

**Exhibit I**



**12.07.2022**

## **Existing Conditions Summary**

The existing site is comprised of Lots 855 & 856 in Square 2132. These lots are zoned mostly RA-2, with a small portion of the site to the south along Calvert Street, NW being RA-4. The site is currently accessed via existing curb cuts and has access from the North at Woodley Road, NW, from the East at 24<sup>th</sup> Street, NW, and from the south at Calvert Street, NW. There is significant topographic change across the site with the Calvert Street frontage at approximate elevation 127', the 24<sup>th</sup> Street frontage at elevation 157', the Woodley Road frontage at 175' and the highest areas on site reaching approximate elevation 196'. The site is currently improved with an existing 11-Story building with an underground parking garage, vegetated lawn areas, and several mature trees. The existing drainage is split between the storm infrastructure in Calvert Street and the combined sewer infrastructure in Woodley Road NW.

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**Exhibit J**



MAP NOTES

1. TREES MARKED WITH AN ASTERISK (\*) HAVE NOT BEEN SURVEY LOCATED. LOCATIONS ARE BASED ON VISUAL FIELD ESTIMATION ONLY AND ARE APPROXIMATE. FIELD VERIFY LOCATIONS AS NECESSARY

TREE ASSESSMENT NOTES

1. TREE CONDITION ASSESSMENT CONDUCTED BY LUIS YAÑEZ, ISA# PN-8778A ON MARCH 8, 2022.
2. THE INSPECTION OF THESE TREES CONSISTED SOLELY OF A VISUAL INSPECTION FROM THE GROUND. WHILE MORE THOROUGH TECHNIQUES ARE AVAILABLE FOR INSPECTION AND EVALUATION, THEY WERE NEITHER REQUESTED NOR CONSIDERED NECESSARY OR APPROPRIATE AT THIS TIME.
3. ON-SITE TREES WERE TAGGED WITH A NUMBERED MEDALLION. OFF-SITE TREES WERE ASSESSED TO THE EXTENT POSSIBLE FROM THE PROJECT SITE OR FROM PUBLIC SPACE. TRUNK DIAMETERS FOR OFF-SITE TREES HAVE BEEN VISUALLY ESTIMATED AND SOME SIDES OF THE TREE MAY HAVE BEEN OBSCURED OR INACCESSIBLE.

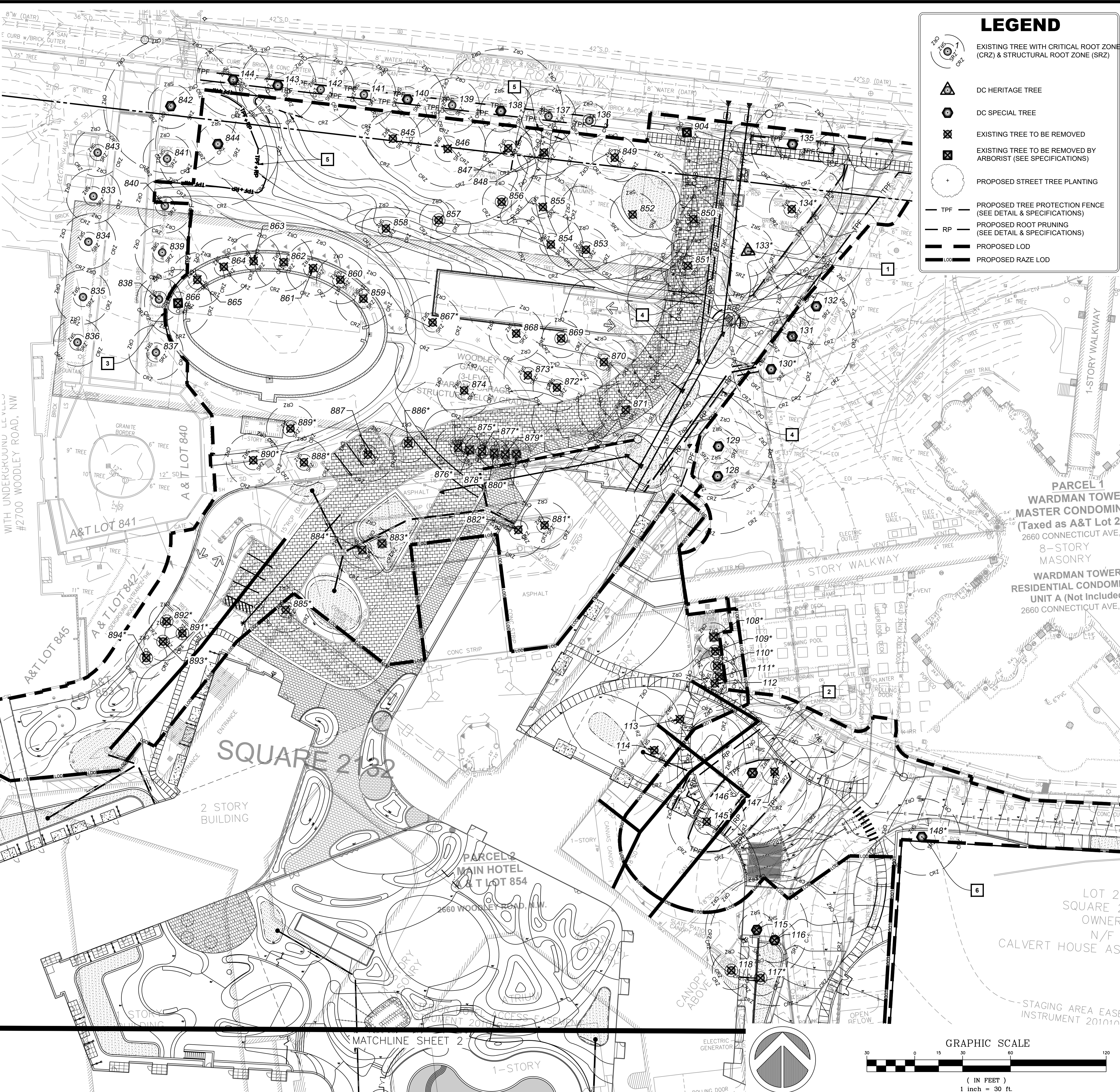
KEYNOTES

- 1 REFER TO "TREE 133 SEQUENCE" ON SHEET 2.
- 2 REFER TO "TREE 146 SEQUENCE" ON SHEET 2. INTENT IS TO RETAIN TREE AS DESCRIBED. HOWEVER, CONSTRUCTION LOGISTICS IN THE AREA ARE EXPECTED TO BE INTENSE. TREE IS TO BE PERMITTED FOR REMOVAL IN CASE THAT BECOME NECESSARY DUE TO SITE CONSTRAINTS.
- 3 SPECIAL DEMOLITION (SEE SPECIFICATIONS) OF EXISTING CURB TO BE PERFORMED BY OR UNDER THE SUPERVISION OF AN ISA CERTIFIED ARBORIST. HAND PRUNE SMALL ROOTS. SIGNIFICANT ROOT ARE NOT ANTICIPATED. RETAINED ARBORIST TO PRESCRIBE ADDITIONAL STRESS REDUCTION MEASURES IF DISTURBANCE IS GREATER THAN ANTICIPATED.
- 4 ROOT PRUNE FOR UTILITY INSTALLATION (SEE DETAIL AND SPECIFICATIONS). ROOT PRUNE LINE IS TO BE COINCIDENT WITH EDGE OF EXCAVATION. SHOWN OFFSET FOR CLARITY. (TYP.)
- 5 ROOT PRUNE FOR PROPOSED SIDEWALK WITHIN CRZS. ROOT PRUNE TO BE AT EDGE OF EXCAVATION FOR SIDEWALK BASE - SHOWN OFFSET FOR CLARITY.

- 6 ARBORIST TO EXCAVATE FOR SIDEWALK BASE NEAR TREE 840'S SRZ. FILL BASE MATERIAL AROUND LARGE ROOTS TO AVOID SEVERING ROOTS IMPORTANT FOR STRUCTURAL STABILITY.
- DUE TO SEVERE CIRCLING/GIRDLING ROOTS, ACTUAL SRZ DISTURBANCE IS UNLIKELY. WRAP TRUNK (SEE DETAIL AND SPECIFICATIONS) AND USE SPECIAL DEMOLITION TECHNIQUES FOR EX. CURB AND WALL. ARBORIST TO HAND PRUNE SMALL ROOTS AS NECESSARY. ARBORIST OVERSIGHT OF CONSTRUCTION OF NEW CURB/WALL.

GENERAL NOTE

PRE-CONSTRUCTION MEETING TO BE HELD PRIOR TO BOTH RAZE AND CONSTRUCTION PHASES TO REVIEW TREE REMOVALS, PROTECTION MEASURES, AND PRUNING ASSOCIATED WITH WORK IN EACH PHASE.



**LEGEND**

EXISTING TREE WITH CRITICAL ROOT ZONE (CRZ) & STRUCTURAL ROOT ZONE (SRZ)

DC HERITAGE TREE

DC SPECIAL TREE

EXISTING TREE TO BE REMOVED

EXISTING TREE TO BE REMOVED BY ARBORIST (SEE SPECIFICATIONS)

PROPOSED STREET TREE PLANTING

TPF PROPOSED TREE PROTECTION FENCE (SEE DETAIL & SPECIFICATIONS)

RP PROPOSED ROOT PRUNING (SEE DETAIL & SPECIFICATIONS)

PROPOSED LOD

PROPOSED RAZE LOD

TREE PRESERVATION PLAN  
Plan View



REVISIONS			App. By
No.	Date	Description	Rev. By

Horizontal Datum: DC Surv.

Vertical Datum: DCDPW

Boundary and Topo Source: Vika Capitol

Design	Draft	Approved
CK	CK	--

Sheet #  
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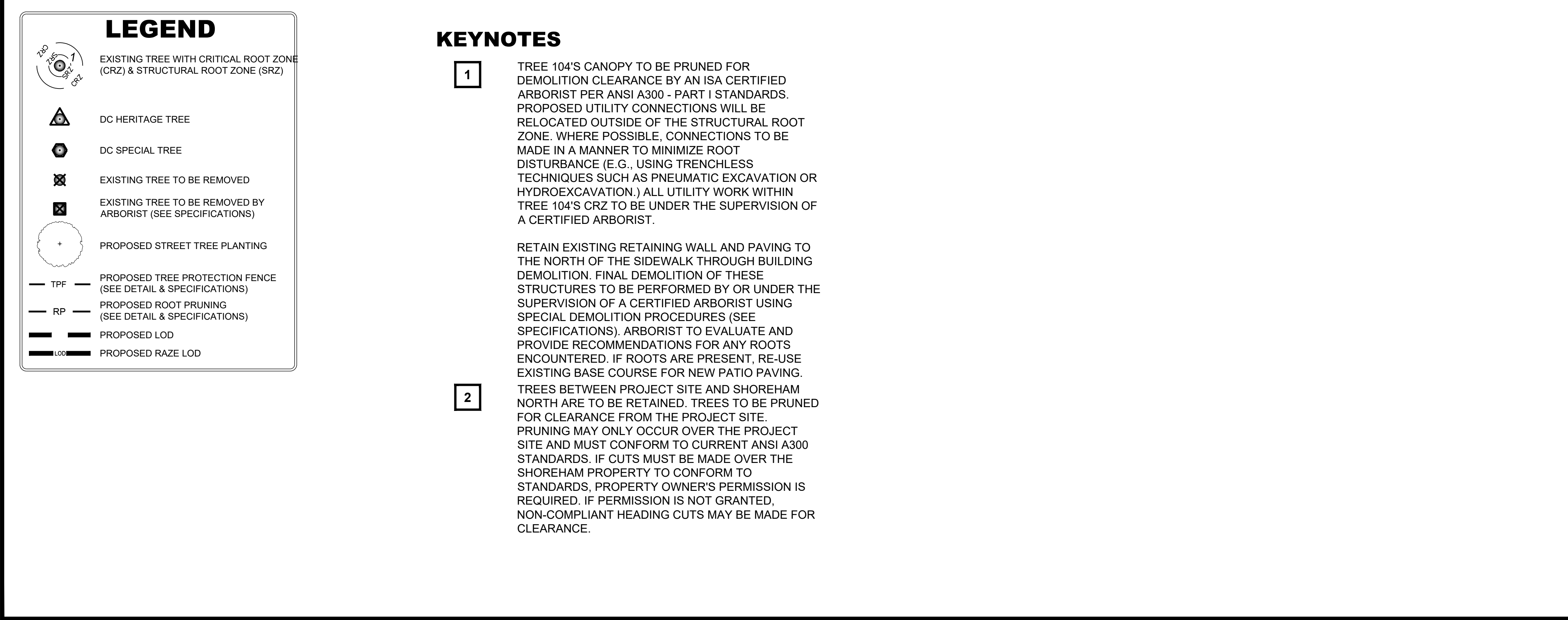
WSSI Project Number:  
32045.01

