MATERIALS PROCEDURE

SUBJECT: QUALITY ASSURANCE PROCEDURE FOR STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS SECTION 700 – MATERIALS AND MANUFACTURING

APPROVED: John E. Rondinaro, Director, Materials Bureau

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INTRODUCTION

This procedure provides Quality Assurance (QA) information for material manufacturers and suppliers, Contractors, and New York State Department of Transportation (NYSDOT) representatives. Materials will be evaluated for qualification, verification, and acceptance based on conformance to the applicable specification(s) and this procedure. The QA requirements for qualification, verification, and acceptance of a material, for each material designation (i.e. Section 700 materials), are selected by Materials Bureau staff based on a qualitative assessment of risk.

This procedure is divided into six main categories:

1. **Risk Assessment** – provides information to determine the appropriate level of QA based on an assessment of a material’s risk.

2. **Manufacturer/Supplier Material Qualification And Verification** – defines the application and evaluation requirements necessary to qualify a material for use on NYSDOT contracts and verification requirements for maintaining the qualification.

3. **Construction Inspection Responsibilities - Evidence of Acceptability and Sampling** – describes material evaluation, sampling and evidence of acceptability requirements at the project.

4. **Material Acceptance** – provides information regarding accepting and rejecting material.

5. **Unsatisfactory Findings** – describes the process followed when unsatisfactory verification or QA results are identified and the potential impact(s) to the manufacturer/supplier.

6. **QA Program Monitoring** – describes how NYSDOT monitors the effectiveness of the QA program.

This procedure applies to Section 700 materials listed in Table 1 of this procedure.

DEFINITIONS

1. **Acceptance Sample** – Sample of a material tested by the Department for acceptance purposes in accordance with the applicable materials specification. When requested a sample may be obtained by a Department representative at the manufacturing/supply location or at the project site.

2. **Approved List** – Refers to the Approved List of Materials and Equipment for use on NYSDOT Projects maintained by the Materials Bureau available at www.dot.state.ny.us. It identifies manufacturers, suppliers, materials, etc. that are qualified for use on Department contracts. Only those materials specifications that require appearance on the Approved List as part of their evidence of acceptability will have a corresponding listing.
3. **Director, Materials Bureau** – Refers to the current Director of the Materials Bureau or his/her designee for a specific task.

4. **Engineer or Engineer-In-Charge (EIC)** – Refers to the current EIC for the contract or his/her designee for a specific task.

5. **Materials Bureau Representatives** – Includes Materials Bureau personnel, Regional Materials personnel, other Department personnel, and consultant agencies and laboratories performing tasks at the request of the Director, Materials Bureau.

6. **Material Certification** – Document issued by a manufacturer/supplier used to identify a specific shipment of material, equipment, etc., sent to a contract and to confirm that it meets the appropriate specifications. §106-04 of the Standard Specifications contains requirements for an acceptable certification.


8. **Monitor Sample** – Sample of a material used to verify that a producer or supplier is providing materials that meet the applicable materials specification.

9. **Project Representatives** – NYSDOT personnel, including the contract EIC and construction inspection staff and/or consultant agency personnel assigned to Department contracts.

10. **Qualification** – Refers to the process of initially evaluating a material or manufacturer/supplier for compliance with Department specifications, in accordance with the requirements of this procedure. An acceptable qualification evaluation results in the placement of the manufacturer, supplier, material, etc., onto the Approved List, if required.

11. **Quality Assurance** – Actions performed by the Department to verify that an acceptable level of quality control is being employed by manufacturers to insure materials supplied to Department contracts consistently meet specification requirements.

12. **Quality Control** – Actions performed by manufacturers to insure materials consistently meet the requirements of applicable specifications, prior to supplying the material.

13. **Quality Control Plan** – A manufacturer’s document identifying processes, procedures, tests, etc. used to insure the quality of a material through each phase of the production process. Specific requirements for Quality Control Plans are contained in Appendix C.

14. **Verification** – Refers to the process of periodically evaluating qualified manufacturers, suppliers, materials, etc. to determine if they will maintain their qualified status and continue to appear on the Department’s Approved List.
PROCEDURE

1. RISK ASSESSMENT

The purpose of the risk assessment is to assist Materials Bureau personnel in determining the appropriate level of quality assurance required for each material item administered by the Materials Bureau. Risk Assessment Guidelines are in Appendix A of this procedure. The guidelines provide factors to consider when determining the level of risk related to using the specified material. The level of risk will be based on the judgment of the evaluator(s), considering the factors provided in the guidelines, as well as any other factors, that are considered pertinent.

Once the relative level of risk is identified, an appropriate quality assurance program will be assigned to the material. The QA program for each material may differ depending on the importance and risk factors considered. A material’s relative level of risk and quality assurance program will be reevaluated on a regular basis or as additional data becomes available.

2. MANUFACTURER/SUPPLIER MATERIAL QUALIFICATION and VERIFICATION

This section informs manufacturers and suppliers of the requirements they must meet for the various qualification and verification techniques used by NYSDOT as part of the QA Program. The applicable requirements must be met to the satisfaction of the Materials Bureau, prior to supplying a material to Department contracts. Table 1 – Manufacturer/Supplier Material Qualification and Verification indicates the techniques and sampling requirements that apply to each material designation. The number in each column heading indicates the corresponding subsection to reference for more information. The subsections provide information regarding what the column entry means, the various evaluation techniques, what the manufacturer/supplier needs to provide and how Materials Bureau representatives evaluate the required information. When there is an entry in a column in Table 1 for a material, go to the corresponding subsection(s) to determine the specific requirements that must be met to qualify and verify material quality.

2.1. Material Designation and Description – Lists the materials designation number and title for each subsection in Section 700 – Materials and Manufacturing of the Standard Specifications, covered by this procedure.

2.2. Material Certification – An “X” in this column means manufacturers and all intermediate suppliers must provide a material certification, meeting the requirements of §106-04, with each delivery to Department contracts.

2.3. Approved List – An entry in this column means manufacturers and all intermediate suppliers are required to qualify materials for addition to the Approved List according to Subsection 2.3.1. – Approved List Qualification. The actual entry lists the
minimum frequency (in years) that manufacturers/suppliers must submit material information according to Subsection 2.3.2. – Approved List Material Verification.

2.3.1. Approved List Qualification - Submit an application to the Director, Materials Bureau, requesting a material be evaluated to qualify for addition to the Department’s Approved List. The submission must include:

1. Material name.
2. Manufacturer name.
3. Quality control contact person (name and telephone number).
4. Address of proposed manufacturer and or supplier location(s).
5. Applicable NYSDOT material specification number.
6. Copy of proposed material certification to accompany deliveries to Department contracts, if Subsection 3.2. applies.
7. Name, location, and qualification (such as applicable experience, certification(s), national accreditation(s), etc.) of QC Laboratory.
8. Supporting QC test data relevant to NYSDOT specification(s) and test method(s).
9. Material safety data sheet (MSDS) sent to NYSDOT Laboratory when a material sample is requested.
10. Material label (if requested).
11. Plan for supplying Department contracts.

- The plan shall include the name and address of all supply and/or terminal locations that may be used in the supply of the material for Department work.
- If the firm is not located in New York State, in addition to the above, also include the transport mode (truck, rail, barge, ocean going vessel, etc.) and distribution terminal, if applicable, and a letter from two or more customers that perform transportation related work in New York State, stating that if the material is qualified by the Department, they would consider using it.

2.3.2. Approved List Application Review - Materials Bureau personnel will review the application to determine if the data provided meets the specification. This review will result in one of three actions:

1. The qualification process continues and a Materials Bureau representative requests the manufacturer/supplier to submit:
   - Sample(s) meeting the applicable requirements of Subsection 2.4. with manufacturer certified QC test results for the same production run.
   - QC Laboratory Certification Documentation per Subsection 2.5., if applicable.
   - QC plan meeting the requirements of Subsection 2.5., if applicable.
   - Other requirements listed in Table 1 under Subsection 2.6., if any.
**NOTE:** In rare instances, samples or additional information may not be required.

2. A Materials Bureau representative requests the manufacturer/supplier to provide additional information and/or meet with Department representatives to discuss quality control and quality assurance requirements, prior to continuing the qualification process.

3. The Materials Bureau discontinues the qualification process and notifies the manufacturer/supplier that the material did not qualify, indicating the reasons for discontinuing the process.

The material name, along with the firm’s name and location(s), will only be added to the Department’s Approved List after all of the applicable qualification requirements are in satisfactory conformance to the specification and this procedure.

2.3.3. Approved List Material Verification – This process provides assurance that firms appearing on the Approved List properly evaluate, supply and certify the material as approved and specified. The process includes manufacturer/supplier submission of updated material information and Materials Bureau monitoring of the material’s quality at anytime.

1. Manufacturer/Supplier Submission of Updated Material Information – Submit a letter to the Director, Materials Bureau, updating or verifying the accuracy of information submitted in Subsection 2.3.1., Approved List Qualification, at the frequency listed in Table 1 under Subsection 2.3., Approved List, or more frequently, if changes occur that require the information be updated. It is not necessary to resubmit previously provided information. Failure to appropriately verify all information provided to the Department may result in the manufacturer/supplier being removed from the Approved List.

**NOTE:** If changes are made to the material or any information included under Subsection 2.3.1., subsequent to the Department’s evaluation and qualification, a resubmission of the updated material and or information within 10 business days of the effective date of the change is required to confirm continued approved list status.

2. Materials Bureau Monitoring – The Materials Bureau’s monitoring of an Approved List material’s quality may include requests for and evaluation of one or more of the following:

- Manufacturer certified QC Laboratory test results.
• Department test results for production samples.
• Department test results for project monitor samples (see Section 3).
• Department test results for project acceptance samples. These samples are independent from monitor samples (see Section 4).
• Independent, third-party laboratory test results for production samples, paid for by the Manufacturer.

Materials Bureau representatives will evaluate test results for specification conformance. Test results failing to meet specified limits may affect the material’s Approved List status as detailed in Section 5, Unsatisfactory Findings.

