

## SECTION 31 10 00

### SITE CLEARING

#### PART 1 - GENERAL

##### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Specification Sections, apply to this Section.

##### 1.02 SUMMARY

- A. Section Includes:
  1. Protecting existing vegetation to remain.
  2. Removing existing vegetation.
  3. Clearing and grubbing.
  4. Stripping and stockpiling topsoil.
  5. Removing above- and below-grade site improvements.
  6. Disconnecting, capping or sealing, and removing site utilities abandoning site utilities in place.
- B. Related Sections:
  1. Division 01 Section "Field Engineering" for temporary utility services, construction and support facilities, security and protection facilities
  2. Division 02 Section "Demolition" for demolition of buildings, structures, and site improvements.
  3. Division 01 Section "Erosion and Sediment Control".
  4. Division 31 Section "Earth Moving".

##### 1.03 DEFINITIONS

- A. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- B. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.
- D. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.
- E. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

##### 1.04 MATERIAL OWNERSHIP

- A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

##### 1.05 SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
  1. Use sufficiently detailed photographs or include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.
- B. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

## **1.06 QUALITY ASSURANCE**

- A. Pre-construction meeting: Discuss site clearing and vegetation protection at SWPPP Pre-construction meeting at project site or agreed-upon location prior to site clearing and grading.

## **1.07 PROJECT CONDITIONS**

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
  - 1. Do not proceed with work on adjoining property until directed by Owner.
  - 2. All benchmarks and monuments shall be protected during construction. If disturbed or destroyed, they shall be replaced in original position by a licensed surveyor at the Contractor's expense.
  - 3. Protect areas outside limits of disturbance from encroachment by construction personnel or equipment, regardless of property ownership. Access shall be by specific written permission or easement only.
- C. Contractor shall verify existing grades prior to performing work under this section. If existing grades are at variance with the drawings, notify the Owner and receive instructions prior to proceeding. No additional compensation will be considered resulting from grade variances once site clearing has commenced.
- D. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
- E. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- F. Do not commence site clearing operations until temporary sediment control, runoff control and other best management practices including plant protection measures are in place as shown on the Drawings and indicated in the Sequence of Construction.
- G. The 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 other earthwork unless otherwise indicated.
  - 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- H. Do not direct vehicle or equipment exhaust towards protection zones.
- I. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.
- J. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.

## **PART 2 - PRODUCTS**

### **2.01 MATERIALS**

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Division 31 Section "Earth Moving."
  - 1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site. Borrow material must be obtained from a permitted site.

## **PART 3 - EXECUTION**

### **3.01 PREPARATION**

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.

- B. Locate and clearly identify trees, shrubs, and other vegetation to remain or to be relocated. Flag each tree trunk at 54 inches (1372 mm) above the ground.
- C. Protect existing site improvements to remain from damage during construction.
  - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

### **3.02 TEMPORARY EROSION AND SEDIMENTATION CONTROL**

- A. Provide erosion and sediment control measures to prevent soil erosion and discharge of sediment and other pollutants to surface waters or airborne dust to adjacent properties and walkways, according to erosion and sediment control Drawings and requirements of authorities having jurisdiction.
- B. Provide erosion and sediment control measures in accordance with Division 01 Section "Erosion and Sediment Control", prior to any construction activity (including demolition).
- C. At Final Stabilization, remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

### **3.03 TREE AND PLANT PROTECTION**

- A. General: Protect existing trees and plants to remain or be relocated on-site according to work shown on the Construction Drawings. All trees and plants to remain shall be barricaded and protected during the construction process
  - 1. Tree Protection
    - a. Erect and maintain a temporary fence directly below the drip line of individual trees or directly below the perimeter drip line of groups of trees to remain. Remove fence when construction is complete.
    - b. Do not excavate, for any reason, within the area directly below the drip lines of trees, unless otherwise indicated.
    - c. Where excavation for new construction is required within the drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
    - d. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by the Owner.
- B. Limit of clearing is to be staked in accordance with Division 01 Section "Field Engineering", and verified by Owner prior to removal of any trees.
- C. All trees and plants not designated to remain within the area to be graded, shall be cut and the removal of stumps shall comply with Article 3.5 of this Section. Burning on site is not permitted, unless otherwise approved by the Owner and authorities having jurisdiction.
- D. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Owner.

### **3.04 EXISTING UTILITIES**

- A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
  - 1. Arrange with utility companies to shut off indicated utilities.
- B. Locate, identify, and disconnect utilities indicated to be abandoned in place.
- C. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Owner not less than seven calendar days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Owner's written permission.
- D. Excavate for and remove underground utilities indicated to be removed.

### **3.05 CLEARING AND GRUBBING**

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
  - 1. Do not remove trees, shrubs, grass, and other vegetation indicated to remain or to be relocated.
  - 2. Removal includes digging or grinding down stumps and remove roots, obstructions, and debris to a depth of 18 inches (450 mm) below exposed subgrade.

3. In areas outside the building limits where the depth of fill exceeds 8 feet in height, unless otherwise directed by the Owner, sound trees shall be cut at a height of not more than 6 inches above natural ground.
  4. Use only hand methods for grubbing within protection zones.
  5. Chip removed tree branches and stockpile in areas shown on the Drawings and as approved by Owner. Re-use material as indicated on the Drawings otherwise dispose of off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
1. Place fill material in horizontal layers not exceeding a loose depth of **8 inches (200 mm)**, and compact each layer to a density equal to adjacent original ground, and in accordance with Division 31 Section "Earth Moving".

### **3.06 TOPSOIL STRIPPING**

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to the full depth encountered in areas indicated to be graded and in a manner to prevent intermingling with underlying subsoil or other waste materials.
1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; trash, debris, weeds, roots, and other waste materials.
- C. Stockpile sufficient topsoil material to facilitate seeding and landscaping. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain away from stockpile. Refer to Division 01 Section "Erosion and Sediment Control" or cover to prevent windblown dust and erosion by water.
1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
  2. Do not stockpile topsoil within tree protection zones.
  3. Dispose of surplus soil material, unsuitable or excess topsoil, obstructions, demolished materials, and waste materials, including trash and debris, and in compliance with all regulations. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
  4. Stockpile surplus topsoil to allow for re-spreading deeper topsoil.

### **3.07 SITE IMPROVEMENTS**

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

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

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. If indicated on the Drawings and/or in the Stormwater Pollution Prevention Plan separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

**END OF SECTION 311000**