Test Procedure for

PREPARING CONTROL CHARTS FOR ASPHALTIC CONCRETE PAVING PROJECTS

TxDOT Designation: Tex-233-F

Effective Dates: August 1999–September 2016.

1. SCOPE

1.1 Use this method to graphically display and track asphaltic concrete test results. In some cases, the charts will predict failure to meet specifications, allowing preventive intervention

1.2 The values given in parentheses (if provided) are not standard and may not be exact mathematical conversions. Use each system of units separately. Combining values from the two systems may result in nonconformance with the standard.

2. PROCEDURE

2.1 Complete the project identification and other heading information lines.

2.2 Place job-mix formula percentages, tolerance limits, and specification criteria in the left hand column (y-axis) as in Figure 1. Draw tolerance limits across each graph as in Figure 2.

2.3 Plot the first set of data points in the first vertical column. Use the conventions in Table 1.

Table 1—Conventions for Control Charts

Convention	
●	Individual standard sample test result, whether a contractor-performed control test or a Department-performed verification test
X	Average of test results from two or more standard samples from the day or sublot
Δ	Independent assurance test result
□	Referee sample test result

2.3.1 Use black to indicate the results of contractor-performed testing.

2.3.2 Use red to indicate the results of all Department-performed testing.

2.4 Identify each column of data points on the blank line below the axis.

2.4.1 Include lot, sublot, and date and time sampled for QC/QA projects.

2.4.2 The sample date and time will be adequate for non-QC/QA projects.

2.5 Continue to plot test data daily in order by sublot or sample date and time. Connect the data points with heavy lines as shown in Figure 2.

2.6 Note adjustments to the job-mix formula or new job-mix formulas above the first column of data points to which it is applicable. (See Figure 3 for example.)

3. TEST RECORD FORMS

3.1 Use an Asphaltic Concrete Control Chart, shown in Figure 4. Charts may be attached, end-to-end, to extend the form-length to cover an entire project.

3.2 A separate chart is required for each mixture type.

3.3 Post control charts on a wall in the plant laboratory where they can be viewed by both contractor and Department personnel.

