CONSTRUCTION RECORDS MANUAL

Prepared for

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
Bismarck, North Dakota Website:
http://www.dot.nd.gov/

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FORWARD

This document is to be used in conjunction with the 2014 Standard Specifications for Road and Bridge Construction.

Resident engineers, project engineers, consultants, office personnel and others associated with construction operations must keep accurate and complete records of the work and submit them promptly as required. The goal of this manual is to provide construction personnel with procedures for documentation of construction activities and pay items and to provide instructions for the operation of the Construction Automated Records System (CARS). This manual should not be interpreted to provide a legal standard of care or a strict code of conduct to be followed.

This manual will not be distributed in printed form and is not intended to be printed. Users should refer to the online version of the manual as revisions will be made frequently.

Accurate measurements and calculations of contract quantities are essential to good record keeping. Records must be accurate, complete, understandable and neatly kept.

The instructions and examples in this manual are suggested methods of record keeping under normal circumstances. The records keeping methods outlined in this manual are considered a minimum requirement. Additional records may be required to completely document contract pay items and construction activities on the project. Adjustments may have to be made on a case by case basis for situations not covered by the manual.

This manual contains some instructions that relate to the NDDOT's internal methods of operation. These instructions (purchasing equipment, vehicle expense, etc.) are not intended to govern on projects where county/city/consultant engineers perform the construction engineering. However, the county/city/consultant engineers are expected to follow the record keeping procedures described in this manual.

This manual is not a contract document. Nothing in this manual replaces, modifies or supersedes any provision of the contract documents. In the case of discrepancies between contract documents and this manual, contract documents such as the project proposal, the project plans and the North Dakota Standard Specifications for Road and Bridge Construction will govern.

The policies and procedures of this or any other manual may be changed at any time without notice to NDDOT employees or third parties including county/city/consultant engineers. Those relying on this information should satisfy themselves as to the most current version. The user agrees to accept all risks and consequences flowing from or related to the use, retention, distribution, alteration, or deletion of this information.

NDDOT will in no instance be liable for any loss of profit or other damage, including but not limited to special, incidental, consequential or other damages, even if apprised of the likelihood of such damages.

Definitions for terms used in this manual can be found in Section 101.04 of the 2014 Standard Specifications for Road & Bridge Construction. The Standard Specifications are in book form but can also be found on the DOT web page by:

1. Go to the DOT web page at https://www.dot.nd.gov/.
2. Click on Publications at the bottom of the page.
3. Click on the link for the Standard Specifications under the Consultant & Engineers heading.
4. The link is found under the heading for 2014 Standard Specifications Book.

The Construction Records Manual can also be found on the DOT website under the Consultant & Engineers heading on the Manuals and Publications page. The manual is in PDF format.

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RESPONSIBLE CHARGE

As a recipient of Federal-aid funds for the state, the NDDOT is responsible for ensuring that Federal-aid funds are expended in accordance with applicable Federal laws and regulations.
This responsibility includes ensuring adequate supervision and inspection to ensure projects are completed in conformance with the approved plans and specifications.
Federally funded projects shall have a full time public employee in responsible charge of the project.

NDDOT Projects with Federal Aid

For NDDOT administered Federal-aid projects, the District Engineer shall name a full-time NDDOT employed engineer as the person in "responsible charge." This requirement applies even when consultants are providing construction engineering services. The person in "responsible charge" shall be identified in the pre-construction conference meeting minutes.

Roles of NDDOT Responsible Charge

1. Primary point of contact for FHWA
2. Attends all key project meetings – if the responsible charge cannot attend, rescheduling of meeting will be attempted. Key project meetings – such as: Project pre-construction conference and meetings involving Federal- aid issues
3. Attend final inspection
4. Must be involved in and/or knowledgeable of key project decisions

Responsibilities of the NDDOT Employee in Responsible Charge

1. Ensures project is constructed in accordance with the plans and specifications
2. Oversee project activities involving costs, schedules, quality, and project changes
3. Be familiar with project status.
4. Be aware of the qualifications, assignments, and on-the-job performance of the engineering staff during all stages of the project
5. Conduct a one-on-one meeting with engineering staff prior to the preconstruction conference. At this meeting the person in "responsible charge" and engineering staff shall discuss required construction contract administration and any project specific expectations
6. If a consultant is performing the engineering, they shall be required to submit the qualifications for the project's inspectors and material testers that will be used on the project. Spot checks and verification will need to be done during the duration of the project on the qualifications of the consultant's inspectors and testers in the field
7. Review financial processes, transactions and documentation for the project
8. Direct and ensure engineering staff carry out construction project administration in accordance with contract documents
9. Administer change orders in accordance with their level of authority.
10. Manage project agreements and any supplements to them
11. Maintain familiarity of day to day project operations & safety issues, including work zone safety requirements
12. Visit and review projects on regular basis (in proportion to the project scope and size)
13. Review and ensure final estimate and final documentation is completed timely

Local Public Agency (LPA) Projects

For locally administered Federal-aid projects, the LPA shall name a person in "responsible charge" for each project. The person in responsible charge must be a full-time employee of the LPA. The person in responsible charge need not be an engineer. The person in "responsible charge" shall be identified in the pre-construction conference meeting minutes.

Roles of LPA Responsible Charge

1. Primary point of contact for the LPA will be the NDDOT.
2. Attends all key project meetings – if the responsible charge cannot attend, rescheduling of meeting will be attempted. Key project meetings – such as: Project pre-construction conference and meetings involving Federal- aid issues.
3. Attend final inspection.
4. Must be involved in and/or knowledgeable of key project decisions.

Responsibilities of the LPA Employee in Responsible Charge

1. Ensure project is constructed in accordance with the plans and specifications.
2. Oversee project activities involving costs, schedules, quality, and project changes.
3. Be familiar with project status.
4. Be aware of the qualifications, assignments, and on-the-job performance of the engineering staff during all stages of the project.
5. Conduct a one-on-one meeting with engineering staff prior to the preconstruction conference. At this meeting the person in "responsible charge" and engineering staff shall discuss required construction contract administration and any project specific expectations.
6. If a consultant is performing the engineering, they shall be required to submit the qualifications for the project's inspectors and material testers that will be used on the project at this meeting. Spot checks and verification will need to be done during the duration of the project on the qualifications of the consultant's inspectors and testers in the field.
7. Review financial processes, transactions, and documentation for the project.
8. Direct and ensure engineering staff carry out construction project administration in accordance with contract documents.
9. Administer change orders in accordance with their level of authority. Manage project agreements and any supplements to them.
10. Maintain familiarity of day to day project operations & safety issues.
11. Visit and review projects on regular basis (in proportion to the project scope and size).
12. Review and ensure final estimate and final documentation is completed timely.

Duties for NDDOT on LPA Projects

1. Attend preconstruction conference.
2. Attend meetings when a major decision is needed.
3. Verify that LPA ensures project is constructed in accordance with the plans & specifications.
4. Review & approve change orders.
5. Verify that LPA ensures work zone safety requirements are being implemented on the project.
6. Attend final Inspection.
7. Review final estimate.

Construction Engineering Provided by County, City, and/or Consulting Engineers

County, city, and consulting engineers will provide their own supplies unless otherwise specified by special agreement between the department and the county, city, or consultant. Construction forms can be found on the DOT's website.

MANUALS AND DOCUMENTS FOR CONSTRUCTION OVERSIGHT

1. Standard Specifications for Road and Bridge Construction
   https://www.dot.nd.gov/dotnet/supplspecs/StandardSpecs.aspx
2. Field Sampling and Testing Manual
   https://www.dot.nd.gov/divisions/materials/testingmanual.htm
5. External Civil Rights Manual
   https://www.dot.nd.gov/manuals/civilrights/civil-rights-manual.pdf
6. Inspection Checklist
   https://www.dot.nd.gov/manuals/manuals-publications.htm
7. Erosion and Sediment Control Handbook
   https://www.dot.nd.gov/manuals/environmental/escm/escmfinal.pdf
8. Davis-Bacon and Payroll Requirements Handbook
   https://www.dot.nd.gov/manuals/civilrights/davisbacon.pdf
9. Department Safety Manual (for NDDOT employees)
   http://mydot.nd.gov/manuals/maintenance/safety%20manual.pdf
10. LCPtracker Procedure Manual for Engineers and Support Staff
    http://dot.nd.gov/divisions/civilrights/docs/NDDOT-LCPtracker-Contractor-User-Manual.pdf

DISTRICT AND CENTRAL OFFICE ADDRESSES AND PHONE NUMBERS

Office	Address/Phone
Bismarck District	218 S Airport Rd Bismarck, ND 58504 328-6950
Valley City District	1524 8th Ave SW Valley City, ND 58072 845-8800
Devils Lake District	316 6th St S Devils Lake, ND 58302 665-5100
Minot District	1305 Hwy 2 Bypass E Minot, ND 58302 857-6925
Dickinson District	1700 3rd Ave W Dickinson, ND 58602 227-6500
Grand Forks District	1951 N Washington Grand Forks, ND 58206 787-6500
Williston District	605 Dakota Parkway W PO Box 698 Williston, ND 58802 774-2700
Fargo District	503 38th Street South Fargo, ND 58103-1198 239-8900
Materials & Research	300 S Airport Rd Bismarck, ND 58504 328-6900
Construction Services	608 E Boulevard Ave Bismarck, ND 58505-0700 328-2563
Design	328-2555
Bridge	328-2130
Civil Rights	328-2637
Environ. & Trans. Services	328-2590

Maintain a list of emergency numbers at the field office and field lab. Provide the list to staff and also post in an easily viewable location.

CONSTRUCTION PROJECT FILING SYSTEM

Project records are maintained electronically in CARS & Filenet. (CARS places records into Filenet behind the scenes for storage.) There may be exceptions necessary if internet access isn't available, but the vast majority of project records are now maintained in CARS/Filenet. See Section 2 of this manual for more information.

Items that have been prepared and stored in CARS are not required to be stored (or submitted to Construction Services Division) in a physical (paper) file.

Timely entry of documents is essential in keeping records.

As of May 1, 2019, the CARS Materials Dropbox should be used to enter materials test reports into CARS. These documents can be viewed either by using the CARS Materials Dropbox – Document Viewer or by searching for the documents in Filenet. Other miscellaneous materials documents can also be entered into CARS/Filenet.

Payroll and Labor Compliance Documents:
All payrolls, labor interviews and apprentice documentation are now prepared and stored in LCPtracker. Paper payrolls are no longer maintained. All projects bid after October, 2017 require all contractors to file electronic payrolls in LCPtracker. Commencing in July of 2018, all labor interviews will be done on LCPtracker. Apprentice Documentation should be uploaded into the EDocument section of LCPtracker. None of these things should be stored in CARS or FileNet. If there is an investigation or a Davis-Bacon complaint, this documentation should be kept in CARS/FileNet.

EEO, DBE AND LABOR COMPLIANCE INFORMATION

A separate file for the following items can be used but is not required. Refer to the External Civil Rights Manual for more information, instructions, examples, etc. about these documents.

The following documents should be uploaded to CARS by Project Manager:

1. SFN 9423, Pre-Construction Conference - EEO, Labor Standards, and DBE Participation Information.
2. SFN 9425, Monthly EEO Project Inspection Report.
3. SFN 14268, DBE Participation Certification
    a. This form is not needed if project is using Civil Rights Certification and Compliance System.
4. SFN 60547, Bulletin Board Review
5. SFN 60596, DBE Performance Project Engineer On-Site Work Confirmation
6. SFN 60597, DBE Performance – Commercially Useful Function Certification

DBE Participation Review (RC), SFN 13743a or DBE Participation Review (RN), SFN 13743b will be uploaded into CARS by Civil Rights

FIELD OFFICE INTERNET ACCESS & TELEPHONE SERVICE

Installation of internet and phone service in the field office is accomplished by submitting a notification of need to ITD-Radio. This notification must be submitted a minimum of six weeks ahead of time and must be submitted on SFN 14272, Request for Computer Software/Equipment & Computer System Changes. An estimated time frame for the project should be included on the request including time the field office would be closed for winter suspension.

ITD-Radio will determine the best and most economical method for internet and phone services for the field office and take care of installation and proper billing to the project.

SUBCONTRACTING

Requests to Sublet, SFN 5682

In accordance with Section 108 of the Standard Specifications, a contractor shall not sublet any portion of a contract without the consent of the Engineer. A sublet is not required for firms listed in the 4th paragraph of Section 108.01 or for any off-site commercial production of materials and manufactured component products or their transportation to the project.

A sublet is not required for rental companies providing hourly services such as pump trucks, drill trucks, and cranes provided that their time worked on the project does not amount to more than 20% of their work week.

Before a subcontractor starts work on NDDOT projects, the request to sublet (SFN 5682) shall be approved by the Project Engineer. Requests to sublet on non-DOT projects (i.e. County and City projects) are approved by the Project Engineer. The following steps outline the procedures for subcontract approvals.

1. Notify all contractors at the pre-job conference that the Request to Sublet forms, SFN 5682, are submitted to the district engineer/project engineer and that these forms must be approved before a subcontractor starts work on the project. If subcontractors want lower tier subcontractors to perform part of their work, the contractor shall submit a Request to Sublet for approval of the lower tier subcontractor along with the Request to Sublet for their work.
2. SFN 60597 must be received with SFN 5682 for all DBE sublets. Do not approve SFN 5682 without the receipt of SFN 60597 for any DBE on the project.
3. Subcontractors who are not currently pre-qualified, certified as a Disadvantaged Business Enterprise (DBE), or registered with the DOT for the type of work being subcontracted must submit SFN 52243 Subcontractor Registration. The subcontractor must list their work experience and equipment on the registration form. A list of current pre-qualified contractors and registered subcontractors is available from the Construction Services Division and on the NDDOT website under Contractor Information link. DBEs are listed at the Civil Rights Certification and Compliance System.
4. The Project Engineer shall review the Request to Sublet for the following items:
    a. The maximum percentage that can be sublet shall be 70 percent. The calculations of the percentage subcontracted must include the cost of materials and manufactured products, if included in the subcontract. Specialty items may be performed by subcontract. The dollar amount of the specialty work items should be deducted from the

total original contract costs prior to computing the amount of the work required to be performed by the prime contractor. Specialty items should be specified as such in the proposal.

b. When Condition of Award items (i.e. items committed to be done by a Disadvantaged Business Enterprise firm or other small business at the time of award) are sublet, the Project Engineer should ensure that the total amount on the Request to Sublet form is equal to or greater than the amount in the Condition of Award and the conditions of award items are sublet to the proper subcontractor. Condition of Award items are listed on the DBE Participation Review form and on Form C, 'Notification of Intent to Use DBE' which are provided to the districts by the Civil Rights Office.

c. When added work is subcontracted, the percentage shall be reflected as a zero entry and noted as 'Added Work' on the Request to Sublet form. A Request to Sublet will not be required for added work on a project performed by a previously approved subcontractor on the project.

d. The Contractor shall ensure that the Subcontractor has received, when applicable, the following specified provisions.

   i. Labor Rates from U.S. Department of Labor
   ii. Required Contract Provisions Federal Aid Construction Contracts (FHWA-1273) and any addendums attached
   iii. Appendix A &E of the Title VI Assurances
   iv. Other federal aid provisions such as Buy America clauses. No subcontracts, or transfer of contract, shall relieve the contractor of liability under the contract bonds
   v. EEO Affirmative Action Requirements
   vi. Disadvantaged Business Enterprise Program Special Provision
   vii. Plans, Specifications, Supplemental Specifications, Specification Provisions, and all other contract documents

5. The Contractor should fill out the Request to Sublet form listing the items covered by the subcontract and the amounts the Contractor is actually paying the Subcontractor. A copy of the subcontract agreement between the prime contractor and the subcontractor must be attached to the Request to Sublet.
6. The Project Engineer shall show the % Sublet This Request (total subcontract amount divided by the original contract amount) and the Total % Sublet to Date for that contract.

After reviewing the request to sublet in accordance with this section, email the completed document to Construction Services Division. Construction Services will enter it into Filenet.

After confirming that the document has been entered into CARs/Filenet by Construction Services, it is no longer necessary to keep the originals.

Subcontract Requirements for Traffic Control Signing

A sign supplier who delivers and installs the construction signs on the project is considered a supplier if, after the initial installation, the prime contractor maintains the signs on the project, and the prime contractor assumes the responsibility of relocating the signs on a day-to-day basis.

Supplied Labor

At times, contractors will use a staffing agency to fill general labor positions such as flaggers. No subcontract is required between the contractor and the staffing agency but Davis-Bacon wage rates would apply. The employees supplied by the agency must appear on the contractor's payroll or on a payroll supplied by the staffing agency.

Prior to DBE credit being counted for a DBE staffing agency, the purchase order must be supplied in place of a subcontract. Documentation of the labor agreement must also be provided.

Contractor Compliance Review

Contractor Compliance Reviews are done each year by Civil Rights Division and are scheduled through the Assistant District Engineer and Team Leaders. After these reviews are scheduled, the Project Engineer should make arrangements to conduct EEO interviews (usually done in conjunction with labor interviews) on at least 5 employees of the contractor being reviewed. These interviews should concentrate on female or minority employees (if available) and are completed on LCPtracker. After a desk audit done by CRD, an exit conference will be scheduled with the ADE, consultant or city or county engineer, project engineer, representative(s) of the Contractor and CRD.

CONTRACTOR'S PAYROLLS

General

On all federal-aid projects, the Bidder's Proposal contains the U.S. Department of Transportation form, FHWA 1273 "REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS". FHWA 1273 provisions outline requirements relating to wages, payrolls and statements of compliance. The proposal will also contain the specific wage rates applicable to the project, and a special provision requiring the use of LCPtracker, an automated payroll program, to file all payrolls.

The engineer monitors the prime contractor's and each subcontractor's payroll compliance on all federal-aid projects. Compliance will be according to FHWA 1273 and the USDOL Field Operations Handbook. All engineers and support staff who play a role in Labor Compliance (checking payrolls or doing labor interviews) need a username and password in LCPtracker. Contact CRD at (701) 328-2605 to get a username and password. Engineers and staff will use the same account for all projects assigned to them.

The prime contractor and each subcontractor are required to submit weekly payrolls to comply with the provisions of the FHWA 1273. These weekly payrolls will be filed, reviewed and maintained on LCPtracker. All payrolls and Statements of Compliance must be completed in LCPtracker before reducing the retainage on a Semi-Final Estimate (109.04 C.)

State-funded project proposals do not contain a predetermined wage rate and the contractor or subcontractor is not required to submit payroll information. However, the contractor and subcontractor should maintain records that show payment has been made.

The engineer is responsible for ensuring that the prime contractor (through the prime approver) has provided payrolls for itself and all subcontractors in LCPtracker, and has approved these payrolls. The engineer is also responsible for reviewing and accepting these payrolls in LCPtracker and for reconciling or dismissing all violations. LCPtracker contains a payroll certification log and a report function which aids in monitoring contractors' compliance.

False Statements Concerning Highway Projects

In order to ensure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons involved with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsifications, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. Refer to FHWA 1273 for more information.

If you suspect willful falsification of a payroll certification, or know of a wage rate complaint, determine the extent and seriousness of the incident. Notify the Civil Rights Office of the incident. They will offer assistance or guidance and will notify FHWA of the incident.

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CARS PROCEDURES

The Construction Automated Records System, or CARS, is the NDDOT's computer based construction records system. The system uses the internet for data entry and stores project records on a central database. Reports generated in CARS can be viewed online at any time so copies do not have to be printed and filed. Pay estimates are prepared and approved online allowing for more timely payments to the contractor.

User ID & Passwords

Before being able to enter or view data, CARS users are assigned a user ID and user's rights by the Information Technology Division. The user ID and a password allow you to login to the CARS system. The user rights assigned determines what access you have to view and edit data. Consultants, counties and cities must fill out and submit SFN 53085: LDAP Account Information to Construction Services in order to get a user ID and be assigned user rights. DOT employees are also required to fill out the LDAP Account Information form.

User ID information will be mailed to the CARS coordinator for cities, counties and consultants. Department employees will receive User ID information by email.

If you will be using temporary employees for data entry, you will have to submit the LDAP Account Information form for that employee. The Information Technology Division should also be informed when a User ID is no longer being used such as when temporary or permanent employees are no longer working for an organization. User ID's will be audited for activity from time to time and if no activity is shown within a certain time frame, the User ID will be removed.

The User ID will be sent out with a generic password and the user will be required to change their password the first time they log in to CARS. To change your password:

1. Click on the Change Password link.
2. Sign in with your User ID and the generic password given to you by ITD. The Change Password page is displayed.
3. Enter your new password. Passwords are case sensitive and must contain the following:
    a. At least 6 characters
    b. At least 1 uppercase letter
    c. At least 2 lower case letters
    d. At least 1 number
4. Type the password in the second text box to confirm and click on the Login key. This will take you to the Main Menu of CARS.

Write down your password and store it in a secure location. If you forget your password, contact the Information Technology Division. Consultant, county and city users will be required to know the answers to the two hint questions submitted on the LDAP Account Information form or they will be unable to get their password information.

Login to the CARS Program

Access to the CARS programs is provided on the NDDOT website. To access CARS:

1. Go to the DOT website at http://www.dot.nd.gov/.
2. A link for CARS can be found by selecting the Construction and Engineering link under the Business tab.
3. Click on the Consultants and Engineers link under the Contractors, Consultants, and Engineers section.
4. Select CARS Login under Online Services.
5. Type in User ID and Password and click the Login button.
6. The CARS Main Menu is displayed.

Navigation

The same methods used to navigate Internet Explorer are also used to navigate in CARS. The following lists the most common navigation tools used.

1. Links
   Links are usually colored, underlined text but can also be a picture or 3-D image. To check whether an item is a link, put the mouse pointer over the text or the image. If it turns into a hand, it is a link. Clicking on the link will take you to the page indicated by the link.
2. Text Box
   Text boxes are used throughout CARS to enter data composed of numbers, text or both. A cursor will appear when you click inside the text box and data can be entered in the box. Sometimes data will be entered in a series of text boxes. Use the TAB button to move to the next text box.
3. Drop Down Box
   A drop down box looks similar to a text box but it has an arrow pointing down on the right side. By clicking on the arrow, a list 'drops down' from the box with a list of different options that may be chosen to fill the box
4. Check Box
   Check boxes can be used to modify data or select a certain record. A check box is a square next to entered data or a record. Clicking inside the check box will put a check mark or an 'X' in the square. This indicates the data or record has been selected.
5. Buttons
   Buttons are used throughout CARS to perform various functions such as SAVE, RETURN, SEARCH, etc. Clicking on them activates these buttons.
6. Radio Buttons
   CARS also uses radio buttons. These are small circles followed by text and are used to pick a certain option within a data entry page. To select an option, click inside the radio button and a small black circle will appear. Only one choice can be made in a group of options with radio buttons. If you click on one radio button in a group of options and then click on another, the black circle will disappear from the first choice.
7. Filters
   Filters are used in Quantity Manager to regulate the displayed PQEs. Filters set will remain active until the user leaves Quantity Manager.

Input Basics

The following list is basic information needed to enter data into CARS.

1. CARS uses a time out feature. The session will time out after 30 minutes if there is no activity registered and data entered but not saved may be lost. If you are logged on and are interrupted, it is recommended that you click on the Save button before leaving your computer.
2. DON'T USE THE BACK BUTTON! The program will function using the back button but you may lose data or you may get a 'Warning: Page has Expired' error message. If this occurs, click the Refresh button on the Internet Explorer tool bar. A dialog box appears asking you to use the Retry button to send the information again. Click on the Retry button and you will be returned to the previous page. Backspace may be used in Quantity Manager at your own risk!
3. The TAB key can be used to move from one input field to the next. As you get used to working in the new CARS format, you will find the TAB key very useful for moving around in the data entry boxes.
4. Station/Location format
    a. Stations are entered without the plus for example Sta. 100+32 would be entered as 10032
5. The project and subproject displayed at the top of the screen will be the same as the project from the last logon. Change these by clicking on the Project or Subproject link. This will take you to the Project Search Criteria page where you can change the project or subproject.
6. The Main Menu can be accessed by clicking on the link in the top right hand corner or the button at the bottom of each page.
7. PQEs are marked by status.
    a. Not Checked. PQE may be edited.
    b. Checked. PQE may be edited.
    c. Rejected. PQE may be checked or submitted.
    d. Submitted. PQE has been added by Project Engineer to the estimate. PQE may be edited. Any changes will reset PQE to Not Checked.
    e. Pending. PQE has been included in the estimate generated by the Project Engineer, but the estimate has not been approved. PQE may be edited. Any changes will reset PQE to Not Checked.
    f. Submitted for Payment. PQE has been included in estimate that has been approved by Project Engineer and is in final approval process.
    g. Paid. Payment for PQE has been made. Item is eligible to be appended.
8. A change order drop down box will be found in pay quantities, mix bitumen, and concrete paving. This is used to indicate when a pay item is affected by a change order.
9. Deleting records
    a. Check box for deleting rows
    b. Delete button deletes the entire record

10. Printing reports requires having Adobe Reader which can be obtained free from the DOT website. If the reports do not generate, check the settings. Also, the full version of Adobe Acrobat will not generate the reports. The reader will have to be downloaded and set as the program that opens the CARS reports. If you are still having problems generating the reports, you will have to change settings in the Reader by:
    a. From the Start Menu on your computer, open the Adobe Reader.
    b. Click on Edit and choose Preferences.
    c. From the list on the left hand side, go to Options.
    d. There are four check boxes under Web Browser Options. The first two boxes (Display PDF in Browser and Check Browser Settings When Starting Acrobat) should be unchecked.

Text Box Field Lengths

CARS uses text boxes throughout the program. Typing in more characters than the size of the text box will generate an error. The following table lists the character length of all text boxes in CARS.

TITLE OF FIELD	# OF CHARACTERS
Change Order Maintenance Remarks	200
Change Order Maintenance Explanation of Change	3,000
Change Order Spec/Code Maintenance Description	50
Change Order Spec/Code Maintenance Other	50
Concrete Paving Remarks	200
Haul Sheet Maintenance Remarks	200
Mix Bitumen Maintenance Remarks	200
Pay Quantity Maintenance Remarks	200
Project & Inspection Diary – Remarks	12,000
Project Diary Contract Time - Lost Time Reason	80
Project Diary – Engineering Staff	500
Project & Inspection Diary – Weather Notes	5,000
Project & Inspection Diary – Document Comments	200
Inspection Diary – Work in Progress	5,000
Inspection Diary – Labor Force Comments	5,000
Inspection Diary – Edit Equipment Comments	500
Project & Inspection Diary - Amendment Comments	500
Stockpile/Invoice Item Maintenance Remarks	200
Construction Status Maintenance Remarks	200
Weekly Progress Report Maintenance – Remarks	2,000
Weekly Progress Report Maintenance – Road Const. Map Info	300
Weekly Progress Report Maintenance – DBE Remarks	200
Contract Adjustment Maintenance – Remarks	200
Contract Adjustment Maintenance – Item Description	50
Final Checklist Maintenance – Remarks	200

Assign Project Engineers & Project Personnel

After the bid opening and award process is complete, the projects are downloaded into CARS from PACER. An email will be sent to the District Engineer listing the projects from the bid opening for that district. The District Engineer will assign Project Engineers and/or consultants for each project listed.

After the District Engineer has assigned a project engineer to a project, the Project Engineer will assign their project personnel. For consultants, the designated CARS coordinator will assign the Project Engineer to a project who will in turn assign project personnel. Project personnel will be able to update or view project information depending on the user rights they have been assigned by the Information Technology Division of the DOT.

The person assigned as the Project Engineer in CARS will be responsible for maintaining Project Diaries, Change Orders, and Estimates. This should be the person in daily contact with the project. A position in charge of multiple projects such as Team Leader or Resident Engineer should not be assigned as the Project Engineer if they are not able to be on the project daily.