2.4. Monitor Samples – These four columns provide qualification and monitor sample information regarding the type of sample, recommended sample size, minimum sample submission frequency, if any, and individual responsible for sampling and submitting the required monitor sample(s) to the Department. When required, a Materials Bureau representative will visit the manufacturing and/or supply location(s) to request and witness random sample(s) taken by the manufacturer/supplier. The Materials Bureau representative may request a sample(s) from existing stock, or a current production lot, and shall use a random number table, or other acceptable method to select the sample(s). Materials Bureau representatives will test and evaluate sample(s) according to the applicable specification(s).

The cost of all monitor samples; including shipment to the NYSDOT Laboratories, and any other expenses incurred in making materials ready for inspection, sampling and/or testing, shall be paid for by the manufacturer and/or material supplier.

2.4.1. Type - Entries in this column refer to type of sample to be submitted, as defined below:

1. Production Sample – Submit a sample manufactured during routine production.

2. Split Sample w/ Test Data – Take two samples representing the same production lot that are expected to have identical properties (for many materials, this will be one sample split into two parts). Submit the firm’s quality control laboratory’s test results for one sample along with the second sample to the Materials Bureau for testing. The firm’s laboratory test results will be evaluated to assure conformity with the specifications and reasonable uniformity with the Materials Bureau’s test results. If available and applicable, published reproducibility statements (e.g., AASHTO or ASTM precision and bias statements) will be used to determine uniformity of test results. A summary of the Materials Bureau’s
test results will be provided to the firm’s quality control representative. Depending on the results, additional samples may be requested for test.

3. Other/Appendix B – Refer to Appendix B for sample type and/or specific sampling information.

2.4.2. Size – Lists the recommended sample size to be submitted or references Appendix B for more detailed sample information.

2.4.3. Frequency – Lists the minimum sample submission frequency, if any, or references Appendix B for detailed sample information.

2.4.4. Department Inspection Required – An @ in this column indicates that monitor sample(s) are required to be submitted to the Department for evaluation. The manufacturer/supplier and the Department’s representative will receive correspondence from the Materials Bureau requesting submission of monitor sample(s). The manufacturer/supplier must provide the Department’s representative with a minimum 48-hour notice prior to requesting inspection services.

The Department’s representative is responsible for selecting monitor sample(s) in accordance with Subsection 2.4. and completing a BR 240 Sample Transmittal Form in accordance with Appendix D. The Department’s representative shall witness the manufacturer/supplier package the monitor sample(s) and BR 240 form. The Department’s representative will secure the package by sealing with red tamper-proof tape seals imprinted NYSDOT SAMPLED.

The manufacturer/supplier is responsible for shipping the monitor sample(s) to NYSDOT Laboratories for evaluation (see Appendix D, Subsection D2. for shipping instructions).

2.5. Facility and Quality Control Requirements – Appendix C will be listed in this column if specific production facility, QC laboratory or QC requirements apply. These requirements will typically include certification by an Industry recognized organization and/or a QC Plan approved by the Director, Materials Bureau. It is likely a Materials Bureau representative will be required to visit the manufacturing facility to verify the quality control laboratory is adequate and, if required, the quality control plan provided is administered as stated.

2.5.1. QC Lab Certification – The quality control laboratory must maintain certification provided by the certifying agency listed in Appendix C, if any.
2.5.2. QC Plan Submission – Submit a QC plan meeting the requirements listed in Appendix C to the Director, Materials Bureau. The QC plan must be approved by the Materials Bureau prior to the manufacturer/supplier being added to the Approved List and qualifying to supply Department contracts.

2.5.3. QC Plan Verification – QC plan verification includes annual submission of plan updates and Materials Bureau monitoring.

1. Manufacturer/supplier Submission of QC Plan Update – Update the plan and submit it to the Director, Materials Bureau, within 10 business days of the effective date of changes to the QC plan. As a minimum, send an annual letter to the Director, Materials Bureau, unless otherwise directed by the Department, assuring the firm’s commitment to following the QC plan as submitted. The QC plan must be resubmitted in its entirety, at a minimum, once every three years.

2. Materials Bureau Monitoring of the QC Plan – In addition to the monitoring listed under Subsection 2.3.2., Materials Bureau representatives may conduct random audits to verify the material quality is being evaluated and properly documented in conformance with the approved quality control plan.

NOTE: If the firm is routinely audited by a certifying or accrediting agency, the Department may review the results of that audit in lieu of an audit by Materials Bureau representatives.

The Materials Bureau’s representative performing the audit may select a sample of certified material(s) at the time of the audit. The selected sample(s) will be used to perform laboratory testing to assure reasonable uniformity with the manufacturer’s certified results (if testing is required in the QC plan) and verification of specification compliance. If available and applicable, published reproducibility statements will be used to determine uniformity of test results.

Audit findings will be reported to the firm’s quality control representative. All audit findings not in conformance with the quality control plan and/or material specifications must be investigated by the manufacturer immediately to assure continued appearance on the Approved List and qualification to supply Department work; see Section 5, Unsatisfactory Verification Findings.

2.6. Other/Comments – This column allows for information not addressed in sections 2.2. through 2.5.
<table>
<thead>
<tr>
<th>Material Designation and Description</th>
<th>2.2. Mtrl. Cert.</th>
<th>2.3. Approved List (years)</th>
<th>2.4.1. Type</th>
<th>2.4.2. Size</th>
<th>2.4.3. Frequency</th>
<th>2.4.4. Department Inspection Required</th>
<th>2.5. Facility and Quality Control Requirements</th>
<th>2.6. Other/Comments</th>
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<td>704-01 Common Brick</td>
<td>X</td>
<td></td>
<td>Production</td>
<td>10 units (bricks) Appendix B</td>
<td>Every 500K or 1/yr. Min.</td>
<td>X</td>
<td>Requires 5 lots for Approved List addition</td>
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<td>704-02 Concrete Brick</td>
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<td>Production</td>
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<td>X</td>
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<td>704-03 Precast Concrete - General</td>
<td>X</td>
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<td>Production</td>
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<td>MP 00-01</td>
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<tr>
<td>704-04 Concrete Block - Slope Paving</td>
<td>X</td>
<td>2</td>
<td>Production</td>
<td>10 units (blocks) Appendix B</td>
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<td>MP 00-01</td>
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<td>704-07 Segmental Retaining Wall Blocks</td>
<td>X</td>
<td>2</td>
<td>Production</td>
<td>10 units (blocks) Appendix B</td>
<td>Every 750 m² of finished wall face or 1/yr. min.</td>
<td>X</td>
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<td>704-08 Brick Pavers</td>
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<td>Production</td>
<td>10 units (bricks) Appendix B</td>
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<td>704-10 Split-Faced Concrete Brick</td>
<td>X</td>
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<td>Production</td>
<td>10 units (bricks) Appendix B</td>
<td>Upon Request</td>
<td>X</td>
<td>Requires 5 lots for Approved List addition</td>
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<tr>
<td>704-11 Precast Concrete Coping</td>
<td>X</td>
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<td>Production</td>
<td>2 cores MP 00-01</td>
<td>X</td>
<td>MP 00-01</td>
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<td>704-12 Decorative Concrete Block</td>
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<td>Production</td>
<td>10 units (blocks) Appendix B</td>
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<td>704-13 Precast Concrete Driveway and Sidewalk Pavers</td>
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<td>2</td>
<td>Production</td>
<td>15 units (pavers) Appendix B</td>
<td>Every 10k or 3/yr. Min.</td>
<td>X</td>
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<tr>
<td>2.1. Material Designation and Description</td>
<td>2.2. Mtrl. Cert.</td>
<td>2.3. Approved List (years)</td>
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<td>2.6. Other/Comments</td>
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<td>704-14 Precast Concrete Panel Units</td>
<td>X</td>
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<td>Production 2 cores</td>
<td>MP 00-01</td>
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<td></td>
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<td>704-23 Precast Concrete Street Pavers</td>
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<td>2</td>
<td>Production 15 units (pavers)</td>
<td>Appendix B</td>
<td>Every 10k or 3/yr. Min.</td>
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<td>705-09 Preformed Elastic Bridge Joint Sealer</td>
<td>X</td>
<td>1</td>
<td>Production 2.5 m length</td>
<td>1/Lot</td>
<td>Requires 5 lots for Approved List addition</td>
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<td>705-10 Preformed Elastic Longitudinal Joint Sealer</td>
<td>X</td>
<td>Production 2.5 m length</td>
<td>Upon Request</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>705-11 Polyvinyl Chloride Extruded Shapes and Sheet Material</td>
<td>X</td>
<td>1</td>
<td>Production 2.5 m length</td>
<td>1/Lot</td>
<td>Randomly selected sample</td>
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<td>705-12 Preformed Elastic Transverse Contraction Expansion Joint Sealers</td>
<td>X</td>
<td>Production 2.5 m length</td>
<td>Upon Request</td>
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<td>706-01 Nonreinforced Concrete Pipe (Wet-Cast Option)</td>
<td>X</td>
<td>1</td>
<td>Production 1 core</td>
<td>MP 00-01</td>
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<td>706-02 Reinforced Concrete Pipe Classes II, III, IV, V (Wet-Cast Option)</td>
<td>X</td>
<td>1</td>
<td>Production 1 core (pipe) 2 cores (cattle pass)</td>
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<td>706-03 Reinforced Concrete Elliptical Pipe Classes HE-II, HE-III, HE-IV, VE-IV, VE-V, VE-VI (Wet-Cast Option)</td>
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<td>Production 1 core</td>
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<td>706-07 Reinforced Concrete Pipe End Sections (Wet-Cast Option)</td>
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<td>Production 2 cores</td>
<td>MP 00-01</td>
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<tr>
<td>2.1. Material Designation and Description</td>
<td>2.2. Mtrl. Cert.</td>
<td>2.3. Approved List (years)</td>
<td>2.4. Monitor Samples</td>
<td>2.4.4. Department Inspection Required</td>
<td>2.5. Facility and Quality Control Requirements</td>
<td>2.6. Other/Comments</td>
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<td>706-12 Smooth Interior Corrugated Polyethylene Pipe</td>
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<td><strong>2.4.1. Type</strong></td>
<td><strong>2.4.2. Size</strong></td>
<td><strong>2.4.3. Frequency</strong></td>
<td><strong>ESC Program Required</strong> - AASHTO M294 - Requires Materials Details on Approved List</td>
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<td>706-17 Precast Concrete Box Culverts</td>
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<td>Production</td>
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<td>MP 00-01</td>
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<td>MM NY 30</td>
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<td>709-01 Bar Reinforcement, Grade 420</td>
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<td>1</td>
<td>Split Sample w/ Test Data</td>
<td>Appendix B</td>
<td>2/yr.</td>
<td>X</td>
<td>Requires 5 lots for Approved List addition</td>
<td></td>
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<tr>
<td>709-02 Welded Wire Fabric for Concrete Reinforcement</td>
<td>X</td>
<td>1</td>
<td>Split Sample w/ Test Data</td>
<td>Appendix B</td>
<td>2/yr.</td>
<td>X</td>
<td>Requires 5 lots for Approved List addition</td>
<td></td>
</tr>
<tr>
<td>709-04 Epoxy-Coated Bar Reinforcement</td>
<td>X</td>
<td>1</td>
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<tr>
<td>709-06 Low-Relaxation Prestressing Steel</td>
<td>X</td>
<td>1</td>
<td>Split Sample w/ Test Data</td>
<td>Appendix B</td>
<td>2/yr.</td>
<td>X</td>
<td>Requires 5 lots for Approved List addition</td>
<td></td>
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<tr>
<td>709-08 Epoxy-Coated Wire Fabric Reinforcement</td>
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<td></td>
<td></td>
<td>Acceptance Based on Manufacturer’s Cert.</td>
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<tr>
<td>709-14 Bar Reinforcement, Grade 520</td>
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<td>Split Sample w/ Test Data</td>
<td>Appendix B</td>
<td>2/yr.</td>
<td>X</td>
<td>Requires 5 lots for Approved List addition</td>
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<tr>
<td>710-01 Aluminum Fence Fabric</td>
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<td>Production</td>
<td>6 strands</td>
<td>600 mm long</td>
<td>Upon Request</td>
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</tbody>
</table>

