

10-1 General

10-1.1 Introduction

This chapter is intended to provide a reference and to act as guidance for the project office in the keeping of Construction Contract Records. While there may be differing needs or circumstances that must also be met within each project office, it is intended that this guidance be used to help identify the minimum requirements that are necessary in order to establish an adequate method of record keeping. These minimum requirements also help to establish a basic level of uniformity among all project offices statewide. This can help to facilitate the review of records by others and promotes greater efficiency when engineering personnel are transferred or reassigned between different projects or even different project offices. If a clear method of record keeping can be identified prior to the beginning of work, then original field notes and records can be easily prepared and maintained as the work progresses. This will also help to reduce the effort required to produce the final contract records upon completion of the project.

Successful contract documentation requires that measurements and calculations supporting contract payments are accurate and that records of these actions are complete. Contract records and documentation must be sufficiently detailed and maintained in a manner that will withstand an audit and be clear enough to be read and understood by anyone unfamiliar with the project. The Project Engineer is responsible to ensure that these accurate and complete records are maintained for all construction project work. If questions arise or assistance is needed, the statewide Documentation Engineer and the Regional Documentation Engineer are both available as resources for the Construction Project Office's use.

It is recommended that original field notes be kept in a form that can be filed and retained as basic documentation. Field notes taken on scratch paper and then passed to the office should not be considered as acceptable documentation. Transcription of field notes to final record form should be avoided due to the possibilities of error and the unnecessary cost of duplication.

All personnel are responsible to ensure that notes are made correctly and are complete with all pertinent information. Sample notes have been included with this chapter and are intended as a guide or reference in preparing final record notes.

Facsimile machines, scanned documents, and electronic mail are normal business practices in most state and private offices. It is acceptable to take action on these types of correspondence; however, in order to properly document and follow the conditions noted in the contract, exchanging or mailing original copies of the documents should follow up all facsimile, scanned documents, and electronic mail. This is especially true for any item that requires a commitment by either the Contractor or the Washington State Department of Transportation (WSDOT). Follow-up mail copies are required for all issues that require an original signature.

Documents which must stand up in a court of law or meet the requirements of a State or Federal Audit require a signature.

A signature, whether digital, electronic, or hand-written, is primarily a symbol signifying intent and identifying those who worked on the documentation record. Now that we are conducting a substantial portion of our business via the computer, each individual should become familiar with those documents which require an original signature and which are acceptable with a printed/computer generated name.

Chapter 11 lists the various electronic construction forms made available by WSDOT. These forms may be used to record, document, and make payment for construction activities and materials on WSDOT construction projects. The forms are categorized by:

- Those persons responsible for completing the form (e.g., project office, Contractor, Materials Lab).
- Whether an original signature is required or a printed/computer generated signature is acceptable.

The State Construction Office encourages the project offices to utilize electronic resources to aid them in their work, and does not wish to stifle creativity in the use of those electronic media. However, it is important to be able to identify an original document, who created it, and to maintain a consistent approach to documentation throughout the State in order to meet the requirements of the contract, an audit or a court of law. Keep in mind that as much as we may wish to have a paperless project, it is very unlikely to occur in the near future. The use of electronic records and signatures is voluntary. Government agencies that accept electronic records and signatures must also accept paper documentation from citizens and businesses, unless otherwise provided by statute.

10-1.2 Requirements for Notes

Documentation of contract items that are not specifically covered by the sample field notes can, in most instances, be created using the examples as a guide for similar items. The following notations should be carefully observed for correct procedure:

1. Each set of notes should contain the date when they were made and the initials of the persons making them.
2. Each set of notes, except staking notes, should contain the date when the phases of work are accomplished, the initials of the persons who compute and check the quantities noted, the dates when the quantities were computed, the dates when the computations were subsequently checked, the locations where the work was performed, and the corresponding group number.

3. When field notes are used as the basic source document in supporting a payment to the Contractor, they must include the date and initials of the person making the entry into the project ledger, the person verifying the entry, and the six-digit entry number.
4. Each pay quantity identified in the field notes should be designated with the corresponding item number and correct item name listed in the contract.
5. It is recommended that the correct field book or loose leaf sheet always be used for the particular kind of work being staked or measured.
6. The degree of accuracy required for computing unit quantities should be consistent with standards established in Section 10-2.1B.
7. It is recommended that sets of field notes and field books be numbered and titled in order to prevent their loss and to aid in tracking payments and their supporting information.

10-1.3 Source Documents

Field notes are one of the many items that might be considered as a Source Document. It is recommended that all field notes, base line notes, centerline notes, and grade books be recorded in bound books. If looseleaf books are to be used, care must be exercised to prevent lost pages.

Notes should be recorded in a manner that is neat, clear, uncrowded, and in sufficient detail so as to be easily understood.

Original entries later determined to be in error must Not be obliterated by erasing, application of correction fluid, taped over, or in the case of computer generated documents, deleted. Instead, a line should be cleanly drawn through the mistaken entry and corrections entered directly above with the date of the correction and the initials of the person making the change. This is very important, as erasures, or deletions will destroy the legal standing of notes. When revisions require abandonment of a considerable portion of notes, they shall be crossed out and a cross reference made of the book and page number where the revised notes may be found.

Each Final Records book should be labeled and contain a title page using DOT Form 422-009 and 422-009B. Each book is to be numbered and a table of contents included on the first page following each book's title sheet. It is essential that original field notes and documents be carefully organized, kept, recorded, and maintained in safe filing facilities during the active stage of a project. These documents should be transferred to safe, adequate, and recoverable storage after the contract is completed. At all times, when not in use, all source documents, reports, survey notes, etc., should be kept in fire resistant files where possible. Additional information on source documents can also be found in Section 10-4.2.

10-2 Measurement of Items of Work

10-2.1 General

10-2.1A Introduction

It is essential that the Project Engineer ensure proper controls are exercised when measuring items of work. The Project Engineer should also ensure that payments are not made for any item that cannot be substantiated by the project records regardless of the work's stage of completion. Items that are paid on the basis of weight or truck volume require measurement of the quantities involved, evidence for receipt of the materials, and documentation for both of these operations through the use of item quantity tickets or other delivery records.

10-2.1B Quantity Details

The number of significant decimal places to which quantities should be measured and/or computed varies with the value or unit bid price of the respective items involved. Unless advised otherwise, the Project Engineer should use the following guidelines.

Bid Price	Significant Decimal Per Unit
Less than \$10 per unit	1.
From \$10 to \$100 per unit	0.1
Over \$100 per unit	0.01

Quite often, good practice would dictate that the various parts of a particular quantity be calculated to a higher significant decimal place or in some other unit, a unit other than that used for payment, and then be converted to the payment unit in the summation. Good judgment should be used in selecting when to actually apply rounding to the quantity. In general, it is considered proper to apply rounding at the first summation of each isolated part. For example, at the summation of a day's item quantity tickets the quantity to be recorded should be rounded to the proper significant decimal place and the rounded quantity recorded into the project ledger.

10-2.1C Item Quantity Ticket

A three-part Item Quantity Ticket (IQT) DOT Form 422-021 has been developed for use as a tool in documenting the many items that are paid for on the basis of quantities of materials or other bid item services that are received at the project site. An example of an IQT can be found in [Figure 10-1](#). When using either the State provided IQT or Contractor provided IQT, the Project Engineer should ensure that the items noted below, identified as minimum required information for documenting receipt of materials and for supporting payment of those materials, are completely filled out on each IQT utilized. Additional information may be added to the item quantity tickets at the option of the project office. However, this additional information would be intended only as a convenience for project staff in their work monitoring material use. The Project Engineer should also ensure that the carrier transporting each load of material or the person responsible for the particular contract bid item or service is issued an item quantity ticket for each delivery of the material or service to the jobsite.

In lieu of using DOT Form 422-021, tickets may also be furnished by the Contractor, commercial scale companies, or suppliers at commercial plants or material sources.

These tickets are sometimes electronically produced. In some instances these tickets can be programmed in advance of the hauling to accurately print, on each ticket, the minimum required information as noted below. While this can be done by the Contractor in an effort to cooperate with the project office towards successful completion of the project, the Project Engineer must ultimately ensure that the minimum required information is accurately noted on each ticket.

The following minimum required information is to be recorded on each State-provided IQT, Contractor provided IQT, or IQT's produced by fully automated scales:

- Contract Number
- Date
- Contract Unit Bid Item No.
- Initials of person accepting the item on the jobsite
- Unit of measure
- Identification of hauling vehicle, as appropriate
- Record of the gross, tare, and net weights. If the scale has a tare beam so that the net weight can be read directly or when using batch plants or storage silos with direct reading scales, only the net weight need be recorded. If the unit of measurement is cubic meters, cubic yards, hours, etc. only the net amount need be recorded.

In addition to this minimum required information, there are a number of other items that could also be included on the item quantity tickets. While this information is helpful to others who may also be using these same tickets for monitoring materials, materials placement, or other issues, this additional information is not required for documentation supporting payment for materials received. Placing this information on item quantity tickets can be helpful, but is solely at the option of the project office. Some of these optional items may include:

- The Group, Station, Mile, or Kilometer of material placement or use can be noted to help identify material's location on the jobsite. It can also be used to help identify group payment.
- Contractor/Subcontractor completing the work represented by the ticket noted
- Cumulative totals for the day
- Pit number identifying the source of the material
- Time weighed and initials of the person issuing the ticket
- Time materials or services are received on the jobsite
- Description of the material that matches the unit bid item name
- Ticket serial number, etc.

