

PART G – MATERIALS ADMINISTRATION UNIT MANUAL

DELAWARE DEPARTMENT OF TRANSPORTATION MATERIALS & RESEARCH SECTION

MATERIALS ADMINISTRATION UNIT

OVERVIEW

This Manual has been prepared to describe the work of the Materials Administration Unit within the Materials & Research Section of the Department of Transportation. The Materials Administration Unit manages the following programs:

- Contractor submitted material sources for all road-building projects and maintenance operations for the Department,
- Consultant inspection services for materials testing, and
- Materials related information management for the Department.

This Unit has daily contact with Contractors, Fabricators, Producers, Suppliers, Designers, Consultant Inspection Agencies, and the various Units within Materials & Research along with various Departmental personnel. This interaction is needed to verify conformance of material submittals to anticipated design and Specification requirements. This communication is also needed when questions or problems arise during production and or fabrication of materials for Department projects.

The Materials Administration Unit is divided into the following three main categories:

- I. Management for Material Source Submittal, Inspection, and Documentation from the Contractor
- II. Management for Materials Consultant Inspection Services
- III. Record Information Management

The following information contained within this Manual will convey information pertaining to these three main categories and how the duties of the Materials Administration Unit are to be performed.

I. MANAGEMENT FOR MATERIAL SOURCE SUBMITTAL, INSPECTION, AND DOCUMENTATION FROM THE CONTRACTOR

Per the Standard Specifications for all Department projects, the Contractor is to submit to the Materials & Research Section their proposed source of supply/materials for that contract prior to the start of the project or a blanket type approval for production plants. This submittal is to have documentation of the sources for future tracking of the material performance. The Contractor-submitted documentation is to provide the following:

- Specification item number for the submitted material
- Proposed Source or Sources
- Source Location (actual production location of the material)
- Material Certification Documents (if required by Specification)
- Technical Data Sheets (if required by Specification)

After the Contractor submits all their sources of supply, it is the responsibility of the Materials Administrator to thoroughly review the submitted materials for conformance to Standard Specifications, Supplemental Specifications, Plan Notes, or Project Requirements for the materials. This review for conformance can be of several different methods: material certification, field sampling and testing, past experience, “acceptance” contingent upon acceptable field performance, etc.

The Materials Administrator has to work closely with other Units within Materials & Research and Designers to verify material conformance of the submitted materials with Contract requirements. This is because the Contractor submitted materials can and will range from borrow material to Portland cement concrete to bituminous hot-mix asphalt to graded aggregate to structural steel to just name a few materials. The other Units within Materials & Research can provide guidance to the requirements needed to meet the specifications of the various materials. The Materials Administrator may also have to communicate to the Design and Construction personnel for their input as well on submitted materials. They may be able to provide insight and past experiences with materials that will be beneficial to the Materials Administrator when making decisions. The Designer can also provide insight in their intent of a material performance based upon their design and performance expectations.

Upon thorough review of the sources and subsequent verification of conformance to the expected requirements, the Materials Administrator will respond in writing to the Contractor’s original submittal letter with copies going to the appropriate District and contract files for follow-up, record keeping, and future reference. It is very important at this point for the Construction personnel to review the Materials Administrator reply letter very carefully to ensure that the Contractor performs the appropriate action referenced in the reply letter. There are many times where follow-up actions are required prior to incorporation of the material into the project.

If the material submittal is found to not meet the specific requirements in the contract, for any reason, this will be documented to the Contractor with copies to the appropriate District and files for record keeping and future reference. At that point, a new submittal will be required for review and action.

For materials that are to be newly produced or fabricated at production facilities on a per contract basis, the Materials & Research Section or their designated representatives will perform Quality Assurance (QA) Testing for verification of conformance to Contract Specifications. Examples of this type include: Portland cement concrete plants, hot-mix asphalt production plants, precast/prestressed concrete plants, structural steel plants, etc. For these facilities, QA Testing will be performed on a daily basis when production is on-going for Departmental projects. Also, the qualifications of the QA testing personnel, both Departmental and Consultant, must be checked very closely to ensure competency to perform acceptance testing and review producer Quality Control (QC) testing.

After the material source submittal has been reviewed and documented, and the material is incorporated into the project, the Materials & Research Section will perform appropriate follow-up review of the material and track the performance of the material for consideration for future use. This review will be on a product-by-product basis with follow-up documentation provided to the appropriate personnel including the suppliers of the reviewed product.