Assign Project Personnel

To assign project personnel:

1. On the Main Menu, check to see that the project displayed at the top of the page is correct. To select a project, click on the Project link in the upper left hand corner of the Main Menu page. The Project Search Criteria page is displayed. Choose your project from the Assigned Project drop down list and click on the Search button. You can also access your project by typing in the project number in the Project ID text box or typing the PCN number in the PCN text box. You will only be able to assign personnel to projects assigned to you.
2. Once you have picked the project, click on the Project Personnel link. The Project Personnel page is displayed.
3. The project engineer's name will be listed under Assigned Personnel. Click on the Assign/Remove Personnel button. The Assign Project Personnel page is displayed.
4. A list of available personnel is displayed in alphabetical order along with their user ID's. To assign personnel to the project, click in the check box in the Assign column.
5. Click on the Save button. If you have tied projects, a dialog box will display asking if you want to update all tied projects. Clicking on yes will assign the personnel chosen to all projects tied to the one shown at the top of the page. If you choose no, you will need to assign personnel to those projects separately.
6. After the assigned personnel are chosen and saved, you will be returned to the Project Personnel page. All personnel assigned to the project will now be listed alphabetically under Assigned Personnel.

If a project engineer is assigned to multiple projects or a large project with several tied project numbers, it is possible to change projects or subprojects from any location within the CARS programs.

Assign Testing Companies & Testing Company Personnel

The Assign Testing Companies button allows the project engineer to assign individual testing companies access to the Materials Dropbox module in CARS. No other modules in CARS will be available to the testing company. The project engineer should notify the testing company that they have been assigned to the project.

Once assigned, the testing company's CARS coordinator will be able to assign personnel to the project. The assigned personnel will have the ability to add, edit, and view documents within the Materials Dropbox.

To assign Testing Company personnel:

1. On the Main Menu, check to see that the project displayed at the top of the page is correct. To select a project, click on the Project link in the upper left-hand corner of the Main Menu page. The Project Search Criteria page is displayed. Choose your project from the Assigned Project drop down list and click on the Search button. You can also access your project by typing in the project number in the Project ID text box or typing the PCN number in the PCN text box. You will only be able to assign personnel to projects assigned to you.
2. Once you have picked the project, click on the Project Personnel link. The Project Personnel page is displayed.
3. Click on the Assign/Remove Personnel button. The Assign Project Personnel from Testing Companies page is displayed.
4. A list of available personnel is displayed in alphabetical order along with their user ID's. To assign personnel to the project, click in the check box in the Assign column.
5. Click on the Save button. If you have tied projects, a dialog box will display asking if you want to update all tied projects. Clicking on yes will assign the personnel chosen to all projects tied to the one shown at the top of the page. If you choose no, you will need to assign personnel to those projects separately.
6. After the assigned personnel are chosen and saved, you will be returned to the Project Personnel page. All personnel assigned to the project will now be listed alphabetically under Assigned Testing Company Personnel.
7. These users must also be added to the "Assigned Testers" section within Project Personnel for their name to be shown in the Tester/Inspector dropdown in the "Document Entry" section of the Materials Dropbox. See next section for details.

Assigned Testers

The Assigned Testers section populates the 'Tester Name' dropdown within the CARS Materials Dropbox. Testing personnel must be added to this section even if they appear above in the Assigned Personnel page or the Assigned Testing Company Personnel above. If they aren't added, their names won't appear as an option in the Materials Dropbox and they won't be able to upload their results under their name.

The Tech ID is required.

1. Click "Assign Testers", then enter the Tester's name and Tech ID.
    a. The Tech ID can be found on the NDDOT website under Materials and Research Division Technical Certification.
2. Click "Add" to add the tester to the Assign Testers section of the project personnel page.

Change Projects/Subproject Selection

To change the project or subproject selection:

1. To change the project
    a. Click on the Project link
    b. The Project Search Criteria page is displayed. Pick the project by:
        i. Choose the project from the Assigned Project drop down
        ii. Type in the project number in the Project ID text box
        iii. Type in the project control number in the PCN text box
        iv. Click on the Search button
2. To change the Subproject
    a. Click on the Subproject link
    b. The Subproject Selection page is displayed. All subprojects for the project chosen are

displayed under Subproject Search Results. Click on the link for the subproject.

c. The Project Search Criteria is also displayed on this page. If the project is changed from this page, the subprojects displayed will change to the ones for that project.

The CARS Main Menu is divided in two distinct categories – Maintenance and Reports. The Maintenance side of the menu is used to make entries into CARS and create reports for the information entered. The Reports side allows you to access any report already created from previously input information. Instructions for use of the various Maintenance and Report functions will be listed by type in subsequent sections of this manual.

CARS/FILENET FILE STORAGE

The NDDOT uses an electronic document management system (Filenet) to store construction project records. All files uploaded to CARS are stored in Filenet.

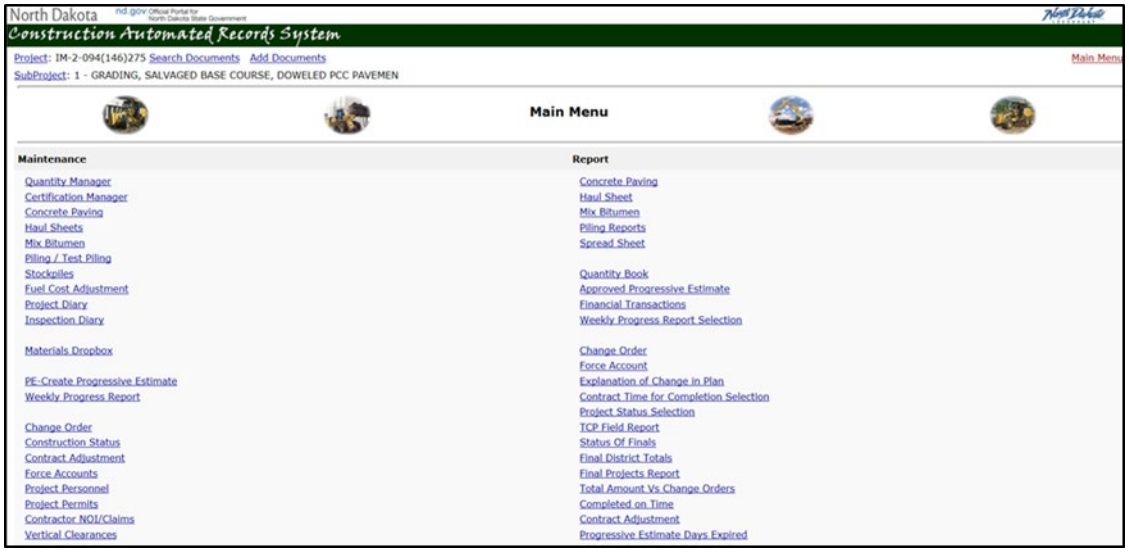
Filenet document management shall be used for all NDDOT projects where the Contract is signed by the Director. Use of Filenet is not required on Local Agency projects.

A modified version of Filenet has been incorporated with the CARS program. This will enable all users in CARS to add, search and store project records to Filenet while using the CARS program.

There are two functions available on the Main Menu for accessing Filenet in CARS. They are the Search Documents link and the Add Documents link.

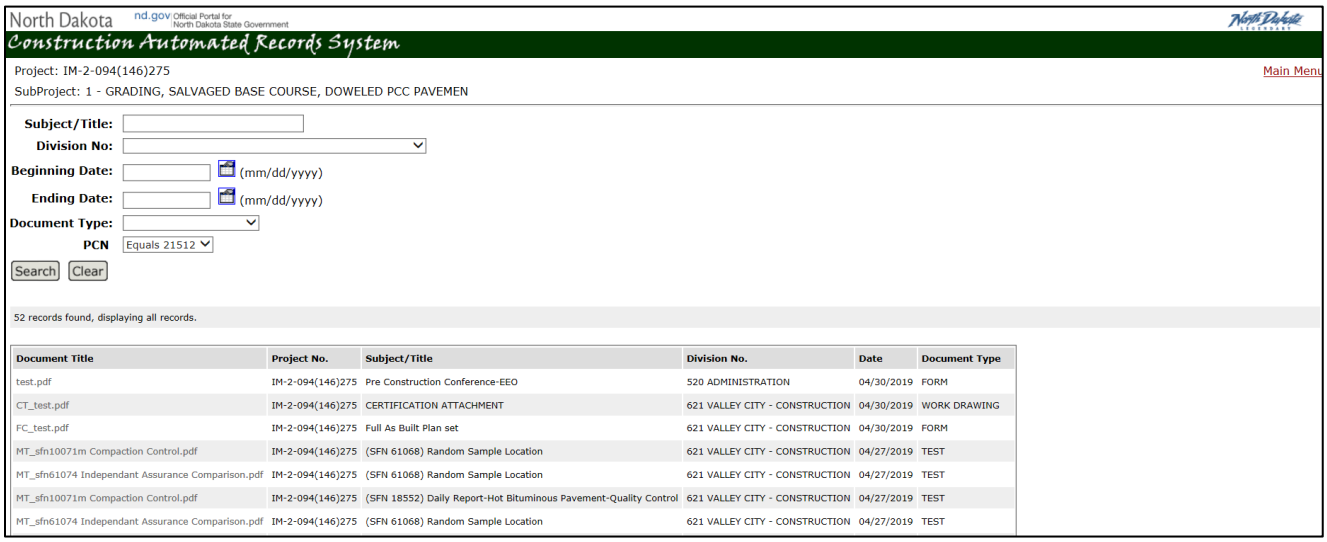
Search Documents Link

All CARS users will be able to view project related documents stored in Filenet/CARS. Project related documents from the bid opening date forward will be displayed in the Search Documents link located at the top of the CARS Main Menu. (see below)



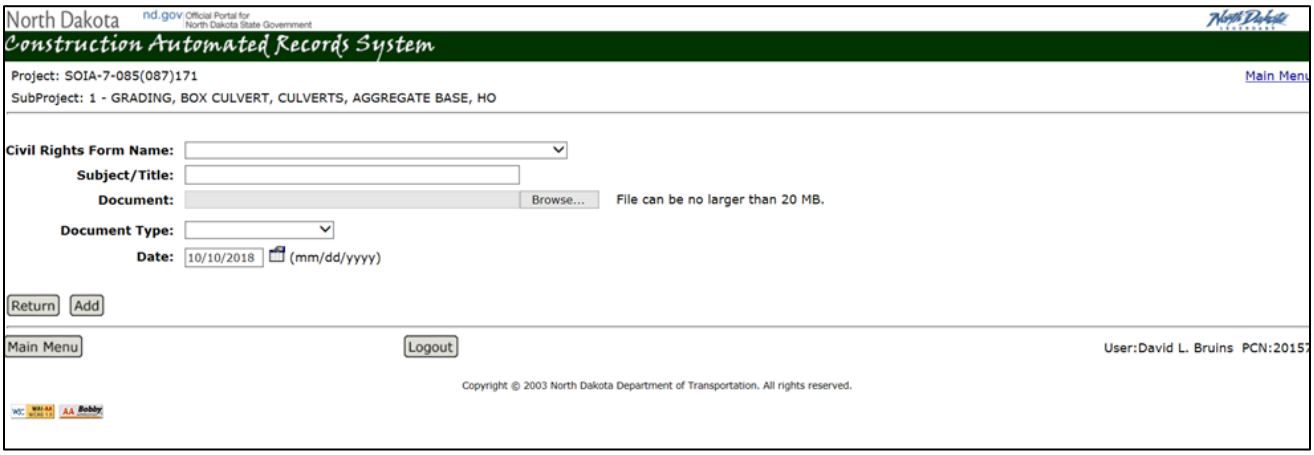
Users are able to refine the search results by choosing several options. They are Subject/Title, Division Number, Beginning and Ending date, and Document Type. Users may enter one or all of the criteria to refine their search. Click the Search button to retrieve the results.

To view the documents, click the document title. The ability to open several documents at one time is not available. See sample below:



Add Documents Link

The Add Documents Link is where CARS users will add electronic project documents into CARS. Users are required to give each document a Subject/Title. A document type is also required, a drop down box is available to define the document type. The users will then click the Browse button to search their PC's for the source documents location they are saving to CARS. The final step is to click the Add button, this will store the document into CARS. The preferred file formats are (tiff, pdf, xlsx, docx). The files should not exceed 20 MB. Once a document is added, it cannot be deleted unless the user contacts Construction Services.



The Department of Transportation's retention on project records is: 3 years after FHWA final payment, then microfilm. Retain microfilm for 75 years after date filmed. To ensure that quality records are put to microfilm, the DOT recommends the following scanning standards:

1. 300 dpi
2. Tiff Group 4 compression
3. Color only if necessary (detailed maps/photos)
4. Pdf

Materials Dropbox

The Materials Dropbox in CARS is a specialized version of the "Add Documents" section. The Materials Dropbox enables CARS users to easily upload completed materials test reports. Files are uploaded using the Document Entry tab. The Document Viewer tab can be used to filter and view all tests that have been uploaded. The link to the Materials Dropbox is found on the CARS home page under the Inspection Diary link.

All materials tests must be entered using the Materials Dropbox. Materials Dropbox places the reports into CARS (Filenet) with the properties correctly populated based on the selections made from the entry screen. Using the Materials Dropbox creates consistency in the materials document Filenet property fields and makes it easier to find documents when needed.

Forms completed on paper should be scanned and uploaded. Files completed on a computer or iPad can be uploaded directly into the Materials Dropbox as a pdf. The recommended naming convention for testing result files is:

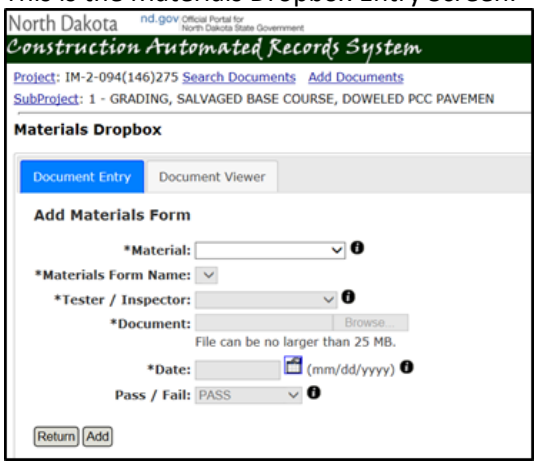
- Spec-Code_Lot#
    - Example: 302-120_Lot 4

There are times when combining tests into a single pdf is recommended. Examples:

- All tests for a day's lot of aggregate tests could be combined into one pdf.
- All soils tests for the day could be combined into a single pdf.
- The 3 sublots for gravel gradations should be combined into one file for the lot.
- The asphalt paving workbook – if a district chooses to create a PDF of the spreadsheet.

Completed test results should be uploaded into the Materials Dropbox by the end of the day when the test is completed. The sooner the results are uploaded, the sooner Project Engineers, District Materials Coordinators, and others will have access to reviewing the results. Each District may have their own preferred operating procedure. Check with the district Materials Coordinator for preferences on how they'd like to see materials tests entered.

This is the Materials Dropbox Entry Screen:



1. Material: Select Aggregate Base Course, Asphalt Pavement, Concrete, or Soils.
    a. The majority of materials testing reports fit into these categories. Miscellaneous test results can be entered into FileNet using the Add Documents link at the top of the page.

2. Materials Form Name: Select the SFN form of the test which is being uploaded.
    a. This dropdown is populated based on the Material selected. (If Concrete is selected, only Concrete forms will appear in the dropdown.)
    b. Some forms appear in more than one category.

3. Tester/Inspector: Enter the name of the tester/inspector that completed the test
    a. This dropdown is populated by the "Assign Testers" section within Project Personnel. Names will not appear here until the Project Engineer adds them into the Assign Testers section.

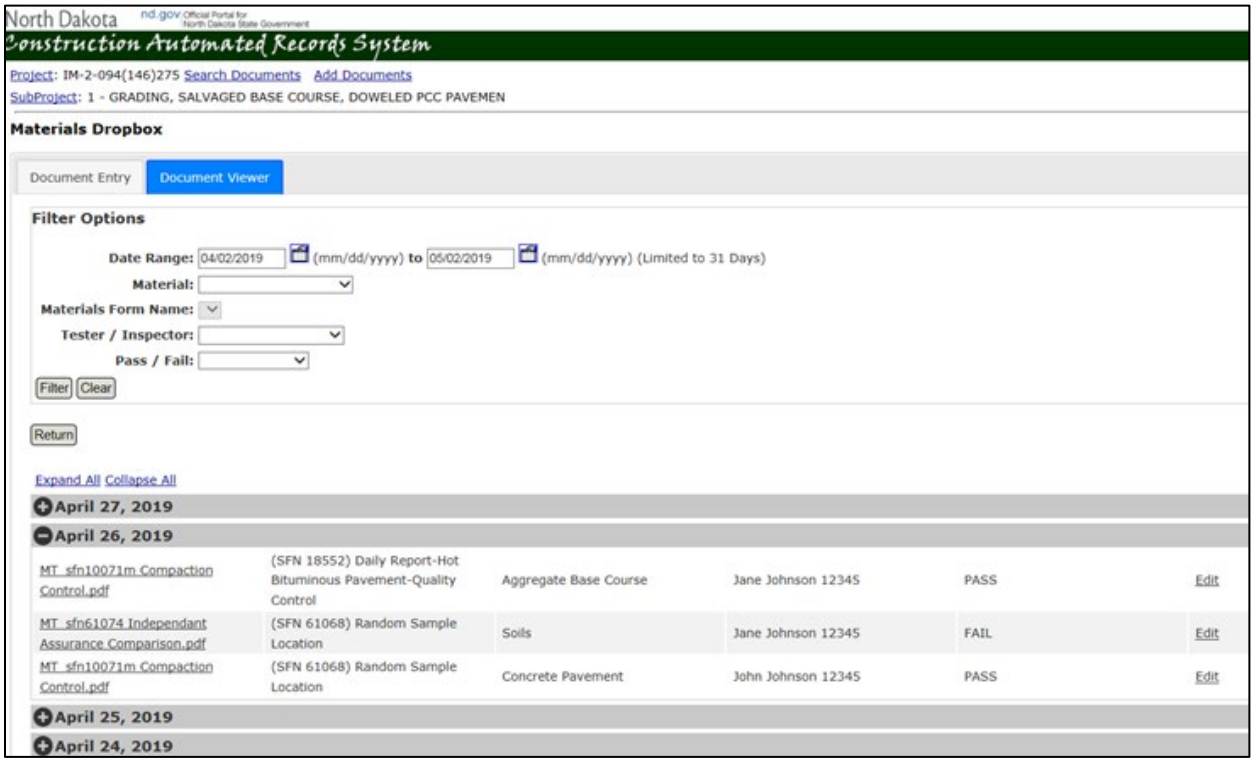
4. Document: Upload the completed document.

5. Date: Enter the date the material was sampled.

6. The Pass/Fail section is not required to add the document. Some tests are informational; these can be left blank. Some lots or tests will be entered together in groups (such as the Asphalt Paving Workbook.) These can be tagged with "Combination" if there is a combination of passing and failing tests.

7. Click "Add" to add the test.
    a. It will now be available for viewing within the Materials Dropbox Viewer tab and in Filenet.

The Document Viewer tab displays the test results organized by date as shown below.



There are many filter options available to narrow down tests by date, material, tester, etc.

Materials test reports cannot be changed after they are entered but a report can be deleted by CARS users assigned to the project. Reports can be deleted until the Construction Status of the project has been changed to Completed. Only district Materials Coordinators can delete tests after the CARS Construction Status has been changed to Completed.

Filing System

When scanning and storing documents in CARS, once it is verified that the document has been uploaded, it should not be included in the paper project files. Paper documents should be stamped with a red star as they are uploaded to CARS. This will help identify documents that have been scanned and do not need to be retained or included with the final paperwork.

All Project Engineers shall store the following construction project records documents in CARS:

1. Preconstruction Meeting Minutes.
2. Correspondence. Project correspondence, including emails, shall be stored in CARS/Filenet. Any documents received should be scanned and stored in CARS/Filenet in a timely manner. Do not store draft documents.
3. Weekly Progress Reports. This will be the original progress report with the project engineer signature and contractor's signature.
4. Certifications and submittals should be stored in the CARS system using the Certification Manager Module.
5. Schedules: Schedules and updates prepared in accordance with Section 108.03, "Progress Schedule"
6. Inspectors Diaries should be created in CARS on a daily basis.

   a. In the rare case where paper diaries are created, they should be scanned and saved into CARS/Filenet. They should be saved in CARS/Filenet once a week per contractor/subcontractor.
7. Project Diaries. These diaries are required to be entered into CARS on a daily basis by using the Project Diary selection on the CARS Main Menu.
   a. In the case of projects that are not set up in CARS, such as an emergency project, the project diaries will be scanned and stored in Filenet using the criteria listed below.
   b. Project number must be on each page.
   c. Legibility is not to be compromised.
   d. Diary entries must be scanned into Filenet daily.
8. Materials Testing Results: Use the Materials Dropbox in CARS to upload completed materials forms. Forms completed on paper should be scanned and uploaded. Files completed on a computer or ipad can be uploaded directly into the Materials Dropbox as a pdf.
   a. Other materials forms can be uploaded into CARS/Filenet using the Add Document feature.
9. Change Orders. Use the Change Order module in CARS to create, enter, and sign Change Orders.
10. Piling logs. Any piling logs that are not in the CARS system shall be scanned and stored in CARS/Filenet.
11. Bench Mark books. All field books used for bench marks shall be scanned and stored in CARS/Filenet.

The following are CARS/Filenet suggestions for adding these documents:

Document	Subject/Title	Document Type
Preconstruction Conference	Preconstruction Conference	Correspondence
Correspondence	Subject	Correspondence
Progress Report	Progress Report weekending (Progress Report _05142010)	Report
Inspection Diary	Inspector Contractor weekending (Johnson_ Gowen_07242010)	Forms
Project Diary	Engineer Project Diary day (Johnson Project Diary_07022010	Forms
Piling Logs	Piling Logs	Forms
Bench Mark Books	Bench Marks	Field Book

FINAL RECORDS

The vast majority of project records are now maintained in CARS/Filenet. All construction project records not stored in CARS should be sent to Construction Services during the final records process. Final paperwork required on the Final Records Checklist should be uploaded to CARS in the Final Checklist Module. See Section 7 of this manual for more information.

CARE OF COMPUTER EQUIPMENT

Proper care and treatment of computer equipment is essential to keep it in proper working condition. The following list of precautions will help keep computer equipment in good working order.

1. Computer equipment is particularly susceptible to weather conditions such as extremes in heat or cold, dust or wet conditions.
2. Make sure computer equipment is secure in field offices or vehicles. Lock the field office or the vehicle when unattended.
3. Computer equipment can be vulnerable during electrical storms especially in the field office setting. It's a good practice to turn off and unplug the computer during an electrical storm or when you leave the office for the day. Although surge protectors are an essential part of protecting your computer, they will not save it from a lightning strike.
4. DO NOT spray window cleaner directly on the screen of the monitor or the display on a laptop as it can damage or destroy this equipment. Cleaning supplies used specifically for monitor screens and laptop displays can be obtained from Supply.

REPAIRS AND OTHER PROBLEMS

Any hardware or software problems that occur should be handled by contacting the NDDOT Help Desk at 328-HELP (4357). If the Help Desk can't assist you at the time of the call, they will log the problem and a technician will be assigned to your problem and will work with you until it is resolved.

Any problems with the CARS programs should be directed to Construction Services Division at 328-2563.

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EXAMPLE PRECONSTRUCTION CONFERENCE AGENDA ..... **Error! Bookmark not defined.**

CONSTRUCTION STATUS

The Change in Status is used to start, suspend or resume time charges on a project or to indicate that the project is completed.

Depending on the type of completion date shown in the bidder's proposal, time charges for a project begin on:

- The date shown on the Time for Completion page of the bidder's proposal for the project
- The proposed starting date indicated by the contractor on the Proposed Progress Chart. This chart is found in the bidder's proposal.

-OR-

- The actual date work starts on the project

Use whichever date is the earliest.

Time charges may be suspended when the contractor will not be working on the project for a prolonged period of time. Time charges are most commonly suspended for the winter months when conditions are unfavorable for project work to continue. It could also be used if time charges are started for some preliminary project work that is performed and completed and the rest of the project work will not begin for some time.

Quantities can be entered into CARS and progressive estimates can be generated when time charges are suspended. Weekly Progress Reports cannot be made until time charges are resumed.

Time charges are resumed whenever the project has been in a state of suspension and the contractor starts working again.

The status of the project is changed to Completed when all work has been finished. Weekly Progress Reports cannot be made after this date but quantities can be entered and estimates can be made.

The start date entered in the Change of Status will be used to compute time charges on the Weekly Progress report. The start and completion dates are also used on the Project Time for Completion.

The status of a project can be viewed in CARS at any time.

Enter/Change Construction Status in CARS

To enter or change the Construction Status:

1. From the Main Menu, click on the Construction Status link. The Construction Status Selection Page is displayed.
2. Click on the Add button. The Construction Status Maintenance page is displayed.
3. In the drop down box for Status, pick if the project is Started, Suspended, Resumed or Completed.
4. Enter the date of the status change.
5. Enter remarks about the status change. Remarks are required when the project is suspended.

If project work has not started and it is necessary to process a progressive estimate to pay for items such as contract bond or stockpiled material, the construction status must be shown as Started in order to generate the estimate. After the estimate has been made, change the status to Suspended using the same date as the Started date. This must be done so the project doesn't appear on the Road Construction Map or get reported on the 511 system. When actual work starts on the project, a construction status of Resumed will be added with the date on which times charges start from the contract documents or the actual date work starts on the project, whichever is earliest.

The last change of status can be edited up until the time when the project status is changed again.

PRECONSTRUCTION CONFERENCE

Before the preconstruction conference, the Responsible Charge shall conduct a one-on-one meeting with the engineering staff. The details for this meeting are given in Section 1 of this manual.

Requirements for the preconstruction conference are outlined in Standard Specification 108.02 including a list of submittals that need to be received either prior to or at the preconstruction meeting. The purpose of the preconstruction conference is for all interested parties to review contract requirements, construction details, proposed work schedule and other project related items.

Representatives from the following organizations are typically invited to the conference:

1. DOT
2. The prime contractor and subcontractors
3. City and/or county
4. Utility companies
5. Railroads

Standard Specification 108.02 requires the contractor to notify the parties of the meeting, but it is good to verify that interested parties have been invited. The project engineer will conduct the conference and keep notes on items discussed. The project engineer will send a memo summarizing items discussed to the Prime Contractor with copies to any subcontractors. Original to be put in CARS/Filenet.

Good communication between the DOT and the contractor at the preconstruction conference can get the project off to a good start. Participants need to come prepared to make worthwhile contributions to the conference. As the moderator, the project engineer must conduct the meeting in a business-like manner while completing the scheduled agenda.

A general Preconstruction Conference Agenda template has been provided at the end of this section and is intended to be used as a general guideline only. When using the provided template, the project engineer should take time to customize the form to reflect the special provisions, specifications, plan notes, bid items, and unique conditions of the project. The project engineer should also include any items that the District Construction Engineer would like emphasized.

A general outline of information to be discussed at the conference and included in the memo is listed below. Additional items may be added depending on the type of project.