A representative of WSDOT should be assigned as a receiver at the delivery site or at the site where the item is to be placed. The receiver should collect the tickets from the carrier upon delivery of the ticketed material, record any required or additional information on the ticket as necessary, and retain the original copy for payment. When using Contractor or State provided multiple part tickets, the Contractor's representative should be provided the copy marked "Contractor" either upon delivery or at the end of each day's operation.

For materials or services that are not paid for by weight, the receiver should complete the ticket at the point of delivery. The appropriate items identifying the material or bid item service, the quantity, and its placement should then be filled in.

Payment and documentation of materials received should be based on the original tickets received at the project site. Any tickets that may be identified as missing should be reconciled immediately with the Contractor so they will not be in contention for payment at a later date. Unless the Project Engineer decides otherwise, when using the State provided item quantity tickets it is not necessary to retain the goldenrod or “Book” copy. Once the Contractor has been provided with the green copy of the ticket marked “Contractor” and the white copy of the ticket marked “Original” has been reconciled and approved for payment, the goldenrod or “Book” copy may be discarded.

10-2.1D Conversion Factors

Where the plans require a weight measurement for minor items of construction, the Contractor may request permission to convert volume to weight. When approved by the Engineer, an agreed factor may be used to make this conversion and volume may be used to calculate the corresponding weight for payment. The provisions for this conversion factor can be found in *Standard Specifications for Road, Bridge, and Municipal Construction* M 41-10 Section 1-09.2(5). When using a conversion factor, the Project Engineer must perform adequate tests and retain supporting data establishing the conversion factor or new price quotation. A letter of agreement or change order for the conversion factor is needed.

10-2.2 Items Measured by Weight

10-2.2A General Instructions

All materials paid on the basis of weight are to be weighed in accordance with the provisions of the *Standard Specifications*. When commercial scales are used a representative of WSDOT will periodically observe the weighing operation and scale check procedures. These periodic reviews are to be unscheduled and not less than twice a week. Both WSDOT and commercial scale operators will record the necessary weights and information on Item Quantity Tickets in accordance with Section 10-2.1C.

In accordance with *Standard Specifications* Section 1-09.2(1), WSDOT and commercial scale operators will verify the scales in accordance with *Standard Specifications* Section 1-09.2(5). Several times each day the operator will also make certain the scale balances and returns to zero when the load is removed. The results of scale testing conducted by both WSDOT and commercial scale operators including determination of scale variance, AM/PM tare weights where needed, and intermittent scale balancing are to be recorded for each day’s production on the Scaleman’s Daily Report DOT Form 422-027. These reports representing each day’s production are to be submitted to the engineer daily.

When platform scales are used the scale platform shall be of sufficient length to weigh the entire hauling vehicle or combination of connected vehicles at one time. When needed for gross weight determinations, tare weights for each truck are to be taken at least twice daily and recorded on a tare sheet, scaleperson’s diary, or shown on the Scaleman’s Daily Report. When using a tare beam scale, the tare weight for each individual truck is to be set on the beam at the time of weighing.

For most materials, material and tare weights will be measured to the nearest 100 pounds. In determining quantities for materials produced from batch type mixing plants, where individual components of each batch of materials are weighed before mixing, the batch weights are acceptable for measurement and payment.

When placing surfacing materials, gravel backfill, riprap, and other similar materials the preferred method for acceptance of quantity is by Item Quantity Tickets. However, where it is reasonably certain that no diversion or substitution of materials can occur, or where an alternative method of calculating the approximate quantity received can be devised, the requirement for issuing and receiving a weight ticket for each individual truckload can be waived. The Project Engineer must approve the use of this procedure in advance of the hauling operation and document to the file the reasons for doing so. In making this decision the Project Engineer should review the risks and the benefit/costs for altering the standard method for receipt of materials. Among other things, this review could include labor savings, the proximity of the scale location to the point at which the materials are to be received, the potential or risk for diversion or substitution of materials, efforts made to mitigate those risks, as well as the methods used to verify the quantities of materials that are received. If an alternate method for receipt of materials is approved it must include provisions for keeping a scale sheet where the weights for each load are recorded along with the other information normally required for an Item Quantity Ticket. The method must also include a procedure for validating the quantities indicated by the dispatch record as being received. This might be a tally sheet, maintained at the project site, showing the arrival of each load. Another method might be a calculation of neat-line volume, which could be compared with weighed quantity to disclose a reasonable conversion factor. In any method, an occasional random check of a loaded vehicle will be needed to provide validation of both the weigher and the scale.

10-2.2B Weighing of Small Quantities

It is recognized that there are certain instances involving small quantities of weighed materials where commercial scales are not reasonably available or where the Project Engineer is unable to staff a WSDOT scale operator to weigh materials at a Contractor provided scale. In these instances where materials are received intermittently throughout the day and the quantities amount to less than 200 tons of untreated materials or 100 tons of treated materials per day, the Project Engineer may choose to receive the material on the basis of weights supplied by the Contractor or supplier. The Project Engineer should ensure that an Item Quantity Ticket is filled out completely and signed by the person who is the weigher of the material. A Scaleman's Daily report is not required for the weighing of these small quantities of materials. Under these conditions, the acceptance of the material will depend entirely on the judgment of the receiver. The receiver of the material should observe the load to ensure the quantity of material shown on the weight ticket appears to be reasonable. The receiver should note this observation in the remarks section on the weight ticket supplied by the Contractor.

The Project Engineer should use their professional judgment in limiting the use of Contractor provided weights. This provision is provided to the engineer so that effective scheduling of WSDOT forces can be made in order to meet other project inspection demands. Every effort should be made to use either a WSDOT or a commercial scale operator while limiting the use of this provision to only those instances that require this action.

10-2.2C Weighing Equipment

Scales for the weighing of natural, manufactured, or processed highway and bridge construction materials that are required to be proportioned or measured and paid for by weight, are to be furnished, erected, and maintained by the Contractor, or be permanently installed, certified, commercial scales. All weighing equipment and scale operations must meet the specific requirements noted in *Standard Specifications* Section 1-09.2.

10-2.3 Items Measured by Volume

10-2.3A Truck Measure

Except as noted below, when materials are measured and paid on the basis of volume delivered in trucks, the Project Engineer should ensure that a receiver is assigned at the point of delivery to issue or receive load tickets and to make periodic computations of yield where applicable.

Item Quantity Tickets (see Section 10-2.1C) should be used for recording the volume of materials paid on the basis of truck measure. The tickets should include all information previously noted as required for materials measured by weight, with the substitution of measured volume in place of measured weight to be shown as the quantity received.

Surfacing Material, Gravel, Topsoil, Etc.

In lieu of issuing individual load tickets when surfacing materials, gravel backfill, top soil, etc., are measured and paid for on the basis of volume delivered in trucks, it is acceptable for the Project Engineer to maintain a field book record showing a recording for each delivery, issuing one ticket for the total amount delivered for each item at the end of each work shift. The field book record will show the truck number, time of delivery, and volume for each load. The ticket issued shall show all pertinent data including reference to the field book number.

In documenting the size of loads received, ensure the following procedures are followed:

1. The volume of the truck box of each hauling conveyance will be calculated and recorded for final records to the nearest 0.1 cubic yard based on a struck or water level height for the leveled load. The volume may be calculated by using a measurement of the truck box (either from the interior or exterior of the bed) using any standard measurement method. This measurement may be performed by a representative of the Engineer or by the Contractor, as verified by the Engineer. The calculation may also be made based upon verified Manufacturer's truck bed dimensions supplied to the Contractor by the Manufacturer, or by filling the truck bed and measuring the volume of a full load after it is dumped. Although State law requires 6 in of freeboard on loaded aggregate material trucks, the actual quantity hauled or calculated may exceed the measured capacity. This is due to the normal practice of heaping material in the center of the load.

2. The material receiver should have sufficient loads leveled at the point of delivery in order to judge consistency in the quantity being hauled.
3. Load volume will be recorded to the nearest cubic yard for pay purposes using the volume computed in part (1) above. If the Inspector questions whether a truck is fully loaded, the load will be leveled. If the vehicle is not fully loaded, the Inspector will measure and document the actual load to the nearest cubic yard.

Water

In order to document the amount of water delivered to the project, a Water Delivery Record DOT Form 422-024) should be maintained showing all pertinent information including time, volume, location of delivery for each load, contract number, and truck number. If the driver maintains the Water Delivery Record, it should be signed by the truck driver or the Contractor and initialed by the Inspector. Daily spot checks should also be completed verifying the quantities being delivered. When performed, random spot checks should be noted on the Delivery Record itself. At the end of each work shift an Item Quantity Ticket should be issued to cover the water delivered to the project that day. The Water Delivery Record should be maintained in a manner that allows it to be easily referenced to the corresponding WSDOT copy of the Item Quantity Ticket used for payment.

The Project Engineer should ensure that the capacity of each water truck is determined by measuring or weighing, and is recorded in the project records. It is recommended that copies of the truck identification and capacity records be attached to the water ticket book to ensure the information is available to the field Inspector.

When water meters are installed at the discharge point for hydrants or water trucks, the Inspector should record the meter reading at the beginning and end of each shift and issue a ticket for the net quantity of water placed in accordance with contract specifications for the item. The Project Engineer should also ensure that the meters are checked for accuracy and that the checks are recorded in support of payment documentation.

