

Memorandum

Federal Highway Administration

6300 Georgetown Pike McLean, Virginia 22101

Subject:	ACTION: LTPP Directive P-58	Date:	May 22, 2019
	Diurnal Collection of Longitudinal Profile Data on		
	SPS-2, GPS-3, and SPS-8 Rigid Pavement Test Sec	ctions	

From:	Larry Wiser	Reply to	
	Long-Term Infrastructure Performance Team	Attn of:	HRDI-30

Mr. Gabe Cimini, PM - LTPP Data Collection Contract To:

> Attached is the Long-Term Pavement Performance (LTPP) Program Directive P-58, which supersedes directive P-46 Diurnal Collection of Longitudinal Profile Data on SPS-2 Project Sites.

> Should you have any questions or would like to discuss this directive, please do not hesitate to contact Larry Wiser via email at Larry. Wiser@dot.gov or (202) 493-3079.

Attachment (1)

FHWA:HRDI-30 LWiser:jeh:493-3079:05/22/19 File: M:\LTPP Directives\PROFILE\P-58 cc: Jonathon Groeger Directive Binder LTPP Team Official file

LONG TERM PAVEMENT PERFORMANCE PROGRAM DIRECTIVE



For the Technical Direction of the LTPP Program



Program Area:	Monitoring	Directive Number:	P-58	
Date:	May 22, 2019	Supersedes:	P-46	
Subject:	Diurnal Collection of Longitudinal Profile Data on SPS-2, GPS- 3, and SPS-8 Rigid Pavement Test Sections			

The Data Collection Contractor (DCC) shall perform the following profile measurements on all currently active SPS-2, GPS-3, and SPS-8 rigid pavement test sections. The measurements shall be performed in accordance with the following guidelines.

- The objective is to perform a minimum of three and up to five repeat sets of measurements, either on the same day or on two consecutive days within the following time windows:
 - Maximum negative gradient window: 5–7 am (prior to sunrise).
 - Neutral temperature gradient windows: 9–11 am or 7–9 pm.
 - Maximum positive gradient window: 1–3 pm.

These time windows can be adjusted plus or minus an hour depending on site conditions and daylight-saving time conventions.

- Flexibility is allowed in obtaining the desired number of profile measurements during each time window on consecutive days. The following are examples of potential testing scenarios:
 - Arrive at staging area day before testing. On day of testing, perform the required number of measurements between the hours of 5-7 am, 9–11 am, and 1-3 pm.
 - Arrive at the test location after 11 am. Perform the 1-3 pm and 7-9 pm measurements sets on the first day. On the second day, perform the 5-7 am measurements.
 - Arrive at the test location after 4 pm. Perform the 7-9 pm measurements on the first day. On the second day, perform the 5-7 am and 1-3 pm measurements.
- The number of measurements passes during each time period depends on the time it takes to perform measurements on the project site and return to the start point within each two-hour time window. A minimum of three measurement passes which do not contain equipment measurement errors is required. Five measurement runs within each time window are desired. LTPP rules concerning variability between measurement passes are not applicable to these data sets within each measurement time window or overall on the test day. The overarching quality check on these data sets is related to equipment measurement problems and errors, which are judged by the equipment operator to result in suspect data quality.

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- It is preferred that these measurements be performed during the period May to August. However, scheduling issues may require measurements at other times of the year.
- The file naming convention similar to that used for SMP test sections as contained in section 2.2.7.3 of Version 4.1 (May 2004) of the LTPP Manual for Profile Measurements and Processing shall be used for these measurements. Character 7 in the file name should be the letter M.
- When diurnal profile measurements are performed on a section or site, the full set of normal profile measurements in conformance with LTPP standards are not required to be performed in addition to the diurnal measurements.
- Exceptions to performing diurnal measurements following these guidelines include:
 - Site conditions during the test period have complete cloud coverage during the daylight period, which should be documented with photographs.
 - Other weather conditions exist where "significant" heating of the pavement surface is not expected to occur during the neutral and maximum positive gradient time windows.
 - Traffic congestion prevents the achievement of the required operating speed during target measurement time windows.
 - Equipment malfunction issues prevent collection of data during the specified time windows.

When performance of diurnal measurements on the specified test sections are deemed not possible or impractical, the reason shall be documented in the operators log, and the DCC Project Manager shall notify FHWA staff for the reasons why diurnal measurements were not performed. If diurnal measurements are not performed, a full set of normal profile measurements shall be performed in conformance with normal LTPP standards.

• If three acceptable repeat measurements within the designated time windows are not achieved at a test site for any reason, then a full set of normal profile measurements shall be performed in accordance with LTPP standards.

Question concerning this directive should be addressed to the FHWA LTPP Team representative responsible for profiler activities.

Prepared by: TSSC

Approved by:

Jean A. Nehme, Ph.D., P.E. Long-Term Infrastructure Performance Team Leader (HRDI30)