

**STATE OF RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

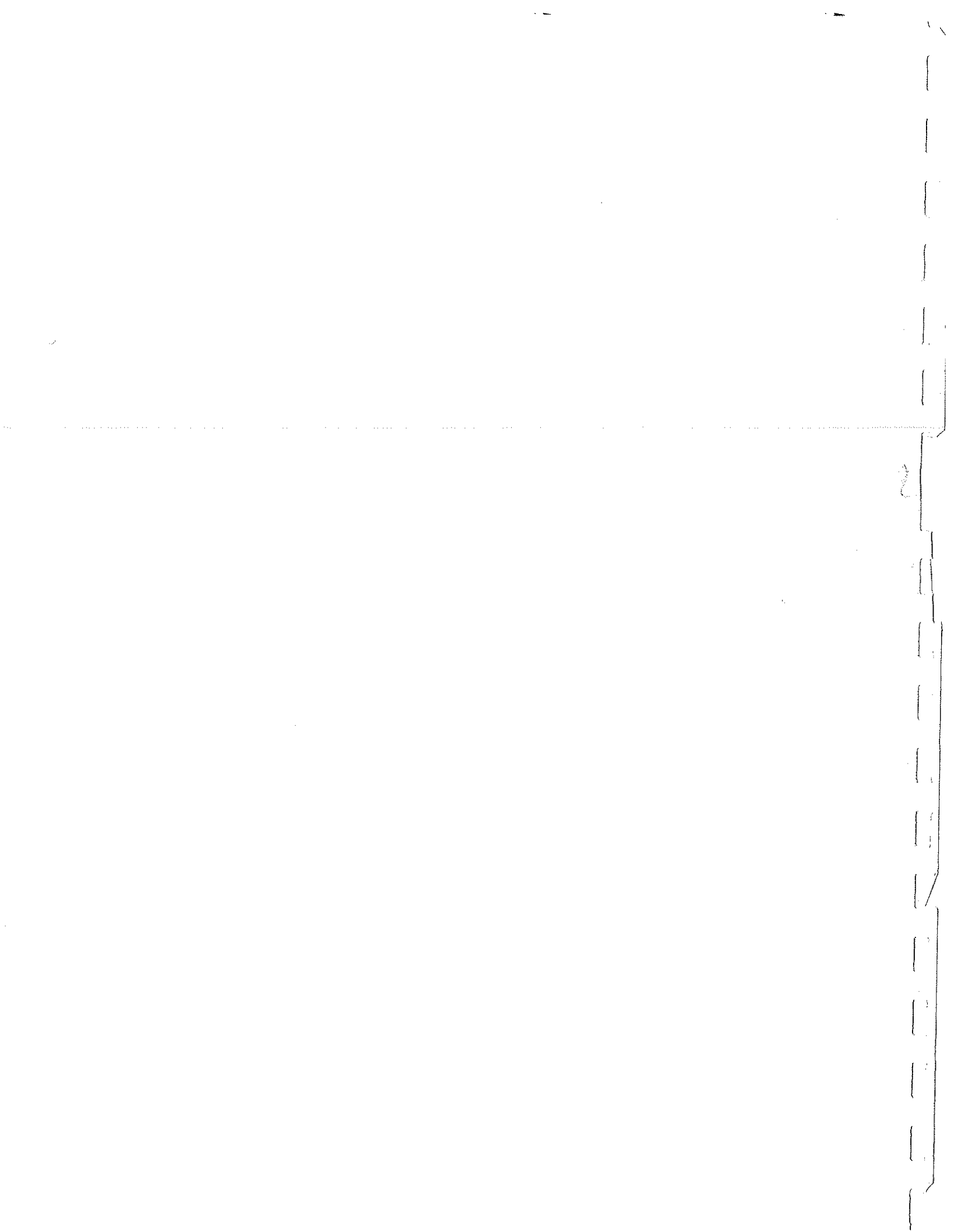
MATERIALS SECTION

RIDOT



**MASTER SCHEDULE
FOR THE PREPARATION OF A
PROJECT SCHEDULE
FOR
SAMPLING, TESTING AND
CERTIFICATION OF MATERIALS**

1998



Director

William D. Ankner, Ph.D.

Chief Engineer (Engineering)

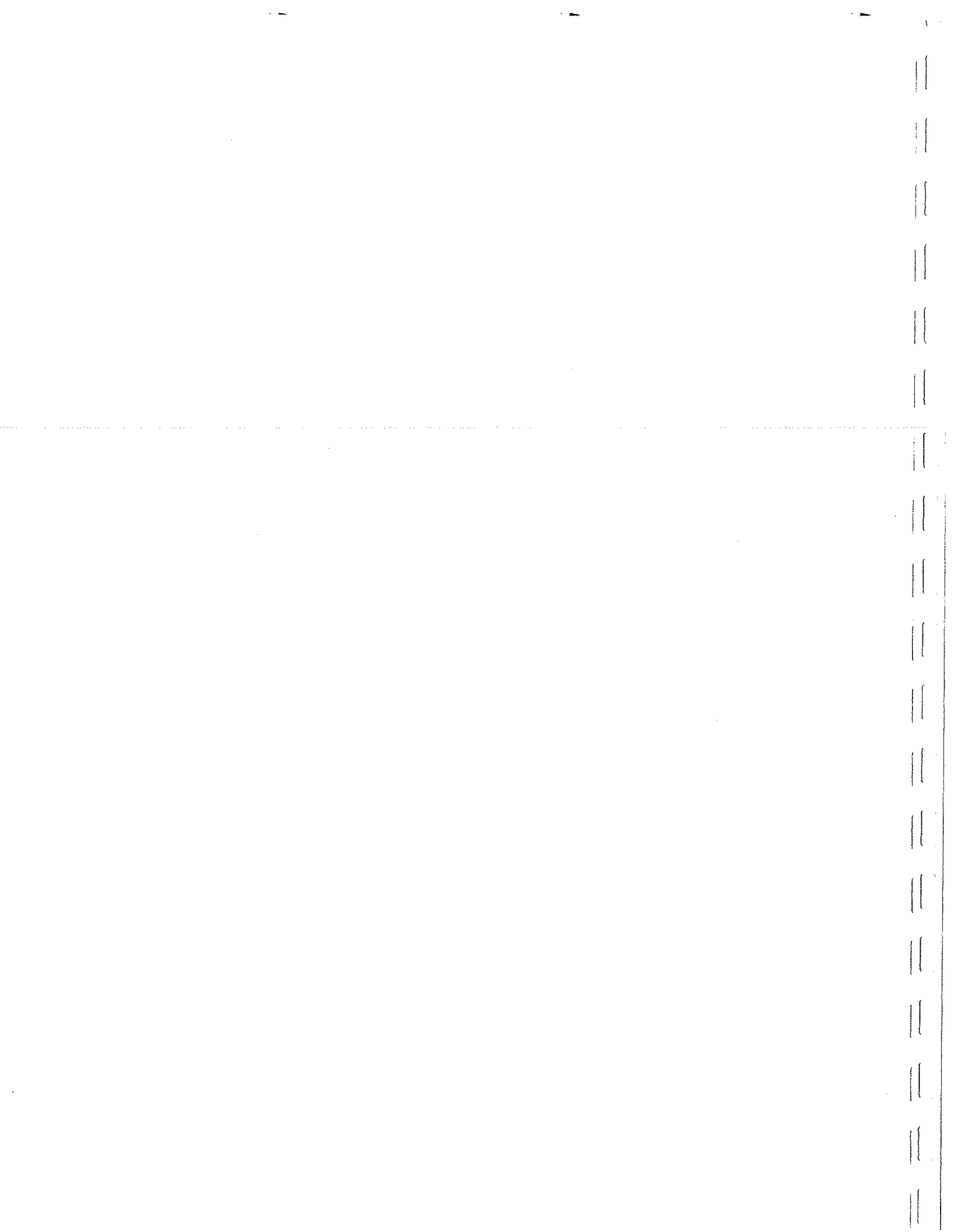
James R. Capaldi, P.E.

Chief Engineer (Operations)

Wendall D. Flanders, P.E.

Chief Civil Engineer

Mark E. Felag, P.E.

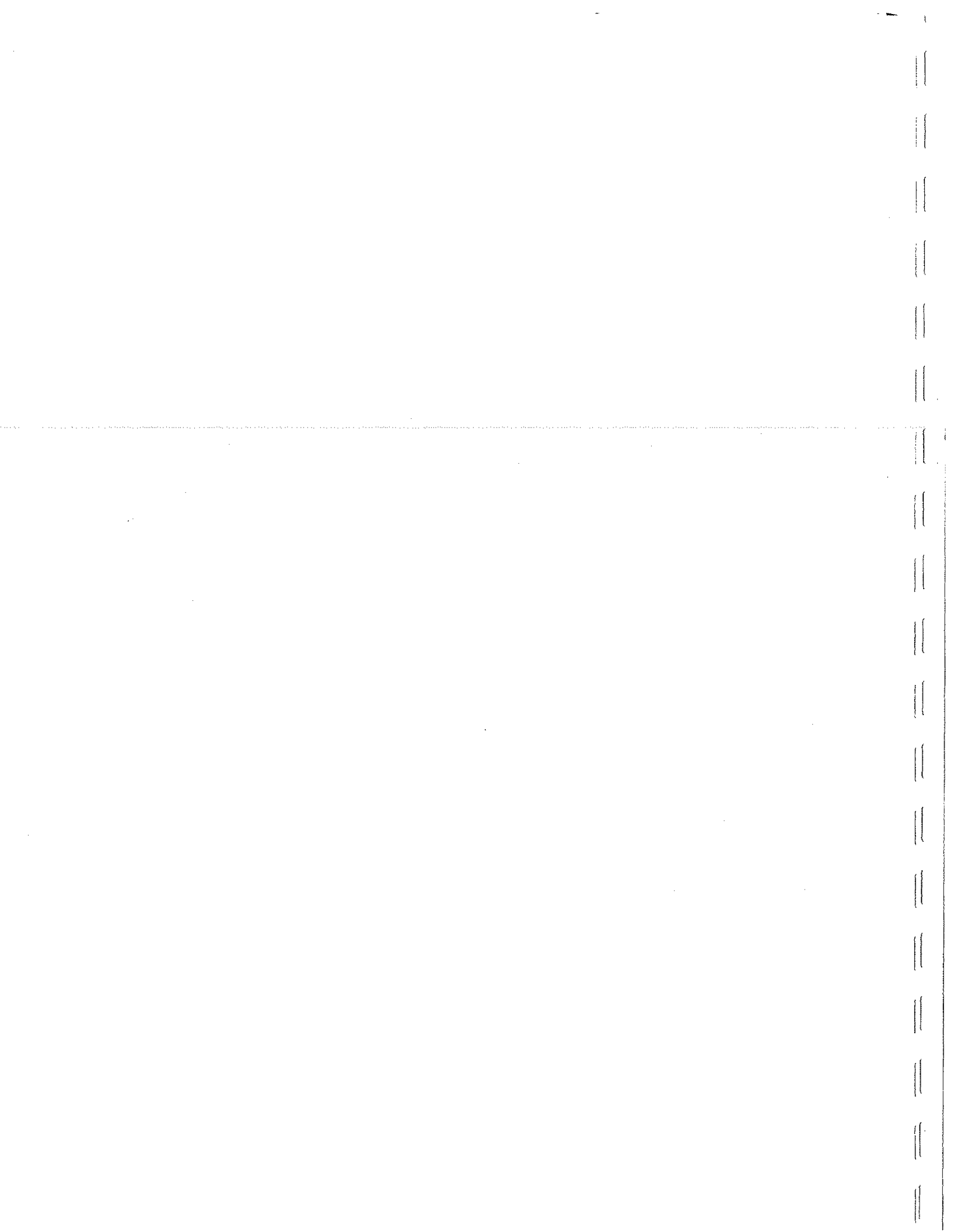


INTRODUCTION

To prescribe policies, procedures, and guidelines to assure the quality of materials and construction in all projects in the State of Rhode Island, the Materials Section of the Rhode Island Department of Transportation (RIDOT) has developed a sampling and testing program in accordance with Volume 60, No. 125, 23 CFR Part 637 (FHWA Docket No. 94-13) of the Federal Register dated Thursday, June 29, 1995. The program is designed to provide assurance that the materials and workmanship incorporated into every highway construction project are in close conformity with the requirements of the plans and specification.

