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**Part 1            General**

**1.1            RELATED REQUIREMENTS**

- .1    The list of work sections in this division is indicative and non-exhaustive. It does not exclude the works described in the other specification sections, shown in the drawings or necessary for the execution of the works in keeping with overall intent of the plans.
- .2    Section 01 35 43 - Environmental Procedures.

**1.2            REFERENCES**

- .1    U.S. Environmental Protection Agency (EPA) / Office of Water
  - .1    EPA 832R92005, Storm Water Management for Construction Activities : Developing Pollution Prevention Plans and Best Management Practices.

**1.3            DEFINITIONS**

- .1    Clearing consists in cutting trees and brush to not more than specified height above grade, and disposing of felled trees, previously uprooted trees and stumps, and surface debris.
- .2    Close-cut clearing consists in cutting standing trees, brush, scrub, roots, stumps and embedded logs, removing at, or close to, existing grade and disposing of fallen timber and surface debris.
- .3    Clearing isolated trees consists in cutting designated trees to not more than specified height above grade and disposing of felled trees and debris.
- .4    Underbrush clearing consists in removing undergrowth, deadwood, and trees with trunk diameter smaller than 50 mm from treed areas and disposing of fallen timber and surface debris.
- .5    Grubbing consists in excavating and disposing of stumps, roots, boulders and rock fragments of specified size to not less than specified depth below existing ground surface.

**1.4            SUBMITTALS**

- .1    Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2    Samples :
  - .1    Submit three samples of each material listed below for approval, prior to delivery of materials to project site.
  - .2    Tree wound paint: one-litre can with manufacturer's label.

- .3 Submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .4 Submit manufacturer's installation/application instructions.

## **1.5 QUALITY ASSURANCE**

- .1 Comply with construction occupational health and safety regulations in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .2 Worker Protection :
  - .1 Workers must wear gloves, dust masks, long-sleeved clothing and eye protection when applying herbicide materials.
  - .2 Workers must not eat, drink or smoke while applying herbicide material.
  - .3 Clean up spills of preservative materials immediately with absorbent material and safely and appropriately discard said material to sanitary landfill.

## **1.6 STORAGE AND PROTECTION**

- .1 Prevent damage to fencing, trees, landscaping, natural features, bench marks, existing buildings, existing pavement, utility lines, site appurtenances, water courses and root systems of trees that are to remain.
  - .1 Repair damaged items to approval by Departmental Representative.
  - .2 Replace trees designated to remain, if damaged, as directed by Departmental Representative.

## **1.7 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .2 Consider felled timber from which saw logs, pulpwood, posts, poles, ties, or fuel wood can be produced as marketable timber.
  - .1 Limb and top felled timber and cut into marketable lengths.
  - .2 Stockpile these materials adjacent to site.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 Bituminous-based paint of standard manufacture, specially formulated for tree wounds.
- .2 Fill Materials :
  - .1 Excavated soil material: Free of debris, roots, wood, scrap material, vegetable matter, refuse, soft unsound particles, deleterious, or objectionable materials.

- .2 Remove and store soil material for reuse.

### **Part 3 Execution**

#### **3.1 PREPARATION**

- .1 Inspect site and verify items designated to remain, particularly the butternut trees, with Departmental Representative.
- .2 Locate and protect utility lines: Preserve active utilities traversing site in operating condition.
  - .1 Notify Departmental Representative immediately of damage to utility lines or when unknown existing utility lines are encountered.
  - .2 When utility lines to be removed are encountered within area of operations, notify Departmental Representative in ample time to minimize interruption of service.
- .3 Notify utility authorities before starting clearing and grubbing.
- .4 Keep roads and sidewalks free of dirt and debris.

#### **3.2 COMPLIANCE**

- .1 Manufacturer's instructions: Comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

#### **3.3 CLEARING**

- .1 Clearing includes felling, trimming, and cutting trees into sections and satisfactory disposal of trees and other vegetation designated for removal, including downed timber, snags, brush and rubbish occurring within cleared areas.
- .2 Clear as directed by Departmental Representative by cutting at height of not more than 300 mm above ground. In areas to be subsequently grubbed, height of stumps left from clearing operations to be not more than 1000 mm above ground surface.
- .3 Cut off branches and cut down trees overhanging area cleared, as directed by Departmental Representative.
- .4 Cut off unsound branches on trees designated to remain, as directed by Departmental Representative.

#### **3.4 GRUBBING**

- .1 Remove and dispose of roots larger than 7.5 cm in diameter, matted roots and designated stumps from indicated grubbing areas.

- .2 Grub out stumps and roots to not less than 300 mm below ground surface.
- .3 Grub out visible rock fragments and boulders, greater than 300 mm in greatest dimension, but less than 0.25 m<sup>3</sup>.
- .4 Fill depressions made by grubbing with suitable material and to make new surface conform with existing adjacent surface of ground.

### **3.5 REMOVAL AND DISPOSAL**

- .1 Transport and dispose of clearing and grubbing debris as indicated by Departmental Representative.

### **3.6 FINISHED SURFACE**

- .1 Leave ground surface in condition suitable for stripping of topsoil, to approval by Departmental Representative.

### **3.7 CLEAN UP**

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
- .2 Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

**END OF SECTION**