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Wardman Park  
Washington, DC  
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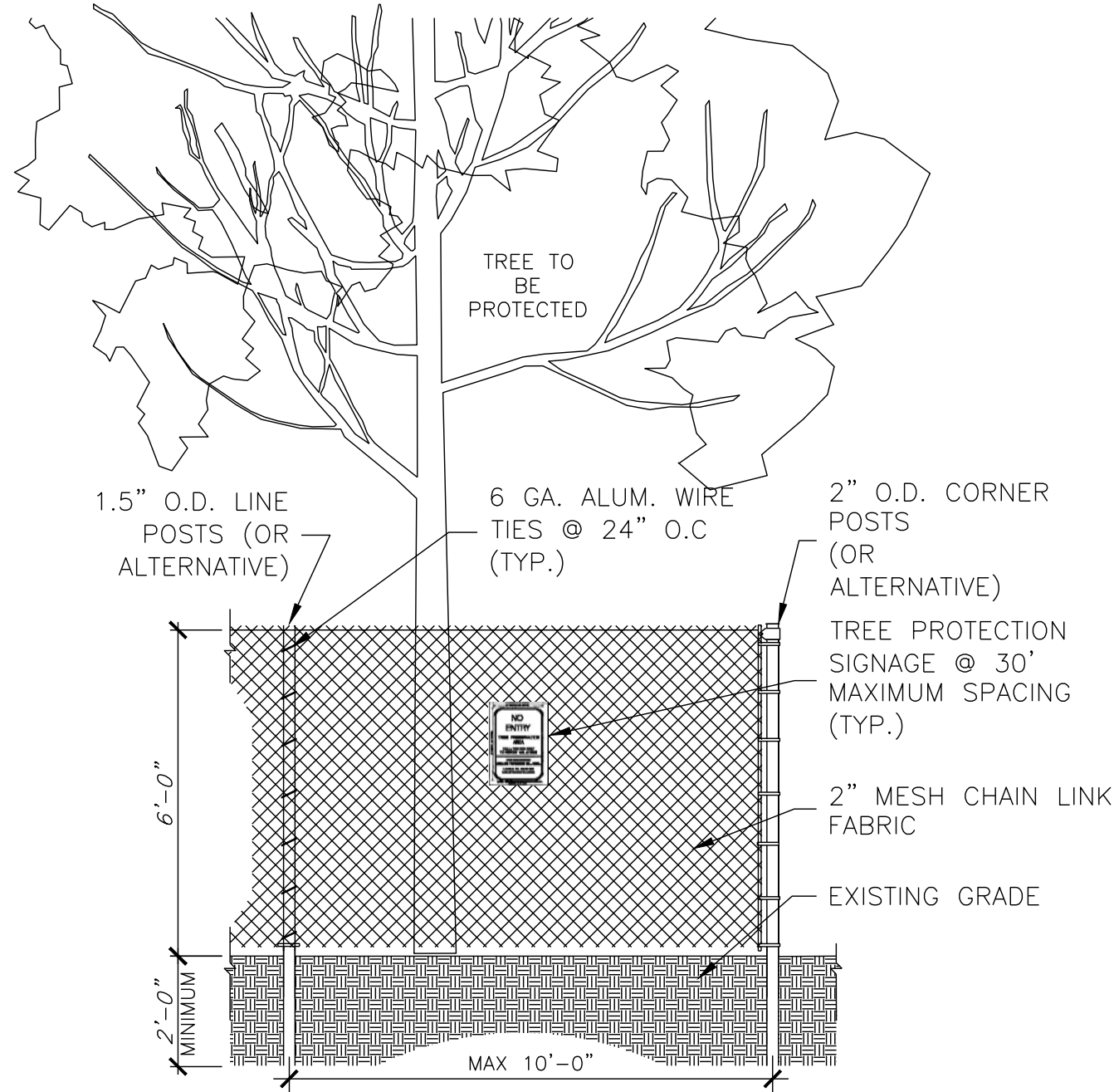


1. APPLY TREE GROWTH REGULATOR.
2. ENCLOSE ENTIRE LANDSCAPED ISLAND WITH TEMPORARY TREE PROTECTION FENCE (TPF) (SEE DETAIL AND SPECIFICATIONS).
3. RETAIN EX. CURB AND DRIVEWAY THROUGH MOST OF CONSTRUCTION FOR EQUIPMENT ACCESS.
4. SPECIAL DEMOLITION (SEE SPECIFICATIONS) OF EX. DRIVEWAY AND CURB. IF ROOTS ARE FOUND IN BASE MATERIAL, RETAIN THIS MATERIAL. OTHERWISE, REMOVE BASE COURSE TO BARE SOIL.
5. ROOT PRUNE FOR UTILITY INSTALLATION AND BIORETENTION.
6. JACK AND BORE OR OTHER TRENCHLESS INSTALLATION TECHNIQUE FOR DOMESTIC WATER LINE UNDER SRZ. FEED PIT AND RECEIVING PIT TO BE LOCATED OUTSIDE OF CRZ.
7. VERTICAL MULCHING (SEE SPECIFICATIONS) OF LANDSCAPED ISLAND AND FORMER ROADWAY WITHIN CRZ.
8. REMOVE TPF PRIOR TO FINAL GRADING. INSTALL TRUNK WRAP. ARBORIST SUPERVISION IS REQUIRED AT ALL TIMES WHEN TPF IS DOWN. ALL ACCESS ON EX. LANDSCAPED ISLAND OR FORMER ROAD BED WITHIN CRZ TO BE ON APPROVED ROOT PROTECTION MATTING (RPM) (SEE DETAIL AND SPECIFICATIONS). GRADE FILL TO BE APPLIED BY HAND OR BY SMALL EQUIPMENT OPERATING ON RPM.

1. APPLY TREE GROWTH REGULATOR.
2. ENCLOSE ENTIRE LANDSCAPED ISLAND WITH TEMPORARY TREE PROTECTION FENCE (TPF) (SEE DETAIL AND SPECIFICATIONS). TEMPORARY ACCESS (I.E., FOR SANITARY SEWER CONNECTION) TO BE UNDER THE SUPERVISION OF AN ISA CERTIFIED ARBORIST AT ALL TIMES. ALL FOOT TRAFFIC, SPOILS, AND/OR SMALL EQUIPMENT ACCESS TO BE ON APPROVED RPM.
3. IF POSSIBLE, INSTALL SANITARY CONNECTION USING AIRTOOL AND/OR VACUUM EXCAVATION. USE ONLY AIR OR LOW-PRESSURE HYDRO TO LOOSEN SOIL -- NO HIGH-PRESSURE HYDRO EXCAVATION. INSTALL PIPE UNDER EXISTING SIGNIFICANT ROOTS. ARBORIST TO HAND PRUNE SMALL ROOTS FOR ACCESS. (SEE DETAIL AND SPECIFICATIONS). IF INSTALLATION UNDER ROOTS IS NOT POSSIBLE DUE TO REQUIRED DEPTH OF EXCAVATION, ARBORIST TO ROOT PRUNE AT EDGE OF EXCAVATION.
4. RETAIN EX. CURB AND DRIVEWAY THROUGH MOST OF CONSTRUCTION FOR EQUIPMENT ACCESS.
5. SPECIAL DEMOLITION (SEE SPECIFICATIONS) OF EX. DRIVEWAY AND CURB. IF ROOTS ARE FOUND IN BASE MATERIAL, RETAIN THIS MATERIAL. OTHERWISE, REMOVE BASE COURSE TO BARE SOIL. ARBORIST TO INVESTIGATE AREA ALONG STORM DRAIN CONNECTION FOR ROOTS AND ROOT PRUNE IF ROOTS ARE FOUND.
6. VERTICAL MULCHING (SEE SPECIFICATIONS) OF LANDSCAPED ISLAND AND FORMER DRIVEWAY WITHIN CRZ.
7. REMOVE TPF PRIOR TO FINAL GRADING. INSTALL TRUNK WRAP. ARBORIST SUPERVISION IS REQUIRED AT ALL TIMES WHEN TPF IS DOWN. ALL ACCESS ON EX. LANDSCAPED ISLAND OR FORMER ROAD BED WITHIN CRZ TO BE ON APPROVED ROOT PROTECTION MATTING (RPM) (SEE DETAIL AND SPECIFICATIONS). GRADE FILL TO BE APPLIED BY HAND OR BY SMALL EQUIPMENT OPERATING ON RPM.
8. SIDEWALK BASE TO BE INSTALLED IN GRADE FILL MATERIAL OR ON GRADE (I.E., NO NEW EXCAVATION WITHIN TREE 146 CRZ. ALL ACCESS AND MATERIALS STORAGE FOR SIDEWALK INSTALLATION TO BE ON APPROVED RPM.

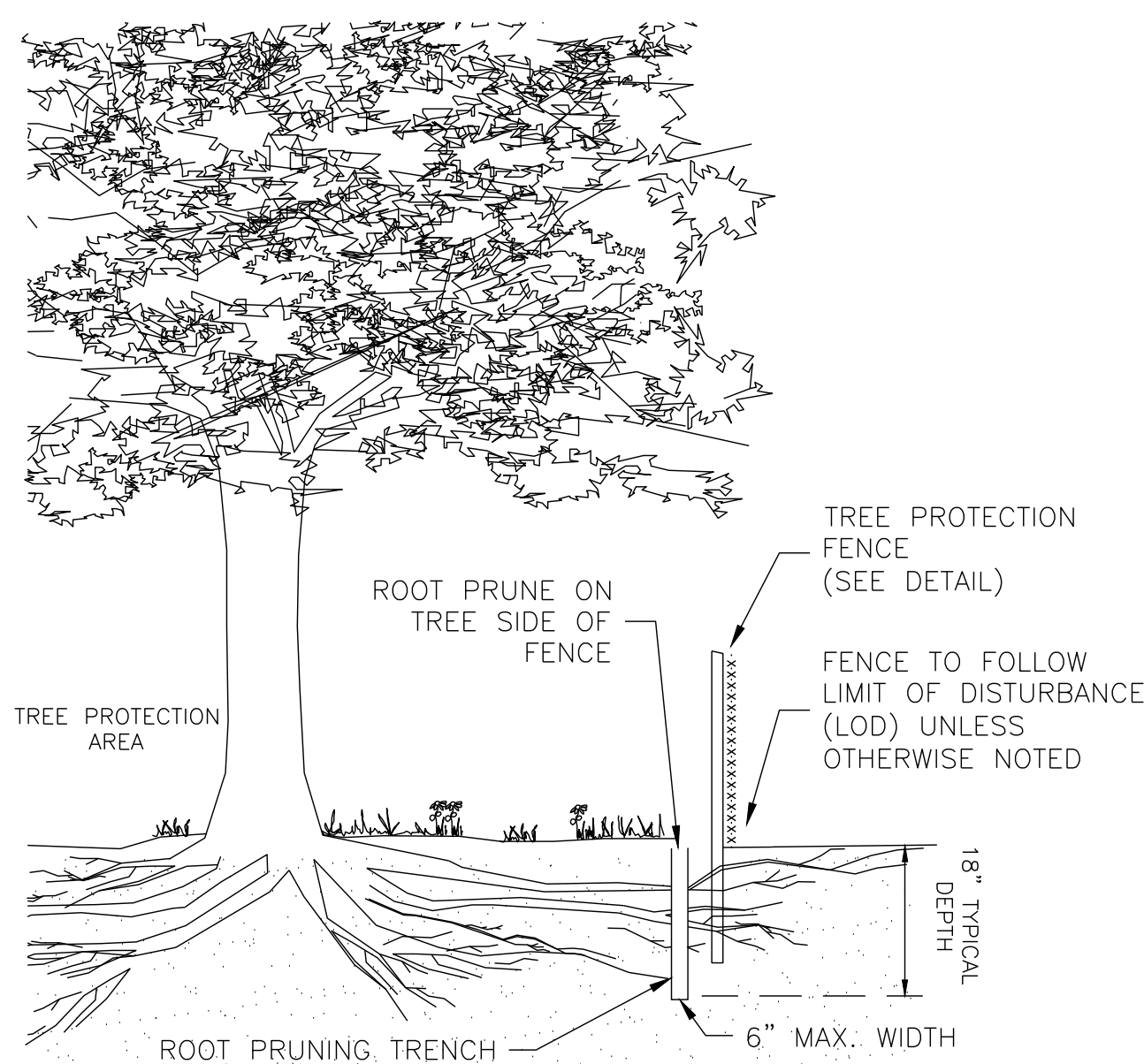
 Wetland Studies and Solutions, Inc. a DMET company		1131 Bonfield Boulevard • Suite L Millersville, Maryland 21088 Phone: 410-672-5990 • Fax: 410-672-5993 www.wetlands.com	
TREE PRESERVATION PLAN Plan View		Wardman Park Washington, DC	
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REVISIONS			
No.	Date	Description	Rev. By App. By
DATE: 11/17/2022		SCALE: 1" = 20' C.L.:1"	
Horizontal Datum: DC Surv.			
Vertical Datum: DCDPW			
Boundary and Topo Source: Vika Capitol			
Design	Draft	Approved	
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Sheet # 2 of 5			
WSSI Project Number: 32045.01			