In order to facilitate the job of the Resident Engineer on each highway project in undertaking the required sampling and testing, the Rhode Island Department of Transportation is requiring that each project which is advertised for bidding have a Project Schedule for Sampling, Testing and Certification of Materials. This schedule will indicate clearly to the Resident Engineer the minimum required number of samples, tests and/or certifications required for each item of work indicated in the proposal for a particular project.

This handbook will establish procedures for those responsible for the design and preparation of the above referenced project schedules on highway projects in the State of Rhode Island.



PURPOSE

The purpose of the Handbook for the Preparation of a Project Schedule for Sampling, Testing and Certification of Materials is to provide the Resident Engineer on each Rhode Island Department of Transportation construction project with a guide as to the minimum number and type of samples and tests required for each individual pay item as listed in the project proposal.

All sampling and testing must be performed by qualified personnel. This qualification consists of: (1) NETTCP (New England Transportation Technician Certification Program), or (2) Education and experience approved by the Materials Section of the Department of Transportation.

After June 30, 1997, the Central Laboratory must be accredited by the AASHTO Accreditation Program or a comparable laboratory accreditation program approved by the FHWA.

Any/all other laboratories conducting testing must be qualified: This qualification consists of: (1) AASHTO Accreditation in the area the testing is being performed.

The acceptance or rejection of materials is based upon tests conducted by field personnel as part of the contract. There are three classes of samples and tests which must be taken:

1. Process Control Samples and Tests are those samples taken and tested for the purpose of controlling the production of materials proposed for incorporation in the project. They are the responsibility of the Contractor and/or Manufacturer and form the basis for a contractor incorporating material into the work prior to acceptance sampling and testing, or are the basis of a manufacturer's certificate of compliance. Process control samples and tests are always subject to verification by the State by means of acceptance samples and tests.

2. Acceptance Samples and Tests are those samples taken and tested for determining the quality and acceptability of the materials and workmanship which have been or are being incorporated in the project. They are the responsibility of the State (Resident Engineer). Acceptance samples and tests will be taken in accordance with the Master Schedule for Certification, Sampling and Testing of Materials. Additional instructions and procedures for acceptance sampling and testing are to be found in the latest revisions of the AASHTO Subcommittee On Materials Specification and Testing publication. Acceptance samples and tests, in the case of material manufactured and/or fabricated away from the project site, may be pre-sampled, tested and inspected by the Materials Section. Test reports and/or inspection reports will be submitted to the Resident Engineer covering preinspected or tested materials. The Resident Engineer may determine that preinspected materials are acceptable at the time they are incorporated into the work.

Inspection personnel are encouraged to inspect each of the certificate of compliance items on their projects whether these items are included for Acceptance Testing or not. Testing may be performed

on any of these items for reasons of suspect quality, poor workmanship, or obvious deficiencies.

3. Independent Assurance Samples and Tests are those samples, tests or other procedures performed by State personnel who do not normally have direct responsibility for acceptance sampling and testing. They are used for the purpose of making an independent check on the reliability of the results obtained in acceptance sampling and testing and not for determining the quality and acceptability of the materials workmanship directly. Independent Assurance samples and tests are the responsibility of the Materials Section.

Independent Assurance samples and tests will be taken from the same locations as, or in close proximity to, the acceptance samples, and be split samples when possible to provide for acceptance sampling observation.

~~A maximum of 20% of the Independent Assurance Tests per quarter may be performed by observation.~~

A prompt comparison of acceptance tests results with Independent Assurance test results and documentation of that comparison will be made.

This will be accomplished by the following procedure/policy:

FIELD:

1. Independent Assurance (IAST) Team will stay with an acceptance crew at least ½ day making field comparisons.
2. IAST team will monitor each acceptance crew at least 2 days every two weeks.
3. Acceptance samples and/or tests should be clearly documented that it was "taken with IAST", and this documentation will be carried through laboratory analysis on test sheets.
4. IAST team will fill out an Independent Field form. Laboratory analyses will be forwarded to the IAST team. Variation limits will be evaluated by the independent team and compared to standard variations. If the variation of the test is greater than the variation allowed, further analysis will be performed to determine the reason for the excess variation. A report of action form will be attached to the original independent review sheet for documentation.
5. If variations arise, the IAST team will file a "Report of Action" documenting what corrective action has been taken.
6. IAST team will not perform any Acceptance Sampling or Testing unless specifically authorized by the Materials Engineer.

7. Since the IAST team will not be involved in Acceptance Sampling and Testing, IAST test sheets will not be marked, "Accept, Reject or Conforms Substantially". IAST tests will not require any resample, rejection or conforms substantially sheets.

PLANTS:

1. IAST team will monitor each plant at least once every ten working days that the plant is in operation.
2. IAST team will witness sampling and testing performed at plants.
3. Acceptance samples and/or tests should be clearly documented that it was "taken with IAST", and this documentation will be carried through laboratory analysis on test sheets.
4. IAST team will fill our Independent Plant form. Laboratory analyses will be forwarded to the IAST team. Variation limits will be evaluated by the independent team and compared to standard variations. If the variation of the test is greater than the variation allowed, further analysis will be performed to determine the reason for the excess variation. A report of action form will be attached to the original independent review sheet for documentation.
5. If variations arise, the IAST team will fill our "Report of Action" form documenting what corrective action has been taken.
6. IAST team will not be perform any Acceptance Sampling or Testing unless specifically authorized by the Materials Engineer.
7. Since IAST team will not be involved in Acceptance Sampling and Testing, IAST test sheets will not be marked "Accept, Reject or Conforms Substantially". IAST tests will no longer require any resample, rejection or conforms substantially sheets.

GENERAL:

1. Resident Engineers who perform concrete testing (ie.slump test, air content test, or cylinder fabrication) should notify the Materials Office at least once every 10 times they perform the tests so that Independent Sampling and Testing may be made.
2. The Materials Section will submit an annual report which will include: the results of the independent assurance tests, the independent personnel, the frequency of witnessed tests, and the results of the calibration of independent field equipment.

The Materials Section will keep all Independent Assurance Tests and records on file in the Materials Section Office.

The minimum frequency and type of test required for each individual item of work in a project is determined from the Master Schedule of Sampling, Testing and Certification of Materials prepared

by the Materials Section of the Rhode Island Department of Transportation. If the Inspection Personnel feels that additional tests are required for any reason, he may increase the frequency of testing for any item as specified herein.

SMALL QUANTITIES

When the quantity of a material used on a job is significantly less than that indicated in the Master Schedule for Materials Control, the Resident Engineer may accept such small quantities without sampling or testing. To qualify for small quantities acceptance, the material shall be from a known reliable source and judged by the Resident Engineer to be capable of performing satisfactorily and to meet the requirements for the intended purpose. The Resident Engineer may also accept Bituminous Concrete and/or Portland Cement Concrete delivered to his project on a "small quantities" basis as long as the following guidelines are met:

Bituminous Concrete Mixes:

- Modified Base or Binder Type Mixes - 50 Tons or less per day.
- Surface Courses - 25 Tons or less per day.

NOTE: THE TOTAL QUANTITY OF ALL BITUMINOUS MIXTURE TYPES COMBINED SHALL NOT EXCEED 200 TONS PER PROJECT

Portland Cement Concrete

Prestressed, Structural, and Pavement/Overlay concrete shall not be accepted under the "small quantities category".

The total quantity of all other classes combined not to exceed 50 cubic yards per project.

All Bituminous and/or Portland Cement Concrete accepted under "Small Quantities" must meet all the required specifications for the given item. Where small quantity items are used in critical locations or will significantly influence the performance, strength or durability of major items, prior approval for their use without testing must be obtained from the Materials Engineer.

CERTIFICATE OF COMPLIANCE

All materials incorporated into the construction of transportation projects will be certified. The required certificate will attest that all materials were in close conformity with the plans and specifications and that they meet the contract specifications except as noted on the certificate.

Certain manufactured products can be accepted on the basis of a manufacturer's certificate of compliance. It is the Resident Engineer's responsibility to obtain the appropriate required certification of compliance from the contractors prior to the use of the material on the project.

All references to "no tests required" must be indicated in the Project Schedule for Sampling, Testing and Certification of Materials.

APPENDIX A

The preparation and submission of a materials certification, as shown below conforming to the requirements of 23CFR637(b), will be sent to the FHWA Division Administrator for each FHWA oversight project.

GUIDE LETTER OF CERTIFICATION BY STATE ENGINEER

DATE: _____
R.I. PROJECT NO. _____
F.A.P. NO. _____

This is to certify that:

The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications.

Exceptions to the plans and specifications are explained on the back of hereof (or on attached sheet).

CHIEF CIVIL ENGINEER (MATERIALS)

SAMPLING/TESTING REQUIREMENTS

Code 201.0301 thru 201.0621 - Clearing, Grubbing, Remove and Salvage Items

- a. No tests required (must be indicated in Project Schedule).

Code 202.0100 - Excavation - Earth

- a. If the excavated material is used as embankment, the following Acceptance Tests are required:

- 1) One (1) 50 lbs. sample per source or geological change for a laboratory Proctor and Sieve Analysis.

- a) Sampled at the source by the Materials Inspector.

- b) Tested in CENTRAL LAB.

- 2) One (1) field density test per 3000 cy of embankment.

- a) Sampled and tested in place at the project site by the Materials Inspector.

Code 202.0200 thru 202.0204 - Rock Excavation Common, Boulders and Presplitting Bedrock

- a. No tests required (must be indicated in the Project Schedule).

Code 202.0300 - Excavation - Unclassified

- a. If the excavated material is used as embankment the same as Code 202.0100.

Code 202.0400 - Muck Excavation

Code 202.0450 - Unsuitable Soils

Code 202.0500 - Channel Excavation - Earth

Code 202.0510 thru 202.0530 - Channel Excavation Rock/Mechanical/ Muck

Code 202.0540, 202.0550 - Channel Excavation Unclassified, Wet Excavation (Below Mean High Water)

- a. No tests required (must be indicated on Project Schedule).

Code 202.0600 - Loam Excavation

- a. If loam is to be rehandled and spread, the same as Code L01.0102.

Code 202.0700 thru 202.0800 - Borrow, Common, from State Stockpiles, Select and Gravel
Code 203.0100 thru 203.0120 - Structural Excavation, Earth, Earth Dry, Earth Wet

- a. If the borrow materials and/or excavated materials is used as embankment the same as Code 202.0100.

Code 203.0130 - Structural Excavation - Muck
Code 203.0201 - Holes for Presplitting
**Code 203.0202 thru 203.0310 - Structural Excavation - Rock (Excluding Boulders),
Boulders, Rock, Masonry**

- a. No tests required (must be indicated on Project Schedule).

**Code 203.0400 thru 203.0420 - Structural Excavation - Unclassified, Unclassified Dry, and
Unclassified Wet**

- a. If the excavated material is used as embankment, the same as Code 202.0100.

Code 203.0430 - Structural Excavation - Unclassified Except Hard Ledge
Code 203.0440 - Structural Excavation Unclassified In Cofferdams

- a. No tests required (must be indicated on project schedule).

Code 203.0510 thru 203.0530 - Cofferdams, Cribs, Tremie Seals, and Dewatering

- a. Sheeting for cofferdams requires one (1) certificate of compliance per source.

Code 203.0600 - Fill Gravel Borrow Under Structures

- a. Acceptance Tests

- 1) One (1) 50 lb. samples per source or geological change for a laboratory Proctor.

- a) Sampled at the project site by the Materials Inspector.

- b) Tested in CENTRAL LAB.

- 2) One (1) 50 lbs. sample per 1,000 CY or less for sieve analysis.

- a) Sampled in place at the project site by the Materials Inspector.

- b) Tested in CENTRAL LAB or in the FIELD.

- 3) One (1) field density test per 1,000 CY or less.

- a) Sample and tested in place at the project site by the Materials Inspector.