10-2.3B Cross-Sections

Many excavation items are measured by field cross sections and/or template notes. The Project Engineer should ensure that the project is staked and measured accurately in accordance with guidance noted in the “Basic Surveying” manual and utilizing sound engineering practices. As a minimum, the field notes should show the date the data was taken, weather, Crewmembers, and their assigned duties. When re measurements are required, it is important that the same base line and elevation datum be used.

Documentation of volume measurement for excavation areas which require original and final measurements, should contain cross references between the original notes and the re-measure notes. Also references should be made to the transit notes and elevation datum for that excavation area.

10-2.3C Neat Line Measurement

Some items, such as concrete volumes, are paid based on dimensions detailed in the plans. For these items, the quantities need to be calculated and the calculations made a part of the record. If additional sketches or dimensions are also required in order to compute the quantities, these should be included in the records as well.

Other items, such as structure excavation and gravel backfill, are measured for payment using neat line volumes based on plan dimensions as a maximum limit. These items require field measurement to determine pay quantities that may be less than neat line maximums. Many times, sketches with the dimensions shown are desirable. The dimensions should show the limits of the actual work, except when these limits exceed the maximum allowed for payment, then the dimensions should be limited to the maximum allowed.

10-2.4 Items Measured by Hour/Day

When contract items are to be measured and paid for on an hourly or daily basis, the Project Engineer is to ensure that a WSDOT representative is assigned to verify the hours or days of payment, and issue Item Quantity Tickets or other verified field note records. At least one ticket should be issued at the end of each work shift or working period. The Project Engineer should ensure that tickets show all pertinent information for the item involved. Some items measured by the hour may be eligible for payment during non-shift hours; for example, a 24-hour flashing arrow used for lane closures or detours in effect during nonworking hours. In these situations, an Item Quantity Ticket for one shift may show more hours for payment than are actually available within the shift.

In order to ensure agreement on the hours or days of work performed, Item Quantity Tickets for items of work measured by the hour or by the day should be initialed by the Inspector and signed by the Contractor's representative on a daily basis.

10-2.5 Items Measured by Lump Sum

For items that are to be paid on a Lump Sum basis, the project records should identify the item, the date that the material was received, and/or the date work was accomplished. This can be accomplished by ensuring that a field note record is made showing the dates work was performed, has the initial of the Inspector, and shows the work to be 100 percent complete. A field note should also be used to show any estimated portions for progress payment of a Lump Sum amount prior to 100 percent completion. It must include the basis on which any quantities used for progress estimate payments were calculated.

10-2.6 Items Measured by Other Units

10-2.6A Linear Measurement

Records for materials measured by length should show the length measured, initials of the persons making the measurements, and the date measured.

For features, such as guard rail and barrier, that are paid by length and which contain repetitive elements or units, the length may be “measured” by calculation. In other words, if the length of a single element is known, then the number of elements may be counted and multiplied by that amount and a total “measured” length determined. Care should be taken to account for odd length elements, such as end sections and custom-fabricated pieces, and for areas where elements overlap or gaps exist.

Records for measurement should also include the beginning and ending stations of the work, recorded by the Inspector or person making the measurement, tying the work to its location on the project. The dates of construction should also be recorded.

10-2.6B Area Measurement

Records for materials or work measured by area should show the length and width measured or otherwise determined, initials of the persons making the measurements, and the date measured. In many instances a sketch of the area with the measurements would be very helpful in showing the computed area. The dates of construction should also be recorded.

10-2.6C Per Each Measurement

Records for materials or work measured per each unit should provide a listing showing the location of each item constructed, dates constructed, and initials of the Inspector or person measuring the item.

10-2.7 Items Bid at “No Charge”

Normal documentation procedures are not required for items bid at “no charge” if the items do not physically constitute a portion of the finished work. However, notes in the diary or Inspector’s Daily Report are necessary to show when the work was done. Examples of these items might include water, haul, and embankment compaction.

For items bid at “no charge” which physically constitute a portion of the finished work, normal documentation procedures, such as Item Quantity Tickets or cross sections, are required to show how the item was incorporated into the project. Examples of these items might include layering materials and prime coat aggregate.

10-3 Final Records for Projects Constructed by Contract

10-3.1 Records

These records consist of field books, Inspector's record of field tests, project and Inspector's diaries, Inspector's Daily Reports, invoices, weigh bills, contaminated material disposal bills, Item Quantity Tickets, receiving reports, project ledgers, mass diagrams, plotted cross-sections, computer listings, working profiles, and any other documents that could be considered a basis of payment for work performed or materials furnished. All records that are created during the administration of a construction project can be placed in one of two categories, *Permanent Records*, records kept by the Headquarters and State Archives for future reference, and *Temporary Records*, records kept by the Region for a limited period of time after which they are discarded by the Region.

10-3.1A Permanent Records

The Region should ensure that those records designated as *Permanent Records*, records that are to be permanently filed, are assembled as a portion of the overall project final records DOT Form 422-012 should be completed and affixed to each final record book when submitted with the files to Engineering Records for filing. The address for Engineering Records may be found on the most current version of DOT Form 722-025. All final records sent to Engineering Records for filing will be kept permanently as the Permanent Final Records for the completed project.

All final record books prepared for *Permanent Final Records* are to be numbered as outlined below.

Permanent Records consist of the following:

Records provided by Headquarters:

- Contracts
- Change Orders
- Contract Estimate Payments

Records provided by the project office in books numbered as follows:

1. Final Records Book No. 1 (See Section 10-3.5 for requirements)
2. Project Engineer's Diaries (Using DOT Form 422-014 or 422-004)
3. Inspector's Daily Reports
4. Traffic Surveillance and Contractor's Daily Report of Traffic Control Summary and Log
5. Pile Driving Records
6. Post Tensioning Records
7. Contaminated Materials Disposal Bills

8. Miscellaneous Records

- Full size (22 inch × 34 inch) electronic or paper As-Built Plans and Completed Contractor Provided Shop Drawings. Offices that chose to submit paper As-Built Plans and Shop Drawings should submit them in rolls (not in books/not bound)

10-3.1B Temporary Final Records

All records designated as *Temporary Final Records* are to be retained within the Region for a period of three years after which they may be destroyed. If a claim, lawsuit, or other circumstance is found to be pending at the end of this three year period, the Region should further retain those pertinent records until the issues have been resolved. The Region should ensure that those records designated as *Temporary Final Records* are also assembled as a portion of the overall project final records. The date for the beginning of this three-year retention period for State-funded projects is the Acceptance Date; the date the State Construction Engineer signs the Final Contract Voucher Certification accepting the project. If Federal funds are involved in the project, the date for the beginning of this three-year retention period is the date that FHWA accepts the final payment voucher. The Headquarters Accounting and Financial Services Division will send a Retention of Records on Federal Aid Projects letter to the Region that specifically indicates the retention period.

The following list contains some of the items that may be kept as *Temporary Final Records*. This listing is not a complete listing of all the possible items that could be grouped into this category. In short, *Temporary Final Records* consist of all project records that are not kept as *Permanent Final Records*. If *Temporary Final Records* are kept in numbered books then, in order to eliminate confusion with *Permanent Final Records*, these books are to be numbered consecutively beginning with Book Number 9. Examples of *Temporary Final Records* include:

- Item Quantity Tickets
- Project Engineer's Copy of Estimates
- Project Correspondence
- The original Project Personnel and Signature Listing
- Inspector's Record of Field Tests
- Scaleman's Diary and Scale Checks
- Scale Test Reports
- Concrete Pour Records
- Record of Field Audits
- Approval of Source of Materials
- Quantity Computation Sheets
- Surfacing Depth Check Records
- Copies of Shop Drawings
- Contractor's Payrolls (Federal Aid Projects)
- FHWA Form 1589 (ARRA Projects)
- Source document files
- Alignment (Transit) Book

- Grade Book
- Cross-Section Notes
- Drainage Notes
- Photographs
- Mass Diagrams
- Computer Summary Sheets
- Computer Listings
- Falsework and Form Plans
- Daily Report of Force Account Worked
- Quarterly Report of Amounts Credited DBE Participation
- Quarterly Report of Amounts Paid MBE/WBE Participants
- Washington State Patrol Field Check list

10-3.1C Electronic Documents Filed With Temporary/Permanent Records

Documents created electronically that do not require an original signature may be kept in an electronic file cabinet during the life of the contract, and if they are not part of the permanent records, they may be placed on a CD and included in the temporary files. No hard copies are necessary.

Documents created electronically that require an original signature and which are to be included in the permanent final records package may be kept in an electronic file cabinet during the life of the contract; however, original hard copies must be provided as part of the permanent records package. CDs are not acceptable.

Documents created electronically that require an original signature and which are not part of the permanent final records package may be kept in an electronic file cabinet during the life of the contract, placed on a CD for the temporary files and the original hard copies destroyed at contract Acceptance or at the end of the three-year retention period.

10-3.2 Contracts

The original signed contract documents are maintained in the Contract Processing Section of the State Accounting Services Office during the active stage of a contract. After final payment has been made, Accounting sends these documents to Records Services for permanent filing.

10-3.3 Change Orders

Approved change orders are a legal part of the contract documents and are treated just like the original contract documents. For a complete discussion of change orders, see Section SS 1-04.4, Changes.