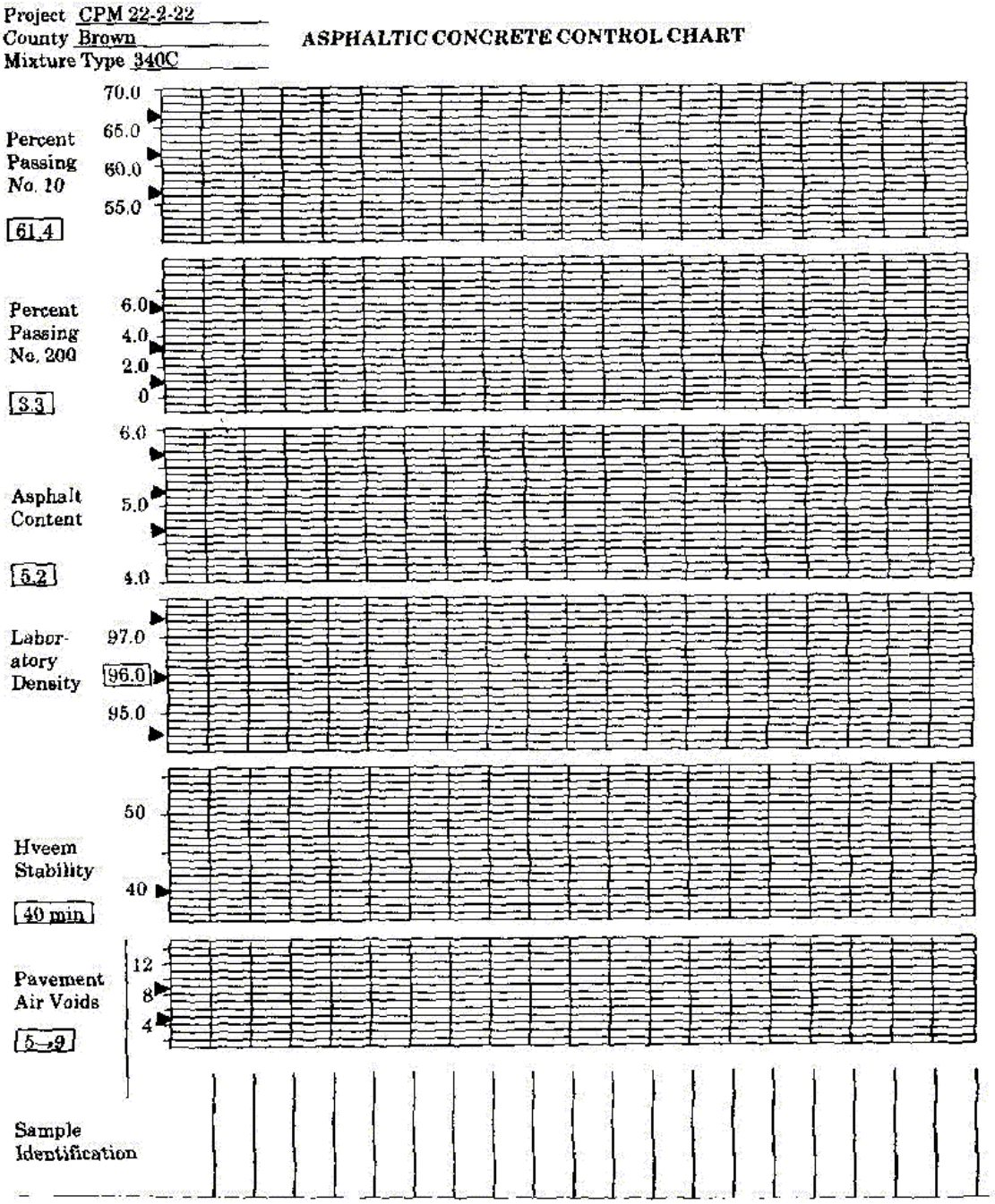

Figure 1—Asphaltic Concrete Control Chart (Example 1)