1. Project number.
2. Date the conference is held.
3. List of those attending the conference and their organization.
4. Collect list of key project personnel and their phone numbers including individuals in Responsible Charge. Collect Email address from the Prime Contractor (used for sending copies of CARS Approved Estimates, see Section 5 of the manual on creating progressive estimates)
5. Collect Quality Control Plan and Personnel (if applicable).
6. Collect list of pits and COAs.
7. Collect list of subcontractors and suppliers.
8. Utilities – Review any utility concerns.
9. Erosion and Water Pollution Control –
    a. The contractor should submit their Erosion Control Plan and where applicable, their Storm Water Pollution Prevention Plan. Additional information on erosion control and the storm water pollution prevention plans can be found on the North Dakota Health Department's website
    b. Discuss erosion control special provisions.
    c. Collect and review water permits.
10. Discuss the contractor's safety and sanitation policy. Collect a copy of their company policy. The discussion should include:
    a. Basic safety requirements such as first aid kits, emergency numbers, trained personnel. The contractor's safety officer should be named.
    b. All workers within the R/W of any road to wear an ANSI/ISEA 107 Performance Class 2 or 3 compliant vest, as stated 107.18.
    c. Sanitation facilities and location.
11. EEO & Affirmative Action Plan/DBE Requirements
    a. The contractor must submit copies of their EEO and Affirmative Action plan.
    b. The EEO Officer will be named.
    c. DBE participation goals will be discussed
    d. SFN 9423 Pre-Job Conference (if applicable) – Equal Employment Opportunity, Labor Standards, and DBE Participation Information form will be reviewed. The prime contractor and all subcontractors present will sign the form. The signed form must be uploaded through CARS within 15 days. Copies will be sent along with the preconstruction conference memo to the contractor and subcontractors.
    e. Work site bulletin board and poster requirements will be discussed. Posters will be furnished for the contractor and all subcontractors.
    f. Discuss payroll (if applicable) requirements and submission.
12. Discussion of plans, notes, specifications, special provisions, and procedures
    a. Discuss 104.02, Contract Revisions.
    b. Railroad protective liability insurance.
    c. Procedures for contractor requests to sublet.

   d. The contractor should provide a list of all subcontractors and their work description. The contractor should also provide a list of suppliers.
   e. Discuss the contractor's starting date, work schedule and starting location.
   f. Field laboratory requirements.
   g. Discuss traffic control.
13. Read the top of the Notice of Intent to File a Claim form and hand the contractor a copy of the form. Discuss the terms for submission.
14. (Section 105.02). The contractor should name their superintendent.
   a. The contractor must have a superintendent on the project at all times
15. Discuss progressive estimates. Discussion should include the frequency of estimates, contract requirements which may lead to the withholding of estimates, and the contractor's ability to request more frequent estimates during times of 'high-dollar' work such as asphalt and concrete paving.
16. The project engineer provides the contractor with a list of materials that require shop drawings or certifications.
17. Signing prior to the start of construction
18. Signing and sign maintenance during construction inclement weather
19. Name designated watch person and discuss submission SFN 14634 Traffic Control Watchperson
   a. Review any other applicable specs or areas of emphasis.
   b. Review plan notes and drawings.
   c. Review special provisions.
   d. Discuss haul roads and detours
20. Inspection, maintenance, repair and release procedure
21. Structure Contracts
   a. Discuss applicable specifications such as requirements for pile hammer, welder and electrode certification, surface finish, and cure.

Meeting minutes shall be placed in Filenet by the Engineer after the meeting.

DIARIES

The Project Diary and Inspector Diaries are used to document work progress, site conditions, labor and equipment usage, conversations, instructions, and the contractor's ability (or inability) to perform his/her work. Diaries provide critical information which is necessary to accurately reconstruct the events of the project. The diaries will become an important part of the project records if the project is subjected to audit, investigation, or litigation.

Daily diaries are key to claims avoidance and mitigating damages. Failure to record an event carries with it the implication that the event did not occur or was insignificant and threatens the credibility of the entire log.

Project inspectors, surveyors, and testers should fill out an inspection diary daily. Inspector's diaries should be specific to the items dealt with by each inspector.

The Project Diary should be filled out daily by the Project Manager who has daily contact with the project and project superintendent. The Project Diary should be a summary of the project's pertinent facts and events arranged in chronological order. Anyone reading the Project Diary should be able to comprehend the project status and determine the work performed.

The designated project manager has user rights that allow information to be entered into the CARS project diary. If the designated project manager is absent from the project an alternate may be designated by contacting the CARS administrator in the Construction Services Office. Other users will only have rights to view the information.

Follow these guidelines when writing diaries:

- The diaries are meant to be created on the day the work occurred and updated throughout the day as events happen.
- The Project Diary, Inspection Diaries, & other reports are meant to supplement each other and do not need to contain identical information.
- Diaries and other reports are public record and may be used in case of litigation.
- Include only factual information in them.
- Minimize personal remarks about operations or personnel of the Contractor, Agency, or other organization. Such remarks may be used to demonstrate the inspector was hostile and did not behave in a manner consistent with good faith.
- All Project Diaries will be created in CARS.
- All Inspection Diaries should be created in CARS. Extenuating circumstances could still require paper diaries, but every effort should be made to create inspection diaries in CARS.
- Summarize key points of any discussion of work activities with the Contractor. Conversations and directions become very important when disputes arise.
- Document conversations and instructions received from administrative positions such as Team Leader, Assistant District Engineer, and District Engineer
- Be specific.

Diary entries must include the following:

- Documentation of traffic control inspections including the status of signs and devices, traffic disruptions, deficiencies and corrections, etc. **This item is required.**

Diary entries should include the following when applicable:

- Weather conditions and how weather affected the project. Identify days when crews were sent home or were unable to work due to weather or field conditions.
- Contractor's work force, equipment, and hours worked. Describe inefficient operations and poorly maintained equipment.
- Labor or equipment shortages. Document instances of work being delayed due to lack of equipment or operators necessary to complete the work.
- Equipment breakdowns.
- Description of major construction activity. Include locations and approximate quantities. Describe any extraordinary work being performed.
- Progress of controlling item(s) of work.
- Comments on the progress of operations as compared to the Contractor's approved schedule.
- Suspensions and resumptions of contractor operations. Causes and dates should be recorded.
- Utility operations. Report on their progress, conflicts with contractor operations and any resultant delays, and quality of workmanship as it affects the project.
- Summary of significant conversations. Include orders to the contractor, especially those pertaining to work schedule, work methods, materials, or payment; directions and advice from supervisor, and discussions with FHWA representative, property owners, local officials, and utility and railroad representatives.

- Reports of meetings and conferences. Record all sources of dispute and subsequent decisions.
- Comments on construction safety hazards and corrective measures.
- Unusual or materially different physical working conditions from those expected under the contract. Record all significant information about the working conditions, progress of work, working force, equipment and materials, which would be of value should the contractor file claims for extra compensation.
- Disagreements with the Contractor over work quality or performance, including rejected work or materials and reasons.
- Delays, difficulties, accidents, utility damages, and other unusual conditions.
- Days charged and days worked. If no day is being charged, the reason for lost time days or periods when no work is in progress or no work was accomplished and reasons why.
- Describe factors or conditions that may hinder the Contractor's operations and cause delays. Also, include the time of suspending or resuming work and explanations.
- Major discrepancies in the contract. Necessary changes and subsequent actions taken to correct the situation should be recorded.
- Work or materials accepted or rejected and why.

Enter Project Diary Information in CARS

To make entries in the project diary:

1. From the Main Menu, click on the Project Diary link. The Project Diary selection page is displayed. The most recent 25 diary dates will be displayed by default.

2. Click on the Add Diary button to make a new diary entry. Enter the diary date. Diaries are editable until midnight on the day after it has been created. A diary should be created at the beginning of the work day and updated throughout the day as events occur.

   A project diary should be created for every day, even if no work occurs on the project. Creating a diary and completing the Contract Time field will ensure that the weekly progress report is correctly populated.

3. Remarks: This area of the diary is particularly important and should be updated frequently throughout the day as events occur. Conversations and instructions are especially important to record. Additional guidance about what to include in the diary can be found on pages 6 & 7 of this section of the manual.

4. Contract Time Guidance:
   For **working day contracts:**
   - Enter a Day Charged and Day Worked in accordance with the criteria explained in Specification 108.06 A. 2.
   - If you enter zero for the Day Charged, enter the reason for not charging a working day in the Lost Time Reason text box.

   For **completion date contracts:**
   - Create a Project Diary for every day, including Sundays.
     - If no work occurred on a day, the diary could simply contain short explanation. Example: No work occurred today because it's Sunday.
   - Enter a full Day Charged for every day, including Sundays.

- Enter a full Day Worked for each day the contractor performs work on the project.
- Use the Half Day option if the contractor works for more than three hours, but less than seven hours that day.
- If you enter zero or half day for the Day Worked, enter the reason why the contractor didn't work on this day in the Lost Time Reason text box.
    - It can be especially valuable to note days where conditions were favorable to work but no work occurred.

5. The Weather section should be used to explain how weather affected work on the project that day. It is critical to document instances of weather affecting the project in the Project Diary & Inspection Diaries.

   The inspectors' entries will explain how weather affected the particular contractor or subcontractor they are watching. The Project Diary will reflect the observations of the Project Engineer, and could be more high level than the contractor-specific observations noted in the Inspection Diaries.

   It is no longer necessary to enter temperature three times per day on every day of the project if the temperature didn't have an effect on the project. There can still be situations when temperatures would be important to note. Examples:
   a. Cold temperatures affect asphalt paving
   b. Cold temperatures require the Contractor to cover concrete
   c. Hot temperatures during a concrete pour
   d. Very nice weather but no work occurs

   Other examples of weather affecting the project would be:
   a. High winds prevent the application of straw mulch
   b. Rain shortened work days

   Focus on recording, with specific examples and details, how weather affected the contractor & project. If weather doesn't affect the Contractor, no weather notes are required for that day.

5a. The "Add Rain Gauge" button is used to enter a rain gauge location. The "Rain Gauge Description" is the permanent location of the gauge (Field Office, for example.) Once the rain gauge is created, it is carried forward to all future diaries unless it is deleted. It should only be deleted if the gauge is removed from the project. Deleting the rain gauge does not delete the amounts that have been entered in previous diaries.

   Multiple rain gauges can be added if more than one gauge exists on the project. (An example is if there was a rain gauge at each end of a long project.)

   When a rain gauge amount is entered in the Project Diary or in an Inspection Diary, the amount appears populated in all diaries for that day.

6. Documents: Files may be attached to both inspector and project diaries. Attach photos of the project, notes, or other files pertinent to the day's operations.

Use the file comments field to describe the attachments. For pictures, explain the location and context of what the picture shows.

Enter Inspection Diary Information in CARS

To make entries in the inspection diary:

1. From the Main Menu, click on the Inspection Diary link. The Inspection Diary selection page is displayed. The last 25 diaries will be displayed by default.

2. Click on the Add Diary button to make a new diary entry. Enter the diary date and select the contractor for which the diary is being created. Multiple contractors can be selected to create multiple diaries at once. Diaries are editable for 48 hours after they have been created.

   A diary should be created at the beginning of the work day and updated throughout the day as events occur.

3. Remarks: This area of the diary is particularly important and should be updated frequently throughout the day as events occur. Conversations and instructions are especially important to record. Additional guidance about what to include in the diary can be found on page 6 of this section of the manual.

4. The Weather section should be used to explain how weather affected work on the project that day. It is critical to document instances of weather affecting the project in the Project Diary & Inspection Diaries.

   The inspectors' entries will explain how weather affected the particular contractor or subcontractor they are watching. The Project Diary will reflect the observations of the Project Engineer, and could be more high level than the contractor-specific observations noted in the Inspection Diaries.

   It is no longer necessary to enter temperature three times per day on every day of the project if the temperature didn't have an effect on the project. There can still be situations when temperatures would be important to note. Examples:

   a. Cold temperatures affect asphalt paving
   b. Cold temperatures require the Contractor to cover concrete
   c. Hot temperatures during a concrete pour
   d. Very nice weather but no work occurs

   Other examples of weather affecting the project would be:

   c. High winds prevent the application of straw mulch
   d. Rain shortened work days
   e. A pipe contractor unable to work on pipe due to muddy conditions

   Focus on recording, with specific examples and details, how weather affected the contractor & project. If weather doesn't affect the Contractor, no weather notes are required for that day.

4a. The "Add Rain Gauge" button is used to enter a rain gauge location. The "Rain Gauge Description" is the permanent location of the gauge (Field Office, for example.) Once the rain gauge is created, it is carried forward to all future diaries unless it is deleted. It should only be

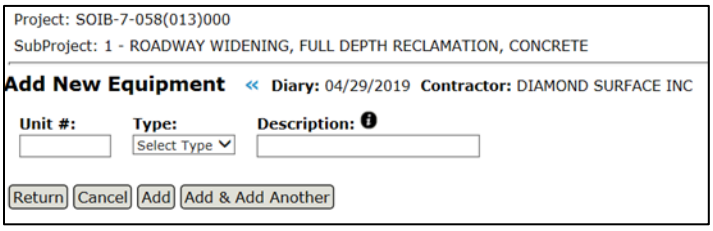
deleted if the gauge is removed from the project. Deleting the rain gauge does not delete the amounts that have been entered in previous diaries.

Multiple rain gauges can be added if more than one gauge exists on the project. (Example: if there was a rain gauge at each end of a long project.)

When a rain gauge amount is entered in the Project Diary or in an Inspection Diary, the amount appears populated in all diaries for that day.

5. Labor Force: Enter the quantity. The comments field can be used to document any issues the Contractor has with their labor force on this day. (Example: An operator shortage.)

6. Equipment: At the beginning of a project, the first step is to enter equipment into the Equipment Inventory. First, click the "Add Equipment" button. Then, click the "Add New Equipment to Inventory" button. This leads to the following screen:



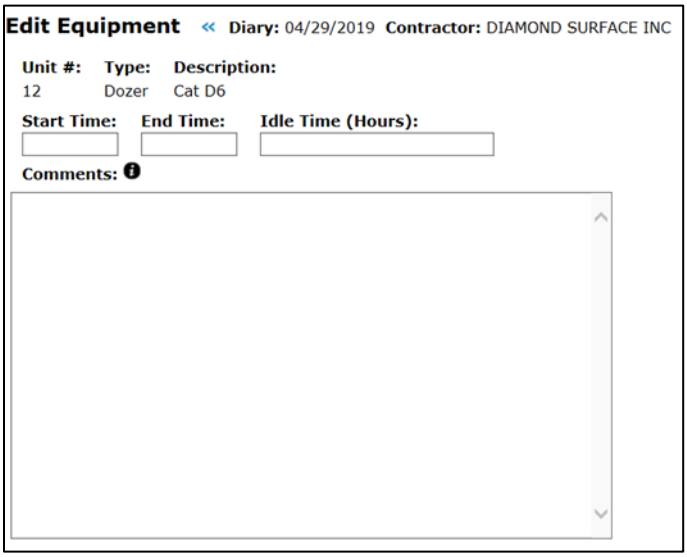
This screen is used to add equipment to the inventory (and Master Equipment List).

a. There are a limited number of options available in the "Type" drop down.
   i. The focus of everyday equipment tracking should be to track start and end times, etc. for the major pieces of equipment shown in the "Type" dropdown. These major pieces (Scrapers, Dozers, Cranes, etc.) are the most likely to become important in a dispute situation.
   ii. In-depth tracking of minor pieces of equipment not shown in the dropdown (like pickups) may be necessary in NOI or force account situations, but this tracking is not required on an everyday basis.
b. Enter the "Description" in the format of Make & Model. (Example: Cat D6) It is important to enter this information correctly because this information populates the Master Equipment List and will be carried forward to all future diaries.

Clicking "Add" adds the equipment to the diary for that day and also adds it to the Equipment Master list. The Equipment Master List contains an inventory of all equipment which has been added to the project for each contractor. It can be accessed by the button at the top of the Project Diary and Inspection Diary home pages.

Once equipment has been added to the diary the Start-End Time, Idle Time, and Comments are added by clicking the "Edit" button.

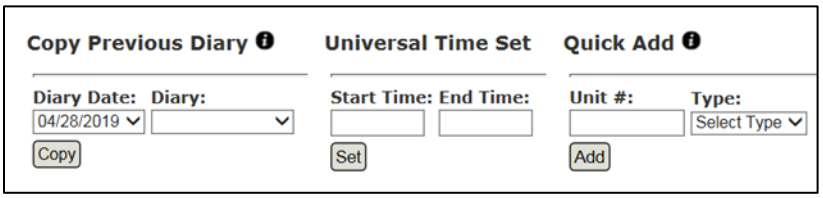
The Edit button leads to the following entry screen:



It is important to track the "Start Time" and "End Time" as accurately as possible for each major piece of equipment. As stated above, the focus of everyday equipment tracking should be to track start and end times, etc. for the major pieces of equipment. These major pieces (Scrapers, Dozers, Cranes, etc.) are the most likely to become important in a dispute situation.

The "Idle Time" and "Comments" are particularly important. Use these fields to track and document any issues the Contractor has with their equipment. Examples would be breakdowns, equipment stuck in the mud, etc. In cases where the contractor is performing multiple operations at the same time, it can also be very helpful to use the Comments field to state which operation the equipment is working on. (Example: Was a particular scraper working on Common Excavation or Borrow Excavation?)

Once the equipment has been entered into a diary, it can be easily brought forward to subsequent diaries by using the "Copy Previous Diary" button. This feature allows the inspector to import an equipment list from any of the last 4 diaries created for that contractor (whichever contractor the current diary is for). It also allows equipment to be imported from another inspector's diary for this particular contractor within the last 4 diaries. (Example: If another inspector created a diary for a contractor on Saturday, but on Monday you are responsible for the contractor's diary, then you are able to import the equipment list used by the other inspector using the Diary dropdown.)



The "Universal Time Set" can be used to quickly enter the Start-End Time for a list of equipment which worked the same hours.

The "Quick Add" feature can be used to add a piece of equipment to the day's diary. It is for equipment that has been previously added to the equipment inventory, but is not listed in the current diary. The "Type" is only required if the same Unit # exists on multiple types of equipment (Example: A Dozer and a Scraper both have Unit # of 1.)

The "Active" check box can be un-checked if a piece of equipment is onsite but not being used on this day. The equipment will still be carried forward to the next day if the "Copy Previous Diary" feature is used. A piece of equipment can be deleted out of the list if it leaves the site. Even if a piece of equipment is deleted from the day-to-day list within an inspection diary, it still exists within the Master Equipment List and can easily be re-added to a diary using the "Quick Add" feature (explained below.)

Amending Diary Entries

Diaries are closed at midnight on the day after they are created. Additions or corrections to diaries after they are closed can only be made by using the Amend feature.

1. From the Diary Selection page, click on the diary date where you want to add information. The Diary home page is displayed. Click on the Amend button at the bottom of the page to begin the Amendment process.
2. Amendment notes are required. Describe why the amendment is needed and what is being changed in the diary. Click Save – this will unlock the diary, bring you to the diary entry screen, and show the fields enabled for editing.
3. The changes will be tracked. Amended sections will be highlighted in yellow when the diary is viewed.
4. An "Amend History" dropdown will appear at the top of diary. This feature will track and display previous versions of the diary.

Additional information:

- A diary is unlocked until midnight on the day after the diary is opened. After that, it returns to closed status.
- A user can only amend their own diary.
- It is possible to amend a diary more than once. Each version will be tracked by CARS.
- Contract time can only be amended in the diary until the weekly progress report has been run.

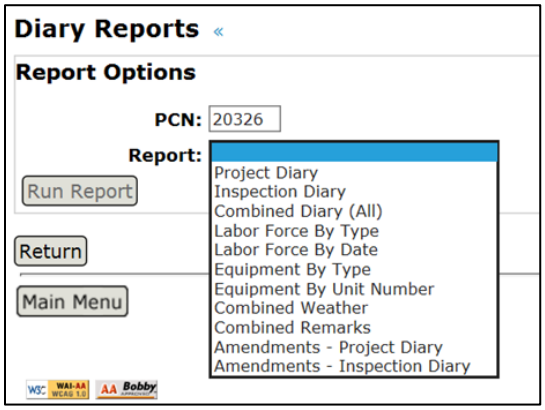
Diary Reports

There are now three links on the CARS main menu for diary reports. The links are found on the right-side column of CARS under "Reports". The options are:

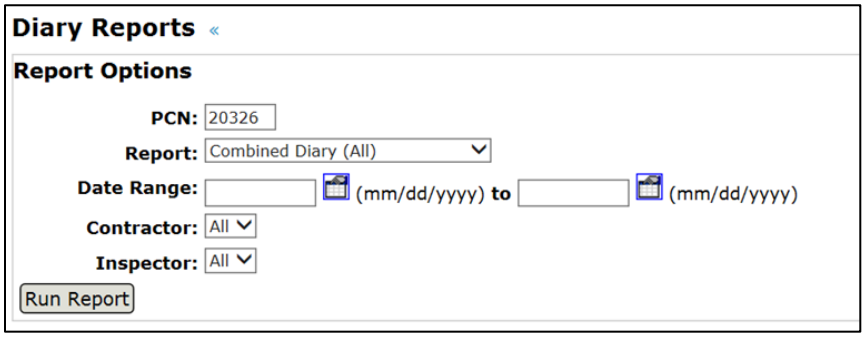
Pre-2019 Reports: These links must be used to create diary reports for any project bid prior to the diary updates in CARS. The "Pre-2019" projects are projects bid before October 2018. These reports are created by entering a PCN. CARS then creates a .pdf which shows all diaries created for that PCN.

Diary Reports: This is the link used to create diary reports for all projects bid after October 2018. Projects bid after October 2018 have the updated environments for creating project diaries and inspection diaries.

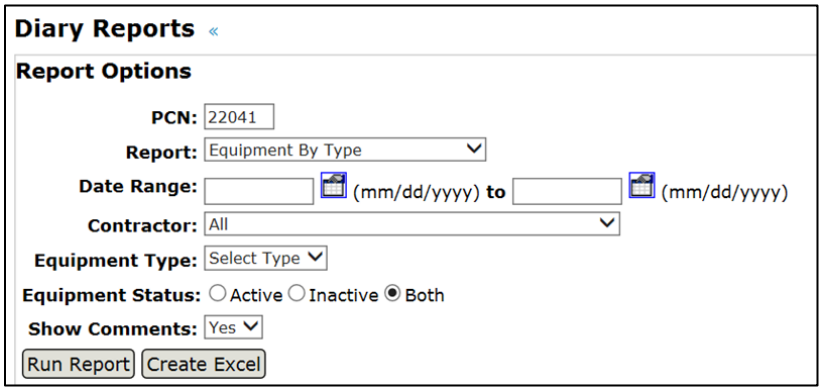
There are now many different report options available to find different types of information and run different types of reports. The report options are visible after entering the PCN of a project (as shown below.)



There are also many filtering options available within the different types of reports. For example, it is possible to filter the diaries by date range, contractor, inspector, and many other options depending on which type of report is being created (as shown below.)



Several reports have the option to create an Excel file which contains the requested information (Create Excel button shown below.)



The Excel option can be useful for creating graphs or charts. Examples: To show a change in the number of operators over time or a change in the number of scrapers over time.

SCHEDULES

Schedules should be submitted by the Contractor and reviewed by the Engineer in accordance with Section 108.03 of the Standard Specifications. If the schedule doesn't meet the contract requirements, it should be returned to the Contractor for revisions. If the Contractor fails to prepare and submit a progress schedule that is acceptable to the Engineer as required by the contract, the Engineer should withhold progressive estimates until the Contractor submits an acceptable schedule.

Schedule updates should be provided by the contractor every month in accordance with 108.03 B. 4.

All schedules (and related information such as narrative reports) should be entered into Filenet for storage.

WEEKLY PROGRESS REPORTS

The Weekly Progress Report is used to track work progress and time charges on the project. The progress report shows the monetary amount of contract work completed and also expresses it as a percentage of the total original contract amount. The progress report shows the contract completion date along with the number of working or calendar days available. Important functions of the progress report are to show days charged and worked on a weekly basis, keep track of the total number of days charged and show the percentage of time expired.

Signature Requirements

Progress reports are required to be signed for working day contracts, calendar day contracts, and completion date projects with guaranteed working days.

Progress reports for completion date projects without guaranteed working days do not need to be signed. The report should be generated and will automatically be stored in CARS.

When a project enters liquidated damages, summarize the weekly and total liquidated damages charges in the remarks section and obtain the contractor's signature regardless of project type.

Time Charges

The method used to determine time charges on construction projects is specified in the contract and can be found in the request for proposal for the project. The three methods of determining time charges commonly used are:

1. Working Day Contracts
2. Calendar Day Contracts
3. Completion Date Contracts

Project time charges for working day contracts, calendar day contracts, or completion date projects with guaranteed working days begin on:

- The date shown on the Time for Completion page of the bidder's proposal

OR

- The actual date work starts on the project from the Construction Status whichever date is earlier.

You should also check the Time for Completion page in the project proposal. Some projects have additional details as to how time charges are assessed and these would supersede the methods in the Standard Specifications and the CARS program.

For instructions on assessing working days and time charges on the project, refer to Section 108.06 the Standard Specifications.

Days charged and days worked are entered in the boxes provided when creating the project diary. Whole days or half days may be entered. Days worked should be recorded for all projects. When the project engineer uses the Project Diary to enter days charged and days worked, the days will automatically be filled in on the progress report.

On contracts with tied projects, progress reports will be made for each project number on the contract. Days charged will be the same on all projects as the time charges are assessed for the contract not the project. The days worked shown may be different for each project number on the contract as the contractor may not work the same number of days on each project.

Remarks Section

The progress report also has Remarks sections. Use the main remarks section to summarize the project work performed by the prime contractor and any subcontractors working on the project.

When a project enters liquidated damages, summarize the weekly and total liquidated damages charges in the remarks section and obtain the contractor's signature regardless of project type.

The progress report divides all contract items into work detail categories and shows the percentage of the total contract each category represents. These work details are grouped by spec and code and the number of categories shown on the progress report will depend on the work items on the project. The Work Detail Categories Chart on page 14 shows the spec/code divisions for each category. When the progress report is created, each work detail included for the project has a remarks area to enter a short description of the work being done on the items in the work detail category. For example, the project includes the work detail category for Bituminous Pavements. A remark could be entered describing the mile numbers being paved or that the contractor was paving approaches. It is not required that information be entered in the Work Details section.

Submission of Weekly Progress Reports

When required, the Weekly Progress Report will be signed by the Contractor and the Project Engineer and uploaded to CARS. The Contractor's signature indicates that he has reviewed the time charges for the week represented by the report and is in agreement. The Contractor should also receive a signed copy of the report.

Create Weekly Progress Report in CARS

To create the Weekly Progress Report in CARS:

1. From the Main Menu, click on the Weekly Progress Report link. The Weekly Progress Report Maintenance Selection page is displayed.
2. To create a new weekly progress report, click on the Add New Report button. The Weekly Progress Report Maintenance page is displayed.

3. The week ending date will be displayed. A date for the week ending will be displayed or the date can be entered. When the week ending date is correct, click on the Submit button.
4. The next page displays the report number and the week ending date. The following information will be entered:
    a. Days worked and days charged can be entered. If the project diary is being used to document days worked and days charged, those will be shown here.
    b. The remarks text box is used to summarize the contractor's work activities for the week.
5. After this information is entered, there are two options for saving and running the report:
    a. Click on the Save and Run Report button. The information is saved and the Weekly Progress Report is generated for printing.
    b. Click on the Save and Continue button. The Work Details page is displayed which lists the various works item categories for the project. Each item has a text box where a short description of work activity for that category can be noted. The table at the end of this section shows the spec and code items covered in each work details category.
    c. Click on the Save and Run Report. The information is saved and the Weekly Progress Report is generated for printing. You can also click on the Save button and the report can be printed later. The most recent report can be edited until a new progress report is created. Any report can be viewed and reprinted at any time by clicking on the week ending date on the Weekly Progress Report Maintenance Selection page.

Work Detail Categories Chart

The following chart shows the spec and code ranges associated with the work detail categories shown on the weekly progress report.

Description	Beg Spec	End Spec
General Provisions	100	199
Removals and Earthwork	200	230
Erosion Control	251	265
Bases	300	399
Bituminous Pavements	400	499
Concrete Pavements	500	599
Structures	600	699
Drainage	714	714
Guardrail	764	764
Mobilization and Traffic Control	702	704
Concrete Work	748 750	748 750
Water and Sewer	722 724 744	722 724 744
Misc.	706 714 720 744 752 760 762 766	706 714 720 744 752 760 762 766
Signing, Lighting, Signals	754 770 772	754 770 772

900 Provisions	900	999

CONSTRUCTION PROJECT ROAD CONDITIONS REPORTING

The Work Zone section is used to enter remarks about construction activities affecting the traveling public. The project engineer is responsible for reporting on the work zone conditions on a project. This information needs to be submitted at the start of a project and updated whenever road conditions change to ensure the information is always current.

The information entered in this section is displayed to the travelling public on the State Travel Information Map on the DOT website. The Width, Height, and Length Restrictions are tied to the NDDOT's permitting programs. Therefore, it is very important to keep this information updated to reflect the actual conditions which exist on the project.

