Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

April 15, 2020

SUBJECT: FAI Route 190/94/290
Project NHPP-APXQ(831)
Section 2015-019R
Cook County
Contract No. 62A76
Item No. 169, April 24, 2020
Letting Addendum B

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Revised page ix of the Table of Contents to the Special Provisions
2. Added pages 711-713 to the Special Provisions

Prime contractors must utilize the enclosed material when preparing their bid and must include any changes to the Schedule of Prices in their bid.

Very truly yours,

Jack A. Elston, P.E.
Bureau Chief, Design and Environment

MTS

Revised 4/15/2020

GEOTECHNICAL REINFORCEMENT

Description. This work shall consist of furnishing and installing integrally-formed polypropylene biaxial or multi axial geogrid reinforcement material. The geogrid shall have aperture, rib, and junction cross section sufficient to permit significant mechanical interlock with the material being reinforced. There shall be a high continuity of tensile strength through all ribs and junctions of the geogrid material to reinforce the subbase or subgrade in identified locations. The contractor shall present design calculations showing the geogrid can fulfil the project requirements as shown on the plans and other projects documents.

Materials.

(a) Geogrid - The geogrid shall conform to the requirement listed in Table 1. The supplier/contactor shall provide a certification that the product meets the requirements.

Table 1 – Required Geogrid Properties

MATERIAL CHARACTERISTICS	TEST METHOD	DATA
Polymer type		polypropylene
Carbon Black Content	ASTM D 4218	0.50% (min.)

DIMENSIONAL CHARACTERISTICS	TEST METHOD	DATA
Open Area	COE-CW 02215	75 % (max.)
Aperture Area	Measured	1.3 sqin (min)
Unit Weight	ASTM D 5261	5.0 oz/yd^2 (min.)

TECHNICAL CHARACTERISTICS	TEST METHOD	DATA
Junction Efficiency	GRI-GG2 or ASTM D6637 and ASTM D7737	93% (min.)
Min. Radial Stiffness @ 0.5% Strain	ASTM D6637	23,989 lb/ft (min)
Resistance to UV Light and Weathering	ASTM D4355	70% at 500 Hours (min)

(b) Aggregates - The aggregates shall conform to the AGGREGATE SUBGRADE IMPROVEMENT (D-1) Special Provision.

Added 4/15/2020

Submittals. A minimum of 60 calendar days prior to proposed installation, the Contractor shall submit the following information:

a. Design calculations, certified by the manufacturer, identifying that the combination of the proposed geogrid material(s) and the aggregate subgrade improvement material provide an equivalent bearing capacity of 24" of aggregate subgrade improvement material meeting both installation conditions:

   - 12" of Aggregate Subgrade Improvement and geogrid reinforcement material(s) over Geotechnical Fabric for Ground Stabilization.
   - 9" of Aggregate Subgrade Improvement and geogrid reinforcement material(s) over Geotechnical Fabric for Ground Stabilization.

b. Project specific installation plan describing subgrade preparation, the proposed layout and orientation of geogrids, loading, transportation and unloading requirements, storage requirements, requirements for field cutting and manipulation of geogrid, minimum overlap and joint treatments, requirements for securing the geogrid materials prior to and during aggregate placement, aggregate placement requirements – including minimum/maximum lift thicknesses, maximum vehicle loading and aggregate compaction requirements, and any additional manufacturer recommended data.

c. Project specific quality control plan prepared by or approved by the manufacturer.

d. Name and contact information of manufacturer representative responsible throughout material procurement, delivery and installation. This representative shall be available to the Engineer for all inquiries, including as needed, to be present during a portion of product installation.

Installation. The geogrid reinforcement shall be transported, stored, and placed as described herein and as shown on the plans. Geogrids shall meet the requirements of ASTM D 4873 "Standard Guide for Identification, Storage, and Handling of Geosynthetic Rolls and Samples."

Geogrids shall be delivered to the jobsite in such a manner as to facilitate handling and incorporation into the work without damage. Geogrids shall be stored in such a manner as to prevent exposure to direct sunlight and damage by other construction activities. During periods of shipment and storage, the geogrid shall be protected from temperatures greater than 140°F, mud, dirt, dust, and debris. Each geogrid roll shall be labeled or tagged to provide product identification. The manufacturer's recommendations shall be followed with regard to protection from direct sunlight. At the time of installation, the geogrid will be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, or storage. All damaged portions of geogrid shall be replaced for the entire width of the roll. The Contractor shall furnish the product labels that clearly show the manufacture's or supplier's name, product identification, lot number, manufactured date, roll dimension and provide a document that the material is in accordance with manufacturer's or supplier's certificate.

Added 4/15/2020

Prior to the installation of the geogrid, the application surface shall be cleared of debris, sharp objects and trees. Tree stumps shall be cut to the level of the ground surface. If the stumps cannot be cut to the ground level, they shall be completely removed. In the case of subgrades, all wheel tracks or ruts in excess of 3 inches in depth shall be graded smooth or otherwise filled with soil to provide a reasonably smooth surface.

The geogrid shall be placed with the "roll length" parallel to the pavement. Fabric of insufficient width or length to fully cover the specified area shall be lapped a minimum of 24 inches. The geogrid should be secured in place.

The granular blanket shall be constructed to the width and depth required on the plans. Unless otherwise specified, the material shall be back-dumped on the geogrid in a sequence of operations beginning at the outer edges of the treatment area with subsequent placement towards the middle.

Placement of material on the geogrid shall be accomplished by spreading dumped material off of previously placed material with a bulldozer blade or endloader, in such a manner as to prevent tearing or shoving of the geogrid. Dumping of material directly on the geogrid will only be permitted to establish an initial working platform. No construction equipment shall be allowed on the geogrid prior to placement of the granular blanket. If the geogrid develops wrinkles or moves significantly, an alternative method of securing it shall be used.

Unless otherwise specified in the plans or Special Provisions, the granular material, shall be placed to the full required thickness and compacted.

Geogrid which is damaged during installation or subsequent placement of granular material, due to failure of the Contractor to comply with these provisions, shall be repaired or replaced at no additional cost to the Department, including costs of removal and replacement of the granular material. Torn geogrid may be patched in-place by cutting and placing a piece of the same geogrid over the tear. The dimensions of the patch shall be at least 2 feet larger than the largest dimension of the tear and it shall be weighted or otherwise secured to prevent the granular material from causing lap separation.

Method of Measurement. GEOTECHNICAL REINFORCEMENT will be measured in square yards for the installed surface area below the proposed pavement, barrier base, curb and gutter, or shoulder, plus as needed along the sides of the excavation. No measurement of overlapping material will be made. If more than one layer is placed due to design considerations, only one layer will be measured for payment. All excavation and placements and compaction of the AGGREGATE SUBGRADE IMPROVEMENT shall be measured and paid for separately.

Basis of Payment. The work will be paid for at the contract unit price per Square Yard for GEOTECHNICAL REINFORCEMENT.

Added 4/15/2020