

Tree Protection, Planting, and Soil Remediation – Visual Guide

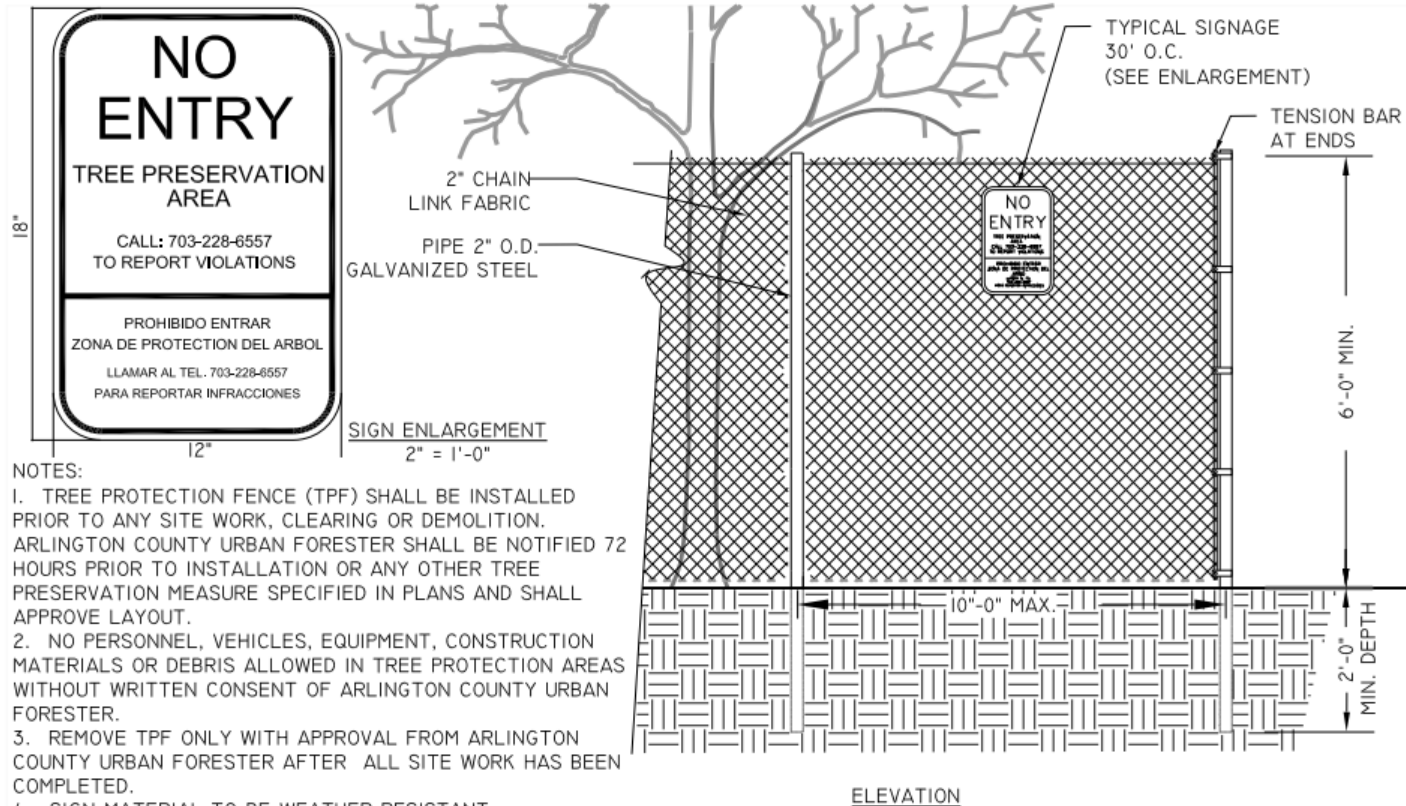


A visual guide of appropriate installation of details. Up-to-date design standards can be found here:

<https://www.arlingtonva.us/Government/Departments/Parks-Recreation/About/Design-Standards>

Tree protection

6 Ft Chain Link Fence – Detail – Public projects and site plans



6' CHAIN LINK TREE PROTECTION FENCE

311300.1 (2016) (02231.1)

1/2" = 1'-0"