Note: Appendix C applies to both Applicators and Fabricators. Materials Bureau representatives will perform unannounced inspections of Approved List Applicators and Fabricators.
<table>
<thead>
<tr>
<th>2.1. Material Designation and Description</th>
<th>2.2. Mtrl. Cert.</th>
<th>2.3. Approved List (years)</th>
<th>2.4. Monitor Samples</th>
<th>2.5. Facility and Quality Control Requirements</th>
<th>2.6. Other/Comments</th>
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<tbody>
<tr>
<td>710-02 Galvanized Steel Fence Fabric</td>
<td>X</td>
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<td>2.4.2. Size</td>
<td>2.4.3. Frequency</td>
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<tr>
<td>710-03 Vinyl-Coated Steel Fence Fabric</td>
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<td></td>
<td>Production</td>
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<td>Upon Request</td>
</tr>
<tr>
<td>710-04 Aluminum-Coated Steel Fence Fabric</td>
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<td></td>
<td>Production</td>
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<td>Upon Request</td>
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<tr>
<td>710-05 Coated Steel Fence Fabric - 95% Zinc, 5% Aluminum</td>
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<td></td>
<td>Production</td>
<td>6 strands 600 mm long</td>
<td>Upon Request</td>
</tr>
<tr>
<td>710-10 Steel and Iron Posts, Rails, Braces, and Fittings for Chain Link Fence</td>
<td>X</td>
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<td></td>
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<tr>
<td>710-11 Aluminum Posts, Rails, Braces, and Fittings for Chain Link Fence</td>
<td>X</td>
<td></td>
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<td></td>
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<tr>
<td>710-12 Plastic-Coated Posts, Rails, Braces, and Fittings for Chain Link Fence</td>
<td>X</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>710-13 Wood and Timber Posts and Timber Blockouts</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>710-14 Galvanized Steel Barrier Posts</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>710-30 Right-Of-Way Fencing</td>
<td>X</td>
<td>1</td>
<td>Production</td>
<td>6 strands 600 mm long</td>
<td>Upon Request</td>
</tr>
<tr>
<td>711-02 Quilted Covers (for Curing)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>712-05 Precast Concrete Right-Of-Way Markers</td>
<td>X</td>
<td>1</td>
<td>Production</td>
<td>2 cores</td>
<td>MP 00-01</td>
</tr>
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<td>Material Designation and Description</td>
<td>Approved List (years)</td>
<td>2.4.1. Type</td>
<td>2.4.2. Size</td>
<td>2.4.3. Frequency</td>
<td>Department Inspection Required</td>
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<td>-------------</td>
<td>-----------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>714-04 Precast Concrete Curb</td>
<td>X</td>
<td>Production</td>
<td>2 cores</td>
<td>MP 00-01</td>
<td>X</td>
</tr>
<tr>
<td>714-07 Precast Concrete Gutter</td>
<td>X</td>
<td>Production</td>
<td>2 cores</td>
<td>MP 00-01</td>
<td>X</td>
</tr>
<tr>
<td>723-45 Precast Reinforced Concrete Foundations And Pullboxes</td>
<td>X</td>
<td>Production</td>
<td>2 cores</td>
<td>MP 00-01</td>
<td>X</td>
</tr>
<tr>
<td>727-01 White and Yellow Thermoplastic Reflectorized Pavement Markings</td>
<td>X</td>
<td>Production</td>
<td>1 kg Appendix B</td>
<td>1/lot (randomly selected batch)</td>
<td>X</td>
</tr>
<tr>
<td>727-03 White and Yellow Epoxy Reflectorized Pavement Markings</td>
<td>X</td>
<td>Production</td>
<td>2 – 500 ml sample Part A 1 – 500 ml sample Part B Appendix B</td>
<td>1/5 lots (randomly selected lot)</td>
<td>X</td>
</tr>
</tbody>
</table>
3. **CONSTRUCTION INSPECTION RESPONSIBILITIES–EVIDENCE of ACCEPTABILITY and SAMPLING**

In addition to the qualification and verification requirements detailed in Section 2, the quality of materials used on Department contracts will be monitored at the project site. This section informs the Engineer-in-Charge (EIC) and construction inspection staff of the required evidence of acceptability, material inspection, and sampling responsibilities. Table 2 – Evidence of Acceptability and Sampling indicates the requirements that apply to materials in each material designation. The number in each column heading indicates the corresponding subsection to reference for more information. The subsections following Table 2 provide project representatives information regarding the requirements and evaluation. When there is an entry in a column in Table 2 for a material, go to the corresponding subsection(s) to determine the specific requirements that must be met. These requirements are used to determine a material’s acceptability as listed in Section 4 – Material Acceptance.

3.1. **Material Designation and Description** – Lists the materials designation number and title for each subsection in Section 700 – Materials and Manufacturing covered by this procedure.

3.2. **Material Certification** – An “X” in this column means the material certification is required from the manufacturer as well as all intermediate supply locations containing a definite statement that the material contained in the shipment meets the requirements of the appropriate Department specification. Obtain and review the material certification(s) for conformance to the requirements outlined in Subsection 106-04 of the Standard Specifications. ASTM, AASHTO or other specifications allowed on the certification in place of the Department’s specification will be listed in the comments column.

*NOTE: If the material contains steel and/or iron, the material must also be certified to conform to the Department’s “Buy America” requirements as detailed in §106-11 of the Standard Specification.*

3.3. **Approved List** – An “X” in this column, of Table 2, requires the material be included in the Approved List. Ensure the material’s name appears in the most recent version of the Approved List for the appropriate material designation.

3.4. **Inspection** – A “Visual” in this column means visually inspect the material. Visually inspect the material for specification compliance; including damage, proper labeling, packaging, and expiration date, as applicable or required by the specification. Additional information, physical properties to inspect, such as dimensions, or a reference to an appendix for detailed information regarding inspection requirements may also be included in this column. Request samples according to Subsection 3.5. or, if necessary, Section 4.
3.5. Project Samples – This subsection provides information regarding the suggested frequency for obtaining project samples and recommended sample size. The EIC will request and witness the Contractor’s sampling of the material. The Contractor is responsible for obtaining a representative sample. Contractors may request guidance from Department representatives regarding sampling techniques; however, the Contractor is responsible for obtaining a representative sample. Reject sampling techniques known to provide biased, non-representative samples. The EIC may contact the Regional Materials Engineer for assistance.

Project representatives will take possession of project sample(s) and, unless otherwise specified or directed, transmit them to New York State DOT Laboratories (see Appendix D, Subsection D2. for shipping instructions). Project sample(s) will be tested by the appropriate laboratory for specification compliance. Test results will be evaluated by the Department and may be transmitted to the material manufacturer and/or contract EIC for information purposes.

3.5.1. Recommended Frequency – The recommended project sampling frequency, if any, is listed in this column. Project representatives should randomly request a sample(s) within the frequency period. It is recommended to use a random number table, or other acceptable method, for selecting a random sample or determining when to request the contractor take a sample.

If “Upon Request” is listed in this column, the QC/QA procedures required in Section 2 are deemed sufficient without routine project monitor samples. Materials Bureau representatives may request EICs obtain project monitor sample(s) for QA purposes.

Results from project monitor samples will not be used for acceptance purposes. Materials Bureau representatives may request that EICs obtain additional monitor or acceptance samples to address a specific quality concern with a material or material manufacturer/supplier.

3.5.2. Size – Lists the recommended sample size to be submitted or references Appendix B for more detailed sample information.