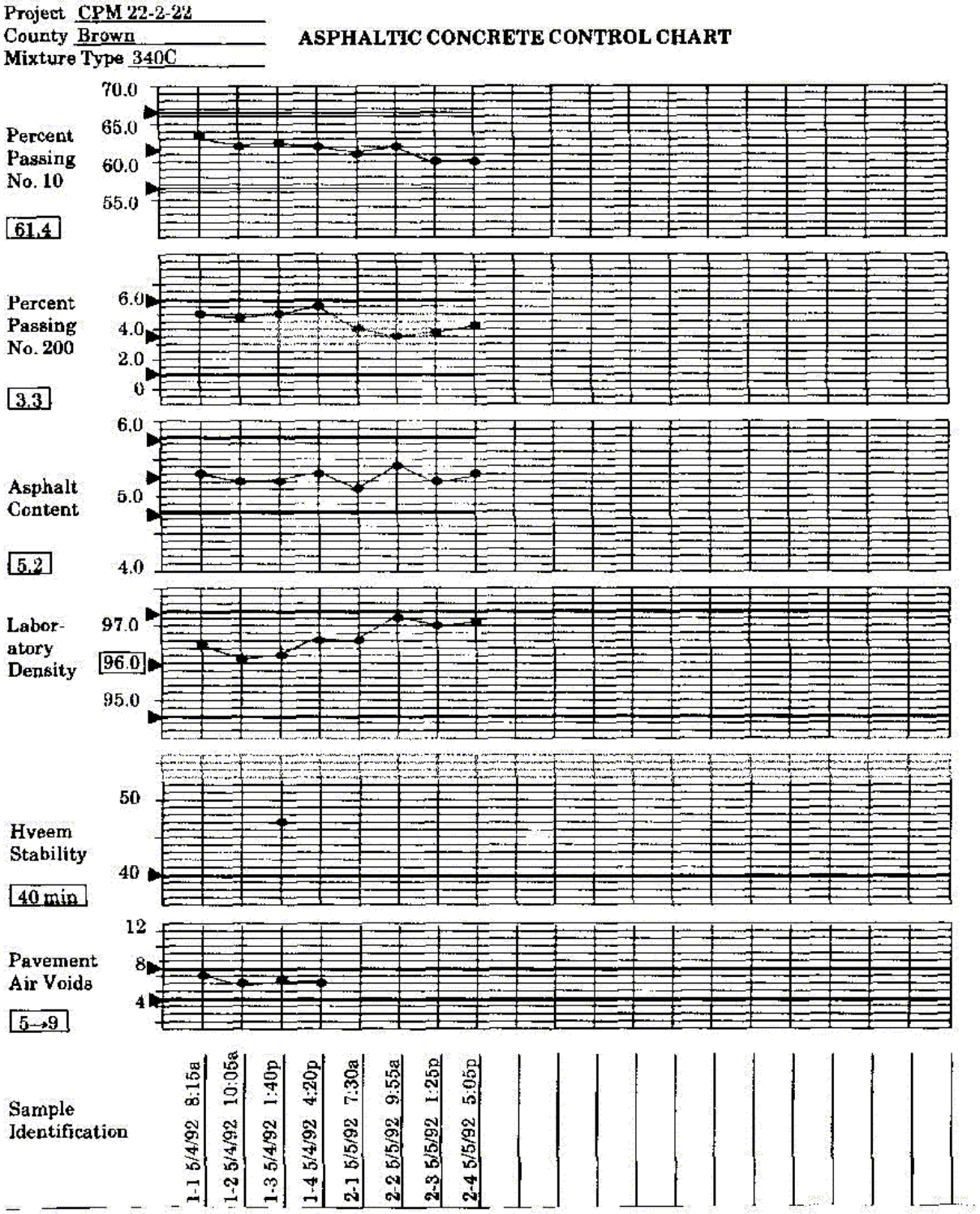

Figure 2—Asphaltic Concrete Control Chart (Example 2)

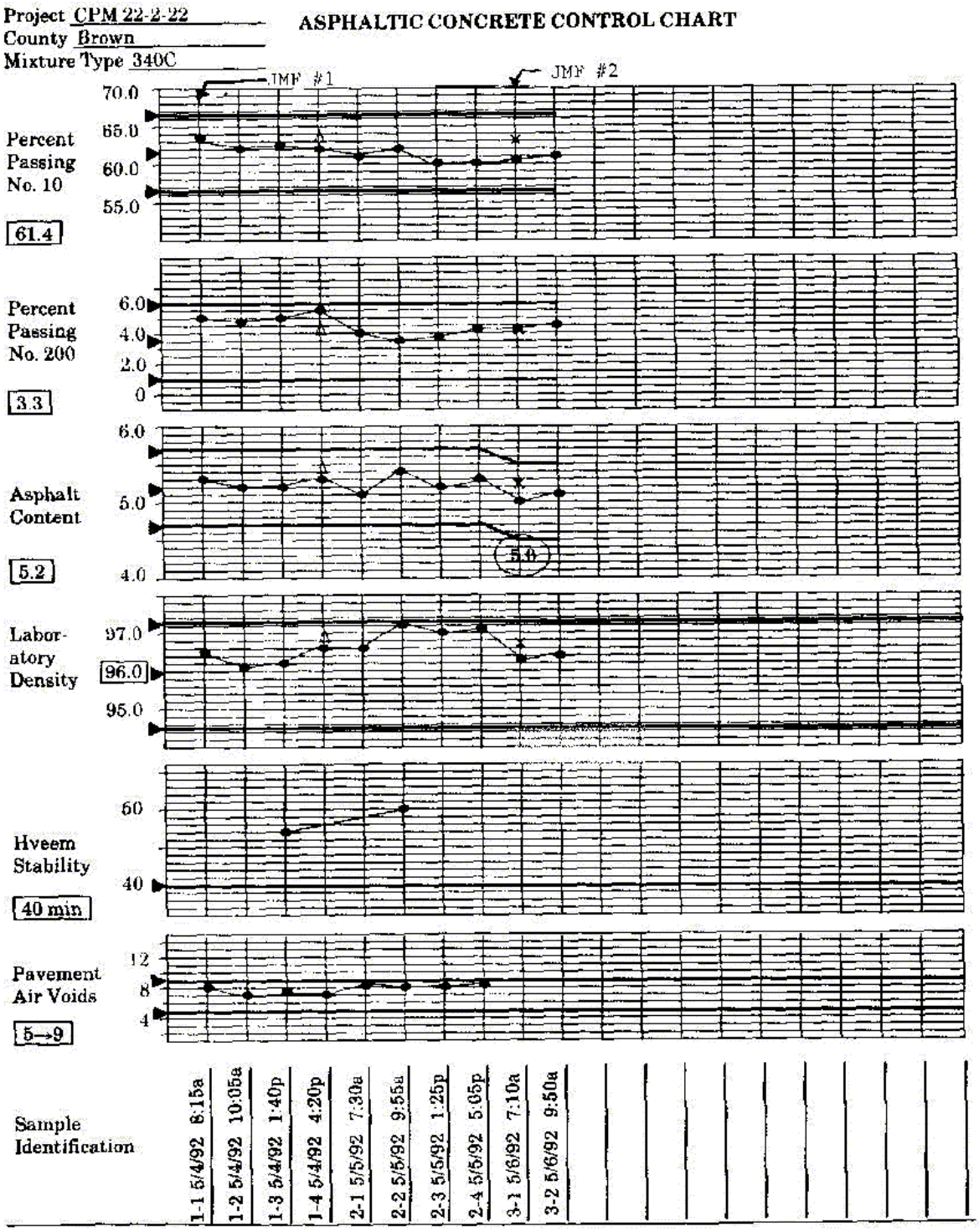

Figure 3—Asphaltic Concrete Control Chart (Example 3)