II. MANAGEMENT FOR CONSULTANT MATERIAL INSPECTION SERVICES

The second main task for the Materials Administration Unit is materials consultant management for inspection services. These are usually on-call inspection services for a three calendar year Agreement. These inspection services are usually required for specialty type QA services or QA services that are needed at remote, distant locations. These consultant services are managed centrally within Materials & Research by the Materials Administration Unit.

In order to understand the whole realm of these consultant materials services, this section of the Manual will document procedures for:

- A. Evaluating the need for consultant services via Agreement
- B. Requesting and hiring a consultant via Agreement
- C. Requirements of consultant services for on-call projects
- D. Invoicing and billing review
- E. Consultant Evaluation

The following sections will detail each of the five above referenced parameters on the evaluation, requesting, and management of consultant services along with the evaluation process of consultant services.

A. Evaluating the Need for Consultant Services (Agreement):

The Chief Materials & Research Engineer should review and evaluate periodically the need for on-call consultant services for materials inspection. Some of the potential reasons for needing consultant services include but are not limited to:

- Specialty certification or training requirements are required for QA testing which Department personnel do not have,
- QA testing at remote or distant locations where it would not be economically and managerially feasible for Department forces to cover, and
- To supplement existing Department forces for QA services.

From this review, one can determine if consultant services are required to supplement the existing Department workforce. If it is determined that consultant services are required, specific steps have to be taken to execute an Agreement between the Department and a consultant firm. The following sections explain the steps required for this to take place.

B. Requesting and Hiring a Consultant (Agreement):

Once it has been determined and justified that there is a need for on-call consultant services, contact should be made with the Division of Administration and specifically the Consultant Control Coordinator's Office to facilitate the steps involved to complete this request up to executing an Agreement. The steps required for obtaining a consultant include:

- Review of operations within Materials & Research by Chief Materials & Research Engineer
- Chief Materials & Research Engineer requests approval from Chief Engineer for consultant services.
- Chief Engineer reviews the request and provides approval in writing to Chief Materials & Research Engineer.
- Chief Materials & Research Engineer forwards the approval to the Consultant Control Coordinator's Office.
- Financial Management & Budget (FM&B) is contacted to provide funds for this request and advertising of Agreement.
- Chief Materials & Research Engineer completes a Request for Proposal (RFP) for the services needed. This RFP is a brief document describing what services will be needed under the Agreement.
- The RFP is advertised.
- Interested firms attend a mandatory Pre-Bid meeting to answer any questions about the RFP.
- Interested firms submit their proposals to the Department for review
- A "Short-List" Committee is selected by the Chief Materials & Research Engineer to review all submitted reply's from the RFP's.
- After the Short-List Committee has narrowed down the potential candidates, a Selection Committee chosen by the Chief Materials & Research Engineer will listen to oral presentations from the short-listed consultants.
- From these presentations, a consultant is selected based upon their presentations and understanding of the Agreement

- An Agreement is negotiated for materials consultant services and then executed for use.

C. Requirements of Consultant Services

Once a consultant has been selected and the Agreement executed, a meeting should be held to discuss the Agreement and what is expected from each party. From the Department's standpoint, we are expecting services for areas where Department forces can not be utilized as referenced above in Section 2-A, Evaluating the need for consultant services (Agreement). Usually though, these services are needed for remote locations and where specialized training/certification is required and Department forces are not qualified in that specific area of expertise.

For the actual administration of the Agreement, the Materials Administrator is the focal point of contact for the Department. The Consultant will assign a Project Manager to work with the Department as their point of contact. These two parties will communicate often to ensure all requirements are being fulfilled under the Agreement.

As for the actual assigning of tasks under the Agreement, the Materials Administrator will assign projects and locations to the Consultant based upon the needs of the Department. These assignments will normally involve QA testing of materials to be incorporated into Department projects. In order to accomplish these assignments, there has to be contact between the Materials Administrator and the Project Manager early and often.

The initial contact between the Materials Administrator and the Project Manager for the potential need of consultant services is when a project is awarded to a Contractor. At this point, all that is known is that an award has been granted and based upon the contract, consultant services may be required. The Materials Administrator will forward this information to the Project Manager so they are at least aware the Department may be requesting services in the future for this project. The next contact between the Materials Administrator and the Project Manager should be after the Contractor has submitted their source of materials/supply to the Department for review. At that point, the Contractor has submitted their fabrication/production plants where their materials will be supplied from and the Department can assign personnel to perform the QA testing.

The need for inspection services will also be conveyed to the Consultant through a carbon copy (cc) of the Department's reply to the Contractor's source of supply letter if fabrication/production plants are required for the Contract. The letter from the Materials Administrator to the Contractor states the Contractor is to give the Materials Administrator at least 4 weeks notice prior to fabrication to schedule inspection.

