

4. Field Office Set-Up & Record Keeping

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4.1. Field Office, Supplies, & Equipment

Not all projects are administered out of a field office. For those that are, selecting, locating, and equipping that office is the first chore facing the Project Engineer and the project staff when they move to the project site. In some cases, one or more of these decisions may already have been made for the Project Engineer by the contract: the office and some of the furnishings may be provided by the contractor or by an engineering consultant. Field offices come in all sizes and shapes and may be owned or rented by the contractor, by an engineering consultant, or by the Department (depending on the terms of the contract).

The field office should be located at a site acceptable to the Project Engineer, convenient to the project as a whole, and accessible to persons covered under the Americans with Disabilities Act. A sign located near the entrance should identify the office. If access to the office is not direct, additional signs should be installed to assist the public in locating it. At rural project sites where the office is readily identifiable or the location of it is commonly known, signing is not necessary.

If the contractor or an engineering consultant provides the field office, the contract or professional services agreement establishes its size and the basic furnishings and utilities that are provided. Any remaining furnishings and office equipment are the responsibility of the Department. If the Department provides the field office, the Project Engineer is responsible for securing all of the furnishings and office equipment. In each region, the Project Engineer and Group Chief/PM should review that region's standard list of equipment and supplies needed to equip the field office, and should modify it to suit the needs of their particular project.

The Department will usually be able to supply basic office furnishings and equipment such as desks,

chairs, file cabinets, a computer, and copy and fax machines; the Project Engineer must sign for each piece of equipment received from the Department, and it will be added to the Project Engineer's inventory. The contractor must purchase all expendable supplies and any additional equipment or furniture needed. While the Project Engineer's purchase authorization limit varies from region to region, general purchasing and stock request procedures are detailed in the Departmental Procedures (DPDR 10.01.021). To properly prepare and submit Stock Requests (Form 02-303), the Project Engineer must also be familiar with the project's financial account coding system (Section 2.1).

The field office should have a first aid kit equipped commensurate with the size of the project staff and the type of hazards the staff will be exposed to. Depending on the type of project and the funding source, the Project Engineer is responsible for displaying a number of posters at the field office. The specific posting requirements are shown in Table II in the Appendix. Workplace and safety posters should be attached to a wall or bulletin board that is accessible to staff. Posting for the Department is only required at one location on a project site, even when there are multiple offices or buildings.

If the field office and project vehicles are equipped with radios, the Project Engineer and staff shall know basic phraseology and techniques; see chapter four, section two of the *Aeronautical Information Manual*, a link is provided on the DOT&PF Construction web site. This applies when communicating with FAA Flight Service Station, Tower personnel, or aircraft. Also, see FAA Advisory Circular (AC) 150/5370-2 Operational Safety on Airports during Construction.

Several Department Policy & Procedure's have application to the field office and are available on the web for reference: P&P 02.01.050 Use of State Telephones, Fax Machines, Computers & Other Office Technologies; also the P&Ps 10.03.010 Procurement, Maintenance, and Control of Surveying Instruments, P&P 10.03.010 Property Control and P&P 10.03.030 Salvaging and Destroying Structures.

The following link will bring you to P&Ps:

http://www.dot.state.ak.us/admsvc/pnp/policy_and_procedures.shtml

4.2. Records Systems

To fulfill their contract administration responsibilities, the Project Engineer and project staff are responsible for establishing and maintaining a system of accurate and complete records covering all project activities. These records must substantiate the acceptability and the quantity of the contractor's work and certify the disbursement of funds. In addition to covering quality, quantity, and payment, project documentation must cover all of the important administrative matters including contract modifications (time, money, and contract language), differing site conditions and their resolutions, and contractor compliance with all of the administrative aspects of the contract (labor and payroll, DBE, EEO, origin-of-manufacture requirements). The importance of developing and maintaining proper records is basic to successful construction contract administration.

The records system is the general framework within which project staff store the documents generated by contract administration. You must tailor it to meet the needs of each project. On any given project, some elements of that system may be used hardly at all, while others will be developed extensively; the extent and direction of development is largely a matter of the Project Engineer's judgment. For the system to be effective, project records must be sufficiently clear and complete and must be filed in such a manner that they are readily accessible, either manually or electronically.

