

1 Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Repair of Jointed Concrete Pavement Slabs	Square Yard
Select Material, Class IV	Ton
Patching Concrete Pavement Spalls	Square Foot

2

## SECTION 724

3

### NONWOVEN GEOTEXTILE INTERLAYER

4

#### 724-1 DESCRIPTION

5 Furnish and install a non-woven geotextile interlayer at locations shown on the plans.  
 6 Schedule a Pre-Pave Meeting at least 3 weeks prior to paving to discuss installation and  
 7 construction procedures for the nonwoven geotextile interlayer with representatives from the  
 8 Contractor including Paving Superintendent, Subcontractor, Geotextile Manufacturer,  
 9 Engineer, Roadway Inspector, Area Roadway Construction Engineer, Division Construction  
 10 Engineer, and the State Pavement Construction Engineer.

11

#### 724-2 MATERIALS

12 The geotextile interlayer shall be constructed of a non-woven needle-punched geotextile, with  
 13 no thermal treatment (calendaring or IR). The material shall be resistant to chemicals,  
 14 mildew, and rot and shall not have any tears or holes that will adversely affect the in-situ  
 15 performance and physical properties of the installed material.

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Furnish with each shipment a Type 3 Certification in accordance with Article 106-3 certifying  
 that the paving mat is a non-woven needle-punched geotextile with no thermal treatment  
 (calendaring or IR) meeting the requirements in Table 724-1.

<b>TABLE 724-1</b>			
<b>PHYSICAL PROPERTIES OF NON-WOVEN GEOTEXTILE INTERLAYER</b>			
<b>Property</b>	<b>Test Method</b>	<b>Units</b>	<b>Value</b>
Minimum Mass per unit area	ASTM D 5261	oz/yd <sup>2</sup>	15.0
Minimum thickness under load (a) at 2 kPa (0.29 psi) (b) at 20 kPa (2.9 psi) (c) at 200 kPa (29 psi)	ASTM D 5199	in	(a) 0.12 (b) 0.10 (c) 0.04
Minimum wide-width tensile strength	ASTM D 4595	lb/ft	685
Maximum wide-width elongation	ASTM D 4595	%	130
Minimum water permeability in normal direction under load (pressure) at 20 kPa (2.9 psi)	Mod. ASTM D 5493 or ASTM D 4491	ft/s	3.3x10 <sup>-4</sup>
Minimum in-plane water permeability (transmissivity) under load (pressure) (a) at 20kPa (2.9 psi) (b) at 200kPa (29 psi)	Mod. ASTM D 6574 or ASTM D 4716	ft/s	(a) 1.6x10 <sup>-3</sup> (b) 6.6x10 <sup>-4</sup>
Minimum weather resistance retained strength	ASTM D 4355 at 500 hrs. exposure	%	60
Alkali resistance, minimum polypropylene/polyethylene	Manufacturer certification of polymer	%	96

1 Requirements must be met for 95% of the samples.

### 2 **724-3 GENERAL REQUIREMENTS**

3 A trained and experienced installer, certified by the Geotextile Manufacturer, shall be present  
4 on-site during the installation of the geotextile and until the crew has a comfort level working  
5 with this material.

6 Ensure that any potential for keying of the two cementitious layers is minimized through  
7 proper repair techniques. Clean the underlying surface to remove loose debris before  
8 applying the interlayer. Roll the geotextile out on the underlying layer. The geotextile shall  
9 be tight and without excess wrinkles and folds. No more than 650 feet of geotextile shall be  
10 installed in advance of the paving operation at a given time. The interlayer shall be placed no  
11 more than 3 days before concrete placement.

12 Keep driving on the interlay to a minimum. Tight radius turns and excessive acceleration and  
13 braking shall be avoided.

14 The geotextile shall be secured to the underlying layer with pins or nails punched through  
15 2 to 2.75 inch galvanized washers or disks every 6 feet or less. Additional fasteners shall be  
16 used as needed to ensure that the geotextile does not shift or fold before or during concrete  
17 placement. Edges of the geotextile shall overlap by 8 inches ± 2 inches. No more than 3

1 layers of geotextile shall overlap at any location. Transverse seams of adjacent rolls shall be  
 2 staggered to prevent 4 layers from coinciding at any location. The free edge of the geotextile  
 3 shall extend beyond the edge of the new concrete into a location that facilitates drainage.

#### 4 **725-1 MEASUREMENT AND PAYMENT**

5 *Nonwoven Geotextile Interlayer* will be measured and paid at the contract unit price per  
 6 square yard. In measuring this quantity, the length will be the actual length installed,  
 7 measured along the surface. The width will be the width measured along the underlying layer  
 8 that has been acceptably placed. No separate measurement will be made for the overlapping  
 9 fabric.

10 The contract prices for this section shall include but not be limited to, furnishing all labor,  
 11 materials, tools, equipment and other incidentals necessary to perform the required work.

12 Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Nonwoven Geotextile Interlayer	Square Yard

### 13 **SECTION 725** 14 **FIELD LABORATORY FOR** 15 **PORTLAND CEMENT CONCRETE PAVEMENT**

#### 16 **725-1 DESCRIPTION**

17 Perform the work covered by this section including, but not limited to, providing and  
 18 maintaining the building or trailer and the curing shelter for the exclusive use of the Engineer  
 19 at concrete plants producing Portland cement concrete for use in pavement to be constructed  
 20 on the project; furnishing water, heat, electricity and other utility services; and any other  
 21 equipment that may be necessary.

#### 22 **725-2 GENERAL REQUIREMENTS**

23 Furnish and maintain for the exclusive use of the Engineer a field office and laboratory in  
 24 which to house and use all testing equipment needed. Only Department representatives will  
 25 have unattended access to these facilities.

26 Provide a field office that is dust and water tight, floored, and has an adequate foundation so  
 27 as to prevent excessive floor movement. Provide a field office that contains 6 or more 110 V  
 28 electrical double outlets properly grounded and spaced; a telephone; at least 2 windows,  
 29 satisfactory locks on all doors and windows; adequate lighting, heating and air conditioning;  
 30 sink; running water to sink; and satisfactory exhaust fan. Provide a field office that meets the  
 31 following approximate minimum requirements: 200 sf of floor space; 9 feet interior width;  
 32 6.5 feet interior height; 20 sf of counter space, 2.5 feet to 3 feet high and 2 feet deep with  
 33 cabinets or drawers below the counter top; and 6 sf of desk space not enclosed with cabinets.  
 34 Locate the office in a position that will permit full view of the plant from the interior of the  
 35 office. At or near the office, furnish toilet facilities, with waste disposal, available for use of  
 36 the Department personnel. Maintain these toilets in a neat and clean condition.

37 Provide a laboratory trailer adjacent to the field office that is at least 400 sf in area,  
 38 approximately 20 feet wide, 20 feet long and 7 feet in height. Provide a laboratory trailer that  
 39 contains 6 or more 110 V electrical double outlets properly grounded and spaced; satisfactory  
 40 locks on all doors and windows; adequate lighting, heating and air conditioning; sink; running  
 41 water to sink; and satisfactory exhaust fans. Provide two workbenches that are approximately  
 42 10 feet long, 2 feet wide and 2.5 feet high. One workbench shall be installed inside the trailer  
 43 and the other across the end of the trailer. Provide a shelter or roof over the outside  
 44 workbench to provide protection from weather. Provide, in the laboratory, an adequate  
 45 number of water storage tanks to hold all acceptance beams and cylinders and any additional  
 46 beams and cylinders made for the purpose of determining early strengths.