10-3.4 Contract Estimate Payments

Documentation of contract estimate payments is facilitated by use of the electronic Contract Administration and Payment System (CAPS) which includes both the monthly progress estimates and the final estimate. For a complete discussion of the contract estimate process, see Section [SS 1-09.9, Payments](#). Specific information on the final estimate package is found in Section [SS 1-09.9, Final Estimates](#). After final payment has been made, Accounting sends these documents to Records Services for permanent filing.

10-3.5 Final Record Book No. 1

Final Record Book No. 1 is the first book of the *Permanent Final Records* for a construction contract. It contains indices to the records that have been compiled for both *Permanent and Temporary Final Records*. It also identifies the people who worked on the project and provides specific summary information. Final Record Book No. 1 is to be signed by the Regional Administrator or designee. Final Record Book No. 1 should contain a title sheet DOT Form 422-009) and should be assembled with a semi rigid, water resistant cover.

The following records are to be incorporated into Final Record Book No. 1 in the order as arranged below. No other material is to be included in this book.

1. **Index** –There are two indices referred to within Final Record Book No. 1. The first is an index or detailed listing showing the various sections of Final Record Book No. 1 itself. An example of an index for Final Record Book No. 1 can be found in [Figure 10-2](#). The second index is actually the first section of the book. It provides a detailed listing of all records that have been kept and assembled for the project, including both *Permanent Records* and *Temporary Records*. An example of this listing or index for Section 1 can be found in [Figure 10-3](#).
2. **WSDOT Personnel List** – Section 2 of Final Record Book No. 1 contains a copy of the listing of all WSDOT personnel assigned to the project and their classifications. Each person noted should place their identifying signature and initials after their name on the listing in the same manner as it appears in other final record documents. The project office may use Project Personnel Signature Listing DOT Form 422-001 for this purpose.
3. **Comparison of Quantities** – Section 3 of Final Record Book No. 1 contains this CAPS report prepared from the Final Estimate.
4. **Final Estimate Sheets** – Section 4 of Final Record Book No. 1 contains a copy of the Final Contract Voucher Certification.
5. **Contract Estimate Payment Totals** – Section 5 of Final Record Book No.1 contains a copy of this report obtained from the final estimate.
6. **Affidavit of Wages Paid** – Section 6 of Final Records Book No. 1 contains all Affidavit of Wages Paid received from the Contractor, subcontractors, lower tier subcontractors or suppliers performing work or providing certain products to the project.

7. **Change Orders** – Section 7 of Final Records Book No. 1 contains a listing of all Change Orders prepared for the completed project.
8. **Record of Construction Materials** – Section 8 of Final Records Book No. 1 contains a tabulation showing the source of all construction materials. If material of a certain type was obtained from two or more sources, the station limits or parts of a structure relative to each source should be shown. A copy of the maintained and completed Materials Tracking Program (MTP) Report per *Construction Manual* Section 9-1.2D shall be included.

When preparing the individual Final Record Books, other than Book No. 1, it is not necessary to label pages within each book. Where it is appropriate, a table of contents may be added to identify sections within a particular book.

10-3.6 *Diary Records*

Diary records consist of both the Project Diary(s) and the Inspector's Daily Report (IDR). Together they should provide a complete narrative picture of the project, covering both the normal work processes and anything unusual that might have occurred on the project. Diary records are to be included in the project's *Permanent Final Records*.

10-3.6A **Project Engineer's Diary**

A complete, well-kept Project Diary is a valuable administrative tool. It is a collection point for many of the project's pertinent facts arranged in any chronological order. It may show how questions were answered, how problems were solved, progress of the work, and unusual conditions pertaining to working days charged. It can provide data for analysis of both claims and requests for extensions of contract time. It is also available for reference long after the work is completed.

The Project Engineer should ensure that a Project Diary is kept current for every construction contract. It is recommended that the Project Diary be maintained primarily by the Project Engineer. However this responsibility may be delegated to the assistant Project Engineer or to the chief field Inspector. At a minimum, one Construction Project Diary is required for each project. The Project Diary should be used to record all matters of importance which are not covered by other routine reports or may contain a record of routine matters if the circumstances are unusual, conferences with the Contractor or the Contractor's field representative, agreements made, special notes regarding equipment or organization, labor conditions, weather or other causes for delays if of any consequence, and any other matters that might have a bearing on the completion of the project. To avoid keeping separate diaries and to avoid duplication, the Project Engineer and the principal assistant(s) may make entries in the same diary. Each diary entry should include the date of the entry and be followed by a signature or initials on the line immediately under the entry to identify the writer. The Project Engineer is responsible for ensuring the existence of a Construction Project Diary for each project.

10-3.6B Inspector's Daily Report

The Inspector's Daily Report (IDR) is a record of operations for a specific type of work on the project, such as surfacing, grading, paving, bridge, etc., which is being inspected by the writer. Page one of the IDR is a structured sheet of questions addressing identification of work operations and the associated labor and equipment being used to accomplish the work. This page should be filled out completely for all questions that pertain to the specific type of work activity being inspected. Page two is a narrative portion that should include a notation of any orders given or received, discussions with the Contractor, unusual conditions, delays in the operations, and the presence of any visitors. If an operation is being inspected which results in the partial payment of an item, the item should be identified along with the basis for calculating the partial payment. It is also of value to note the Inspector or Engineer's activities in the daily report.

The Project Engineer should ensure that the Inspector's Daily Report DOT Form 422-004, 422-004A, and 422-004B) are utilized for completing this daily report of activities. Each page of these forms is printed separately in a tablet in duplicate on NCR paper. Both types of tablets have the instructions printed on the tablet cover. The original copy is to be submitted to the Project Engineer each day.

If necessary, the Project Engineer should add comments or remarks on the original copies of the Inspector's Daily Reports to clarify the report. The duplicate copy of the report should remain in the book for the Inspector's immediate information and may be discarded when it is no longer useful for that purpose. The original copies of the Inspector's Daily Report should be included in the Final Records for permanent retention.

IDR Content

The IDR is intended to document communication, progress of work, Contractor workforce/equipment and materials sampling/acceptance. Keeping this in mind, the following are general rules for content of IDRs:

1. Remember that the IDR is part of the public record and may be called upon in case of litigation. The level of detail and professionalism exhibited may be of great benefit.
2. Do not make (or document) derogatory comments, as this is unprofessional behavior, and may be used to demonstrate that the inspector was hostile toward the Contractor and did not behave in a manner consistent with good faith.
3. All statements must be based on facts and requirements should reference the contract requirements.
4. All entries should be clear, neat, correctly spelled, and most importantly, legible.
5. Summarize key points of any discussion of work activities with the Contractor.
6. Be specific when recording information about work activities. Use drainage codes, exact bid item numbers, line and station limits, etc. Avoid referencing a co-worker's IDR, but if doing so, attach a copy.

7. Be specific when recording deliveries of materials to the project. Use bid item numbers, drainage codes, RAM number, etc. Record heat numbers, lot numbers, “Approved For Shipment” and “WSDOT Inspected” tags or stamps, etc. Using the IDR as materials documentation is acceptable. If used as documentation for acceptance, a copy of the IDR, with the appropriate items high-lighted, should be included with the materials documentation file.
8. Daily Equipment Status Reports should be complete and current.
 - Record all equipment, including any trailer or transport used to deliver equipment to the project.
 - Record the make, model and year of equipment. Request an equipment list from the Contractor and keep it updated. Photos make a good record of condition and configuration.
 - Record the exact bid item on which the equipment was working.
 - Understand the difference between down, idle, and standby time and use the correct term on the report.
 - Record crew composition (once a week or whenever it changes) along with the hours worked where practicable. This can be done on a separate IDR or in the narrative portion (page 2).
9. Record a chronology of events throughout the day, as they occur. Taking notes and transferring them to the IDR will work, but duplicates work and introduces an opportunity for error.
10. Record any potential delay, in as much detail as possible. Include start and end time, who was notified of the issue and when; along with any mitigating action by the Inspector or the Contractor.
11. Record every time the Contractor disagrees with a determination or protests a decision by the Engineer, and remind the Contractor to follow the process for protest as defined in the [Standard Specifications](#).

Subject to the following, it is acceptable for inspectors to produce IDR’s by recording information onto a recording device while at the job site for later transcription to a paper format.

1. All information required on the regular handwritten form must appear on the typed version.
2. The Inspector must read and sign the typed document. (It is desirable for this to take place within 24 to 48 hours of the reporting period. However, it is recognized that certain situations may not permit this time frame and therefore it is not mandatory.)
3. The Inspector may make and initial hand corrections to the typed document.

Please note that inspectors who use lap top computers can also produce electronic versions of the IDR document. The electronically produced document must be complete, including the Inspector identification block (the old signature block), consistent with the above criteria.

10-3.7 Record of Collisions and Traffic Control

10-3.7A Record of Collisions and Traffic Surveillance

In the past, all Record of Accidents (now known as Record of Collisions) received by the Project Engineer's office used to be included as part of the Permanent Records. Since collisions recorded by the WSP are now part of WSDOT's Transportation Data Office records (TDO), there is no need for a project office to keep Record of Collisions in either the Temporary or Final Records. If it is necessary to change traffic control as a result of a collision, the project office only needs to reference the record of collision report in either the Project Engineer's diary or Inspector's Daily Report. The Record of Collisions should only be used during the life of the project to augment decisions on changing traffic control plans during construction. It should be noted that Section SS 1-10, Temporary Traffic Control does not require a collision report be obtained for every collision that may occur within the project limits.