6 Ft Chain Link Fence – Example 1 – Tree pit



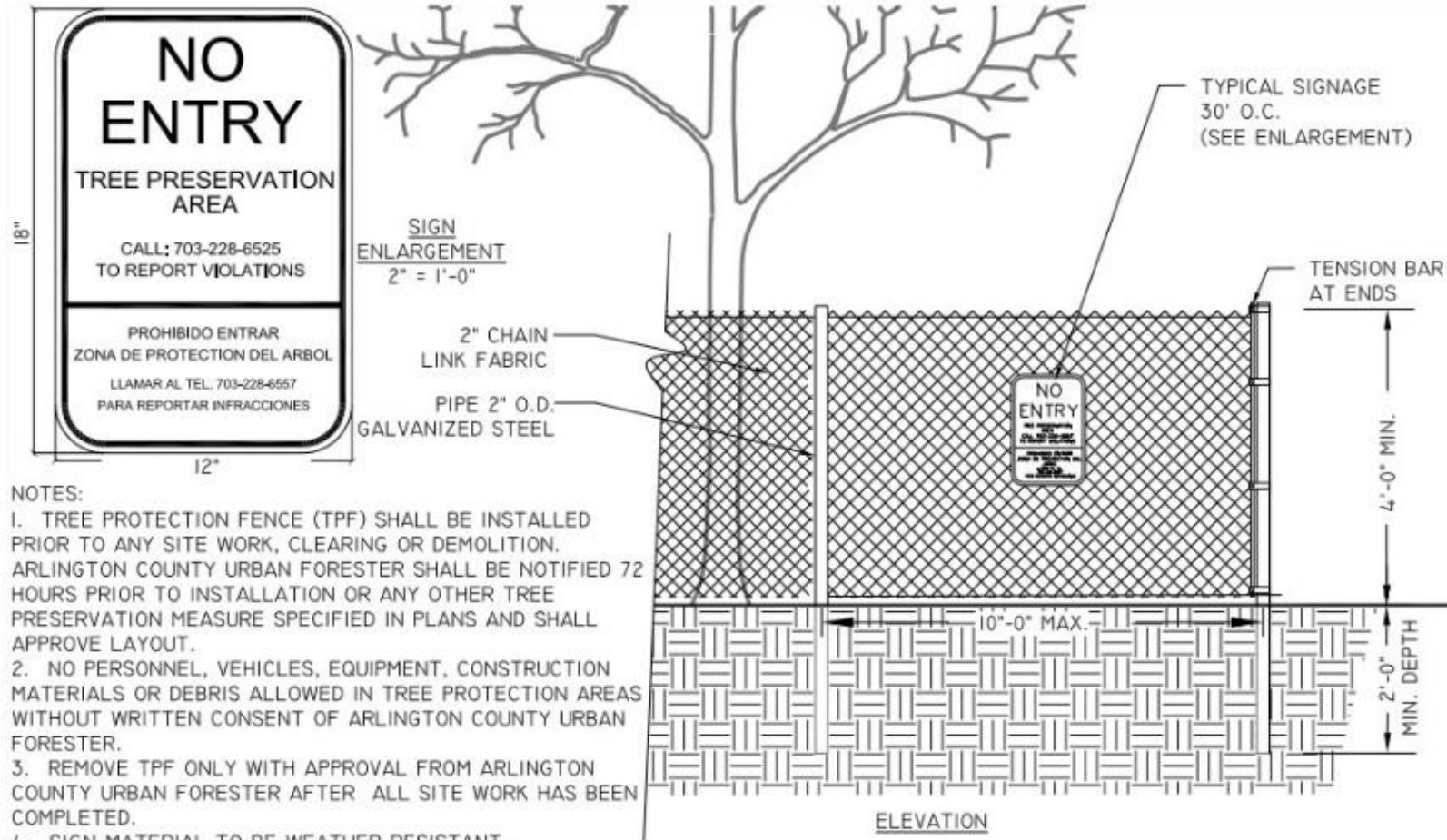
6 Ft Chain Link Fence – Example 2 – Open-grown tree



6 Ft Chain Link Fence – Example 3 – With Silt Fence



4 Ft Chain Link Fence - Detail



4' CHAIN LINK TREE PROTECTION FENCE (RESIDENTIAL)

311300.2 (2016) (02231.2)

1/2" = 1'-0"



4 Ft Chain Link Fence – Example 1 – Small street tree



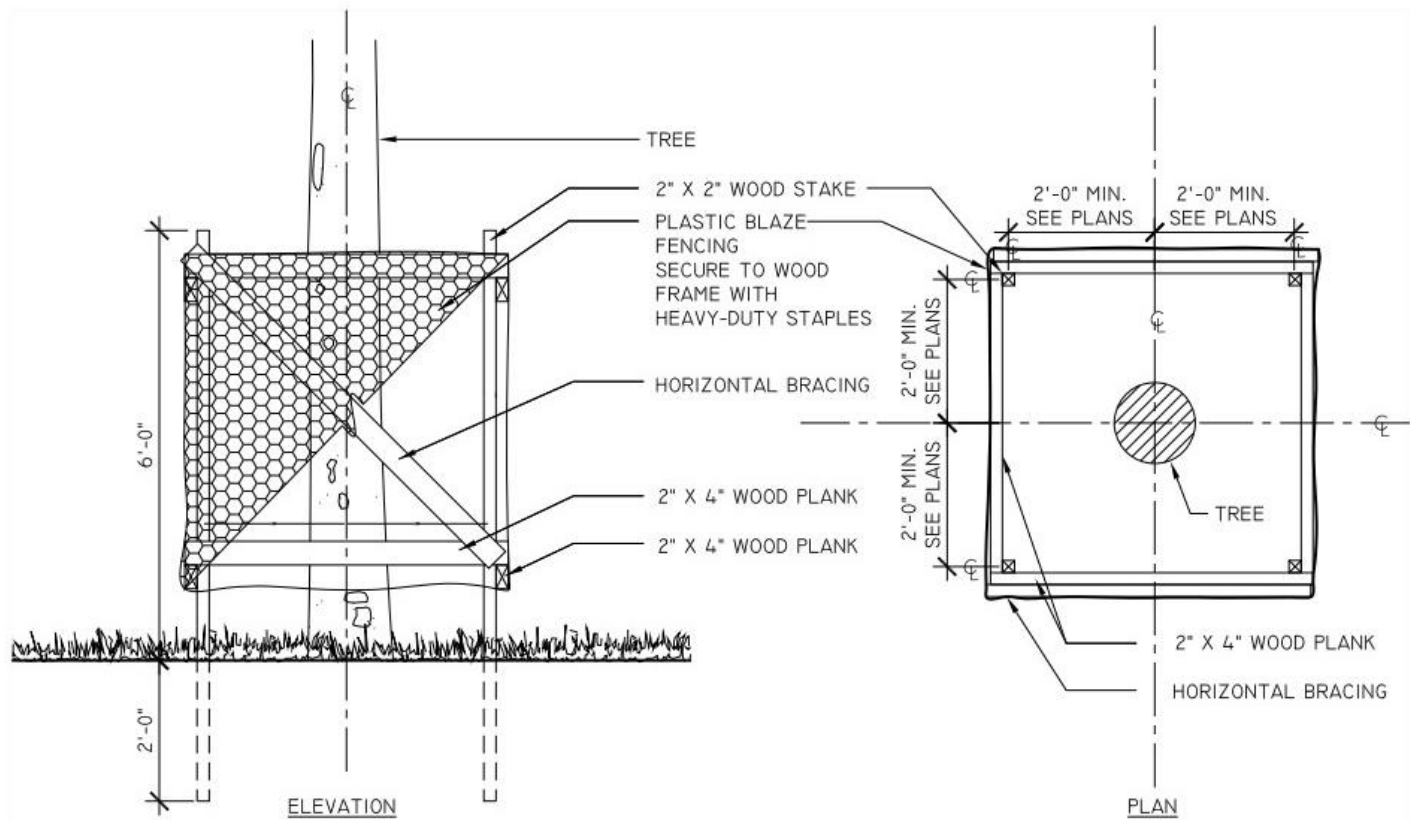
4 Ft Chain Link Fence – Example 2 – Open grown tree with partial CRZ protection