The records system for each project should include the basic elements shown below; acceptable formats are covered in greater detail in Section 4.3 and contents are covered in Sections 10.3 – 10.5:

Master Index Book or File: A listing of all project records.

Engineer's Diary: A bound or loose-leaf book, or inspector's daily reports.

Progress Documentation: Inspector's daily reports, specialized daily reports, field books, and supporting data.

Progress Summary: An Estimate book or estimate files.

Progress Payments: Estimates, quantity calculations.

Reports: Weekly or semi-monthly project construction reports; intermittent program reports on OJT, safety, and labor programs; inspection reports

received from the contractor and from other agencies – SWPPP reports, US Coast Guard, American Bureau of Shipping; geotechnical reports; accident reports.

Photographic Records: Photo albums and/or video tape files.

Project Files: This should contain project correspondence; contract documents and changes; materials submittals, certifications, and test results; federal reimbursement agreements and payment information; construction progress schedules and revisions; contractor prepared plans; design and project development data; materials and environmental permits; administrative files; in addition to the above listed items.

Full-size drawings: For as-built markup.

You must tailor the format and scope of the record keeping system to the needs of a project and the size of the project staff. As soon as you have determined the documentation requirements for a project, you should set up the files, books, and indexing. On a smaller project, the Project Engineer usually sets the system up and together with the project staff they jointly maintain the system. On a larger project one project staff member is usually assigned the field office management duties.

All project records, both loose-leaf and bound book, should be listed in a master index, either in a bound book, an index file, or a computer file; the records include all contract documents, engineering drawings, materials reports and test results, bound books, project files, and photographic records. This index book or file serves as the master index for all project records both during construction and after the project is completed.

The purpose of a filing system is to organize loose project records in an orderly manner, so that you can retrieve any record without delay. The project filing system, which organizes all of the above material, should be set up along logical lines; a guide format that subdivides the files into six sections is shown in Table IV in the Appendix. All of the basic sections outlined in Table IV should be present in the filing system, regardless of the format you follow. The specific files required for any project will depend on the nature of the project and there should be enough files to create an efficient, easy to use system. Once established, you must keep the filing system current throughout the project.

In addition to all of the half-size plans that the project inherits from the bidding process, the Project Engineer should obtain several sets of full-size plans also. One of these sets should be set aside in the field office for recording all of the as-built changes made to the project during construction; if regional policy allows, you can record as-built changes on half-size plans, if you can record them accurately.

Accomplishing these organizational steps prior to the start of construction will make it much easier to document the work as it is being performed. It will also allow you to spend more time at the primary job of assuring that the project is constructed in accordance with the contract.

4.3. Records Management

Records developed during the course of the project consist of both loose leaf records (which may be hand written, typed, or computer-stored, and which may include the Engineer's diary, inspector's daily reports, specialized daily reports, photographic records, materials test results, correspondence, progress summary, progress payments, change documents, construction progress reports) and bound book records (hand written records which may include the Engineer's diary, inspector's daily reports, specialized daily reports, field books, progress summary). All project records, particularly loose-leaf records, must contain the project name and project number for identification purposes.

Project records are used to support payments to the contractor to determine the acceptability of materials, verify conformance of the work to the contract, develop a record of the completed project, and, on federally-funded projects or under reimbursable agreements, substantiate the eligibility for reimbursement of construction phase expenses. On contracts with multiple projects or funding sources, the project records must account for the separation of charges to each project or source.

Computers may be used to record and store the records of project progress. The master index, as well as the Engineer's diary, inspector's daily reports, and the Construction Progress Report all may be prepared on a computer and the records stored in computer files. Computers may also be used to calculate quantities and prepare progress estimates, prepare change documents, calculate and prepare materials test results and reports, and prepare general project correspondence. Computer-generated forms may be

used in place of any form listed in this manual as long as the computer form contains the same information, in the same or in a different format, and maintains the essential integrity and legal requirements, if any, of the original form.

Computer records used as source documents must be either:

- Printed, signed and dated by the person creating the record, or
- Electronically signed and dated, with the data stored in a non-rewritable electronic archiving system kept in a secure area.