Change the Map Status to Off Map at the completion of the work.

To update Work Zone information in CARS:

1. Select Work Zone on the main menu
2. Fill out applicable text boxes and drop down selections. Some guidelines include:
    a. Map Status – Any projects affecting traffic should be marked 'On Map'
    b. Delay Time should be entered for stopped traffic conditions
    c. When entering restrictions, consider how oversize loads will be affected. If the project is large and covers multiple routes or major intersections and the restriction only covers a portion of the project, the restriction should be entered by the District using the Road Condition Reporting System.
    d. Map Comments section will appear on the public travel map. List any conditions or concerns that might benefit the traveling public. Contact information of project personnel and details for oversize loads can also be placed here.
3. The Work Zone section of CARS is limited to the project boundaries as defined in Mainframe. At times, a project will impact traffic outside these defined project limits. In these cases, the Team Leader will need to add a Maintenance Activity to the road map. To do this, select Maintenance Activity on the main page. Click add Maintenance Activity, fill out applicable fields, and click save. This will show up on the road map separate from the project and will need to be removed separately as well.

TRACKING PROJECT PERMITS IN CARS

Many construction projects require permits from various state and/or federal agencies. These permits must be maintained until the activity that they cover is completed. Once these activities have been completed, the permits must be terminated. This CARS module is used to track the status of all project permits.

Three main permit types have been established in the system. One is the Construction General Permit issued by the North Dakota Department of Health (NDDoH) for non-tribal lands. The second is the Construction General Permit issued by the United States Environmental Protection Agency (EPA) for tribal lands. The third is the 404 Permit issued by United States Army Corps of Engineers (USACE).

Once a permit is received for a project, the Project Engineer shall enter the applicable permit information into CARS. For projects that are located inside tribal lands, the EPA permit will be required. If the project is on both tribal and non-tribal lands both the NDDoH and EPA permits will be required. The permits must be recorded separately. Once the permitted activity (land disturbance or impacts to waters of the U.S.) is completed, the Project Engineer should terminate the permit according to the instructions contained on each individual permit.

Before terminating a Construction General Permit, the Project Engineer must conduct a field review and fill out Form SFN 60504, Stormwater Permit Termination Field Review Checklist. This form must be signed and added to the project record in CARS using the add documents link. The Project Engineer would then update the termination date in the CARS permit module as the date the Notice of Termination or 404 permit certification was submitted. When a letter of termination from a state and/or federal agency is received, this should be documented in the comments section including the date of the letter and the letter should be uploaded to FileNet.

The final checklist in CARS asks if all appropriate permits have been terminated in CARS. If permits have been entered, the Project Engineer should ensure all permits have been terminated before checking this item. If there are no permits associated with the project, no permits should be entered into the CARS permit module.

To Add/Maintain/Delete a Permit in CARS:

1. From the Main Menu, click on the Project Permits link. The Project Permits View page is displayed.
2. To add a new permit, click on the Add button. The Project Permit Add page is displayed.
3. Enter the Permit ID (permit number), Select the Permit Type from the drop down menu, and enter the Permit Expiration Date. Comments can be added but are limited to 250 characters. Also, if the permit has already been terminated, enter the termination date.
4. If the permit covers more than one PCN, enter the additional PCNs in the “Other Projects covered by PCNs” fields. If more than two PCNs need to be entered hit the Add button to create more fields.
5. When all required data has been entered, hit the Save button.
6. Permit Type, Expiration Date, Termination Date, Comments and associated PCNs can be edited using the Maintenance page. This page is accessible from the “Maint” link on the Project Permits View page.
7. If a permit was entered into the system by mistake, District or Assistant District Engineers can delete permits from the project using the Maintenance Page. Click the “Maint” link on the Project Permits View page and check the box under Delete next to the permit to be deleted. Hit Save. The permit should be deleted from that project and all associated projects.

View Contractor Information for a Permit in CARS:

From the Project permits Maintenance page, click the Contractor Name on a permit. The Contractor Contact Information is displayed.

VERTICAL CLEARANCE CHANGE RECORDS

Any permanent changes to vertical clearances above highways will be included in the final records. These changes may be due to paving overlays or reconstruction under bridges and sign structures or bridge deck overlays on trusses. The new measurements are recorded in CARS and Bridge Division will

record the changes into the Bridge Management database for use in the Automated Routing Program and by the Highway Patrol Permitting Office.

Temporary changes to vertical clearance such as erection of roadway canopy should be reported in CARS Work Zone Activity Reporting.

The section in CARS must be filled out before the project can be finaled but the clearances should be recorded as soon as practical after the construction is complete and before the roadway is opened to traffic.

Many projects will have no effect on the vertical clearance. Striping, guardrail, chip seal, are just a few of the type of projects that will not affect the vertical clearance under a structure. If the clearance is not affected, select Not Affected on the initial page and the input is complete.

Record a change to the Vertical Clearance:

1. Click on the Vertical Clearance link on the left side of the beginning page. The Vertical Clearance page is displayed. Choose either Maint or Not Affected for a bridge from the list.
2. If Maint (maintain the Vertical Clearance) is selected (If Not affected is selected no more inputs are required for that particular bridge)
    a. Select Yes if clearance is affected
    b. Select type of overhead obstruction from dropdown menu
    c. Enter Beam Face Direction while looking up station
    d. Enter Date from dropdown menu
    e. Enter inspector's name
    f. Enter measured clearances at shoulder and edge of lanes in feet and inches to the nearest 0.25"
    g. Select Save when all measurements of "Not Affected" lines are complete.
3. Repeat process for all bridges on list
4. If not all affected bridges are listed, contact Bridge Division 328-4844 to have the bridges added to the CARS Module.

Initial input of bridges will be done by designers during the final estimate process. If the designer determines type of project provides no bridge vertical clearances will be affected, no bridges will be entered. If there is a possibility to affect vertical clearances, bridges will be entered which are automatically pulled into Pacer and then CARS and the decision if a vertical clearance is affected will be made in the field by the construction observation team.

If the project is a consultant design, Local Government will input any bridges that may be affected in Pacer prior to the information being transferred into CARS

EXAMPLE PRECONSTRUCTION CONFERENCE AGENDA

Instructions: If using this form, customize it to be project specific. Delete areas that do not apply and add items as needed. Know your audience. For example, if the contractor is currently submitting correct payrolls on DOT work, do not spend much time on payrolls. Delete these instructions.

Insert today's date

To: Prime Contractor Name
Prime Contractor Address
Address continued

PRECONSTRUCTION CONFERENCE AGENDA

Project Number:	Enter Project #
PCN Number	Enter PCN #
Description/Location:	Enter project description and location text.
County:	Enter County
Conference Date:	Click here to enter a date.
Time:	Enter meeting time.
Prime Contractor:	Enter Prime Contractor name.
(address)	Enter address.
	Enter address.
Engineer(s):	Click here to enter text.
(address)	Click here to enter text.
	Click here to enter text.

ITEMS OF DISCUSSION

1. **Introductions**
    a. Sign-in sheet presented to everyone in attendance (the sign-in sheet should include everyone's name, contact phone #, cell #, and e-mail address)
2. **Personnel**
    a. Engineering Staff
        i. NDDOT Responsible Charge — Click here to enter text.
        ii. LPA Responsible Charge — Click here to enter text.
        iii. Project Engineer — Click here to enter text.
        iv. Main Inspector — Click here to enter text.
        v. Inspectors — Click here to enter text.
        vi. Tester — Click here to enter text.
        vii. Surveyor — Click here to enter text.

b. Contractor Staff
   i. Project Manager Click here to enter text.
   ii. Project Superintendent Click here to enter text.
   iii. Foreman Click here to enter text.
   iv. EEO/DBE officer Click here to enter text.
   v. Traffic Control Watchperson Click here to enter text.
   vi. Safety Officer Click here to enter text.
   vii. Erosion Control Supervisor Click here to enter text.

c. Collect list of emergency contacts from the contractor.

3. **Project Correspondence**
   a. All project correspondence must contain related project number.
   b. Discuss the chain of command.
4. **Schedule**
   a. Completion date (pick one and delete the others)
      i. Working Day Contracts. The contract specifies enter number of working days working days. Working days are charged from the starting date specified in the contract, or the date the contractor starts work at the project site, whichever is earlier. Specified starting date is Click here to enter a date.
      ii. Calendar Day Contracts. The contract specifies Click here to enter text. calendar days. Time charges will begin at the starting date specified in the contract, or the date the contractor starts work at the project site, whichever is earlier. Specified starting date is Click here to enter a date.
      iii. Completion Date Contracts. This contract has a completion date of Click on completion date. with a guarantee of enter number of working days working days. If applicable working days will be counted from a known date which for this project is enter the known date.
   b. Collect and review schedule and narrative.
      i. The Contractor will begin work on starting date**.**
      ii. Contractor working hours will be enter days and hours to be worked**.**
   c. Review procedure for submittal of schedules
      i. The engineer will accept or reject the schedule in writing.
   d. Discuss sequence of work.
   e. Discuss staking needs.
   f. Work on holidays including Sundays must be approved by the Engineer in accordance with 108.05
5. **Progressive Estimates**
   a. Issuing Progressive Estimates – Progressive estimates will be issued at least once per month as the work progresses (109.04 B.)
      i. Discuss the Contractor's ability to request additional progressive estimates during times of high-dollar work; such as asphalt paving & concrete paving.
   b. Withholding Progressive Estimates – The Department may withhold progressive estimates if the Contractor fails to comply with any contract requirement (109.04 A.) Examples: Schedules, Payrolls, Missing certification requirements
   c. CARS Certification Report – Distribute the CARS Certification Report for this project
      i. Bid items cannot be paid until all requirements are met
      ii. Would the Contractor like to be sent an updated copy of this report with each progressive estimate?

   d. Automated emails – CARS has the ability to email approved progressive estimates to the Contractor and others. Multiple email addresses can be entered.
      i. Gather email addresses from all who'd like a copy

5. **Utilities**
   a. The Prime Contractor along with his/her sub-contractors is required to notify the North Dakota One Call System prior to the beginning of construction, so that they can locate and mark all utilities in the project area.
   b. Discuss any utility issues and allow utility companies to leave if they desire

6. **EEO, Labor Standards and DBE Participation Information (**discussion of form 9423) **to be read aloud**
   a. Collect a copy of contractor's EEO and Affirmative Action Policy?
   b. Review requirements for "EEO and Labor Compliance Job-Site Interviews" and "In-depth Contract Compliance"
   c. This project is *Race Conscious, Race Neutral, or State Funded*. The Race Conscious goal is Enter RC goal. Delete if RN or State funded. %. Intended DBE participation for this project is Enter intended participation %.
   d. Annual EEO Report (Form FHWA -1391) is applicable for the month of Starting month? and must be filled out and received back by the Civil Rights Office no later than Click here to enter a date.
   e. Posters and Bulletin Board (prime and subs)
      i. What will the locations be for the posters?
      ii. All posters need to be up prior to start of construction!
   f. Review trainee requirements and program if applicable.
   g. Does the Contractor have a list of all the DBE firms that will be working on the project, their items of work, and work schedule (daily and weekly)?
   h. Review Truck Driver Owner/Operators and DBE Weekly Trucking Report SFN 60781 – The prime contractor is responsible for monitoring and verifying the status of all truck owner-operators or trucking subcontractors. The DBE's supervisor must be on the project at all times. DBE trucks along with leased trucks must display the name and identification number of the DBE.

7. **Payrolls**
   a. All contractors must comply with Labor Rates from US Department of Labor which specifies basic hourly rates and applicable fringe benefit payments for specific job classifications
   b. The initial entry for each employee must exhibit their address and unique ID number - proper classification as shown in the Labor Rates must also be shown. (Form WH347).
   c. A statement of compliance with entries as shown on Form WH348 must accompany each payroll.
   d. The subcontractors must submit their payrolls to the Prime Contractor for review/corrections prior to submitting to the Project Engineer. Some indication that they have been reviewed by the Prime Contractor must appear on or with each payroll.
   e. Use LCPtracker for entering and filing of Davis-Bacon certified payrolls. Certified payrolls in paper form will no longer be accepted.
   f. Notify the Engineer when payrolls have been uploaded and approved in LCP tracker.

8. **Safety and Sanitation Requirement**
   a. Collect Contractor Safety plan
      i. What method does the contractor utilize in conveying information to employees regarding company, State, and Federal safety requirements?

        ii. What method does the Contractor use to ensure that his subcontractors comply with these safety requirements?
    b. Review 107.18 HIGH VISIBILITY CLOTHING

9. **Erosion and Water Pollution Control**
    a. Collect and review Storm Water Pollution Prevention Plan and requirements (107.02 C).
        i. Collect and review permit application(s) and coverage letter(s) for the project site.
    b. Discuss erosion control special provisions.
        i. Collect and review permit application(s) and coverage letter(s) for contractor controlled areas (SP 3(14)).
        ii. Collect the name and proof of NDDOT Erosion and Sediment Control Certification of the Prime's Designated Erosion Control Supervisor (SP 3(14)).
        iii. Collect the supervisor name and proof of NDDOT Erosion and Sediment Control Certification of any subcontractor hired for erosion control (SP 3(14)).
        iv. Provide proof of NDDOT Erosion and Sediment Control Certification for the Project Engineer (SP 3(14)).
    c. Collect and review water permits.
10. **Claims for Adjustment and Disputes**
    a. Read section of "Notice of Intent to File a Claim" (SFN 16743) was read, and refer to section 104.04. A copy of this form was given to the Contractor. All "Notice of Intents" must be filed through the Prime Contractor.
11. **Subcontractors and Suppliers**
    a. A request for subletting work must be submitted and approved prior to any work by the subcontractor on the project. (SFN 5682)
    b. Contractors must be registered SFN 52243.
    c. Collect list of proposed sub-contractors and suppliers.
12. **Field Laboratory**
    a. The location of this laboratory will be enter proposed lab location as agreed upon by the Contractor and the NDDOT.
13. **Materials**
    a. Collect and review Quality Control Plan.
        i. Collect certifications for all testers.
    b. Distribute a list of items that require certifications, work drawings, and testing requirements.
    c. Review 106.01 C, certification requirements. Certifications and shop drawings must comply with the Standard Specifications and be submitted and approved (when necessary) prior to any installation taking place.
    d. If Fabric (such as reinforcement, structural, riprap) is to be used on the project, it must be on the project 21 days prior to installation so that they can be tested.
    e. Collect list of pit names and legal descriptions for all aggregates that will be used on the project. Discuss need for Certificate of Approval (COA) and SFN 58466.
    f. If pit is state owned or state optioned, discuss notification requirements of 106.02 B.
        i. If Contractor states an intention to use a state owned or state optioned pit, the Engineer must notify the Gravel Prospecting Coordinator at NDDOT Materials & Research.
    g. Review SFN 14486 Pit Release.
    h. Review 107.17, Removed Material.
14. **Specifications of Emphasis**
    a. 107.13, railroad insurance.

b. 105.02, superintendent required on site.
c. 107.07 C, park equipment a minimum of 60 feet from roadway.
d. 107.08, haul road designation and SFN 14458, Haul Road Release.
e. 109.01 J, scale and haul sheet requirements.
f. 109.05, payment for material on hand.
g. 704.04 C.2, traffic control watchperson requirements and SFN 14634, Watchperson Report. Reports must be done at least 3 times a day.
h. Discuss any specifications related to structural work if applicable
i. Discuss any other applicable specifications. List them here prior to meeting.

15. **Special Provisions**
    a. Any special provisions should be reviewed here. List them prior to meeting.
16. **Project Notes**
    a. Discuss any notes here. List talking points prior to meeting.
17. **Project Plans**
    a. Discuss project plans here. List talking points prior to meeting.

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CERTIFICATION MODULE

The Certification Module is used to track and store documents that are required before work starts on a bid item including certificate of compliance, work drawings, and various submittals.

When a project is uploaded to CARS, the Certification Module Requirements are automatically imported and tied to the bid item for which they apply. This information is pulled from the Default Certification Table that is maintained by Construction Services. Changes to the Default Certification list should be submitted to Construction Services by the Materials Coordinator.

Prior to the Preconstruction Meeting for each project, the Materials Coordinator must review the Certification Module Requirements and customize them for the project by adding or deleting requirements. Once the requirements have been established, a Project Certifications Report should be generated in Certification Manager and delivered to the contractor.

Before any pay quantity entry for a bid item is paid, all certification requirements associated with that bid item must be satisfied. The requirements are satisfied by uploading a document and tying it to the pertinent bid item.

Bid Items that have a certification requirement are designated on Quantity Manager by displaying "Cert: Not Received." To view the required certifications, click on Not Received. Once all requirements have been satisfied, the display will change to "Cert: Received."

Creating Certification Requirements in Certification Manager

Only available to Materials Coordinator, Project Engineer, and Alternate Engineer.

1. Click the Certification Manager link on the main menu.
2. The Certification Manager page is displayed.
    a. Click the + button to expand the bid item.
    b. Click Add Requirement.
3. The Add Certification Requirement page is displayed.
    a. Use the Requirement Category dropdown to select the Category.
    b. Enter Spec and Code if different than the default values.
    c. Use the Type dropdown to select type.
    d. The Add More Rows button may be used to add multiple requirements at once. All requirements added at the same time must be of the same Category.
    e. Use the radio button to bind the requirement(s) to the current PCN or to all tied PCNs.
    f. Click Save.

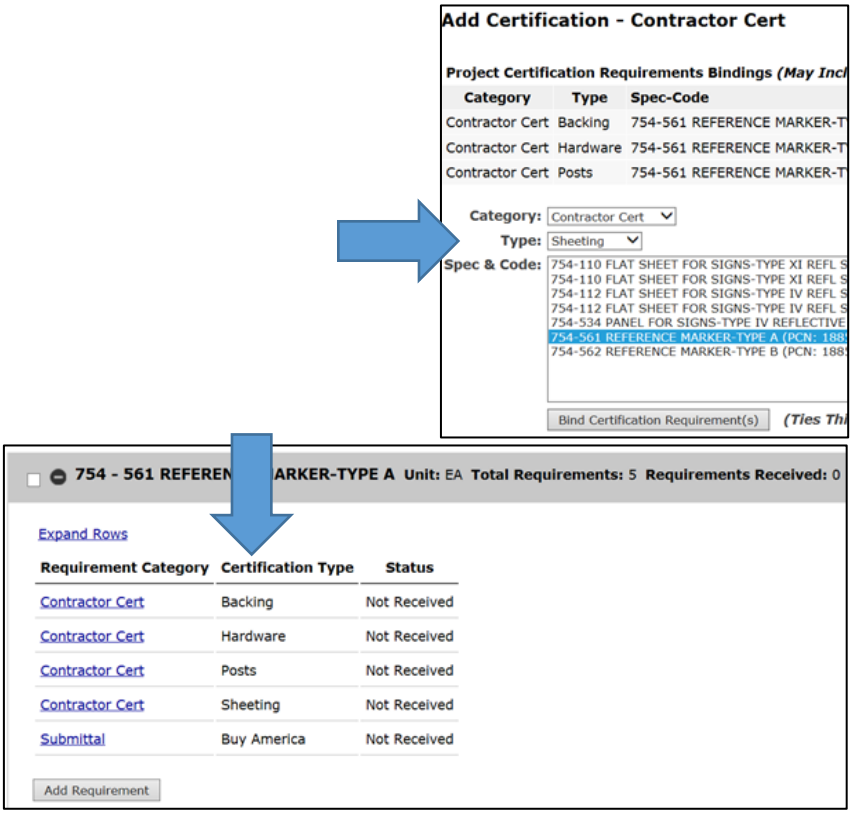
Deleting Certification Requirements in Certification Manager

Only available to Materials Coordinator, Project Engineer, and Alternate Engineer. Requirements tied to uploaded documents cannot be deleted.

1. Click the Certification Manager link on the main menu.
2. The Certification Manager page is displayed.
    a. Click the + button to expand the bid item.
    b. Click the Requirement Category for the requirement to be deleted.
3. The Certification Requirement-Submittal page is displayed.
    a. Click the Delete button.
    b. Click the Confirm button.

Uploading Required Certification Documents

1. Click the Certification Manager link on the main menu.
2. The Certification Manager page is displayed.
    a. Click the + button to expand the bid item.
    b. Click the Requirement Category for the requirement to be modified.
3. The Certification Requirement-Submittal page is displayed. This page can also be accessed from Quantity Manager by clicking on the Cert: Not Received/Received link and clicking on the Category button.
    a. Click the Add Certification button.
4. The Add Certification-Submittal page is displayed.
    a. Use the browse button to upload the desired file.
    b. Multiple files may be added using the Add More Files button.
    c. Populate the Remarks field as needed. The Remarks field never locks.
    d. Multiple items, even those with different Specs & Codes, can be tied to the same uploaded file using the "Bind Certification Requirements" feature:
        i. Use the Category dropdown to select Category.
        ii. Use the Type dropdown to select Type.
            1. When searching for an item, only the bid items which match the "Category" and "Type" selected in the drop down menus will show up in the Spec & Code box. For a certification, the "Type" field corresponds to the "Certification Type" from the main Certification Manager screen:



            2. The "Category" and "Type" must match the "Requirement Category" & "Certification Type" from the Certification Manager home screen for the bid item to show up in the Spec & Code box.

iii. The Spec and Code box will display every bid item on every tied project and sub project that corresponds to the Category and Type selections.
iv. Select all the bid items that correspond to the uploaded document. To highlight multiple bid items, hold down the control button.
v. Click the Bind Certification Requirements button.
vi. Repeat the process with additional Categories and Types as needed.

e. Click the Save button.

5. Uploaded documents will be locked after 48 hours. At this time additional documents may be uploaded, but the originals will remain.

Override Required Certification Documents

Only available to Materials Coordinator, Project Engineer, and Alternate Engineer.

1. Click the Certification Manager link on the main menu.
2. The Certification Manager page is displayed.
   a. Click the + button to expand the bid item.
   b. Click the Requirement Category for the requirement to be modified.
3. The Certification Requirement-Submittal page is displayed. This page can also be accessed from Quantity Manager by clicking on the Cert: Not Received/Received link and clicking on the Category button.
   a. Click the Override Requirement button.
   b. Enter the engineer's justification for the override.
   c. Click the OK button.

Custom Certification Requirement Types

Only available to Materials Coordinator, Project Engineer, and Alternate Engineer. Use this page when adding a certification requirement type that is not on the default list.

1. Click the Certification Manager link on the main menu.
2. The Certification Manager page is displayed.
   a. Click View Custom Cert Types
3. View Project Specific Certification Types page is displayed.
   a. Click the Add button
4. Maintain Project Specific Certification Type page is displayed.
   a. Enter the name of the custom cert requirement type.
   b. Click the Save button.
5. Once saved, the custom certification type cannot be deleted. To add the custom certification type to a bid item as a requirement by follow these steps.

PAY QUANTITIES

Contract bid items are documented in CARS Quantity Manager as the work is completed and accepted. Quantity Manager uses PQEs (Pay Quantity Entry) to document the payments. Each PQE must be supported by measurements and descriptions of the installed bid item known as source documents. Source document information may either be entered directly in a PQE (example) or attached to a PQE (example). Use of SFN 10004, Pay Quantity Report is not necessary. If SFN 10004 is used, it should be uploaded as an attachment to the PQE.

At a minimum, document the location and quantity of each pay item recorded on the PQE. When quantities are measured in the field, show measurements and all quantity calculations.

PQEs should be generated the same day by the inspector assigned to the respective pay item. Inspectors can enter PQEs in the field if they have internet access to CARS. If internet access is not available, enter PQEs as soon as practical. Summary sheets and diagrams prepared in the field can be scanned in and attached from the field. An iPad can be used to take a picture of a summary sheet or other document and attach it to a PQE (example).

Some projects contain multiple funding sources. The multiple funding sources are identified in the detailed estimate and CARS as subprojects. If a project contains subprojects, only one bid item per subproject is documented on the PQE. For example, the project you are working on has two subprojects with quantities for Traffic Control Signs on each. The contractor places the construction signing resulting in quantities for traffic control signs in each subproject. This would be documented on two PQEs, one for each subproject.

Required Pay Quantity Signatures

Documentation of certain pay quantities requires obtaining the contractor's signature. They are:

1. Flagging
2. Pilot Car
3. Water
4. Excavation quantities documented by field measurements such as subcuts. Signatures are not needed for computer generated quantities such as a GPS surveyed subcuts.
5. Rock excavation not measured by cross sections.
6. Items measured in place such as foundation fill or select backfill, if using measurements greater than plan dimensions.
7. Any material paid for by load count.
8. Haul Summaries (109.01 J).

The purpose of obtaining the signature is to give the contractor an opportunity to review the measurements and signify agreement with the pay quantity documented.

PQEs in CARS

Pay Quantity Entries (PQEs) are used to manage payment of bid items. PQEs are displayed and managed in the Quantity Manager module. All PQEs must be Submitted before they will be paid on an Estimate.

PQEs are added to the Quantity Manager in the following ways:

- Contract Adjustment
- Mix Bitumen Report
- Concrete Paving Report
- Piling Report
- Add PQE button on Quantity Manager
    - Appendage feature on existing PQE

Creating PQEs in Quantity Manager

To enter PQEs in Quantity Manager:

1. Click on the Quantity Manager link on the main menu. The Quantity Manager page is displayed.
    a. Contract items are listed in ascending order by spec and code including change order items.

   b. Contract adjustments are displayed separately at the end of the list.
2. Click on the Add PQE link by the Spec and Code to be entered.
3. Enter the information for the pay quantity
   a. Enter the date the item was documented or installed.
   b. Use the dropdown box to enter the type of source document for the pay quantity.
      i. No Additional – Use when PQE is source document.
      ii. Attached – Use when source document is attached.
      iii. Referenced – Use when source document is referenced.
   c. If the quantity being entered is from a change order, use the Change Order dropdown to pick the change order information.
   d. The Contractor Approved radio buttons may be used for items such as water or flagging hours that require the contractor's signature. These buttons do not replace the signature requirement and should be used for tracking only.
   e. The Remarks text box is used to enter any comments about the pay item.
   f. Under locations, enter the quantity for the item documented and its location. One quantity and location text box is initially provided but more can be added by pressing the Add More Rows button.
4. Attach supporting documents
   a. The source document and other supporting documents may be attached by clicking the Browse button and navigating to the location of the document.
   b. Multiple files may be attached using the Add More Files button and repeating step 4a.
   c. Use the file comments section to add information about the attachments.
5. Click the Save button. If additional PQEs will be entered for the item, click on the Save and Add New Button. This will save the information entered and bring up a blank page.

Editing PQEs

A PQE or appendage can be edited until it is paid on the progressive estimate or as long as the status is Not Checked, Checked, Rejected, Submitted, or Pending. To edit a pay quantity:

1. Click on the expand button next to the spec and code.
2. Click on the date of the entry to be edited.
3. Edit the information by changing the data or dropdown selections.
4. Files may be added or deleted.
5. Use the approval buttons to mark the entry as checked or submitted.
6. Click on the Save button to save the corrected entry.
7. The entire entry may be deleted using the delete button at the bottom of the page.

Checking PQEs

Each PQE should be checked before it is submitted to the estimate. The check should be performed by a user who is not the originator.

To check entries on Quantity Manger main page (available to users with the inspector role):

1. Set Spec and Code filter to With Entries and Status filter to Not Checked to display all PQEs that need checking.
2. Click on Expand All.
3. Review the displayed information for each PQE. Click on an attachment to display it.
4. Click the check box next to the PQE once it has been reviewed.
5. Click Check at the top of the page.

To check PQE from within the PQE (available to users assigned to project):

1. Set Spec and Code filter to With Entries and Status filter to Not Checked to display all PQEs that need checking.
2. Click on the date of the entry to be reviewed.
3. After reviewing the displayed information and attachments, click the Check radio button and hit save.

Submitting PQEs

Each pay quantity entry (PQE) must be submitted before it will be added to the estimate. Only the roles of Engineer and Alternate Engineer have the ability to submit.

To submit PQEs on Quantity Manager Page:

1. Set Spec and Code filter to With Entries and Status filter to Checked. This will display all checked pay entries.
2. Click on Expand All.
3. Review the displayed information for each PQE. Click on an attachment to display it.
4. Click the check box next to the PQE once it has been reviewed.
5. Click Submit at the top of the page.