4 Ft chain Link Fence – Example 3 – With Silt Fence



Wooden Tree Guard – Detail



WOODEN TREE GUARD

311300.8NS

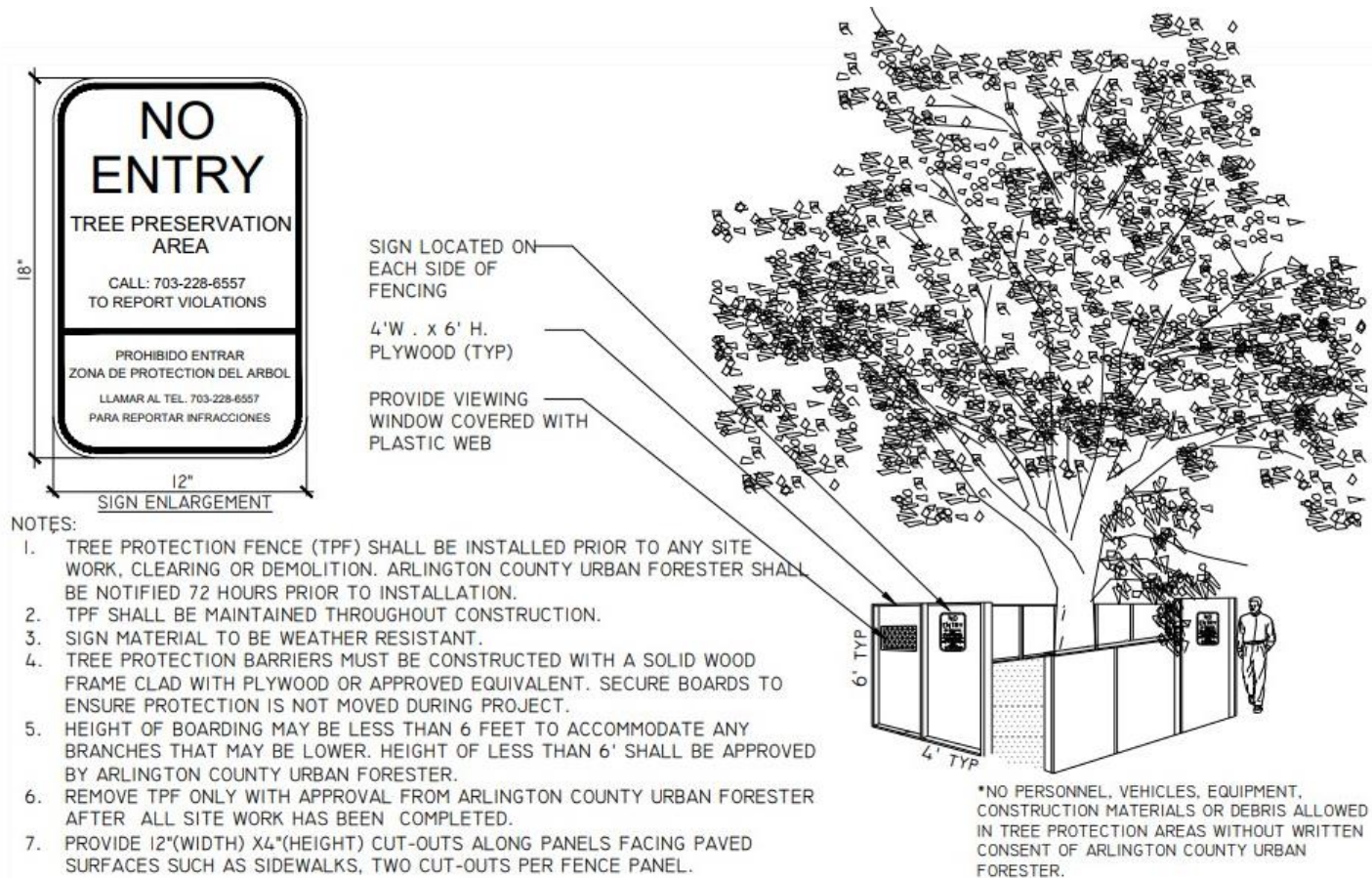
1/2" = 1'-0"

