

## SECTION 02225

### ROCK REMOVAL

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. The work of this section includes, but is not limited to:
  - 1. Removal of identified and/or discovered rock during excavation.
  - 2. Rock removal to the widths and depths identified in the Contract Documents or as directed by the Owner, including the loosening, removing, transporting, storing and disposal of all materials requiring barring, or wedging for removal from their original beds.
  - 3. Backfill of rock excavations with acceptable materials.
- B. Related work specified elsewhere
  - 1. Trenching, Backfilling and Compacting: Section 02221
- C. Definitions of Rock Excavation
  - 1. Rock excavation in trenches and pits includes removal and disposal of materials and obstructions encountered which cannot be excavated with 30" wide bucket equipped with a ripper and penetrating "tiger" teeth on tract-mounted power excavator equivalent to Caterpillar Model 322L, rated at not less than 148 horsepower flywheel power.
  - 2. When a questions arises concerning classification of material to be excavated, the Owner shall be notified and their decision shall be final. No extra payment will be allowed unless a formal change order is prepared and issued by the Owner and approved by the Owner.
  - 3. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of the Owner. Unauthorized excavation, as well as remedial work directed by the Owner shall be at the Contractor's expense.

#### PART 2 MATERIALS (NOT USED)

#### PART 3 EXECUTION

##### 3.01 EXCAVATION & BACKFILL

- A. Rock Clearance in Trenches
  - 1. Ledge rock, boulders and large stones shall be removed from the sides and bottom of the trench to provide clearance for the specified embedment of each pipe section, joint or appurtenances; but in no

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instance shall the clearance be less than 9 inches. Additional clearance at the pipe bell or joint shall be provided to allow for the proper make up of the joint.

#### B. Rock Clearance at Structures

1. Concrete for structures shall be placed directly on the rock and the excavation shall be only to the elevations and grades shown on the Contract Drawings.

#### C. Rock removal and backfilling shall be performed in accordance with the applicable provisions of the Section entitled "Trenching, Backfilling and Compacting".

##### 1. Acceptable Methods of Rock Removal Include

- a. Blasting only where indicated on the Contract Drawings.
- b. Barring or wedging.
- c. Rock removal using pneumatic vibrating chippers.
- d. Ram Hammer Methods - Removal of rock using boom mounted pneumatic, impact hammer equipment.

#### D. The rock excavated which cannot be incorporated into the backfill material, as specified, shall be disposed of as spoil and shall be replaced with the quantity of acceptable material required for backfilling at no additional cost. The cost of these items shall be included in the unit price for rock excavation, rock disposal and supplying of backfill.

\*\*\* END OF SECTION \*\*\*