

**1. GENERAL**

1.1 MEASUREMENT AND PAYMENT

The unit of measurement for geosynthetic products will be the square metre, exclusive of overlaps (i.e; no additional payment will be made for overlaps), as specified in the Bid Forms. The unit price will be full compensation for the supply of the geosynthetic products and all labour, equipment, tools, supervision, and incidentals necessary to supply and place the geosynthetic products in accordance with these Specifications and the manufacturer's recommendations.

**2. PRODUCTS**

2.1 GEOTEXTILES

- .1 For roadway construction the synthetic geotextile shall consist of a durable, permeable, woven, polypropylene fabric composed of continuous synthetic filaments, free of any tears or damage.
  - .1 Geotextile shall be Nilex GEOTEX 200ST, Nilex 2006, Layfield LP 200 or approved equal.
- .2 For riprap, gabions and trench lining, the synthetic geotextile shall consist of a durable, permeable, non-woven, polyester fabric composed of continuous synthetic filaments, free of any tears or damage.
  - .1 Geotextile shall be Amoco (Nilex) 4551, Layfield LP 601 or approved equal.

2.2 GEOGRIDS

- .1 For roadway construction the synthetic geogrid shall consist of an open grid polymer having biaxial or triaxial orientation, free of striations, roughness, pinholes, blisters, undispersed raw materials or any sign of contamination by foreign matter.
  - .1 Geogrid shall be Tensar BX1200 or approved equal.

2.3 COMBIGRIDS

- .1 For roadway construction the synthetic combigrid shall consist of an open grid polymer having biaxial orientation, with nonwoven geotextile welded between the reinforcement bars, free from any tears or damage. Follow the installation methodology for the placement of geogrids.
  - .1 Combigrid shall be Naue Combigrid or approved equal.

**3. EXECUTION**

3.1 PLACEMENT OF GEOTEXTILE

- .1 Geotextiles, if required, shall be placed as shown on the Drawings or as directed by the Engineer.
- .2 The areas to be covered by the geotextile material shall be trimmed and dressed to the lines and grades shown on the Drawings or as required by the Engineer.

- .3 The material shall be placed with the long axis parallel to centreline of the structure, highway or dam.
- .4 The material shall be lapped a minimum of 1.0 metre along the longitudinal joint of material or have the joints lapped 0.30 metres and sewn. The ends of rolls at joints shall be lapped a minimum of 1.0 metre.
- .5 The securing pins shall be placed in the lapped longitudinal joints and spaced on approximately 3.0m centres. Additional securing pins shall be set at random points as necessary to hold the material in the desired position.
- .6 The geotextile material shall be free of tension, stress, folds, wrinkles or creases.
- .7 Any defects, rips holes, flaws or damage to the material may be cause for rejection. If deemed acceptable by the Engineer, torn or punctured material may be repaired by the following method:
  - .1 Place a layer of material over the damaged area, which overlaps a minimum of one (1) metre beyond the damaged area in all directions.
  - .2 Place securing pins through both strips of material at lapped joints at approximately the midpoint of the overlap.
- .8 The geotextile material, in the specified position, must be covered as soon as practicable; this time shall not exceed three (3) Days.

### 3.2 PLACEMENT OF GEOGRID OR COMBIGRID

- .1 Place the geogrid or combigrid by unrolling onto the prepared surface, stretch taut and retain in position.
- .2 Protect the geogrid or combigrid from displacement or damage until and during placement of the overlaid material layers.
- .3 Place the geogrid or combigrid on sloping surfaces in one continuous length, from the toe of the slope to the upper extent of the roll.
- .4 The material shall be lapped a minimum of 1.0 metre along the longitudinal joint of material. The ends of rolls at joints shall be lapped a minimum of 1.0 metre.
- .5 Seams are to be connected as per the manufacturer's recommendations.
- .6 Protect the geogrid from displacement and damage until and during the placement of the granular sub-base and/or granular base material.
- .7 After installation, cover with granular material within four hours of placement.
- .8 Remove and replace any geogrid or combigrid damaged or deteriorated as directed by the Engineer.
- .9 Do not permit the passage of any vehicle directly on the geogrid or combigrid at any time.

**END OF SECTION**