ARLINGTON
VIRGINIA
DPR

Wooden Tree Guard – Example



6 Ft Tree protection barrier for restricted spaces – Detail



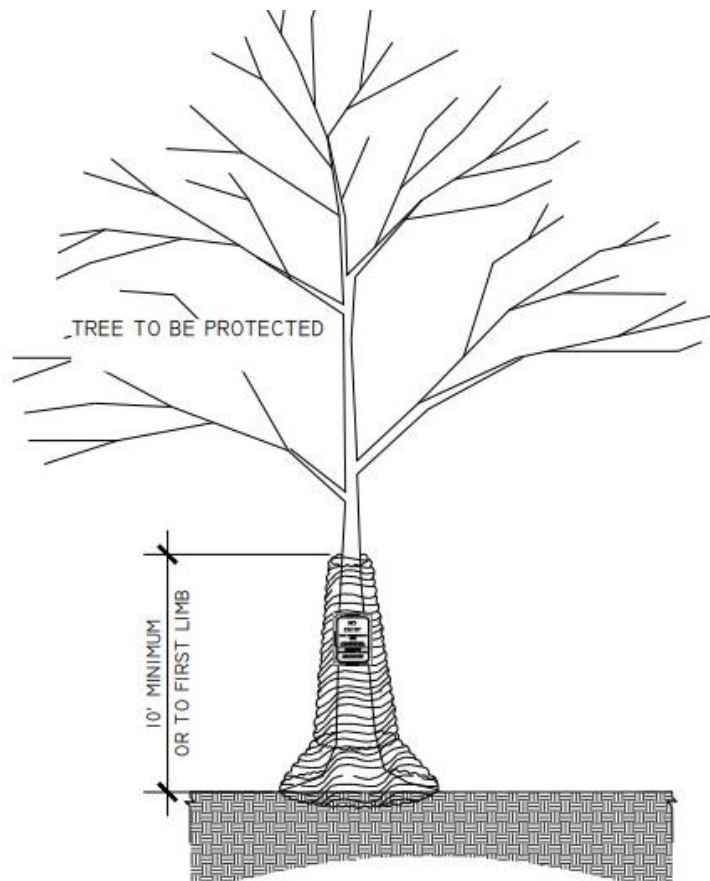
TREE PROTECTION BARRIERS FOR RESTRICTED SPACE AND TREE PITS N.T.S.

311300.14NS (2019)

6 Ft Tree protection barrier for restricted spaces – Example

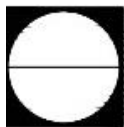


Trunk Wrap – Detail



NOTES:

1. TRUNK WRAP MATERIAL SHALL BE DOUBLE SIDED GEOCOMPOSITE, GEONET CORE WITH NON-WOVEN COVERING (SUCH AS TENAX TENDRAIN 770/2) OR AN APPROVED EQUAL.
2. WRAP SHALL BE INSTALLED BY A CERTIFIED ARBORIST.
3. WRAP SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION.
4. WRAP SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. REMOVE WRAP ONLY WITH APPROVAL AND AFTER ALL SITE WORK HAS BEEN COMPLETED. ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO REMOVAL.
5. WRAP SHALL BE REMOVED PROMPTLY AFTER CONSTRUCTION.
6. MAJOR SCAFFOLD LIMBS MAY ALSO REQUIRE THIS PROTECTION AS DIRECTED BY THE PROJECT ARBORIST OR REQUESTED BY ARLINGTON COUNTY URBAN FORESTER.
7. WRAP SHALL EXTEND AS HIGH AS ADJACENT MACHINERY THAT IS WORKING ADJACENT TO TREES. PROJECT ARBORIST AND ARLINGTON COUNTY URBAN FORESTER MAY REQUIRE DOUBLE WRAP OR HEAVY DUTY WRAP IN AREAS OF MAJOR EXCAVATION.



TREE TRUNK AND LIMB PROTECTION WRAP

311300.15NS (2019)

N.T.S.