A separate file should also contain the records of traffic control surveillance prepared in accordance with Section SS 1-10, Temporary Traffic Control. Information in this file should be kept current and upon completion of the contract, submitted to Headquarters Engineering Records as a part of the project's *Permanent Final Records*. When the Washington State Patrol provides the Project Engineer with traffic control assistance they also provide the engineer with a WSP Traffic Control Checklist DOT Form 421-045. While this form is a part of the traffic control operations, it can be kept separately and made part of the Temporary Final Records.

10-3.7B Contractor's Daily Report of Traffic Control

The Contractor's Daily Report of Traffic Control DOT Form 421-040A and 421-040B), completed by the Contractor's Traffic Control Supervisor, should also be included as part of the project's *Permanent Final Records*. The Contractor's Daily Report of Traffic Control is discussed in more detail in Section SS 1-10, Temporary Traffic Control.

10-3.8 Pile Driving Records

The Pile Driving Record Book DOT Form 450-004 or Pile Driving Log DOT Form 450-004A should be included and made a part of the *Permanent Final Records*. The requirements for pile driving and pile driving records are further detailed in Chapter 6.

10-3.9 Post Tensioning Records

The Post Tensioning Record Book DOT Form 450-005 should be included and made a part of the *Permanent Final Records*. The requirements for post tensioning and post tensioning records are further detailed in Chapter 6.

10-3.10 **Miscellaneous Records**

Miscellaneous Records are, in general, optional records and may be included in the permanent records at the Project Engineer's discretion. This part of the records is intended for items that might be considered of added importance. This might include photographs of special features or construction methods, information regarding opening to traffic, dedication activities, or other documentation of particular importance. Placing these in the *Permanent Final Records* will make them a matter of permanent record where they will be retained for future reference.

Records of environmental contamination issues are not optional and should be included in Miscellaneous Records, except records of disposal of contaminated materials which are placed in Book 7.

10-3.11 **As-Built Plans and Shop Drawings**

As-Built Plans are a record of changes made to the originally intended physical product of the contract. As-Built drawings should reflect the same degree of detail as the original plan drawings. As-Built Plans are necessary as a way of preserving the historical detail of what occurred on the project. As-Built Plans can also be used as a basis to plan and design future projects in the same location and to make repairs to damaged structural components or other non-functioning facilities. In addition, state law requires that owners of "underground facilities" be able to locate these facilities within 24 inches of the outside dimensions. As-Built Plans offer a convenient means for recording these facilities.

10-3.11A **Preparing As-Built Plans**

Within two weeks after a contract has been awarded, the State Pre-Contract Administration Office or Printing Services Office will furnish the Region Office with one set of full size (22 inches × 34 inches) black line prints of the contract plans which will be marked "For As Constructed Plans Only." These plans shall be used by the Project Engineer solely for the purpose of preparing "As-Built Plans". All corrections, revisions, and additional sketches, necessary to depict the work as it was constructed should be shown on these plans. All As-Built plans must meet the same requirements no matter how they are produced. Corrections are to be made by lining out quantities or features that were changed during construction, then noting the correction or change in red ink. These corrections and revisions are to be noted on the plans in a manner that results in neat and legible sheets. A red pen that writes sharp, clear, and dark with a medium width line shall be used to mark these corrections. If desired, the changes may be further identified by placing them in a "cloud" symbol. Fine lined pens do not reproduce well when scanned and are not to be used. If electronic versions of these plans are available, corrections may be made on these plans, but must be noted electronically and plotted in a manner that produces these same results (i.e.: changes shown in red). If plan sheets from change orders are intended to be used as part of the As-Built plans, the changes should be made in red. Special care must be taken to ensure that changes in construction are noted on all contract plan sheets affected by the change. For instance, the change in location of a catch basin or manhole may affect the location listed in the structure note sheet, the drainage plan view sheet, and the drainage profile sheet.

As-Built plans for Design-Build contracts must meet the same requirements as any other set of As-Built plans, unless specifically stated otherwise in the contract documents. This is to include formatting, file size, and naming conventions.

If concrete foundations are partially removed, the remaining portions of the foundations should be shown on the As-Built Plans. It is not required that the As-Built, Summary of Quantities sheets be revised to reflect final estimate quantities. Summary of Quantity sheets are to be marked identifying them as original plan quantities which are shown as preliminary estimates of work. It should also be noted that final As-Built quantities for individual unit bid items can be obtained from the final CAPS ledger for the project.

In order to help identify significant changes in work location or significant changes in the work completed at a particular location, the Quantity Tabulation sheets must be updated to show the actual physical feature items or the locations of installations where significant changes were made. Types of significant changes may include revisions to guardrail, guardrail termini, post types, anchors or anchor types, revisions to monuments, etc. The intent is to show what significant changes to the planned work were made. Except for significant changes to quantities of items used or items added at a particular installation, it is not necessary to update item quantities for actual quantities used. Final As-Built quantities for the individual unit bid items can be more accurately obtained from the final CAPS ledger for the project.

In order to help identify significant changes in work location or the significant changes in the structure work completed at a particular location, the Structure Note sheets must be updated to show the actual physical feature items or the locations of installations where these significant changes were made. Types of significant changes may include structure notes that were added or revised, pipe size and types that were changed, revised locations for catch basins, manholes, etc. The intent is to show what significant changes to the planned work were made. Except for significant changes to quantities of items used or items added at a particular installation, it is not necessary to update item quantities for actual quantities used. Final As-Built quantities for the individual unit bid items involved can be more accurately obtained from the final CAPS ledger for the project.

Correction tape may only be used to complete corrections or revisions made to the Quantity Tabulation and Structure Note sheets. Correction tape is not to be used for noting corrections on any other plan sheet of the As-Built plans. If electronic versions of these sheets are available, corrections noted electronically that clearly depict that a change has been made and plotted in a manner that produces these same results, is acceptable.

In addition to the requirements outlined above for As-Constructed or As-Built contract plans, the [Standard Specifications](#) also require that the Contractor furnish the Engineer with original reproducible tracings or drawings suitable for scanning or for use in correcting contract plans for; shop drawings, schematic circuit drawings etc. for Illumination, Traffic Signal Systems, and Electrical for shop drawings, including approved revisions for prestressed structural elements and all other structural steel components fabricated from shop plans. Specific requirements for these plans are outlined in [Standard Specifications](#) Section 6-02.3(26)A, 6-03.3(7), 8-03.3(10), and 8-20.3(17).

10-3.11A(1) Requirements for Submitting Paper As-Built Plans

Upon project completion, all “As-Built” plans are to be arranged in numerical sequence, including a cover sheet using DOT Form 722-025 (use only the most current version of the form which may be downloaded from the Forms Management web page), and submitted to the Headquarters Engineering Records office, where they will become a part of the project *Permanent Final Records*. As-Built plans are being scanned to the Oracle Content Management System by Records Management Imaging Services (RMIS). In order to achieve consistency, each Region shall:

- Submit as-built plan sheets with latest version of DOT Form 722-025 attached.
- Submit full sized plan sheets only.
- Make corrections in red.
- Submit any and all shop drawings with the roll(s) of as-built plans (not in books/not bound).

Once the scanning process is completed, Engineering Records will recycle (shred) the submitted as-built plans.

10-3.11A(2) Requirements for Submitting Electronic As-Built Plans

As-built Plans and Shop Drawings can be electronically transferred from a CAD program as pdf files into the designated download site shown below. For each contract that a region submits electronically, a region staff member must be responsible for uploading and verifying all electronically transferred As-Built content. The staff member will also be responsible for informing HQ Engineering Records by email at recimages@wsdot.wa.gov that the plans have been placed on the download site. The staff member will wait for an email confirmation that HQ Engineering Records has received and processed the electronic plans into Oracle before the region staff member can delete the region’s copy of the electronic As-Built.

Format – PDF (non-editable)

Dpi – 300

Size – 22 in × 34 in (full size plan sheets)

As-built Plans – Mark each sheet with “FOR AS-CONSTRUCTED PLANS ONLY”. This mark can either be a grey watermark applied to each sheet or stamped in red to each sheet.

As-built Sheet Contract Numbers – Each sheet should have the contract number applied, for example, “1234”.

Naming Convention – Each pdf document must be named using the contract number, for example, “001234.pdf”. If the contract is large, you would need to break it up in volumes no greater than 50 Mb each. An example of pdf naming with the contract number and volume for volume 1 of a 10 volume set would be “001234-Vol-1-of-10.pdf”. An example of pdf naming for volume 10 of a 10 volume set would be “001234-Vol-10-of-10.pdf”.

As-Built Cover Sheet – The plans will be transferred with a completed As-Built Cover Sheet form 722-025. This is what is used to key in the metadata. The form can be filled out electronically in FileMaker Pro, then saved as a pdf and transmitted with the As-Built. The most current As-Built Cover Sheet form 722-025 is located at wwwi.wsdot.wa.gov/fasc/adminservices/forms/default.htm

Design Bid Build P.E. Stamps and Signatures – All appropriate WSDOT P.E. stamps and signatures as shown in awarded contract plans must be shown on As-builts.

Design Builder P.E. Stamps & Signatures – All appropriate Design Builder P.E. stamps and signatures as shown in the Released for Construction (RFC) plans must be shown on the final As-builts.