3.6. Comments – Contains additional comments or references to clarify construction QA and acceptance requirements, if necessary.
### TABLE 2 – EVIDENCE of ACCEPTABILITY and SAMPLING

<table>
<thead>
<tr>
<th>3.1. Material Designation And Description</th>
<th>3.2. Mtrl. Cert.</th>
<th>3.3. Approved List</th>
<th>3.4. Inspection</th>
<th>3.5. Project Samples</th>
<th>3.6. Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.5.1. Recommended Frequency</td>
<td>3.5.2. Size</td>
</tr>
<tr>
<td>704-01 Common Brick</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>Upon Request</td>
<td>10 units</td>
</tr>
<tr>
<td>704-02 Concrete Brick</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>Upon Request</td>
<td>6 units</td>
</tr>
<tr>
<td>704-03 Precast Concrete - General</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>Upon Request</td>
<td></td>
</tr>
<tr>
<td>704-04 Concrete Block - Slope Paving</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>Upon Request</td>
<td></td>
</tr>
<tr>
<td>704-05 Precast Concrete Barrier</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>Upon Request</td>
<td></td>
</tr>
<tr>
<td>704-06 Precast Concrete Cribbing</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>Upon Request</td>
<td></td>
</tr>
<tr>
<td>704-07 Segmental Retaining Wall Blocks</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>Upon Request</td>
<td>5 units (C140)</td>
</tr>
<tr>
<td>704-08 Brick Pavers</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>Upon Request</td>
<td>5 units (C1262)</td>
</tr>
<tr>
<td>704-10 Split-Faced Concrete Brick</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>I/Contract</td>
<td>10 units</td>
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<tr>
<td>704-11 Precast Concrete Coping</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>I/Contract</td>
<td></td>
</tr>
<tr>
<td>704-12 Decorative Concrete Block</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>I/Contract</td>
<td>10 units</td>
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<tr>
<td>704-13 Precast Concrete Driveway and Sidewalk Street Pavers</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td>Upon Request</td>
<td>15 units</td>
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<tr>
<td>704-14 Precast Concrete Panel Units (Mechanically Stabilized Earth System)</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td>I/Contract</td>
<td>15 units</td>
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<tr>
<td>704-23 Precast Concrete Pavers</td>
<td>X</td>
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<td>Visual</td>
<td>Upon Request</td>
<td>15 units</td>
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<tr>
<td>705-09 Preformed Elastic Bridge Joint Sealer</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td>Upon Request</td>
<td>2.5 meter length</td>
</tr>
<tr>
<td>3.1. Material Designation And Description</td>
<td>3.2. Mtrl. Cert.</td>
<td>3.3. Approved List</td>
<td>3.4. Inspection</td>
<td>3.5. Project Samples</td>
<td>3.6. Comments</td>
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<td>3.5.1. Recommended Frequency</td>
<td>3.5.2. Size</td>
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<td>705-10 Preformed Elastic Longitudinal Joint Sealer</td>
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<tr>
<td>705-11 Polyvinyl Chloride Extruded Shapes and Sheet Material</td>
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<td>Visual</td>
<td>Upon Request</td>
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<tr>
<td>705-12 Preformed Elastic Transverse Contraction Expansion Joint Sealers</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>Upon Request</td>
<td>2.5 meter length</td>
</tr>
<tr>
<td>706-01 Nonreinforced Concrete Pipe (Wet-Cast Option)</td>
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<tr>
<td>706-02 Reinforced Concrete Pipe Classes II, III, IV, V (Wet-Cast Option)</td>
<td>X</td>
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<td>Visual</td>
<td>See MP 00-01</td>
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<tr>
<td>706-03 Reinforced Concrete Elliptical Pipe Classes HE-II, HE-III, HE-IV, VE-IV, VE-V, VE-VI(Wet-Cast Option)</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td>See MP 00-01</td>
<td></td>
</tr>
<tr>
<td>706-04 Precast Concrete Drainage Units</td>
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<td>X</td>
<td>Visual</td>
<td>See MP 00-01</td>
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<tr>
<td>706-07 Reinforced Concrete Pipe End Sections(Wet-Cast Option)</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td>See MP 00-01</td>
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<tr>
<td>706-12 Smooth Interior Corrugated Polyethylene Pipe</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td>Upon Request</td>
<td>- See MM NY 30 - Materials Details must be included on Approved List</td>
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<tr>
<td>706-13 Perforated Corrugated Polyethylene Underdrain Tubing</td>
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<td>706-14 Corrugated Interior Polyethylene Pipe</td>
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### 3.1. Material Designation and Description

<table>
<thead>
<tr>
<th>Material Designation and Description</th>
<th>3.2. Mtrl. Cert.</th>
<th>3.3. Approved List</th>
<th>3.4. Inspection</th>
<th>3.5. Project Samples</th>
<th>3.6. Comments</th>
</tr>
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<tbody>
<tr>
<td>706-17 Precast Concrete Box Culverts</td>
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<td>Visual</td>
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<tr>
<td>709-01 Bar Reinforcement, Grade 420</td>
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<td>See Appendix B</td>
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<td>709-02 Welded Wire Fabric for Concrete Reinforcement</td>
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<td>Visual</td>
<td>Upon Request</td>
<td>See Appendix B</td>
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<tr>
<td>709-04 Epoxy-Coated Bar Reinforcement</td>
<td>X*</td>
<td>X**</td>
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<td>Upon Request</td>
<td>See Appendix C</td>
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<tr>
<td>709-08 Epoxy-Coated Wire Fabric Reinforcement</td>
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<td>Upon Request</td>
<td>See Appendix B</td>
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<tr>
<td>709-14 Bar Reinforcement, Grade 520</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td>Upon Request</td>
<td>See Appendix B</td>
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<tr>
<td>710-01 Aluminum Fence Fabric</td>
<td>X</td>
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<td>Visual</td>
<td>1/Contract</td>
<td>1 m x 1 m</td>
</tr>
<tr>
<td>710-02 Galvanized Steel Fence Fabric</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td>1/Contract</td>
<td>1 m x 1 m</td>
</tr>
<tr>
<td>710-03 Vinyl-Coated Steel Fence Fabric</td>
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<td>Visual</td>
<td>1/Contract</td>
<td>1 m x 1 m</td>
</tr>
<tr>
<td>710-04 Aluminum-Coated Steel Fence Fabric</td>
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<td></td>
<td>Visual</td>
<td>1/Contract</td>
<td>1 m x 1 m</td>
</tr>
<tr>
<td>710-05 Coated Steel Fence Fabric - 95% Zinc, 5% Aluminum</td>
<td>X</td>
<td></td>
<td>Visual</td>
<td>1/Contract</td>
<td>1 m x 1 m</td>
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</table>

* A Material Certification must be provided by the Epoxy Applicator
** The Steel reinforcing bar manufacturer, epoxy applicator, and epoxy coated reinforcing bar fabricator (when applicable) must be on the Approved List
<table>
<thead>
<tr>
<th>3.1. Material Designation and Description</th>
<th>3.2. Mtrl. Cert.</th>
<th>3.3. Approved List</th>
<th>3.4. Inspection</th>
<th>3.5. Project Samples</th>
<th>3.6. Comments</th>
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</thead>
<tbody>
<tr>
<td>710-10 Steel and Iron Posts, Rails, Braces, and Fittings for Chain Link Fence</td>
<td>X</td>
<td>Visual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>710-11 Aluminum Posts, Rails, Braces, and Fittings for Chain Link Fence</td>
<td>X</td>
<td>Visual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>710-12 Plastic-Coated Posts, Rails, Braces, and Fittings for Chain Link Fence</td>
<td>X</td>
<td>Visual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>710-13 Wood and Timber Posts and Timber Blockouts</td>
<td>X</td>
<td>Visual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>710-14 Galvanized Steel Barrier Posts</td>
<td>X</td>
<td>Visual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>710-30 Right-Of-Way Fencing</td>
<td>X</td>
<td>Visual</td>
<td>1/Contract</td>
<td>1 m x 1 m</td>
<td></td>
</tr>
<tr>
<td>711-02 Quilted Covers (for Curing)</td>
<td>X</td>
<td>Visual</td>
<td></td>
<td>1 m x 1 m</td>
<td></td>
</tr>
<tr>
<td>712-05 Precast Concrete Right-Of-Way Markers</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td></td>
<td>See MP 00-01</td>
</tr>
<tr>
<td>714-04 Precast Concrete Curb</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td></td>
<td>See MP 00-01</td>
</tr>
<tr>
<td>714-07 Precast Concrete Gutter</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td></td>
<td>See MP 00-01</td>
</tr>
<tr>
<td>723-45 Precast Reinforced Concrete Foundations And Pullboxes</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td></td>
<td>See MP 00-01</td>
</tr>
<tr>
<td>727-01, White and Yellow Thermoplastic Reflectorized Pavement Markings</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td>Upon Request</td>
<td>1 kg See Appendix B</td>
</tr>
</tbody>
</table>

- **Glass Spheres**: Manufacturer’s certification required
- **Primers**: Manufacturer’s certification indicating conformance to 727-01 required
<table>
<thead>
<tr>
<th>3.1. Material Designation And Description</th>
<th>3.2. Mtrl. Cert.</th>
<th>3.3. Approved List</th>
<th>3.4. Inspection</th>
<th>3.5. Project Samples</th>
<th>3.6. Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>727-03, White and Yellow Epoxy Reflectorized Pavement Markings</td>
<td>X</td>
<td>X</td>
<td>Visual</td>
<td>Upon Request</td>
<td>2 – 500 ml sample Part A 1 – 500 ml sample Part B See Appendix B</td>
</tr>
</tbody>
</table>

- Epoxy marking material shall expire six (6) months after the date of manufacture
- Glass Spheres: Manufacturer’s certification required
4. MATERIAL ACCEPTANCE

This section provides guidelines to the EIC and construction inspection staff for materials acceptance.

Accept material meeting all of the applicable construction evidence of acceptability requirements listed in Section 3. Reject material not meeting the requirements of Section 3, such as material with obvious visual defects or other quality concerns. The contractor shall remove all unacceptable material from the project site and replace it with acceptable material.

A contract EIC, or his/her representative, may at anytime request the contractor obtain a sample(s) to determine the acceptability of a suspect material. Samples taken for acceptance purposes must be clearly identified as such, and include a brief explanation noting the specific reason(s) for requesting the sample(s). These sample(s) shall be submitted to the Materials Bureau laboratory for test, unless otherwise directed, in conformance with the recommended sample sizes listed in Table 2.

Upon completion of testing the Materials Bureau will transmit the test results to the contract EIC for evaluation and appropriate action, which may include acceptance of the material, removal and replacement of material found unacceptable with acceptable material or a charge to the contractor (i.e. reduced payment).

If material has been installed and subsequently found unacceptable by the Materials Bureau, the contractor may request that the Regional Construction Engineer (RCE) allow a third-party laboratory evaluate the installed material. The RCE will forward requests to the Director, Materials Bureau, for approval. The contractor shall provide the laboratory’s credentials to the Director, Materials Bureau for consideration. All laboratories accredited by AASHTO for the specific tests to be performed, will be considered acceptable. The contractor will be responsible for all costs associated with sampling and testing the material utilizing the third-party laboratory. This may involve testing a final product constructed with the material, not just the individual material itself (e.g., test portland cement concrete properties when evaluating a cement-quality concern).