Trunk Wrap – Example



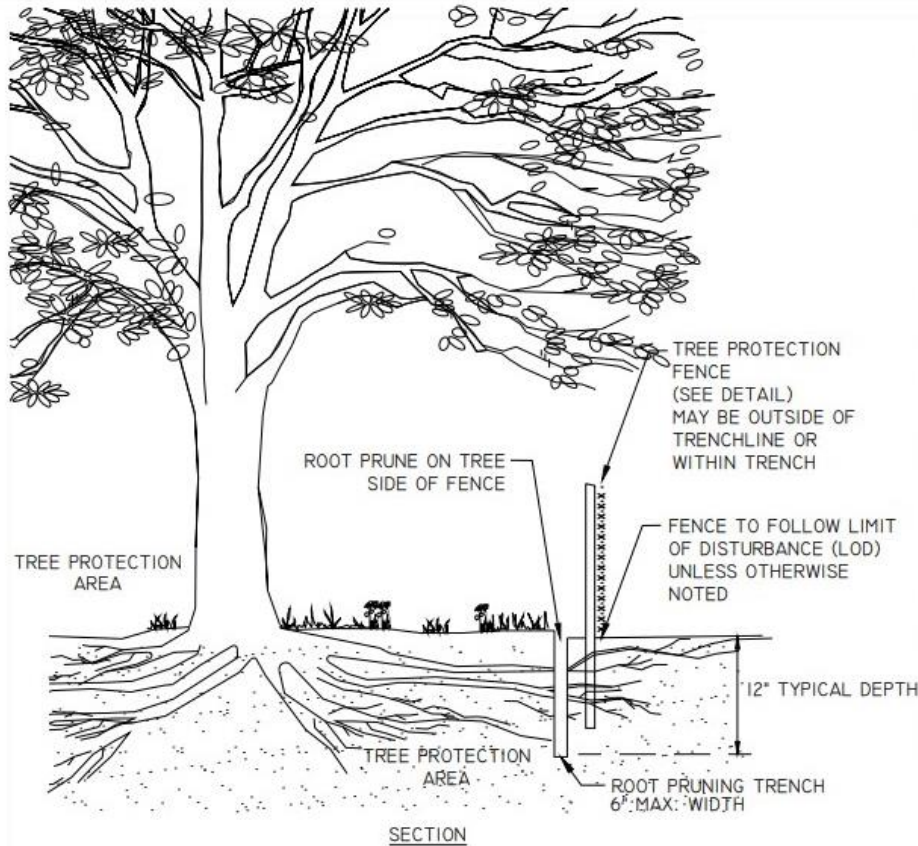
Tree protection for linear projects – Example 1



Tree protection for linear projects – Example 2



Root Pruning – Detail



NOTES

1. ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 12". ROOTS OVER 1.5" IN DIAMETER SHALL HAVE A CLEAN CUT MADE BY A CLEAN SAW ON THE SURFACE OF THE ROOT, WHICH IS STILL ATTACHED TO THE TREE. DO NOT BREAK OR CHOP. DO NOT PAINT THE CUT ROOT END. IF EXCAVATION IS FOR INSTALLATION OF UNDERGROUND UTILITIES, LEAVE THE ROOT INTACT AND THREAD THE LINES UNDERNEATH.
2. ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING. EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING AND SHALL BE APPROVED BY ARLINGTON COUNTY URBAN FORESTER.
3. ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF AN ISA CERTIFIED ARBORIST.
4. BACKFILL THE ROOT-PRUNING TRENCH WITH APPROVED LOOSE TOPSOIL MIX AND TOP WITH 3-4" BARK MULCH AND MARK LOCATION FOR FUTURE REFERENCE. SILT FENCE MAY BE INSTALLED IN TRENCH PRIOR TO BACKFILLING AS LONG AS THE TRENCH IS NOT OPEN FOR LONGER THAN 48 HOURS WITHOUT WATERING.
5. ROOT PRUNING WORK SHALL NOT BE DONE WHEN MORE THAN THE TOP 1 INCH OF SOIL IS FROZEN. ROOT PRUNING SHALL NOT BE UNDERTAKEN WHEN THE SOIL IS WET AND CONDITIONS ARE MUDDY.
6. THE ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO TRENCHING AND WHEN ALL ROOT PRUNING AND TREE PROTECTION FENCE INSTALLATION IS COMPLETE.



ROOT PRUNING

311300.5 (2019)