Code 203.0700 - Pervious Fill

a. Acceptance Tests

- 1) One (1) 50 lbs. sample per source or geological change for permeability laboratory Proctor.

- a) Sampled at the project by the Materials Inspector.

- b) Tested in CENTRAL LAB.

- 2) One (1) 50 lbs. Sample per 1,000 CY or less at each bridge or structural fill for a permeability test.

- a) Sampled at each bridge or structural fill by the Materials Inspector.

- b) Tested in CENTRAL LAB.

- 3) One (1) field density test per 1,000 CY or less at each bridge or structural fill.

- a) Sampled and tested at each bridge or structural fill by the Materials Inspector.

Code 203.0800 - Vibratory Compaction

a. Acceptance Tests

- 1) One (1) field density test per 3,000 CY of embankment.

- a) Sampled and tested in place at the project site by the Materials Inspector.

Code 204.0100 - Trimming and Fine Grading

a. No tests required (must be indicated in the Project Schedule).

Code 205.0240 thru 205.0260 - Trench Excavation - Rock (0'-7', 7'-12', 12' & D)

Code 205.0270 thru 205.0290 - Trench Excavation Mechanical-Rock (0'-7', 7'-12', 12' & D)

Code 205.0700 thru 205.0801 - Temporary or Permanent Timber Sheeting

- a. No tests required (must be indicated on Project Schedule).

Code 205.0900 - Temporary Steel Sheeting

Code 205.1000 - Permanent Steel Sheeting

- a. Process Control Tests

- 1) One (1) certificate of compliance per source.

Code 206.0201 - Baled Hay, Erosion Checks Standard 9.1

Code 206.0208 - Removal of Baled Hay Erosion Checks

- a. No tests required (must be indicated in the Project Schedule).

Code 206.0220 - Silt Fence

- a. Process Control Tests

- 1) One (1) certificate of compliance per source.

Code 207.0202 thru 212.0210 - Erosion Control Devices, RI Standard 9.2, 9.4

- a. Process Control Tests

- 1) One (1) certificate of compliance per source.

Code 212.2000 - Cleaning and Maintenance of Erosion Controls

- a. No tests required (must be indicated in the Project Schedule)

Code 301.0200 thru 301.0202 - Gravel Borrow Base Course

- a. Acceptance Tests

- 1) One (1) 50+ lbs. sample per source or geological change for a laboratory Proctor.

- a) Sampled at the project site by the Materials Inspector.

- b) Tested in CENTRAL LAB.

- 2) One (1) 50+ lbs. sample per 1,000 CY or less for a sieve analysis.

- a) Sampled in place at the Project Site by the Materials Inspector.

b) Tested in the CENTRAL LAB or in the FIELD.

3) One (1) field density test per 1,000 CY or less.

a) Sampled and tested in place at the Project Site by the Materials Inspector.

Code 301.0300 - Crushed Stone or Crushed Gravel Base - Modified

a. Acceptance Tests

1) One (1) 50+ lbs. sample per 800 tons of base course for a crushed particle sieve analysis.

a) Sampled at the source/and or the project site by the Materials Inspector.

b) Tested in the CENTRAL LAB or in the FIELD.

2) One (1) 50+ lbs. sample per project for filter stone, keystone or bedding for a crushed particle sieve analysis.

a) Sampled at the source/and or the project site by the Materials Inspector.

b) Tested in the CENTRAL LAB or in the FIELD.

3) One (1) 50+lbs. sample per source per year for L.A. Abrasion tests and sodium sulfate soundness test.

a) Sample at the source by the Materials Inspector.

b) Tested in the CENTRAL LAB.

Code 301.0400 Screened Gravel Base Course

a. Same as 301.0200 thru 301.0202

Code 301.0500 - Crushed Stone or Crushed Gravel Base Modified

a. Same as 301.0300

Code 302.0100 thru 304.0100 - Gravel Borrow Subbase, Special Graded Aggregate

- a. Same as Codes 301.0200 thru 301.0202.

Code 401.0100 - Bituminous Base Course

Code 401.0101 - Bituminous Binder Courses

Code 401.0200 thru 401.0400 - Bituminous Surface Courses I-1, I-2, Bridge Binder

Code 401.0870, 401.0880 - Dense Friction Course & Ramp

1. Bituminous Concrete Mixtures

a. Acceptance Tests

1) One (1) sample (size according to AASHTO T-168) per 500 tons or less for bitumen extraction sieve analysis.

a) Sampled at the mix plant by the Materials Inspector.

b) Tested in the Plant Lab.

2) Two (2) cores (size according to AASHTO T 245) per day for a Marshall Test.

a) Sampled and made at the plant by the Materials Inspector.

b) Tested in the CENTRAL LAB.

3) Two (2) density tests per type of mix.

a) Tested at the project site by the Materials Inspector.

4) Two (2) full depth 4" or 6" diameter cores per lane and or shoulder if applicable mile, per type of mix for depth measurements.

a) Sampled at the project site by the Materials Section.

b) Measured in the CENTRAL LAB or in the FIELD.

Code 403.0300 - Asphalt Emulsion SS-1

Code 404.0500 thru 404.0501 - Materials for Prime Coat

Code 405.0100 thru 405.0202 - Materials for Seal Coat

a. Acceptance Tests

1) One (1) 1-quart sample per project for relevant AASHTO Tests.

a) Sampled at the Project Site or plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) certificate of compliance per source.

Code 406.0100 - Cold Recycled Base Course

a. Same as Code 401.0100

Code 408.0400 - 409.0000

a. Same as Code 403.0300

Code 410.1000 - Temporary Patching Material/Trenches

a. Same as Code 401.0100

Code 501.0100 thru 501.0110 - Portland Cement Concrete Base Course Plain and Crack Control 8 inch

1. Concrete Mix

a. Acceptance Tests

1) One (1) sample (size according to AASHTO T-119) per 200 CY or each day's production for slump test.

a) Sampled and tested at the Project Site by the Resident Engineer or the Materials Inspector.

2) One (1) sample (size according to AASHTO T-152) per 200 CY or each day's production for an air content test.

a) Sampled and tested at the Project Site by the Resident Engineer or the Materials Inspector.

3) Two (2) 6" x 6" x 20" beams per each day's production for a test of flexural strength.

a) Sampled at the Project Site by the Resident Engineer or the Materials Inspector.

b) Tested in the CENTRAL LAB.

4) Two (2) full depth 4" cores per lane mile to check depth.

- a) Sampled at the Project Site by the Materials Section.
- b) Measured in the CENTRAL LAB or in the FIELD.

2. Portland Cement

a. Process Control Tests

- 1) One (1) mill test report per truck load of cement.

- a) Given to the Materials Inspector at the Plant.

b. Acceptance Tests

- 1) One (1) 6+ lbs. sample per project, per railroad car load for relevant AASHTO tests.

- a) Sampled at truck or railroad car by the Materials Inspector.

- b) Tested in CENTRAL LAB.

3. Coarse Aggregate

a. Acceptance Tests

- 1) One sample per 200 CY for a sieve analysis.

- a) Sampled at the concrete plant by the Materials Inspector.

- b) Tested in PLANT LAB.

- 2) One (1) 50+ lbs. sample per year for L.A. Abrasion Tests, a sodium sulfate soundness test, specific gravity and unit weight measurements.

- a) Sampled at the concrete or processing plant by the Materials Inspector.

- b) Tested in CENTRAL LAB.

4. Fine Aggregate

a. Acceptance Tests

- 1) One (1) sample per 200 CY for a sieve analysis and determination of fineness modulus.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) One (1) 50+ lbs. sample per year for a sieve analysis, determination of fineness modulus, specific gravity, unit weight and absorption.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

5. Steel Reinforcing

a. Process Control Tests

1) One (1) mill test report per shipment, per size, per source, per heat number.

b. Acceptance Tests

1) Two (2) 3 foot long sample per size, per source, per heat number for a tension and AASHTO T-244 bend test.

a) Sampled at the Project Site by the Resident Engineer.

b) Tested in CENTRAL LAB.

Code 502.1000 thru 503.1010 - Portland Cement Concrete Pavements

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code 504.1000 - Pavement Grooving

a. No tests required (must be indicated in the project schedule)

Code 601.0101 thru 601.0600 - Portland Cement Concrete Class X, XX, A, B, (AE)

Code 601.1000, 601.2000 - Type IP Cement/Portland Cement with Fly Ash

Code 603.1000 - Controlled Low Strength Material

1. Concrete Mix

a. Acceptance Tests

1) Six (6) 6" x 12" cylinders per 200 CY or each day's production for compressive strength tests.

a) Sampled at the Project Site by the Resident Engineer or the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) sample (size according to AASHTO T-119) per 200 CY or each day's production for slump test.

a) Sampled and tested at the Project Site by the Resident Engineer or the Materials Inspector.

3) One (1) sample (size according to AASTHO T-152) per 200 CY or each day's production for an air content test.

a) Sampled and tested at the Project Site by the Resident Engineer or the Materials Inspector.

2. Portland Cement and/or Fly Ash

a. Process Control Tests

1) One (1) mill test report per truck load of portland cement and/or fly ash.

a) Given to the Materials Inspector at the plant.

b. Acceptance Tests

1) One (1) 6+ lbs. sample per project, per railroad car load for relevant AASHTO tests.

a) Sampled at the truck or railroad car by the Materials Inspector.

b) Tested in CENTRAL LAB.

3. Coarse Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) One (1) 150+ lbs. sample per year for L.A. Abrasion Tests, a sodium sulfate soundness test, specific gravity and unit weight measurements.

a) Sampled at the concrete or processing plant by the Material Inspector.

b) Tested in CENTRAL LAB.

4. Fine Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis and determination of fineness modulus.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) One (1) 50+ lbs. sample per year for a sieve analysis and determination of fineness modulus, specific gravity, unit weight and absorption.

a) Sampled at concrete or processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

Code 701.0260 thru 701.0698 - Reinforced Concrete Pipe M170, Class I thru V Code 701.0704 thru 701.0874 - Concrete Drain Tile M178, Standard, Extra and Special Quality

a. Process Control Tests

1) One (1) certificate of compliance per size, per source.

b. Acceptance Tests

1) Observed one (1) certified load bearing test (AASHTO T-280) per size, per source meeting loads to produce 0.01 inch crack and the ultimate strength specification of the pipe at MANUFACTURERS PLANT per year.

2) Two (2) samples per size, per source for absorption tests.

3) One (1) 150+ lbs. sample per year for L.A. Abrasion Tests, a sodium sulfate soundness test, specific gravity and unit weight measurements.

a) Sampled at the concrete or processing plant by the Material Inspector.

b) Tested in CENTRAL LAB.

Code 701.2012 thru 701.2296 - BCRCMCP M190, Types A, B, C, with Bends and Bands

Code 701.2514 thru 701.2748 - Cast Iron Culvert Pipe, 2000D, 3000D, 4000D

Code 701.2815 thru 701.2836 - Corrugated Cast Iron Culvert Pipe, 2000D

Code 701.2910 thru 701.2984 - Corrugated Aluminum Culvert Pipe, M196 (Minimum Gauge)

Code 701.4412 thru 701.4424 - Plastic Pipe (WW-P-00380)

a. Process Control Tests

1) One (1) certificate of compliance per type, per size, per source.

2) Certified AASHTO plant tests per type, per size, per source.

Code 701.4504 thru 701.5060 - Cast Iron Water Pipe, ASA, A21, Classes 50, 100, 150, 200, 250 & 300.

a. Process Control Tests

1) One (1) certificate of compliance per type, per size, per source.

Code 701.7412 thru 701.7596 - BCRCMP, M190, Type A End Section, RI Standards 2.8,2.9

Code 701.7612 thru 701.7684 - Corrugated Aluminum Culvert Pipe End Section, RI Standard 2.8

a. Same as Codes 701.2012 thru 701.2296.

Code 701.7712 thru 701.7748 - Reinforced Concrete Pipe End Sections, RI Standard 2.6

a. Same as Codes 701.0260 thru 701.0698.

