

Site Evaluation Form

For Street Tree Plantings

Date: _____

Background and Legal Restrictions

Description/location of site: _____

Locate rights-of-way and easements _____

Does the area have historic or landmark status that create legal restrictions or special aesthetic considerations? yes no

If yes, describe: _____

Are species choices restricted by landscape, zoning, or other ordinances? yes no

Infrastructure/Utilities/Buildings

Overhead wires present? yes no If yes, approximate height _____

Underground utilities present that affect actual or proposed rooting area? yes no

What is the distance to the nearest building or planned building? _____

What is the required building setback? _____

Are there any streetlights nearby? yes no If yes, how far away? _____

Note sidewalks, wires, lights, utilities, setbacks etc. on a sketch.

Call the utility clearinghouse for your region (1-800-MISS-UTILITY in Virginia) for location of underground utilities. In addition to allowing you to dig safely, these affect rooting space and may increase the likelihood of the root system being disrupted for infrastructure repairs.

Design and Traffic Circulation

Foot traffic will compact soil and affect the health of trees. Determine pedestrian and vehicular traffic patterns. Consider daily peaks as well as special events or seasonal activities that might bring heavier traffic (sporting events, festivals). Note bus stops, truck loading zones, dumpsters, etc. Are trees protected from parked cars? Describe any design features that affect pedestrian or vehicular circulation at the site:

Describe any existing or proposed site uses, such as festivals or tailgating, that affect the site:

Climate and Microclimate

Is the site in the Mountains Piedmont or Coastal Plain?

USDA Hardiness Zone: 5b 6a 6b 7a 7b 8a 8b

Sun and shade patterns: full sun (6 hrs. +/-day) afternoon sun morning sun
 shady deep shade

Other exposure considerations (remember to consider planned structures):

Are there any features that create temperature microclimates? yes no If yes, describe (Note surfaces that reflect or reradiate heat, such as buildings, pavement, cars, etc. These can greatly increase air temperatures at certain times. Identify wind patterns and areas protected or exposed to drying winter or summer winds. Note low areas where cold air might pool, creating frost pockets.) _____

Soil Conditions

See [Testing Soil Conditions](#) at the end of this document if you are not familiar with how to conduct these soil tests.

Soil Composition and Chemistry

Soil Test Conducted (e.g. "pH" or "texture-by-feel")	Location	Test Results

Soil Moisture

Drainage: standing water (0 in./hr.)
 poorly drained (<1/2 in./hr.)
 moderate drainage (1/2 to 2 in/hr)
 well drained (2 to 6 in/hr)
 rapid drainage (6 in./hr.)

Is there supplemental irrigation? yes no If yes, describe or specify rate: _____

Is runoff a concern? yes no If yes, describe _____

Sites may collect water from other areas, or may have steep slopes and compacted soils that prevent water infiltration. Note other moisture considerations.: _____

Soil Volume and Structure

Describe planting site dimensions (include on sketch):

Is site a tree pit, parking lot island, or similar? yes no

If yes, give dimensions: _____X_____

Is site a tree lawn or continuous planting strip? yes no

If yes, give width _____

Is the site an open lawn or soil area? yes no

Describe any sidewalks, street crossings, light poles, etc. that might limit the rooting area.

Include the distance to these features. _____

Describe any special design features such as structural/skeletal soils, vaulted sidewalks etc. that might enhance the rooting area: _____

Describe soil cover around tree sites such as mulch, gravel, grass, or annuals. :

Are there limiting soil layers (hardpans, asphalt, gravel)? yes no If yes, how deep? ____

Compaction: excellent tilth

uncompacted

moderately compacted

highly compacted

severely compacted

Soil Disturbance and Contaminants

Is the soil eroded? yes no

Is the site exposed to salt (either deicing or from the ocean)? yes no

If yes, describe _____

Describe soil contamination or disturbance if present:

Testing Soil Conditions

1. **Soil Texture.** Use "[texture by feel](#) [[leaving VT site](#)]" or send to a lab to determine texture. Use soil survey maps only on relatively undisturbed sites (this disqualifies most urban and developed sites).
2. **Soil pH.** Test soil pH on-site. Note that soil pH can vary over short distances and tends to be influenced by paved areas and foundations (these raise pH). Two convenient field methods are a pH meter and a color kit. Mix a representative soil sample in a bucket by taking slivers of soil down to about 6" with a trowel in at least 5 places and mixing thoroughly. Draw your sample from this. Because pH is highly variable, it often makes sense to carry out numerous tests at each site. For example, you might test pH close the sidewalk and away from the sidewalk. Are there any existing tree exhibiting signs of micronutrient deficiency (interveinal chlorosis)? Pin oak and willow oak are sensitive indicators. This could indicate pH is high.
3. **Soil Drainage and drainage rate.** Is the soil soggy, moist or dry? If possible, identify wet spots and areas of standing water after a rain. Dig a hole at least one foot deep and remove clods of soil. Any gleying (a gray mottled appearance) or a foul odor indicate poor drainage. Use a percolation test to indicate drainage rate. Fill your hole with water and allow to drain, completely, if possible. Refill with water and insert a stick or ruler and note the water level and time. After 15 minutes, check water level again and calculate the rate of drainage in inches per hour. Rapidly draining soils are of concern only where water holding capacity is low.
4. **Compaction.** Has there been construction or other activity in the site's history that may have compacted the soil? Test soil strength using a penetrometer or other tool when soil is moderately moist or take a [bulk density](#) sample. [Penetrometers](#) are pointed rods that measure resistance as they are pushed into the soil. They allow you to quickly "poke around" a site and get an idea of compaction levels and hardpans. Keep in mind that very wet soils will have very little resistance, even if severely compacted. Conversely, very dry soils can appear harder than they are. Bulk density samples are more time consuming, but can be taken any time. Also consider if current or planned activities continue to compact the soil.
5. **Soil disturbance and contaminants.** Is there evidence that snow, deicing salt, litter or various chemicals are dumped here? For example, is plowed snow with deicing salt piled on the site? Are there indications that the soil layers have been disturbed in the past? Find out the history of the site. Was a building demolished on the site? Was the site used as a staging area during construction? Is there rubble or other debris mixed in the soil? Was the site a former parking lot?