Transfer Pdf Files – Transfer pdf's to this public folder so that HQ Engineering Records can download them:

\\wsdot.loc\hq\Corporate\Public\DOT\EngineeringRecords\As-Builts

10-3.12 *Final Record Field Notebooks*

Field notebooks are bound books of notes that are used for specific kinds of work such as alignment notes, grading notes, pile driving notes, etc. Field notebooks can also consist of loose leaf field notes that have been bound together into books as well. Records that appear in the field books should not be duplicated and placed in other final record books. The only exception to this rule are copies of Field Note Records with multiple item numbers which may be copied as described in Section 10-4.3.

Field notebooks should be consecutively numbered and each should have the pages numbered beginning with number one. Typing information in the field book is not necessary as hand lettering is preferred. As with other project records, erasure corrections of any kind are not permitted.

The quantities for payment for each item of work in the field notebook shall correspond directly to entries in the CAPS project ledger. Adequate cross-referencing must be made between the field notebook and the project ledger in order to trace item quantities and entries from one to the other.

The field notes should show the initials of the persons or person making them, the date, and the weather conditions if appropriate. In some cases, different stages of work will be noted on the same page, such as staking, measurement, and construction. This would require dates and initials at each stage of work. The notes shall also show the dates that quantities are computed and checked along with the initials of those persons doing the work. In all cases, field notes should be neat and legible and show all necessary information. [Figure 10-4](#) and [10-5](#) show sample field notes and summary for clearing.

Sketches should be shown when necessary to compute a quantity that cannot be computed from the As-Built Plans. Sometimes structure excavation sketches are helpful for determining the pay limits and computing the volume; other sketches are helpful on special details.

Current business practices provide for electronic calculation and storage of all types of detailed surveying data, quantity calculations, etc. Data forms for template input, calculation setup, forms for direct recording of field information, storage media for electronic files, as well as output for the calculated data shall all be treated as an original source documents. See [Section 10-3.13](#) for further direction in regards to electronic data.

Remeasure cross section notes, where a deviation from the established roadway section or slopes has occurred, should be indexed carefully so that they can be identified readily with the original cross section. For convenience of calculation on remeasure, plotted cross sections may also be used.

Structure and drainage notes in the Final Record Field Notebook should show the stationing, distance left or right, angle or skew if applicable, flow line elevation and grade in the case of culverts, drains and ditches, and all information necessary for computation of the pay items involved in the construction. For convenience, it is recommended that all pay quantities pertaining to the construction of items listed on the Structure Notes sheets of the plans, be shown in the field book with structure note number, item number, and quantities, and that cross-references be used to show where the totals were obtained. It should be remembered that quantities must be segregated by group number as shown in the summary of quantities contained in the contract plans.

For use as an example, [Figure 10-6](#) and [10-7](#) show the front and back of a completed field note for the installation of a reinforced concrete sewer pipe.

10-3.13 Electronically Produced Documents

There are many computer applications available for use on a WSDOT highway construction project. Included are programs for earthwork quantities, mass diagrams, basic cut and fill, geometrics, surveying, and for determining structural quantities. In addition, there are many other “stand alone” applications created by individuals in each office for use on personal computers that are also recognized for these kinds of uses.

When electronic computations are used, the output generated must be bound together and identified with a title sheet for final record purposes. These documents are to be made a part of the three-year *Temporary Final Records* retained by the Region as explained in Section 10-3.1. When a computer program is used to calculate quantities for payment, the summary sheets containing the quantities entered in the project ledger must be treated as source documents with all required signatures, dates, ledger entry number, and sufficient cross-referencing to provide a good audit trail.

10-3.14 Photographs

A detailed photographic record is an important part of the project documents. A photographic record could consist of filmed photographs, digital photos, infrared photographs, video, etc. A photographic record should be taken of unusual equipment, construction methods, problem areas, areas of possible controversy, traffic control, and especially conditions in the area of an accident. In addition to these are "before" and "after" views taken from the same vantage point. These are particularly useful in documenting the progress of work. When photographs are to be maintained as a part of the project documents they must be fully identified. Photographs should clearly note when they were taken (date and time), where they were taken, and who took the picture. Although photographs are placed in the category of three-year *Temporary Final Records*, some regions have extended the Region retention period for photographs or have even included them as a part of the project's *Permanent Final Records* for permanent retention.

10-3.15 Pre-Estimate Reports

A pre-estimate report prepares the CAPS system to make an estimate payment. This report provides the opportunity for the project office to preview the estimate and is a means to allow for any corrections or deferments to be made before actual payment. The corrected pre-estimate report used to make a progress payment must be signed by the Project Engineer in order to indicate authorization for payment. The signed pre-estimate report must be retained in the project files, and become a part of the three-year *Temporary Final Records*. For additional information regarding progress payments and the CAPS system, see Section SS 1-09.9, Payments.

10-3.16 Estimate Reports

When a payment is made to the Contractor for a progress or Final Estimate, the project office receives a copy of all the reports that are sent to the Contractor along with the warrant. The Contract Estimate Payment Advice report and the Contract Estimate Payment Totals report should be compared to the pre-estimate report verifying that the amount actually paid is the same as the amount authorized. These estimate reports should be kept with the completed pre-estimate reports in the project files, and become a part of the three-year *Temporary Final Records*. For additional information regarding progress payments and the CAPS system, see Section SS 1-09.9, Payments.

10-4 Project Ledger System

10-4.1 General

The Contract Administration and Payment System (CAPS) provides both an accounting and payment system, while also acting as an information collection system. The CAPS program uses an electronic project ledger that is maintained current throughout the life of the project as the backbone of the system. All items of work on a project for which payment is made must be entered into the electronic project ledger. Items posted in the ledger become the basis for payment and summary record document for dollars paid to the Contractor, quantity of work performed by the Contractor, status reports during the active life of the contract, and are also used as the basis for final reports when the project is completed.

As work is completed on the project, the project office continuously enters those quantities into the ledger, those records then become eligible for payment when the next progress estimate is due. Processing of monthly progress and project final estimates is further detailed in Section SS 1-09.9, Payments. With the ledger entries completed, the application compiles all those records eligible for payment and transfers the data to the payment portion of the CAPS system. Because of the system's ability to store information it is also used as an extensive resource for corporate information regarding the construction program and is used extensively by many other groups throughout WSDOT.

All electronic data incorporated into the CAPS system is stored on either an active file or a history file. These files are both permanently retained and are available for use whenever the need arises. It is not necessary, or intended, that paper copies of the project ledger be retained for final records.

Detailed instructions for the use of the CAPS system can be found in the *CAPS Manual* M 72-89.

A key function of CAPS is to provide a complete accounting trail for every pay item. An accounting trail must be clearly maintained from the original source document through the actual payment to the Contractor. Audits are an effective tool used by both state and federal governments to ensure established procedures and processes are correctly used to maintain the most effective use of the public's funds. It is important that WSDOT maintain sufficient records and documentation to clearly identify an accounting trail that is capable of withstanding the test of audits.

In order to satisfy the requirements of an accounting audit, the following conditions must be met:

- There must be a source document for every ledger entry and vice-versa.
- There must be an orderly filing system to facilitate timely retrieval of source documents.
- Both Interim Progress Estimate and Final Estimate reports must be signed by the Project Engineer.
- The Contract Estimate Payment Advice report must be filed along with its corresponding Progress Estimate report.

10-4.2 Source Documents

Each ledger entry must be supported by a detailed source document, which specifically identifies the type, amount, and location of the work or material that is being entered into CAPS for payment. Source documents used to support these entries are intended to be complete documents, documents that stand alone, and fully support the payment that is being made. If information from other documents is used in the source document, these additional document(s) must be clearly identified in order to complete the audit trail.

Some examples of source documents include Item Quantity Tickets, Field Note Records, Inspector's Estimates, and Force Account sheets. Source documents are the beginning of the audit trail. They show that a WSDOT Inspector has observed and determined the amount of work performed by the Contractor. Also, the source document must show that all calculations have been checked by a second WSDOT employee to ensure they are correct.

Source documents must show four sets of dated initials as follows: (1) the person who does the original calculations, (2) the person who checks the original calculations, (3) the person who enters the payment quantity/amount in the CAPS ledger, and (4) the person who verifies the CAPS ledger entry. In addition, the source document must also show the ledger entry number.

Ledger entries for estimates of monthly progress quantities for grading, lump sum, or other such items must also be supported by a source document. Among other things, the source document must show the method used for determining the estimate. These methods and source documents must lead to an accurate measurement after the item of work has been completed. For lump sum items, the field notes or diaries can show an estimated percentage of work completed. If this percentage method is used, then a brief discussion outlining the basis for the calculation and any assumptions that were used should also be included.

Many project offices use electronic data collectors for surveying work. These data collectors eliminate the need for hand prepared field transit and field level books. Many project offices have also developed or routinely use other electronic programs or applications, which perform calculations and produce a report of the results. In using these applications there can be confusion regarding the need for checking data that has been compiled and reported electronically. In the absence of specific direction, when an electronically produced record or set of notes is used as a source document for a contract payment, the individual who originated the document should be noted. A second person can then check both input and output for both reasonableness and accuracy. This check may range from duplicating the process to verifying the input. Whatever the case may be, it is recommended that the dated initials of those two individuals be on the source document.