To submit PQE from within the PQE:

1. Set Spec and Code filter to With Entries and Status filter to Checked. This will display all checked PQEs.
2. Click on the date of the entry to be submitted.
3. After reviewing the displayed information and attachments, click the Submit radio button and hit save.

Rejecting PQEs

At any time during the checking or submitting processes, the entry may be rejected. The Reject action changes the entry status to Rejected.

To reject a PQE on Quantity Manager Page:

1. Select the check box next to the PQE.
2. Click the Reject button at the top or bottom of the page.
3. Add comments to Rejection Reason.
4. Click Reject.
5. Reject Reason is automatically emailed to entry originator and status is changed to Not Checked.

To reject a PQE from within the PQE:

1. Click on the date to enter the PQE.
2. Click the Reject radio button next to Approval.
3. Click Save.
4. Add comments to Rejection Note.
5. Click OK.
6. Reject Reason is automatically emailed to entry originator and status is changed to Not Checked.

Appending PQEs

Occasionally, it may be necessary to correct or supplement a PQE that has been paid. This is done by adding an appendage to the original PQE in Quantity Manager.

To make an appendage:

1. Click on the date of the PQE.
2. Click Add Appendage at the bottom of the page.
3. Enter date the appendage is created.
4. Enter the difference in quantity if applicable. For example if the original quantity was 5 ft and the correct quantity is 4 FT, enter -1 FT in the appendage quantity.
5. Add location if it has changed.
6. Add remarks explaining why change was made.
    a. Remarks are required for all appendages.
7. Use the browse button on the original entry to add additional files if necessary.
8. Click save. Status of the original entry will change to Not Checked.
9. Reject Reason is automatically emailed to entry originator and status is changed to rejected.

Attaching Documents to PQEs

Documents may be attached directly to the respective PQE as detailed above. Multiple documents can be attached at once. Additional documents may be attached until the project finaled.

Attached documents are automatically stored in CARS/FileNet. CARS indexes the Subject/title field based on the pay item spec and code and the attached file name. Attached files may be viewed by clicking on the attachment link in the PQE. Once confirmed the source document is stored in CARS/FileNet, it is not necessary to retain a hard copy as part of the project records.

Only the source document should be attached to the PQE in CARS.

Attaching Source Documents

The source document should be legible and accurate when attached.

Do not attach pictures or documents related to the inspection or testing of the item.

When attaching a source document, do not reference the hard copy of the document.

There is no need to repeat information from the source document in the remarks section of the PQE.

The following chart displays file types that may be attached.

File Type	Description	Max Size (MB)
docx	Microsoft Word Document	5
jpg	JPEG Graphic	3
jpeg	JPG Graphic	3
pdf	Portable Document Format	20
png	Graphic	5
html	Wep Page Source Text	2
xls	Excel Document	5
mov	Movie File	10
mp4	Windows Movie	10
txt	Text File	1
rtf	Rich Text Format	1
bmp	Bit Map Image	10
tif	Image	5
pptx	Power Point	10

Deleting Attached Documents in CARS

Attachments can only be deleted until the PQE is paid for. To delete attachments, follow the Editing PQE instructions and click Delete next to the unwanted file.

District Finals PQE Check

Each PQE should be checked by the district before the final is submitted to Construction Services. This check is performed in Quantity Manager. This check is available for all users assigned to the project.

For District Finals check on Quantity Manager main page:

1. Set Spec and Code filter to With Entries and District Finals filter to Not Completed to display all PQEs that need District Finals checking.
2. Click on Expand All.
3. Review the displayed information for each PQE. Click on an attachment to display it.
4. Click the check box next to the PQE once it has been reviewed.
5. Click District Finals button at the top of the page.

To check PQEs individually (available to users assigned to project):

1. Set Spec and Code filter to With Entries and District Finals filter to Not Completed to display all PQEs that need District Finals checking.
2. Click on the date of the entry to be reviewed.
   After reviewing the displayed information and attachments, click the Approve radio button next to District Finals and click save.

ELECTRONIC SIGNATURES

Electronic signatures are acceptable for the following documents:

- Required pay quantity signatures
  - An electronic signature may be added to the field documentation and then uploaded into CARS. Form SFN 10004 may be used to collect the signatures.

- Materials Certifications.
- State forms that do not alter the contract such as Statement of Daily Force Account Work, Road and Pit Release Statement and others.

Electronic signatures can be obtained in one of two ways on any document that has a signature block.

1. Typed name
    a. Signee types their own name into the signature box.
2. Signature Software
    a. Signee uses a software program such as Adobe Pro to add typed name, image of signature, or computer generated signature into signature box.

DOCUMENTATION GUIDELINES FOR SELECTED ITEMS

Contract Bond

Contract bond will be paid based on the receipted invoice submitted by the contractor along with a letter requesting payment. Attach the receipted invoice to the PQE. If the premium paid by the contractor is less than the original lump sum bid price, only the percentage represented by the invoice amount will be paid on intermediate and semi-final estimates. For example:

- The invoice amount submitted by the contractor is $4,500.
- The original bid amount is $5000.
- Pay for 0.90 LS

The remainder of the original lump sum bid price remains unpaid until the final estimate. If the invoice amount submitted by the contractor is equal to or more than the original lump sum bid price, only the bid price will be paid.

Railroad Insurance

Railroad Insurance is paid lump sum when the Contractor provides the Engineer with certified copies of the insurance policies and with the railroad company's approval of the policy in accordance with Section 107.13. Attach the railroad company's approval and the insurance policies to the PQE.

State Furnished Concrete Barrier

Submit SFN 60565 to Design Division when contractor takes and returns barrier.

Mobilization

Mobilization will be paid on the percentage of the original contract earned. The dollar amount paid will be the percentage of the mobilization bid price or the percentage of the original contract amount, whichever is less. These payments are made according to the following chart.

Amount Earned of the Total Contract	Pay the lesser of:	
	Mobilization Bid Amount	Total Contract Amount
5%	25%	2 ½%
10%	50%	5%
50%	100%	7 ½%
75%	100%	10%

Aggregates

Aggregates are generally paid by the ton. Weigh tickets are produced and summarized on haul summaries produced by the contractor's scale. The signed haul summary should be attached to the corresponding PQE.

Aggregates are sometimes measured by the square yard or cubic yard and will be measured in place. All field measurements and calculations must be recorded on the PQE or kept in a field book.

Asphalt for Prime, Tack or Seal Coat

A field book or summary sheet will be kept to document distributor shots. Shot records are used to determine application rates and can be used as an estimated quantity. Actual final quantities paid will be based on manifest quantities. Final quantities are based on the undiluted gallons delivered minus any quantities used for other purposes such as waste or private use. The total quantity from manifests should be equal to or greater than the total quantity in the shot record. Attach the manifest for the asphalt material to the PQE.

On some projects like those in an urban setting, quantities may be determined by shot record only as the contractor's equipment is serving multiple projects. A manifest for the asphalt material applied to the project must still be collected for testing purposes. When paying off the shot record, attach the shot record and manifest to the PQE along with an explanation as to why the shot record was used for payment.

Asphalt for Bituminous Mixes

Asphalt used in hot bituminous mixes is paid for by the ton. Daily estimated amounts are calculated in the Mix Bitumen Report tab, using the Cut-Off Report function, which is also used to determine the percentage of asphalt in the mix. Cut-Off Reports are calculated using the manifest tons. Final quantities are based on the tons delivered minus any quantities used for other purposes such as waste or private use. If the Cut-Off Report application is used, a PQE is automatically created and will need to be checked and submitted on Quantity Manager. Attach all manifests to the daily report or PQE.

Sometimes hot mix is supplied from a commercial plant that is serving many other customers. In this case, the quantity determined from the mix bitumen report will be used. Manifests covering the material used on the project must still be collected for testing purposes.

Reinforcing Steel

A record of all reinforcement bars placed in a structure is kept by the inspector present at the time of placement. These records are generally kept in a field book or summary sheet listing the number, size and length of each type of bar installed and separated by portion of the structure. Attach the summary sheet or reference the field book in the corresponding PQE in CARS.

Subgrade Preparation

Subgrade preparation will be measured by the number of miles or square yards prepared and accepted. Document field measurements and calculations on the PQE. Referencing a field book or diary entry or attaching a summary sheet with the corresponding calculations is also acceptable.

Water

Water may be measured in calibrated tanks, by weighing and converting to gallons, or by an approved metering device.

Spot check the loaded water truck to ensure compliance with legal load limits.

When water is measured in calibrated tanks, attach the calibration information to the pay quantity report. It is up to the Project Manager to determine the accuracy and acceptance of the calibration. Quantities are determined by a count of the loads hauled and placed multiplied by the "M" gallon (1000 gallon) calibrated capacity of the water hauling unit. Record each load on SFN 61032, Water Haul Sheet. The contractor will sign each Water Haul Sheet. Attach the signed Water Haul Sheet to the PQE.

Where water is measured and paid by weighing, The "M" gallons of the hauling units will be calculated by weighing the truck empty and full and converting to gallons at a rate of 8.33 pounds per gallon. The full weight must not exceed the licensed legal load for the hauling unit. Quantities are determined by a count of the loads hauled and placed multiplied by the "M" gallon capacity of the water hauling unit. The contractor will sign each days load counts along with the "M" gallon calculations for each hauling unit. The quantities must be signed by the contractor. Attach the signed summary sheet to the PQE.

Where water is measured by meter, attach a certified statement that the device conforms to AWWA requirements to the PQE. Calibration must have been performed within one year. The Engineer should observe and record the meter before and after each period of water use or weekly at a minimum, taking care to ensure that each period of water use was used solely for the project. A summary should be prepared by the Engineer and signed by the Contractor. Attach the signed summary to the PQE.

Excavation and Borrow

Excavation and borrow quantities may be recorded as estimated amounts until actual computations are made. Excavation and borrow quantities are determined by cross sections. If common excavation areas include topsoil, the topsoil quantity must be subtracted from the common excavation quantity and paid separately. The field notes can be plotted, and computed, or may be determined by using a computer earthwork program. Hand plotted cross sections and earthwork computations should be checked in depth at the District level. Earthwork computations will be submitted along with the field notes with the final records. Earthwork computations calculated using Geopak will also be submitted with final records. Attach earthwork calculations to the PQE. An example of source document for small quantity excavation can be found here.

Roadway Obliteration

Locations and field measured quantities for obliteration will be recorded on the PQE. Show any calculations for the quantities.

Loose Rock Riprap

Riprap quantities are generally paid by the cubic yard and are determined by load counts or are measured in place. For load counts, determine the cubic yard capacity of the hauling unit. The cubic yard capacity of the truck should not exceed the licensed legal load. Document the calculations used to determine the hauling capacity and have the Contractor sign them. Attach the signed calculations to the first PQE. Record the load counts on a summary sheet or in a field book. The contractor should also sign each day's load counts before they are attached the PQE.

If the riprap is paid by the cubic yard in place, measure the length and width of the area. Take random depth checks along the placement area to determine an average depth. Show all measurements and calculations on the PQE.

If the Riprap is paid by the ton, tickets and haul summaries should be provided by the contractor.

Flagging and Pilot Car

Documentation must include name of flagger/driver and hours worked. Do not use contractor payroll as source for hours. Record hours worked for each flagger and pilot car on SFN 61031, Flagging and Pilot Car Summary. Attach the Contractor signed summary sheet to the PQE.

There also must be certification on file from the contractor verifying the flaggers are trained personnel.

Seeding and Sodding

These items will be paid by actual field measurements of the placement areas. Seeding may be measured using SFN 16474, Seeding Quantity Sheet, or by surveying the area. Show all measurements and calculations on the PQE or attach a summary of the measurements (example). Allow the Contractor to review quantities before processing payment.

Measuring of areas not seeded/sodded and deducting this from plan quantity does not substantiate the plan quantity amount and is not sufficient.

Pipe

Payment of pipe will be the actual field measurements of pipe placed. Documentation of pipe shall be made by the inspector at the time of installation. Record all necessary information including date, length, diameter, class, station, and heat numbers in the PQE.

Permanent Pavement Marking

When plan quantity of either water based or epoxy paint is 30,000 linear feet or greater, collect a daily DLS report in accordance with 762.04 C.1.b and attach it to PQE.

Non-Structural Concrete

Concrete construction will generally be paid for by the linear foot or square yard. These items will be field measured and drawings will be attached to the PQE or referenced in a field book. Computations must be shown for all quantities.

Concrete paving quantities may also be determined by using the Concrete Paving Report.

Structural Concrete

All concrete pours will be recorded. The total yards used in each portion of the structure will be recorded in the inspector's diary or a separate field book. Tickets will be produced at the concrete plant and will be kept in the District until final payment it made. The pay quantity for each portion of the structure will be plan quantity unless it is determined that the plans are in error or a change in design has been made.

Manholes, Catch Basins, and Inlets

Documentation is required on the PQEs showing stations and date installed of each item.

Temporary Signing

Documentation should include the location of the device and date placed as well as the sign number and units. Show all calculations for total units to be paid. Project Managers should ensure that each sign is only paid for once, regardless of the number of moves. If a sign summary sheet is used, attach it to the PQE. This information should be made available to the Contractor.

Posts

Actual lengths and weights per foot of post, plus the extension should be documented.

Miscellaneous Items

Items should be documented showing the location and amount being paid. If an additional quantity of an item was added and was not shown on the plans, it should also be noted on the PQE.
Lump sum quantities will be paid as a percentage of the work complete and the PQE should include documentation supporting the amount of the lump sum work completed.

METHODS OF MEASUREMENTS

Weighed Materials

The contractor is required to submit tickets and haul summaries for all weighed materials in accordance with Section 109. CARS should no longer be used for generating haul summaries for payment.

The results of the scale tests should be documented in the project or inspection diary or attached to the PQE.

In the case of small tonnages as determined by the Engineer, payment may be recorded on a PQE with the weigh tickets attached.

Tickets

The contractor should produce tickets in accordance with 109.01 J.6.b.

Two copies of the tickets will be made. The contractor keeps the original copy. The duplicate copy of each ticket is given to the truck driver and collected by the inspector on the roadway. This ensures that the loads weighed are being used on the project. As the tickets are collected on the roadway, the inspector will initial each one and keep the tickets separated in groups by use such as mainline, shoulders, approaches, etc. The inspector also writes the location of each different placement area on each group of tickets. Sometimes, only a partial load will be used on the project and the rest of the load will be considered waste. The inspector will write the tons actually used on the ticket and initial it. At the end of the day, the inspector records the following information:

1. Beginning and ending ticket numbers
2. Locations material was placed and the total tons for each area
3. Any missing ticket numbers
4. Any partial or whole loads not used and considered waste

The inspection report and the tickets are used when checking and certifying the daily haul summary.

The requirement that an inspector personally receive all load tickets at the time of Delivery may be relaxed only in cases of very small quantities or intermittent deliveries under conditions where the project engineer or inspector can visually determine the approximate quantity delivered.

Truck Platform Scale Use

Each truck to be weighed shall be tared daily in accordance with 109.01 J.3.a. No truck may be used for hauling material paid for on a weight basis until tared.

Contractor Produced Daily Haul Summaries

Computerized weighing systems not only weigh the load and produce a weigh ticket but are also required to produce a daily haul summary. The contractor produced daily haul summary must include the information in Section 109.01 J.6.c of the Standard Specifications. The haul summary must be signed by the Contractor & Subcontractor or Supplier (if applicable) prior to submittal to the Engineer (109.01 J.6.c.(11).

Check the tickets turned in by the inspector against the contractor produced haul summary. The beginning and ending ticket numbers should correspond with the tickets turned in by the inspector as should the total tons hauled. The total and running total on the contractor's haul summary may be adjusted for voided tickets or partial loads used.

If any corrections to the haul summary are necessary, inform the contractor and have them re-submit a corrected haul summary.

After the contractor's haul summary is verified, the individual who has verified the contractor's haul summary shall sign the haul summary in the blank for Engineer's signature to approve it.

Signed contractor haul summaries are the source document and should be attached to the PQE in CARS. Once the haul summary has been prepared in accordance with Section 109.01 J.6 and uploaded into CARS, the tickets may be disposed of at the discretion of the Engineer.

Load Counted Material (Volume Measurement)

Volume measurement is used to determine pay quantities because of the type of material or because only a small quantity is being used. Volume measurements are typically used for items such as foundation fill, riprap, and water. Volume measurement can be calculated by load counts or by in-place measurement.

Measured In Place

After the material is placed, measure the length, width and depth of the placement area. Take several depth measurements throughout the area to establish an average depth of the material. Calculate the cubic yards.

Load Counts

Determine which trucks the contractor will use to haul the material. Measure width, length and depth of the truck box and compute the cubic yards. The volume used for each truck's load should be agreed to

by the contractor and should not exceed the legal load limits for the hauling unit. Record the truck number and the calculations in the inspector's diary, a load count field book or on a pay item report. This information is necessary to check the quantities when the project is finaled.

Record the number of loads each truck hauls and places on the project. Calculate the quantity by multiplying the number of loads by the cubic yard measurement for each truck. These load counts can be kept in a field book or be recorded directly on a pay item report. The contractor must sign the field book or PQE for each day's load counts.

If a field book is used to document the load counts, note this when entering these types of pay items into CARS.

STOCKPILES AND INVOICED ITEMS

Section 109.05 of the Standard Specifications allows the Department to make payment for material on hand that meets certain conditions. Payment is based on written request from the contractor that must include, among other items, an invoice for purchased materials or statement of production costs for contractor produced materials. An example of the contractor's breakdown of material costs is included at the end of this section.

- The contractor's written request and invoice/production costs should be entered into Filenet.
- For materials not produced by the contractor, include the paid invoice and signed statement acknowledging receipt of payment from the supplier/fabricator in the project file.

The general idea behind paying for material on hand is that a bid item's unit price is made up of the material cost and the cost of incorporating the material into the work. For example, an aggregate CL5 bid item includes the price of the aggregate and the price of hauling, placing, and compacting the aggregate into the finished product. Payment for material on hand is a way to pay the contractor for the material portion of a bid item when the material is obtained for the project. The NDDOT recoups the payment as the material is incorporated into the project.

The Engineer uses the CARS Stockpiles module to set up payment for the material on hand.

Enter Stockpile/Invoiced Items in CARS

To enter stockpile or invoiced items into CARS:

1. Click on the Stockpiles link on the main menu. The Stockpile spec and code Selection page is displayed.
2. Click on the Add link for the material or items to be stockpiled. The Stockpile/Invoiced Item Maintenance page is displayed.
    a. Enter the date
    b. Click in the radio button to choose between stockpile or invoiced.
    c. If the item to be stockpiled is material added by change order, be sure the change order material is chosen in the Change Order dropdown box.
    d. Enter the quantity
        i. This is the quantity over which the payment will be "spread"
    e. Enter the price

i. This will be a portion of the contract unit price. *Example calculation shown below.*

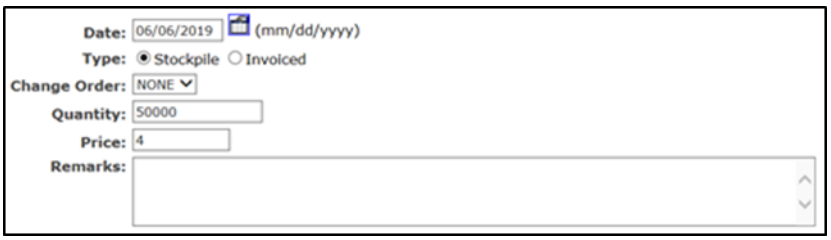
f. Remarks can be entered in the text box provided. These will be displayed in the quantity book.

3. Click on Save.

The material on hand portion of the unit price is spread over the quantity of the bid item for which the material will be used.

Example: 50,000 SY of 10" Non-Reinforced Concrete pavement is planned on a project. The contract unit price is $75.00/SY, so the total dollar amount for this bid item is $3,750,000. The contractor submits a written request for payment of material on hand for all dowel bars which will be used in the pavement. The itemized cost breakdown shows the value of the material (the dowel bars) is $200,000. Specification 109.05 is followed, and the Engineer determines that the dowel bars are eligible for payment for material on hand.

The Engineer must now calculate the portion of the contract unit price which is comprised of the stockpiled material. In the example above, the value of the material is $200,000 and the quantity for which the dowel bars will be used is 50,000 SY. Therefore: $200,000/50,000 SY= $4/SY. In other words, the stockpiled dowel bars make up $4/SY of the $75/SY contract unit price. The numbers are entered into the Stockpile module as shown below:



As a result of this entry, the Contractor will be paid $200,000 (50,000 SY x $4/SY) on the next progressive estimate. It will show up at the bottom of the progressive estimate in a section called Stockpiled and Invoiced Items.

Stockpile payments are automatically depleted as PQE's for the corresponding spec and code are entered in Quantity Manager and submitted to progressive estimates.

To put this in terms of the example shown above, if the contractor begins paving and a PQE is entered for 1,000 SY of this concrete bid item, then -1,000 SY (-$4,000) will automatically appear for the bid item in the Stockpiled and Invoiced Items section on the next Progressive Estimate. This is what is known as depleting the stockpile quantity. The NDDOT paid for the material portion of the bid item upfront and now it's being automatically recouped as the work is completed.

Important!
It is possible a portion of the pre-paid stockpile quantity will remain after the work is completed. This will happen if the Payment for Material on Hand (Stockpile) was spread over the entire planned quantity, but the actual quantity underruns. <u>All remaining Stockpile payments must be depleted prior to the final estimate.</u>

Deplete Stockpile/Invoiced Items in CARS

If there is any stockpile quantity remaining when the work for the contract item is completed, it can be depleted by:

1. From the Main Menu, click on the Stockpiles link. The Stockpiles page is displayed.
2. Find the spec and code for the item to delete and click on the Maint link. The Stockpile/Invoiced Item Selection page is displayed.
3. Click on the date link for the stockpile/invoiced item. The Stockpile/Invoiced Item Maintenance page is displayed.
4. Click in the check box by Deplete Quantity.
5. Click on Save. This will deplete any remaining stockpile or invoiced quantity.

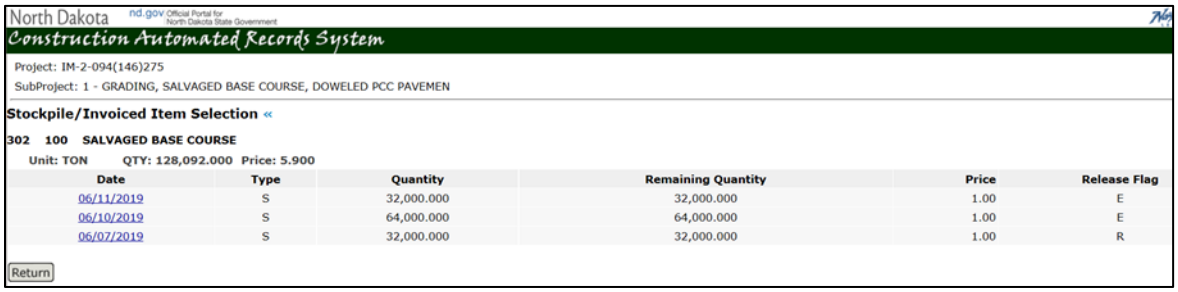
Multiple Stockpiles

It is possible to create multiple stockpile entries for the same bid item. This can happen if the contractor requests payment for a portion of the plan quantity, then later requests another portion. Example: The contractor stockpiles half the plan quantity of aggregate, then later crushes another quarter. Later, they finish the final quarter.

These entries are created in CARS Stockpiles as described above. The difference, is in this case, is the material on hand portion of the unit price is spread over the quantity of material contained in the stockpile. (In the previous example, the material price was spread over the entire plan quantity.)

Stockpile entries can be created multiple times for a bid item until the plan quantity of that material has been reached.

CARS will deplete the stockpiles in chronological order based on when the stockpile was created. In the example shown below, CARS will deplete the 6/7/2019 stockpile, then 6/10/2019, then 6/11/2019 as the material is incorporated into the project.



Again, remember to deplete any remaining stockpile quantities prior to the final estimate.

ITEMS DOCUMENTED IN CARS REPORTS

Fuel Cost Adjustment

All Fuel Cost Adjustments should be performed using the CARS Fuel Cost Adjustment Module. If a project has one or more adjustments processed and posted to CARS manually, the Fuel Cost Adjustment Module will not be available for that project. The Fuel Cost Adjustment Module calculations are based on the PQE date entered. For this reason, it is critical that each PQE be dated in the month the work was performed. The Fuel Index values will be automatically displayed for each project and will be maintained by Construction Services.

To use the Fuel Cost Adjustment Module:

1. Click on Fuel Cost Adjustment on main page.
2. Click Maintain Contractor Affidavit Costs
    a. Enter the fuel affidavit costs as found in the contract.
    b. Click Save.
3. Click recalculate.
    a. The adjustments will automatically be calculated based on PQEs in the submitted, pending, or paid status.
4. The Fuel Cost Adjustment Totals will be displayed. The Pending PQE row will only populate if there is an outstanding payment to be made.
5. After reviewing the calculated Fuel Cost Adjustments, click POST PQEs if a payment is desired.
    a. The respective PQEs will be created in Quantity Manager in the submitted status.
6. Each time changes are made in Quantity Manager, they will not reflect in the Fuel Cost Adjustment Module until the Recalculate button has been clicked. Recalculate triggers a new calculation for every month and every PQE. For example, if a PQE is added in August, but dated in May, it will automatically be included in the calculations for May.

Exclusion List

The Exclusion List button displays all spec and codes that will be excluded from the Fuel Cost Adjustment calculations in accordance with the special provision. This list may be viewed and edited by clicking on the button and clicking Add or View. This list should be reviewed to ensure that all contract adjustments are listed as excluded.

HBP List

The HBP List button displays all spec and codes that will be included in the HBP calculations in accordance with the special provision. This list may be viewed and edited by clicking on the button and clicking Add or View.

Liquidated Damage Exclusions

Fuel Adjustments should not be made when the contractor is working under liquidated damages after the expiration of contract time. To ensure that the adjustment excludes such dates they need to be entered by clicking on the Liquidated Damage Exclusions button, clicking Add, and entering the dates for the window of the work.

Reports

The reports button displays several reports that are available to ensure that the calculations have been made correctly. These reports may be emailed to the contractor upon request.

- Fuel Cost Adjustment Report – Displays the monthly adjustments.
- Excluded Items Report – Displays each PQE that was excluded from the calculations because the respective spec and code was on the Exclusion List.
- Included Items Report – Displays each PQE that was included in the calculations for the Unleaded and Diesel Fuel Cost Adjustments.
- HBP Items – Displays all PQEs that were included in the calculations for the Burner Fuel Cost Adjustment.
- Liquidated Damage (LD) Exclusions – Displays each PQE that was excluded from the calculations because it fell in the LD Exclusion date range.

Piling/Test Piling

Piling reports are used to record pile driving data, calculate bearing values and document pay lengths for both test pile and foundation piling. Section 622 of the Standard Specifications contains complete information for the inspection of piling and test piling.

Before piling or test piling information is entered in CARS, you will enter the bridge number and station for each structure on the project. Next, you will enter the hammer information for each driving unit used on the project. This information is obtained from the manufacturer's specification sheet submitted by the contractor.

The following is a list of some common terminology used in piling/test piling documentation and calculation:

- Rated Energy – This is the manufacturer's rated energy in foot/lbs. Some reductions may apply and are listed in the Standard Specifications.
- Weight of Striking Parts – This refers to the ram weight in pounds. This weight is used in the bearing calculations.
- Rated Stroke –This is the manufacturer's rated stroke of the hammer in feet.
- Rated Speed – This is the manufacturer's rated speed in blows per minute.
- Average Observed Speed – The observed speed in blows per minute from the inspector's documentation.
- Type of Cap/Cushion –Refers to the type of material used for these parts of the hammer.
- Cap Weight – The weight of the cap in pounds from the hammer manufacturer's specifications. This weight is used in the bearing calculations.
- Anvil Weight – The weight of the anvil in pounds from the manufacturer's specifications. This weight is used in the bearing calculations.
- Adapter Weight – The weight of the adapter in pounds from the manufacturer's specifications. This weight is used in the bearing calculations.
- Hammer Stroke – This is the stroke in feet from the field documentation or the manufacturer's rating.
- Blows per Minute – Refers to the observed blows per minute recorded in the field documentation by the inspector
- Energy – This is the observed energy from field documentation and is recorded in foot/pounds.
- Number of Blows – The number of blows counted as final penetration is being taken for bearing.
- Inches Penetration – Full penetration of the pile during the final check. Recorded to the nearest hundredth of an inch.