Code 701.8001 - Class A Bedding

1. Concrete Mix

a. Acceptance Tests

1) Six (6) 6" x 12" cylinders per 200 CY or each day's production for compressive strength tests.

a) Sampled at the Project Site by the Resident Engineer or the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) sample (size according to AASHTO T-119) per each day's production for slump test.

a) Sampled and tested at the Project Site by the Resident Engineer or the Materials Inspector.

3) One (1) sample (size according to AASHTO T-152) per each day's production for an air content test.

a) Sampled and tested at the Project Site by the Resident Engineer or the Materials Inspector.

2. Portland Cement

a. Process Control Tests

1) One (1) mill test report per truck load of cement.

a) Given to the Materials Inspector at the concrete plant.

b. Acceptance Tests

1) One (1) 6+ lbs. sample per project, per railroad carload for relevant AASHTO tests.

a) Sampled at the truck or railroad car by the Materials Inspector.

b) Tested in CENTRAL LAB.

3. Coarse Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) 150+ lbs. sample per year for L.A. Abrasion Tests, a sodium sulfate soundness test, specific gravity and unit weight measurements

a) Sampled at the concrete or processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

4. Fine Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis and determination of fineness modulus.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) One (1) 50+ lbs. sample per year for a sieve analysis and determination of fineness modulus, specific gravity, unit weight and absorption.

a) Sampled at concrete or processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

Code 701.8002 - Class B Bedding

a. Acceptance Tests

1) One (1) 50+ lbs. sample per 1000 CY or less, per type, per source for sieve analysis.

a) Sampled in place at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB or in the FIELD.

Code 701.8003 - Class C Bedding

a. Process Control Tests

1) Documented by a delivery slip noting 1" commercial stone.

b. Acceptance Tests

1) One (1) 50+ lbs. sample per type, per source for sieve analysis.

a. Sampled in place at the project site by the Materials Inspector.

b. Tested in CENTRAL LAB or in the FIELD.

Code 701.8100 - Furnish and Install Cast Iron Fittings

a. Same as Code 701.4504 thru 701.5060.

Code 701.8101 - Shut Off and Disconnect at Main and Abandon Service

a. No tests required (must indicated in Project Schedule).

Code 701.8104 thru 701.8148 - Gate Valves and Boxes

a. Same as Codes 701.4504 thru 701.5060.

Code 701.8150 - Type K Copper Service Pipe

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code 701.8151 - Curb Stop - Complete In Place

Code 701.8160 - Blow Off Assembly

a. Same as 701.4504 thru 701.5060.

Code 701.8161 - Water Meter Pit

a. No tests required (must be indicated in Project Schedule).

Code 701.8162 - Water Valve Manhole (0-10' Deep)

1. Brick or Blocks

a. Acceptance Tests

1) One (1) sample of 15 bricks or 3 blocks of each type for absorption and compressive strength tests.

a) Sampled at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB.

2. Castings

a. Process Control Tests

1) One (1) certificate of compliance per source.

3. Mortar Cement

a. Acceptance Tests

1) One (1) 6+ lbs. sample per project, per railroad car load for relevant AASHTO tests.

a) Sampled at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB.

4. Mortar Sand

a. Acceptance Tests

1) One (1) sample per 1,000 CY for a sieve analysis.

a) Sampled at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) 50+ lbs. sample per year for a sieve analysis and determination of specific gravity, unit weight and absorption.

a) Sampled at the processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

Code 701.8163, 701.8164 - Post Type Hydrant (High Pressure)

Code 701.8170 - 8" x 6" Tapping Sleeve and Tapping Valve with Gate Box

a. Same as Codes 701.4504 thru 701.5060.

Code 701.8200 thru 701.8261 - Remove and Relocate or Adjust Water Line Items

Code 701.9001 - Conduct Leakage Test

Code 701.9002 - Sterilization of Water Mains

Code 701.9003 - Remove and Reset Pipe - All Sizes

Codes 702.0204 thru 702.0209 - Manholes, Brick or Block, 4', 5', & 6' R.I. Standards 3.1 & 3.2.

1. Portland Cement

a. Acceptance Tests

1) One (1) 6+ lbs. sample per project, per railroad car load for relevant AASHTO tests.

a) Sampled at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB.

2. Fine Aggregate

a. Acceptance Tests

1) One (1) sample per 1,000 CY for a Sieve analysis and determination of fineness modulus.

a) Sampled at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB

2) One (1) 50+ lbs. sample per year for a sieve analysis and determination of fineness modulus, specific gravity, unit weight and absorption.

a) Sampled at the processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

3. Bricks or Blocks

a. Acceptance Tests

1) One (1) sample of 15 bricks or 3 blocks of each type for absorption and compressive strength tests.

a) Sampled at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB.

Code 702.0304 - Manholes Type P-20 - Providence Standard
Code 702.0400 - Sanitary Sewer Manhole

a. Same as Codes 702.0204 thru 702.0209.

Code 702.0511 thru 702.0522 - Frames, Grates and Covers, R.I. Standards 5.11, 5.12, 5.13, 5.14, 5.15, 5.16, 5.17, 5.21 and 5.22

Code 702.0530 thru 702.0535 - Precast Concrete Inlet and Apron Stones, R.I. Standards 7.12, 7.13, 7.14, 7.15, 7.22 and 7.23.

a. Process Control Tests

1) One (1) certificate of compliance per type per source.

Code 702.0540 thru 702.0543 - Granite Inlet & Apron Stones - R.I. Standards - 7.52, 7.53, 7.54 & 7.55

a. No tests required (must be indicated on Project Schedule).

Code 702.0605 thru 702.0650 - Precast Catch Basins & Manholes RI Standards 4.31, 4.32, 4.33, 4.34, 4.37

1. Concrete Mix

a. Acceptance Tests

1) Six (6) 6" x 12" cylinders per 200 CY or each day's production for compressive strength tests.

a) Sampled at the place of manufacture or the project site by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) sample (size according to AASHTO T-119) per 200 CY or each day's production for slump test.

a) Sample and test at the project site or by the place of manufacture by the Materials Inspector.

3) One (1) sample (size according to AASHTO T-152) per 200 CY or each day's production for an air content test.

a) Sampled and tested at the place of manufacturer or at the project site by the Materials Inspector.

2. Portland Cement

a. Process Control Tests

1) One (1) mill test report per truck load of cement.

a) Given to the Materials Inspector at the Plant.

b. Acceptance Tests

1) One (1) 6+ lbs. sample per project, per railroad car load for relevant AASHTO tests.

a) Sampled at the truck or railroad car by the Materials Inspector.

b) Tested in CENTRAL LAB.

3. Coarse Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) One (1) 150+ lbs. sample per year for L.A. Abrasion Tests, a sodium sulfate soundness test, specific gravity and unit weight measurements.

a) Sampled at the concrete or processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

4. Fine Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis and determination of fineness modulus.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) One (1) 50+ lbs. sample per year for a sieve analysis and determination of fineness modulus, specific gravity, unit weight and absorption.

a) Sampled at concrete or processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

5. Steel Reinforcing

a. Process Control Tests

1) One (1) mill test report per shipment, per size, per source, per heat number.

b. Acceptance Tests

1) Two (2) 3-foot long sample per size, per source, per heat number, for a tension and AASHTO T-244 bend test.

a) Sampled at concrete plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

Code 702.0701 thru 702.0711 - Catch Basins, Driveway Basins and Drop Inlets Brick or Block, R.I. Standards - 4.1, 4.2, 4.3, 4.5, 4.6, 4.7, 4.8, 4.9, 4.11

a. Same as codes 702.0204 thru 701.0209.

**Code 702.0712 thru 702.0714 - Precast Concrete Drop Inlets, R.I. Standards - 4.12,4.13,4.14
Code 702.0715 - Precast Concrete Sump - Round - R.I. Standard 4.15**

a. Same as Codes 702.0530 thru 702.0535.

Code 702.0716, 702.0717 - Double Catch Basin R.I. Standard - 4.16 and 4.17

Code 702.0720, 702.0721 - Catch Basin P-1 Providence Standard, (0-12') and (12' & D)

**Code 702.0750 - Manholes, Catch Basins, Inlets, 12" Walls, Greater than 12' RI Standard
3.5**

Code 702.1600 - Furnish and Set Frames, Covers or Grates

a. Same as Codes 702.0511 thru 702.0522.

Code 702.1700 - Remove and Reset Covers or Grates

- a. No tests required (must be indicated on Project Schedule).

Code 703.0008 thru 703.0024 - Perforated Concrete Pipe, M175, with Filter Material, R.I. Standard 1.1

1. Pipe

- a. Same as Codes 701.0704 thru 701.0874.

2. Filter stone and Fine Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis and determination of fineness modulus.

a) Sampled at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB or in the FIELD.

3. Filter Material

a. Process Control Tests

1) One (1) certificate of compliance per type, per source.

Code 703.0308 thru 703.0321 - Corrugated Iron or Steel Underdrain, M36, with Filter Material R.I. Standard 1.1

Code 703.0408 thru 703.0421 - BCCIORS Underdrain, M36, with Filter Material, R.I. Standard 1.1

1. Pipe

- a. Same as Codes 701.2012 thru 701.2296.

2. Filter stone and Fine Aggregate

a. Acceptance Tests

1) One (1) sample per day for a sieve analysis.

a) Sampled at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB or in the FIELD.

3. Filter Material

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code 703.0508 thru 703.0521 - Corrugated Aluminum Pipe, M196, Underdrain with Filter Material, R.I. Standard 1.1

Code 704.0100 thru 705.1300 - Reconstruct Catch Basins & Manholes

a. Same as 702.0204 thru 702.0209

Code 706.9000 - Plug and Cap Pipe - All Sizes

Code 707.0900 thru 707.1200 - Adjust, Reconstruct or Cut-in Existing Manholes and Catch Basins

a. Same as Codes 702.0204 thru 702.0209.

Code 707.1800 - Adjust Catch Basin to Manholes and Furnish Frame and Cover

a. Same as Codes 702.0204 thru 702.0209.

b. Process Control Tests

1) One (1) certificate of compliance per type, per source.

Code 707.1900, 707.2000 - Adjust Frame, Grate and Cover to Grade.

a. Same as Codes 702.0204 thru 702.0209.

Code 708.8103 - Furnish and Install Cement Concrete Class B Thrust and Anchor Blocks - Cast in Place

a. Same as codes 601.0101 thru 601.0600

Code 708.9040 - Cleaning and Flushing Pipe - All Sizes

Code 708.9041, 708.9042 - Cleaning Catch Basins and Manholes - All Types and Sizes

a. No tests required (must be indicated on the Project Schedule).

Code 711.0100, 711.0101 - Cobble Waterways

- a. No Tests required (must be indicated in Project Schedule).

Code 711.0110, 711.0111 - Paved Waterways, Class I-1, R.I. Standard 8.2

1. Bituminous Concrete Mixture

a. Acceptance Tests

1) One (1) sample (size according to AASHTO T-168) per 500 tons or less for bitumen extraction sieve analysis.

a) Sampled at the plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) Two (2) cores (size according to AASHTO T-245) per day for a Marshall Test.

a) Sampled and made at the plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

3) One (1) density test per type of mix and as required.

a) Tested at the Project Site by the Materials Inspector.

2. Gravel Borrow Subbase Course

a. Acceptance Tests

1) One (1) 50+ lbs. sample per source or geological change for a Laboratory proctor.

a) Sampled at the source by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) 50+ lbs. sample per 1000 CY or less for a sieve analysis.

a) Sampled in place at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB or in the FIELD.

3) One (1) field density test per 1000 CY or less.

a) Sampled and tested in place at the project site by the Materials Inspector.

Code 711.0120 - Cement Concrete Waterway

1. Concrete Mix

a. Acceptance Tests

1) Six (6) 6" x 12" cylinders per 200 CY or each day's production for compressive strength tests.

a) Sampled at the Project Site by the Resident Engineer or the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) sample (size according to AASHTO T-119) per 200 CY or each day's production for slump test.

a) Sampled and tested at the project Site by the Resident Engineer or the Materials Inspector.

3) One (1) sample (size according to AASHTO T-152) per 200 CY or each day's production for an air content test.

a) Sampled and tested at the Project Site by the Resident Engineer or the Materials Inspector.

