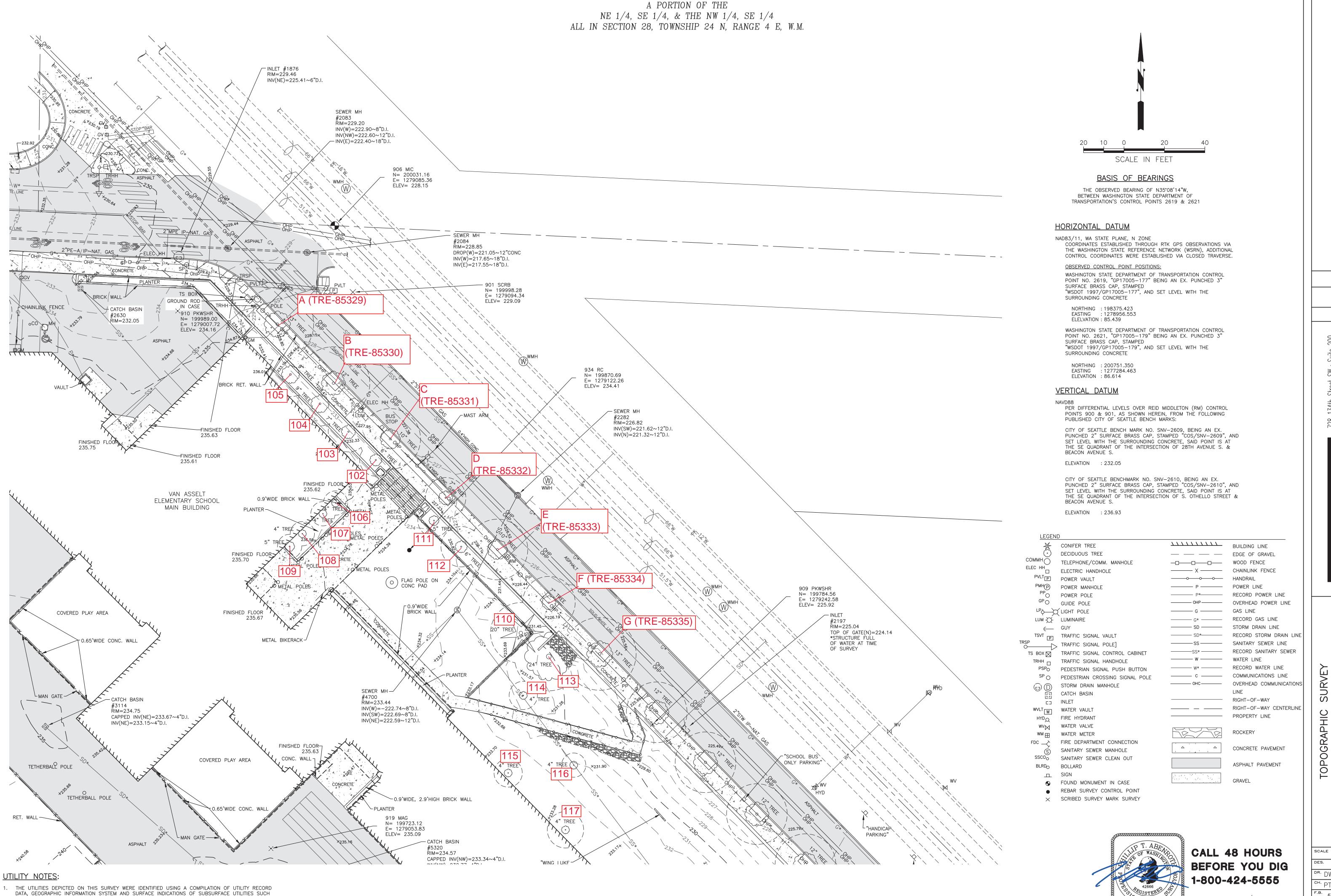
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SCALE 1"=20'

DR. DW,IW ^{сн.} РТА F.B. 679-B of 7 SHEETS

DATE 05/01/2020

ADJUST SCALES ACCORDINGLY.