10-4.3 Source Document Filing Systems

Basic criteria for a good Source Document Filing System would include ease of set up, ease of use, and the capability to retrieve any specific document in a timely manner. The source document filing system should also be set up to coordinate easily with final records requirements. The filing system described here for source documents is not mandatory. However, it is presented as one alternative that works well with the CAPS electronic ledger system, the final records process, and is easy to use. The unique ledger entry number from CAPS makes this method work. Files are set up in two books or sets of notes. The first book is organized by Unit Bid Item Number and the second book is organized by Structure Note Number. Source documents are filed by Unit Bid Item Number except for drainage items, which are filed by Structure Note Number. With this method there is only one item per source document except for the drainage items. Drainage items are filed by Structure Note Number because their source document (field note record) normally has multiple items while the Structure Note Number is unique to a specific drainage facility. For all other items, if more than one item appears on a source document, a copy is made for each item noted, the desired item number is highlighted, and then the copy is filed behind their respective Unit Bid Item Number locations. This works extremely well if the source documents are placed in order by date in their respective files.

To look at the source document for a ledger entry, simply note the item number, entry number, and date; go to the file and look for the entry number within the item file. If files are maintained in order by date, this is made even easier. For ledger entries of drainage items, it is necessary to include the structure note number in the remarks section.

This system allows anyone to easily locate the source documents that support a contract payment. These records are retained in the Project Office until Final Record time when the source documents are bound into books with their respective titles and made a part of the three-year *Temporary Final Records*.

10-5 Region Project Documentation Reviews

10-5.1 General

The Region is responsible to ensure that reviews of record keeping and documentation procedures are completed during the progress of the work. This will help to ensure that the original field records and pay notes are being properly prepared and that proper procedures are being followed. The Region should review specific pay items for correctness of the payments made as well as for procedural requirements for documenting and processing of contract payments, acceptance of materials and other pertinent contract administration requirements. Reviews of specific pay items should be recorded on DOT Form 421-014. Reviews of procedural items should be recorded on either DOT Form 230-036A or 230-036B. Version A should be used for the first review made on a project. Version B places more emphasis on individual pay items and should be used for the second review or on larger projects during the initial review phase where this emphasis is more appropriate.

On projects that are estimated to cost more than \$1,000,000, and require more than 35 working days to construct, the Region should conduct an interim documentation review when the project is approximately 50 percent complete. This review should be thorough and complete to ensure that the documentation records are adequate and are being properly maintained. This review should include both procedural checks for those items listed on DOT Form 230-036A and detailed reviews of specific pay items for accurate documentation practices of contract payments completed to date. Audit work for pay items may also be started at this time in preparation for the Final Records general Review at Physical Completion. This early audit work could consist of checking any individual items that have been fully completed. Reviews of completed items that are recorded on DOT Form 421-014 can be kept and then made a part of the Final Records check upon Physical Completion. Once the project has been completed, information from both procedural reviews and specific pay item reviews can then become a part of the *Temporary Final Records*.

On projects that are estimated to cost more than \$500,000 and require more than 100 working days to construct, the interim documentation review should be considered as early as 30 percent completion but, where possible, no later than 50 percent completion. On these larger projects, it is particularly important that the interim reviews be sufficient to verify both documentation and procedural practices. However, on many projects, the nature of the work completed at 30 percent may not provide an adequate representation of the documentation procedure to merit a documentation review. In these instances, the Region should exercise considerable judgment regarding the timing of interim documentation reviews.

The Region reviewer should also exercise considerable judgment in deciding whether or not to perform additional documentation reviews in conjunction with the reviews described above. In addition to cost and time, other criteria should also be used to evaluate the need for additional documentation reviews. This could include results of previous documentation reviews as well as the history, knowledge, and experience of the specific Project Office personnel involved. The Region reviewer should be satisfied on a case-by-case basis that each project's records are adequate and are being properly maintained.


It is recommended that each time a documentation review is performed on a project the Region reviewers discuss the results of the review with the Project Office staff, leaving a completed copy of DOT Form 230-036 and 421-014 to be included in the project temporary records.

10-5.2 Review Procedures for Final Estimates and Final Records

When work on the project is physically complete, it is important that the final records be completed and assembled in as timely a manner as possible. The final quantities should be checked and the final estimate or Final Contract Voucher Certification furnished to the Contractor as soon as is reasonably possible.

In order to facilitate this, the Project Engineer should ensure that the overall project final records, including the final contract quantities, are made ready for Region review as timely as can be and that the Region has completed their review work shortly thereafter.

The Region is responsible to ensure that the final records for the contract are complete, accurate and maintained in an orderly manner. The Region may exercise considerable judgment regarding the procedures used for this check. These procedures may include a complete check of all records or a representative sampling of records in order to validate all records maintained. If problems are discovered during the review of the representative sample, and if those problems indicate that the entire population might be flawed, then the entire population should be checked and corrected by the field office and a new representative sample taken. In conducting these final reviews the Region reviewer should mark the areas that have been checked, initialing and dating the records or portions of records that have been reviewed. The Examination Sheets for Contract Items DOT Form 421-014 and Documentation Review (Procedures) DOT Form 230-036A and 230-036B should be kept until the contract final records check is completed and then filed with the *Temporary Final Records* where they can be further reviewed should an audit occur.

 Washington State Department of Transportation Item Quantity Ticket		
Date *	Location	Group
Remarks		
Time Received	<input type="radio"/> AM <input type="radio"/> PM	Time Weighed
Received By *		Weighed By
Pit Number		Truck Number *
Check One *		Legal Gross Weight
<input type="radio"/> Tons <input type="radio"/> Hours <input type="radio"/> Cu. Yds. <input type="radio"/> M. Gal. <input type="radio"/> LBS. <input type="radio"/> Each <input type="radio"/> Days		Gross *
		Tare *
		Net *
Other Unit of Measure	This Load	Total
Item Identification		
Contract Number *	Item Number *	
Item Description		
Subcontractor		
Contractor		
* Required Information		Ticket Number

DOT Form 422-021
Revised 4/00

Figure 10-1

**Contract #6767
Johnson Creek Bridge 112/38
Columbia Basin Region
Final Records Book Number 1**

Item	Section
Listing of All Final Records Books	1
Listing of State Personnel	2
Comparison of Quantities	3
Final Contract Voucher	4
Contract Estimate Payment Totals	5
Affidavit of Wages Paid	6
Change Orders	7
Record of Construction Materials	8

Figure 10-2

Contract # 7767**Johnson Creek Bridge 112/38****Columbia Basin Region****Permanent Final Records**(Retained at HQ Records Services)

<u>Book Description</u>	<u>Book No.</u>
Final Records Book No. 1	1
Project Engineer's Diary	2
Inspector's Daily Reports	3
Traffic Control Reports	4
Pile Driving Records	5
Post Tensioning Records	6
Contaminated Materials Disposal Bills	7
Miscellaneous Records	8
As-Built Plans (Submitted under separate cover dated 08/10/2000)	

Temporary Final Records(Retained Within the Region)

<u>Description</u>	<u>Book No.</u>
Item Quantity Tickets	9
Project Engineer's Copy of Estimates	10
Inspector's Record of Field Tests	11
Scaleman's Diary and Scale Checks	12
Scale Test Report	13
Concrete Pour Records	14
Field Note Records	15
Drainage Notes	16
Approval of Source of Materials	17
Daily Report of Force Account Worked	18
Other Source Document Files	19
Quarterly Report of Amounts Credited DBE Participation	20
Quarterly Report of Amounts Paid MBE/WBE Participation	21
Contractor's Payrolls (Fed-Aid Projects)	22
FHWA Form 1589 (ARRA Projects)	23
Alignment (Transit) Book	24
Grade Book	25
Cross Section Notes	26
Quantity Computation Sheets	27
Record of Field Audits	28
Surfacing Depth Checks	29
Washington State Patrol Field Checklist	30

Figure 10-3



Washington State
Department of Transportation

Field Note Record

Contract No. 4747	Station SEE DETAIL	Line L-LINE	C/S 2316
Staked By M. Lewis	Date 2-12-98	Work Started 2-5-98	Work Completed 2-9-98
Calculated By J.R.	Date 2-14-98	Checked By CB	Inspector's Signature John Smith
		Date 2-15-98	Date 2-9-98

CREW: LEWIS M, BARNES, TOLIS			
WEATHER: CLEAR, COOL			
CLEARING & GRUBBING			
GROUP 1	TOTAL	21172 M²	FROM REVERSE SIDE
		= 2.12 HECTARES	
GROUP 2	TOTAL	14609	FROM PAGE 4
		= 1.46 HECTARES	
PROJECT TOTAL		= 3.58 HECTARES	

Item No.	Material	Manufacturer	Brand Name Model/Type	RAMS/QPL Ref. No.	Appr/Accept Code	Basis of Acceptance

Item No.	Item Description	Group	Date Work Completed	Unit	Quantity	CAPS Entry No.	Posted By Initials Date	Checked By Initials Date	Est. No.
2	CLEARING & GRUBBING	1	2-9-98	HECTARE	2.12	7	JS 4/16	CR 4/20	1
2	"	2	2-9-98	HECTARE	1.46	8	JS 4/16	CR 4/20	1