2. Portland Cement

a. Process Control Tests

1) One (1) mill test report per truck load of cement.

a) Given to the Materials Inspector at the concrete plant.

b. Acceptance Tests

1) One (1) 6+ lbs. sample per project, per railroad car load for relevant AASHTO tests.

a) Sampled at the truck railroad car by the Materials Inspector.

b) Tested in CENTRAL LAB.

3. Coarse Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) 150+lbs. sample per year for L.A. Abrasion Tests, a sodium sulfate soundness test, specific gravity and unit weight measurements.

a) Samples at the concrete or processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

4. Fine Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis and determination of fineness modulus.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) One (1) 50+lbs. sample per year for a sieve analysis and determination of fineness modulus, specific gravity, unit weight and absorption.

a) Sampled at the concrete or processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

5. Steel Reinforcing

a. Process Control Tests

1) One (1) mill test report per shipment, per size, per source, per heat number.

b. Acceptance Tests

1) Two (2) 3 foot long sample per size, per source, per heat number, for a tension and AASHTO T-244 bend test.

a) Sampled at the project site by the Resident Engineer.

b) Tested in CENTRAL LAB.

6. Gravel Borrow Subbase Course

a. Acceptance Tests

1) One (1) 50+lbs. sample per source or geological change for a Laboratory proctor.

a) Sampled at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) 50+ lbs. sample per 100 CY or less for a sieve analysis.

a) Sampled in place at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB or in the FIELD.

3) One (1) field density test per 1000 CY or less.

a) Sampled and tested in place at the project site by the Materials Inspector.

Code 711.0200 - Paved Waterway Class I-2

a. Same as Code 704.0110

Codes 712.0100, 712.0200 - Water and Gas Gates Boxes

a. Same as 701.4504 thru 701.5060

Code 713.8267 thru 713.8300 - Adjust Gate Boxes - Remove and Relocate Curb Stop

Code 713.8300 - Adjust Gas Gate to Grade

Code 714.8263, 714.8264 - Post Type Hydrants

Code 714.8265 thru 714.8266 - Remove and Salvage Hydrant & Valves

a. Same as 701.8200 thru 701.8621

Code 802.0000, 802.2000 Temporary Bridge Structures, Fenders

- a. Required samples and tests shall be determined from bridge quantities for appropriate materials as shown on bridge plans or lump sum breakdowns.

Code 803.0000 thru 803.0200 - Remove and Dispose Bridges, Super/Sub Structures

- a. No tests required (must be indicated in project schedule).

Code 804.0210 thru 804.0280 - Untreated Timber Piles, Furnish and Drive and Equip

- a. No tests required (must be indicated in Project Schedule).

Code 804.0410 thru 804.0480 - Treated Timber Piles, Furnish and Drive and Equip

- a. Process Control Tests

- 1) One (1) certificate of compliance per size, per source.

Code 804.0703 thru 804.0707 - Prestressed Concrete Piles, Furnished

1. Concrete Mix

- a. Acceptance Tests

- 1) Six (6) 6" x 12" cylinders per 200 CY or each day's production compressive strength tests.

- a) Sampled at the place of manufacture by the Materials Inspector.

- b) Tested in CENTRAL LAB.

- 2) One (1) sample (size according to AASHTO T-119) per 200 CY or each day's production for slump test.

- a) Sample and test at place of manufacture by the Materials Inspector.

- 3) One (1) sample (size according to AASHTO T-152) per 200 CY or each day's production for an air content test.

- a) Sampled and tested at the place of manufacture by the Materials Inspector.

2. Portland Cement

a. Process Control Tests

1) One (1) mill test report per truck load of cement.

a) Given to the Materials Inspector at the Plant.

b. Acceptance Tests

1) One (1) 6+ lbs. sample per project, per railroad car load for relevant AASHTO tests.

a) Sampled at the truck or railroad car by the Materials Inspector.

b) Tested in CENTRAL LAB.

3. Coarse Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) One (1) 150+ lbs. sample per year for L.A. Abrasion Tests, a sodium sulfate soundness test, specific gravity and unit weight measurements.

a) Sampled at the concrete or processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

4. Fine Aggregate

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis and determination of fineness modulus.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) One (1) 50+ lbs. sample per year for a sieve analysis and determination of fineness modulus, specific gravity, unit weight and absorption.

a) Sampled at the concrete or processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

5. Steel Reinforcing

a. Process Control Tests

1) One (1) mill test report per shipment, per size, per source, per heat number.

b. Acceptance Tests

1) Two (2) 3-foot long samples per size, per source, per heat number, for a tension and AASHTO T-244 bend test.

a) Sampled at the concrete plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

6. Prestressing Strand

a. Process Control Tests.

1) One (1) mill test report per shipment, per type, per size, per source, per heat number.

2) One (1) certificate of compliance per type, per size, per source, per heat number.

b. Acceptance Tests

1) Two (2) 3 foot long samples per type, per size, per source, per heat number for tension tests.

a) Sampled at the Plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

Code 804.0743 thru 804.0747 - Prestressed Piles - Drive

- a. No tests required (must be indicated in Project Schedule).

Code 804.0763 thru 804.0767 - Prestressed Piles - Furnish and Drive

Code 804.0783 thru 804.0787 - Prestressed Piles - Furnish, Drive and Equip

- a. Same as Codes 804.0703 thru 804.0707.

Code 804.0797 - Prestressed Pile Cut-Off

- a. No tests required (must be indicated in Project Schedule).

Code 804.0900 thru 804.0950 - Furnish and Drive, CIP Piles

Code 804.0960 thru 804.1010 - Furnish, Drive and Equip CIP Piles

- a. Same as Codes 804.0703 thru 804.0707 EXCEPT SECTION #6

Code 804.1210 thru 804.1290 - H Piles, Furnish and Drive

Code 804.1310 thru 804.1390 - H Piles - Furnish, Drive and Equip

Code 804.1510 thru 804.1530 - Pipes Piles, Furnish and Drive

Code 804.1560 thru 804.1580 - Pipe Piles, Furnish, Drive and Equip

- a. Process Control Tests

- 1) One (1) Mill Test Report per source for listing relevant ASTM/AASHTO tests results.

- a) Sampled at the manufacturing plant by the Manufacturing Quality Control Inspector.

- b) Tested in the MANUFACTURING PLANT LAB.

Code 804.1610 thru 804.1800 - Pile Tests

Code 804.2000 - Moving Equipment On and Off Job

- a. No tests required (must be indicated in Project Schedule).

Code 804.2100 thru 804.2300 - Pile Points, Shoes - Cast Steel

- a. Process Control Tests

- 1) One (1) certificate of compliance per source.

Code 805.0100 - Permanent Sheet Piling - Steel, Furnish and Drive

a. Process Control Tests

1) One (1) Mill Test Report per source listing relevant ASTM/AASHTO test results.

a) Sampled at the manufacturing plant by the Manufacturing Quality Control Inspector.

b) Tested in the MANUFACTURING PLANT LAB.

2) One (1) certificate of compliance per type, per source.

Code 805.0200 - Permanent Sheet Piling, Timber, Furnish and Drive

Code 805.0300 - Permanent Sheet Piling, Concrete, Furnish and Drive

Code 805.0400 - Permanent Sheet Piling - Optional Material - Furnish & Drive

Code 805.2000, 805.2100 - Temporary Sheet Piling, Steel, Timber

Code 805.2200, 805.2300 - Temporary Sheet Piling, Concrete & Optional Material-Furnish & Drive

a. Process Control Tests

1) One (1) certificate of compliance per type, per source.

Code 805.3000 - 805.3250 - Precast Concrete or Retained Earth Walls

a. Same as Codes 804.0203 thru 804.0707 Except Section #6

Code 805.4000, 805.4100 - Soldier Piles Drive, Timber, Steel

Code 805.4200, 805.4300 - Soldier Piles Predrilled, Timber, Steel

Code 805.4400, 805.4500 - Timber Steel Lagging - Installed

Code 805.4600, 805.4700 - Ground Anchors Installed, Waters and Bracing

a. Same as 805.0200

Code 806.1000 thru 806.1750 - Timber Bridge Items

a. Same as Code 805.0100

Code 807.0110 thru 807.0300 - Masonry, Ranged Cut, Tandem Course Cut, Split Face, Ranged Split and Rubble

1. Mortar Cement

a. Acceptance Tests

1) One (1) 6+ lbs. sample per Project, per railroad car load for relevant AASHTO tests.

a) Sampled at the Project Site by the Materials Inspector or Resident Engineer.

b) Tested in CENTRAL LAB.

2. Mortar Sand

a. Acceptance Tests

1) One (1) sample per 200 CY for a sieve analysis and determination of fineness modulus.

a) Sampled at the Project Site by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) 50+ lbs. sample per year for a sieve analysis and determination of fineness modulus, specific gravity unit weight and absorption.

a) Sampled at the processing plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

Code 807.0350, 807.0360 - Pointing and Grouting Masonry, Underwater

a. Must be on the Materials Approved List.

Code 807.0500 - Pointing and Grouting

a. Must be on the Materials Approved List.

Code 808.0120 thru 808.0602 - Concrete Substructure Structures

Code 808.0701 thru 808.0703 - Reinforced Concrete Structures

a. Same as Codes 804.0900 thru 804.0950.

Code 808.0721 thru 808.0724 - Unreinforced Concrete Beams, Types 1 thru 6, Furnish, Fabricate and Erect Class X 1"

a. Same as Codes 601.0101 thru 601.0600.

Code 808.0730 - Concrete Substructure Class X(AE) 3/8" Modular Wall Units

- a. Same as Code 804.0900 thru 804.0950

Code 808.1200 thru 808.1520 - Concrete Superstructure Construction

- a. Same as Codes 804.0703 thru 804.0707

Code 808.1601 thru 808.1608 - Preformed Joint Filler - Cork

Code 808.1611 thru 808.1618 - Preformed Joint Filler - Expanded Rubber

- a. Process Control Tests

1) One (1) certificate of compliance per source, per shipment.

2) One (1) manufacturer's certificate of test per source, per shipment.

Code 808.1621 - Joint Sealer - Poured and Caulked Types, Type A

- a. Process Control Tests

1) One (1) certificate of compliance per source.

Code 808.1631 thru 808.1637 - Preformed Joint Filler - Bituminous

Code 808.1640 thru 808.1646 Preformed Polyethylene Foam Joint Filler

- a. Same as Code 807.1601 thru 807.1608.

Code 808.1650 - Mastic Joint Sealer (1" x 1")

Code 808.1651 - Mastic Joint Sealer

- a. Process Control Tests

1) One (1) certificate of compliance per source.

Code 808.1660 - Underpavement Joint Repairs

- a. Same as Codes 808.1601 thru 808.1608.

Code 808.1670, 808.1675 - Polyurethane Joint Sealant

Code 808.1680 - Neoprene Joint Sealant - Expansion and Fixed

Code 808.1810 thru 808.1830 - Concrete Surface Finishing

Code 808.1840 - Concrete Bridge Deck - Finish

- a. No tests required (must be indicated in Project Schedule).

Code 809.0811 thru 809.0845 - Prestressed Concrete Beams, Types 1 thru 6, Furnish, Fabricate and Erect Class X 1"

Code 809.0913 thru 809.0946 - Prestressed Concrete Box Beams, Furnish, Fabricate and Erect Class X 3/4"

Code 809.1041 thru 809.1146 - Prestressed Concrete Slabs, Furnish, Fabricate & Erect - Class X3/4"

a. Same as Code 804.0703 thru 804.0707

Code 810.0100, 810.0200 - Standard Bars - Grade 40 and 60

Code 810.0300 - Epoxy Coated Bar Reinforcement for Structure

Code 810.0400 - Spirals Standard for Columns

a. Process Control Tests

1) One (1) certificate of compliance per source and mill test report per size, per heat number, per source.

b. Acceptance Tests

1) Two (2) 3 foot ling samples per size, per source, per heat number, per bridge or as shown on the plans for tension, coating thickness and AASHTO T-244 bend tests.

a) Sampled at the Project Site by the Materials Inspector or Resident Engineer.

b) Tested in CENTRAL LAB.