AS WATER OR GAS VALVES, HYDRANTS, POWER VAULTS ETC. FIELD LOCATIONS MUST BE VERIFIED

2. UTILITIES MARKED * ARE AS PER GIS INFORMATION/UTILITY RECORD MAPS/AS-BUILTS)

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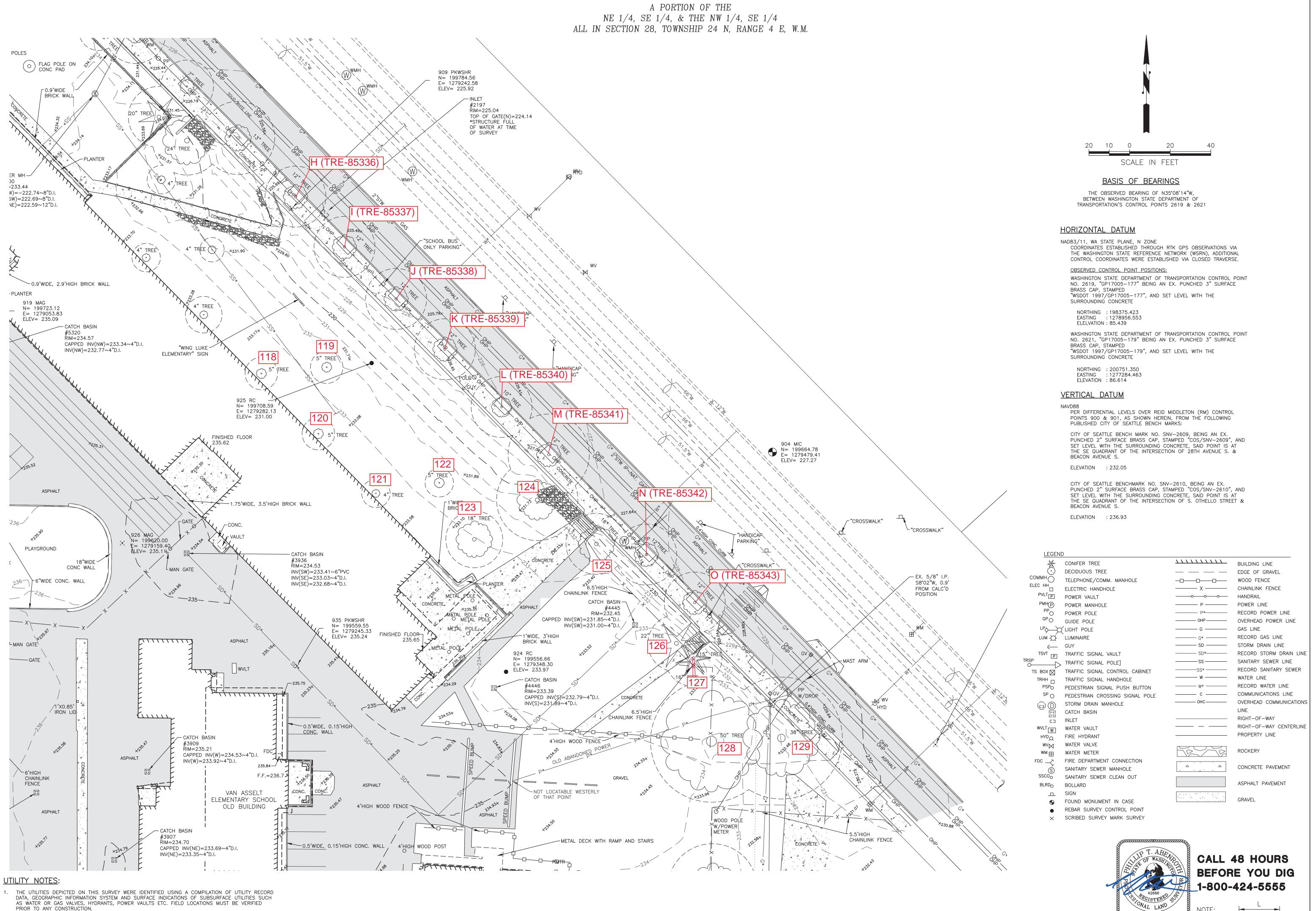
TOPOGRAPHIC SEATTLE SCHOOL

SCALE 1"=20' DR. DW,IW ^{сн.} РТА

F.B. 679-B of 7 SHEETS DATE 05/01/2020

"L" DOES NOT MEASURE

ADJUST SCALES ACCORDINGLY.