The 'M' value in the pile formula is the combined weight of the pile, the driving head and the hammer anvil.

Information for design load, plan length of test pile and pile type is found in the project plans. The weight per foot of steel piling is found in the size designation for the piling. For example, the bid item Steel Piling HP 14 x 73 indicates that the piling weighs 73 pounds per linear foot. The weight of the piling is also used in the bearing calculations.

Test Piling

A Test Pile Log is completed for each test pile driven for the structure. The plans will show the test pile number, location and minimum required bearing. Information needed to compute the bearing for the test pile is recorded in a field book by the inspector or directly in the Piling module.

Bearing values are computed according to the applicable formula found in the Standard Specifications. 'Obs. Stoke' applies to single acting hammers and 'Feet of Drop' applies to gravity type hammers. The value for "M" in the piling formula is the combined weight of the pile, driving head and hammer anvil (lbs.) and represents the total weight of the 'driven' parts.

When computing the average penetration, before obtaining 50% of the design load, it is not necessary to count the total number of blows between each 5 feet of penetration, but rather count the number of blows required to penetrate the last foot of penetration.

When 50% of the design load is obtained, bearing must be computed for every foot of penetration even if the bearing drops below 50% of the design load. This is the distance below the bottom of the footing where 50% of the design load is first obtained and bearing readings begin. This distance is used to compute bearing for each foot for the test pile report. Use special attention to insure the accuracy of this entry.

The inspector records the following information in the field documentation for test piling:

1. The substructure unit and number i.e. pier or abutment number
2. Piling number
3. Date, start and stop time
4. The reading starting point
5. The number of piling and cutoff, if any, for each pile length
6. Penetration data including stroke, energy, blows, penetration in inches and the pile length number for that reading

Data recorded in the field inspector's log for test piling is entered into CARS. The bearing calculations are made and the test piling pay quantity is sent to the Quantity Manager when it must be checked and submitted. Only the plan length for test piling as entered on the Test Piling Maintenance page will be sent to the quantity book. Any test piling driven in excess of the plan length will be paid at the contract unit prices for piling. Document the excess quantity on a PQE.

Piling

A log of pile driving is completed for all abutment and pier piling. The project plans show details of piling locations, numbers for each substructure unit, pile type and design loads.

The inspector records the following information for each piling driven:

1. The substructure unit and piling number
2. Hammer stroke
3. Blows per minute
4. Energy in foot/lbs
5. Number of blows
6. Each pile length installed and any footage cut off of the pile length

7. Final Add On. When piling has been driven to the required penetration and bearing, there may not be sufficient length of piling to extend into the footing. A length of piling is welded on and shown as the final add on quantity. This length of piling is part of the pay length but is not used in the bearing calculations.

This data may be entered directly into CARS in the Piling Maintenance section. The average penetration and bearing will be calculated. The pay length of piling driven will also be calculated and sent to the quantity book.

Before entering any piling or test piling data, you will need to enter the structure and hammer data. From the Main Menu, click on the Piling/Test Piling link. A list of the types or piling and test piling for the project will be displayed. Below the list are buttons for Structure and Hammer.

Enter Pile/Test Pile Information in CARS

To enter structure information:

1. Click on the Structure button. The Structure Maintenance page is displayed.
2. Make sure the correct subproject is shown at the top of the page and click on the Add button. Enter the bridge number and station in the text boxes provided. If there is more than one structure, click on the Add button. Click on the Save button. This information will appear in the Structure dropdown list in the Piling and Test Piling pages.
3. To delete a structure in the list, click the check box in the Delete column by the structure information to be deleted and click on the Save button. The information is deleted and will no longer appear in the structure dropdown list in the Piling and Test Piling pages.

Make sure the correct subproject is shown when entering the structure information.

Enter Hammer Information in CARS

To enter hammer information:

1. Click on the Hammer button
2. Click on the Add button. The Hammer Maintenance page is displayed.
3. Enter information for the cap, cushion and hammer type using the choices provided in the dropdown boxes.
4. Enter the remaining hammer information in the text boxes shown and click on the Save button. This information will appear in the Hammer dropdown list in the Piling and Test Piling pages.

Enter Test Piling Information in CARS

For test piling:

1. Click on the Add link by the test piling spec and code.
2. Pick the structure location from the choices in the dropdown box.
3. Enter the pier or abutment number, the pile number, date and start and stop time in the text boxes.
4. Pick the hammer being used from the choices in the dropdown box.
5. Enter the pile weight, design load, plan length and the start point reading in the text boxes. A text box is also provided for remarks if there would be any special comments to make.
6. Enter the Pile Length information and Penetration Data. To add additional rows, type the number of readings in the text box and click on the Add Penetration Row button.

7. When all the test pile information has been entered, click on the Save button or the Save and Run Report button.

Enter Piling Information in CARS

For piling reports:

1. Click on the Add link by the piling spec and code.
2. Pick the structure location from the choices in the dropdown box.
3. Enter the pier or abutment number, the pile number and date in the text boxes.
4. Pick the hammer being used from the choices in the dropdown box.
5. Enter the piling weight, required penetration and required bearing.
6. Enter the pile length added after bearing was reached, if any.
7. Enter the hammer stroke, blows/minute, energy, number of blows and penetration in inches.
8. Use Browse button to add attachments if applicable.
9. Enter the pile lengths driven and any cutoff footage. If more than four length and cutoff entries are needed, click on the Add Pile Row button.
10. Click on either the Save or Save and Add New button if there are more piling to enter for that part of the structure.

Clicking on the Save and Add New button will bring up the same information as the first piling entered except that the piling number and pile lengths text boxes will be blank. When the information for all piling for that report is entered, click on either the Save or Save and Run Report button. The Piling Record Selection Page will display each piling separately but will produce the report based on the date driven and the pier/abutment number. For example, if you have driven piles 1, 2 and 3 for abutment #1 and pile 1 for pier #2 on the same day, separate reports will be made for abutment #1 and pier #2.

Edit or Delete Pile Information:

1. Click on the Maint link by the test piling or piling spec and code.
2. Click on the bridge number by the date of test piling or piling report to edit.
3. Enter corrected information in any of the text boxes.
4. An entire row of penetration data can be deleted by clicking in the check box in the delete column for that row. In the piling report, only the last row of pile length can be deleted at one time.
5. The entire test piling or piling report can be deleted by clicking on the Delete button on the Test Piling or Piling Maintenance page.

Payment for test piling and piling is usually made at the contract unit prices for lengths of piling installed. Sometimes, adjustments to the payments for piling are made for circumstances such as underruns/overruns or piling splices. Refer to Section 622.06 Basis of Payment of the Standard Specifications for details of these types of payments.

Contact Bridge Division to review pile reports in CARS as soon as possible.

Mix Bitumen Reports

The mix bitumen report is used to calculate the estimated pay quantity of oil for a day's hot bituminous paving and to establish the percentage of oil in the mix.

When paving begins, some bituminous material may already be stored in the tanks supplying oil to the hot mix plant. This quantity is measured and recorded for the first mix bitumen report on a project. On subsequent days of paving, the bitumen in storage at the beginning of the day's paving is usually the quantity recorded as left in storage from the previous day. Sometimes, there is a break in paving from a particular plant to work on other projects. In these cases, the oil tanks supplying the hot mix plant will have to be re-measured. When the hot mix is being supplied from a commercial operation, it may be necessary to measure the tanks at the beginning of each day of paving. Commercial operations supply mix to many customers so the oil tank quantities are measured for those hours when mix is supplied to your project.

Any oil delivered by transport and used in the day's paving is also recorded on the mix bitumen report. The manifests for each load of oil delivered are collected and become a part of the project records.

The oil tanks are measured again at the end of a day's paving to record and calculate the quantity of oil left in storage.

The bitumen in storage at the beginning and end of each report are calculated by correcting the volume for temperature, multiplying by the specific gravity and dividing by 2,000 to obtain the quantity in tons. The bitumen delivered is recorded in pounds and converted to tons. The amount of bitumen used for a day's paving is calculated by adding the bitumen in storage and bitumen delivered then subtracting the bitumen left in storage. If any bitumen was used for purposes other than paving such as tack or fog coat, the gallons used are converted to tons and are also subtracted. The result is then divided by the total tons produced from the plant for the day's paving to obtain the percent of oil in the mix. The oil quantity for mix produced but not used on the project (waste, private use, etc.) is multiplied by the oil percentage and those tons are subtracted from the quantity of bitumen for all mix produced. This result is the estimated pay quantity for the bitumen used on the project.
When this information is entered in the Mix Bitumen portion of CARS and saved, it will send the estimated pay quantity to the quantity book.

When paving is complete on the project, you will make an oil summary to check the quantity. An oil summary lists all bitumen delivered to the project from the manifests. Add the quantity for oil in storage at the beginning of the project. Oil quantities from non-project mix (waste, private use, etc.) along with any material left in storage when paving is complete is subtracted. The result of these computations is the total oil quantity for the project.

Enter Mix Bitumen Information in CARS To make a Mix Bitumen Report is CARS:

1. Make sure the Project and Subproject are correct.
2. Click on the Mix Bitumen link. The Mix Bitumen page is displayed.
3. Select the type of oil for the report by clicking on the Add link. Goes to the Mix Bitumen Maintenance page.
4. Enter the information for fields in the Mix Bitumen report:
    a. Date, begin and end time.

   b. The change order dropdown box will have a default of 'None' if no change orders apply to the material hauled. If the material is affected by a change order, the change order number, date of the change order, quantity and unit price will be display in the change order dropdown box. This can be left in the dropdown or the 'None" option can be chosen.
   c. Enter the haul sheet or pay quantity tonnage for that day's paving.
   d. Add the specific gravity from the oil manifest.
   e. Enter the waste amount in gallons for any oil used for purposes other than in the hot bituminous pavement.
   f. Enter any waste tonnage. This includes plant waste, road waste, private use, tons of pavement going to another project or any other pavement quantities that were not placed on the project.
   g. Enter any remarks. This can include information about plant shut downs during the day or the types and tonnages of waste.
   h. Enter the bitumen in storage. The beginning and ending gallons and beginning and ending temperatures for each tank are entered on one line. If you would need to enter more tanks than the four lines provide for click on the Add Storage Row button. Also, the ending storage and temperature readings from the previous day's report will automatically be filled in. If there has been a break in the paving on the project, that quantity and temperature can be changed by clicking in the text box and typing the new numbers.
   i. Enter the bitumen delivered. Enter the manifest number and the net weight in pounds for each load of oil delivered. A remarks line is also provided if needed. To add more lines for loads delivered, click on the Add Delivered Row.
   j. Attach manifests from loads delivered using the browse button
5. Click on the Save or the Save and Run Report button.
6. A PQE is created and must be checked and submitted on Quantity Manager.

Data entered in the mix bitumen report can be edited or the entire report can be deleted as long as the PQE has not been paid. After the oil quantity has been paid on a progressive estimate, the report can only be viewed and/or printed.

To edit or delete a mix bitumen report:

1. Click on the Mix Bitumen link. The page listing the types of material is displayed.
2. Click on the Maint link by the material used. The Mix Bitumen Record selection page is displayed where all reports for that item are listed in ascending date order.
3. Click on the date link for the mix bitumen report to edit or delete.
   a. To edit the report, change any incorrect data and click on the Save or the Save and Run report button.
   b. To delete the report, click on the delete button at the bottom of the page. A dialog box that confirms if the report should be deleted appears. If it should be deleted, click OK.

Concrete Paving

The concrete paving report is used to record and calculate concrete design and paving information. It also calculates the square yards paved and sends it to the quantity book.

Enter Concrete Paving Information in CARS

To make a concrete paving report in CARS:

1. Click on Concrete Paving link. The page listing the types of concrete pavement on the project is displayed.
2. Select the type of pavement by clicking on the Add link. The page to enter data for the paving report is displayed.
3. Enter the mix design data, any additional square yards paved and any remarks.
4. Enter the start and end time, start and end stations and any minutes of delay.
    a. The linear distance will be computed automatically from the numbers entered in the start and end stations. Remember to enter the stations as a whole numbers without the plus, for example; 14+00 would be entered as 1400, 8+56.82 would be entered as 856.82. If there is an equation within the area paved, you will make two entries for the linear distance computations. Enter the start station for that day's paving and enter the back station for the end station. Make a second entry with the ahead station for the start stationing and then enter the end station for that day's paving.
    b. If additional paving stations are required, click on the Add Blank Station Row button.
    c. Use the Browse button to attach files as necessary.
5. Save the data by clicking on either the Save or Save and Run Report button.
    a. Clicking on the Save button, saves your data. A report can be generated later.
    b. Clicking on the Save and Run Report button, creates a PQE that must be checked and submitted in Quantity Manager.

The concrete paving report includes a text box where additional square yards paved can be added. This is for small areas placed without the paving machine but included in the plant quantities produced for that day's paving. These quantities are field measured and the square yards calculated. These measurements and calculations could be recorded in the remarks section if space allows. If not, record the measurements and calculations and attach them to the paving report.

A copy of the paving report should be given to the contractor.

View/Print Concrete Paving Report:

1. Click on the Concrete Paving link. The page listing the types of concrete pavement on the project is displayed.
2. Click on the Maint link by the type of concrete pavement. The Concrete Paving Record selection page is displayed where all reports for that item are listed in ascending date order.
3. Click on the Report link for the concrete paving report to be viewed and/or printed. The report is generated.

Data entered in the concrete paving report can be edited or the entire paving report can be deleted as long as it has not been paid. After the concrete quantity has been paid on a progressive estimate, the report can only be viewed and/or printed.

To edit or delete a concrete paving report:

1. Click on the Concrete Paving link. The page listing the types of concrete pavement is displayed.
2. Click on the Maint link by the type of concrete pavement. The Concrete Paving Record selection page is displayed where all reports for that item are listed in ascending date order.
3. Click on the date link for the concrete paving report to edit or delete.

a. To edit the report, change any incorrect data and click on the Save button.
b. To delete the report, click on the delete button at the bottom of the page. A dialog box appears to confirm if the report should be deleted. If it should be deleted, click OK.

Certification of Materials

For projects bid after May 2016, certifications of materials are received on SFN 61040, Contractor Certificate of Compliance, and SFN 61041, Manufacture Certificate of compliance. See attached examples below. These forms represent the complete material certification and no additional information is needed unless specified elsewhere in the contract documents (such as mill reports for Buy America materials). The forms are prepared by the contractor who must sign them, certifying that that materials he is providing meet the contract requirements.

Instructions for filling out the forms:
SFN 61040, Contractor Certificate of Compliance

- Spec/Code/Name/Description/Unit/Quantity
  - Corresponds to the bid item for the materials being certified.
- Material Certified
  - List the types of materials being certified.
- Factory Identification
  - List factory identification if applicable. If not applicable, place “N/A”.
- First Signature Block
  - This signature block is only required if the Prime Contractor desires its use.
- Second Signature Block
  - Must be filled out by the prime contractor.

SFN 61041, Manufacture Certificate of Compliance

- Spec/Code/Name/Description/Unit/Quantity
  - This information corresponds to the bid item for the materials being certified.
- Material Certified
  - List the types of materials being certified.
- Factory Identification
  - List factory identification if applicable. If not applicable, place “N/A”.
- Place of Manufacture
  - Place of manufacture of material.
- First Signature Block
  - Manufacture signature is required.
- Second Signature Block
  - Prime contractor signature is required.

CONTRACTOR CERTIFICATE OF COMPLIANCE EXAMPLE

CONTRACTOR CERTIFICATE OF COMPLIANCE
North Dakota Department of Transportation, Construction Services
SFN 61040 (3-2016)

PCN	Project Number	Prime Contractor
11111	111111111111	DOT Construction

Spec	Code	Name/Description	Material Certified	Factory Identification (lot, bin, heat number, etc.)	Unit	Quantity
762	115	Epoxy PVMT MK 4 IN Line	Paint	111111	LF	10000
			Beads	222222		
704	1067	Tubular Markers	Tubular Markers	N/A	EA	100
255	201	TRM Type 1	TRM	333333	SY	1000
			Staples	N/A		

* The signature section below is only applicable as determined by Contractor
I certify the above listed materials meet contract requirements, including "Buy America" if applicable.

☐ *Manufacturer ☐ *Supplier ☐ *Subcontractor

*Representative Name	*Title	*Organization		
*Address	*City		*State	*ZIP Code
*Signature	*Date			

I certify the above listed materials meet contract requirements, including "Buy America" if applicable.

Prime Contractor Representative	Title
Bryan Strasser	Contractor Superintendent
Signature Bryan Strasser	Date 06/08/2016

Comments

MANUFACTURE CERTIFICATE OF COMPLIANCE EXAMPLE

MANUFACTURER CERTIFICATE OF COMPLIANCE
North Dakota Department of Transportation, Construction Services
SFN 61041 (3-2016)

PCN 11111	Project Number 234098
Prime Contractor DOT Construction	Manufacturer DOT Manufacturing

Spec	Code	Name/Description	Material Certified	Factory Identification (lot, bin, heat number, etc.)	Unit	Quantity	Place of Manufacture
604	9600	Prestressed Box Beam - 21 IN	Box Beam	11111	FT	100	Bismarck
			Wire	N/A			
			Strand	N/A			
			Reinf. Steel	22222			
714	615	Pipe Conc Reinf 24IN CL III	Pipe	33333	LF	200	Bismarck
			Geosynthetic Type R1	44444			

I certify the above listed materials meet contract requirements, including "Buy America" if applicable.

Manufacturer's Representative BOB	Title Plant Man		
Address 2020 street	City Bismarck	State ND	ZIP Code 58503
Signature Bryan Strasser		Date 06/06/2016	

I certify the above listed materials meet contract requirements, including "Buy America" if applicable.

Prime Contractor Name Joe	Title Contractor
Signature Bryan Strasser	Date 05/30/2016

Comments

SAMPLE LETTER OF PRODUCTION COSTS

STATEMENT OF PRODUCTION COSTS

TO: North Dakota Department of Transportation
District Office
Grand Forks, ND

This is to certify that we have crushed and stockpiled, at the pit site located in the following location

NE 25-158-35

3,000 tons of Class 4 for use on Project No. F-6-111((801)182 in Walsh County. The material meets contract specifications and will meet contract specifications at the time of placement.

The following are our costs for producing this material:

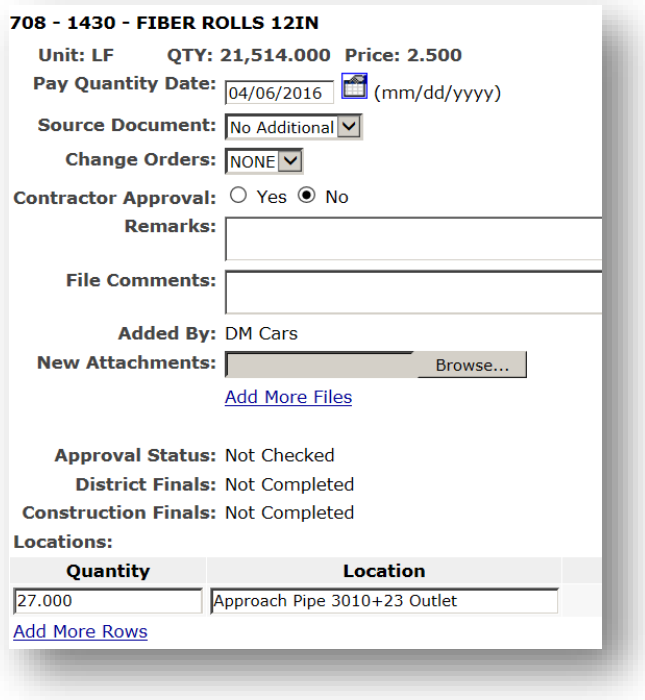
Moving to Job Site	$ .22
Stripping	.25
Crushing	1.00
Stockpiling	.30
Supervision	.13
Total per Ton	$1.90

Signed by

Title Estimator

DOCUMENTATION EXAMPLES

PQE as Source Document



708 - 1430 - FIBER ROLLS 12IN

Unit: LF **QTY: 21,514.000** **Price: 2.500**

Pay Quantity Date: 04/06/2016 (mm/dd/yyyy)

Source Document: No Additional

Change Orders: NONE

Contractor Approval: Yes No

Remarks:

File Comments:

Added By: DM Cars

New Attachments: Browse...

Add More Files

Approval Status: Not Checked

District Finals: Not Completed

Construction Finals: Not Completed

Locations:

Quantity	Location
27.000	Approach Pipe 3010+23 Outlet

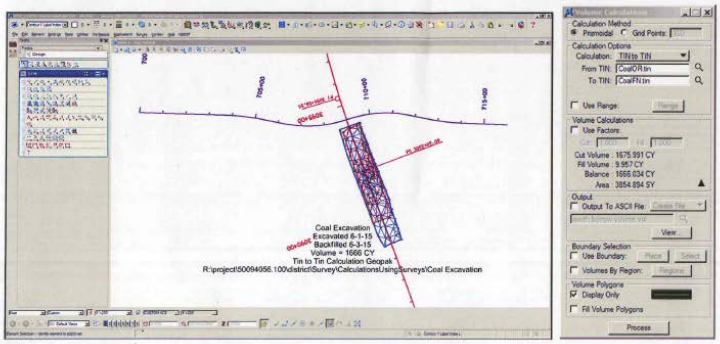
Add More Rows

All required information including, location, date, and quantity are entered directly in CARS. SFN 10004, Pay Quantity Report, was not filled out and is not needed.

Source Document Attached

Attached Document is selected as the Source Document and the Contractor Haul Summary is attached. The quantity from the Summary is entered in the Quantity box. The Pay Quantity Date corresponds with the date on the Summary.

Excavation



Coal Encountered in the roadway at 3090+00 to 3094+00. 1666 CY excavated and wasted. 1666 CY of good material was excavated to replace the material. Total common excavation payment = 1666 (coal ex)+1666 (replacement) = 3332 CY (pay total)

Engineer _____ Date 6/4/15

Contractor _____ Date 6/4/15

```
*****************************************************************
**                                                             **
** TIN to TIN Volume Report -- Thu Jun 04 08:35:07 2015
**                                                             **
** From TIN <CoalOR.tin> to TIN <CoalFN.tin>
**                                                             **
** Prismoidal Volume
**                                                             **
**                                                             **
*****************************************************************
**                                                             **
**  Total Cut = 1675.991 Cubic Yards
**  Total Fill =      9.957 Cubic Yards
**  Area =            3854.894 Sq Yards
**  Balance =         1666.034 Cubic Yards
**                                                             **
*****************************************************************
```

This summary sheet was prepared and attached to the PQE to document excavation. This style of summary sheet could be used to document any item paid by the ton and measured with a survey. The signatures are not required for this type of documentation.

Mulching

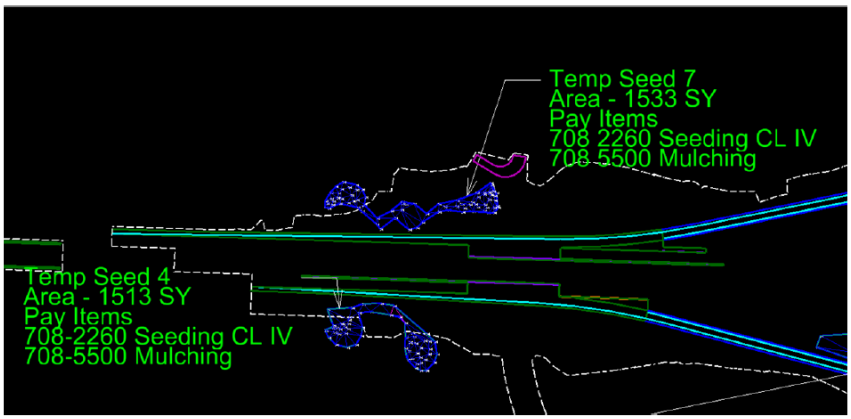
Mulching 708 5500

Temp seed 7 – 1533 SY
Temp seed 4 – 1513 SY

Total - 3046 SY = 0.63 acres

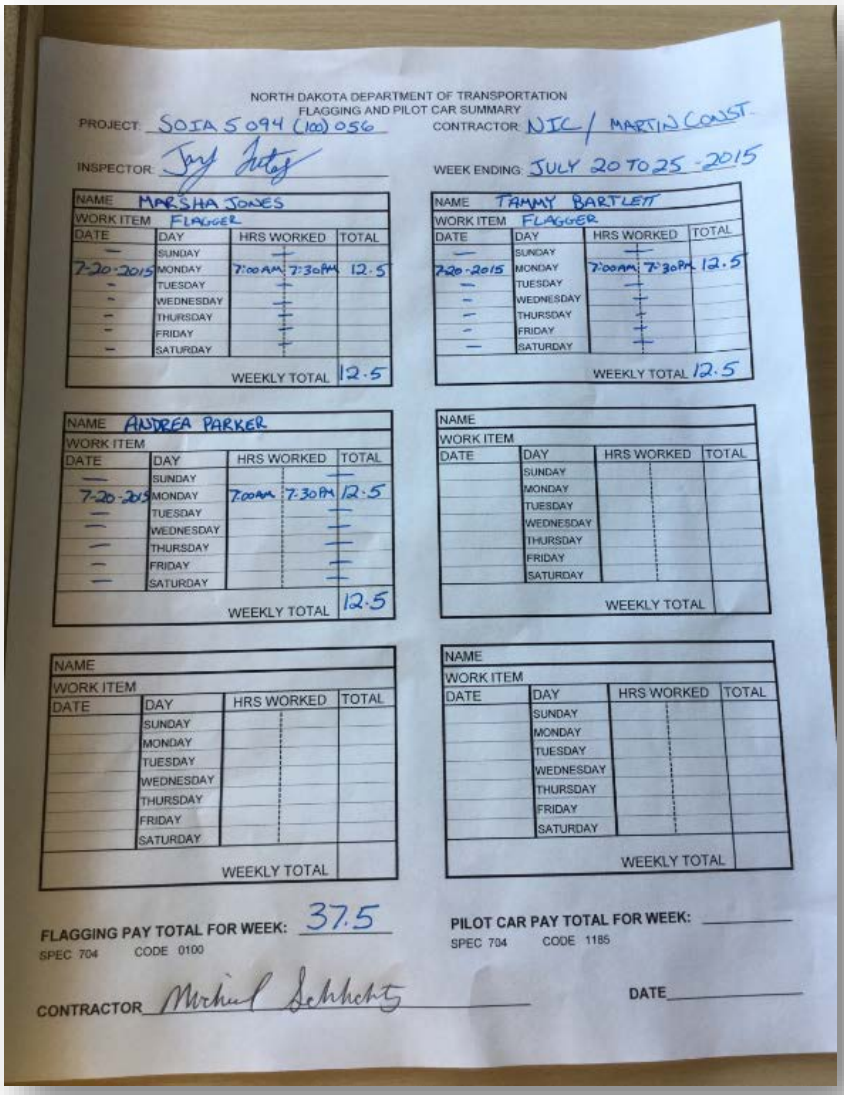
This area was mulched on 5/25/15 by Martin Construction. It had previously been mulched, but had then been disturbed so a new layer of mulch was requested by the Project Engineer.

Prepared by: Bryan Strasser 6/1/15



This documentation was prepared and attached to a PQE. This same format may be used for any item measured by area.

Flagging



NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
FLAGGING AND PILOT CAR SUMMARY

PROJECT: SOIA 5094 (100) 056 CONTRACTOR: NIC / MARTIN CONST.

