SECTION 02230

EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes:

1. Erosion and Sediment Control Methods

B. Related Sections:

1. Section 01400 - Quality Control.
2. Section 02110 - Site Clearing
3. Section 02111 – Tree and Plant Protection
4. Section 02200 - Earthwork

1.2 INTENT:

A. The intent of this standard is to state the general erosion and sediment control requirements for all construction projects on the UCB campus

1.3 CODES AND STANDARDS:

A. The most recent City of Boulder Design & Construction Standards are incorporated by reference into the University Standards. When there is a conflict between standards, the more stringent requirement shall apply. The University’s Civil must approve in writing any deviation from these standards prior to construction.

B. The most recent Colorado Department of Transportation Erosion Control and Stormwater Quality Field Guide.

1.4 QUALITY ASSURANCE:

A. Perform all Erosion and Sediment Control operations in conformance with the requirements herein specified. The Contractor may refer to the City of Boulder, Colorado Design and Construction Standards, most recent edition, as well as the CDOT Erosion Control & Stormwater Quality Guide for work not covered in this standard. The University of Colorado at Boulder Civil Engineer shall approve the use of particular City of Boulder/CDOT standards.

B. Pre-Installation Conference: Prior to the start of the work, conduct a pre-installation conference with Contractor, Owner, Architect, and Civil Engineer to discuss the following:

1. Erosion and Sediment Control plan
2. Stormwater Management Plan (SWMP) – only needed if the area of disturbance is equal to or greater than one acre

3. Materials list

4. Equipment to be used

5. Special requirements

C. Contractor shall implement redundant BMPs to ensure protection is maintained.

D. No control method shall cause flooding of project site or surrounding areas and buildings. Any flooding or damage resulting from BMPs shall be the sole responsibility of the Contractor.

1.5 SUBMITTALS:

A. Submit a copy of the proposed erosion and sediment control plan to UCB Civil Engineer.

B. Submit a copy of the proposed SWMP to UCB Civil Engineer (if applicable).

PART 2 - MATERIALS

2.1 EROSION AND SEDIMENT CONTROL MATERIALS

A. Curb Socks

1. Curb Sock shall be made of ¼” mesh or burlap, filled with ¾” gravel.

B. Silt Fence

1. Filter fabric shall conform to the requirements described in Section 420 of CDOT’s Standard Specifications for Road and Bridge Construction. Minimum height of the filter fabric shall be 36 inches.

2. The use of joints should be minimized to improve the strength and efficiency of the barrier.

3. Posts for silt fences shall be metal or hard wood with a minimum length of 42 inches. Wooden posts shall have a minimum diameter or cross section of 1-¼ inches. Metal posts shall be “studded tee” or “U” type with a minimum weight of 1.33 lbs/ft, and they shall be protected against corrosion. Metal posts shall have projections for fastening wire.

4. Installation of silt fence will not be located within drip lines of existing trees.

5. When used, wire fence reinforcement for the filter fabric should be a minimum of 36 inches in height and a minimum of 14 gauge, with a maximum mesh
spacing of 6 inches.

PART 3 - EXECUTION

3.1 EROSION AND SEDIMENT CONTROL METHODS:

A. Storm Inlet Protection

1. Contractor shall install curb socks for applicable situations in the following manner:
   a. All inlets a minimum 100 ft. down gradient from area of disturbance
   b. All inlets within in project area

   Curb socks shall be installed as detailed by the Colorado Department of Transportation (CDOT).

B. Sediment Interception

1. Contractor shall install silt fencing around disturbance perimeter. There shall be a maximum ratio of 100 linear ft. of silt fence per one-quarter acre drainage area. The maximum slope length behind the barrier is 100 ft. Maximum gradient behind the barrier is 50 percent. Silt fencing shall be installed as detailed by CDOT.

C. Concrete Washout

1. Contractor shall provide a temporary concrete washout area as approved by UCB Civil Engineer. Washout facility shall be located a minimum of 50 ft. from storm drain inlets, open drainage facilities, and watercourses, unless determined infeasible by the UCB Civil Eng.

2. A small sign shall be installed adjacent to each washout facility. Temporary concrete washout facilities shall be constructed above grade or below grade at the option of the Contractor. Temporary concrete washout facilities shall be constructed and maintained in sufficient quantity and size to contain all liquid and waste concrete materials generated by washout operations.

3. Temporary washout facilities shall have a temporary pit, portable washout system, or berm areas of sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures.

4. All washout facilities shall have adequate protection available in case of rain and adverse weather.

5. The Contractor shall assume sole monetary responsibility for any clean-up resulting from improper concrete washout practices.
END OF SECTION 02230