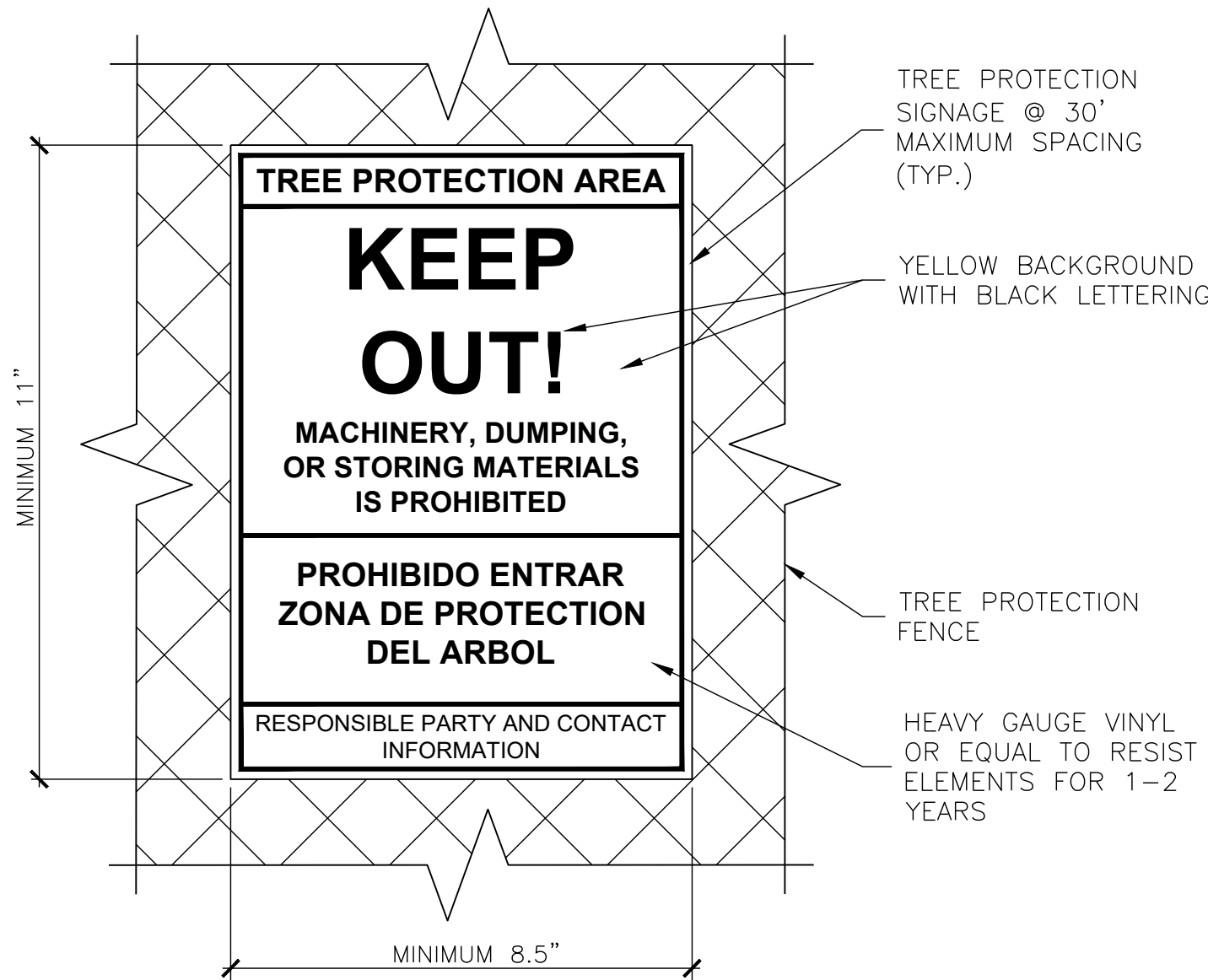
- NOTES:
- TREE PROTECTION FENCE SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION.
  - SUPER SILT FENCE MAY BE USED IN LIEU OF WELDED WIRE FOR TREE PROTECTION PROVIDED IT IS INSTALLED AND MAINTAINED AS A TREE PROTECTION MEASURE AND IS POSTED WITH TREE PROTECTION SIGNS.
  - TREE PROTECTION FENCE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. REMOVE FENCE ONLY WITH APPROVAL AND AFTER ALL SITE WORK HAS BEEN COMPLETED.

1 CHAIN LINK TREE PROTECTION FENCE (TYPICAL)  
3 SCALE: NTS



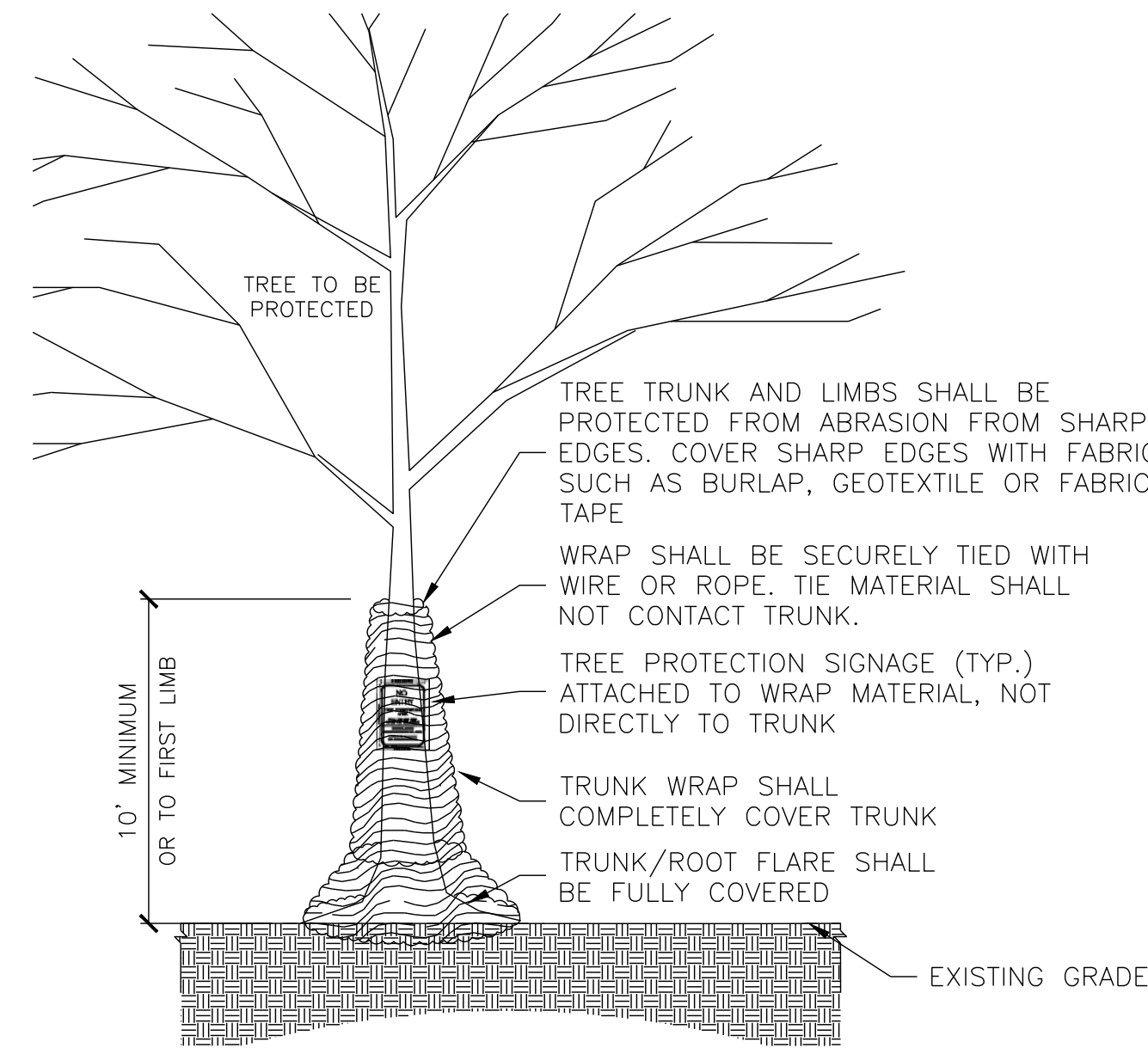
- NOTES:
- TREE PROTECTION AREA WILL BE DETERMINED AS PART OF THE PLAN REVIEW PROCESS. EXACT LOCATION, DEPTH AND METHODS OF ROOT PRUNING TO BE DETERMINED IN THE FIELD BY PROJECT ARBORIST.
  - EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING.
  - TRENCH SHOULD BE BACKFILLED IMMEDIATELY OR INCORPORATED WITH SILT FENCE INSTALLATION.
  - ROOTS SHOULD BE SEVERED BY ROCK SAW, TRENCHER, VIBRATORY PLOW OR APPROVED EQUIVALENT.
  - ROOTS OVER 1.5\"/>
  - COORDINATE WITH SILT FENCE INSTALLATION (IF REQUIRED) TO MINIMIZE ROOT IMPACTS FROM ADDITIONAL TRENCHING.

2 ROOT PRUNING (TYPICAL)  
3 SCALE: NTS



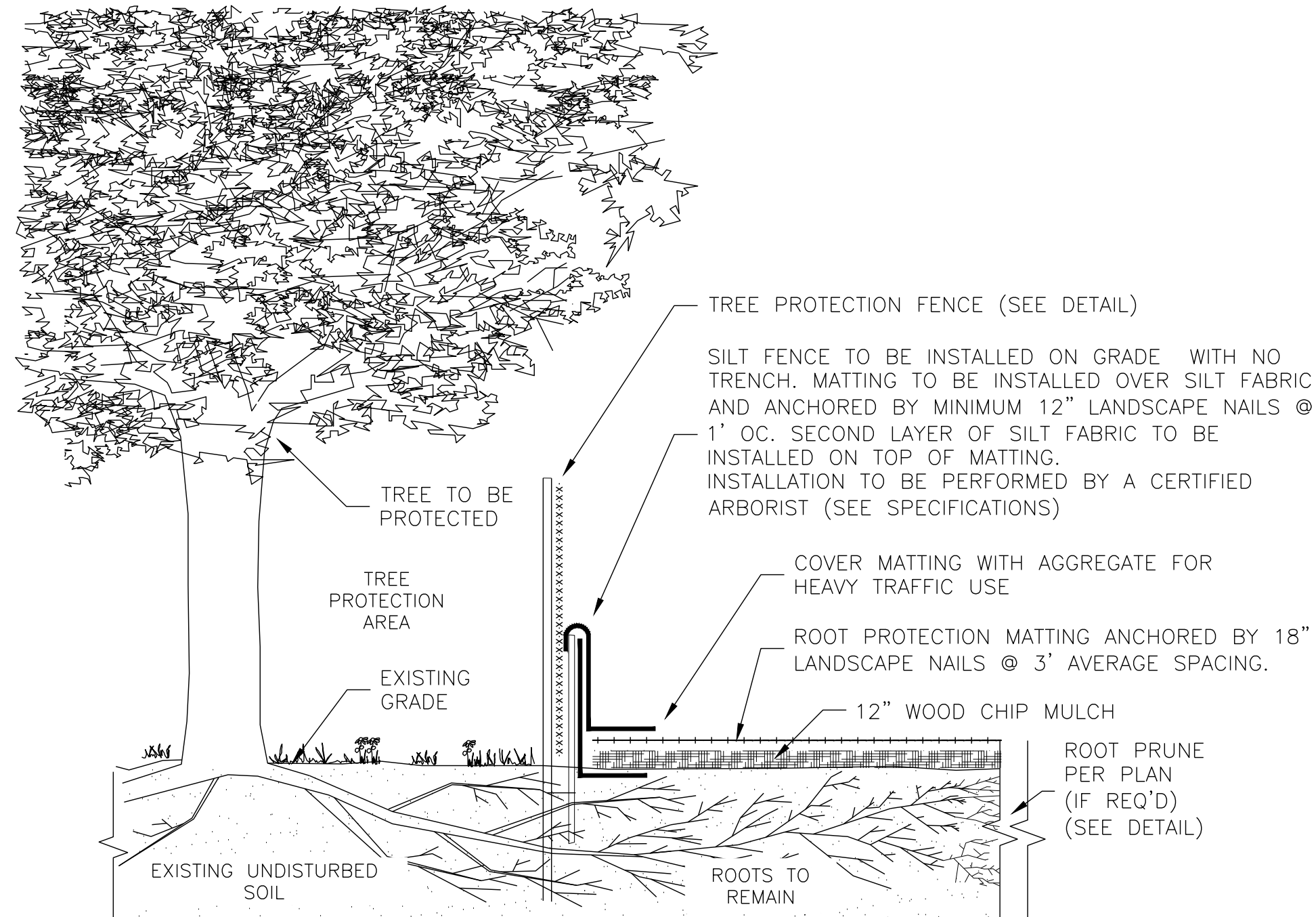
- NOTES:
- SIGNS TO BE ATTACHED TO TREE PROTECTION FENCE OR POSTS AT READABLE LEVEL.
  - 30' MINIMUM SPACING AVERAGE ADJUSTED FOR MAXIMUM READABILITY.
  - MINIMUM ONE SIGN FOR SMALL TREE PROTECTION AREAS.
  - SIGNS MAY BE REMOVED FROM RESIDENTIAL LOTS UPON ISSUANCE OF USE AND OCCUPANCY.
  - SIGNS TO REMAIN ON NON RESIDENTIAL SITES FOR MAINTENANCE PERIOD.