All documentation recorded on a computer bank must be downloaded onto data storage devices for backup and storage no less frequently than once each week; depending on the volume of data being generated on the project, more frequent backup may be advisable.

Loose-leaf records may contain field notes, calculations, transcriptions of audiotape records (such as the Engineer's diary or the minutes of meetings), and other information necessary to document the progress and acceptance of the work. Project name and number must identify each loose-leaf record. Signature and dating requirements vary for loose leaf records, depending on the type of record: calculation sheets and records serving as pay quantity source documents must be signed and dated by both the author and the checker, if applicable, on the front page with initials and dates used on subsequent pages. If it is necessary to change an entry on any written project record, the original entry should be lined out and initialed, and the corrected entry made immediately following the incorrect entry.

Bound book records may contain survey measurements, field notes, staking data, calculations and other information necessary to document the progress and acceptance of the work. Certain Department forms may also be available in bound book form, as well as loose-leaf form, including inspector's daily reports and scales diary forms. The number, type and content of field and computation books will vary with the type of project. Each book should have its own index on the first pages, and each project staff member making entries in a book should print and sign their name and initials near the front of the book. The pages in bound books should be numbered as they are used, for ease in cross-referencing the contents. Calculations made in bound

books must be initialed and dated by both the person who calculates and the person who checks. If it is necessary to change an entry on any written project record, the original entry should be lined out and initialed, and the corrected entry made immediately following the incorrect entry.

Photographic records are another form of loose leaf record and include both still photos and video tape, taken from the ground or from the air. The photographer should record the date, time and location of each photo/film segment taken, and should record that information on the back of each still photograph before the photo is placed in the project album. Video segment filming information should be referenced to the tape and tape segment and kept in the project files. Negatives from still photographs should be cross-referenced to the photos in the album for ease in obtaining duplicate prints.

The Project Engineer must maintain a **progress summary**, in the form of an estimate book or estimate files, to tabulate the quantity of work completed on each pay item for each estimate. This record shows how each pay item's quantity was derived (calculated or estimated) and must provide an audit trail back to the source document measurements that were used to establish the quantities. It can be set up as shown in Section 12.4.

4.4. Source Documents

The source document is the basis for determining that work on a pay item has been acceptably performed and is eligible for payment. To be complete and valid, the source document must:

- Identify the project by name and number;
- Identify the pay item, the quantity of the pay item or material inspected, and the location of the installation or placement;
- Be made on the site at the time an item is manufactured, fabricated, or inspected, by the person taking the action;
- Contain a validation statement, indicating that the item substantially conforms to the plans and specifications and was incorporated into the project;
- Be dated and signed by the person creating or receiving it.

A person's initials, printed or typewritten name, electronic (digital) signature, or handwritten signature, are all considered acceptable ways of signing. The contract, ACM or Department forms, may be more specific about signature requirements.

Source documents that are used in determining contract quantities may include materials certifications, field notes, calculations, receipts, invoices, weigh tickets, daily load count or time equipment records, survey measurements, and reports.

You should never destroy an original source document; if you must replace one (to clarify the information or to correct an error), you should line out the original information and label it as original, and label the replacement as a copy. Cross-reference and retain both documents in the project records; add an explanatory note to the original record along with the date and the signature of the person making the change.

4.5. Materials Certification List (MCL)

The contractor must submit certifications, or quality testing must be completed, for all the materials incorporated into the project.

A Materials Certification List (MCL) is a listing of all the material certifications required by the contract.

Non project specific MCL master documents are available from the D&ES Statewide Materials website.

A project specific MCL is developed during the final PS&E stage of the design of the project. The MCL coordinator will assist the Engineer of Record in developing the MCL for inclusion in the contract appendix.

The contractor submits material certifications for approval to the Project Engineer, who will approve the material certification or transmit it for approval to the position designated in the MCL. The position that reviews/approves each submittal is identified in the unshaded box corresponding to the appropriate item.

If the contractor submits a material listed on the Qualified Products List (QPL), the Project Engineer must indicate in the appropriate cell on the MCL the manufacturer and model of the material. The QPL listed material has been pre-certified so no further certification is required.

If the material submittal by the contractor does not match the material required in the contract, the Project Engineer must contact the Engineer of Record or the Project Manager to get approval for the material.