The Materials Bureau will evaluate all third-party laboratory test results. If the third-party laboratory obtains acceptable test results (e.g. material meets the appropriate 700 item specification) it will be necessary for the Materials Bureau laboratory to perform additional testing on this material to substantiate the third-party laboratory test results.

The EIC and construction inspection staff shall notify the Materials Bureau of all material rejections. Rejected material will result in an investigation by the Materials Bureau as detailed in Section 5, Unsatisfactory Findings.
5. UNSATISFACTORY FINDINGS

This section outlines the Materials Bureau’s process for evaluating unsatisfactory verification or construction findings. It provides manufacturers/suppliers an opportunity to evaluate and correct quality control and supply processes, or dispute the unsatisfactory findings. The Materials Bureau will use the information gathered to determine future qualification of the material and determine if changes are needed to the quality assurance program for the material designation group.

5.1. Notification - When a material or audit is deemed unsatisfactory, the Materials Bureau will provide written notification to the material manufacturer/supplier, outlining the specific unsatisfactory findings.

5.2. Required Action - The manufacturer/supplier shall conduct a prompt investigation into the findings. The results of the investigation and proposed corrective action shall be provided to the Materials Bureau, in writing, within 30 days of the notification. Failure to provide a timely response to notification of unsatisfactory findings may result in the firm’s name being removed from the Approved List.

Alternately, the Approved List firm may dispute the unsatisfactory findings. Within 10 business days of the Department notifying the firm of the unsatisfactory findings, the firm shall provide written notification of the intent to dispute those findings. The letter shall include the intended approach such as providing evidence supporting the firm’s position and/or plans to arrange for and provide third-party laboratory test results to provide technical support. If a third-party laboratory is used, provide the laboratory’s credentials to the Director, Materials Bureau for consideration. All laboratories accredited by AASHTO for the specific tests to be performed, will be considered acceptable. Laboratory test results will be considered from the Department, manufacturer, supplier, and third-party laboratories, if provided.

The Director, Materials Bureau, will be the final arbitrator of disputes.

5.3. Resolution of Unsatisfactory Findings - The Department will evaluate the firm’s investigative findings, which may include proposed quality control revisions or supporting data disputing the Department’s findings. At the completion of this evaluation, the firm will be notified, in writing, of the Department’s resolution to the unsatisfactory findings.

5.3.1. Department Resolution - typically results in one of the following:

- The Department agrees with the supporting data supplied by the manufacturer and therefore no further action is required. Routine Department supply may continue.
• At the discretion of the Director, Materials Bureau, routine Department supply can continue in accordance with proposed quality control revisions or the manufacturer may be placed on probation in accordance with Subsection 5.4, Probationary Supply.

• The Department issues an Engineering Bulletin (EB) to Department staff and contractors. The EB will identify the manufacturer and/or supplier(s), identify the unsatisfactory findings, and may provide information regarding increased construction inspection and sampling for the individual material and/or material designation group to assure specification compliance prior to installing the material. The manufacturer may also be placed on probation in accordance with Subsection 5.4, Probationary Supply.

• The manufacturer’s name and location are removed from the Department’s Approved List. When removed from the Approved List, supply must cease immediately and all materials from this manufacturer will be rejected after that date. The following identifies some of the factors that may result in the removal of a firm’s name from the Approved List:
  
  − Failure to provide a timely response to notifications of unsatisfactory findings. Typically investigative reports in excess of 30 days, subsequent to Department notification as identified in the Department’s letter of notification, will be considered delinquent.  
  − Unsatisfactory findings without appropriate corrective action.  
  − Factors that indicate a shipment or sample(s) of material not meeting the specification represents routine supply to Department contracts.

5.3.2. Reinstatement to the Approved List — In order to be reinstated to the Approved List, the manufacturer/supplier must provide proof, acceptable to the Director, Materials Bureau that appropriate corrective actions have been taken to resolve the unsatisfactory findings. The manufacturer will be required to supply in accordance with Subsection 5.4, Probationary Supply as a criterion for reinstatement to the Approved List to demonstrate the effectiveness of the corrective actions.

5.4. Probationary Supply - As part of the resolution of unsatisfactory findings, the Director, Materials Bureau, will consider probation status for manufacturers appearing on the Approved List for a limited duration. This duration, typically not to exceed six months, will provide the manufacturer an opportunity to continue to supply and maintain previous contractual relationships while reestablishing quality control. Materials manufactured prior to the date of implementation of “Probationary Supply” will not be considered acceptable without specific technical basis provided by the manufacturer and written approval by the
Director, Materials Bureau. The requirements for probationary supply are as follows:

5.4.1. Application – Upon notification by the Department that the manufacturer is required to supply under the provisions of Probationary Supply, the manufacturer must provide notice to the Director, Materials Bureau, in writing that the manufacturer agrees to supply under these provisions. The notification shall include details of quality control modifications and supplemental evaluation resource(s), if necessary, as detailed in Subsection 5.4.2., Quality Control. The notification shall also include a list of existing contractual relationships to supply material to Department contracts. Probationary Supply will not exceed six months duration without a technical basis for extended consideration.

5.4.2. Quality Control - When materials are found not to conform to the specification requirements, typically, either the approved quality control process was not followed or the quality control process does not sufficiently address all the problems that may arise in the manufacturing process. Prior to consideration for continued supply, the manufacturer/supplier, must address the following:

1. Identify the portion of the quality control process that was not followed or not followed sufficiently to assure the material conforms to the specification and provide modifications to the quality control process to provide assurance that the problems found will not reoccur.

2. Provide written confirmation assuring the implementation of modifications identified above. The document shall include the specific date of implementation.

3. Supplemental Evaluation Resource - The Approved List manufacturer may be required by the Department to provide an interim (while on Probationary Supply) evaluation resource to adequately satisfy the Department that corrective measures to the quality control process, as detailed above, are adequate to assure the material’s specification conformance. The supplemental evaluation resource(s) shall openly communicate with Department representatives. This includes free access to all documentation related to the services provided. Examples of supplemental evaluation resources include:

- Additional testing, typically a third-party laboratory, to test and verify specification conformance as well as the adequacy of the modifications to the QC plan. The credentials of the laboratory and the proposed frequency of test shall be provided to the Director, Materials
Bureau, for review and approval. All costs for the laboratory services will be the manufacturer’s responsibility.

- Additional inspection team, typically by a third-party inspection agency, to verify specification conformance as well as the adequacy of the modifications to the QC process. The credentials of the inspection agency and the proposed evaluation process shall be provided to the Director, Materials Bureau, for review and approval. All costs for the inspection services will be the manufacturer’s responsibility.

5.4.3. Quality Assurance - The Department will continue to provide quality assurance as administered by the Materials Bureau. The verification process detailed in this procedure will continue to be used. The Materials Bureau may elect to sample and test each lot of material for acceptance purposes prior to use on Department contracts. The sampling may take place at the manufacturer/ supplier and/or project site. If quality problems continue to persist, the approval to supply under Probationary Supply may be immediately rescinded by the Director, Materials Bureau.

5.4.4. Restoration of Routine Supply - The Director, Materials Bureau, will consider a request in writing from the manufacturer to restore routine supply when satisfactory evidence is provided, and confirmed by the Department, that the manufacturer’s quality control problems have been corrected and are unlikely to reoccur in the future.

6. QA PROGRAM MONITORING

In addition to the routine risk assessments, sampling, testing, document and data reviews, and facility audits conducted in Sections 1 through 5, the Materials Bureau, along with Construction and Regional personnel, will monitor and evaluate the effectiveness of the QA program based on Region Materials Engineer’s assessments, contract assessments, and QA test data summaries.

6.1. Region Materials Engineer’s Assessments – Regional Materials Engineers (RME’s) should contact the Materials Bureau when concerns arise over the quality of a particular material or material designation group. Additionally, RMEs will have the opportunity to provide the Materials Bureau with an annual assessment of the QA program, which provides a more formal process to express concerns regarding QA requirements for a specific material item, recommendations for QA data summaries, and concerns regarding the ability to comply to specific QA program requirements.

6.2. Contract Assessments – A review of material QA documents and visual inspection of contract materials may be conducted on contracts by Construction and or Materials
Bureau staff. Construction staff is also encouraged to provide commentary to the Materials Bureau regarding the QA program.

6.3. QA Data Summaries – QA data for a number of materials items will be summarized each year by the Materials Bureau. Materials to be summarized will be determined based on RME’s and contract assessments, Materials Bureau concerns, time since the last QA data summary or risk assessment, need to evaluate effectiveness of recent QA procedure changes for a material, etc.

QA data summaries may lead to recommendations regarding the need to further evaluate or conduct a risk assessment, revise QA procedures for a material, adjust the sampling frequency, conduct targeted sampling to ensure all manufacturers are sampled, or to monitor those manufacturers with a high failure rate.

**NOTE:** Summaries distributed outside of the Materials Bureau will **not** include manufacturers’ and or supplier’s name(s).
Appendix A

Risk Assessment Guidelines
A1. SCOPE:

This procedure will assist Materials Bureau staff in assessing the level of risk associated with each material item administered by the Materials Bureau. The procedure provides factors to consider when determining the level of risk related to using the specified material. The level of risk will be based on the judgment of the evaluator(s), considering the factors provided in this procedure, as well as any other factors not included, that are considered pertinent.

Once a level of risk has been determined it will be used to select appropriate quality assurance tools for use in developing a Quality Assurance Program for the material. A material’s level of risk and quality assurance program will be reevaluated on a regular basis or as additional data becomes available.

A2. RESOURCES:

A2.1 Standard Specifications for the material item
A2.2 National Standards (ASTM, AASHTO, etc.)
A2.3 Test data from the Department, material manufacturers, private laboratories and/or other sources
A2.4 Historical data from material manufacturers, as well as past and present users (such as Regional personnel, other Divisions in the Department, and other state DOTs)

A3. OVERVIEW:

In order to establish the method to assure a material’s quality, an assessment of risk must be performed. The purpose of the risk assessment is to determine the level of quality assurance for the specified material. This procedure provides guidance in performing that risk assessment.

There are many factors to consider when assessing risk. It is not intended that this procedure identify every possible factor for consideration when assessing risk. The procedure will however provide typical factors for consideration, enabling the assessor to be assured of reasonable uniformity in the resultant evaluation.