3 TREE PROTECTION AREA SIGN (TYPICAL)  
3 SCALE: NTS



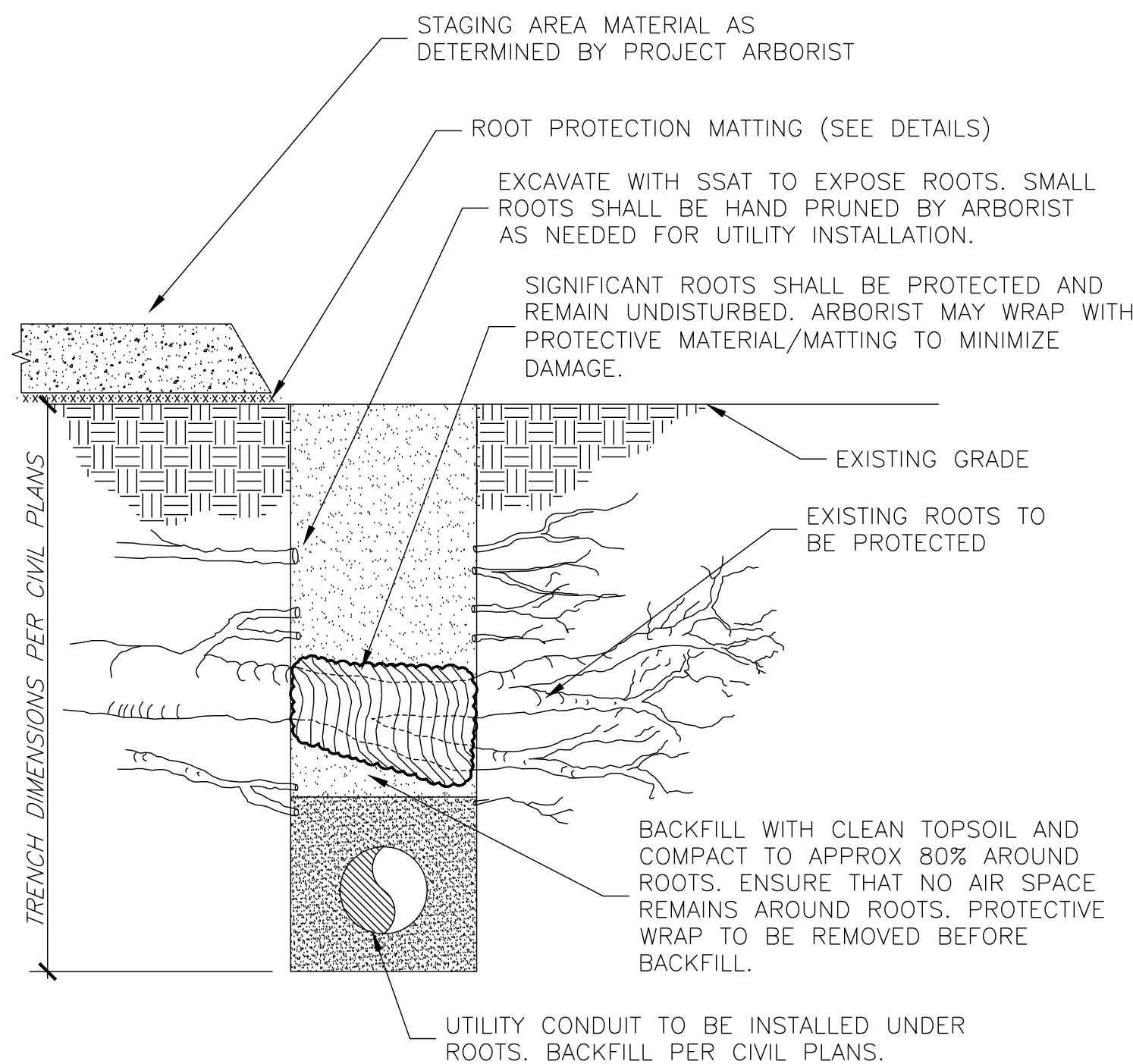
- NOTES:
- TRUNK WRAP MATERIAL SHALL BE DOUBLE SIDED GEOCOMPOSITE, GEONET CORE WITH NON-WOVEN COVERING (SUCH AS TENSAR ROADRAIN RD7) OR EQUIVALENT.
  - WRAP SHALL BE INSTALLED BY A CERTIFIED ARBORIST.
  - WRAP SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION.
  - WRAP SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. REMOVE WRAP ONLY WITH APPROVAL AND AFTER ALL SITE WORK HAS BEEN COMPLETED.
  - WRAP SHALL BE REMOVED PROMPTLY AFTER CONSTRUCTION.
  - MAJOR SCAFFOLD LIMBS MAY ALSO REQUIRE THIS PROTECTION AS DIRECTED BY THE PROJECT ARBORIST.

4 TREE TRUNK & LIMB PROTECTION WRAP (TYP)  
3 SCALE: NTS

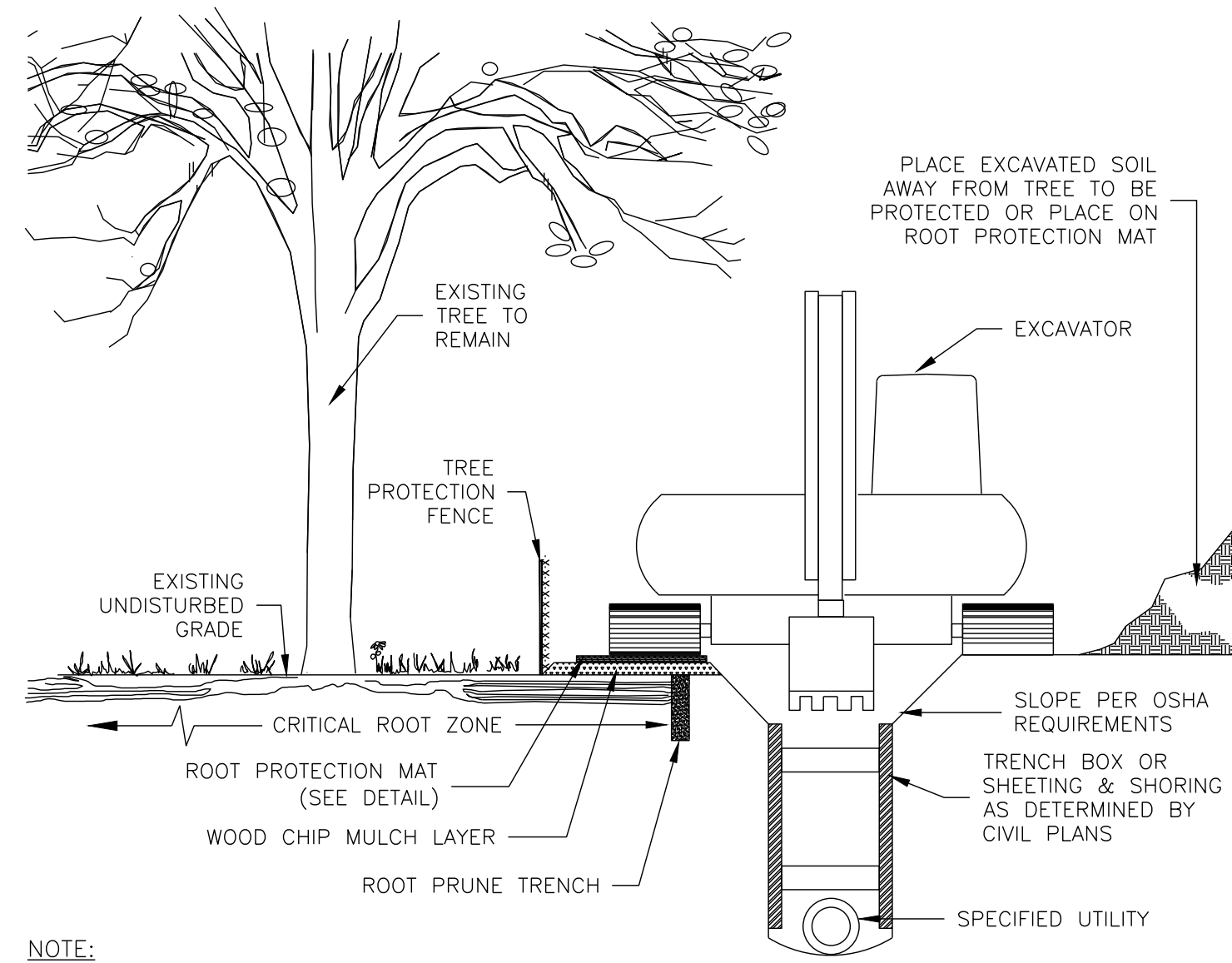


- NOTES:
- MATting MATERIAL SHALL BE DOUBLE SIDED GEOCOMPOSITE, GEONET CORE WITH NON-WOVEN COVERING (SUCH AS TENSAR ROADRAIN RD7) OR APPROVED EQUIVALENT.
  - RPM SHALL BE INSTALLED BY A CERTIFIED ARBORIST.
  - TO BE USED FOR DESIGNATED TEMPORARY CONSTRUCTION ACCESS AND STOCKPILE AREAS.
  - MATting SHALL BE PLACED ON 12\"/>
  - FOR HEAVY TRAFFIC AREAS, MATting SHALL BE COVERED WITH 6-8\"/>

5 TEMPORARY ROOT PROTECTION MATTING (TYPICAL)  
3 SCALE: NTS



6 ROOT PROTECTION IN UTILITY TRENCH  
3 SCALE: NTS



- NOTE:
- EXACT RPM DIMENSIONS TO BE DETERMINED BY PROJECT ARBORIST
  - ARBORIST TO COORDINATE WITH SITE SUPERINTENDENT FOR PIPE LAYOUT, DEPTH, SIZE OF EQUIPMENT, WIDTH OF TRENCH, AND OVERDIG TO DETERMINE LOCATION AND LAYOUT OF TREE PROTECTION.
  - ARBORIST TO COORDINATE WITH SITE SUPERINTENDENT FOR OVERHEAD CLEARANCE ISSUES. MAY REQUIRE SELECT PRUNING OR TEMPORARY GUYING.
  - ARBORIST TO MONITOR BACK FILL AND RESTORATION ADJACENT TO PROTECTED TREES.

7 TREE PROTECTION FOR UNDERGROUND UTILITY (TYP)  
3 SCALE: NTS

TREE PRESERVATION PLAN  
Details

Wardman Park  
Washington, DC

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REVISIONS				SCALE/A	CL:1'
No.	Date	Description	App. By		

Horizontal Datum: DC Surv.