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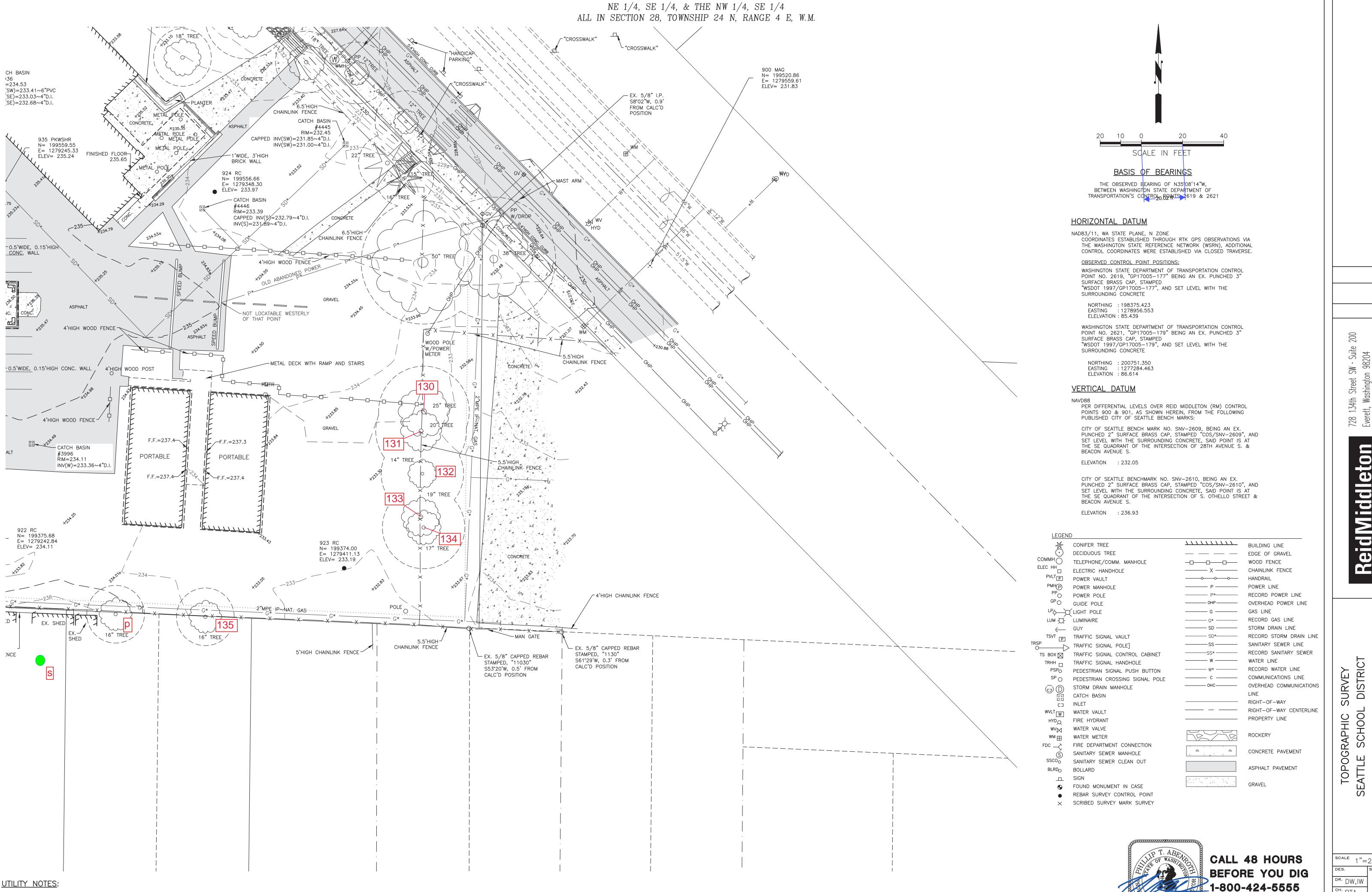
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SURVEY DISTRICT

TOPOGRAPHIC SEATTLE SCHOOL



1. THE UTILITIES DEPICTED ON THIS SURVEY WERE IDENTIFIED USING A COMPILATION OF UTILITY RECORD

2. UTILITIES MARKED * ARE AS PER GIS INFORMATION/UTILITY RECORD MAPS/AS-BUILTS)

PRIOR TO ANY CONSTRUCTION.

DATA, GEOGRAPHIC INFORMATION SYSTEM AND SURFACE INDICATIONS OF SUBSURFACE UTILITIES SUCH AS WATER OR GAS VALVES, HYDRANTS, POWER VAULTS ETC. FIELD LOCATIONS MUST BE VERIFIED

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scale 1"=20' SHEET NO. DR. DW,IW

"L" DOES NOT MEASURE

ADJUST SCALES ACCORDINGLY.

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