For the purpose of selecting appropriate quality assurance tools, the level of risk associated with each material will be categorized as “Low,” “Medium,” or “High.” Recommendations are provided for selecting appropriate quality assurance tools for each level of risk.

The results of the risk assessment are likely to change over time. Usually the reason for the change will be the availability of additional data and experience since the previous assessment. Additional data and experience may indicate a higher or lower level of risk and, therefore, changes to the quality assurance procedure. It is imperative that a regular assessment of risk for each material is made.
A4. RISK ASSESSMENT CONSIDERATIONS:

The following list identifies factors to consider when assessing risk. Additional factors not listed below may be considered based on the judgment of the evaluator.

A4.1 Safety - Consider the worst-case condition, as it relates to the traveling public as well as the construction staff, which would result if failure occurs. The greater the potential for an unsafe condition, the higher the level of risk associated with the material.

A4.2 Monetary - Should the material fail, how much will it cost to replace it? How will failure likely reduce the service life of the material and/or if a component material, the finished constructed item? The greater the replacement cost and/or the overall affect on the quality of the finished constructed item, the higher the level of risk associated with the material.

A4.3 Public Perception - Some materials are very visible to the traveling public, others are not. As taxpayers, the public has an expectation of the quality of these materials. Determine the negative impact of the public perception of inferior quality as specified. The greater the potential for negative public perception, the greater the risk.

A4.4 Public Inconvenience - Consider if a lower quality material could inconvenience the public. Inconveniences may include a worse ride quality or delays when repairing/replacing a failed or defective material. The greater the potential for public inconvenience, the greater the risk.

A4.5 New Material Specification - Some new and sometimes innovative materials are occasionally specified. The knowledge and data available to assess risk may be considerably less than the routine materials specified. The less knowledge the evaluator has for a newly specified material, the greater the risk.

A4.6 Past Performance History - The greater the pertinent data available and used to assess risk, the greater the comfort level with the risk assessment. Factors to consider include test data and material performance history. Test data and performance history may come from within the Department, other states, manufacturers, commercial users and/or other resources. Typically, the greater the pertinent data available to assist in the assessment of risk, the more accurate the evaluation.

A4.7 Complexity and/or Level of Quality Control Required In the Manufacturing Process - Materials with a less complex manufacturing process typically have a lower level of risk than materials with more complex manufacturing processes. In addition to the complexity of the manufacturing process, the industry’s quality control standards will also determine the level of risk. Rigorous quality control standards will lower the level of risk.

A4.8 Source of the Standard for the Specified Material - Typically, the more accustomed the manufacturer is to providing a material to a specified standard, the more likely
controls are in place to assure the material quality. National standards such as ASTM or AASHTO are more likely to be familiar to the manufacturer than newly created Department standards. Materials made to longstanding national specifications are more likely to be in compliance versus materials made to a newly developed specification. The greater the experience, coupled with the data to support the satisfactory quality, the lower the risk.

A4.9 Frequency of Use - Typically the more frequently you specify a material, the more data you have and the more accurate the assessment of risk.

A5. EVALUATION PROCEDURE:

The evaluator will assess the risk of the specified material using the factors identified above in addition to any other factors judged pertinent by the evaluator. When assessing the risk associated with each factor, consider how both the typical quantity of material used on an individual contract and on an annual basis may affect the level of risk.

The evaluator needs to determine:

- The risk associated with a material failure after construction.
- The probability or risk of receiving material that does not meet the specification from the manufacturers/suppliers (i.e., what is the industry’s level of quality control?).
- If a higher or lower level of quality assurance will noticeably change the risk of receiving materials that do not meet the specification.

Subsequent to the above evaluation, the evaluator will record the level of risk as either “Low”, “Medium,” or “High.” Once the level of risk is established, appropriate quality assurance tools are selected. Section B6 contains recommended quality assurance tools for each level of risk. Once quality assurance tools have been selected for the material under consideration, the corresponding information is then entered into Tables 1 and 2.

One Materials Bureau Section will be designated to review all evaluations. A brief summary providing the basis for the risk level and a copy of Tables 1 and 2, with information entered for the material under consideration, will be submitted to that Section. The Section’s staff will review the submitted information and, if necessary, discuss the assessment in more detail with the evaluator.

A6. QUALITY ASSURANCE TOOLS:

The following identifies the quality assurance resources typically used for each of the three levels of risk.

A6.1 Low:
- Department staff inspection upon receipt.
- Manufacturer’s material certification.
A6.2 Medium:
- Department staff inspection upon receipt.
- Manufacturer’s material certification.
- Approved List (qualification requirements).
- The manufacturer shall provide independent laboratory test results to confirm the acceptability of the material at the minimum frequency (typically not to exceed 5 years) identified. Satisfactory test results will provide the basis to update the Approved List qualification.

A6.3 High:
- Department staff inspection upon receipt.
- Manufacturer’s material certification.
- Approved List (qualification requirements).
- Manufacturer’s (and supplier’s as appropriate) quality control plan.
- Testing and/or audits will be performed at a regular frequency to monitor and verify quality. For those materials to be tested with properties that have potential for change, (contamination during supply, UV exposure, shipment damage, etc.) from manufacture to point of use, the goal will be to sample as close to the point of use as possible.

A7. EVALUATION FREQUENCY:

It is imperative that material risk be evaluated at a regular interval, to verify an appropriate level of quality assurance is specified. The risk level should change whenever data supports a change, without waiting for the routine evaluation. The minimum recommended frequency for the reevaluation for each of the three risk levels is as follows:
- High every 2 years
- Medium every 5 years
- Low every 5 years
Appendix B

Sampling Requirements

(To be further developed as needed)
704-01 – Common Brick
704-02 – Concrete Brick
704-04 – Concrete Block-Slope Paving
704-07 – Segmental Retaining Wall Block
704-08 – Brick Pavers
704-10 – Split-Faced Concrete Brick
704-12 – Decorative Concrete Block
704-13 – Precast Concrete Driveway and Sidewalk Pavers
704-23 – Precast Concrete Street Pavers

B1. SAMPLES:

B1.1. Notification – Five business days prior to producing brick, block, or pavers for Department use, the manufacturer must forward the following information, in writing, to Product Operations at the following address:

New York State Department of Transportation
Technical Services, Mail Pod 34
50 Wolf Road
Albany, NY 12232

- Description of the material being produced by reference to the appropriate 704 Materials Specification above.
- Indicate if units are being produced for NYSDOT stock or for a NYSDOT contract. If for a NYSDOT contract, provide the contract “D” number.
- Anticipated production quantity.
- Anticipated production date(s).

B1.2. A Department representative will contact the manufacturer to make arrangements for obtaining monitor samples. Sampling frequencies will be in accordance with Table 1. The Department’s inspector will randomly select full-size units from production lots.

B1.3. Manufacturers are only responsible for preparing test specimens, from the full-size units selected, for the following items:

- 704-04 Concrete Block (Slope Paving) requires preparation of specimens as follows:
  - 5 specimens for freeze/thaw testing prepared in accordance with ASTM C1262.

- 704-07 Segmental Retaining Wall Block requires preparation of specimens as follows:
  - 5 specimens for compressive strength testing prepared in accordance with ASTM C140.
  - 5 specimens for freeze/thaw testing prepared in accordance with ASTM C1262.

B1.4. Department inspector shall perform the following prior to sample submission:

- Complete a Sample and Acceptance Transmittal form BR-240 for each lot (see Appendix D for a completed sample BR-240 form) and enclose in a BR-241 envelope with a Manufacturer’s Certification in accordance with §106-04 of the Standard Specifications.
• Witness the packing of the units with accompanying BR-240 in a BR-241 envelope to be shipped to the Department for testing.

B1.5. The manufacturer is responsible for shipment of the samples to the NYSDOT Laboratory (see Appendix D, Subsection D2. for shipping instructions).

B1.6. Five (5) acceptable lots meeting the appropriate Department specification are required prior to approved list addition.
B1. SAMPLES:

B1.1. Manufacturer (as witnessed by the Department’s inspector) shall sample in accordance with the following:

- **Straight rebar only**, the sampling is to consist of two (2) heats of bars, ten (10) bars per heat.
- **Coiled rebar only**, the sampling is to consist of two (2) heats of bars twenty (20) bars per heat.
- **Both straight and coiled rebar**, sample one (1) heat of straight bar, ten (10) bars per heat and one (1) heat of coiled bars, twenty (20) bars per heat.
- For metric bar size 10 through 36, sample bar length for test shall be 762 mm and for metric bar size 43 and 57 sample bar length for test shall be 1524 mm.

B1.2. Manufacturer shall obtain a replicate ten (10) bar sample for **straight rebar**, and a replicate twenty (20) bar sample for **coiled rebar**.

B1.3. Department inspector shall perform the following prior to sample submission:

- Verify the two heats being sampled have been certified as meeting ASTM A615/A615 M.
- Securely bundle each lot of bars and affix an identification tag BR-131 to each bundle of bars. The lot number, bar size, heat number, and manufacturer shall be entered on each tag.
- Complete a Sample and Acceptance Transmittal form BR-240 for each lot (see Appendix D for a completed sample BR-240 form) enclosed in a BR-241 envelope with the Manufacturer’s Certification in accordance with Subsection 106-04 of the Standard Specifications and witness the packing of the bundled bars (two lots) to be shipped to the Department for testing.

B1.4. Manufacturer is responsible for shipment of the rebar samples to the NYSDOT Laboratory (see Appendix D, Subsection D2. for shipping instructions).

B2. MANUFACTURER TEST REQUIREMENTS:

B2.1. The testing is to be performed as follows for **straight rebar**:

- All ten (10) bars are to be evaluated for dimensional conformance (deformation height, gap and spacing) and weight per foot.
- Five (5) of these samples are to be evaluated for tensile properties (yield strength, ultimate strength, and percent elongation).
- The remaining five (5) samples are to be subjected to bend testing.

B2.2. The testing is to be performed as follows for **coiled rebar**:

- Ten (10) bars are to be evaluated for dimensional conformance (deformation height, gap, and spacing) and weight per foot. A straightening process may be used that does not affect the dimensional properties for these bars. These bars should be separately identified.
• The remaining ten (10) of these samples are to be evaluated for tensile properties (yield strength, ultimate strength, and percent elongation).
• Five (5) samples are to be subjected to bend testing. These five (5) bars should be randomly chosen for bend testing from the ten (10) bars that were evaluated for dimensional conformance.