Vertical Datum: DCDPW

Boundary and Topo Source:  
Vika Capitol  
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Design	Draft	Approved
CK	CK	--

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3 of 5

WSSI Project Number:  
32045.01



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TREE PROTECTION ACTION KEY (TPAK)

Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Dead Tree (Y/N)	REGULATED STATUS	Number of Stems	SRZ Structural Critical Root Zone (radius) in Feet Critical Root Zone Radius at P1 (1.5 ft radius in DBH)	CRZ Critical Root Zone Radius at P1 (1.5 ft radius in DBH)	Removal By Arborist	Preservation Measures														Construction Notes	Condition Notes				
												Root Prune	Root Protection Mating	Tree Protection Fence	Trunk Wrap	Mulch	Special Demolition	Canopy Pruning	Tree Growth Regulator	Tree Condition Inspections	Watering	Vertical Mulching	Year 1 Soil Care	Root Aeration Mating	Construction Oversight/Monitoring						
103	14	elm, American	Ulmus americana	70%	Good	NO	---	1	7	21	X																	To be removed and replaced for construction.	DDOT street tree; not tagged. Compacted Soils, Surface Roots		
104	33	elm, American	Ulmus americana	60%	Fair	NO	HERITAGE	1	17	50				X		X	X	X	X						X	Canopy pruning in dormant season only.	DDOT street tree; not tagged. Compacted Soils, Surface Roots, Trunk Decay, Small deadwood (1-2")				
105	22	elm, American	Ulmus americana	65%	Good	NO	SPECIAL	1	11	33				X											X	No disturbance	DDOT street tree; not tagged. Small deadwood (1-2")				
106	27	elm, American	Ulmus americana	70%	Good	NO	SPECIAL	1	14	41																No disturbance	DDOT street tree; not tagged. One Sided, Surface Roots, Small deadwood (1-2"), Broken Limbs				
107	30	Zelkova spp.	Zelkova spp.	60%	Fair	NO	SPECIAL	1	15	45																No disturbance	DDOT street tree; not tagged. Bacterial wetwood. One Sided, Root Damage/Decay, Co-Dominant Stems, Mechanical Damage				
108	6	elm, American	Ulmus americana	70%	Good	NO	---	1	3	9	X																	not tagged; inaccessible			
109	8.3	holly, English	Ilex aquifolium	70%	Good	NO	---	2	4	13	X																		scale Co-Dominant Stems, Insect/Disease Problem		
110	6.4	holly, English	Ilex aquifolium	70%	Good	NO	---	2	4	11	X																		scale One Sided, Co-Dominant Stems, Insect/Disease Problem		
111	7	holly, English	Ilex aquifolium	70%	Good	NO	---	1	4	11	X																		scale One Sided, Suppressed, Co-Dominant Stems, Insect/Disease Problem		
112	7.7,6	cherry, Japanese flowering	Prunus serrulata	70%	Good	NO	---	3	6	17	X																		cicada damage Buried Root Collar, Co-Dominant Stems, Insect/Disease Problem		
113	13.13	birch spp.	Betula spp.	70%	Good	NO	SPECIAL	2	9	28	X																		co-dom at 2'; Co-Dominant Stems, Small deadwood (1-2"), Broken Limbs		
114	11.10	birch spp.	Betula spp.	70%	Good	NO	SPECIAL	2	7	22	X																		co-dom at 1' Surface Roots, Co-Dominant Stems, Small deadwood (1-2"), Broken Limbs		
115	21	beech, American	Fagus grandifolia	65%	Good	NO	SPECIAL	1	11	32	X																		Buried Root Collar, Included Bark/Weak Union, Co-Dominant Stems		
116	27	beech, American	Fagus grandifolia	60%	Fair	NO	SPECIAL	1	14	41	X																		Basal Decay, Included Bark/Weak Union, Co-Dominant Stems, Small deadwood (1-2"), Broken Limbs		
117	7	dogwood, flowering	Cornus florida	65%	Good	NO	---	1	4	11	X																		Buried Root Collar		
118	8	dogwood, flowering	Cornus florida	70%	Good	NO	---	1	4	12	X																		Buried Root Collar, Small deadwood (1-2")		
119	18.4	planetree, London	Platanus x hispanica	65%	Good	NO	SPECIAL	1	9	28								X										Canopy prune only over project site property.	not tagged; measured 9/28/2022 Vines		
120	28.2	royal paulownia	Paulownia tomentosa	65%	Good	NO	SPECIAL	1	14	42								X										Canopy prune only over project site property.	not tagged; measured 9/28/2022		
121	25.2	royal paulownia	Paulownia tomentosa	65%	Good	NO	SPECIAL	1	13	38								X										Canopy prune only over project site property.	not tagged; measured 9/28/2022		
122	15.1	planetree, London	Platanus x hispanica	65%	Good	NO	SPECIAL	1	8	23								X										Canopy prune only over project site property.	not tagged; measured 9/28/2022 Vines		
123	13.8	planetree, London	Platanus x hispanica	65%	Good	NO	---	1	7	21								X										Canopy prune only over project site property.	not tagged; measured 9/28/2022		
124	8.5	mulberry, white	Morus alba	65%	Good	NO	---	1	4	13								X									Canopy prune only over project site property.	not tagged; measured 9/28/2022			
125	8.6	boxelder	Acer negundo	65%	Good	NO	---	1	4	13								X									Canopy prune only over project site property.	not tagged; measured 9/28/2022			
126	13.8	elm spp.	Ulmus spp.	65%	Good	NO	---	1	7	21								X									Canopy prune only over project site property.	not tagged; measured 9/28/2022			
127	13	tree of heaven	Ailanthus altissima	65%	Good	NO	---	1	7	20								X									Canopy prune only over project site property.	not tagged; measured 9/28/2022			
128	24	oak, southern red	Quercus falcata	70%	Good	NO	SPECIAL	1	12	36		X	X	X						X	X			X				off-site tree; visually est.; not tagged Large deadwood (3"+), Small deadwood (1-2"), User 2 (change data entry text to use)			
129	22	oak, southern red	Quercus falcata	70%	Good	NO	SPECIAL	1	11	33		X	X	X						X	X			X				off-site tree; visually est.; not tagged Large deadwood (3"+), Small deadwood (1-2"), Branch Decay, User 2 (change data entry text to use)			
130	16	magnolia, saucer	Magnolia x soulangeana	70%	Good	NO	SPECIAL	1	8	24		X	X	X						X	X			X				off-site tree; visually est.; not tagged User 2 (change data entry text to use)			
131	26	oak, southern red	Quercus falcata	60%	Fair	NO	SPECIAL	1	13	39		X	X	X	X					X					X			Large deadwood (3"+), Small deadwood (1-2"), Low Vigor, User 2 (change data entry text to use)			
132	16	oak, southern red	Quercus falcata	55%	Fair	NO	SPECIAL	1	8	24				X	X	X				X					X			Large deadwood (3"+), Small deadwood (1-2"), Low Vigor, Serious Decline, Branch Decay, User 2 (change data entry text to use)			
133	32	oak, willow	Quercus phellos	70%	Good	NO	HERITAGE	1	16	48		X	X	X	X	X				X	X							Surface Roots, Root Damage/Decay, Co-Dominant Stems, Small deadwood (1-2")			
134	9	cherry, Japanese flowering	Prunus serrulata	75%	Good	NO	---	1	5	14	X																	DBH at 4' Buried Root Collar			
135	17	oak, pin	Quercus palustris	60%	Fair	NO	SPECIAL	1	9	26						X	X								X			Arborist oversight for light pole installation, demolition and construction of sidewalk, and grade fill.	DDOT street tree; not tagged. Root Damage/Decay, Small deadwood (1-2"), Low Vigor		
136	7	oak, willow	Quercus phellos	70%	Good	NO	---	1	4	11				X											X			No disturbance	DDOT street tree; not tagged. Compacted Soils, Surface Roots, Root Damage/Decay		
137	11	oak, southern red	Quercus falcata	70%	Good	NO	---	1	6	17		X	X												X			Root prune for grade cut.	DDOT street tree; not tagged. Compacted Soils, Surface Roots, Girdling Roots, Root Damage/Decay		
138	26	oak, pin	Quercus palustris	75%	Good	NO	SPECIAL	1	13	39		X	X												X			Root prune for grade cut.	DDOT street tree; not tagged. Compacted Soils, Surface Roots		
139	11	oak, pin	Quercus palustris	65%	Good	NO	---	1	6	17				X											X			No disturbance	DDOT street tree; not tagged. Compacted Soils, Surface Roots, Root Damage/Decay		
140	15	oak, pin	Quercus palustris	70%	Good	NO	SPECIAL	1	8	23				X											X			No disturbance	DDOT street tree; not tagged. Compacted Soils, Surface Roots		
141	13	oak, pin	Quercus palustris	75%	Good	NO	---	1	7	20				X											X			No disturbance	DDOT street tree; not tagged. Compacted Soils, Surface Roots		
142	14	oak, willow	Quercus phellos	75%	Good	NO	---	1	7	21				X											X			No disturbance	DDOT street tree; not tagged. Compacted Soils, Surface Roots, Root Damage/Decay		
143	16	oak, willow	Quercus phellos	70%	Good	NO	SPECIAL	1	8	24		X	X												X			Root prune for grade cut and sidewalk installation.	DDOT street tree; not tagged. Compacted Soils, Surface Roots, Root Damage/Decay		
144	15	oak, willow	Quercus phellos	70%	Good	NO	SPECIAL	1	8	23		X	X												X			Root prune for sidewalk installation.	DDOT street tree; not tagged. Compacted Soils, Surface Roots, Root Damage/Decay		
145	16	beech, American	Fagus grandifolia	75%	Good	NO	SPECIAL	1	8	24	X																			Intent is to retain tree. May be removed if logistics needs in the area make retention practically impossible.	Surface Roots, Root Damage/Decay, Large deadwood (3"+), Small deadwood (1-2"), Broken Limbs
146	31	oak, willow	Quercus phellos	70%	Good	NO	SPECIAL	1	16	47	(X)	X	X	X	X	X			X	X	X	X	X	X	X				Buried Root Collar, Trunk Decay, Small deadwood (1-2"), Broken Limbs, Branch Decay		
147	15	cherry, Japanese flowering	Prunus serrulata	65%	Good	NO	SPECIAL	1	8	23	X																			Special demolition of existing curb and wall within CR2. Arborist oversight of construction of new curb/wall.	Surface Roots, Small deadwood (1-2")
148	24	linden, littleleaf	Tilia cordata	45%	Fair	NO	SPECIAL	1	12	36				X	X	X				X					X				No disturbance	Surface Roots, Small deadwood (1-2")	
833	11	planetree, London	Platanus x hispanica	75%	Good	NO	---	1	6	17																			No disturbance	Surface Roots, Small deadwood (1-2")	
834	11	planetree, London	Platanus x hispanica	70%	Good	NO	---	1	6	17																			No disturbance	Surface Roots, Small deadwood (1-2")	
835	11	planetree, London	Platanus x hispanica	70%	Good	NO	---	1	6	17																			No disturbance	poor pruning Surface Roots, Small deadwood (1-2")	
836	10	planetree, London	Platanus x hispanica	70%	Good	NO	---	1	5	15																			No disturbance	Girdling root 1"; poor pruning Surface Roots, Girdling Roots, Small deadwood (1-2")	
837	11	planetree, London	Platanus x hispanica	75%	Good	NO	---	1	6	17				X	X										X				Special demolition of existing curb within CR2. Arborist to hand prune roots as necessary.	Girdling root 1" Surface Roots, Girdling Roots, Small deadwood (1-2")	
838	9	planetree, London	Platanus x hispanica	65%	Good	NO	---	1	5	14				X	X					X					X				Special demolition of existing curb within CR2. Arborist to hand prune roots as necessary.	Girdling root. 5" One Sided, Surface Roots, Girdling Roots, Small deadwood (1-2"), Broken Limbs	
839	11	planetree, London	Platanus x hispanica	70%	Good	NO	---	1	6	17					X														No disturbance	poor pruning Broken Limbs	
840	11	planetree, London	Platanus x hispanica	75%	Good	NO	---	1	6	17						X													Arborist to excavate for sidewalk base with airtool. Fill base around significant roots.	Surface Roots, Girdling Roots, Broken Limbs	
841	10	planetree, London	Platanus x hispanica	65%	Good	NO	---	1	5	15						X													photolean due to adjacent tree One Sided, Suppressed, Surface Roots, Girdling Roots		
842	28	cherry, Japanese																													

Trees associated with raze activities. Review with DDOT arborist prior to raze.

Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Dead Tree (Y/N)	REGULATED STATUS	Number of Stems	SRZ Structural Critical Root Zone (radius 1x Feet F1 (1.5x radius) DBH)	CRZ Critical Root Zone Radius F1 (1.5x radius) DBH)	Removal By Arborist
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TREE PRESERVATION SPECIFICATIONS

1. GENERAL

1.1. REFER TO THE TREE PROTECTION ACTION KEY (TPAK) FOR SPECIFIC RECOMMENDATIONS FOR EACH TREE.

1.2. PRIOR TO BOTH THE RAZE AND CONSTRUCTION PHASES, A PRE-CONSTRUCTION SITE WALK SHALL BE HELD TO INCLUDE THE RETAINED ARBORIST AND PROJECT FORESTER WITH THE CONTRACTOR, ARCHITECT, DDOT, AND OWNER. WORK WITHIN OR ADJACENT TO TREE PROTECTION AREAS (TPA) IS TO BE REVIEWED.

1.3. SUBSTITUTIONS OR ALTERNATIVE METHODS OR MATERIALS SHALL BE REVIEWED AND APPROVED BY DDOT.

1.4. ALL TREE PROTECTION MEASURES MUST BE IN PLACE PRIOR TO COMMENCEMENT OF DEMOLITION, SITE CLEARING OR CONSTRUCTION AND MAINTAINED THROUGHOUT CONSTRUCTION. TREE PROTECTION MEASURES MAY ONLY BE REMOVED WITH DDOT APPROVAL.