INSPECTOR: WEEK ENDING: JULY 20 TO 25 - 2015

NAME: MARSHA JONES			
WORK ITEM: FLAGGER			
DATE	DAY	HRS WORKED	TOTAL
—	SUNDAY	—	
7-20-2015	MONDAY	7:00 AM 7:30 PM	12.5
—	TUESDAY	—	
—	WEDNESDAY	—	
—	THURSDAY	—	
—	FRIDAY	—	
—	SATURDAY	—	
		WEEKLY TOTAL	12.5

NAME: TAMMY BARTLETT			
WORK ITEM: FLAGGER			
DATE	DAY	HRS WORKED	TOTAL
—	SUNDAY	—	
7-20-2015	MONDAY	7:00 AM 7:30 PM	12.5
—	TUESDAY	—	
—	WEDNESDAY	—	
—	THURSDAY	—	
—	FRIDAY	—	
—	SATURDAY	—	
		WEEKLY TOTAL	12.5

NAME: ANDREA PARKER			
WORK ITEM			
DATE	DAY	HRS WORKED	TOTAL
—	SUNDAY	—	
7-20-2015	MONDAY	7:00 AM 7:30 PM	12.5
—	TUESDAY	—	
—	WEDNESDAY	—	
—	THURSDAY	—	
—	FRIDAY	—	
—	SATURDAY	—	
		WEEKLY TOTAL	12.5

NAME			
WORK ITEM			
DATE	DAY	HRS WORKED	TOTAL
	SUNDAY		
	MONDAY		
	TUESDAY		
	WEDNESDAY		
	THURSDAY		
	FRIDAY		
	SATURDAY		
		WEEKLY TOTAL	

NAME			
WORK ITEM			
DATE	DAY	HRS WORKED	TOTAL
	SUNDAY		
	MONDAY		
	TUESDAY		
	WEDNESDAY		
	THURSDAY		
	FRIDAY		
	SATURDAY		
		WEEKLY TOTAL	

NAME			
WORK ITEM			
DATE	DAY	HRS WORKED	TOTAL
	SUNDAY		
	MONDAY		
	TUESDAY		
	WEDNESDAY		
	THURSDAY		
	FRIDAY		
	SATURDAY		
		WEEKLY TOTAL	

FLAGGING PAY TOTAL FOR WEEK: 37.5
SPEC 704 CODE 0100

PILOT CAR PAY TOTAL FOR WEEK: _____
SPEC 704 CODE 1185

CONTRACTOR: Michael Schlicht DATE: _____

An iPad was used to take this picture of a flagger summary sheet and attach it to the PQE in the field.

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CHANGE ORDERS

It is the contractor's responsibility to construct the project according to the requirements of the plans, special provisions and specifications as originally drawn and written unless the project is revised by approved written change orders.

Section 104 of the Standard Specifications allows the DOT to modify the plans and terms of the contract by changes, additions or deletions to properly complete the work planned under the contract.

Contract changes are alterations or revisions of the plans and quantities of work, deletion of work items found unnecessary during construction or extra work required to properly complete the project.

NEPA Reassessment

All potential change orders must be reviewed to assess any changes that affect the conditions of environmental notes, or modify any environmental permits or associated mitigation. Change orders involving these items must be coordinated with the original registrant and/or environmental document author.

Functional Design & Inherent Variability

Change orders also need to be reviewed and assessed for any changes that are outside of inherent variability or result in a functional design change. These types of change orders need to be sealed, signed, and dated by the original registrant. See Chapter 1 Section 9 of the Design Manual for more information.

Value Engineering

Change orders containing Value Engineering must be submitted for review to ETS – Technical Services before they are signed by the Project Engineer.

Alterations

Alterations on the contract include changes made in the plans or plan quantities, revision of the method of measurement for pay quantities, deletion of items of work or extra work determined necessary during construction due to unforeseen circumstances or to make a beneficial improvement to the project. These alterations will require a written change order.

Contract Change Orders

A contract change order is a written supplemental agreement executed between the contractor and the DOT which provides for the performance of modifications to the contract such as changes in plans, specifications, special provisions or plan quantities. A contract change order would also be created for changes in the construction of the project necessary to satisfactorily complete the work.

The effect of the change order on contract time will be addressed on all change orders whether an adjustment to time is made or not. Section 108.06 of the Standard Specifications provides guidelines when determining a time adjustment on the change order. Justifiable increases or decreases in contract time should be included in the change order whenever the number of days can be determined with reasonable certainty. When the amount of contract time cannot be determined at the time the change order is created, the option stating that the contract time 'may be revised if the work affects/affected the controlling operation' should be used.

When preparing a change order, you will be required to include a detailed explanation of the change to the contract including quantities affected, items added and the reasons for the change to the project.

Justification for unit prices on the change order must be adequately explained and documented. Change orders should be prepared under the presumption that the approval authorities may not be as familiar with the details of the work as the engineer.

A change order must be self-explanatory and must incorporate sufficient detail to assist the approval authority in evaluation of the change order. Justification for unit prices on change orders needs to receive special emphasis by the project engineer and the district. Change orders must provide adequate documentation to establish a basis for unit costs before the appropriate authority approves the change order.

The list of Annual Average Bid Prices can be used to compare against unit prices submitted by the contractor. You may also require the contractor to submit a breakdown of costs as justification for the unit price submitted.

Increased or Decreased Quantities

The quantities of any item of work on a project may vary from the original plan estimate. The specifications provide protection for both the owner and the contractor by allowing an adjustment of the contract unit price when the quantity of a major work item is increased or decreased by more than 25 percent from the original contract quantity. Any adjustments of the contract unit price will be made by change order. These adjustments are governed by Section 104 of the Standard Specifications.

A change order is not required for normal increases or decreases in contract item quantities that occur in the completion of the project or to delete minor bid items that were not required on the project. A change order is also not required for those items adjusted by provisions in the specifications such as deducts for failing materials.

Change Order Approval Procedures

Work added to the project by change order should not be started by the contractor until the change order has been created and has been signed by the contractor, the project engineer and all other required approval authorities.

When conditions dictate that the extra work begin without delay and the work is estimated to be beyond the project engineer's approval authority, verbal approval for the change order may be obtained so the work can progress. The change order document should be created and signatures obtained as soon as possible. Work on a change order item can be started before a change order has been created if:

1. A delay in starting the work would jeopardize life, property or result in environmental damage
2. A delay in starting the work would result in delay damages to the contractor or the DOT
3. A fully executed change order will be processed for approval as soon as possible.

If higher approval authorities disagree with the project engineer's decision and direct the work to stop, all work performed to that point will be paid for under the terms of Section 109.03 E Force Account. The project records of the contractor's labor, equipment and materials used to perform the work must be kept with enough detail to allow accurate payment.

On change orders with non-participating items added, signatures will also be obtained from the owner responsible for the costs i.e., city, county, park district, etc.

Change Order Approval

Change order approval authority is determined by the monetary amount of the change order, amount of days requested, and/or the reason for the change order. The Change Order Approval Process Chart shows the required approval authority for various types of change orders and monetary amounts. Parts A though E are described as follows:

Part A

The Project Engineer has final change order approval authority for the change orders listed in Part A if the following conditions are not exceeded:

1. Cumulative change order increase or decrease up to $10,000
2. Any single contract pay item with an increase or decrease up to $10,000
3. Force Account up to $10,000
4. A time extension up to five working days

A Team Leader has final change order approval authority for the change orders listed in Part A if the following conditions are not exceeded:

1. Cumulative change order increase or decrease up to $20,000
2. Any single contract pay item with an increase or decrease up to $20,000
3. Force Account up to $20,000
4. A time extension up to five working days

The District Engineer has final change order approval authority for the change orders listed in Part A if the following conditions are not exceeded:

1. Cumulative change order increase or decrease up to $100,000
2. Any single contract pay item with an increase or decrease up to $100,000
3. Force Account up to $100,000
4. A time extension up to fifteen working days

The Office of Operations Director has final change order approval authority for the change orders listed in Part A if the following conditions are not exceeded:

1. Cumulative change order increase or decrease up to $500,000
2. Any single contract pay item with an increase of decrease up to $500,000
3. Force Account up to $500,000
4. A time extension over fifteen working days

Change Orders over $500,000 will be signed by the Office of Operations Director but will require verbal approval from the Deputy Director for Engineering.

When local agency approval is required, the change order must also be signed by a representative of that agency.

Parts B and C

Change orders described in Part B 'Structural design changes' and Part C 'Changes in specifications' require Department approval at the Office of Operations level as shown in the approval chart.

Part D and E

Change orders described in Part D 'Environmental Commitments' and Part E 'Emergency Relief' require Department approval at the Office of Operations level as shown in the approval chart.

Change Order Approval Procedures for Local Agency Funds on Department project

On some Department projects, there is local public agency funding (ie, city, county) in addition to the federal or state funding.

Change orders for work that only has local public agency funds associated with it do not require a "Recommendation of Approval" or "Approval" by either the District Engineer or Office of Operations, regardless of the amount or reason for the change order.

These change orders shall be signed by the contractor, approved by the Project Engineer and signed by the local public agency official.

If a change order contains a combination of federal/state funded work and local public agency funded work, then the change order approval shall follow the outlined change order approval process in this manual.

If there is a change to the contract time as a result of the change order, then the change order approval shall follow the outlined change order approval process in this manual.

Change Order Approval Procedures for Non-NDDOT Projects

On Non-NDDOT project without federal aid, the owner's authorized representative such as a city, county, park district, etc. will approve change orders. The DOT does not review these change orders for approval.

On Non-NDDOT project with federal aid, the owner and/or the owner's authorized representative will approve the change order. Change orders that have non-participating items must be approved by the owner responsible for the costs.

The Department will review change orders that exceed any of the following criteria to determine if the costs are eligible for federal aid. These are:

1. Cumulative increase or decrease greater than $10,000
2. Any single contract pay item with an increase or decrease greater than $10,000
3. A Force Account greater than $10,000
4. A time extension greater than five working days

The District Engineer and, if required, the Director of Operations, will review and approve these change orders for federal aid eligibility. The approval authority of the District Engineer and Director of Operations for federal aid eligibility is the same as the authority provided on Department projects and detailed in the Change Order Approval Process Chart.

If the federal funds authorized in the cost participation agreement with the local agency are exceeded and no federal funds are available for any change order, the local agency will assume the total cost of the change order.

If the federal aid participation on the project is limited and the limit is reached, the NDDOT will no longer review and approve subsequent change orders for federal aid eligibility. The owner will be responsible for those extra costs.

Changes to emergency relief (ER) projects that affect the scope identified in the Detailed Damage Inspection Report (DDIR) must have prior FHWA concurrence. Normal overruns and underruns plus routine change orders on ER project should be processed according to procedures previously defined.

Change Order Approval Process Chart

REASON FOR CHANGE ORDER	CHANGE ORDER PARAMETERS	FINAL APPROVAL AUTHORITY [5]
A. All reasons except those listed in items B. through E. including: • Changes in contract documents. • Extra work within the scope of the contract. • For establishing the basis of payment or time adjustments for work affected by the changes.	Costs up to $10,000.[1] Time extensions up to 5 working days.[2]	Project Engineer
	Costs up to $20,000.[1] Time extensions up to 5 working days.[2]	Team Leader[3]
	Costs up to $100,000.[1] Time extensions over 5 working days up to 15 working days.[2]	District Engineer[3]
	Costs up to $500,000.[1,4] Time extensions over 15 working days.[2]	Office of Operations Director[3,4]
B. Structural Design Changes.	All	Office of Operations Director[3]
C. Changes in specifications, including materials specifications.	All	Office of Operations Director[3]
D. Changes that affect the "Environmental Commitments" where the environmental action needs to be reassessed.	All	Office of Operations Director[3]
E. Emergency Relief (ER) Projects	All	NDDOT approval in accordance with A.
	Scope Change	Federal Highway Administration[3]

1. Cost thresholds can be an increase or decrease to the original cost. The costs are cumulative, not net:
   - (An increase of $80,000 and decrease of $70,000 = $150,000 final approval authority required)
2. Calendar to working days conversion: [working days = (calendar days requested) × (working days specified to be charged per week) ÷ 7].
3. Verbal approval of the final approval authority is required prior to the start of change order work and prior to obtaining the Contractor's signature on the Change Order.
4. Change Orders over $500,000 will be signed by the Office of Operations Director but will require verbal approval from the Deputy Director for Engineering.
5. If not authorized to sign as final approval authority, need to sign "Approval Recommended" before going to the next authority.

Change Orders in CARS

When entering change order data into CARS, you will be required to choose a change order reason from the drop down list on the Change Order Maintenance page. The choices are as follows:

1. Design changes
2. Structural design changes
3. Changes in specifications
4. Environmental commitments
5. Major changes in project limits
6. Emergency relief
7. Emergency relief scope change

You will also be required to pick a Category and Sub-Category for the change order items. The sub-categories are different for each category. The categories and sub-categories will be used to track the types and amounts of change orders during the construction season and produce a report. The categories and their sub-categories are listed below.

1. Design Changes
    a. Plan error/omission
    b. Work due to unknown condition
    c. Design change to improve the project/public interest
    d. Design change to provide equal or greater product for less cost
    e. Work done to correct error in the field
    f. Value Engineering Proposal
2. Specification Changes
    a. Equal or better product for less cost
    b. Unable to construct/supply what was specified
    c. Original specifications were not suitable for project
3. Contract Administration Issue
    a. Price deductions
    b. Resolution of Notice of Intent or Claim
    c. Haul Road Related Issues
    d. Fuel Cost Adjustments
    e. Partnering
4. Other
    a. This category is used when the change order item does not fit in any of the other categories. The project engineer will be required to enter a short description for the sub-category.

The recommended approval personnel will be shown on the Change Order Approval page. The approval level is based on the change order reasons, the monetary amounts on the change order and the time extensions approved in the change order.

Create a change order in CARS

1. From the Main Menu, click on the Change Order link. The Change Order Selection page is displayed. Any change orders created previously will be displayed in descending order and separated by subproject. The change order number, date created, change order reason and approval status are shown.

2. To create a new change order, click on the Add Change Order link. The Change Order Maintenance page is displayed.
3. A change order number is assigned and the date you are creating the change order is displayed.
4. The Reason drop down box has seven general categories which are used along with dollar amounts to determine approval authority. Pick the one that best describes why the change order is being created.
5. Pick one of the choices in the Contract Time Change drop down box. If a change is being made in the contract time, enter the increase or decrease in the Calendar Days text box.
6. A short description of the change order work can be entered in the Remarks text box. The Remarks entered here are used for identification of the change order in the Change Order Summary management report. They are also displayed on the Change Order after the Explanation of Change.
7. Enter a narrative of the change being made in the Explanation of Change text box. Additional details such as price breakdown and correspondence from the contractor may be attached to the hard copy change order.
8. Click on the Save and Continue button. The Change Order Spec/Code List is displayed.
9. Click on the Add Spec Code button. The Change Order Spec/Code Maintenance page is displayed.
10. Enter the Spec and Code for the item being added, if known. The spec and code can also be determined two ways:
    a. Click on the Annual Average Bid Price Report link. The Bid Opening Reports page from the DOT website will open in a separate window. Go to the drop down box under Annual Average Bid Price and click on the report year. The Annual Average Bid Price list will open and you can browse the list for the item to be added if you are adding an item with a valid spec and code.
    b. If you know the specification number for the item to be added but are not sure of the code, type the spec number in the text box and click on the Search button. A list of all valid items for that spec number will be opened. Click on the link for the item to be added and the code number will be filled in.
11. Enter the unit price and quantity.
12. Click in one of the radio buttons to mark the item Participating or Non-Participating.
13. In the Category drop down box, pick one of the options. If the item doesn't fall into the design change, specification change or contract administration issue options, choose the Other category and enter a short description in the Other text box.
14. In the Sub-Category drop down box, pick the subcategory that best describes the change order item.
15. If the item added by change order doesn't have a valid spec and code (one not found in the list), you will be required to enter the following information:
    a. Enter a short description in the Description text box. For example, you are adding a force account on the change order and are using 109/0180 for the spec and code. Enter 'Force Account #1' in the description text box.
    b. Pick the unit for the item being added.
    c. If the item being added will be recorded on a mix bitumen report, concrete paving report, test piling/piling report or haul sheet, pick the spec/code group that applies from the drop down list. This allows the change order item to be added as a choice for these reports.

16. Click on the Save and Add New button to enter additional items for the change order. Clicking on the Save button will return you to the Change Order Spec/Code List. From this page, you can click on the Add Spec Code button to enter additional items for the change order.
17. The Change Order report can be printed from several places in the change order screens.
    a. From the Change Order Selection page, click on the Report link.
    b. From the Change Order Maintenance page, click on the Save and Run Report button.
    c. From the Change Order Spec/Code List page, click on the Run Report button.

After all the information has been entered and saved, the change order will be displayed on the Change Order Selection page and it will be shown as 'Not Approved' in the Approval column. A printed report will be used to gather signatures for all external signers (people without CARS access.) The remaining signatures will be obtained using the electronic signature process in CARS.

Attach supporting documentation to the change order

Supporting documentation is attached to the change order using the Files link on the main change order selection screen. Files can be added to the change order at any time prior to beginning the electronic signature process. Files can also be deleted prior to beginning the electronic signature process. If a change to a file is necessary after starting the electronic signature process, then the signatures must be reset and the signature process restarted after making the file changes.

There are currently three options available to label file attachments in the drop down menu next to the Browse button. It is important to select the correct document description because this selection becomes the document's "Subject/Title" in Filenet. The options are:

1. Cost Justification: Internal Cost Justification
2. Support Document: Supporting documents such as pictures, invoices, or correspondence
3. External Signed Change Order: Used to upload the signed change order after receiving all external signatures

External Signatures

External Signers are people who do not have access to CARS such as the Contractor, a County Engineer, or a Park Board President. These people will physically sign the change order. All external signatures must be obtained on the change order prior to beginning the electronic signature process.

1. Obtain all external signatures
2. Click on the "Files" link in the Documentation column on the change order selection screen
3. Attach the externally signed change order to the change order by browsing to the location of the file.
4. Select "External Signed Change Order" from the drop down menu
5. Click "Save"

Electronic Signature Process

After the externally signed change order has been entered into CARS, the external signatures must be entered into the electronic change order:

1. Click on "Signatures" link on the main change order selection screen.
2. The Contractor will be automatically populated as a required external signature.

3. Add additional external signatures, such as city or county representatives, by using the "Add External Signer" & "Add Custom Signer" buttons. Each entity which signed the change order externally should be represented by an external signature line. Each signature will be populated into the final electronic version of the signed change order.

Electronic signers are signers who will sign the change order using CARS. The Project Engineer, Team Leader, District Engineer representative, and Office of Operations representative's signatures are obtained electronically in CARS. The recommended approval personnel will be shown at the top of the electronic signature screen. This is based on the dollar amount and change in time entered for the change order. Add each signer to the signature queue in order of approval authority.

1. Add all necessary Electronic Signers to the queue by selecting a signer from the "Electronic Signature" drop down menu and clicking "Add Electronic Signer". The signers must be added in order of approval authority, starting with the Project Engineer.
2. Click "Save & Start Signatures Process".
3. Add the date of external signatures by selecting the date each entity signed the change order from the calendar next to the external entity. If multiple external signatures were obtained, all dates must be entered prior to clicking 'Save External Signatures.'
4. Click "Confirm" to confirm that all external signatures have been received and the signed report has been entered into Filenet. After clicking "Confirm", options become available to Reset, Reject, or Sign the change order.
5. The Project Engineer signs the change order by clicking the "Sign" button. Each time the change order is signed electronically, an email is automatically sent to the next signer in the signature queue which notifies them of a change order which requires their signature.

District Engineer & Office of Operations Signatures

After the change order is signed by the Team Leader the change order becomes available for the District Engineer's review. The District Engineer and Office of Operations users review the change order using the "Change Order Signature Overview" link located on the CARS main menu in the Maintenance column.

Any change orders which are awaiting signature will be shown in the list as shown below:

The "Reviewed" field (Yes/No) is indicating whether the change order has been reviewed by the Assistant Construction Engineer.

To sign the review and sign the change order:

1. Click the "**+**" sign to expand the change order for review. The change order report, supporting documentation, and other information are available from this screen.
2. Select "Reject" or "Apply Signature". If the change order is rejected, an email is automatically sent to the Project Engineer and the process is restarted.
3. When the change order is signed by the District representative, an automated email is sent to Office of Operations (if applicable) which notifies them of a change order awaiting approval.

4. The change order now appears in the queue for the Office of Operations.

Approving the Change Order

After the final approval authority has signed the change order, the Project Engineer will receive an email stating that all electronic signatures have been received. After the final signature, the "Approve Change Order" check box becomes available to be checked by the Project Engineer.

Make the Change Order approved by:

1. From the Main Menu, click on the Change Order link. The Change Order Selection page is displayed.
2. Click on the Not Approved link for the change order to be approved. The Change Order Approval page is displayed.
3. Click on the Approve Change Order check box.
4. Click on the Save button. You will be returned to the Change Order Selection page.

The change order will now show 'Approved' in the Approval column and the change order items will be added to Quantity Manager in spec and code order with the original contract items. The information entered for the change order can be edited or deleted as long as it has not been marked approved. Once the change order is marked approved, the information can only be viewed.

All change orders regardless of amounts are subject to review at any time for proper expenditure of Federal funds. Sometimes a change order is processed and approved and it is determined later by the FHWA or the NDDOT that all or part of the change order is non-participating. The project engineer will be informed about the funding change. A change order will be created deleting the participating item or items and adding them back to the project as non-participating items.

Change Order Routing

Construction Services is automatically notified when the change order is approved by the Engineer. The individual files which make up the change order are compiled into one file and entered into Filenet by Construction Services Division. After the combined file is entered into Filenet, the Signed Report becomes available on the project's change order selection screen.

The Engineer should confirm that all necessary files (Original Contractor Signature, E-Signature Change Order, Cost Justification, etc.) are included in the final Signed Report. After confirming that all files were compiled correctly, the original documents which made up the change order can be disposed of. It is no longer necessary to send the original documents to Construction Services as long as the Electronic Signature process was followed.

In the rare case where a change order is executed outside the CARS electronic signature process, the original copies of fully executed change orders shall be forwarded to the Construction Services Division for recording, processing, and distribution, regardless of the approval level.

Change Orders and Quantity Manager

When a change order modifies the quantity of an item, the quantity displayed in Quantity Manager will be revised and an * will be placed next to the revised quantity.

When a change order modifies the price of an item, the displayed price will not change on Quantity Manager, but an * will appear next to it, notifying the user that there are multiple prices available.

TIME EXTENSIONS

Contract Time Adjustments

The Project Engineer is responsible for addressing contract time adjustments. Section 108.06 of the Standard Specifications and any supplemental specifications provide for the adjustment of contract time under certain conditions. Either the NDDOT or the contractor may initiate an adjustment of the contract time.

NDDOT Initiated Time Adjustment

All change orders involving added work and compensation will address contract time whether an adjustment is made or not. Section 108.06 of the Standard Specifications provides guidelines for determining time adjustments. Justifiable increases or decreases in contract time should be included in contract change orders whenever the amount of contract time involved can be determined with reasonable certainty. When creating a change order in CARS, the Project Engineer is given three options to address contract time which are:

1. No change
2. May be revised if the work affects/affected the controlling operation
3. Will increase/decrease by Calendar or Working days.

If a time extension is necessary for some reason other than additional work or compensation, the extension shall be addressed by the Project Engineer with a change order. The change order must state the increase or decrease in contract time and the reason for it.

Contractor Initiated Time Extension

The Contractor can request additional time by following Section 104.03 in the Specifications and submitting SFN 14461 Request for Additional Time.

The Project Engineer will promptly review any time extension request received. The contractor must provide sufficient documentation and justification to support their position. A letter or email will be sent to the contractor to acknowledge that the request was received and if necessary, to ask for additional supporting information. If the request is the result of a suspension or delay, refer to Section 108.06 B of the Standard Specifications on how to handle it. If the contractor submits poor or no justification, the request may be denied based on the lack of submitted information.

District Administration and Construction Services Division should also be made aware of the request, depending on the amount of days requested. The approval authority for time extension requests is the same as for Change Orders. The Project Engineer can make the final determination for time extension requests of up to 5 days. Most District Administrations will want to be notified of all time extension requests, and be involved in drafting the response, regardless of the amount of days requested. The

District can approve time extension requests of up to 15 days. Construction Services Division should be notified of time extension requests of greater than 15 days.

After reviewing the time extension request, the Project Engineer will prepare a detailed report of the contractor-claimed delays and make an internal recommendation for action (This is for time extension requests which require higher approval authority.) The internal recommendation should be attached on a separate document, not written on the time extension request form received from the contractor. The District's internal recommendation to the Office of Operations Director (if applicable) should also be made on an attached document, or added to the Project Engineer's document.

The Owner's Action section of SFN 14461 should only be filled out and signed by the person with final approval authority. This is the document that will be returned to the Contractor to notify them of the Owner's decision.

For non-NDDOT projects, the Project Engineer will contact the owner. The decision on federal aid eligibility will be made by the NDDOT at the highest approval authority for the number of days requested.

Executing the Time Extension

Ideally, the days granted in response to a time extension request will be included on a change order signed by the Contractor. The change order will contain language resolving the NOI or stating that this change order is complete compensation for the issue that caused the time extension. The benefit of resolving a time extension through a signed change order is that the Department can be sure the issue is resolved.

The NDDOT and Contractor will not always agree on the number of days to be granted in response to an issue, NOI, or time extension request.

Example Scenario:

> A Contractor notifies the Engineer in accordance with 108.06 B. The Specifications are followed in regards to tracking the delay, but a disagreement arises regarding the number of days the Contractor was delayed. The Contractor requests 10 days on the time extension request form, but the Engineer can only justify 5 days.
>
> In this case the District (since approval authority is based on the amount of days requested) fills out the Owner's Action section of the form. The NDDOT grants 5 days. As mentioned above, ideally, the 5 days would be included on a change order and signed by the contractor. In this case, the Contractor has stated they will not sign a change order which includes any less than 10 days.
>
> Therefore, the completed SFN 14461 form is returned to the Contractor, notifying them of the NDDOT's decision to add 5 days. The 5 days are added to the contract and accounted for on SFN 5660: Contract Time for Completion. The completed and signed time extension request is entered into CARS/Filenet.
>
> If the Contractor decides to further dispute the issue, they have the ability to file a claim in accordance with Specification 104.05.

CONTRACT ADJUSTMENTS

Contract adjustments are used to add bid items to the project when the unit price is established in the contract documents such as the Standard Specifications or the bidder's proposal for the project. Some examples of items commonly added to the project using the contract adjustment are deducts for failing materials, piling adjustments and bonus or deducts for contract items. Adding items using the contract adjustment is similar to adding items by change order but does not require approval signatures.

Some contract adjustments do not have a fixed unit price but are computed by using a formula set in the contract documents. Unit price adjustment computations must be included in the project records. These computations can be documented on the pay quantity report made out for the contract adjustment.

Create Contract Adjustments in CARS

To create a contract adjustment in CARS:

1. From the Main Menu, click on the Contract Adjustment link. The Contract Adjustment Selection page is displayed.
2. Click on the Add button to enter a new contract adjustment. The Contract Adjustment Maintenance page is displayed. Enter the following information:
    a. Date
    b. Enter the spec and code from the Spec & Code List at the bottom of this section. They are also included in the Spec & Code list on the NDDOT website. If no Spec & Code number for the Contract Adjustment exists call the Construction Services Division. A Spec & Code number will be assigned or instructions will be given to process adjustments that will not be added to the list.
    c. Enter the unit price and quantity for the adjustment.
    d. Determine if the contract adjustment is participating or non-participating and click the appropriate radio button.
    e. The Adjustment Description text box can be used to enter a short explanation of the contract adjustment. This will be displayed under the item name of the Contract Adjustment Selection page.
    f. The Remarks text box is used to enter more information about the contract adjustment. For example, if a deduct for failing aggregate samples is being added to the project by contract adjustment, the remarks text box could be used to document which samples failed.
3. After all the information has been entered, click on the Save button. If you have entered a spec and code that is not valid (one that is not in the list of spec and code numbers), two error messages will display at the top of the Contract Adjustment Maintenance screen. This requires entry of a short description of the contract adjustment in the Item Description text box. You will also be required to pick a unit designation from the Unit drop down box.
    After all the required information has been entered and successfully saved, you will be returned to the Contract Adjustment Selection screen. The item added will be listed and a Generate PQE button will be displayed. Clicking on this link adds the PQE to Quantity Manager where it will need to be checked and submitted. Future payments for the same adjustment can then be made from Quantity Manager. Contract Adjustments are displayed at the end of the spec and code list on Quantity Manager. Supporting documentation for the contract adjustment should be attached to the PQE when applicable.