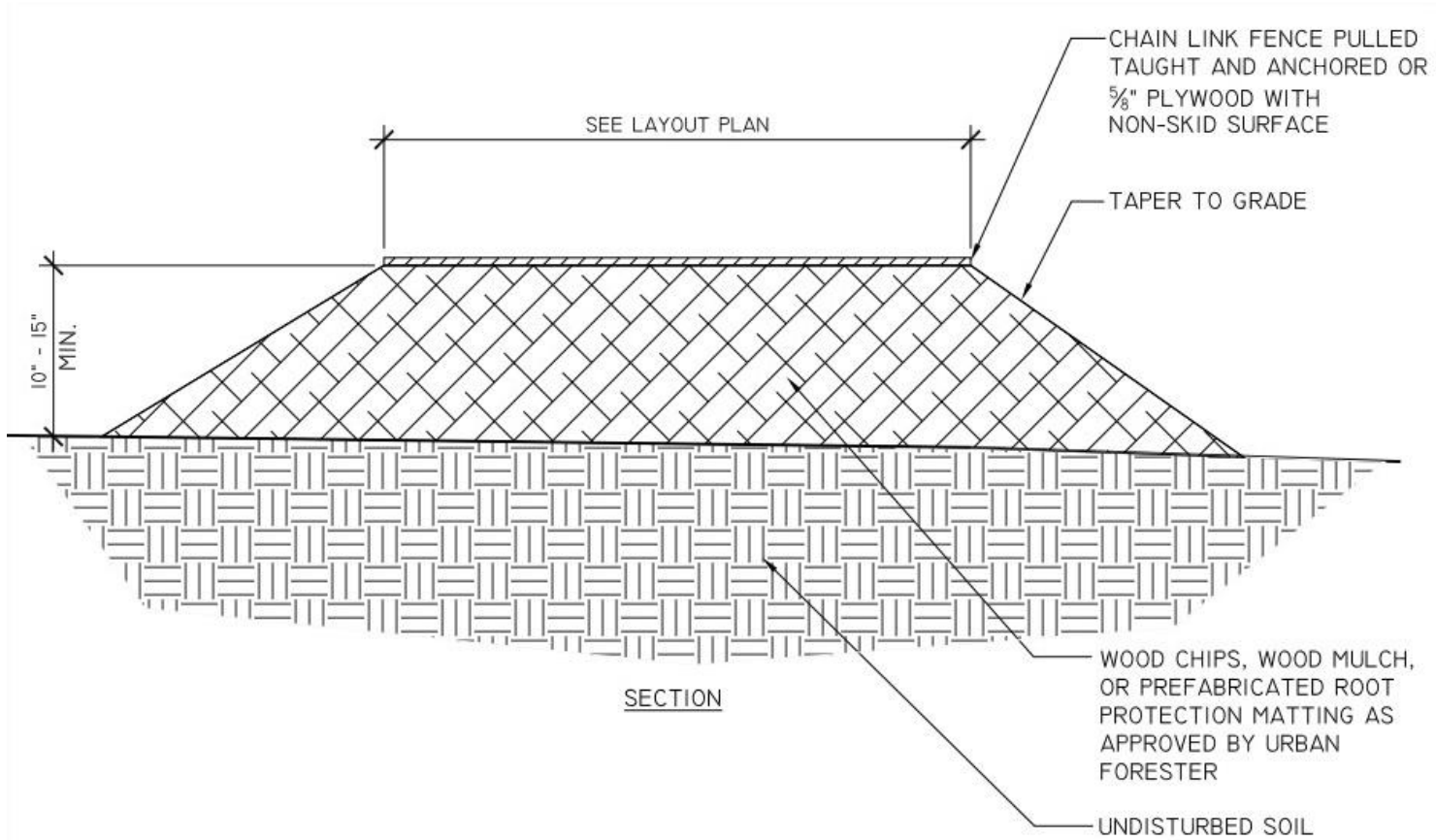
N.T.S.



Root Pruning – Example (signs are missing)



Root Pad – Detail



ROOT PAD DETAIL

311300.4 (2016) (02231.4)

1" = 1'-0"



Root Pad - Example



Tree Planting – Detail

NOTES

1. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS PER ANSI STANDARD A300. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.

2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA FOR TREE PIT WITHOUT ADVERSELY IMPACTING ADJACENT SITE FEATURES.

3. UNLESS OTHERWISE DIRECTED BY ARLINGTON COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE URBAN FORESTER; PEAT MOSS SHALL NOT BE USED).

4. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.

5. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.

6. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO STAKING DETAILS.

3 IN. SHREDDED HARDWOOD MULCH;
MULCH MUST BE 6 IN.
AWAY FROM TREE TRUNK

ROUGHEN SIDES OF PLANTING HOLE
BACKFILL SOIL MIXTURE FOR
ENTIRE TREE PIT AREA X ROOTBALL DEPTH
SOIL SHALL BE FIRMED IN 8" LIFTS



CENTER TREE IN PIT AND SET TOP OF
ROOT BALL 2 IN. ABOVE ADJACENT GRADE.
THE TRUNK FLARE SHALL BE VISIBLE AT THE
TOP OF THE ROOT BALL. DO NOT COVER
THE TOP OF THE ROOT BALL WITH SOIL.

ALL PLANTS MUST BE WATERED TWICE:
ONCE AT INSTALLATION AND AGAIN WITHIN
48-HOURS OF INSTALLATION,
PER THE SPECIFICATIONS.

*THIS DETAIL SUPERSEDES ALL
OTHER TREE PLANTING
DETAILS IN ARLINGTON COUNTY.*

4 IN. HIGH EARTH SAUCER
BEYOND EDGE OF ROOT BALL

CAREFULLY REMOVE ALL TWINE, ROPE,
WIRE, AND BURLAP FROM ROOT BALL;
REMOVE BOTTOM RING FROM BASKET,
PLACE TREE IN THE HOLE. REMOVE
REMAINDER OF BASKET BY CUTTING
DOWN ONE SIDE AND LIFTING THE
ENTIRE PIECE AFTER THE TREE IS SET
IN THE PLANTING HOLE AND
STABILIZED.