1.5. ALL MEASURES WILL BE REVIEWED AFTER INSTALLATION AND APPROVED BY OWNER AND DDOT.
2. REMOVAL BY ARBORIST

2.1. TREES DESIGNATED AS "REMOVAL BY ARBORIST" SHALL BE REMOVED BY A QUALIFIED ARBORIST "BY HAND", TO MINIMIZE POTENTIAL FOR DAMAGE TO REMAINING TREES AND ROOTS.

2.2. CREWS SHALL BE DIRECTLY SUPERVISED BY A CERTIFIED ARBORIST.

2.3. TRUCKS AND MECHANIZED EQUIPMENT SHALL NOT ENTER THE FENCED TREE PROTECTION AREAS, EXCEPT WHERE EXPLICITLY APPROVED BY THE PROJECT FORESTER AND UTILIZING APPROVED ROOT PROTECTION DEVICE.

2.4. STUMPS SHALL BE LEFT IN PLACE OR GROUND OUT AT THE OWNERS DISCRETION. STUMPS IN TURFLANDSCAPE AREAS OR WITHIN ROOT AERATION MATTING AREAS SHALL BE GROUND.

2.5. STUMP GRINDING SHALL BE DONE WITH SMALL MACHINES SPECIFICALLY DESIGNED FOR THAT PURPOSE. NO STUMPS SHALL BE EXCAVATED EXCEPT AS DESCRIBED HEREIN. STUMPS SHALL BE GROUND NOT MORE THAN 8" BELOW GRADE AND CARE MUST BE TAKEN TO MINIMIZE DAMAGE TO ROOTS OF RETAINED TREES.
3. TREE PROTECTION FENCE

3.1. INSTALL AND MAINTAIN TEMPORARY TREE PROTECTION FENCE FOR EACH TREE PROTECTION AREA AS SHOWN ON THE PLAN. INSTALLATION IS TYPICALLY AFTER ROOT PRUNING AND PRIOR TO CLEARING & GRADING.

3.2. FENCE SHALL BE ONE OF THE FOLLOWING: (SEE DETAIL)

3.2.1. 4" HIGH, 14 GAUGE WELDED WIRE FENCE MOUNTED ON 6" STEEL "T" POSTS SPACED NOT MORE THAN 10' APART. FENCE SHALL BE ATTACHED TO POSTS USING GALVANIZED STEEL CLIPS OR ALUMINUM TIES. PLASTIC "ZIP" TIES SHALL NOT BE USED.

3.2.2. 6" HIGH CHAIN LINK FENCE FABRIC MOUNTED ON 8' 1.5"Ø GALVANIZED STEEL PIPE LINE POSTS. CORNER POSTS SHALL BE 2"Ø. FENCE SHALL BE ATTACHED TO POSTS USING ALUMINUM TIES. PLASTIC "ZIP" TIES SHALL NOT BE USED.

3.2.3. "SUPER SILT FENCE" (SILT FENCE WITH AN INCORPORATED CHAIN LINK FENCE FABRIC) INSTALLED AS SPECIFIED BY APPROPRIATE STATE OR LOCAL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

3.3. SILT FENCE SHALL BE COORDINATED FOR INSTALLATION TO ENHANCE PROTECTION AND AVOID UNNECESSARY ROOT CUTS BY SILT FENCE INSTALLATION.

3.4. FENCE SHALL REMAIN FOR THE DURATION OF CONSTRUCTION. FENCE MAY BE REMOVED ONLY AFTER ALL CONSTRUCTION AND FINAL LANDSCAPING IS COMPLETE AND WITH DDOT APPROVAL.
4. TREE PROTECTION AREA SIGNS

4.1. TREE PROTECTION AREA SIGNS SHALL BE AFFIXED TO ALL TREE PROTECTION FENCE AT 30' SPACING AVERAGE.

4.2. SIGNS SHALL BE BILINGUAL (ENGLISH AND SPANISH).

4.3. SIGNS SHALL NOT BE AFFIXED DIRECTLY TO TREES. SEE DETAIL.

4.4. SIGN MATERIAL SHALL BE WATERPROOF, HEAVY VINYL OR SIMILAR.

4.5. SIGNS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
5. ROOT PRUNE

5.1. THE EXACT LOCATION AND DEPTH WILL BE DETERMINED DURING THE PRE-CONSTRUCTION MEETING. SPECIFIC EQUIPMENT & METHODS WILL BE DETERMINED BY PROJECT FORESTER AND DDOT BASED UPON DEPTH & TREE IMPACT. (SEE DETAIL)

5.2. HAND PRUNE ROOTS OVER 1" DIAMETER WITHIN CRZS OF SIGNIFICANT TREES, STEEP SLOPES, DEEP EXCAVATIONS AND PAVEMENT/CURB REMOVAL WILL BE REVIEWED WHEN OPEN FOR HAND ROOT PRUNING DURING CONSTRUCTION.

5.3. COORDINATE WITH SILT FENCE INSTALLATION TO MINIMIZE UNNECESSARY ROOT DAMAGE.

5.4. ROOT PRUNING SHALL BE PERFORMED BY A CERTIFIED ARBORIST.
6. WOOD CHIP MULCH

6.1. INSTALL MULCH FOR DESIGNATED SIGNIFICANT TREES. MULCH AREA SHALL BE ONE OF THE FOLLOWING, AT THE DISCRETION OF THE RETAINED ARBORIST AND OWNER:

6.1.1. INSTALL MULCH BED RINGS. MULCH SHOULD COVER AT LEAST THE ENTIRE STRUCTURAL ROOT ZONE. LARGER MULCH BEDS ARE PREFERRED.

6.1.2. PROVIDE CONTINUOUS MULCH STRIP 10" TO 15" WIDE ALONG LOD WITHIN PRESERVED CRZ AREAS.

6.2. MULCH SHALL BE INSTALLED TO A DEPTH OF 4". TOTAL MULCH DEPTH SHALL NOT EXCEED 4" SHOULD EXISTING MULCH BE PRESENT.

6.3. MULCH SHALL BE DOUBLE GROUND SHREPPED HARDWOOD, AGED FOR AT LEAST 6 MONTHS FROM AN APPROVED SOURCE, INSUFFICIENTLY OR IMPROPERLY AGED MULCH CONTAINING HIGH BACTERIAL COUNTS OR HIGH LEVELS OF BARK, WALNUT, INVASIVE SPECIES, OR OTHER MATERIALS RESISTANT TO DECOMPOSITION SHALL NOT BE USED.

6.4. MULCH SHALL NOT CONTACT TRUNK OF TREES.

6.5. EDGING SHALL NOT BE USED.
7. CONSTRUCTION MONITORING/INSPECTIONS

7.1. A CERTIFIED ARBORIST SHALL ACTIVELY MONITOR THE SITE TO ENSURE ADHERENCE TO ALL TREE PROTECTION REQUIREMENTS.

7.2. THIS WORK IS TYPICALLY PREFORMED BY THE RETAINED ARBORIST, TO BE HIRED BY THE GENERAL CONTRACTOR OR OWNER.

7.3. SCHEDULE:

7.3.1. PHASE 1 (DURING INITIAL CLEARING AND INSTALLATION OF TREE PROTECTION AND PERIMETER E&S CONTROLS) INSPECTIONS SHALL BE AT LEAST WEEKLY.

7.3.2. PHASE 2 (DURING ALL REMAINING SITE WORK AND UNTIL PROJECT COMPLETION) INSPECTIONS SHALL BE AT LEAST MONTHLY.

7.3.3. TRANSITION FROM WEEKLY TO MONTHLY SCHEDULE SHALL REQUIRE OWNER AND DDOT APPROVAL.

7.4. REPORTS SHALL BE PROVIDED TO THE OWNER AND DDOT. REPORTS SHALL DOCUMENT CONDITION OF TREE PROTECTION DEVICES AND PROVIDE RECOMMENDATIONS FOR MAINTENANCE AND/OR ADDITIONAL CARE.

7.5. ADDITIONAL ARBORIST INSPECTIONS AND/OR DIRECT ARBORIST OVERSIGHT OF CRITICAL TREE PRESERVATION ACTIVITIES, TREE PRUNING, TREE REMOVAL, OR OTHER SENSITIVE ACTIVITIES MAY BE REQUIRED. WEEKLY INSPECTIONS DO NOT SATISFY THE NEED FOR DIRECT ARBORIST OVERSIGHT THAT MAY BE REQUIRED FOR SPECIFIC ACTIVITIES.
8. MISCELLANEOUS TREE PROTECTION REQUIREMENTS

8.1. NO TOXIC MATERIALS SHALL BE STORED WITHIN 100' OF TREE PROTECTION AREAS.

8.2. ALL WORK IN OR NEAR TREE PROTECTION AREAS SHALL BE PERFORMED IN A MANNER TO MINIMIZE DAMAGE TO TREES, SHRUBS, GROUND COVER, SOIL AND ROOT SYSTEMS.

8.3. MECHANIZED EQUIPMENT SHALL NOT BE PERMITTED TO ENTER ANY TREE PROTECTION AREAS WITHOUT EXPLICIT APPROVAL BY THE PROJECT FORESTER AND DDOT, AND WITH ADEQUATE APPROVED ROOT PROTECTION DEVICES.
9. CANOPY PRUNING & SUPPORT CABLES

9.1. CANOPY PRUNING SHALL BE CLEANING PRUNING AND/OR RESTORATION PRUNING AND SHALL BE IN CONFORMANCE WITH CURRENT ANSI A300 STANDARDS AND ISA BEST

- MANAGEMENT PRACTICES.
- 9.2. PRUNING SHALL REMOVE ONLY DEAD, DYING, DAMAGED OR BROKEN BRANCHES GREATER THAN 1" IN DIAMETER. PRUNING OF SMALL TREES MAY INCLUDE REMOVAL OF LIMBS TO IMPROVE STRUCTURE.
- 9.3. FOLIAGE REMOVAL SHALL NOT BE MORE THAN 25% OF THE TOTAL LIVE CANOPY VOLUME OF ANY TREE IN ANY ONE SEASON. PRUNING SHALL NOT REMOVE INTERIOR BRANCHING EXCEPT AS OTHERWISE STATED.
- 9.4. PRUNING FOR SPECIFIC CLEARANCE (FOR CONSTRUCTION ACCESS OR PROPOSED IMPROVEMENTS) SHALL BE REVIEWED AND APPROVED BY THE OWNER AND DDOT.
- 9.5. SUPPORT CABLES SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT ANSI A300 STANDARDS AND ISA BEST MANAGEMENT PRACTICES.

10. CONSTRUCTION STRATEGIES FOR TREE PROTECTION

10.1. CONSTRUCTION STAGING, STOCKPILING, EQUIPMENT STORAGE, MASONRY SET-UP AND WASHOUT, ETC. SHALL BE LIMITED TO AREAS OF EXISTING PAVEMENT AND AREAS WITHIN THE LOD EXCEPT AS OTHERWISE NOTED.

10.2. CONSTRUCTION EQUIPMENT ACCESS BETWEEN VARIOUS WORK AREAS SHALL REMAIN ON EXISTING PAVEMENT/IMPROVED SURFACES TO THE GREATEST EXTENT POSSIBLE. WHERE THIS IS NOT POSSIBLE AND WITHIN THE CRITICAL ROOT ZONE (CRZ) OF ANY TREE TO REMAIN, ACCESS SHALL BE MADE ON ROOT PROTECTION MATTING (RPM)(SEE DETAIL) OR APPROVED ALTERNATIVE. CONTRACTOR TO DETERMINE ACCESS NEEDS AND COORDINATE RPM INSTALLATION WITH THE RETAINED ARBORIST AT THE PRE-CONSTRUCTION MEETING OR BEFORE.

10.3. PROPOSED LANDSCAPE PLANTINGS WITHIN TREE PROTECTION AREAS SHALL BE INSTALLED BY HAND. MECHANIZED EQUIPMENT SHALL NOT BE USED OUTSIDE THE LOD OR OFF OF EXISTING PAVED AREAS TO EXCAVATE FOR PLANTINGS OR FOR STAGING PLANT MATERIAL.

10.4. COORDINATE PLANTING LOCATIONS WITHIN CRZS WITH THE RETAINED ARBORIST TO AVOID UNNECESSARY ROOT DAMAGE. PLANTING PITS WITHIN CRZS SHOULD BE DUG BY HAND OR USING AIRTOOL EXCAVATION EQUIPMENT. ROOTS GREATER THAN 1" SHOULD NOT BE CUT.

