HMA IC Test Strip- required for HMA with minimum thickness of 0.15' or more.

Goal: Establish rolling pattern, and ICMV

I. Field

  A. Choose test Strip location

    1. 600 feet long

    2. Use rover to establish test strip boundary

    3. Correlate nuclear gages with density core

    4. Establish 3 randomly selected nuclear gage density locations. Record the position of the density test locations using handheld rover.

  B. Determine rolling pattern

    1. After each coverage measure density at 3 preselected random location using nuclear gage and record.

    2. Record the pass (coverage) number

    3. Record type of the roller

    5. Calculate average density for each pass (coverage)

    6. Plot average density vs. No. of passes

      a. Determine the corresponding no. of passes when density stays constant or decreases within the specified density requirement (i.e. 91% to 97% maximum theoretical density).

        (1) Take an additional 7 randomly selected nuclear gage readings   Average the 10 gage readings.

          (a) If the average density (10 locations) equals or exceeds the maximum specified density, the test strip density is established.

          (b) If the average density (10 locations) does not equal or exceeds the maximum specified density and the average density is greater than the previous average density by more than 3%

            i) Establish new test strip density till the average density

              (1) Continue rolling using steel or rubber tire roller

              (2) Measure density at 10 random location

              (3) Plot average density vs. passes

              (4) Determine the test strip density

              (5) If the average density (10 locations) equals or exceeds the maximum specified density or density is lower or higher by less than 3% than the previous density

                i) Stop rolling

ii)   Test strip density is established

Density
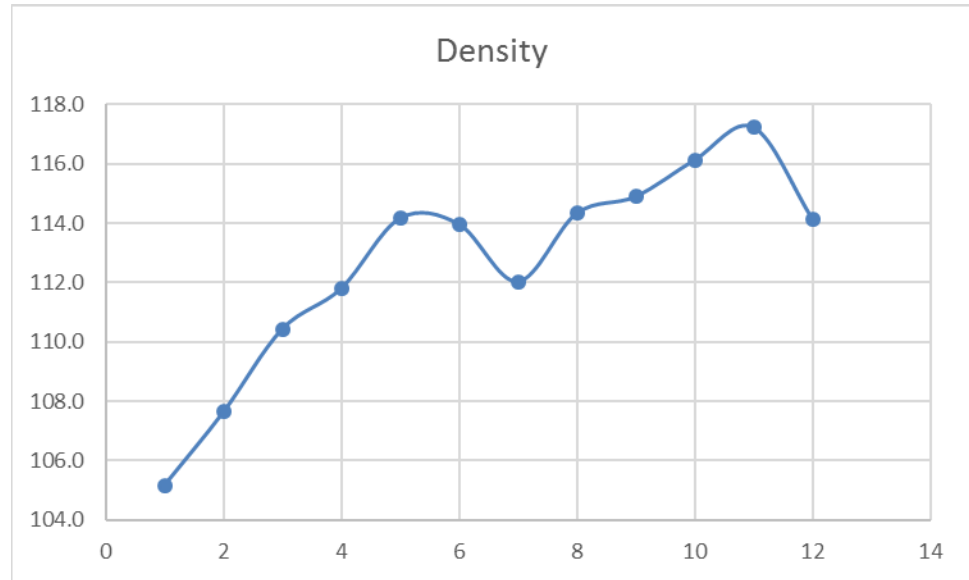
II.   VETA Analysis

   A.   Download the latest version of VETA from www.intelligent.com

   B.   Use vendor's software to combine all rollers data. If vendor's software cannot process Combine rollers data, separate analyses for steel drum and pneumatic tire roller

      1.   Steel drum vibratory IC roller

         a.   Import all passes data (*,csv or *.pln) into VETA

         b.   Enter the coordinate system

         c.   Set up the test strip boundary as a filter location to exclude outside work data

            (1)   Set the filter compaction mode to vibratory

         d.   Enter or import the density reading corresponding to each pass

         e.   Run analysis with test strip filter, for number of passes for IC roller

         f.   Use compaction curve for all passes to determine the target ICMV corresponding to target No. of passes established in field for break over point

         g.   Report
             Prepare and include the following

            (1)   Complete form CEM-IC10

            (2)   Excel spreadsheet of boundary coordinates

            (3)   Excel spreadsheet of gage density readings and coordinates

            (4)   Plot of field average density vs. number of passes

            (5)   Plot of compaction curve for all passes

            (6)   Plots of coverage for all passes and individual passes (11"x17")

      2.   AMG rubber tire roller

a. Import all passes data (*,csv or *.pln) into VETA

b. Enter the coordinate system

c. Set up the test strip boundary as a filter location to exclude outside work data

   (1) Set the filter compaction mode to static

d. Enter or import the density reading corresponding to each pass

e. Run analysis with test strip filter, for number of passes for AMG roller

f. Use compaction curve for all passes to determine the target density corresponding to target No. of passes established in field for break over point

g. Report

   Prepare and include the following

   (1) Complete form CEM-IC10

   (2) Excel spreadsheet of boundary coordinates

   (3) Excel spreadsheet of gage density readings and coordinates

   (4) Plot of field average density vs. number of passes

   (5) Plot of compaction curve for all passes

   (6) Plots of coverage for all passes and individual passes (11"x17")