TAMP SOIL AROUND ROOT BALL BASE
FIRMLY WITH FOOT PRESSURE SO
THAT ROOT BALL DOES NOT SHIFT

UNDISTURBED SUBGRADE



TREE PLANTING DETAIL

FOR OPEN PLANTING AREAS FREE OF PAVING OR GRATES
329300.1 (2021)

NOT TO SCALE



Tree Planting – Examples

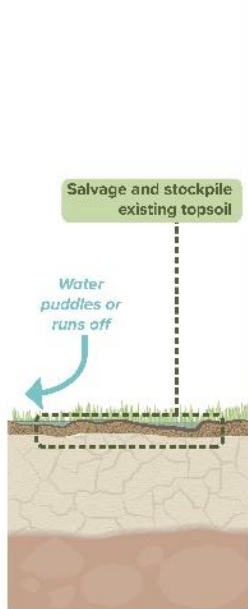




Soil Profile Rebuilding – Schematic

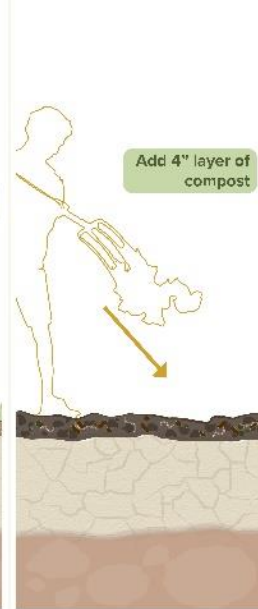
Existing

Prior to construction, remove and salvage any existing topsoil.



Step One

Spread mature, stable compost to a 4" depth over compacted subsoil



Step Two

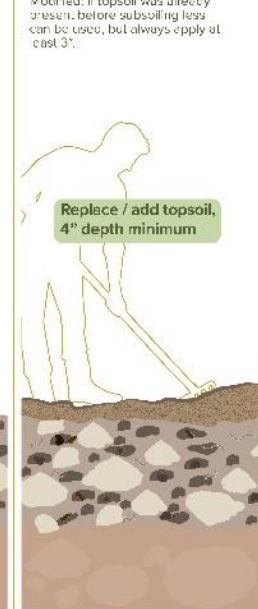
Use a backhoe to break up the compacted soil and incorporate the compost to a depth of 24".



Step Three

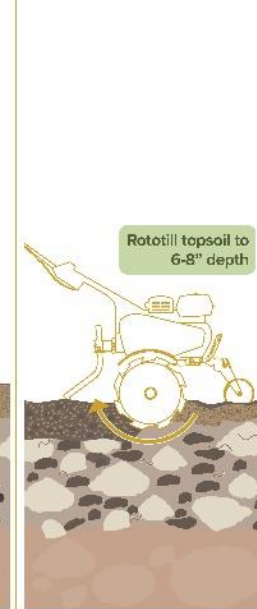
Standard: Return stockpiled topsoil or additional topsoil if none is available from the site to a 4" min depth. If soil was severely disturbed, 6-8" depth should be used.

Modified: If topsoil was already present, before subsoiling less can be used, but always apply at least 3".



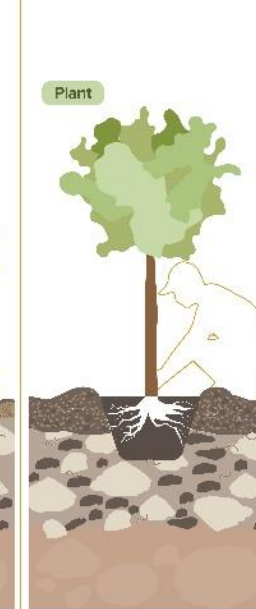
Step Four

Rototill topsoil to a depth of 6-8" when soil is neither dry nor very moist. Rototilling depth should ideally cross the interface with the subsoiled layer.



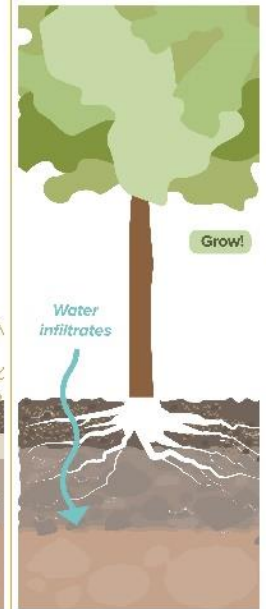
Step Five

Plant the site with woody plants, trees, or shrubs, such that at least half the area will be colonized by roots within about 10 years.



Rebuilt

The plant roots will exploit the loosened subsoil and compost veins and then continue to contribute organic matter and work the soil over time to develop soil structure throughout the profile.



