



**SPECIAL PROVISIONS  
FOR  
CONSTRUCTION OF SOIL-FLYASH SUBBASE**

**Tama County  
FM-C086(87)--55-86**

**Effective Date  
April 16, 2013**

**THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**121020.01 DESCRIPTION.**

Soil-flyash sub-base shall consist of soil from the subgrade and any mineral aggregate present on the road surface combined with flyash. These materials shall be mixed, shaped, and compacted in accordance with the plans and these specifications.

**121020.02 MATERIALS.**

The materials used shall meet the requirements as specified below.

- A.** Flyash shall be Class C. The engineer may approve other flyash in writing.
- B.** Water shall meet the requirements of Section 4102 of the Standard Specifications.

**121020.03 EQUIPMENT.**

The contractor shall provide all equipment necessary for the construction of the subbase.

- A. Pulverizing Equipment.**  
Article 2001.17 of the Standard Specifications shall apply.
- B. Equipment for Applying Water.**  
Article 2001.09 of the Standard Specifications shall apply.
- C. Flyash Spreading Equipment.**  
Flyash shall be spread by a device or method that will minimize fugitive dust and distribute the flyash uniformly at the prescribed rate on or in the material with which it is being incorporated.
- D. Flyash and Soil Mixing Equipment.**  
Furnish a self-propelled machine capable of reclaiming the existing subgrade and flyash to the width and depth shown in the contract documents. Ensure the machine meets the following:

1. Equipped with automatic depth control and maintain a constant cutting depth and width.
2. Capable of pulverizing material to the required gradation.
3. Capable of mixing the subgrade and flyash into a homogeneous mixture.

**E. Compacting Equipment.**

Article 2001.05 of the Standard Specifications shall apply.

**121020.04 ROADBED CORRECTION.**

The cross section shall be checked with an accurate template extending at least halfway across the width of the roadbed, and deviations of more than 1 inch from the template shall be corrected.

**121020.05 CONSTRUCTION.**

The soil-flyash sub-base shall be constructed to the width and thickness shown on the plans and in conformance with the following requirements:

**A. Application of Flyash.**

Approved equipment for handling, weighing, and spreading shall be provided. Spread flyash that has been displaced by construction traffic, or by other means, shall be replaced or redistributed before mixing is started. Flyash shall not be applied when the material to be processed or the sub-grade is frozen nor when the air temperature is below 40°F.

**B. Mixing and Pulverization.**

The soil and flyash shall be uniformly mixed to the width and depth shown. The moisture content of the mixture will be approved on the basis of visual inspection. The mixture is to be pulverized to the extent that the complete mixing will be done at this time and initial compaction is to follow immediately. The mixture shall be uniformly wetted or dried, so that at the time it is spread and compacted, it shall contain the amount of water necessary to obtain the required density, together with stability, with the field compaction process.

**C. Compaction.**

The prepared material shall then be so spread and shaped as to assure conformance with the cross section shown on the plans after compaction. The material shall be compacted at the moisture content specified in Paragraph B to a density not less than 95% of the maximum density as determined by Iowa DOT Materials Laboratory Test Method 103. During compaction operations, such additional shaping shall be performed as may be necessary. The profile and cross section shall meet the requirements of Article 121020.04.

**121020.06 MAINTENANCE OF COMPLETED SUB-BASE.**

Hauling equipment and other traffic shall not be operated on the sub-base.

**121020.07 METHOD OF MEASUREMENT.**

Soil-flyash sub-base material furnished and placed in accepted portions of work will be measured in square yards for the specified design thickness. The design thickness of the placed material will be verified by spot checks of the grade. The measured area will be based on plan dimensions for the finished surface but will exclude fillets.

**121020.08 BASIS OF PAYMENT.**

The Contractor will be paid the contract unit price per square yard for each design thickness of soil-flyash subbase as measured above. This payment shall be full compensation for furnishing and placing all materials, water, preparation of subgrade, and doing all work necessary to complete the subbase in compliance with the contract documents.