B2.3. Report test results to the Materials Bureau within five business days by faxing test results to (518) 457-8171, Attn.: Product Operations.
B1. SAMPLES:

B1.1. Manufacturer (as witnessed by the Department’s inspector) shall sample in accordance with the following:

- The inspector shall randomly select the rolls or sheets from which the specimens are to be obtained.
- Sample reinforcement of a different size than the previous monitor samples, when possible.
- Sample two (2) lots manufactured and certified within the previous five working days, when possible, or alternately manufactured and certified subsequent to the inspector’s last visit.
- Sample one lot of Plain Steel Welded Wire Fabric and one lot of Deformed Steel Welded Wire Fabric, if available at the time of sampling.
- Each set of specimens (one full-width, transverse-weld shear specimen, three transverse tension specimens and three longitudinal tension specimens) shall be cut from a separate sheet or roll.

B1.2. Department inspector shall perform the following prior to sample submission:

- Securely bundles each set of specimens together and affixes an identification tag BR-131 identifying lot number, BR-240 serial number, and sample type (i.e., full-width, transverse-weld shear, transverse tension, or longitudinal tension specimen).
- Each lot of specimens shall be bundled together and a Sample and Acceptance Transmittal form BR-240 completed for each lot (see Appendix D for a completed sample BR-240 form) and enclose in a BR-241 envelope with a Manufacturer’s Certification in accordance with §106-04 of the Standard Specifications.
- Witness the packing of the bundled bars (two lots) with accompanying BR-240 in a BR-241 envelope to be shipped to the Department for testing.

B1.3. The manufacturer is responsible for shipment of the samples to the NYSDOT Laboratory (see Appendix D, Subsection D2. for shipping instructions).

B2. MANUFACTURER TEST REQUIREMENTS:

B2.1. Obtain full-width, transverse-weld shear specimens as follows (see drawing below).

- One specimen is required from a sheet or roll.
- The specimen shall not be taken from an end piece.
- The specimen shall extend the entire width of the sheet or roll.
- The specimens shall be taken so that longitudinal cross wires on either side of the transverse wire specimens are cut where they meet adjacent transverse wires.
- For ease of shipment, the specimen may be cut into pieces no more than 1 meter in length, tagged and labeled "FULL WIDTH TRANSVERSE WELD SHEAR SPECIMEN."
B2.2. Obtain transverse tension specimens as follows (see drawing below).

- **Three** specimens are required; three from one sheet or roll.
- Specimens **shall not** be taken from end pieces.
- Each specimen shall be 1.5 meters long.
- Each specimen shall be taken so that the longitudinal cross wires on either side of the transverse wire specimen are cut where they meet adjacent transverse wires.
- Specimens shall be wired together, tagged, and labeled "TRANSVERSE TENSION SPECIMENS."

B2.3. Obtain longitudinal tension specimens as follows (see drawing below).

- **Three** specimens are required; three from one sheet or roll.
- Specimens **shall not** be taken from end pieces.
- Each specimen shall be 1.5 meters long.
- Each specimen shall be taken so that the transverse cross wires on either side of the longitudinal wire specimen are cut where they meet adjacent longitudinal wires.
- Specimens shall be wired together, tagged, and labeled "LONGITUDINAL TENSION SPECIMENS."

B2.4. Obtain samples selected by the Department inspector adjacent to those to be submitted to the Materials Bureau.

B2.5. Tests retained samples in accordance with the Department specifications 709-02.

EXAMPLE (1)
1 – FULL-WIDTH, TRANSVERSE-WELD SHEAR SPECIMEN

EXAMPLE (2)
3 – TRANSVERSE TENSION SPECIMEN

EXAMPLE (3)
3 – LONGITUDINAL TENSION SPECIMEN
B1. SAMPLES:
B1.1. The manufacturer (as witnessed by the Department’s inspector) shall sample in accordance with the following:
   • The inspector shall randomly select three (3) 1.5 meter samples from five (5) separate lots.

B1.2. Department inspector shall perform the following prior to sample submission:
   • Seal each piece of strand with red “N.Y.S.D.O.T. SAMPLED” tape security seals in two locations.
   • Securely bundle each lot of specimens and affix an identification tag BR-131 to each bundle. The lot number and heat number shall be entered on each tag.
   • Complete a Sample and Acceptance Transmittal form BR-240 for each lot (see Appendix D for a completed sample BR-240 form) enclosed in a BR-241 envelope with the Manufacturer’s Certification in accordance with §106-04 of the Standard Specifications, including the 1000-hour relaxation test and witness the packing of the bundled specimens (five lots) to be shipped to the Department for testing.

B1.3. The manufacturer is responsible for shipment of the samples to the NYSDOT Laboratory (see Appendix D, Subsection D2. for shipping instructions).

B2. MANUFACTURER TEST REQUIREMENTS:
B2.1. Test sample for tensile and dimension properties in accordance with ASTM A416M.

B2.2. Report test results to the Materials Bureau within five business days by faxing test results to (518) 457-8171, Attn.: Product Operations.
B1. SAMPLES:
   B1.1. The manufacturer (as witnessed by the Department’s inspector) shall sample in accordance with the following:
   • Randomly select a full bag or box from a randomly selected batch comprising the lot to be monitored.
   • Obtain a 1 kg sample for testing.
   • The sample shall be obtained from the selected bag or box by splitting the sample using a mechanical splitter, quartering in accordance with ASTM C702, or using a “Thieve Pipe” method approved by the Director, Materials Bureau.

   B1.2. The inspector shall complete a Sample and Acceptance Transmittal form BR-240 for each lot, with the batch numbers indicated in Box 16 (see Appendix D for a completed sample BR-240 form), enclosed in a BR-241 envelope with the Manufacturer’s Certification in accordance with §106-04 of the Standard Specifications. Seal the sample package with red “N.Y.S.D.O.T. SAMPLED” tape security seals.

   B1.3. The manufacturer is responsible for shipment of the samples to the NYSDOT Laboratory (see Appendix D, Subsection D2. for shipping instructions).
B1. **SAMPLES:**

B1.1. The manufacturer (as witnessed by the Department’s inspector) shall sample in accordance with the following:

- Inform the N.Y.S.D.O.T. inspector at least 48 hours prior to the canning of each lot of paint.
- Draw separate 500 ml samples of the Part A and Part B component directly from the pouring tank at the approximate middle of the pour.
- Samples should never be drawn from the first few or the last few liters of a pour.
- Part A shall consist of two 500 ml samples and Part B one 500 ml sample.
- When the manufacturer notifies the inspector that Part B component will be monitored under two separate lot numbers, two 500 ml samples shall be drawn from the approximate middle of the pour. Label and seal the second Part B sample can and retained at the manufacturer until the mating Part A is manufactured. Send in both Part A and Part B monitor samples together.

B1.2. The inspector shall identify the sample cans with the following:

- Lot Number
- Batch Number
- Mixing ratio, if other than 2:1 (Part A to Part B)
- Part A – Contains Pigment and Epoxy Resin
  - or -
  Part B – Contains Catalyst
- Item Number
- Manufacturer’s name and location

B1.3. The inspector shall seal each sample can with red “N.Y.S.D.O.T. SAMPLED” tape security seals placed at approximately 120° around each sample can and package the samples for shipment to the Department, including a Sample and Acceptance Transmittal form BR-240 (see Appendix D for a completed sample BR-240 form) enclosed in a BR-241 envelope with a Manufacturer’s certification in accordance with §106-04 of the Standard Specifications.

B1.4. The Department inspector shall randomly select one in five lots produced for both white and yellow paint, and submit these samples to the Materials Bureau for testing. Unless notified by the Department, the samples not chosen for submission shall remain at the manufacturer and discarded after the expiration date.

B1.5. The manufacturer is responsible for shipment of the samples to the NYSDOT Laboratory (see Appendix D, Subsection D2. for shipping instructions).
Appendix C

Facility and Quality Control Requirements

(To be further developed as needed)
C1. **APPLICATORS: SUPPLEMENTARY QUALITY CONTROL REQUIREMENTS**

C1.1. Name and location on approved list of Applicators for Steel Reinforcing Bars (709-04).

C1.2. Epoxy-coated bar reinforcement applicators must be certified by the Concrete Reinforcing Steel Institute (CRSI) Epoxy Plant Certification Program. Prequalification samples will not be required by the Department prior to Approved List addition.

C1.3. Epoxy-coated bar reinforcement applicator’s quality control requirements (to be verified prior to application for NYSDOT):
   - Steel reinforcing bars shall conform to the requirements of §709-01, including manufacturer on the Department’s Approved List (verify bar markings conform to those displayed in the Approved List).
   - Steel certification including a statement indicating uncoated bar meets “Buy America,” Subsection 106-11 of the Department’s Standard Specifications.
   - Certification(s) on file from the epoxy coating manufacturer(s) that the coating material is the same as that on the Department’s approved list.

C1.4. In addition to the documentation required by this quality assurance procedure, epoxy-coated bar reinforcement applicators must annually submit copies of the following to the Department:
   - Quality Control plan prepared for CRSI Fusion Bonded Epoxy Coating Applicator Plant Certification Program.
   - Current CRSI Plant Certification.
   - CRSI plant inspection report for current year with satisfactory grade in order to maintain current approved list status.

C2. **FABRICATORS: SUPPLEMENTARY QUALITY CONTROL REQUIREMENTS**

C2.1. Name and location on approved list of Fabricators for Epoxy-Coated Steel Reinforcing Bars.

C2.2. Epoxy-coated bar reinforcement fabricator’s quality control requirements (to be verified prior to fabrication for NYSDOT):
   - Steel reinforcing bars shall conform to the requirements of §709-01, including manufacturer on the Department’s Approved List (verify bar markings conform to those displayed in the Approved List).
   - Steel certification including a statement indicating uncoated bar meets “Buy America,” §106-11 of the Department’s Standard Specifications.
   - Epoxy-coated bar reinforcement applicator’s certification indicating that the applicator is on the Department’s approved list.
C2.3. Quality Control Plan submitted to the Director, Materials Bureau, for approval annually in accordance with Subsection 2.5 of this document that addresses compliance to the repair, handling and storage requirements listed below.

