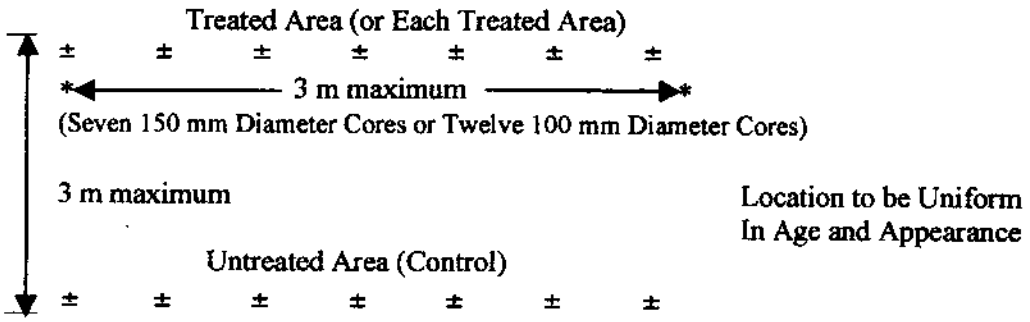
FIELD SAMPLING AND LABORATORY TESTING PROCEDURES
REJUVASEAL PAVEMENT SEALER

The field sampling program consists of:

1. At each location where samples are required for recovered asphalt cement properties determination, the cores are to be obtained for each area (untreated and treated) as indicated below:



The number of cores required for each core (untreated and treated) at each sampling location will depend on the diameter of the cores: if 150 mm diameter cores are taken, seven cores will be needed for each sampling area; if 100 mm diameter cores are taken, at least twelve cores from each sampling area will be needed. (The use of 150 mm diameter cores is encouraged.) Each corehole is to be properly reinstated using cold-mix asphalt that has been properly placed and well compacted.

2. Cores for asphalt cement properties testing should be carefully packaged and shipped to the selected testing laboratory in suitable containers to prevent damage to the cores. The location of each core should be noted along with: the type of asphalt concrete surface course; age or estimated age of the asphalt concrete surface course; and condition of the asphalt concrete surface (oxidized, ravelling, cracked, etc.). This information is important for reporting purposes.

The laboratory testing of the cores consists of:

1. After general examination and description of the cores for the location(s) and areas (untreated and treated) in the laboratory, six cores for each area are randomly selected (if 150 mm diameter; ten cores if 100 mm diameter), the top 12.5 mm of each core is carefully removed by sawcutting (cores can be frozen prior to sawing to prevent damage), and the top 12.5 mm of each core can then be used to make a composite sample for the area.

2. The surface course from the remaining (seventh) core for each area (if 150 mm diameter, or composite of two cores if 100 mm diameter) is tested to determine its air voids (ASTM D2041 and ASTM D2726), asphalt cement content (ASTM D2172), and aggregate gradation (washed gradation, ASTM C136). A simple petrographic examination should also be completed to identify the coarse aggregate type (rock type(s) and source (pit or quarry)) and physical characteristics such as shape, hardness, etc.

3. The asphalt cement content of each composite sample (each area) is then determined (ASTM D2172), with the asphalt cement then recovered using the Abson method (ASTM D1856). The following tests are then completed on each recovered asphalt cement: Absolute Viscosity at 60°C (ASTM D2171); Penetration at 25°C (ASTM D5); and Ductility at 25°C (ASTM D113).

The test results for each recovered asphalt cement are considered representative of that area (location and untreated or treated). Please note that relatively small test sample sizes are involved throughout so that care must be taken to optimize handling and testing procedures.

[The above procedure has been developed from Echelon notes of April 1, 1994.]