

**SECTION 01 56 39  
TEMPORARY TREE AND PLANT PROTECTION**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section specifies general protection of existing trees and plants that are affected by execution of the work, whether temporary or permanent construction.

**1.2 RELATED WORK**

- A. Demolition and removal of roads, walks, curbs, and on-grade slabs outside buildings to be demolished: Section 31 20 00, EARTH MOVING.
- B. Safety Requirements: GENERAL CONDITIONS Article, ACCIDENT PREVENTION.
- C. Disconnecting utility services prior to demolition: Section 01 00 00, GENERAL REQUIREMENTS.
- D. Reserved items that are to remain the property of the Government: Section 01 00 00, GENERAL REQUIREMENTS.
- E. Environmental Protection: Section 01 57 19, TEMPORARY ENVIRONMENTAL CONTROLS.
- F. Construction Waste Management: Section 017419 CONSTRUCTION WASTE MANAGEMENT.
- G. Infectious Control: Section 01 00 00, GENERAL REQUIREMENTS, Article 1.7, INFECTION PREVENTION MEASURES.

**1.3 REFERENCED STANDARDS**

- A. ASTM F 567-00 Practice for Installation of Chain-Link Fence

**1.4 DEFINITIONS**

- A. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by a circle concentric with each tree with a radius 1.5 times the diameter of the drip line unless otherwise indicated.

**1.5 PROJECT CONDITIONS**

- A. Prohibited Practices (following practices are prohibited within protection zones):
  - 1. Storage of construction materials, debris, or excavated material.
  - 2. Parking vehicles or equipment.
  - 3. Foot traffic.
  - 4. Erection of sheds or structures.
  - 5. Impoundment of water.
  - 6. Excavation or digging unless otherwise indicated.
  - 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

8. Fertilizing protected trees during first year following construction, unless otherwise instructed by arborist.
- B. Do not direct vehicle or equipment exhaust toward protection zones.
- C. Prohibit heat sources, flames, ignition sources and smoking within or near protection zones and organic mulch.

## **PART 2 - PRODUCTS**

- A. Protection-Zone Fencing:
  1. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top and bottom rails. Provide concrete bases for supporting posts.
- B. Protection-Zone Signage:
  1. Shop-fabricated, rigid plastic or metal sheet with attachment holes pre-punched and reinforced; legibly printed with nonfading lettering.

## **PART 3 - EXECUTION**

### **3.1 TREE PROTECTION ZONES**

- A. Protection-Zone Fencing:
  1. Install protection-zone fencing along edges of protection zones before materials or equipment are brought on the site and construction operations begin in a manner that will prevent people and animals from easily entering protected area. Construct fencing so as not to obstruct safe passage or visibility at vehicle intersections where fencing is located adjacent to pedestrian walkways or in close proximity to street intersections, drives or other vehicular circulation.
  2. Posts: Provide concrete base acceptable to Project Manager.
- B. Protection-Zone Signage:
  1. Install protection-zone signage in visibly prominent location in a manner approved by Project manager. Install one sign spaced approximately every 20 feet on protection-zone fencing, but no fewer than signs with each facing a different direction.
- C. Maintenance of Protection Zones:
  1. Maintain protection zones free of weeds and trash.
  2. Maintain protection-zone fencing and signage in good conditions as acceptable to Project Manager and remove when construction operations are complete and equipment has been removed from site. Do not remove protection-zone fencing, even temporarily, to allow deliveries or equipment access through the protection zone.

### **3.2 EXCAVATION**

- A. General:
  1. Excavate at edge of protection zones and for trenches indicated within protection zones according to requirements in Division 31 Section 'Earth Moving.'

B. Trenching near Trees:

1. Where utility trenches are required within protection zones, hand excavate under or around tree roots or tunnel under the roots by drilling, auger boring, or pipe jacking. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut as required for root pruning.

C. Roots:

1. Redirect roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and redirect them without breaking. If encountered immediately adjacent to location of new construction and redirection is not practical, cut roots approximately 3 inches back from new construction and as required for root pruning.
2. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

### **3.3 REGRADING**

A. Lowering Grade:

1. Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

B. Lowering Grade within Protection Zone:

1. Where new finish grade is indicated below existing grade around trees, slope grade away from trees as recommended by arborist unless otherwise indicated.
2. Root Pruning: Prune tree roots exposed by lowering the grade. Do not cut main lateral roots or tap roots; cut only smaller roots. Cut roots as required for root pruning.

C. Raising Grade:

1. Where new finish grade is indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

D. Minor Fill within Protection Zone:

1. Where new finish grade is indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

### **3.4 DISPOSAL OF SURPLUS AND WASTE MATERIALS**

A. Disposal:

1. Remove excess excavated material, displaced trees, trash and debris, and legally dispose of them off as specified in Division 01 Section "Special Procedures."

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