After it has been determined that consultant services are required for a specific project, the Materials Administrator will discuss with the Project Manager the specific requirements for the task such as:

- When production/fabrication is to start.
- What specific technical abilities are required from the consultant.
- What documentation will be required from the Department for the consultant to perform their duties (approved shop drawings, plans, specifications, etc.).
- Timeframe of the consultant services needed.
- Estimated budget for this task.
- Requirements for daily and weekly reports.

Once the consultant has selected personnel to cover a task, they will submit to the Materials Administrator a resume with the knowledge, skills, abilities, certifications, past experience, etc. of the personnel. The Materials Administrator will evaluate the submittal and, if found acceptable, approve in writing the use of that specific Consultant personnel. If the submittal is not approved, the Materials Administrator will document why they are not approved to the Consultant for their review and re-submittal of other personnel. Along with the documented approval of the personnel, the Materials Administrator will also approve the hourly and, if needed, premium salary of the personnel as well.

Once all salary issues are resolved and documented, an estimated budget is to be established by the consultant based upon the task. This estimated budget will be submitted to the Administrative Assistant of Materials & Research so Finance can encumber funds for when the actual invoice is received from the consultant. (Past experience has shown this allows for faster processing of approved invoices). If it is found that the estimated budget was either too low or too high, appropriate adjustments can be made at any time during this task on the specific contract.

Once the consultant is working at the production/fabrication facility, they are considered the representative of the Department. They are to review all quality control (QC) activities of the producer/supplier/fabricator and perform all QA testing for the Department. If any problems arise, the consultant is to contact the Materials Administrator immediately for further directions. All problems are to be documented in detail and placed in the contract file along with a copy to the Agreement file and copies to all appropriate parties directly involved in the project for their information and input if required.

The consultant is to document daily activities in a progress report for submission to the Department for review and placing in the contract files. It will be the responsibility of the Materials Administrator to disseminate the information to the appropriate personnel. These progress reports shall include the following:

- Inspector's name
- Contract number
- Production/fabrication facility and location
- Inspection date
- Hours worked
- Miles traveled (if applicable)
- Daily activities including:

- QA/QC test results,
- activities witnessed,
- repair procedures (if applicable),
- shipment details (if applicable),
- other pertinent information
- Supervisory signatures verifying review and agreement with report

The Materials Administrator is to thoroughly review the daily and weekly reports for accuracy and conformance to the Agreement. Any problems should be noted immediately to the Project Manager for resolution.

At the end of the production/fabrication, if all specifications have been met, the consultant is to “stamp” the pieces with their company’s emblem so Department field personnel have a record that the pieces have been reviewed prior to delivery. This emblem in no way verifies complete conformance to the contract requirements; the ultimate responsibility for all performance of materials lies with the contractor and their suppliers. Any failure to meet the specified requirements shall be corrected by the Contractor at no cost to the Department.

During the production of materials for the Department, the Materials Administrator is to arrange unannounced visits of the production/fabrication facilities to ensure the presence of the consultant when expected and perform QC/QA checks of the facilities. When conducting a plant visit, the following is to be verified and documented in a report after the visit:

1. Date and time of fabrication plant visit
2. Fabrication plant name and address
3. Personnel involved (include M&R Staff, Plant, and Consultant Personnel)
4. Contract(s) and Pay Item(s) involved
5. Work reviewed/ recorded
 - a. Work completed and stored (note location and condition)
 - b. Work in progress (note when work began)
 - c. Work planned (note expected completion date)
 - d. QC forms (by plant and available to Consultant QA Inspectors)
 - e. Reports and forms used by Consultant QA Inspector
6. Records and references
 - a. DelDOT Contract Plans and Specifications (Standards and Special Provisions)
 - b. Approved Shop Drawings
 - c. Quality reports for component materials and mix designs, as appropriate
 - d. Correspondence with DelDOT (letters and documentation regarding any correspondence)
 - e. Inspection Reports (Plant QC and Consultant QA)
 - f. Industry Standards and References
7. Cost tracking of Consultant’s Services

- a. Diary of Consultant Inspector
 - b. Time keeping (expected prorating due to multiple clients)
 - c. Mileage determination (as appropriate)
 - d. Meals and Overnight accommodations (as appropriate)
 - e. Other costs (as appropriate)
8. General Comments
- a. Activities observed
 - b. Questions/Issues raised
 - c. Overall Consultant evaluation based on the visit

D. Invoicing and Billing Review

On a monthly basis, the consultant will submit invoices to the Department for payment. Once the invoice is received by the Materials Administrator, they will have 10 business days to complete the review of the submitted invoices. The invoices are to be reviewed very thoroughly for completeness, accuracy, and conformance to the Agreement. If any problems are noticed, payment is not to be made until everything is acceptable.

