

SECTION 02300

EARTHWORK

PART 1 - GENERAL

1.1 PROJECT INCLUDES

- A. Excavation, filling, compaction, and grading for buildings, site improvements, and utilities.
- B. Materials for subbase, drainage fill, and backfill for slabs, pavements, and improvements.
- C. Rock excavation without blasting unless authorized.
- D. Supply of additional materials from offsite if required.
- E. Removal and legal disposal of excavated materials.

1.2 QUALITY ASSURANCE

- A. Compaction:
 - 1. Under structures, building slabs, steps, pavements, and walkways, 95 percent maximum density, ASTM D 1557.
 - 2. Under lawns or unpaved areas, 90 percent maximum density, ASTM D 1557.
- B. Grading Tolerances Outside Building Lines:
 - 1. Lawns, unpaved areas, and walks, plus or minus 1 inch.
 - 2. Pavements, plus or minus 1/2 inch.
 - 3. All grading must be water tested prior to payment for the work to assure storm water flow into catch basins and storm drain inlets.
- C. Grading Tolerance for Fill Under Building Slabs: Plus or minus 1/2 inch measured with 10 foot straightedge.

1.3 EXISTING CONDITIONS

- A. Comply with the Dig Safe Laws for the state of New Hampshire and Dartmouth College. See attachment at the end of section 02070. There is a Dartmouth College Dig Safe application form available from Facilities Operation and Management (tel no 646-1178)

1.4 DESIGN CRITERIA

- A. The following are the Hanover Fire Department Vehicle Weights (2/8/99) and should be taken into consideration when designing for roads and parking areas.
 - 1. Engine 1 – 45,740 pounds
 - 2. Engine 3 – 34,040 pounds
 - 3. Engine 4 – 35,000 pounds
 - 4. Engine 5 – 25,000 pounds
 - 5. Ladder Tower – 54,000 pounds – turning radius is available from Hanover Fire Department

6. Tanker 1 – 31,000 pounds
7. Ambulance 150 – 11,000 pounds
8. Ambulance 151 – 22,000 pounds

B. Dartmouth College Equipment

1. Cherry Picker –
 - a. Minimum overhead clearance required – 11' 6"
 - b. Overall length in road position – 36' 10"
 - c. Shipping weight – Front Axle – 10810 lbs
 - d. Shipping weight – Rear Axle – 16570 lbs
 - e. Total shipping weight – 27380 lbs
 - f. Wheelbase (WB) – 224"
 - g. Rear of cab to rear axle centerline (CA) – 166"
 - h. Maximum height from platform to ground – 71" 11"
 - i. Maximum horizontal reach – 58' 2"
 - j. Minimum horizontal reach – 25' 2"
 - k. Overall width - 8'-6'

C. Reference DOT Standards H20 loading

PART 2 - PRODUCTS

- 2.1 MATERIALS The architect must confirm that the material and compaction requirements of the civil and structural design agree.

PART 3 - EXECUTION

- 3.1 COMPACTION The architect must confirm that the civil and structural design requirements for compaction agree.

3.2 ROCK EXCAVATION

- A. Comply with NHDOT "Standard Specifications", Section 203.

END OF SECTION 02300