



Category 43 – Concrete Records

General

Category 43 is the number assigned to concrete records under the Department of Transportation uniform system of organizing contract documents. This category will consist of the concrete plant inspection and concrete mix design records.

The following records will be filed in Category 43 and labeled "43 Concrete Records". This file is to be tabbed as noted below:

- 43.1 Plant Inspection Check List
- 43.2 Concrete Mix Designs

Note: "Concrete Pour Record", Form DS-C73 is to be filed in:
Category 48. (See Bridge Construction Memo 4-5.8 for additional information.)

"Bar Reinforcing Steel Placing Record", Form DS-C76 is to be filed in Category
48. (See Bridge Construction Memo 4-5.9 for additional information.)

Plant Inspection Check List

The Office of Structure Construction has a Plant Inspection Form DH-OS C54, to facilitate concrete batch plant inspections. This form should be completed prior to any use of the batch plant. The use of this form is not intended to preclude the use of a District or other suitable form. If the District has made a recent plant inspection, and their Plant Inspection Report is available, it may be filed in this category in lieu of filing Form DH-OS C54 in this category.

Further information on plant inspection is to be found in the Structures/ Manual of *Concrete Technology*.

Concrete Mix Designs

Section 90-1.01 of the Standard Specifications states, "The Contractor shall determine the mix proportions for all concrete to be used in concrete Structures." Also, "The Contractor shall submit in writing to the Engineer a copy of the mix design."

The submittal by the Contractor shall include all the necessary information to check: the mix including but not limited to dry batch weights of ingredients, water cement ratio, fine and coarse aggregate gradations, and types of admixtures to be used.

The Engineers shall check cement content, water cement ratio, fine, coarse, and the combined gradation of the aggregates, and assure himself that all other requirements of Section 90 are met.

Concrete Mix Design-Aggregate Gradation (Form DS-OS C70A), Concrete Mix Design-Mix Design Calculations (Form DS-OS C70B) and Aggregate Grading Chart (Form DH-OS C71) have been developed to facilitate designing and checking concrete mixes. Samples of the forms are in Section 16, Vol. 1 of this manual. For further information refer to Section 4 of the Office of Structure Construction *Concrete Technology Manual*, Volume 1.

The Engineer shall acknowledge receipt in writing of the Contractor's submittal and results of the check on the mix Design.

Mix Design Records

Each mix used on the contract should be shown on separate forms DS-OS C70A and DS-OS C70B, and filed under Category 43.2, Concrete Mix Designs. In addition, Form DH-OS C71 for the combined aggregate grading should be filed with the first mix design used (by stapling it behind the mix design chart) and with all subsequent mix designs which are required because of a change in aggregate gradation.

Mix designs should be numbered so that they can be readily identified. Note, however, that minor adjustments in basic mix design should be given a letter suffix, not a new number.

Concrete mix designs are part of the permanent job records, and it is very important that information shown on Forms DS-OS C70A and DS-OS C70B is correct, complete and legible, and that the form is properly filed.