11. ROOT PROTECTION MATTING

11.1. TEMPORARY MATTING TO PROTECT EXISTING ROOTS AND SOILS FROM PROPOSED SHORT-TERM CONSTRUCTION TRAFFIC IMPACTS.

11.2. TO PREPARE SITE, REMOVE ANY DEBRIS BY HAND AND SPREAD AN EVEN LAYER OF WOOD CHIP MULCH 12" THICK OVER THE ENTIRE AREA TO RECEIVE MATTING.

11.3. MATTING SHALL BE INSTALLED IN A SINGLE LAYER ON MULCH.

11.4. TOPSOIL SHALL NOT BE DISTURBED OR REMOVED. NO GRUBBING, GRADING, EXCAVATION OR EQUIPMENT TRAFFIC SHALL BE ALLOWED IN THE AREA TO RECEIVE RPM. EQUIPMENT MAY TRAVEL ON RPM AFTER IT IS INSTALLED, BUT SHOULD BE MINIMIZED. TRACKED EQUIPMENT SHOULD NOT TURN ON RPM TO AVOID DAMAGE.

11.5. MATTING MATERIAL SHALL BE TENSAR ROADRAIN R07 OR APPROVED EQUIVALENT.

11.6. RPM SHALL BE INSTALLED BY A CERTIFIED ARBORIST.

11.7. RPM SHALL NOT BE REMOVED OR DISTURBED BY SITE CONTRACTORS.

11.8. INSTALLATION OF SILT FENCE FOR EROSION CONTROL SHALL BE COORDINATED WITH THE PROJECT FORESTER AND DESIGN TEAM TO PREVENT DAMAGE TO TREE ROOTS FROM TRENCHING OPERATIONS. TRENCHLESS EROSION CONTROL MEASURES (SUCH AS COMPOST FILTER SOCKS OR SIMILAR DEVICES) MAY BE USED IN LIEU OF OR IN COMBINATION WITH SILT FABRIC.

12. SPECIAL DEMOLITION PROCEDURES

12.1. DEMOLITION OF WALLS, FOOTINGS, WALKS, CURBS, AND OTHER IMPROVEMENTS OR HARDSCAPE WITHIN TREE PROTECTION AREAS (TPAS) SHALL BE PERFORMED BY THE RETAINED ARBORIST AND DIRECTLY SUPERVISED BY A CERTIFIED ARBORIST.

12.2. MECHANIZED EQUIPMENT SHALL NOT ENTER THE TPAS, EXCEPT WHERE EXPLICITLY APPROVED BY THE PROJECT FORESTER AND UTILIZING APPROVED ROOT PROTECTION DEVICE.

12.3. BACKFILL OF VOIDS FROM DEMOLITION WITHIN THE TPAS SHALL BE LOOSELY PLACED TOPSOIL. ONLY THE AMOUNT OF SOIL NECESSARY TO FILL THE VOID WITHOUT SPREADING OVER EXISTING ADJACENT GRADES SHALL BE ALLOWED.

12.4. ROOTS ENCOUNTERED DURING DEMOLITION SHALL BE REVIEWED ON A CASE-BY-CASE BASIS BY THE RETAINED ARBORIST. THE ARBORIST SHALL PROVIDE APPROPRIATE TREATMENT OR PRUNING METHODS AS NEEDED AND IN GENERAL CONFORMANCE WITH ACCEPTED INDUSTRY STANDARDS AND THIS SECTION.

13. SSAT EXCAVATION WITHIN CRZS

13.1. PROPOSED UTILITIES, DRAINAGE PLUMBING, LIGHTING CONDUITS, HARDSCAPE, IRRIGATION, OR OTHER IMPROVEMENTS WITHIN TREE PROTECTION AREAS (TPAS) SHALL BE EXCAVATED BY SUPERSONIC AIRTOOL (SSAT) TO MINIMIZE DAMAGE TO ROOT SYSTEMS.

13.2. OWNER, CONTRACTOR, RETAINED ARBORIST, AND DDOT SHALL REVIEW THE PROPOSED LOCATION(S) DURING THE PRE-CONSTRUCTION MEETING.

13.3. PRE-WATERING OF THE PROPOSED AREAS OF EXCAVATION DURING SUMMER AND FALL MONTHS IS RECOMMENDED TO MAINTAIN ROOT / SOIL MOISTURE.

13.4. THE RETAINED ARBORIST SHALL PROVIDE A QUALIFIED ARBORIST CREW EXPERIENCED WITH THE SSAT AND UTILITY EXCAVATION TO PROTECT ADJACENT TREES, OPEN THE EXCAVATION, HAND PRUNE MINOR ROOTS, AND IDENTIFY AND PROTECT PRIORITY ROOTS TO REMAIN. COORDINATION WITH THE APPROPRIATE SUB-CONTRACTOR SHALL BE MADE TO DETERMINE APPROPRIATE WIDTH, DEPTH & SEQUENCING, UTILITY INSTALLATION, BACKFILL, COMPLETION, AND COVER.

14. SSAT LANDSCAPE PLANTING EXCAVATION

14.1. PROPOSED LANDSCAPE PLANTING OF B&B PLANTS WITHIN CRITICAL ROOT ZONES WITHIN TPAS SHALL BE REVIEWED BY THE RETAINED ARBORIST, CONTRACTOR, AND DDOT IN THE FIELD TO DETERMINE POTENTIAL FOR DAMAGE TO PRIORITY ROOTS SYSTEMS OF SELECT TREES AND LAYOUT THE LIMIT OF WORK.

14.2. PRE-WATERING OF THE PROPOSED AREAS OF EXCAVATION DURING SUMMER AND FALL MONTHS IS RECOMMENDED TO MAINTAIN ROOT / SOIL MOISTURE.

14.3. THE RETAINED ARBORIST SHALL PROVIDE A QUALIFIED ARBORIST CREW EXPERIENCED WITH THE SSAT AND LANDSCAPE PLANTING EXCAVATION TO PROTECT ADJACENT NATURAL RESOURCES AND CONSTRUCTION WORK, OPEN THE EXCAVATION, HAND PRUNE MINOR ROOTS, AND IDENTIFY AND PROTECT PRIORITY ROOTS TO REMAIN. COORDINATION WITH THE APPROPRIATE SUB-CONTRACTOR SHALL BE MADE TO DETERMINE APPROPRIATE WIDTH, DEPTH, SEQUENCING.

14.4. THE RETAINED ARBORIST SHALL PROVIDE ADEQUATE PROTECTION FOR PEDESTRIANS, STRUCTURES, VEHICLES, ETC. DURING THIS OPERATION.

15. SOIL CARE/ FERTILIZATION

15.1. INITIAL SOIL TESTING WITHIN TREE PROTECTION AREAS IS REQUIRED. CONDUCT INDIVIDUAL SOIL TESTS FOR SEPARATE TREE PROTECTION AREAS (SMALL ADJACENT AREAS MAY BE TESTED TOGETHER). SOIL TEST SHALL BE A REPRESENTATIVE SAMPLE FROM EACH AREA.

15.2. SUBMIT ALL TEST RESULTS AND PRODUCT SPECIMEN LABELS TO THE PROJECT TEAM FOR APPROVAL PRIOR TO TREATMENT.

15.3. TREATMENTS TO THE TREE PROTECTION AREAS FOR SPECIFIED TREES (SEE TPAK) SHALL BE BASED ON THE RESULTS OF THE SOIL ANALYSIS. FERTILIZATION SHALL BE CONSISTENT WITH THE RECOMMENDATIONS OF THE CURRENT ANSI A-300 (PART 2) TREE, SHRUB, AND OTHER WOODY PLANT MAINTENANCE – STANDARD PRACTICES (FERTILIZATION).

15.4. APPLICATION RATES SHALL NOT EXCEED A RATE OF 1 POUND OF ACTUAL NITROGEN PER 1,000 SQUARE FEET ANNUALLY. FERTILIZER USED SHOULD BE PREDOMINANTLY SLOW RELEASE NITROGEN, POTASSIUM PHOSPHITES, OTHER NUTRIENTS AS RECOMMENDED BY SOIL TESTING, AND INCLUDE HUMIC AND FULVIC ACIDS.

16. TREE CONDITION MONITORING INSPECTIONS

16.1. RETAINED ARBORIST SHALL PROVIDE MONITORING OF THE CONDITION OF RETAINED TREES IN TREE PROTECTION AREAS, AND TREATMENT OF DETRIMENTAL CONDITIONS (INSECTS, DISEASES, NUTRIENT DEFICIENCIES, SOIL MOISTURE, ETC.), AS THEY OCCUR, OR AS APPROPRIATE FOR EFFECTIVE MANAGEMENT.

16.2. INSPECTIONS SHALL BE PERFORMED AT LEAST MONTHLY DURING THE GROWING SEASON, BEGINNING PRIOR TO CONSTRUCTION AND CONTINUING THROUGHOUT CONSTRUCTION AND FOR AT LEAST ONE YEAR SUBSEQUENT TO COMPLETION OF CONSTRUCTION

- ACTIVITIES.
- 16.3. A WRITTEN SUMMARY REPORT INCLUDING SPECIFIC TREATMENTS MADE AND RECOMMENDATIONS FOR ADDITIONAL TREATMENTS SHALL BE PROVIDED TO THE OWNER AND PROJECT FORESTER SUBSEQUENT TO EACH INSPECTION.

17. TREE GROWTH REGULATOR (TGR)

17.1. PACLOBUTRAZOL SOIL-APPLIED TREE GROWTH REGULATOR (CAMBISTAT® OR EQUIVALENT) SHALL BE APPLIED TO INDICATED TREES. APPLICATIONS SHALL FOLLOW MANUFACTURER'S LABEL AND APPLICABLE LAWS.

17.2. TGR REDUCES CANOPY GROWTH WHICH CAN INCREASE FIBROUS ROOT SYSTEM GROWTH OVER 2-3 YEARS. THIS CAN INCREASE TOLERANCE TO DROUGHT STRESS AND IMPROVE ABSORPTION OF NUTRIENTS AND MOISTURE DURING THE STRESS RECOVERY PERIOD.

18. TREE TRUNK PROTECTION WRAP

18.1. TRUNKS OF TREES IN CLOSE PROXIMITY TO CONSTRUCTION SHALL BE PROTECTED WITH A SINGLE WRAP OF GEOCOMPOSITE. GEOCOMPOSITE SHALL BE DOUBLE SIDED, GEONET CORE WITH NON-WOVEN COVERING (SUCH AS TENSAR ROADRAIN RD7) OR EQUIVALENT.

18.2. WRAP SHALL BE NOT LESS THAN 10' HIGH ON TRUNK OR UP TO THE LOWEST LIMB (WHICHEVER IS LESS). EXPOSED ROOT FLARE SHALL ALSO BE FULLY COVERED.

18.3. WRAP SHALL BE TIED WITH ROPE OR WIRE. TIE MATERIAL SHALL NOT CONTACT TRUNK.

18.4. WRAP SHALL BE REMOVED PROMPTLY AFTER CONSTRUCTION.

19. QUALITY ASSURANCE

19.1. GENERAL CONTRACTOR'S ON-SITE (RETAINED) ARBORIST:

19.1.1. THE GENERAL CONTRACTOR SHALL ENTER INTO A CONTRACTUAL RELATIONSHIP WITH AN EXPERIENCED ARBORICULTURE/TREE CARE FIRM TO PERFORM THE WORK SPECIFIED HEREIN. THIS CONTRACT SHALL BE FULLY EXECUTED PRIOR TO RELEASE OF THE DEMOLITION/BUILDING PERMIT. THE GENERAL CONTRACTOR SHALL PROVIDE PROOF OF SUCH CONTRACT TO DDOT. TO THE EXTENT DDOT IS ASSURED WORK WILL BE EXECUTED BY A COMPETENT FIRM AS OUTLINED BELOW:

19.1.2. THE RETAINED ARBORIST IS TO BE AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) AND LICENSED IN THE JURISDICTION WHERE PROJECT IS LOCATED. AS APPLICABLE, ALL WORK PERFORMED BY THE RETAINED ARBORIST SHALL BE REVIEWED AND APPROVED BY THE OWNER'S ARBORIST CONSULTANT OR AS APPROVED BY DDOT.

19.2. RETAINED ARBORIST FIRM QUALIFICATIONS:

19.2.1. RETAINED ARBORIST FIRM SHALL COMPLY WITH THE FOLLOWING:

19.2.2. ESTABLISHED BUSINESS WITH DOCUMENTED EXPERIENCE OF AT LEAST FIVE YEARS.

19.2.3. EXPERIENCE WORKING ON A MINIMUM OF THREE COMMERCIAL, NONGOVERNMENTAL OR GOVERNMENTAL PROJECTS WHERE SIMILAR TREE PRESERVATION PROGRAMS HAVE BEEN SUCCESSFULLY IMPLEMENTED.

19.2.4. PROPERLY LICENSED AND INSURED TO PERFORM ARBORICULTURAL WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED.

