

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**CONTROLLING UNIFORMITY IN HOT MIX ASPHALT PAVEMENT
DURING PAVING OPERATIONS**

C&T:MJB

1 of 2

C&T:APPR:MF:GMM:08-29-01
FHWA:APPR:08-06-02

a. Description. All work shall be done according to the standard specifications, except as modified herein. This special provision shall be used to help assist the Contractor and Engineer in identifying segregation and taking corrective action to eliminate segregation when it is present in the hot mix asphalt pavements. This special provision requires the use of a nuclear density gauge and the MDOT MBITSEG2 computer program to assist in locating segregated areas.

b. Terminology Used.

Segregation - Areas of Hot Mix Asphalt Pavement exhibiting non-uniform distribution of coarse and fine aggregate particles that are visually identifiable or can be identified by other methods.

Heavy Segregation - An area showing stone against stone, with little or no matrix visible.

Medium Segregation - An area showing significantly more stone than surrounding pavement with a lack of matrix.

c. Equipment. Nuclear Density Gauge provided by the Contractor.

MBITSEG2 Excel or Quattro Pro computer program provided by the Department.

d. Quality Control of Contractors Construction Process. Hot Mix Asphalt Pavement materials shall be produced, transported, placed and compacted with the proper construction processes to provide uniform volumetric properties throughout the entire cross section of pavement. When heavy segregation is identified visually in the pavement by the Contractor or the Engineer, a set of six to fifteen one minute nuclear density measurements shall be taken by the Contractor in the segregated area, a similar set of readings shall also be taken in an adjacent non segregated area. The mean value of the density of the two areas shall be compared using MDOT's MBITSEG2 computer program. When it is determined that corrective action is needed, the Contractor shall implement corrective actions immediately and report them to the Engineer before the next day's paving begins. The Contractor shall also provide, in writing, the actions that will be taken to eliminate segregation. The Contractor, with the Engineer, shall closely monitor the in-place pavement when paving resumes. If, once paving resumes, heavy segregation is identified, the Contractor shall stop production and a complete evaluation of the manufacturing and paving process shall be completed. This evaluation shall follow the troubleshooting guide and suggested changes according to the equipment manufacturer's recommendations or the guide manual *AASHTO Segregation Causes and Cures For Hot Mix Asphalt*.

The Engineer reserves the right to independently monitor the uniformity in hot mix asphalt pavement and require that the Contractor take corrective action if segregation is identified.

e. Measurement & Payment. No additional compensation will be made for corrective action required or operational changes to prevent segregation. This work will be considered as included in other contract items.