TABLE 305-2
ADJUSTMENT IN CONTRACT UNIT PRICE FOR DEFICIENCY IN COMPRESSIVE STRENGTH OF LEAN CONCRETE BASE

Mean Compressive Strength (pounds per square inch)	Unit Price Adjustment ** (dollars per square yard)
500 or more	0
450 to 499	- 1.50
400 to 449	- 3.25
350 to 399	- 5.00
Less than 350 *	- 7.00

* Material represented by cores deficient by more than 0.75 inches in thickness and/or represented by lots attaining seven-day compressive strengths with the mean value of the four compressive strength tests less than 350 pounds per square inch will be evaluated as to acceptance. The Engineer will determine if the material can be left in place. Lean concrete base allowed to remain in place will be subject to the unit price adjustments presented in Tables 305-1 and 305-2. Lean concrete base not permitted to remain in place shall be removed and replaced at no additional cost to the Department.

**The Unit Price Adjustment will be multiplied by the design thickness of lean concrete base in inches, the product divided by 10, and rounded off to the nearest 25 cents to determine the unit price for payment.

Where a deficiency exists in both the average length of cores and the average compressive strength, the amount of the contract unit price allowed will be the appropriate percentage of contract unit price allowed from Table 305-1 less the unit price adjustment from Table 305-2.

SECTION 306 GEOGRID BASE REINFORCEMENT:

306-1 Description:

The work under this section shall consist of furnishing and placing a geogrid material within or below the aggregate base as shown on the project plans.

306-2 Materials:

306-2.01 Geogrid Materials:

The geogrid material shall be supplied in accordance with and conform to the material requirements of Subsections 1014-1 and 1014-3.

306-2.02 Geogrid Packaging, Handling, and Storage:

The identification, packaging, handling, and storage of the geogrid material shall be in accordance with ASTM D 4873. Geogrid rolls shall be furnished with suitable wrapping for protection from the elements, primarily ultraviolet exposure, prior to placement. Each roll shall be labeled or tagged to provide product identification sufficient to determine the product type, manufacturer, quantity, lot number, roll number, date of manufacturer, shipping date, and the project number and name to which it is assigned. Rolls will be stored on the site or at another identified storage location in a manner which protects them from the elements, and any other factor which may cause damage to the material. Care should be taken to prevent mud, wet cement, epoxy and other contaminating materials which may permanently affix themselves to the grid material, from coming into contact with the geogrid. If stored outdoors, geogrid rolls shall be elevated and protected with a light colored, opaque, waterproof cover. At no time shall the geogrid material be exposed to ultraviolet light for a period exceeding 14 days or stored in temperatures below zero degrees F or in extreme heat. Torn, damaged, or defective geogrid will be rejected.

306-3 Construction Requirements:

306-3.01 Weather Limitations:

The geogrid shall not be placed when weather or surface conditions, in the opinion of the Engineer, are not suitable for placement. This will normally be at times of wet and snowy conditions, heavy rainfall, extreme cold or frost conditions, or extreme heat.

306-3.02 Equipment:

Mechanical or manual laydown equipment shall be capable of laying the geogrid properly and smoothly, according to the manufacturer's recommendations.

306-3.03 Surface Preparation:

If the geogrid material is to be placed directly on the subgrade, the subgrade surface shall be compacted and finished according to Subsections 203-3.03, 203-10.03, or 205-3.04 prior to placement of the geogrid. If the geogrid material is to be placed within the aggregate base materials, the aggregate base surface upon which the geogrid will be placed, shall be compacted according to Subsection 303-3.02 and finished according to Subsection 303-3.03 before placement of the geogrid.

306-3.04 Geogrid Placement:

The geogrid shall be rolled out along the alignment in the direction of advancing construction. All wrinkles and folds shall be removed.

