

# Additional Notes: Tree Protection and Tree Planting

## Tree Protection

Tree protection BMPs for both landscape and hardscape drainage areas allows an area larger than the canopy itself to be counted as a drainage area managed. However, site design and site development should be performed without impacting tree health by following these best practices:

- An arborist certified by the International Society of Arboriculture (ISA) should be engaged during, at a minimum, the construction phase, but preferably also during the planning or design phase, to provide recommendations for tree protection and health.
- Fence off the critical root zone with durable fencing such as cyclone or wooden fencing, at least 3' tall. Orange construction fencing is discouraged due to its poor effectiveness at tree protection.
- Indicate the area as a "Tree Protection Zone" using signage with any additional information needed so that subcontractors and delivery people are aware that traffic and materials storage are not allowed within the critical root zone. Excess disturbance under the canopy during a construction project will likely harm the tree. Impacts will not be seen for a few years, long after the project team has completed the project.



Tree Protection Measures Taken During Construction.

### **Managing Landscape areas (Site Landscape Form)**

- DO enter the tree canopy area that is forested or of a single tree or group of trees that that will be protected by fencing as Tree Protection BMP (Landscape).
- DO NOT include forested areas as Cluster Development BMP that are already included as Tree Protection BMP (Landscape).

### **Managing Hardscape areas (Catchment Form)**

- DO enter the existing tree canopy area overhanging existing or proposed hardscape areas (within 10 ft.) as Tree Protection BMP (Hardscape). These trees are intercepting rainfall and reducing runoff from those hardscape areas
- DO enter the existing canopy area of any trees where 70% of the ground area below the canopy will be protected from construction of any additional structures or pavements, unless approved by an International Society of Arboriculture certified arborist.
- DO NOT enter the existing canopy area of invasive trees. These should be removed.

### **Tree Planting Size Requirements**

- Evergreen trees in the public right-of-way should be at least 5 feet tall. Fencing after construction is optional, but recommended. Evergreen trees on private property may be as short as 1 foot, planted; however, fencing is required in this case until they reach a height of 5 feet.
- Deciduous trees must be at least 1.5-inch caliper. Fencing is optional after construction, but recommended. Deciduous trees on private property may be as small as 1 foot tall, planted; however, fencing is required in this case until they reach a caliper of 1.5 inches.
- DO NOT enter areas covered in plants considered to be arborescent shrubs (e.g. Vine Maple)
- Trees should be established over a 3-year irrigation period. Within this time period, if trees do not establish and instead their health declines, they should be replaced.

### **Tree Planting in Depave Areas (Catchment Form, Step #24)**

- If trees will be planted in the depave area, consider that trees require 2 cubic feet of soil per square foot of mature canopy. Therefore the minimum area of pavement converted to a landscape area with trees should be determined based on the projected mature canopy of the proposed tree: Minimum area of pavement converted to landscape [sf] = Tree canopy area [sf] x 0.666.

**Protection Fencing (Catchment Form, Step #45).** Preventing soil compaction and other damage anywhere infiltration of rainfall or runoff will take place is key to the hydrologic function of these areas. Showing protection fencing on every site plan sheet in a set of construction drawings (civil, landscape, electrical, etc.) will alert each contractor and sub-contractor to the value of the natural resource to be protected, which may include soil or vegetation. It will also help contractors and subcontractors include this in their cost estimate when bidding the job, which is more likely to result in fencing being implemented.

Protection fencing is needed to implement the following BMPs:

- Cluster Development BMP (the natural areas to be protected)
- Tree Protection BMP
- Porous Pavement BMP
- Infiltration Rain Garden BMP
- Infiltration Stormwater Planter BMP
- Vegetated Filter Strip BMP
- Soakage Trench BMP