Code 810.0700 thru 810.0702 - Wire Fabric Bridge Item (Plain, Epoxy, Galvanized)

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code 811.0100 - Weep Holes - 2 Inch Diameter

Code 811.0200 - Sub Pavement Drain

Code 811.1400, 811.1401 - Thermoplastic Pipe - Commercial Grade Plastic

Code 811.2000 thru 811.2201 - Wall Drains

a. Process Control Tests

1) One (1) certificate of compliance per size, per source.

Code 812.0000 - Waterstops and Flashings
Code 813.0100 - DampProofing
Code 813.0200 - Preformed WaterProofing Membrane
Code 813.0300 - Cold Applied Liquid Membrane
Code 813.0400 - Rubberized Asphalt Liquid Membrane (Waterproofing Membrane)

a. Process Control Tests

1) One (1) certificate of compliance per size, per source.

b. Acceptance Tests

1) One (1) quart sample per source for relevant tests.

a) Sampled at the Project Site by the Resident Engineer.

b) Tested in CENTRAL LAB.

2) One (1) 3 - foot fabric sample.

a) Sampled at the Project Site by the Resident Engineer.

b) Tested in CENTRAL LAB.

Code 815.1900 - Latex Modified Structural Concrete
Code 816.1901, 816.1920 - Microsilica Modified Concrete Deck Overlay and Full Depth Deck

a. Same as Code 601.0101 thru 601.0600.

Code 817.2100 thru 807.2130 - Repairs to Structural Concrete Masonry, Pneumatic Mortar, Patching

a. Process Control tests

1) Must be on the Materials Approved List.

2) One (1) certificate of compliance per type, per source.

Code 817.2200, 817.2210 - Polymer Modified/Concrete/Mortar
Code 817.2300 - Underwater Concrete Repairs

Code 818.2000 thru 818.2020 - Portland Cement Concrete - Deck Repairs

- a. Same as Codes 601.0101 thru 601.0600.

Code 819.0800 - Drill and Grout Reinforcing Dowels

- a. Acceptance Tests
 - 1) Same as Codes 808.0100 and 808.0200.
 - 2) Grout used must be on the Materials Approved List.

Code 819.0900 - Drill and Set Concrete Expansion Anchors

- a. No tests required (must be indicated in Project Schedule).

Code 820.0110 - Concrete Surface Treatments

- a. Process Control Tests
 - 1) One (1) certificate of compliance per source.
- b. Acceptance Tests
 - 1) One (1) quart sample per batch number
 - a) Sampled at the Project Site by the Resident Engineer or Materials Inspector.
 - b) Tested in CENTRAL LAB.
 - 2) Wet-Film thickness measurements
 - a) Tested at the Project Site by the Resident Engineer or Materials Inspector.

Code 821.1690 - Sawing and Sealing Joints in Bituminous Concrete Pavement

Code 822.1695 - Silicone Highway Joint Sealer

Code 823.1711, 823.1712 - Expansion Joints - 3" Extruded Sealer

Code 823.1722 - Fix Joint 1 5/8" - Extruded Sealer

Code 823.1750 - 823.1770 - Expansion Joint Assemblies

- a. Process Control Tests
 - 1) One (1) certificate of compliance per source.

Code 824.0110 thru 824.0516 - Structural Steel

Code 824.0610, 824.0620 - Welded Shear Connectors
Code 824.0710 - Stainless Steel

a. Process Control Tests

1) One (1) Mill Test Report per source.

a) Sampled at the Manufacturing plant by the Manufacturing Quality Control Inspector.

b) Tested in the MANUFACTURING PLANT LAB.

Code 824.8010 - Anchorage Assemblies for Future Fixtures

a. No tests required (must be indicated in Project Schedule).

Code 825.8015 thru 825.8031 - Surface Preparation Using SSPC-SP1 Methods
Code 825.8035, 825.8036 - High Pressure Water Blasting
Code 825.8040 thru 825.8046 - Field Painting - Repairing Structural Steel

a. Process Control Tests

1) One (1) certificate of compliance per source, per item, per batch number, per project for relevant tests.

b. Acceptance Tests

1) One (1) quart sample per batch number.

a) Sampled at the Project Site by the Resident Engineer.

b) Tested in CENTRAL LAB.

2) Wet-Film thickness measurements

a) Tested at the Project Site by the Resident Engineer or Materials Inspector.

Code 826.0100 - Containment, Collection, Storage and Disposal of Debris and Spent Materials

a. No tests required (must be indicated in project schedule).

Code 827.8038 - Thermal Sprayed Zinc Coating for New Structural Steel
Code 828.0100 thru 828.0500 - Bearings, Pot, Pin Connected Pedestal, Sliding (Expansion

or Fixed), Elastomeric (Plain or Laminated) & Pedestrian
Bridge, Base Isolation

Code 829.0300 - Polyvinyl Chloride Scupper Piping

Code 830.0110, 830.0111 - Aluminum Bridge Rail, One Bar, Ornamental or Structural

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code 830.0200 - Aluminum Bridge Rail - Remove and Reset

a. No tests required (must be indicated in Project Schedule).

Code 830.0210 thru 830.0300 - Steel Bridge Rail

Code 830.0301 - Anchor Assemblies for Future Rail

a. Process Control Tests

1) One (1) certificate of compliance per source.

b. Acceptance Tests

1) Thickness measurements

a) Tested at the Project Site by the Resident Engineer or Materials
Inspector.

Code 830.0400 - Steel Bridge Rail - Remove and Reset

a. No test required (must be indicated in Project Schedule).

Code 831.0110 thru 831.0120 - Pedestrian Chain Link Fence

Code 831.0130 - Railroad Protective Barrier Railing

Code 832.8050, 832.8051 - Bridge Minimum Clearance and Identification Signs

Code 833.0400 - Granite Identification Tablets

a. No tests required (must be indicated in Project Schedule).

**Code 834.0111 thru 834.0223 - Granite Curb, Vertical, Slope Faced, Straight, Curved,
Transition**

a. No tests required (must be indicated in Project Schedule).

Code 835.0110 thru 835.0302 - Deck Scuppers

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code 901.0101 thru 901.0144 - Guardrail, Steel Beam, Single and Double Faced, Earth and Asphalt, Concrete, Rubrail, Light Barrier

Code 901.0151 thru 901.0159 - Guardrail, Steel Beam, End and Anchor Sections

Code 901.0160 thru 901.0184 - Guardrail, Steel Beam, Elements

Code 901.0190 - Guardrail, Steel Beam Anchorage Approach Section - Section - RI Standard 34.5 - Complete In Place

Code 901.0192 - Guardrail, Steel Beam, Anchorage Detail Trailing End, RI Standard 34.6 - Complete In Place

Code 901.0193 - Guardrail Steel Beam Single Face RI Standard 34.7

Code 901.0194, 901.0195 - Guardrail Connection to Barrier/End Post - Approach End and Trailing End Section - RI Standard 34.8/34.9/34.10/34.11

Code 901.0196, 901.0197 - Guardrail Connection to Existing End Post - RI Standard 34.10/34.11

Code 901.0200 thru 901.0220 - Cable Guide Railing and Elements

Code 901.0301 thru 901.0322 - Cable Chain Link Barrier and Elements

Code 901.0324 thru 901.0346 - Chain Link Fence and Elements

Code 901.0401 - Rustic Barrier RI Standard 33.5

Code 901.0410 - 904.0430 - Steel Backed Timber Guardrail and Earth Berm RI Standards 34.23/34.24/34.25/34.26

Code 901.0500 - Glare Barrier

a. Process Control Tests

1) One (1) certificate of compliance per source.

b. Acceptance Tests

1) Thickness measurements

a) Tested at the Project Site by the Resident Engineer or Materials Inspector.

Code 906.0600 - Shock Absorbing Barrier Modules

a. Process Control Tests

1) One (1) certificate of compliance per source, per item.

Code 906.0700 - Guardrail Energy Absorbing Terminal Impact Attenuator

Code 906.0800 - High Speed Hi-Dro Cushion Impact Attenuators

a. Process Control Tests

1) One (1) certificate of compliance per type, per size, per source.

Code 901.0901 - Remove and Reset Guardrail - All Types

Code 901.0902 - Remove and Reset Terminal End Section

Code 901.0903, 901.0904 - Remove and Reset Tapered Anchor Section - Single Face and Double Face

Code 901.0905 - Remove and Reset Barrier End Section - Double Face

a. No tests required (must be indicated in Project Schedule).

Code 901.0906 - Remove and Reset Steel Beam Anchor (Concrete Class A (AE))

a. Same as Code 601.0101 thru 601.0600.

Code 901.0907 thru 901.0909 - Remove and Reset Guardrail and Elements, Steel Beam and Cable Guide

a. No tests required (must be indicated in Project Schedule).

Code 902.0110 - Woven Wire Right-of-Way Fence - RI Standard 32.1

Code 902.0205 thru 902.0208 - Chain Link Fence - RI Standards 31.3, 31.4, 31.5

a. Same as Code 901.0600.

Code 902.0209 - Post Holes in Ledge - Standard CIP

a. No tests required (must be indicated in Project Schedule).

Code 902.0226, 902.0227 - Gates, Chain Link, 5', 6' - RI Standard 31.3, 31.4, 31.5

Code 902.0232 - Barway - Standard 33.1

a. Same as Code 901.0600.

Code 902.0240, 902.0241 - Wooden Fence, Cedar Pole - 8 Foot

a. Process Control Tests

1) One (1) certificate of compliance per type, per source.

Code 902.0323 - Post with Plate and Bolt on Bridge Chainlink

a. Same as 901.0600

Code 903.0100 thru 903.0200 - Remove and Reset Fence and/or Fence Posts

- a. No tests required (must be indicated in Project Schedule).

Code 904.0110, 904.0115 - Portland Cement Sidewalk, Driveway Monolithic - RI Standard 43.1, 43.50

- a. Same as Codes 601.0101 thru 601.0600.

Code 904.0120, 904.0122 - Bituminous Sidewalks - RI Standard 43.2, Types I-1, I-2

1. Bituminous Concrete Mixture

a. Acceptance Tests

1) One (1) sample (size according to AASHTO T-168) per 500 tons or less for bitumen extraction sieve analysis.

a) Sampled at the mix Plant by the Materials Inspector.

b) Tested in PLANT LAB.

2) Two (2) cores (size according to AASHTO T-245) per day for a Marshall Test.

a) Sampled and made at the Plant by the Material Inspector.

b) Tested in CENTRAL LAB.

3) One (1) density test per type of mix per day.

a) Sampled and tested at the Project Site by the Materials Inspector.

Code 904.0130, 904.0131 - Portland Cement Concrete medians - Monolithic, 4", 6"

- a. Same as Codes 601.0101 thru 601.0600.

Code 905.0100 thru 905.0120 - Granite Curb, Quarry Split, Straight, Circular Corners, Wheelchair RI Standards 7.18, 7.50, 7.51, 7.56, 7.57, 43.31, 43.32

- a. No tests required (must be indicated in Project Schedule).

Code 905.0210 thru 905.0241 - Cement Concrete Curb, Straight, Circular, Corners,

Transition, Wheelchair - RI Standards 7.11, 7.16, 7.17,
7.21, and 7.28

Code 905.0242 thru 905.0244 - Cement Concrete Edging

Code 905.0245 - Precast Car Stops - RI Standard 7.29

Code 905.0250 - Precast Wheelchair Ramp Curb - RI Standards 43.31, 43.32

**Code 905.0270 thru 905.0280 - Precast Concrete Transition Curbs - RI Standard 7.18, 7.24,
7.27**

Code 905.0561 thru 905.0565 - Cement Concrete Edging, Lot Curb RI Standard 10.9

- a. Same as Code 702.0605 thru 702.0650

Code 905.0600 - Bituminous Curbing - RI Standard 7.41

Code 905.0602 - Bituminous Berm - RI Standard 7.43

- a. Same as Codes 905.0120 and 905.0122.

**Code 905.0700 thru 905.0720 - Remove, Handle, Haul, Trim, Reset or Stockpile Curb and
Curb Returns**

Code 906.0100 thru 906.0102 - Water for Dust Control, Recycling Compaction

- a. No tests required (must be indicated in Project Schedule).