A 12-inch minimum overlap with securing pins is required at all joints (both transverse and longitudinal). Longitudinal joints shall be located

according to the requirements shown in Subsection 406-6 for pavement joints unless otherwise approved by the Engineer. At transverse joints, the preceding roll shall overlap the following roll in the direction that the aggregate base will be placed. Securing pins shall be 3/16-inch steel bars, pointed at one end and fabricated with a head to retain a steel washer having an outside diameter of not less than 1.5 inches. U-shaped pins shall be another option as approved by the Engineer.

The length of the securing pins shall be four-inch minimum. The geogrid shall be tensioned by hand and anchored to the ground at the edges, including overlaps, and in the center of the roll at 30-foot intervals along the roll length, at the corners if applicable, or as directed by the Engineer. The use of securing pins may be reduced or eliminated by the Engineer if it can be shown that by careful installation the geogrid is adequately tensioned by hand and anchored by the placed aggregate in a progressive installation process as recommended by the manufacturer's representative.

Care shall be taken to ensure that geogrid sections do not separate at overlaps during construction. Placement of geogrid around corners will require cutting of the geogrid product and diagonal overlapping of the same to make sure that excessive buckling of geogrid material does not occur.

306-3.05 Placing and Compacting Aggregate Fill:

The aggregate shall be back dumped and spread in a uniform lift maintaining the design aggregate thickness at all times. The aggregate material shall be bladed onto the geogrid in such a manner that the aggregate rolls onto the grid ahead, by gradually raising the dozer blade while moving ahead.

If the underlying material is capable of supporting rubber tire trucks (end and belly dumps) they may drive over the grid at very low speeds, less than five miles per hour, and dump aggregate as they go. Sudden stops and turning by trucks shall be avoided while on the grid. No tracked vehicles should be allowed on the grid until there is a minimum of six inches of material between the tracks and the grid.

Any ruts which might develop during spreading or compacting the aggregate shall be filled with additional aggregate rather than bladed from surrounding areas. Placing additional aggregate into the rutted areas insures that the design aggregate thickness is maintained.

Geogrid damaged after or during construction will be repaired in accordance with the manufacturer's recommended procedure.

Aggregate base shall be compacted as specified in Subsection 303-3.02. Aggregate base material shall not be mixed or processed on the geogrid. The aggregate base material shall be premixed at the stockpile area or another location in a manner approved by the Engineer. Aggregate base materials will be sampled for acceptance

after premixing and prior to placement on the geogrid material. Contamination and segregation of aggregate base materials prior to or during placement shall be minimized.

306-4 Method of Measurement:

Geogrid base reinforcement will be measured by the square yard in-place. Measurement will be to the nearest square yard. No allowance will be made for material in laps.

306-5 Basis of Payment:

The accepted quantity of geogrid base reinforcement, measured as provided above, will be paid for at the contract unit price per square yard, which price shall be full compensation for furnishing all labor, material, and equipment, and performing all operations in connection with placing the geogrid as shown on the project plans. No payment will be made for geogrid base reinforcement rejected due to either contamination or damage due to either the fault or negligence of the contractor.

SECTION 307 GEOCOMPOSITE EDGE DRAIN:

307-1 Description:

The work under this section shall consist of furnishing all labor, equipment, and materials to install a pavement edge drain system. The drainage system shall be installed in accordance with the specifications, plans, and manufacturer's recommendations. The purpose of the geocomposite edge drain is to provide drainage for the pavement base course while restricting loss of fines.

307-2 Materials:

307-2.01 Geocomposite Edge Drain:

The geocomposite edge drain material shall be supplied in accordance with and conform to the material requirements of Subsections 1014-1 and 1014-7.

307-2.02 Geocomposite Packaging, Handling, and Storage:

The identification, packaging, handling, and storage of the geocomposite edge drain material shall be in accordance with ASTM D 4873. Geocomposite edge drain material shall be furnished in rolls, or in another acceptable manner wrapped with a suitable protective covering to protect the fabric from mud, dirt, dust, debris, or harmful ultraviolet light. The edge drain material shall be free of defects or flaws which significantly affect its physical properties at the time of delivery and installation. Each roll or package shall be labeled or