If the Project Engineer adds materials by change order, then the new materials must be added to the MCL with the appropriate approval level.

After acceptance of the material, the Project Engineer will fill out the MCL with the date of approval, manufacturer, model number, and the file location of the material certificates.

A sample of the Master Materials Certification List can be found in Section 17.

4.6. Qualified Products List (QPL)

The Qualified Products List (QPL) identifies products that meet the Department's standard specifications. The QPL is populated and maintained by the Statewide Materials section. Access the QPL at this web address:

http://www.dot.state.ak.us/stwddes/desmaterials/qpl_intro.shtml

The QPL provides information on the product; contact information for the manufacturer/supplier, and independent verification of the product's conformance with standard specifications.

The Project Manager or Project Engineer must print a copy of the QPL (revised monthly, kept on file at Statewide Material website) that corresponds to the day of Bid Opening. Products may be added to the QPL after this date and the product can be used on the project if it meets contract requirements.

When products are listed on the QPL, the Project Engineer can approve submittals of catalog cuts or invoices instead of requiring a manufacturer's certificate of compliance.

Special provisions may modify product requirements so that products listed in the QPL do not meet the modified contract requirements. The contract provisions take precedence over the QPL.

Use of the QPL does not guarantee the approval of, or appropriateness of a product for a given project or application. The contractor must request and receive approval from the Project Engineer before incorporating a product into the project.

Products that perform unacceptably in the field, or are found to be non-compliant with standard specifications, may be removed at any time from the QPL. The Project Engineer must notify the Statewide Materials Quality Assurance Engineer of any product on the QPL that is found to be non-compliant with the standard specifications or that performs unacceptably in the field.

A product that was listed on the QPL on the day of Bid Opening and later removed; may still be used on the Project if it meets contract requirements. Discuss with Statewide Materials the reasons for product removal. If the product hasn't been ordered yet, discuss purchase of equal products with the contractor.

4.7. Degree of Accuracy

The degree of accuracy used in making field measurements, in performing quantity calculations, and in measuring and calculating materials test results should be consistent with the contract requirements, construction methods, and good engineering judgment. You should determine the appropriate degree of accuracy to use in each situation before construction is started.

Measurements and calculations should be rounded off according to the following rules:

- Determine the last digit needed for the required degree of accuracy.
- If the digit following the last needed digit is 4 or lower, drop it.
- If the digit following the last needed digit is 5 or greater, drop it and add 1 to the last needed digit.

Measurements for pay quantities should be made only to the number of decimal places that can be determined with reasonable accuracy, using conventional and commonly used measurement methods; such measurements should be consistent with the value or price of the pay item being measured. Pay quantities and materials test results should be calculated to a degree of accuracy consistent with the measurements. This would normally mean calculating to one less decimal place than the least accurate measurement taken; however, when more than one calculation is necessary to obtain the final answer, all intermediate results should be carried out to one decimal place more than is

necessary is the final answer. The following table may be used as a guide in taking measurements and in calculating quantities:

BID PRICE/ UNIT	SIGNIFICANT DECIMAL/ MEASURED UNIT	SIGNIFICANT DECIMAL/ CALCULATED UNIT
< \$10	0.1	1
\$10 - \$100	0.01	0.1
\$100 - \$1000	0.001	0.01
> \$1000	0.0001	0.001

4.8. Disclosure of Records

All project records are available for review by the contractor and the public (under AS 09.25.110 – AS 09.25.220), except for personnel files, labor compliance interviews (Section 7.3), and correspondence between the Department and their attorneys that is marked CONFIDENTIAL – ATTORNEY CLIENT PRIVILEGE. Attorney client privilege correspondence should be kept in a separate file to make its inadvertent release less likely. The Project Engineer should keep a record of all requests to review the project records and should coordinate all reviews in advance with the Group Chief/PM.

After completing the project, transfer records for long term storage according to Section 16.15.

4.9. Reference Books/Material

The Project Engineer should equip the field office with a small library of reference material that may be useful to the project staff during construction. Table V in the Appendix contains a list of both required and recommended reference material for the field office, along with a list of reference material that should be available in the regional office. Some books and safety guides are required by AS or CFR, to be kept on hand in certain offices; other reference material is applicable only to certain types of projects.