Colorado Procedure 12B-18

Standard Practice for

Contractor's Portland Cement Concrete Paving Process Control Notebook

1. SCOPE

1.1 This Standard describes the best practice to be used when developing appropriate worksheets and forms in a PC notebook.

1.2 The requirements such as, but not limited to: the sample size, specimen size, number of specimens, interpretation of results, reporting significant digits, and precision statements are in the specific test method.

1.3 This practice is to be used when quantities exceed 1000 square yards of Item 412.

2. GENERAL PC NOTEBOOK REQUIREMENTS

2.1 The following information shall be included on each page of a worksheet or form:

(1) Project number, Contract ID, and Project location
(2) Item number and grading or class
(3) Supplier's name and address
(4) Name of the laboratory performing the test
(5) Date, location, and time the sample was taken or the beginning of the test
(6) Type of test performed
(7) Sampling method
(8) Name of the person taking the sample and performing the test
(9) Sample ID number
(10) Quantity of material placed to date at the time of taking the sample
(11) Specification limits
(12) Remarks area

3. PAVEMENT TEXTURE WORKSHEET

3.1 When determining the texture depth, the following shall be included on the worksheet:

(1) 10 consecutive texture depth readings
(2) Average depth

4. SIEVE ANALYSIS WORKSHEET

4.1 When performing a sieve analysis and determining the aggregate gradation, the following shall be included on the worksheet:

(1) Weight of the tare
(2) Wet weight of material before washing
(3) Dry weight of material before washing
(4) Weight of moisture lost due to drying
(5) Percent moisture
(6) Dry weight after washing
(7) Weight retained on the applicable sieve size
(8) Percent passing the applicable sieve size
(9) Total weight sieved
(10) Percent difference between number 6 & 9
(11) Test Date

5. WATER CEMENTITIOUS RATIO WORKSHEET

5.1 When determining the water cementitious ratio the following shall be included on the worksheet:

(1) CDOT Form #1373 mix design number
(2) Weight of Cement
(3) Weight of Flyash
(4) Weight of total cementitious
(5) Moisture content of each aggregate
(6) Absorption of each aggregate
(7) Free moisture of each aggregate
(8) Weight of batch water
(9) Weight of total water
(10) Water cementitious ratio

6. JOINT SEALANT PULL TEST WORKSHEET

6.1 When determining the joints pull test, the following shall be included on the worksheet:

(1) Method Used
(2) Pass / Fail

7. COMPRESSIVE STRENGTH WORKSHEET

7.1 When determining the compressive strength of a molded cylinder the following shall be included on the worksheet:

(1) CDOT Form #1373 mix design number
(2) Time of initial cure
(3) Minimum & maximum temperature of curing facility
(4) Age of specimen
(5) 2 diameter measurements & average diameter or established diameter
(6) Cross sectional area
(7) Cylinder cap type
(8) Maximum load
(9) Fracture type (if necessary)
(10) Compressive strength of each cylinder
(11) Average compressive strength
(12) Slump of the fresh concrete
(13) Air temperature at the time of sampling
(14) Temperature of the fresh concrete
(15) Air content of the fresh concrete
(16) Unit weight of the fresh concrete including the following:
    a. Pot tare weight
    b. Pot volume
    c. Weight of pot & concrete
(17) Yield of the fresh concrete

7.2 When determining the compressive strength of a core the following shall be included on the worksheet:

(1) CDOT Form #1373 mix design number
(2) Age of specimen
(3) 2 diameter measurements & average diameter or established diameter
(4) Cross sectional area
(5) Core length
(6) L/D ratio & correction factor
(7) Core cap type
(8) Maximum load
(9) Fracture type
(10) Compressive strength of each core
(11) Average compressive strength

8. FLEXURAL STRENGTH WORKSHEET

8.1 When determining the flexural strength the following shall be included on the worksheet:

(1) CDOT Form #1373 mix design number
(2) Time of initial cure
(3) Minimum & maximum temperature of curing facility
(4) Age of specimen
(5) 3 width measurements & average width
(6) 3 height measurements & average height
(7) Span length
(8) Maximum load
(9) Distance between fracture & nearest support
(10) Modulus of rupture of each beam
(11) Average modulus of rupture
(12) Slump of the fresh concrete
(13) Air temperature at the time of sampling
(14) Temperature of the fresh concrete
(15) Air content of the fresh concrete
(16) Unit weight of the fresh concrete including the following:
    d. Pot tare weight
    e. Pot volume
    f. Weight of pot & concrete
(17) Yield of the fresh concrete

9. PAVEMENT THICKNESS WORKSHEET

9.1 When determining the pavement thickness, the following shall be included on the worksheet:

(1) Thickness
(2) Difference in thickness from plan thickness

10. SAND EQUIVALENT WORKSHEET

10.1 When determining the equivalency the following shall be included on the worksheet:

(1) Type of shaker
(2) Age of stock solution
(3) Clay reading of each specimen
(4) Sand reading of each specimen
(5) Sand equivalent of each specimen
(6) Average sand equivalent
(7) Date Tested

11. Pavement Smoothness

11.1 When determining the pavement smoothness, the following shall be included:

(1) Distance calibration site
(2) Start and stop locations
(3) Time of each test
(4) MRI of each section

12. Pavement Texture

12.1 When determining the pavement texture, the following shall be included on the worksheet:

(1) Location of test
(2) Diameter of each measurement
(3) Average diameter at test location
(4) Macrotexture thickness