The direct salary items are hourly and premium wages for justifiable hours worked on Department projects. To verify hours, timesheets are to be reviewed and approved by the Project Manager and then submitted for review and approval by the Materials Administrator. The timesheets are to be reviewed and compared to the submitted daily inspection reports to verify times of work. Timesheets are also to be checked for prorated hours when the consultant is working for more than one client.

The invoices include not only direct salary items but also non-direct salary items such as travel expenses (mileage, tolls, etc.), hotel stays, and meal expenses. To verify non-direct salary expenses, the Materials Administrator must review the following very closely:

- The actual distances traveled by the consultant and compare the claimed mileage to the payable mileage as per Agreement.
- Receipts for toll charges (check toll plaza locations and times).
- Authorization by the Department for per-diem expense reimbursement.
- Receipts for meals and lodging. Verify that meal receipts include date, name and location of restaurant (*Note:* no alcoholic beverages are to be paid for as a representative of the Department).
- Lodging receipts include date of use and the name, address, and phone number of the hotel (get Federal Employee Identification Number)

If the invoices are found to be within the scope of the Agreement, the Materials Administrator will complete a form showing that the invoice meets all requirements. After another review and approval by the Materials Engineer, the invoice is to be submitted to the Administrative Assistant of Materials & Research for payment. (Since a

budget was already established, the funds should be available by this step). Once approved by Finance, payment is generated and sent to the consultant for their services.

If the invoices are found to not be in conformance with the Agreement, the Materials Administrator is to document the problem to the Project Manager for review and corrections. Once the corrections have been made, they will be reviewed and, if approved, processed as per the paragraph above.

As the Agreement will have specific timetables for actions by the Department, it is imperative that all steps are taken to ensure timely and accurate payment to the Consultant for their services. To that end, it is the responsibility of the Materials Administrator to track all budget information including:

- Date and amount of originally submitted consultant invoice
- Date of review and approval from Materials Administrator
- Amount of approved invoice from Materials Administrator
- Date of review and approval from Materials Engineer
- Amount of approved invoice from Materials Engineer
- Date of submittal to Administrative Assistant
- Date and final amount of Payment Voucher (PV)

E. Consultant Evaluation

The Material Administrator evaluates the services of the Consultant annually and at the end of the contract. This helps the Department for possible future selection of Consultants. The solicitation for evaluation will come from the Division of Administration and the information will be sent to them for filing for future use.

Also, at the end of the Agreement, an audit of the Agreement will take place. This audit will evaluate the performance of the Materials Administration Unit in conforming to the terms of the Agreement.

III. RECORD INFORMATION MANAGEMENT

Maintenance of all records on submitted sources of supply, approved materials, tests, certifications, and inspection reports is the responsibility of the Material Administration Unit. The proper maintenance and proper distribution of information is very important for management for future reference. All information is to be maintained on a contract-by-contract basis for filing purposes along with carbon copies in the Agreement files for consultant correspondence.

Along with the information referenced in the paragraph above, specific databases are to be maintained for consultant information by the Materials Administration Unit. These databases include:

- Spreadsheets for tracking resumes of the different Consultant Inspectors.
- Spreadsheet tracking the weekly reports from Consultant Inspectors
- Spreadsheet tracking invoices and payment voucher (see Section II –D above)
- Sign in sheets required for each and every production plant supplying to the Department
- Records for plan specification, special provision, shop drawings, approved mix designs or any other relevant information on the construction projects.

The fabrication facilities must maintain records of all activities on a contract-by-contract basis as well. The records are to be accessible to all Department personnel and their designated representatives at any time. The following is a list of some of the records that are to be accessible:

- QC Plan and test records
- Industry certification of plant
- Shop drawings, specifications, and special provision for particular contract along with any revision or addition of these drawings.
- Material sources records
- Calibration records of equipment and scales
- Temperature records
- Curing details
- Records about compressive strength of cylinders
- Detail of repairs and approved repair procedure
- As built drawings
- Final inspection detail
- Shipment detail

The information contained within this document is intended to detail the activities of the Materials Administration Unit. It is not intended to detail all possible situations and circumstances that may arise when performing duties associated with the Materials Administration Unit. For any specific questions or concerns that may arise, see the assistance and guidance of the Materials Engineer and/or the Chief Materials & Research Engineer.