SPECIAL SPECIFICATION

4695

Temporary Earth Walls

1. **Description.** This Item shall govern for the construction of Temporary Earth Walls in accordance with these specifications and with the lines, grades and dimensions shown on the plans.

The temporary earth wall shall be a mechanically stabilized earth wall and shall be designed by a Registered Professional Engineer, registered in Texas.

2. **Design Drawings.** Prior to fabrication or construction, the Contractor shall submit to the Engineer five (5) sets of construction drawings and two (2) sets of design calculations. The drawings shall include a layout for construction sequencing and details for temporary forms and shoring.

3. **Materials.** The materials, reinforcements and their properties shall be as approved through submitted design drawings.

The facing of the retaining wall shall be fabricated of steel sheeting or welded wire fabric. The facing material shall be rigid enough to maintain a smooth and straight wall face both during and after construction. If welded wire fabric is used, filter fabric shall be placed behind the face to prevent migration or erosion of backfill. Filter fabric shall conform to Department Specification D-9-6200, "Filter Fabric". Filter fabric shall be rated as UV resistant by the Manufacturer.

All backfill material used in the structure volume shall be reasonably free from organic and otherwise deleterious materials and shall conform to the following gradation limits as determined by Test Method Tex-110-E:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
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<tr>
<td>2 inches</td>
<td>100</td>
</tr>
<tr>
<td>No. 200</td>
<td>0-35</td>
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In addition, if the fraction finer than the No. 200 sieve is between 20% and 35%, the backfill must conform to the following additional requirements:

(a) The Plasticity Index (P.I.) As determined by Test Method Tex-106-E shall not exceed 15.

(b) The material, when compacted at 95 percent of Da density as determined by Test Method Tex-114-E at optimum moisture content, shall exhibit an angle of internal friction of not less than 30 degrees as determined by Test Method Tex-117-E.
Backfill material in the two (2) feet immediately behind the wall face shall be clean coarse rock which conforms to the grading requirements of concrete coarse aggregate Grade 1, 2, or 3. In lieu of the coarse rock, the Contractor shall have the option of using backfill stabilized with five (5) percent Portland cement by dry weight of the backfill material.

4. **Test and Inspection.** Acceptability of facing materials and soil reinforcements will be determined on the basis of manufacturer published material properties, properties used in the design process and visual inspection.

5. **Construction Methods.** Construction of temporary earth walls shall be in accordance with the manufacturer’s specifications, in conjunction with Item 132, "Embankment". The construction sequence, location of reinforcement and filter fabric will be as approved on the Construction Drawings.

   Positive means shall be provided to prevent drainage of water over or along the face of the wall. Methods may include placement of temporary curbs or berms, grading of fill away from walls, or other measures as directed by the Engineer.

6. **Measurement.** When shown on the plans and in the proposal as a bid item, "Temporary Earth Walls" will be measured by square foot of vertical projection as shown on the plans.

   When not shown in the plans and in the proposal as a bid item, "Temporary Earth Walls" will not be measured or paid for directly but will be considered subsidiary to the various bid items in the contract.

7. **Payment.** The work performed and materials furnished will be paid for as specified above. This price shall be full compensation for furnishing all labor and materials including temporary forms, shoring, tools, equipment and incidentals necessary to complete the work.