**Code 906.0200 thru 906.0202 - Calcium Chloride for Dust Control, Recycling and
Pavement Rehabilitation**

Code 906.0300 - Bitumen for Dust Control

- a. Process Control Tests

- 1) One (1) certificate of compliance per source.

Code 907.0100 - Flagstone - Blue Stone Treads

- a. No tests required (must be indicated in Project Schedule).

**Code 909.3010 thru 909.3030 - Precast Median Barrier - RI Standards 40.1, 40.2, 40.21 &
40.3**

- a. Same as Codes 702.0605 thru 702.0650.

Code 909.3040 - Precast Median Barrier With Light Unit RI Standard 40.4

- a. Same as Codes 702.0605 thru 702.0650.

**Code 910.2070, 910.2080 - Raised Pavement Markers - RI Standard 46.10, 46.11, 46.20 and
46.21**

a. Process Control Tests

- 1) One (1) certificate of compliance per source.

Code 911.0100 - Wet Stone Masonry Wall - RI Standard 10.1

Code 911.0101, 911.0102 - Stone Masonry Steps Headwalls - RI Standard 10.12

Code 911.0104 - Wet Stone Masonry Wall RI Standard 10.11

1. Plastic Pipe

a. Process Control Tests

- 1) One (1) certificate of compliance per source.

2. Backfill

a. Acceptance Tests

- 1) One (1) 50+ lbs. sample per source or geological change for a laboratory Proctor and Sieve Analysis Test.

a) Sampled at the source by the Materials Inspector.

b) Tested in CENTRAL LAB.

- 2) One (1) field density test per 3000 CY.

a) Sampled and tested in place at the Project Site by the Materials Inspector.

3. Mortar Cement

a. Acceptance Tests

- 1) One (1) 6+ lbs. sample per project or per railroad carload for relevant AASHTO tests.

a) Sampled at the project site car by the materials Inspector.

b) Tested in CENTRAL LAB.

4. Mortar Sand

a. Acceptance Tests

1) One (1) 10+ lbs. sample per 1000 CY for a sieve analysis and determination of fineness modulus.

a) Sampled at the Project Site by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) 50+ lbs. sample per year for a sieve analysis and determination of fineness modulus, specific gravity, unit weight and absorption.

a) Sampled at the Processing Plant by the Materials Inspector.

b) Tested in CENTRAL LAB.

Code 911.0105 - Concrete Retaining Wall - RI Standard 10.2

1. Plastic Pipe

a. Process Control Tests

1) One (1) certificate of compliance per source.

2. Backfill

a. Acceptance Tests

1) One (1) 50+ lbs. sample per source or geological change for a laboratory Proctor and Sieve Analysis Test.

a) Sampled at the source by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) field density test per 3000 CY.

a) Sampled and tested in place at the Project site by the Materials Inspector.

3. Concrete Mix

a. Same as Codes 601.0101 thru 601.0600.

4. Steel Reinforcing

a. Process Control Tests

1) One (1) mill test report per shipment, per size, per source, per heat number.

b. Acceptance Tests

1) Two (2) 3 foot long sample per size, per source, per heat number for a tension and AASHTO T-244 bend test.

a) Sampled at the project site by the Resident Engineer.

b) Tested in CENTRAL LAB.

5. Gravel Borrow Subbase Course

a. Acceptance Tests

1) One (1) 50+ lbs. sample per source or geological change for sieve analysis.

a) Sampled at the source by the Materials Inspector.

b) Tested in CENTRAL LAB.

2) One (1) 50+ lbs. sample per 1000 CY or less for a sieve analysis.

a) Sampled in place at the project site by the Materials Inspector.

3) One (1) field density test per 1000 CY or less.

a) Sampled & tested in place at the project site by the Materials Inspector.

6. Joint Filler

a. Process Control Tests

1) One (1) certificate of compliance per source.

2) One (1) manufacturer's certificate of compliance per source, per shipment.

7. Joint Sealer

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code 911.0107 - Concrete Masonry Steps

Code 911.0200 thru 911.1010 Stone Walls in Historic, Scenic or Rural Areas

a. Same as Code 911.0100

Code 911.2100 - Precast Cement Concrete Coping - RI Standard 10.6

a. Same as Code 702.0605 thru 702.0650

Code 911.3100 thru 912.0105 - Remove and Rebuild Dry Stone Walls, Remove and Reset Wet Stone Masonry Walls RI Standard 10.1, 10.11, 10.3

a. Same as Code 911.0100.

Code 913.4010 thru 914.5020 - Trafficpersons/Flagpersons

Code 915.0100 - Highway Bound - Granite - RI Standard 14.2

a. No tests required (must be indicated in Project Schedule).

Code 915.0200 thru 915.0230 - Highway Bounds, Reinforced Concrete RI Standards 14.1, 14.3, 14.4

a. Process Control Tests

1) One (1) certificate of compliance per type, per source.

Code 915.0240 - Remove and Reset Highway Bounds (all Types)

a. No tests required (must be indicated in Project Schedule).

Code 915.0300 - Highway Bounds - Bronze - RI Standard 14.7

Code 915.0400 - Highway Station Marker - RI Standard 14.8

Code 915.0500 - Precise Level Monument - Reinforced Concrete - RI Standard 14.9

a. Same as Codes 915.0200 thru 915.0230.

Code 916.0600 - Shock Absorbing Barrier Modules

a. Process Control Tests

1) No tests required (must be indicated in Project Schedule).

Code 916.0650 - Remove and Relocate Shock Absorbing Barrier Modules

- a. No tests required (must be indicated in Project Schedule).

Code 916.0700 - Guardrail Energy Absorbing Terminal Impact Attenuator

Code 916.0800 - High Speed Hi-Dro Cushion Impact Attenuators

- a. Process Control Tests

- 1) One (1) certificate of compliance per type, per size, per source.

Code 917.0105, 917.0106 - Remove and Replace Rural Mailbox Post and with RI Standard 15.20/15.30

Code 918.0100 - Rural Mailboxes

- a. Process Control Tests

- 1) One (1) certificate of compliance per type, per size, per source.

Code 919.0101 - Test Pits

Code 920.0000 thru 920.0090 - Riprap, Dumped or Placed - R1 thru R8 Standard 2.11, 2.12, 8.3

- a. Process Control Tests

- 1) One (1) certificate of compliance per class, per source.

Code 920.0115 thru 920.0155 - Bedding for Riprap FS-1, FS-2, FS-3, RI Standards 2.11, 2.12, 8.3

- a. Acceptance Tests

- 1) One (1) 50+lbs. sample per type, per source for sieve analysis.

- a) Sampled at the Project Site by the Materials Inspector.

- b) Tested in CENTRAL LAB or in the FIELD.

Code 921.0100 - Slope Paving

- a. Acceptance Tests

- 1) One (1) sample of 15 blocks per source for absorption and compressive strength tests.

a) Sampled at the Project Site by the Materials Inspector.

b) Tested in CENTRAL LAB.

Code 922.0100 - Temporary Construction Signs - RI Standard 29.0

1. Signs

a. Process Control Tests

1) One (1) certificate of compliance per source.

2. Posts or Supports

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code 922.0102 - Temporary Warning Signs - RI Standard 28.0

a. Same as Code 922.0100.

Code 923.0105 - Drum Barricade - RI Standard 26.5

Code 923.0120, 923.0125 - Plastic Pipe Barricade - RI Standard 26.15

Code 923.0200 - Fluorescent Traffic Cones - RI Standard 26.6

Code 924.0109 - Temporary Flashing Speed Signs

Code 924.0113 - Advance Warning Arrow Panel

a. Process Control Tests

1) One (1) certificate of compliance per type, per source.

Code 925.0112 - Portable Changeable Message Sign

Code 926.0130 - Precast Median Barrier for Temporary Traffic Control - RI Standard 40.5

Code 926.0140 - Reflective Delineators for Temporary Concrete Barriers

Code 927.0135 - Relocate Precast Median Barrier for Temporary Traffic Control

Code 928.0800 - Truck Mounted Attenuator with Truck Mounted Flashing Arrow Board

Code 929.0100 - Field Offices - 240 Square Feet Minimum

Code 929.0200 - Materials Lab - 200 Square Feet Minimum

Code 929.0300 - Champ's Management System

Code 932.0100, 932.0101 - Cutting and Matching - Asphalt, Concrete

Code 931.0110, 931.0130 - Cleaning and Sweeping Pavement, for Pavement Marking Only

Code 932.0200 thru 932.0230 - Full Depth Sawcutting

Code 932.0400 - Cold Joint Sawing and Sealing

1. Crack and Joint Sealer

a. Acceptance Tests

1) One (1) quart sample per type, per source, per batch for relevant tests.

a) Sampled at Project Site by Materials Inspector.

b) Tested in CENTRAL LAB.

Code 933.0300 - Saw Cutting Pavement for Traffic Count Loop Detectors

a. No tests required (must be indicated in Project Schedule).

Code 934.1000, 934.1010 - Two-Man, Three-Man Survey Party

a. No tests required (must be indicated in Project Schedule).

Code 935.0200 - Scarify and Reshape Existing Pavement

Code 935.0500 - Removing Bituminous Surface - Cold Planing

Code 936.0110 - Mobilization

Code 937.0200 - Maintenance and Movement of Traffic

Code 939.0100 - Load and Haul Salvaged Material - Non-Participating

Code 939.0200 - Load and Haul Salvaged Material

Code 940.0100 - Trainee Manhours

Code L01.0102 - Loam Borrow - 4 Inches Deep

Code L01.0104 - Plantable Soil - 4 Inches Deep

Code L01.0106 - High Organic Soil 4 Inches Deep (Slopes)

a. Acceptance Tests

1) One (1) 10+ lbs. sample per source for loss on ignition and pH tests.

a) Sampled at the project site by the Materials Inspector.

b) Tested in CENTRAL LAB.

Code L02.0101 thru L02.0106 - Seeding, Types I, II, III,IV,V,VI, Wetland and Temporary

1. Seeding, Limestone, Fertilizer, Mulch, or Adhesive Mulch Stabilizer

a. Process Control Tests

1) One (1) certified analysis per type, per source.

Code L03.0201 - Sodding Lawn Sod

Code L04.0514 - Fertilization of Seeded and Grassed Areas

a. Process Control Tests

1) One (1) certificate of compliance per type, per source.

Code L05.0502 - Adhesive Mulch Stabilizer

Code L05.0505 - Erosion Control Blanket

Code L05.0506 - Jute Mesh

a. Process Control Tests

1) One (1) certificate of compliance per source.

b. Acceptance Tests

1) One (1) 3 foot section per source for relevant tests.

a) Sampled at the project site by the Materials Inspector or Resident Engineer.

b) Tested in CENTRAL LAB.

Code L05.0507 - Excelsior Matting

Code L05.0508 - Straw Mulch

a. Process Control Tests

1) One(1) certificate of compliance per source.

Code L06. - Trees, Shrubs & Vines (to be provided)

Code L06.0101 - Oversized Planting Holes

a. No tests required (must be indicated in Project Schedule)

Code L06.0201, L06.0202 - Transplanting Shrubs/Trees all Types and Sizes

Code L06.0513 - Wood Chips Furnish and Spread 4" Depth

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code L07.0100 - Extended Establishment Period

- a. No test required (must be indicated in project schedule)

Code L08.0104 - Shrub or Vine Pruning

Code L08.0109, L08.0110 - Tree Trimming

Code L09.0106 - Selective Clearing

Code L10.0101 - Mechanical Tree and Shrub Root Pruning

- a. Process Control Tests

- 1) One (1) certificate of analysis of seed mixture per source.

Code L11.0102, L11.0103 - Tree/Shrub Plant Protection Device R.I. Standard 51.1, 51.2

Code L11.0104 - Drip-Line Tree Protection Device

- a. Process Control Tests

- 1) One (1) certificate of compliance per type per source.

Code L12.0206, L12.209 - Furnish and Install Pavers

1. Block, Brick and Pavers

- a. Acceptance Tests

- 1) One (1) sample of 15 blocks, bricks, and /or pavers per source for absorption and compressive strength tests.

