Highway Design Manual (Vol. 1)
List of Major Revisions to Chapter 6 (Drainage)

1. General
   a. Removed all references to the “Hydraulic Engineer”.
   b. Performed general grammatical revisions and sentence restructuring.
   c. Revised the primary units to English.
   d. Included specific chapter references at the end of the Chapter.

2. Introduction
   a. Added a reference to Pollutant Loading.

3. Responsibility
   a. Added a reference to in-house and Consultant designers.

4. Permits
   a. Updated the paragraph relating to the NPDES Storm Water Construction General Permit.

5. Runoff Computations
   a. Added a reference to the section entitled “Storm Design Frequency” for the analysis of existing soil type and groundwater conditions to determine the feasibility of BMP types.
   b. Updated the section on Detention Basins (revised the title to include “for Peak Flow Control”).

6. Storm Sewers
   a. Revised the sections relative to the hydraulic grade line calculations. Added a reference to sag/ snow curb locations relative to ponding limits, and added the use of recommended core hole diameters for sizing structures.
   b. Added drainage design recommendations for curbed medians greater than 6 ft wide.
   c. Added a section entitled “Selection of Pipe Material”.

7. Culverts
   a. Revised the order of preference in the selection of culvert type to list pipe arches last.
   b. Added a paragraph to the section entitled “Environmental Issues” referencing culvert inlet protection.
8. **Erosion Control**  
   a. Revised the list of items for use in implementing temporary and permanent BMP’s based upon updated specifications and item numbers.

9. **Water Quality**  
   a. Revised this section to include additional discussion on permanent water quality BMP’s.  
   b. Included specific BMP design criteria based upon interim NHDES guidelines.  
   c. Included reference to the “first flush” volume for water quality treatment.