High Compaction
Low permeability
Insufficient nutrients

Low compaction
High permeability
Organic matter

Soil Profile Rebuilding – Add mature and stable compost



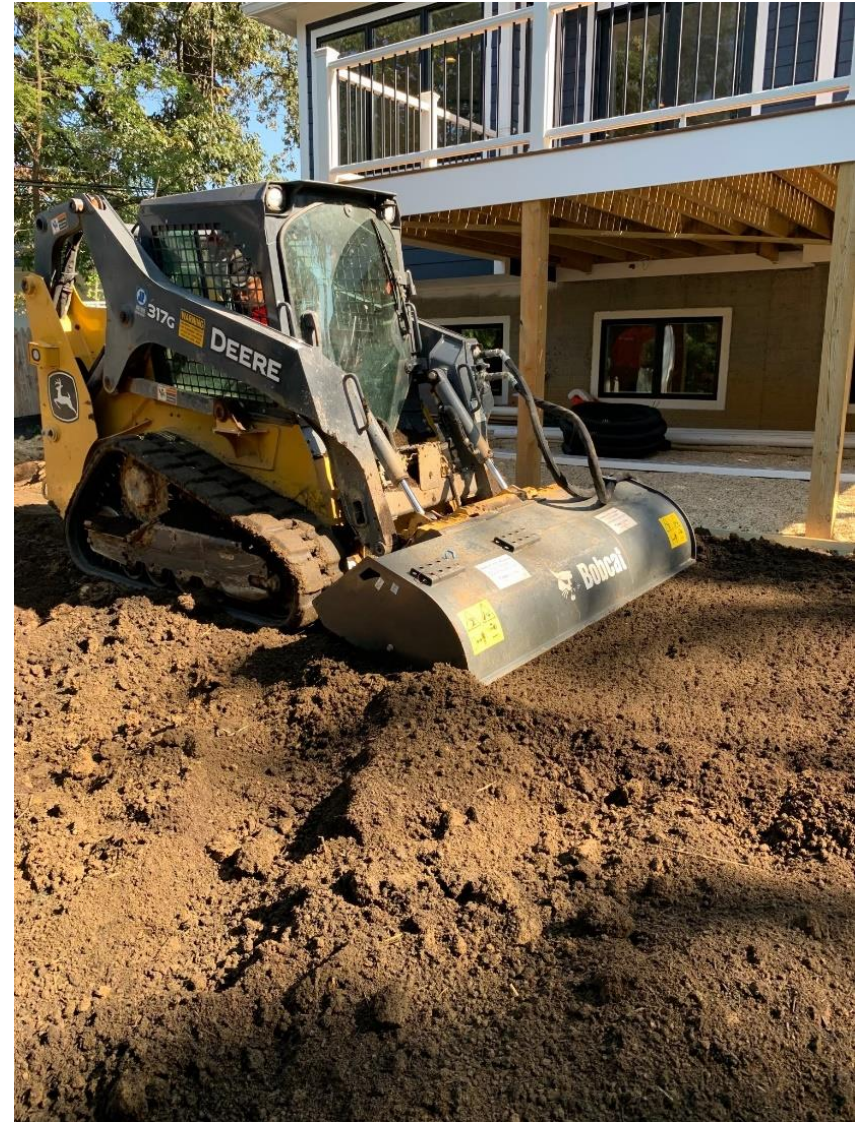
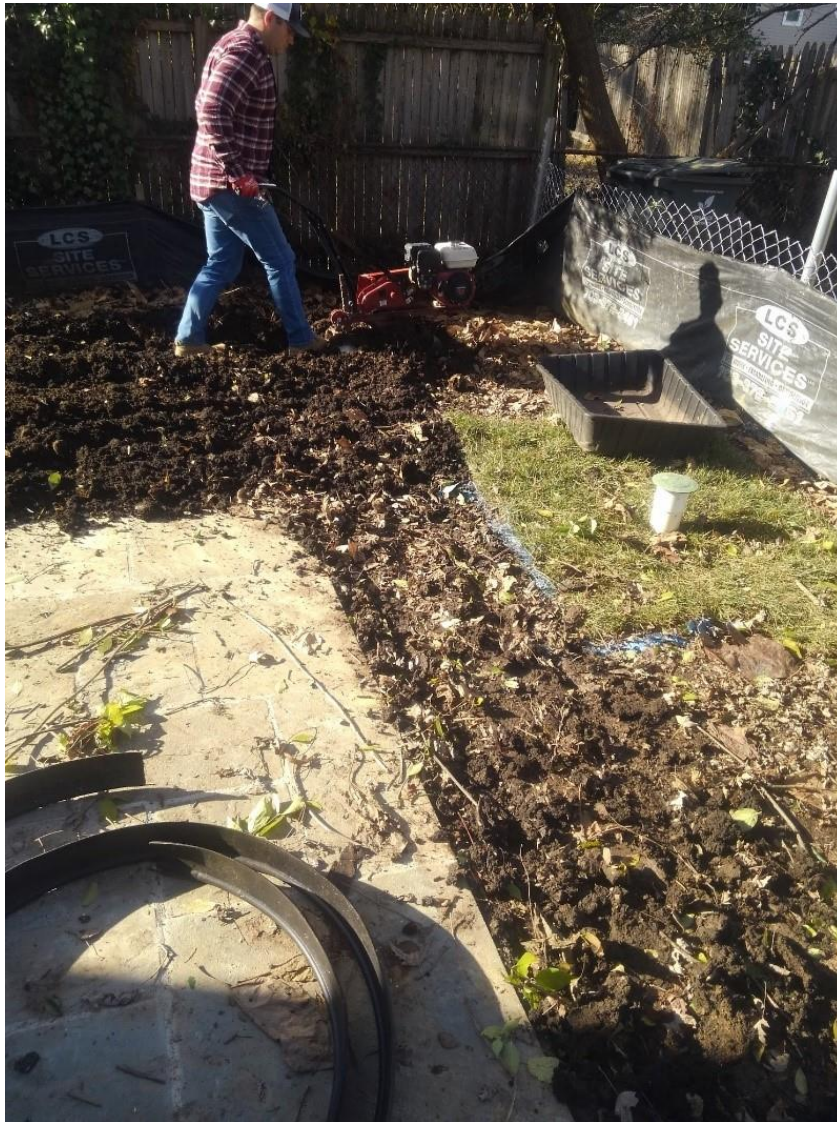
Soil Profile Rebuilding – Scoop and Dump



Soil Profile Rebuilding – Scoop and Dump and topsoil installation



Soil Profile Rebuilding – Tilling of topsoil, starting at the back, reversing out



Soil Profile Rebuilding – Compaction testing and planting