- a) Sampled at the project site by the Materials Inspector.

- b) Tested in CENTRAL LAB.

2. Perforated Pipe

- a. Same as Code L06.0102.

Code L13.0204, L13.0205 - Tree Wells Block Construction, Stds. 50.7 & 50.8

Code L13.0206 - TreeWall

Code L14.0107, L14.0108 - Selective/Nonselective and Pre-Emergent Herbicide Application

- a. Process Control Tests

- 1) One (1) certificate of compliance per source.

Code T02.0010 - Lighting for Night Work Operations

- a. No test required (must be indicated in project schedule)

Code T03.6003, T03.6005 - Ground Rods 3/4" and 5/8" Diameter 10' Copper Clad Steel Including Clamps.

- a. Process control Tests

- 1) One (1) certificate of compliance per size, per source.

Code T04.5001 thru T04.5102 - 6 AWG/ 8AWG Cable, 600V, Insulation, Single & 2 Conductor

Code T04.5202 thru T04.5404 - 14 AWG/18 AWG/12AWG Cable

- a. Process Control Tests

- 1) One (1) certificate of compliance per type, per size, per source.

- b. Acceptance Tests

- 1) One (1) 2 foot long sample per size, per source.

- a) Sampled at the project site by the Resident Engineer.

- b) Tested in CENTRAL LAB.

Code T04.6900 thru T04.6914 - Stranded Copper Conductor 600V Insulated

- a. Process Control Tests

- 1) One (1) certificate of compliance per size, per source.

- b. Acceptance Tests

- 1) One (1) 2 foot long sample of each size, per each source for relevant tests.

- a) Sampled at the project site by the Resident Engineer.

- b) Tested in CENTRAL Lab.

Code T04.7300, T04.7400 - In-Line Disconnect Devices, Fused and Unfused

Code T04.7502, T04.7503 - 2-Way Splice/Semi-Permanent 3-Way Splice

a. Process Control Tests

- 1) One (1) certificate of compliance per type, per source.

Code T05.0100 - Electric Handholes - Type A - Precast RI Std. 18.9, 18.10

Code T05.0200 - Furnish and Install Heavy Duty Handhole - Type "H" RI Std. 18.11

1. Precast Concrete

a. Process Control Tests

- 1) One (1) certificate of compliance per size, per source.

b. Acceptance Tests

- 1) Same as Codes 702.0605 thru 702.0650

2. Brick or Block

a. Acceptance Tests

- 1) One (1) sample of 15 bricks or blocks for each source for absorption and compressive strength tests.

- 2) Sample of mortar sand for tests as required for fine aggregate for Portland Cement Concrete, one (1) per project.

- 3) Sample of mortar cement for relevant tests as required of Portland Cement - one (1) per project.

- a) Sampled at the project site by the Materials Inspector.

- b) Tested in CENTRAL LAB.

3. Castings

a. Process Control Tests

- 1) One (1) certificate of compliance per size, per source.

Code T05.0301 - Pull Box in Structure

a. Same as Code T08.0250

Code T05.0302 - Pull Box on Structure

- a. Same as Code T08.0250

Code T05.0400 - Electric Manholes

- a. Same as Code T05.0100

Code T05.1030 - Adjust Handhole to Grade

- a. No tests required (must be indicated in the Project Schedule for Sampling, Testing and Certification of Materials).

Code T06.1005 thru T06.4040 - Rigid Steel Conduit

Code T06.5010 thru T06.6040 - Polyvinyl Chloride Plastic Conduit

- a. Process Control Tests

- 1) One (1) certificate of compliance per type, per size, per source.

Code T06.7002 thru T06.7113 - Expansion Couplings with or without Transverse Motion, Steel Fiber, Cement

- a. Process Control Tests

- 1) One (1) certificate of compliance per type, per size, per source.

Code T07.1010 - Photoelectric Controls

Code T07.1250 - Furnish and Install 250 Watt High Pressure Sodium Luminaire

- a. Process Control Tests

- 1) One (1) certificate of compliance per source.

Code T07.1400 - Furnish and Install 400 Watt High Pressure Sodium Luminaire

- a. Same as Code T02.1010

Code T08.0050 - Furnish and Install Breakaway Couplings

Code T08.0100 - Precast Light Standard Foundation with Anchor Bolts RI Std. 18.1

- a. Process Control Tests

- 1) One (1) certificate of compliance per source.

- b. Acceptance Tests

1) Same as Code 702.0605 thru 702.0650

Code T08.0200 - Light Standard Anchorages on Bridges

1. Anchor Bolts

a. Process Control Tests

1) One (1) certificate of test per source, per size of bolt for relevant ASTM/AASHTO tests.

a) Sampled at the manufacturer's plant by the Manufacturer's Quality Control Inspector.

b) Tested in MANUFACTURER'S PLANT LAB.

2. Steel Reinforcing

a. Process Control Tests

1) One (1) mill test report per shipment, per size, per heat number, per source.

b. Acceptance Tests

1) Two (2) 3 foot long samples of each size from each source, each heat number for tension and bend test (AASHTO T-244).

a. Sampled at the project site by the Resident Engineer.

b. Tested in CENTRAL LAB.

Code T08.0250 - Luminaire Support Under Structure

a. Process Control Tests

1) One (1) certificate of compliance per size, per source.

Code T08.1700, T08.1701 - Remove and Relocate/Stockpile/Dispose Light Standards etc.

a. No tests required (must be indicated in the Project Schedule)

Code T08.2031 thru T08.2042 - Aluminum Lighting Standards RI Std. 19.8

Code T09.1000 - Service Pedestal

Code T11.0100 - Anchor Guy Assembly - Constructed in Place

a. Process Control Tests

- 1) One (1) certificate of compliance for each item (cable, hardware, etc.) required per source.

Code T11.0130 - Traffic Signal Standard, Wood, 30 Feet Class 3

Code T11.1020 thru T11.1404 - Steel Mast Arms R.I. Standard 19.2

Code T11.2008 thru Code T11.2500 - Traffic Signal R.I. Standards 19.3, 19.4

Code T11.6005 thru T11.6010 - Span and Messenger Wires

a. Process Control Tests

- 1) One (1) certificate of compliance per type, per size, per source.

Code T12.0004 thru Code T12.0018 - Actuated Controllers

Code T12.0028 - Eight Phase Actuated Controller Digital -Without Cabinet

Code T12.0204 thru Code T12.0218 - Fixed Time Controllers 4 Phase & 8 Phase

a. Process Control Tests

- 1) One (1) certificate of compliance per type, per source

Code T12.1000 - Two Circuit Flasher

a. Process Control Tests

- 1) One (1) certificate of compliance per source.

Code T12.1001, T12.1002, T12.1012 - Single and Double Circuit Flasher Solid State.

a. Process Control Tests

- 1) One (1) certificate of compliance per type, per source.

Code T12.9100, T12.9150 - Meter Socket/Meter Socket with Manual By-Pass

Code T13.1000 - Traffic Detectors - Loop, R.I. Standard 19.5

1. Wire and Cable

a. Process Control Tests

- 1) One (1) certificate of compliance for loop wire per source.

b. Acceptance Tests

1) One (1) 2-foot long sample of wire per source for relevant tests.

a) Sampled at the project site by the Resident Engineer.

b) Tested in CENTRAL LAB.

2. Crack and Joint Sealer

a. Process Control Tests

1) One (1) certificate of compliance per type, per source, per batch.

b. Acceptance Tests

1) One (1) quart sample for relevant AASHTO tests.

Code T13.1002 - Traffic Detectors Relays - Loop 2 Channel

a. Same as Code T13.1000.

Code T13.1004 - Traffic Detectors Relays - Loop 4 Channel

a. Same as Code T13.1000

Code T13.2000 - Traffic Detectors - Magnetometer

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code T13.2001 - Traffic Detectors Relays - Magnetometer

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code T13.8200 - Pedestrian Detector - Pushbutton

a. Process Control Tests

1) One (1) certificate of compliance per source.

Code T14.3401 thru Code T14.3914 - Signal Heads/Pedestrian Signals

Code T14.9100 - Remove and Relocate Traffic Signal Equipment

- a. No tests required (must be indicated in Project Schedule).

Code T14.9150 - Remove, Modify and Relocate Traffic Signal Heads

- a. No tests required (must be indicated in Project Schedule).

Code T14.9200 - Remove and Modify Traffic Signal Heads

Code T14.9300 - Relamping of Existing Signal Heads

Code T14.9400 - Replace Signal Head Hangers

Code T14.9500 - Furnish and install Galvanized Steel Safety Chains.

Code T15.0100 - Directional, Regulatory and Warning Signs

1. Signs

- a. Process Control Tests

1) One (1) certificate of compliance per source.

2. Wood Sign Posts or Galvanized Steel, Aluminum

- a. Process Control Tests

1) One (1) certificate of compliance per source.

Code T15.0200 - Remove Directional, Regulatory and Warning Signs

- a. No tests required (must be indicated in Project Schedule).

Code T15.1000 - Street Sign Assembly R.I. Standard 19.10

Code T15.2000 - Parking Signs

- a. Same as Code T15.0100.

Code T16.0100 and T16.0300 thru T16.0320 - Ground Mounted Primary Directional Sign Posts Steel, Aluminum and Wood

- a. Process Control Tests

1) One (1) certificate of compliance per type, per source.

Code T17.0100 - Overhead Sign Panels

Code T17.0201 thru T17.0317 - Overhead Sign Structures, Steel Aluminum, under 20 to 100 Foot Span

- a. Process Control Tests

1) One (1) certificate of compliance per type, per size, per source.

Code T18.0100 thru T18.0213 - Delineators

Code T18.0324 thru T18.0348 - Hazard Markers

a. Process Control Tests

1) One (1) certificate of compliance per type, per source.

Code T19.0100, T19.0200 - Mile Post Markers

Code T20.0004 thru T20.0108 - Fast Drying Waterborne Paint, White and Yellow

Code T20.0204 thru T20.0308 - Reflectorized Pigment Pavement Markings - White and Yellow

1. Paint

a. Process Control Tests

1) One (1) certificate of compliance per type, per source, per batch.

b. Acceptance Tests

1) One (1) quart sample required per type, per source, per batch for relevant tests.

a) Sampled at the project site by the Resident Engineer or Materials Inspector.

b) Tested in CENTRAL LAB.

2. Glass Beads

a. Process Control Tests

1) One (1) certificate of compliance per type, per size, per source.

b. Acceptance Tests

1) One (1) 10 lbs. sample per source for relevant tests.

a) Sampled at the project site by the Resident Engineer or Materials Inspector.

b) Tested In CENTRAL LAB.

Code T20.0404 thru T20.0508 - Thermoplastic Pavement Markings - White or Yellow

1. Thermoplastic (Block Form Only)

a. Process Control Test

1) One (1) certificate of compliance per type, per source.

b. Acceptance Tests

1) One (1) 5 lb. sample, per lot, per type, per source for relevant tests.

a) Sampled at the project site by the Resident Engineer or Materials Inspector.

b) Tested in CENTRAL LAB.

2. Glass Beads

a. Process Control Tests

1) One (1) certificate of compliance per type, per size, per source.

b. Acceptance Tests

1) One (1) 10 lbs. sample per source for relevant tests.

a) Sampled at the project site by the Resident Engineer or Materials Inspector.

b) Tested in CENTRAL LAB.

Code T20.0604 thru T20.0608 - Temporary Pavement Marking (Tape)

a. Process Control Tests

1) One (1) certificate of compliance per type, per size, per source.

Code T20.0701, T20.0702 - Reflectorized Pigment Pavement Markings, Arrows and Only

a. Same as Codes T20.0204 thru T20.0308

Code T20.0801 thru T20.0805 - Thermoplastic Markings, Words and Arrows

a. Same as Codes T20.0404 thru T20.0508

Code T20.0900 - Bi-Directional Control Device

a. Process Control Tests

- 1) One (1) certificate of compliance per source.

Code T20.1000 - Remove Existing Pavement Markings

a. No tests required (must be indicated in Project Schedule).