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Page No. _____

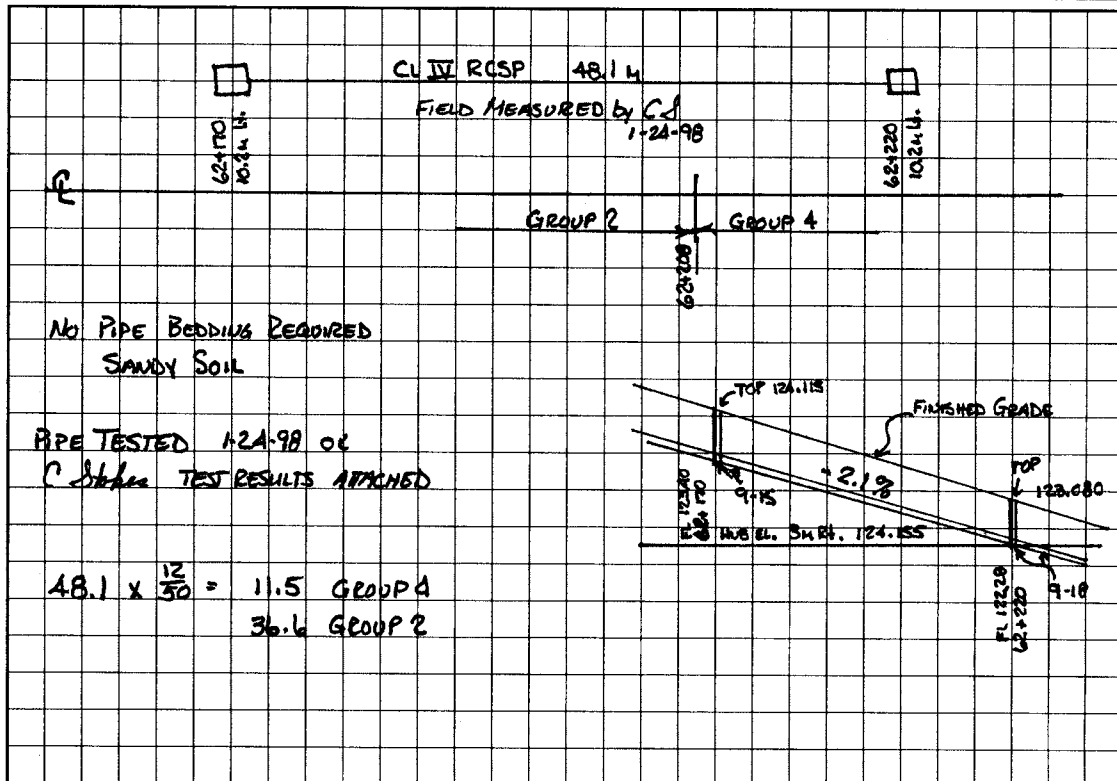
Figure 10-4



Washington State Department of Transportation

Field Note Record For Drainage

Contract No. 4747	Station 62+170 to 62+220	Line L LINS	C/S 1701	Page No.
Staked By T. ROBERTS	Date 1-12-98	Work Started 1-16-98	Code Number 9-15	Work Completed 1-24-98
Calculated By TMC	Date 1-26-98	Checked By DEM	Date 1-30-98	Inspector's Signature C. Stokes



Item No.	Item	Group No.	Date	Unit	Quantity	RAMS No.	Basis of Material Acceptance	CAPS Entry No.	Initials	Est. No.
7	STR. EX. CL. B	2	1/8/98	M ³	17.6			53	DS CR 1/9 1/20	1
7	" " "	4	1/8/98	M ³	6.7			54	DS CR 1/9 1/20	1
24	CL IV RCSP 300mm	2	1/24/98	M	36.6	4063	TAG # A123A56	76	DS CR 1/25 1/26	1
24	" " "	4	1/24/98	M	11.5	4063	TAG # A123A56	77	DS CR 1/25 1/26	1
25	TESTING SEWER PIPE	2	1/24/98	M	36.6			78	DS CR 1/25 1/26	1
25	" " "	4	1/24/98	M	11.5			79	DS CR 1/25 1/26	1
26	C.B. TYPE 1	2	1/24/98	EACH	1	4063	TAG # A123A56	80	DS CR 1/25 1/26	1

DOT Form 422-637 EF
Revised 9/97

Figure 10-6


**Washington State
Department of Transportation**
Field Note Record

Contract No. C7616	Station Project Limits	Mile/Line: SR 26	C/S 0134 - G1/ 3830 - G2
Staked by Jason Lefler	Date 3/23/2009	Work Started Date 4/27/2009	Work Completed Date 4/27/2009
Calculated by Jason Lefler	Date 4/27/2009	Checked by Sean Carpenter	Date 5/6/2009
Inspector Jason Lefler		Date 4/27/09	

One Type B Guardrail Connection installed at each bridge corner; 4 total.

Group 1

Station 299+93 Left and Right = 2

Pay 2.00 each



Group 2

Station 302+43 Left and Right = 2

Pay 2.00 each

Item Num	Material Brand Name/Model Type	Manufacturer	RAMS/QPL Ref. No.	Appr/Acc Code	Basis of Accept	Acceptance	
						Date	Init.
019.01	9-16 Fence and Guardrail W and Thrie Beam + components	Trinity Highway Products, LLC	QPL-0012	3002	Document conformance to approved plan	04/27/09	JL
019.02.00	9-09 Timber and Lumber	Superior Wood Treating	QPL-0013	2110	Verify Cert of Treatment and Lumber Grade Stamp.	04/27/09	JL
019.02.02	Steel Fasteners Threaded Rods,Nuts,and Washers	Portland Bolt and Mfrg	QPL-0022	2015	Verify Product along with MCC and CMO	04/27/09	JL
019.02.03	9-26 Epoxy Resins Acrylic Tie (AT)	Simpson Strong Tie Co., Inc.	QPL-0021	3008	Visually Verify Product	04/27/09	JL

Item Num	Item Description	Grp	Date Work Complete	Unit	Quantity	Ledger Entry No.	Posted By Init.	Posted By Date	Checked By Init.	Checked By Date	Est. No.
0019	TYPE B GUARDRAIL CONNECTION	1	4/27/2009	EACH	2.00	48	rah	05/07/09	TH	05/07/09	
0019	TYPE B GUARDRAIL CONNECTION	2	4/27/2009	EACH	2.00	49	rah	05/07/09	TH	05/07/09	

Attachments


File Attachment

DOT Form IP 422-635ER EF
Revised 2/2009

Figure 10-8

IDR Sheet 1 of 3 Sheets



Washington State
Department of Transportation

Inspector's Daily Report

Contract C7762	SR Nos. SR 206	Day Tuesday	Shift Day	Date 7/28/2009
Weather AM clr/warm PM clr/hot				
Prime Contractor A. Inland Asphalt		Representative/Title Tony Via		
Subcontractor or Agent		Appr'd	DBE	Representative/Title
a	Northstar	y	y	Jeremy Simpkins

Work Activity Summary

Description and Location

Installing Class A construction signs.

Pay Note Made Today?

☒ No - Work not complete. Will complete Paynote on completion or at estimate cutoff.

☐ No - LS Item. Work is not completed. Will complete paynote on completion or percentage at estimate cutoff.

NOTE: Any "No" will be explained in Diary.

Required Backup Samples Taken

Matls Documentation Approved

Matls Source Approved

Item No.	Contract Item Description	Location	Y/N	Y/N	Y/N	Y/N
41	Construction Signs Class A	Throughout project	NA	No	NA	No

File Upload

File Attachment

Contractor's Equipment

Operating Contractors Id (A-E Above)

	No.	Equipment - ID No. and Description	Opr	Stdb	Down	Idle
a	1	GMC 3500 20,000 GVW flatbed truck, #45A	8			
a	1	Dodge 1500 pickup, #39A	6			
a	1	20 foot flatbed trailer #18	8			

Contractor's

Workforce

Operating contractors ID(A-E see above)

	Number/Hours								Number			
	Laborers	Carpenters	Operators	Teamsters	IronWorkers	Masons	Flaggers	Electricians	Male	Female	Appr	Trnee
a	4	32					1	3	4	1		

Traffic Control

Was Traffic Control Labor Required Today? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Was WZTC according to approved TCP? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Photos/Video taken Today? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Do all Flaggers and Spotters have current flagging card? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Inspector's On Site Hours		Inspector	
From 9:00 am		Gordon Hurt	
To 2:30 PM		Genessa Cebriak	
		Reviewed By	

DOT Form IP 422-004 EF
Revised 3/2009

Reviewed by ggc C.I./P.M. A.P.E. DGM P.E. rah O.E.

Figure 10-9

IDR Sheet 3 of 3 Sheets

Washington State
Department of Transportation

Inspector's Daily Report

Contract C7762	Day Tuesday	Date 2009-07-28
File Upload		
<input type="button" value="File Attachment"/>		
<p>DIARY - Including but not limited to: a report of the day's operations, time log (if applicable), orders given and received, discussions with contractor, and any applicable statements for the monthly estimate.</p>		
<p>Northstar called the office this morning at 8:30 with questions about the Class A signing. This was the first we heard that they were working today. Northstar still does not have an approved traffic control plan for short duration shoulder work.</p> <p>I met the installation crew on the jobsite around 9:00 am and answered their questions. A couple of stakes had been knocked over which I located and set back in place.</p> <p>Kevin Littleton and Chad Swenson visited the site to evaluate the proposal to not grind out the shoulders between US 2 and Yale rd. to avoid adjusting the drainage structures.</p> <p>Spent the day on site answering questions from the sign installation crew and working on documentation.</p> <p>Off site at 2:30 PM</p>		
		Gordon Hurt Inspector

Figure 10-9 (continued)