

**SECTION 02969**

**OPTIONAL USE OF RECLAIMED ASPHALT PAVEMENT  
(PG GRADE PROJECTS ONLY)**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Option to incorporate Reclaimed Asphalt Pavement (RAP) materials into hot mix asphalt pavement, dense-graded material only.

**1.2 RELATED SECTIONS**

- A. Section 02741: Hot Mix Asphalt (HMA)
- B. Section 02745: Asphalt Materials
- C. Section 02746: Hydrated Lime
- D. Section 02961: Rotomilling

**1.3 REFERENCES**

- A. UDOT Materials Manual of Instruction

**1.4 SUBMITTALS**

- A. Quality plan.
  - 1. Submit for Engineer approval.
  - 2. Provide for independent testing of the reclaimed material and the total mixture at no additional cost to the Department.

## **PART 2      PRODUCTS**

### **2.1      PG BINDER**

- A.      Meet the cold end requirements of the design grade for a virgin mix.
- B.      The hot end of the PG grade may be one grade above the grade specified.
- C.      Reduction in the RAP content may be required if the low end of the PG grade for the binder does not meet the original grade specified. If a standard PG binder cannot meet the cold end requirement, then RAP will not be allowed.
- D.      A 5 percent or greater change in either the RAP or virgin materials requires a new mix design. Engineer approves changes in mix proportions.
- E.      Combined virgin and RAP material must meet all requirements of Sections 02741, and 02745 with the exception of the mix design that must meet SHRP requirements. RAP material does not have to be 100 percent crushed as outlined in the above sections.
- F.      May use up to 25 percent RAP by total weight in the hot mix asphalt. RAP may only be used if approved by the Engineer.

### **2.2      MIX DESIGN**

- A.      Complete the mix design including the RAP material using a Materials Division approved independent laboratory following SHRP volumetric mix design procedures.
- B.      Provide separately the following for reclaimed portion and virgin portion:
  - 1.      Gradation
  - 2.      PG Grade
  - 3.      Asphalt content
- C.      Provide the following for the combined portion:
  - 1.      Gradation
  - 2.      PG Grade
  - 3.      Asphalt content
  - 4.      RAP content

## **PART 3 EXECUTION**

### **3.1 RECLAIMED MATERIAL**

- A. Remove the existing surface as outlined in Section 02961.
- B. Only material rotomilled from 2 inches below the existing surface will be allowed to be recycled into the dense-graded asphalt concrete material.
- C. Crush or screen the reclaimed material to be used for recycle to pass a 1-1/2 inch sieve.
- D. Screen and separate the RAP to be used for recycle into two stockpiles.
  - 1. Stockpile: Material passing the 1-1/2 inch sieve and retained on the No. 4 sieve.
  - 2. Stockpile: Material passing the No. 4 sieve.
  - 3. Material retained on the No. 4 sieve will have no more than 10 percent override of the material passing the No. 4 sieve during the screening process.
  - 4. Use separate cold feed bins for each stockpile.
- E. Use screened reclaimed material free of organic materials, soil, or other foreign substances.

### **3.2 LOTTMAN TEST**

- A. Engineer verifies a Lottman Test on the proposed job mix to determine the percentage of lime required.
  - 1. Complete and have approved the Lottman Test before the project paving begins.
  - 2. Eighty percent retained tensile strength is required.
  - 3. Lime slurry or marination of one or more stockpiles may be necessary to meet the strength requirement. Refer to Section 02746 and UDOT Materials Manual, procedure 8-957.

END OF SECTION