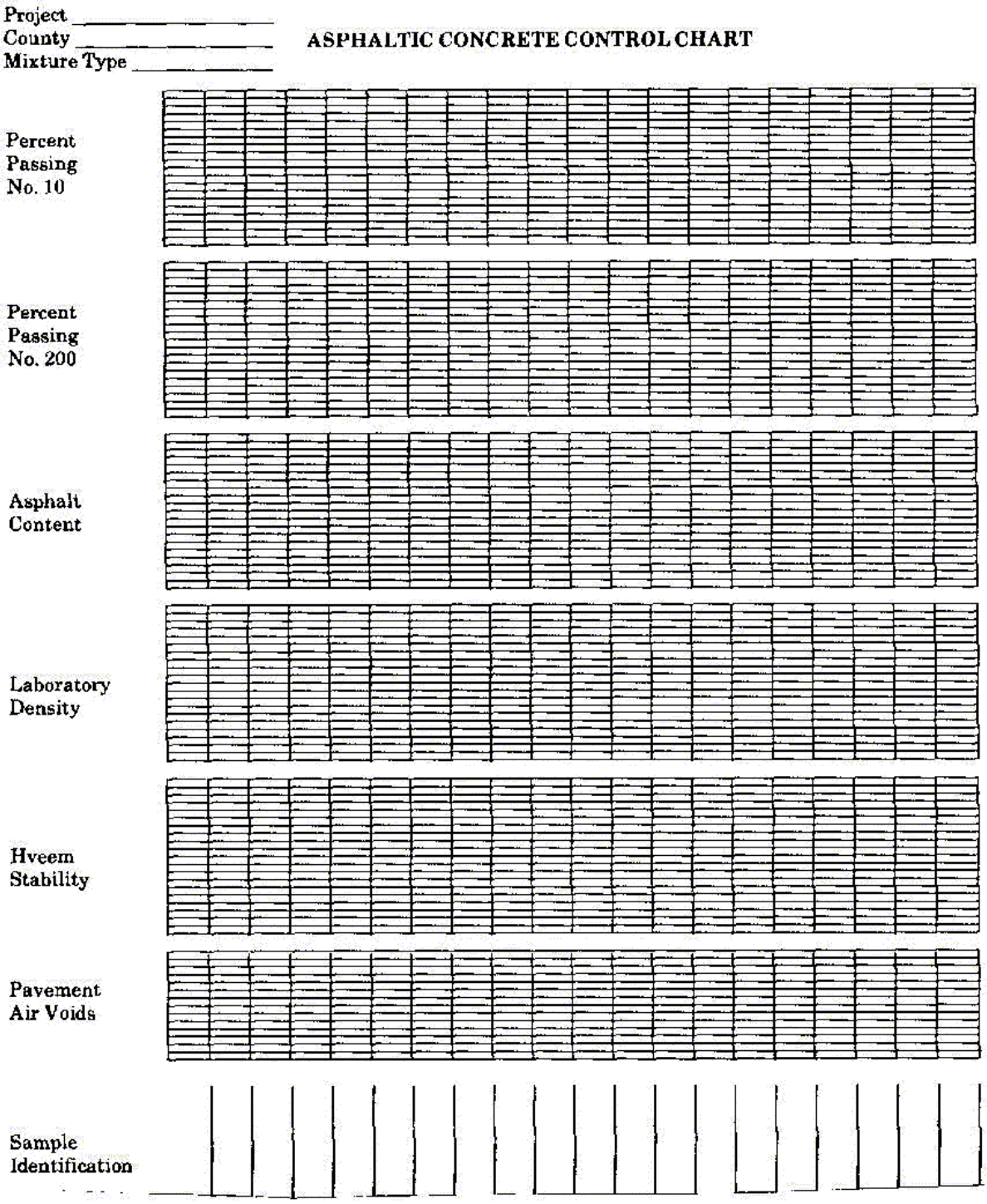

Figure 4—Asphaltic Concrete Control Chart (Blank Form)