

Lincoln Park Golf Course Recycled Water Point of Connection Tree Protection Plan

Fontenoy Engineering will be installing a Recycled Water Point of Connection for Lincoln Park G.C. at a location on the north side of Clement St. near the intersection of 39th Ave. in San Francisco. There is one tree, a New Zealand Christmas Tree, *Metrosideros excelsa*, at this location which will need protection during construction activities. Tree protection guidelines shall be adhered to as follows.

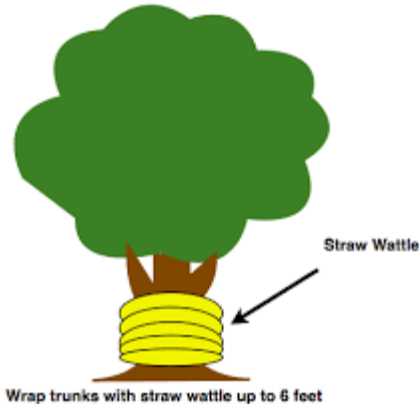


This Section includes the requirements for the protection of existing trees and shrubs, including entire structure of plant material above and below ground impacted by all demolition and construction work at this location. Contractor is prohibited from stockpiling any excavation or construction materials within the canopy of trees, on lawn areas or near shrubs. Contractor shall immediately clean and remove any construction residue that falls within the canopy of a tree or near shrubs

The Contractor is prohibited from using equipment for trench and excavation work within the tree drip line, defined as the area below the perimeter of the tree's edge of canopy, or where root intrusion exists on asphalt pathways to be reconstructed. In the event pruning is required for roots greater than 2" in diameter the Contractor shall only proceed with the approval of an ISA Certified Arborist. Ripping or tearing of roots will not be allowed. Roots shall be pruned using sharp clean saw or rotary blade. In areas where trenching is required under low hanging tree branches (8 to 12-feet off the ground), the Contractor shall operate equipment to a maximum height of 10-feet to avoid contact and possible



damage to the tree branches. Contractor shall hand dig only within the drip line of the tree. Tree Protection shall be composed of rolls of erosion control straw wattling, secured around trunk to a height of 6 feet.



Temporary Protection shall be installed prior to construction activities and kept in place for the duration of the Project, maintained during construction, and temporarily relocated as required by the progress of the construction at no additional cost to the City. In the event roots greater than 4" are exposed during excavation, exposed roots shall not be allowed to dry out before permanent backfill is placed. Temporary earth cover shall be provided, or exposed roots shall be packed with wet peat moss or four (4) layers of wet untreated burlap and temporarily supported and protected from damage until permanently covered with backfill. There shall be no placing backfill under protected trees unless indicated otherwise. Where fill is required for grading, and as indicated on the Drawings, do not fill above existing grade line at trunks. Fill soil must percolate at a rate of 1-inch per hour minimum. Contractor shall prevent damage to trunk, canopy, or limbs caused by maneuvering of vehicles or equipment, or stacking of materials and equipment. Driving or parking vehicles; storage of vehicles, equipment, or supplies is prohibited. Disposing of paint, petroleum products, dirty water, soil sterilant, concrete slurry or other deleterious materials on or around roots or on any landscape areas is prohibited. Contractor shall not use protected trees as support posts, power poles, crane stays, signposts, or anchorage for ropes, guy wires, power lines, or other similar functions. Contractor shall avoid damage to root system from flooding, erosion, excessive wetting or drying resulting from dewatering or other operations and excessive water or heat from equipment, utility line construction, or burning of trash under or near shrubs or trees.