

**CONTRACTOR PROCESS QUALITY CONTROL PLAN GUIDELINES  
PORTLAND CEMENT CONCRETE PAVEMENT  
(PLAN WILL CONFORM TO PERTINENT SPECIFICATIONS)**

**A. Contractor Organization:**

1. Plan will address authority levels/duties by position and name of persons holding those positions.
2. Include those who can be contacted by State personnel and have decision making authority with regard to quality control, materials, sampling and testing.
3. Identify when Joint Layout Plan will be submitted in accordance with Section 450.3.4

**B. Sampling, Testing and Lab Facilities:**

1. Plan will include copies of TTCP certification of all personnel who will be performing Process Quality Control testing for the contractor.
2. Identify lab location.
3. Identify person(s) responsible for determining random sampling locations, and how the original random sampling locations will be confirmed.
4. Identify how and when lab equipment will be calibrated.
5. Identify person(s) responsible for contacting Project Manager when lab facilities are ready for inspection in accordance with Section 901.
6. Identify person(s) responsible for maintaining control charts and all records associated with materials sampling, testing and calibration of lab equipment. Control charts shall contain as a minimum items listed in Tables 901.7:3 and 901.7:5.
7. Identify person(s) responsible for dispute resolution.

**C. Concrete Mix Design:**

1. Identify concrete supplier.
2. Provide copies of all approved mix designs and field report forms to be used;
  - a. If approved mix design is not available, how and when will approved mix become available;
- 3.

**D. Aggregate Production:**

1. If concrete mix design is approved using Standard Stockpile procedures, how will stockpiles be maintained and monitored to comply with
  - a. required master-band gradations
  - b. fineness-modulus requirements.

2. If concrete mix design is approved using the Combined Gradation procedures,
  - a. how the required gradations will be performed,
  - b. who will perform the required gradations;
  - c. where the required gradations will be performed;
  - d. how often the required gradations will be performed, and
  - e. how the information will be provided to the Department;
3. Describe aggregate production and compliance. Includes control charts tracking items in Table 901.7:3.
4. Describe stockpile management.

**E. Batching & Hauling:**

1. Identify manufacturer and type of equipment;
2. Define all batching procedures, including order of addition of individual ingredients;.
3. How cement and fly ash will be:
  - a. Stored;
  - b. Kept separate;
  - c. Kept dry;
  - d. Maximum anticipated time on-site before use.
4. How chemical admixtures will be stored and protected; and introduced into the mix
5. Process used to manage concrete temperatures.
6. How aggregate moistures will be determined, monitored and communicated to the Department
7. Describe wash-down and final mixing procedures after concrete mix has been loaded into trucks. Include process control performed, if any, at this point;
8. Pre-departure procedures for all delivery trucks;;
9. Provide written approval of Batch Plant and all operations by NMDOT; to include scale certification
10. Identify proposed delivery rate.
11. Certificate of Inspection and Certification of all mixer trucks to be used on the project;
12. Identify proposed delivery route (haul road).
13. 8. Describe how material temperatures will be maintained.
14. Describe the corrective action process if batch weights are out of specification. This will include how the problem will be recognized, and at what point production will cease and a written corrective action plan will be presented and approved by the Project Manager before resuming production.

**F. Placement and Finishing of Concrete:**

1. Plan will address verification process that subgrade/base have been approved and grades have been verified. Prior to concrete placement.
2. Identify and describe placement method (slip form or construction by form).
3. Describe placement and securing of dowels and tie bars.
4. Describe equipment and tools to be utilized.
5. Identify how material will be transferred from haul vehicles to placement location.
6. Describe how material handling equipment will prevent segregation.

- a. Include discussion on how segregation will be recognized, and how it will be eliminated, if detected.
  - b. Indicate how much material will be maintained and monitored in front of the paver to prevent paste segregation
7. Describe method(s) for vibrating and consolidating concrete.
8. Provide balance sheets that demonstrate how paver speed, number of trucks and plant production will maintain a continuation of placement operations without stopping and starting.
9. Describe pull widths and placement sequence that will achieve quantities/dimensions as shown on the plans.
10. Describe method used to measure and maintain plan thickness.
11. Describe joint construction, longitudinal and transverse.
12. Describe sawing operations.
  - a. What kind of sawing equipment will be used;
  - b. How many units will be used;
  - c. How sawing operations will insure initial saw-cuts are made within the allotted time;
  - d. How many and what kind of spare equipment and parts will be maintained on-site.
13. Describe joint sealing operations and materials.
14. Describe grooving or tining operations.
15. Describe method(s) for curing concrete.
16. Describe how evaporation potential will be monitored and provided to the Project Manager.
17. Describe random sampling plan that will be utilized and documented.
18. Identify lot and sub lot sizes.
19. Define Shakedown Period and how it will be evaluated for compliance with mix design.
20. Describe Process Quality Control sampling and testing used for compliance and control charts for tracking items in Table 901.7:5.
21. Describe what corrective action process will taken, and when it will be started when test results are out of specification; this will include what increased frequency of testing is until corrective measures have brought mix back into compliance. This will include a measure of threshold at which time concrete placement will cease and a written corrective action plan will be presented and approved by the Project Manager before resuming placement.
22. Describe method and material available for constructing a bulk-head if it becomes necessary. This should just be that the concrete is cut back to the nearest joint that the surface plane meets the 10' straightedge tolerance.
23. Describe what emergency covering and protective measures will be available in case of unforeseen weather or other events forcing unanticipated protection of the concrete.

**G. Smoothness:**

1. Plan will identify measures to be taken to insure smoothness;.
2. Identify if profiler smoothness specification applies to this project.

3. Identify Department approved profiler that will be utilized.
4. Identify roadway surface preparation prior to profiling.
5. Describe sequence measurements will be taken with accompanying NMDOT representative and submission of data.
6. Describe evaluation of profile data using ProVAL for must grind work and corrective work required.
  - a. Insure proper version of ProVAL is available before project begins. As with HMA we should be considering the filter to be used also.
7. Describe format of written corrective work plan that will be submitted to the Project Manager.

NOTES:

1. Changes and data not available at time of submittal of the plan can be added via addendum.