19.3. PROVIDE NAMES OF EACH INDIVIDUAL TO COMPLY WITH THE FOLLOWING:

19.3.1. CERTIFICATION BY ISA (CERTIFIED ARBORIST OR BOARD CERTIFIED MASTER ARBORIST)

19.3.2. MINIMUM BS OR AS DEGREE IN FORESTRY, ARBORICULTURE, OR RELATED FIELD

19.3.3. RESUMES SHOULD REFLECT COMBINED 5 YEARS FULL-TIME EXPERIENCE ON SIMILAR TREE PRESERVATION PROJECTS.

19.4. PROVIDE INDIVIDUAL(S) NAMES, CERTIFICATIONS, AND EACH ANTICIPATED ROLE IN THIS PROJECT. ROLE(S) SHALL BE DEFINED AS ONE OR MORE OF THE FOLLOWING:

19.4.1. PROJECT MANAGER

19.4.2. TECHNICAL OVERSIGHT

19.4.3. FIELD ARBORIST/TECHNICIAN

19.5. FOR EACH STAFF MEMBER, LIST A MINIMUM OF THREE CONSTRUCTION PROJECTS AND A MINIMUM THREE YEARS EXPERIENCE IN THE FOLLOWING TECHNICAL APPLICATIONS:

19.5.1. SOIL AMENDMENT PRESCRIPTIONS AND APPLICATIONS

19.5.2. ROOT PROTECTION MATTING (RPM) OR SIMILAR APPLICATIONS

19.5.3. CONSTRUCTION OVERSIGHT AND MONITORING

19.5.4. COORDINATION OF ARBORICULTURAL ACTIVITIES WITH CONSTRUCTION PROJECT MANAGERS

20. PUBLICATIONS INCLUDED BY REFERENCE

20.1. PUBLICATIONS LISTED HEREIN ARE PART OF THIS WORK TO EXTENT REFERENCED:

20.1.1. ANSI A300 STANDARD PRACTICES FOR TREES, SHRUBS, AND OTHER WOODY PLANT MAINTENANCE

20.1.2. PART 1 -- 2017, TREE PRUNING

20.1.3. PART 2 -- 2018, SOIL MANAGEMENT

20.1.4. PART 3 -- 2013, SUPPLEMENTAL SUPPORT SYSTEMS

20.1.5. PART 4 -- 2014, LIGHTNING PROTECTION SYSTEMS

20.1.6. PART 5 -- 2019, MANAGEMENT OF TREES AND SHRUBS DURING SITE PLANNING, SITE DEVELOPMENT, AND CONSTRUCTION

20.1.7. PART 6 -- 2018, PLANTING AND TRANSPLANTING

20.1.8. PART 7 -- 2020, ROOT MANAGEMENT

20.1.9. PART 8 -- 2017, TREE RISK ASSESSMENT

20.1.10. PART 9 -- 2016, IPM

20.2. ANSI Z133.1 -- 2017 AND MOST RECENT UPDATES, ARBORICULTURAL OPERATIONS -- SAFETY REQUIREMENTS

21. GRADE FILL PLACEMENT WITHIN CRZS

21.1. PROPOSED GRADE FILL PROPOSED WITHIN PROTECTED TREE CRZS SHALL BE WELL DRAINED WITH HIGHER SAND/LOAM CONTENT AND LOWER CLAY IN ORDER TO PROMOTE DRAINAGE AND AERATION INTO EXISTING GRADE. GRADE FILL SHALL NOT EXCEED 6" DEPTH.

21.2. SHOULD EXISTING SOILS WITHIN PROTECTED CRZS BE DESIGNATED AS "COMPACTED", THEN DECOMPACTION USING AN AIR-TOOL SHALL BE DONE PRIOR TO OR IN CONJUNCTION WITH FILL PLACEMENT. DEPTH OF AIR TOOL DECOMPACTION SHALL BE 12" OR UNTIL REFUSAL. PRE-WATERING DURING DROUGHT TIMES IS REQUIRED.

21.3. PLACEMENT OF FILL SHALL NOT FURTHER COMPACT EXISTING SOIL. USE OF RUBBER TRACKED, LOW-PSI EQUIPMENT IS REQUIRED, OR EQUIVALENT.

21.4. GRADE FILL SHALL NOT BE PLACED TO COVER THE ROOT FLARE. USE CAUTION TO AVOID GOUGES OR SCRAPES TO TRUNK OR ROOT FLARE.

21.5. WOOD CHIP MULCH SHALL BE INSTALLED AFTER FINAL GRADING.

22. VERTICAL MULCHING

22.1. THE AREA DESIGNATED FOR THIS OPERATION SHALL BE 30" FROM TREE BASE TO ½ THE CRZ RADIUS. FOLLOW UP IF NEEDED CAN TREAT THE OUTER ½ OF THE CRZ AREA. ALSO TREAT ANY AREA UNDER ROOT PROTECTION MATTING INSIDE CRZS, ONCE THE RPM IS REMOVED.

22.2. USE SUPERSONIC AIR TOOL (SSAT 150 OR 300CFM AS SITE DICTATES) TO VERTICALLY BORE 12"-18" DEEP HOLES MINIMUM OF 2" DIAMETER ON A SPACING OF ONE HOLE PER SQUARE YARD 3' x 3'.

22.3. BACKFILL WITH CHIP-SIZED, PRE-MOISTENED BIOCHAR UP TO TOP AND COVER.

22.4. CERTIFY THAT ADEQUATE SOIL MOISTURE IS AVAILABLE OR PRE-WATER AREA.

22.5. THE OPERATOR SHALL ATTEMPT TO CAUSE HORIZONTAL FRACTURING WITH THE SSAT AMONG THE SOIL LAYERS TO INCREASE PORE SPACE.

22.6. TYPICALLY THIS OPERATION IS FOLLOWED BY HIGH PRESSURE LIQUID FERTILIZATION INJECTION. OFFSET EACH HOLE TO FILL FISSURES. REFER TO SOIL CARE/FERTILIZATION.

23. SUPPLEMENTAL WATERING

23.1. RETAINED ARBORIST SHALL PROVIDE SUPPLEMENTAL WATERING FOR SIGNIFICANT TREES DURING SEASONAL DROUGHT TIMES.

23.4. TREES REQUIRING THIS TREATMENT ARE INDICATED IN THE TPAK. OTHER TREES WILL NOT RECEIVE THIS TREATMENT.

23.5. MINIMUM WATERING SHALL BE CONSIDERED TO BE 6 APPLICATIONS PER GROWING SEASON, TYPICALLY JULY THRU OCTOBER WITH THE EXACT TIMING AND DURATION TO BE DETERMINED BY THE PROJECT FORESTER AND DDOT. CALIBRATE FOR 5 TO 10 GALLONS PER DIAMETER INCH PER TREE. FOR EXAMPLE, A 30" DBH TREE = 150-300 GALLONS PER WATERING.

- 23.6. BASED UPON THE NUMBER AND SIZE OF TREES VARIOUS STRATEGIES CAN BE CONSIDERED TO MAINTAIN ADEQUATE SOIL MOISTURE DURING THESE TIMES. THESE STRATEGIES MAY INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

23.6.1. FIRE HYDRANT CONNECTION WITH TIMER AND DRIP IRRIGATION HOSE / TUBING.

23.6.2. WATER TANK TRUCK AND HAND APPLIED AS DIRECTED.

23.6.3. TEMPORARY ABOVE GRADE POLY TANK WITH TIMERS FOR DRIP OR SOAKER HOSES AT EACH TPA.

23.6.4. 30-50 GALLON WATERING CANS WITH 6-8 DRILLED HOLES IN BOTTOM TO ALLOW SLOW SEEPING OF WATER WITH SPACING AND ROTATION TO REACH DESIRED GALLONS.

23.6.5. EQUIVALENT MEANS OF EFFECTIVELY WATERING TREES AS APPROVED BY PROJECT FORESTER AND DDOT.
- 23.7. DROUGHT TIMES SHALL BE DEFINED AS:

23.7.1. PERIODS DURING THE GROWING SEASON OF TWO WEEKS OR LONGER, WHERE DAYTIME HIGH TEMPERATURES REACH 80 DEGREES FAHRENHEIT OR HIGHER AND LESS THAN ½" RAINFALL IS RECORDED PER WEEK; OR,

23.7.2. PERIODS DURING THE GROWING SEASON DESIGNATED AS "ABNORMALLY DRY" OR "DROUGHT" OF ANY SEVERITY, BY THE U.S. DROUGHT MONITOR (HTTP://DROUGHTMONITOR.UNL.EDU/); OR,

23.7.3. ANY PERIOD OF EXTRAORDINARY CIRCUMSTANCE, AS DETERMINED BY THE PROJECT FORESTER OR DDOT.
- 23.8. A PRESCRIPTION FOR THE NUMBER OF GALLONS AND STRATEGY FOR WATERING DESIGNATED TREES WILL BE DEVELOPED. LARGE MATURE TREES WITH IMPACTS TO ROOT SYSTEMS REQUIRE AS MUCH AS 100- 250 GALLONS PER WEEK DURING 90 DEGREE DAYS DURING SUMMER DROUGHT TIMES.
- 23.9. PERIODIC INSPECTIONS BY AN ISA CERTIFIED ARBORIST (PROVIDED BY THE RETAINED ARBORIST) AT THIS TIME ARE CRITICAL. DEPTH OF MOISTURE IN SOILS SHALL BE DETERMINED BY SOIL SAMPLE TUBE OR OTHER EXPLORATORY MEANS.
- 23.10. PRIOR TO CONSTRUCTION COMPLETION, THE RETAINED ARBORIST SHALL PROVIDE A POST-CONSTRUCTION AFTERCARE PROGRAM FOR UP TO THREE (3) YEARS DURATION TO BE APPROVED BY THE PROJECT FORESTER, OWNER, AND DDOT.

DEFINITIONS

- Certified Arborist:** Credential of an individual arborist issued and administered by the International Society of Arboriculture. This credential must be current and valid to qualify to use the copyrighted designation of "Certified Arborist". Refer to [www.isa-arbor.com](http://www.isa-arbor.com) for additional information.
- Project Forester:** Natural resource consulting firm contracted by the developer to develop tree preservation plans, methods, details, and specifications in collaboration with the project design team. Project Forester may provide site investigation and documentation (root investigation studies, GPR, tree inventories, assessments, forest stand delineations, etc.); construction-phase monitoring; coordinate between design team, construction team, and Retained Arborist; review submittals; and/or other management or oversight tasks.
- Retained Arborist:** Arboricultural firm contracted to implement the approved tree preservation plans on site. All crews conducting arboricultural operations on site shall consist of at least one Certified Arborist who directly oversees all work by that crew. Arboricultural operations include, but are not limited to, pruning, tree protection device installation and maintenance (fence, matting, etc.), root pruning, air tool root excavation/exploration, soil care activities, soil testing, mulch application, tree inspections, pesticide/chemical applications and tree removal.

TREE PROTECTION CHECKLIST				
DATE	JOB	CONTRACTOR	NOTES	OK'd
	Pre-construction meeting (Raze)			
	Pre-construction meeting (Construction)			
	Apply tree growth regulator*			
	Install tree protection fencing* (Raze)			
	Install tree protection fencing* (Construction)			
	Root pruning*			
	Mulch application (Raze)			
	Mulch application (Construction)			
	Tree removals* (Raze)			
	Tree removals* (Construction)			
	Canopy pruning* (Raze)			
	Arborist oversight of excavation*			
	Construction monitoring of tree protection devices and tree health*†			
	Special demolition*			
	Vertical mulching*			
	Install temporary Root Protection Matting (as needed)*			
	Supplemental watering (note responsible party, watering method(s), and log application rate(s))			
	Year 1 Soil Care/Fertilization*§			
	Removal of tree protection devices.			
	Year 1 inspections*‡			
	Year 2 inspections*‡			
	Year 3 inspections*‡			
C:\WS\13\2006\32006\32045 01\CADD\05-ENVYR\2022\1114_tree_protection_checklist_32045 01.xlsx Checklist				
* Performed by or under supervision of ISA Certified Arborist.				
† Monthly during demolition and construction for non-transplant trees. Transplant trees and alternate(s) to be monitored weekly during the leaf-on season and monthly during dormancy.				
‡ At least twice annually during the leaf-on season for non-transplant trees. Transplant trees and alternate(s) to be inspected weekly during the leaf-on season and monthly during dormancy.				
§ Note product(s) and application rate(s).				

TREE PROTECTION PLAN Specifications

Wardman Park

Washington, DC

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REVISIONS					App. By	Rev. By	SCALE: N/A	C.L.: 1'
Date		Description						
No.								
Horizontal Datum: DC Surv.								
Vertical Datum: DCDPW								
Boundary and Topo Source: Vika Capitol								
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Design		Draft		Approved				
CK		CK		--				
Sheet # 5 of 5								
WSI Project Number: 32045.01								