

LONG TERM PAVEMENT PERFORMANCE PROGRAM DIRECTIVE



For the Technical Direction of the LTPP Program



Program Area:	General Operations	Directive Number:	GO-24
Date:	May 2, 2000	Supersedes:	N/A
Subject:	General Specifications for LTPP Digital Cameras		

Photographs are used within the LTPP program for many purposes and reasons; e.g., document site visits, document SMP installations/de-installations, document AWS installations, supplement distress data, supplement QA review visits, capture special events or activities such as meetings for posterity, etc. To date, most of those photographs have been taken using 35 mm film (analog) cameras, which are of satisfactory quality but difficult to store and share with potential LTPP data users. To overcome those limitations, the LTPP management team has decided to begin using digital cameras effective immediately.

The general specifications for the digital cameras to be purchased by LTPP operations contractors for use within the LTPP program are as follows:

- Resolution: must support 640x480 resolution and have maximum resolution of 1600x1200 or better.
- Focal length: minimum 35mm.
- Zoom: 2.5x or better.
- Storage: minimum of 8MB removable memory (additional cards may be purchased if required).
- Lens: auto-focus and programmable auto-exposure (AE).
- Flash modes: red-eye reduction, off, on, and auto.
- Viewfinder: optical.
- LCD Display: 2 in or better.
- Operating system: connect to Windows platform via serial or parallel cable.
- Hardware must include: serial or parallel cable (PC), video cable, 8MB or better removable memory, batteries (purchase of additional batteries is encouraged), external power adapter/charger, lens cover, and hand strap.
- Software must include: utility software and, as appropriate, photo enhancing software.

Cameras that meet above criteria include, but are not limited to, the following: Fujifilm MX-2700, AGFA ePhoto CL50, Nikon CoolPix 950, and Epson PhotoPC 850Z.

Upon implementation of this Directive, the four LTPP operations contractors shall each purchase two (2) cameras for use within the LTPP program. Within two (2) months of the purchase of the camera, each operations contractor should provide an evaluation of the digital camera to the FHWA LTPP Team Leader. At a minimum, the evaluation should include details on the following:

- Overall ease of use, from taking digital photos to downloading and storing
- Comparison of ease or difficulty of use of the digital camera to a 35 mm camera
- Evaluation of best resolution for taking digital photos
- Operational costs (batteries, memory cards, etc.)
- Other information that would prove useful in the future purchase of additional cameras
- Information that may warrant a change to improve data collection and storage

If two digital cameras will not cover all data collection operations where digital photographs are necessary, please continue to utilize 35 mm cameras to obtain necessary photos until further camera purchases are warranted. Photographs taken with 35 mm cameras should be taken and, once developed, scanned and saved in *.jpeg format using the same file naming format as Directive D-16, Distress Photographs Using Digital Photographs. The *.jpeg files will then be saved on CD ROM as per the storage format in Directive D-18, Storage of LTPP Digital Distress Maps and Photographs .

Questions concerning this directive should be addressed to the FHWA LTPP Team Leader, with a copy to the LTPP Technical Support Services Contractor.

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Approved by:

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