C2.4. Epoxy-coated bar reinforcement fabricator’s repair requirements:
- The fabricator shall be responsible for repair to the coating due to damage during fabrication and handling at the fabricator’s facility.
- All coating damage that occurs at the fabricator's facility due to fabrication, handling, or other reasons shall be repaired with patching or repair material that is compatible with the epoxy coating, inert in concrete, and suitable for use in making shop repairs.
- Wherever bond loss or damaged areas of coating exist, they shall be cleaned and repaired. The cleaning shall remove loose or deleterious material, or both.
- Visible cracks, including hairline cracks without bond loss that occur due to fabrication of the bars, shall be repaired with patching material.
- When coated bars are sheared, saw-cut, or cut by other means during the fabrication process, the exposed ends shall be coated with patching material.
- All repairs shall be performed as soon as possible and before visible rust (oxidation) appears on the steel surface.

C2.5. Epoxy-coated bar reinforcement fabricator’s handling and storage requirements:
- Maintain identification (including steel certification and epoxy-coating applicator’s certification including date and type of coating system used) of NYSDOT epoxy coated reinforcing bars throughout the fabrication process to assure identity of the epoxy-coated reinforcing bars before and after fabrication.
- All systems for handling coated bars shall have padded contact areas for the bars.
- All bundling bands shall be padded and all bundles shall be lifted with a strong back, multiple supports or a platform bridge so as to prevent bar-to-bar abrasion from sags in the bar bundle.
- The bars or bundles shall not be dropped or dragged.
- Epoxy-coated bar reinforcement shall be stored above the ground on wooden or padded supports.
- All coated bars that are stored outdoors shall be protected from sunlight and moisture, using opaque waterproof covers. The covers shall be placed in a manner that will permit constant air circulation so as to minimize the formation of condensation on the epoxy-coated bar surface.
C1. SUPPLEMENTARY APPROVED LIST REQUIREMENTS:

C1.1. Epoxy-coated wire fabric reinforcement applicator’s quality control requirements (to be verified prior to application for NYSDOT):

- Wire fabric reinforcement shall conform to the requirements of §709-02, including manufacturer on the Department’s Approved List.
- Certification(s) on file from the epoxy coating manufacturer(s) that the coating material is the same as that on the Department’s approved list.

C1.2. Epoxy-coated wire fabric reinforcement applicator’s handling requirements:

- All systems for coated wire fabric shall have padded contact areas, wherever possible.
- All bundling bands shall be padded and all bundles shall be lifted with a strong back, multiple supports or a platform bridge so as to prevent sheet to sheet abrasion from sags in the bundle.
- The sheets or bundles shall not be dropped or dragged.
727-01 – White and Yellow, Thermoplastic, Reflectorized Pavement Markings

C1. BASIS OF ACCEPTANCE:
   C1.1. The appearance of the Brand Name, as well as the supplying Company’s Name and Location on the Department’s Approved List of Thermoplastic Reflectorized Pavement Markings.

   C1.2. Each shipping container indelibly labeled in accordance with the following:
       • Manufacturer’s Name and Address
       • Item Number
       • Date of Manufacture
       • Batch Number

   C1.3. Manufacturer’s Certification in accordance with §106-04 of the Standard Specifications for all lots of thermoplastic produced with Department review for specification compliance prior to accepting the lot(s) at the project location.
C1. BASIS OF ACCEPTANCE:
   C1.1. The appearance of the Brand Name, as well as the supplying Company’s Name and Location on the Department’s Approved List of Epoxy Reflectorized Pavement Markings.

   C1.2. Each shipping container indelibly labeled in accordance with the following:
       • Name of Material
       • Item Number
       • Lot Number
       • Batch number
       • Test Number
       • Name and Location of Manufacturer
       • Date of Manufacture (date of manufacture may be part of the batch number)
       • Date of Expiration of Acceptance
       • Part A – Contains Pigment and Epoxy Resin
         - or -
         Part B – Contains Catalyst
       • Quantity
       • Mixing Proportions, Application Temperature, and Instructions for use
       • Safety Information

   C1.3. Manufacturer’s Certification in accordance with §106-04 of the Standard Specifications for all lots of paint produced with Department review for specification compliance prior to accepting the lot(s) at the project location.
Appendix D

Forms Instruction
Sample and Acceptance Transmittal Form BR-240

(Includes instructions for sample submission to the NYSDOT Laboratories and completed sample BR-240 forms for select materials)
D1. SCOPE:

Form BR 240, entitled “Sample and Acceptance Transmittal,” accompanies all submissions of samples of materials secured by the Department or its designated representatives to the Materials Bureau except for the following items:

- Fine and Coarse Aggregates (BR 3)
- Bituminous Materials (BR 170)
- Bituminous Plant – Mix Materials (BR 170)
- Concrete Cores (BR 166)
- Concrete Cylinders (BR 41)

Samples of the materials listed above are accompanied by the form indicated in parenthesis.

Form BR 240 is a five-part, color-coded, snap-out form containing provision for both identification by the Inspector of the material sampled.

D2. EXECUTION AND TRANSMITTAL:

D2.1 All entries printed by ballpoint pen or typewriter.

D2.2 Use sufficient pressure to assure legibility of all copies.

D2.3 Rubberstamp entries not to be used.

D2.4 All entries to be in accordance with instructions.

D2.5 Following completion, remove pink copy by detaching it from the left-hand stub of the form and retaining it.

D2.6 Insert completed form in the “Sample Transmittal Envelope,” Form BR 241.

D2.7 Place envelope inside sample package for transmission to the NYSDOT Laboratory at the following address:

Use the following address to deliver items via United States Postal Services (USPS):

(Laboratory Section)
NEW YORK STATE DOT LABORATORIES
50 Wolf Road
Albany, NY 12232

OR

Direct delivery services will provide deliveries directly to the laboratories. Use the following address to deliver items via direct delivery service (Fed Ex, UPS, Airborne Express, DHL)
D2.8 The yellow and green copies of the form will be returned to the Department or Inspection Agency office having supervision over the Inspector who submitted the sample.

D2.9 That office will forward the green copy to the Inspector while retaining the yellow copy on file.

D3. ENTRY INSTRUCTIONS:

The upper portion of Form BR 240 and the lower right-hand box entitled “Materials Bureau Validation” are for use only by Main Office Materials Bureau personnel and no entries are to be made by the Inspector in those portions of the form.

Inspector’s entries are to be made only in the numbered boxes. Not all boxes are applicable to each material sampled.

The following information applies to those boxes which may not necessarily be self-explanatory for all materials.

Box 4, Contract No. Enter Department contract identification number for all samples taken at the job site or presenting a specific lot of materials which, by Department instructions, is to be eventually shipped to a single, specific project site.

Box 5, Supplier and Location – For the purpose of this form, “supplier” is defined as the Company actually making the shipment direct to the project site. For “location,” the city and state is sufficient.

Box 6, Quantity in the Lot – Always enter the unit of measure (i.e., meters, kilograms, pieces, etc.).

Box 8, Manufacturer and Location – For identification of the actual manufacturer or producer and/or production location when either or both are different than the supplier and supply location entered in Box 5.

Box 9, Batch No. – Enter only when applicable to the material (i.e., paint, epoxy, etc.).

Box 10, Date of Manufacture – Date material was manufactured.
Box 12, Type – Check appropriate box in accordance with the following definitions.

**Control Sample** – A sample required by Department instruction to secure evidence of acceptability.

**Information Sample** – A secured sample representing material already possessing the stipulated evidence of acceptability but for which further information specifications or its application or use characteristics are desired (i.e., a monitor sample).

**BPR Sample** – A sample secured by the Engineer at the specific request of a Department representative.

**Approved-List Materials** – A sample secured at the project site of material for which the required evidence of acceptability is the presence of the brand issued by the Materials Bureau, but in the opinion of the Engineer, has proven unsatisfactory in use. Explain the reason for submission in Box 16.

**Certified Materials** – Same as Approved-List Materials, except that the required evidence of acceptability consists of the filing of a “certification of compliance” or “certified test results” with the Engineer by the supplier.

Box 13, Sampled From – Describe concisely the physical facility from which the sample was obtained (i.e., 55-gal. drum, Silo #XX, Tank #XX, mill-banded bundle, etc.).

Box 14, Sampled By – Print name of person securing sample together with his affiliation (NYSDOT Region or Inspection Agency name and Inspection Agency Code).

NOTE – Inspection Agency personnel must also list the location of their company’s office which administers the particular inspection assignment under which the sample was secured. This location shall be noted by abbreviating the name of the city and such information may, if necessary, be inserted in the lower right-hand box immediately under the bold ruled line and directly opposite the printed legend “Materials Bureau Validation.”

Box 15, Contractor and Project Location – Enter only when Box #4 “Contract No.” requires an entry.

Box 16, Additional Info. – Typical required uses:

- Reinforcing bars: Tabulation of bar size, heat number, manufacturer, and quantity.
- Concrete pipe: Enter Working Drawing Number, results of three-edge bearing strength test.
- Portland cement: List can numbers (example: cans 1 to 5).
D4. SAMPLE BR 240 FORMS:

**Sample 1:**

Common Brick Sampled at the Manufacturer

**Sample 2:**

Concrete Brick Sampled at the Manufacturer
Concrete Block-Slope Paver Sampled at the Manufacturer

Brick Pavers Sampled at the Manufacturer
Preformed Elastic Bridge Joint Sealer Sampled at the Manufacturer

Polyvinyl Chloride Extruded Shapes and Sheet Material Sampled at the Manufacturer
**Welded Wire Fabric for Concrete Reinforcement**
Sampled at the Manufacturer

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**Bar Reinforcement Sampled at the Manufacturer**

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Page D8
Low-Relaxation Prestressing Steel Sampled at the Manufacturer

Aluminum-Coated Fence Fabric Sampled at the Fence Erector’s Yard
White or Yellow, Thermoplastic, Reflectorized Pavement Markings
Sampled at the Manufacturer

<table>
<thead>
<tr>
<th>Material Represented by the Sample Described Below Was:</th>
</tr>
</thead>
<tbody>
<tr>
<td>White or Yellow, Thermoplastic, Reflectorized Pavement Markings</td>
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White or Yellow, Reflectorized Pavement Markings
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