

SECTION 6500 – MODULAR BLOCK RETAINING WALL SYSTEM

PART 1 - GENERAL

1.01 SCOPE: This Section includes furnishing and installing concrete modular block retaining wall units up to a maximum height of three and one half feet.

1.02 RELATED WORK: Refer to the following sections for related work:

Earthwork for Structures	Section 2000-Earthwork
Filter Fabric	Section 2000-Earthwork

1.03 SUBMITTALS: The following shall be submitted for review:

- A. Manufacturer's literature: Materials description.
- B. Color Samples: Color chips will be required if a substitution is requested. One unit of the retaining wall in the color specified by Unified Government shall be furnished. If approved, the unit may be used in the finished work.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Concrete wall units shall meet requirements of ASTM C90, Sections 4, 5, 6, and 7, except compressive strength shall be a minimum of 3,000 psi, maximum water absorption shall be limited to 7.0 percent, and unit height dimensions shall not vary more than \pm 1/16-inch from that specified.
- B. Concrete wall units shall have a face area of approximately 0.67 square foot.
- C. Color shall be in the range of Buff to Tan unless otherwise specified. Color shall be selected by Engineer from manufacturer's available standard colors.
- D. Face pattern geometry shall be bevel face, and texture shall be a split rock face. Concrete units shall include an integral concrete locating surface and shear connection flange along the lower rear edge.
- E. Base: Material shall consist of drainage aggregate, and/or concrete as shown on the drawings.
- F. Drainage aggregate: Fill between units shall consist of free-draining aggregate conforming to KDOT CA-5 (3/4 inch clean gravel).
- G. Backfill: Suitable native soils at a moisture content which enables compaction to specified densities. Unsuitable soils are those soils with the USCS classification of CH, OH, MH, OL, or PT. CL soils with a Plasticity Index (PI) greater than 25 are also considered unsuitable soils.

PART 3 - EXECUTION

3.01 FOUNDATION PREPARATION: Excavation and foundation preparation shall follow the requirements for earthwork for structures. See related work Part 1.

3.02 BASE COURSE PREPARATION:

- A. Base materials shall be prepared to ensure complete contact of retaining wall unit. Gaps will not be allowed. Base materials shall be to the depths and shown on the drawings. If not shown, a minimum 6-inch depth shall be used.
- B. Material shall be compacted so as to provide a level, hard surface on which to place the first course of wall units.

3.03 ERECTION:

- A. Place first course of concrete wall units on prepared base material. Check units for level and alignment. The top of all units in base course shall be at the same elevation.
- B. Ensure that concrete wall units are in full contact with base.
- C. Place concrete wall units side by side for the full length of wall. Use running bond layup. Cut units at sharp angles in the wall, as necessary to maintain running bond. Horizontal joints shall be straight and level. Backfill each course with drainage aggregate before commencing the next course. Pull the units forward until the locating surface of the unit contacts the locating surface of the units in the preceding course. Pull the units forward as far as possible.
- D. Fill all voids between and within concrete wall units with drainage aggregate. Place a minimum of 6 inches of drainage aggregate behind the concrete wall units. Stop drainage aggregate 6 inches below finished grade. Install a layer of geotextile filter fabric in between the drainable aggregate and the unexcavated soil.

STANDARD DETAILS RELATED TO THE WORK OF THIS SECTION:

UG 6500-A MANUFACTURED BLOCK RETAINING WALL FOR USE WITH INLET OR SIDEWALK

END OF SECTION 6500