**Washington State
Department of Transportation**

WSDOT SOP 735
Standard Operating Procedure for Longitudinal Joint Density

1. General Scope

a. This procedure describes the method for determining the location of a longitudinal joint density test.

b. Longitudinal joint density tests are performed in addition to Quality Assurance (QA) density tests.

c. One longitudinal joint density test will be performed on the confined or unconfined edge at each longitudinal joint.

2. Longitudinal Joint Testing

a. The longitudinal joint density test will be conducted in accordance with WSDOT FOP for WAQTC T 355, except "Test Site Location, Section 1, subsection c, which is modified by this procedure to read "No closer than 18 in (450mm) to any vertical mass, or less than 6 in (152 mm) from a vertical pavement edge," making sure the gauge will sit flush with the hot-mix asphalt (HMA). See Figure 1.

b. A longitudinal joint density will be required on the lane edge side of a shoulder if the shoulder is required to meet the same QA density requirements as the traveled lane.

Note: Hot lap joints are not included in longitudinal joint testing.

3. Number of Longitudinal Joint Tests

a. For projects requiring 400 tons sublot with 5 sublots – One reading, at each longitudinal joint to be tested, will be taken within each compaction lot at the same station location as the third sublot.

b. For projects requiring 80 ton sublots – One reading, at each longitudinal joint to be tested, will be taken every four hundred tons or at every fifth sublot tested.
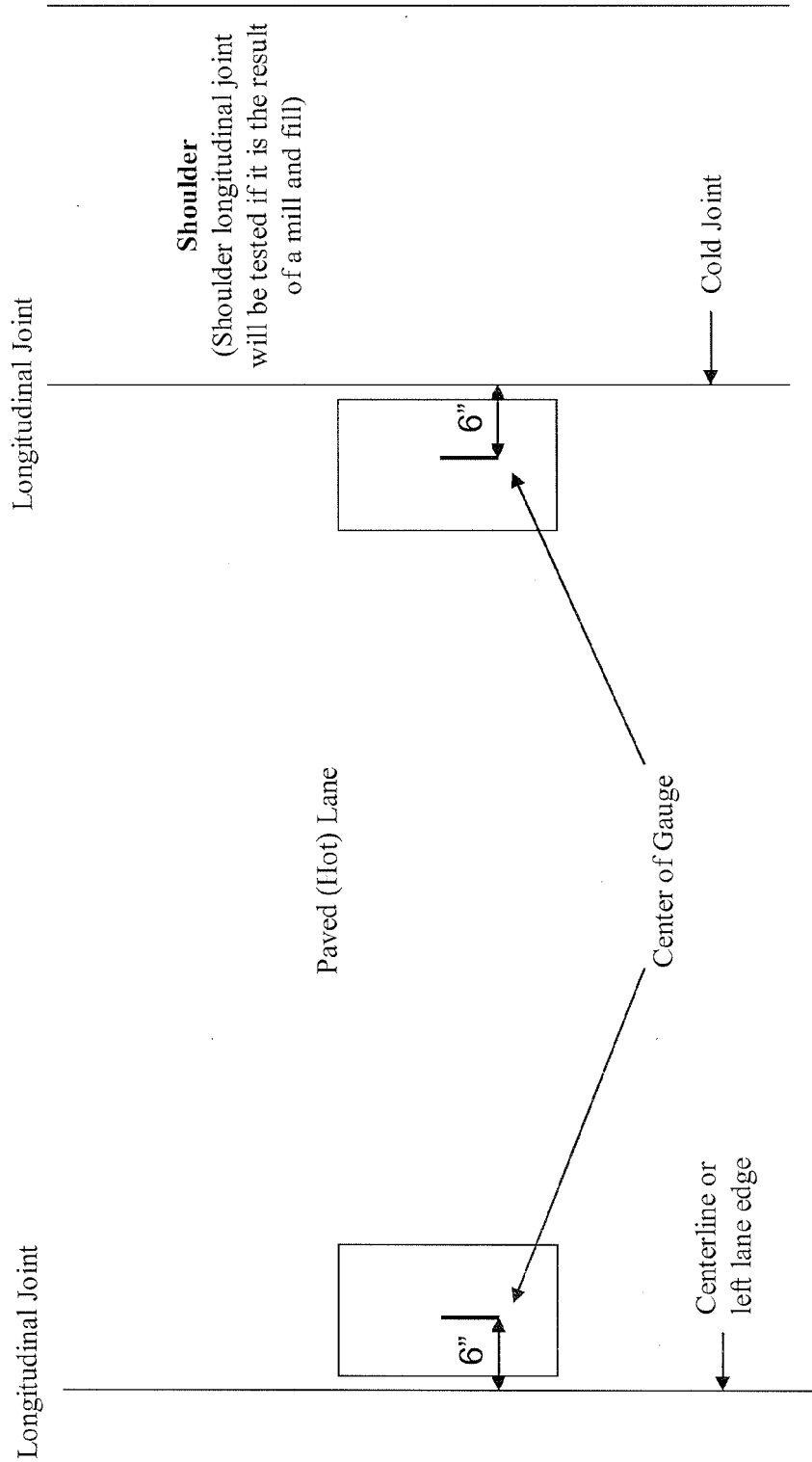
4. Calculation of Results

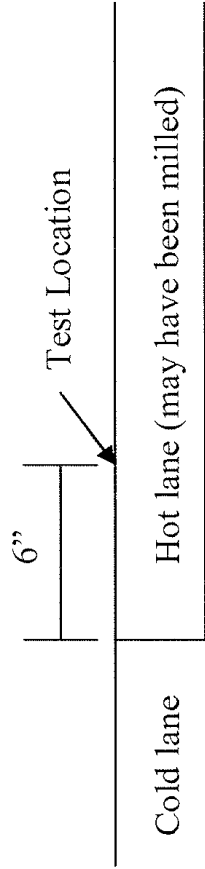a. Calculate the Longitudinal Joint density in accordance WSDOT SOP 729.

5. Report

a. Report the results using one or more of the following:

- Materials Testing System (MATS)

- WSDOT Form 350-095

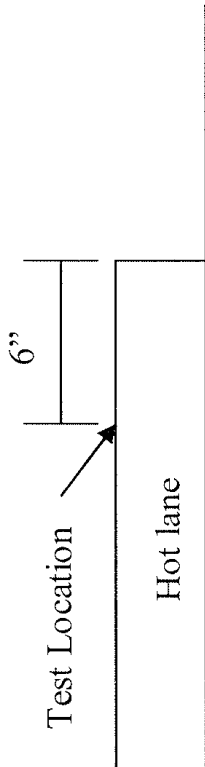- Form approved in writing by the State Materials Engineer

Note: Lot Number corresponds to the lot where the set of longitudinal joint readings were taken. The station corresponds to the station within the lot (i.e., third sublot) where the set of longitudinal joint readings were taken.

Shoulder
(Shoulder longitudinal joint will be tested if it is the result of a mill and fill)

Longitudinal Joint

Cold Joint

6"

Paved (Hot) Lane

Center of Gauge

6"

Longitudinal Joint

Centerline or left lane edge

Longitudinal Joint Testing Locations
Figure 1

Longitudinal Test Location Examples
Figure 2