Liquidated Damages

Liquidated damages are assessed when the project work has not been completed within the time allowed in the contract documents or approved time extensions.

Liquidated damages are charged on the total contract amount. On contracts with tied projects, liquidated damages will be prorated per project. For example, projects A, B, and C are let as one contract totaling $1,000,000. The total bid amounts for the projects are as follows:

Project A - $500,000 Project B - $375,000 Project C - $125,000

If 8 days @ $400.00/day are charged against the contract, the days for each project would be as follows:

Project A - 4 days Project B - 3 days Project C - 1 day

Fuel Cost Adjustment

All contracts contain the special provision 'Fuel Cost Adjustment Clause'. The project engineer must check the Fuel Cost Adjustment Affidavit (SFN 58393) found in the project proposal to see if the contractor is participating in the fuel cost adjustment program.

If the contractor elects to participate, the project engineer will calculate the adjustments monthly using the Fuel Cost Adjustment module in CARS. Additional information about Fuel Cost Adjustments can be found on the NDDOT website at the following address:

http://www.dot.nd.gov/divisions/construction/fuelcostadjustments.htm

PROGRESSIVE ESTIMATES

The quantities listed in the plans and proposals are estimated quantities of work to be completed by the contractor. The breakdown of quantities and the different funding sources are listed in the detail sheets. Payment to the contractor is made for the actual quantities incorporated in the project work.

Accurate documentation of all pay quantities is kept by using Quantity Manager in CARS, inspection reports, field books and various reports such as those used for concrete paving, mix bitumen, haul sheets, etc. The pay quantities are recorded in Quantity Manager on a regular basis and are used to make regular payments to the contractor. These payments are made on the progressive estimate. If a contract has multiple tied projects, a separate estimate is used for each project even though there is only one contract.

A minimum of one progressive estimate a month will be made as the project work proceeds. Progressive estimates may be created as often as the amount of work completed is sufficient to warrant making a payment to the contractor. Keep in mind that a subcontractor's work is sometimes performed near the end of a project. This may include items such as seeding, sod, striping, signing, lighting, signals, etc. Unless special circumstances exist that demand withholding payment, intermediate estimates should be prepared to pay for subcontract work items in order for the subcontractors to receive timely payments. DO NOT wait until the final estimate to pay for the subcontract work items completed.

Most estimate quantities are based on actual field measured quantities. Some items such as common excavation may be paid as an estimated quantity until all final measurements can be made and calculated. Estimates also include payments for stockpiled or invoiced materials, contract adjustments and change order items.

The progressive estimate consists of detail sheets listing all original pay items along with any items added by change order in order by specification and code number. The detail sheets also include those items added by contract adjustment and stockpile/invoiced items. Detail sheets will also be divided by subprojects. The progressive estimate has a cover sheet that shows the estimate number, the dates covered by the estimate and a breakdown by funding sources of the total monetary amount for the estimate.

Estimates are generated by the project engineer. When the estimate is generated, the project engineer can review the quantities and make any changes if required. The estimate must be re-generated if any changes are made.

Withholding Progressive Estimates

There are various contract provisions which allow the Engineer to withhold progressive estimates until the Contractor is in compliance with the contract.

The Contractor should be notified if progressive estimates are being withheld. The notification should be documented by the Engineer (Examples: letter, email, recording it in the Project Diary).

Enter the reason progressive estimates are not being made on the CARS "Create Progressive Estimate" screen. Entering a reason in this field will prevent CARS from sending automated emails based on the length of time since the last approved progressive estimate.

Automated Progressive Estimate Emails

CARS automatically sends email reminders if it has been 14 days or more days since a progressive estimate was approved on a project.

The emails are sent to the project engineer, assistant project engineers, and the assistant district engineer from the project's district.

There are three ways to stop receiving the automated emails:

- Approve a progressive estimate
- Enter a reason progressive estimates are not being made on the CARS "Create Progressive Estimate" screen.
    - Entering a reason in this field will prevent CARS from sending automated emails based on the length of time since the last approved progressive estimate.
- Update the CARS Construction Status
    - The automated emails are tied to the CARS "Construction Status" page. Changing the project's construction status to 'suspended' or 'completed' will automatically suspend the automated progressive estimate emails.

Create Progressive Estimate in CARS

To make a progressive estimate in CARS:

1. From the Main Menu, click on Create Progressive Estimate. The Create Progressive Estimate page is displayed.
2. On the Create Progressive Estimate page, the following items are shown:
    a. A message will display if the previous estimate has been paid or if a progressive estimate has been generated but not paid and additional pay items have been added since it was generated.
    b. The construction start date or the previous estimate date.
    c. The date the estimate is being created.
    d. The division of the DOT responsible for approval of the estimate before it is sent to Finance. Most projects will be approved by the Construction Services Division but some will be approved by the District or by the Maintenance Division.
    e. A drop-down box for the estimate type – intermediate, semi-final and final.
    f. Text boxes are provided for the retainage percent or a retainage amount. These will only be filled in for semi-final estimates where you have approval from Construction Services to reduce the retainage to less than one percent or to a specific dollar amount.
    g. Text boxes to enter liquidated damage amounts and days to the estimate.
    h. Copies of approved estimates can be emailed to Contractors (Recommended) or others with up to 3 email addresses (each email address should be separated by a ; (semi colon)) The copy will be sent after the Construction Engineer approves the estimate. Use the check box to toggle this function off or on.
3. To create the progressive estimate, click on the Generate button. The Progressive Estimate page is displayed.
4. Only items that have been submitted in Quantity Manager will be displayed.
5. The Progressive Estimate page displays the following information about the estimate:
    a. The status of the estimate. Until the estimate is approved by the project engineer, the status is shown as preliminary. The status will change as the estimate goes through the approval process.
    b. An estimate number will be assigned after the project engineer has approved the estimate.
    c. The division, type of estimate and estimate dates are shown.
    d. The payment this estimate and total amount to date are shown. All subprojects and the total amount for each subproject are listed.
    e. Detail sheets may be viewed and printed separately by clicking on the Details link after the total amount for each subproject. All the subprojects can be viewed and printed at once by clicking on the All Details button.
    f. The cover sheet can be viewed and printed by clicking on the Cover Sheet button.
6. If all the detail sheets and cover sheet are acceptable, click on the Approved button. A dialog box asking if the estimate should be approved will be displayed. Click OK and the estimate will electronically transfer to the next approval authority.

If the estimate should not have been approved, it can still be rejected at the District or Construction Engineer level. If the estimate is rejected by the District or Construction Engineer, it goes back to the Project Engineer level to be edited and re-generated. When the estimate has been through all the approvals, the message on the Create Progressive Estimate page will show that the last estimate number

has been paid. No new estimates can be created until the previous estimate has been through the entire approval process and has been sent for payment.

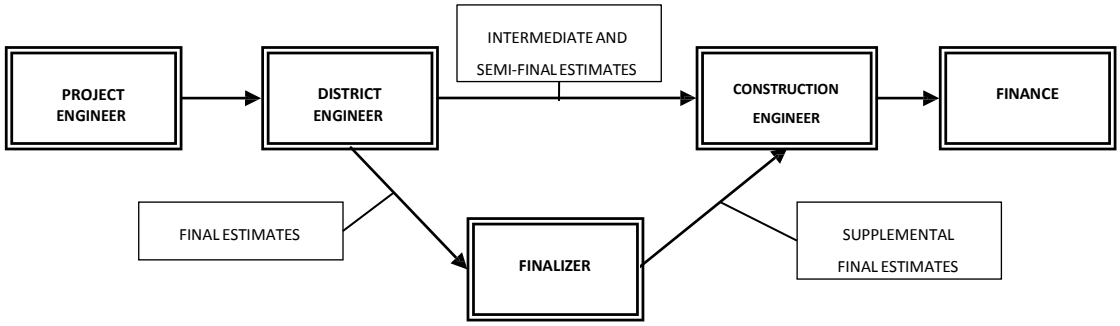
Not all estimates will be approved by the Construction Engineer. Projects that are paid with Maintenance funds will be approved by the Maintenance Engineer. District funded projects will be approved by the District Engineer. The Claim for Payment will be signed by the individual having approval authority for the estimate.

The diagrams on the following page show the electronic flow for intermediate, semi-final and final estimates approved by the Construction Engineer, the Maintenance Engineer and the District Engineer.

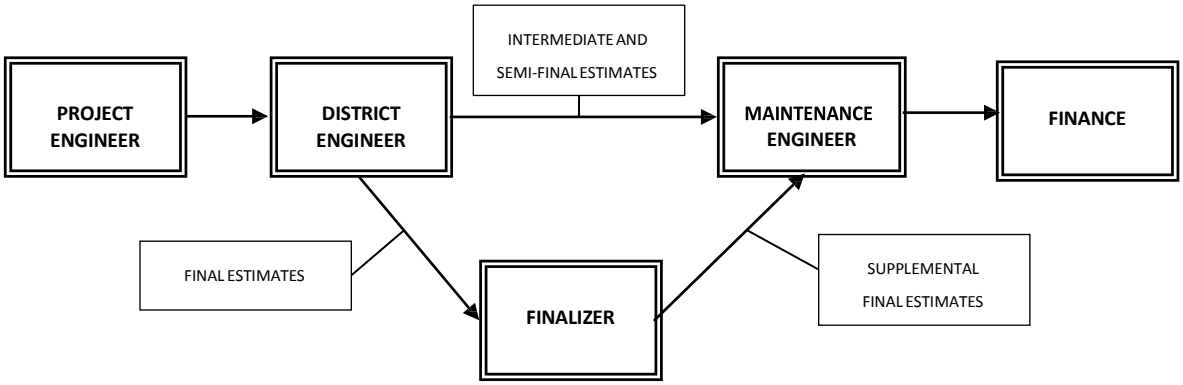
It is no longer necessary to generate estimates at the end of the fiscal year or those with a June 30th cutoff date on projects that have used CARS to generate pay estimates. CARS will automatically sort the pay items by date and the amounts for each fiscal year will be indicated in the information forwarded to Finance.

Estimate Approval Flow Charts

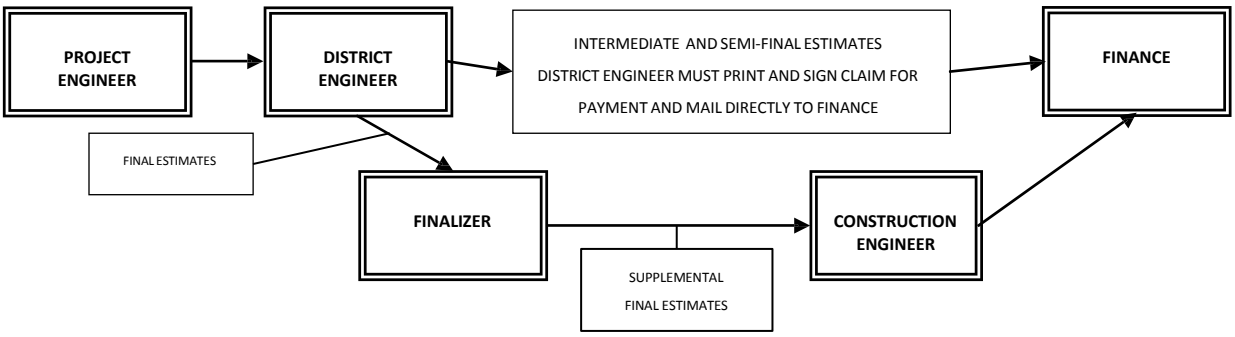
CONSTRUCTION PROGRESSIVE ESTIMATE FLOW



MAINTENANCE PROGRESSIVE ESTIMATE FLOW



DISTRICT PROGRESSIVE ESTIMATE FLOW



EXTENSION PROJECTS

Small scale projects are sometimes added to an existing project by creating an extension project. Because of the proximity of the small project to the contractor's work and plant operations, it is more economically feasible to add the work in this manner. Extension projects are generally district funded non-participating projects or emergency relief projects that may be eligible for federal funds. The District and the contractor negotiate the unit prices and time allowed to accomplish the work.

To add an extension project, the District notifies Construction Services that the work will be added along with the project numbers to be used for the extension project and the parent project. Construction Services will set up the project information and a project engineer will be assigned to the extension project. After that, the extension project will be in the assigned project drop down list for the engineer.

The project engineer will create a change order for the extension project adding all work items required. The change order is signed by the contractor, the project engineer and the District and is then forwarded to Construction Services.

After reviewing the change order, the financial information required will be added that allows estimates to be generated for the extension project.

All project records and documents for the extension project will be included in the final for the parent project.

FORCE ACCOUNT

Extra work can be performed on a project due to unforeseen circumstances or to make a beneficial improvement to the project. Payment for extra work can be made at an agreed unit price or lump sum. A change order signed by the contractor, project engineer and all other approval authorities directs and pays for the extra work. When an agreement cannot be reached as to method of payment, the project engineer can direct the contractor to complete the work on a force account basis. Standard Specification 109.03 E contains further information about extra work and force account.

The project inspector must keep accurate, detailed records of all labor hours, equipment hours and materials used for the force account whenever the contractor is working on the extra work item. Preliminary field documentation of employee names, employee hours, equipment used, equipment hours and any material incorporated in the work are kept on SFN 14462 Statement of Daily Force Account Work. The project number, date, type of extra work, the contractor and subcontractor if applicable, are entered on the top portion of the statement. At the end of each day, the contractor and the inspector will review the force account records and each will sign the daily statement.

Force Account Maintenance in CARS

The Force Account Module in CARs does not need to be used if SFN 14462 is complete.

Before entering any of the labor, equipment or materials information into CARS, the force account must be added. The Force Account Maintenance page is for entry of the date, a short description of the extra work item, a subcontractor, if applicable, and mark-up percentages. After this information is entered and saved, a number will be assigned to the force account work.

Labor

The classification and wage rates for employees that worked on the force account item are filled out using the contractor's payrolls. The wage rates shown on the contractor's payrolls should agree with those rates set in the project proposal for the classification shown. Some classifications are also compensated for pension/health & welfare. These amounts are also included in the force account. The pension/health & welfare amounts are paid on a straight time basis only. For example, an employee on the force account works eight hours of straight time and two hours of overtime. The total for pension/health & welfare would be computed at ten hours multiplied by the rate. The employee may have more hours worked on the payroll than documented on the force account statement but should not have fewer hours. Hours worked on the force account should not exceed hours shown on the payrolls. Mechanic hours are not included in the force account labor as their functions are included in the rental rates for equipment.

A contractor's foreman sometimes works on force account items. If the foreman is paid hourly, compensation will be the hourly rate shown on the contractor's payroll. When a foreman is a salaried employee, an hourly rate will be determined by dividing the rate of pay by the number of hours the foreman is expected to work. For example, the foreman is paid $700 for a 50 hour work week. In this case, the foreman's hourly rate would be $14.00/hr. You will also have to know if the foreman is compensated with overtime pay for any hours worked in excess of the 50 hour work week. The contractor must submit this information in writing. The foreman's hourly rate is then put on SFN 13890 Equipment Rental and Wage Rates Agreement. If the foreman has more hours worked per day than shown in the foreman's salary determination and is not compensated for the increased hours, the extra hours will not be paid for on the force account. On force account work, the contractor is only reimbursed for actual costs.

When all the required labor information has been received, it can be entered in the personnel details portion for force accounts in CARS.

Equipment

Along with the type of equipment and number of equipment hours worked, it is useful to collect as much other information about the equipment as possible. This information is recorded on SFN 13891 Request for Equipment Rental Rate Determination. Fill out as much information on each piece of equipment including the contractor's equipment number, the brand & type of equipment, the model number, the model year, and the equipment capacity. It is acceptable to fill out the preliminary information and have the contractor complete the remaining information on the request. After you have gathered as much information on a piece of equipment as possible, submit the request to Construction Services.

When the rental rate determinations have been completed, all rental rates for equipment and any wage rates, such as the foreman's rate discussed previously, are added to SFN 13890 Agreement for Wage and Equipment Rental Rates. This agreement is signed by the contractor and the project engineer and indicates the contractor's acceptance of the rental and wage rates shown.

Equipment rates and hours are entered in the equipment details portion of force account in CARS.

Material

The contractor is also compensated for any material incorporated into the force account work. Any items used in the force account work that are part of the original bid items will be paid at contract unit prices on the progressive estimate not on the force account. All other material used on a force account will be paid at prices shown on invoices furnished by the contractor. The contractor will also be compensated for any state and local taxes paid on the material and any shipping costs shown on the invoice.

If material is used to construct the force account but is not incorporated as a permanent part of the extra work item, a reasonable depreciation for the material plus transportation costs will be allowed. An example would be concrete forms or form material.

When all the necessary documentation for materials has been received, it can be entered in the materials detail section of CARS.

Summary of Force Account

When all the information for labor, equipment and material has been collected and entered in the details sections, a summary will be generated. This computes the totals with all markups for the force account. The summary will be signed by the project engineer and the contractor. The force account work will be added to the project with a change order. After the change order has been signed by the contractor and the project engineer, it is submitted to Construction Services.

The following supporting documents will be submitted with the change order:

1. All Statements of Daily Force Account Work
2. The Force Account Equipment, Materials and Personnel detail reports from CARS
3. The Force Account Summary report from CARS
4. Copies of the contractor's payrolls supporting the personnel entries
5. The Agreement for Wage and Equipment Rental Rates
6. Any invoices supporting materials entries

Do not approve the change order in CARS until the change order and force account documents have been checked and returned to you by Construction Services. If any errors are found in the force account, the final amount on the change order can be edited before it is added to the CARS pay items.

If the force account becomes large or covers a long time period, you may want to create a change order for an estimated force account item. This can be done in order to make payment to the contractor until all the required documentation is gathered and the force account total calculated. Remember to subtract the estimated force account payment from the pay quantities when you pay for the final amount of the completed force account. For a large force account, you may also submit the completed force account documentation to Construction Services to be checked before creating the change order.

Enter Force Account Information in CARS

To enter force account information into CARS:

1. From the Main Menu, click on the Force Account link. The Force Account Selection page is displayed.
2. Click on the Add button. The Force Account Maintenance page is displayed.
3. On the Force Account Maintenance page, enter the following information:
    a. A short description of the type of work
    b. Enter the date. This date will be displayed when printing the Summary of Force Account report.
    c. If the force account work was performed by a subcontractor, pick the subcontractor from the list in the drop down box.
    d. Default values for percent of labor, percent of materials and the prime contractor's percentage automatically fill the text boxes. These percentages can be edited if required.
4. After all the information is entered on the Force Account Maintenance page, click on the Save button. You will be returned to the Force Account Selection page and a number will be assigned to the force account. Click on the Details link by the newly created force account. The Force Account Equipment/Material/ Personnel Selection page is displayed.
5. Click on the Add link by Equipment. The Force Account Equipment Maintenance page is displayed. To enter information for equipment:
    a. Enter the date the equipment was used.
    b. Enter the type of equipment.
    c. Enter the unit number, serial number and capacity. These fields are not required but will help identify each piece of equipment listed on the Force Account Equipment Selection page.
    d. Enter the bare rate and service charge rate.
    e. Enter the hours for that day and any standby hours if applicable.
    f. Click on either the Save or the Save and Add New button.

    Clicking on the Save button returns you to the Force Account Equipment/Material/ Personnel Selection page. Enter data for additional equipment by clicking on the Add link and entering the required information.

    Clicking on the Save and Add New button saves the data entered and brings up a new entry screen. The date and rental hours will be blank. The equipment information fields will be filled with the last piece of equipment entered. Enter a new date and rental hours or edit the information to add a new piece of equipment. You can also clear any information in the text boxes by clicking on the Clear button.

    Additional entries can also be made by going to the Force Account Equipment/Material/ Personnel Selection page and clicking on the Maintain link for Equipment. Click on the Copy link for a specific piece of equipment. The Force Account Equipment Maintenance page with the information for that equipment will be displayed. Edit the date and hours and click on the Save button. A new entry for that equipment will be generated.

6. Click on the Add link by Material. The Force Account Material Maintenance page is displayed. To enter information for material:
    a. Enter the date the material was used.

b. Enter the type of material used.
c. Enter the invoice number. This field is not required but can help identify the material on the Force Account Material Selection page.
d. Enter the quantity used, unit and unit price of the material.
e. Enter the sales tax as shown on the invoice. The tax will be entered as a whole number, for example six percent is entered as 6.0.
f. Click on the Save or Save and Add New Button.

Clicking on the Save button returns you to the Force Account Equipment/Material/ Personnel Selection page. Enter data for additional material by clicking on the Add link and entering the required information.

Clicking on the Save and Add New button saves the data entered and brings up a new entry screen. The date and quantity will be blank. The other material information fields will be filled with the information from the previous entry. Enter a new date and quantity or edit the information to add a new material entry. You can also clear any information in the text boxes by clicking on the Clear button.

Additional entries can also be made by going to the Force Account Equipment/Material/ Personnel Selection page and clicking on the Maintain link by Material. Click on the Copy link for a specific material entry. The Force Account Material Maintenance page with the information for that date will be displayed. Edit the date and quantity and click on the Save button. A new entry for that material will be generated.

7. Click on the Add link by Personnel. The Force Account Personnel Maintenance page is displayed. To enter information for personnel:
    a. Enter the date the employee worked
    b. Enter the last name and first name of the employee
    c. Enter the employee's craft designation and group number as shown on project payrolls
    d. Enter the hourly wage amount for the employee as shown on the project payrolls
    e. Enter the Health & Welfare amount if it applies. Not all craft designations have a Health & Welfare amount so if it does not apply to the employee, enter 0 in the text box.
    f. Enter the straight time and overtime hours for that employee.
    g. The overtime multiplier has a default value of 1.5. This number can be edited in the event that the employee has any hours paid as double time. Double time entries will be rare but they do occur sometimes especially with certain craft designations.
    h. Click on the Save or Save and Add New button.

Clicking on the Save button returns you to the Force Account Equipment/Material/ Personnel Selection page. Enter data for additional personnel by clicking on the Add link and entering the required information.

Clicking on the Save and Add New button saves the data entered and brings up a new entry screen. The date, straight time hours and overtime hours will be blank. The last name, first name, craft designations, hourly wage and health & welfare hours will be filled with the last employee information entered. Enter a new date and hours worked or edit the information to add a new employee. You can also clear any information in the text boxes by clicking on the Clear button.

Additional entries can also be made by going to the Force Account Equipment/Material/ Personnel Selection page by clicking on the Maintain link by Personnel. Click on the Copy link for a specific employee. The Force Account Personnel Maintenance page with the information for that date and employee will be displayed. Edit the date and hours and click on the Save button. A new entry for that employee will be generated.

8. After all the daily equipment, material and personnel information has been entered, the force account reports and summary can be printed.
    a. To print the equipment, material and personnel reports, go to the Force Account Selection page and click on the Details link for the force account. The Force Account Equipment/Material/Personnel Selection page is displayed. Click on the Report link for equipment, material or personnel. A report will be generated and can be printed.
    b. To print the Summary of Force Account report, go to the Force Account Selection page and click on the Summary link. The Summary of Force Account report will be generated and can be printed.

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SPREADSHEET

A spreadsheet is a table listing a range of tons with corresponding footage representing the distance a particular tonnage must be spread to obtain the required plan quantity.

The quantity per mile for the width, depth and type of material is found on the project plans. This quantity is used to compute tons/foot and feet/ton and these constants are then used to compute the spread. These constants are figured as follows:

> The quantity per mile from the plans for a 6" lift of Cl. 5 placed 24' wide is 3312 tons.
> 3312 tons / 5280 feet = 0.627 tons/foot
> 5280 feet / 3312 tons = 1.594 feet/ton
>
> The figure of 1.594 feet/ton is then multiplied by the number of tons in the load.
> 15.0 tons x 1.594 feet/ton = 23.9 feet

Create Spreadsheet in CARS

To make a spreadsheet with CARS:

1. On the Main Menu page, choose Spreadsheet from the Reports column. The Spreadsheet Selection page is displayed.
2. Enter the type of material, tons per mile, beginning and ending tons.
3. Pick the project number from the Assigned Project drop down box, type in the project number in project ID box or type in the project control number in the PCN box. Click on the SEARCH button.
4. The spreadsheet report is generated and can be printed.

The spreadsheet will calculate the spread for each tenth of a ton between the beginning and ending range you enter on the Spreadsheet Selection page. The range of tons entered should be broad enough to cover the various capacities of trucks on the project. Give one copy of the spreadsheet to the scale person so the spread can be entered on the haul ticket. The gravel checker should also have a copy in case the spread is inadvertently left off the haul ticket or if the tickets are generated by the contractor's scale. Retain one copy of the spreadsheet in the project files.

QUANTITY BOOK

The quantity book is a detailed report of all pay quantities entered in CARS. These entries are taken from Quantity Manager.

The individual contract bid items are displayed in the quantity book in spec and code order and in the same order as listed on the progressive estimate detail sheets. For projects with multiple subprojects, the quantity book will also be divided by subproject.

Source documentation should be noted when quantities are entered.

Generate the Quantity Book in CARS

To generate a portion or the entire quantity book in CARS:

1. Click on the Quantity Book link. The Quantity Book Selection page is displayed.
2. To generate and print the entire quantity book, leave the beginning and ending spec and codes set to the default values of 001/0001 through 999/9999.
3. To generate and print a section of pay quantities, enter the beginning spec and code for the first item of the section and enter the spec and code for the last item in the range in the ending spec and code. You can also get a section of pay items by typing in the spec number only in the beginning and ending spec text boxes and leaving the codes at their default values. For example, you want to look at all the traffic control pay items in the quantity book. Enter the spec number 704 in the beginning and ending spec text boxes. Leave the beginning and ending code numbers at the default values of 0001 and 9999. Only the pay items under spec number 704 will be generated from the quantity book.
4. The quantity book links displayed on the Quantity Book Selection page can be changed by selecting a project from the Assigned Project drop down list, by entering the project number or entering the PCN.
5. Quantity book reports can be generated by clicking on the subproject links and producing the quantity book for the subproject chosen only. The entire quantity book can be generated by clicking on the All Subprojects link.

REPORTS

Any reports already created using the Maintenance menu can be printed using the Reports menu. The reports for the project shown at the top of the screen will be displayed. Reports for a different project can be accessed by using the Project Search Criteria. Pick the project by using the assigned project drop down list, by entering the project number or by entering the project PCN. Click on the Search button to display the reports.

Display/Generate Reports

The reports are displayed and generated as follows:

1. Concrete Paving, Haul Sheets and Mix Bitumen reports
    a. Reports are displayed by subproject, spec/code and date order
    b. Click on the date link to generate the report
2. Piling/Test Piling Reports
    a. Reports are displayed by subproject, spec/code and structure number
    b. Click on the structure number to generate the report
3. Change Orders
    a. Reports are displayed by change order number in descending order
    b. Click on the change order number to generate the report
4. Force Account
    a. Reports are listed in descending order by force account number
    b. Click on the Equipment, Material, Personnel and Summary links to generate the reports
5. Weekly Progress Reports
    a. Reports are listed in descending order by report number

   b. Click on the report number link to generate the report.
6. Approved Progressive Estimates
   a. From the Approve Progressive Estimate Selection page, pick the project using the assigned project drop down list. The project can also be selected by typing in the project ID, project PCN, the contractor vendor number or the estimate released date, if known.
   b. Choose the number of the approved estimates to display using the Selection Range drop down list.
   c. Click on the Search button. The estimates are displayed in descending order. All subprojects are listed.
   d. Generate the estimate details by clicking on the Details link by each subproject or clicking on the All Details link. Click on the Cover link to generate the cover sheet.
7. Contract Time for Completion

   This CARS report is no longer used for final records. The Contract Time for Completion should be completed using SFN 5660 Contract Time for Completion Summary.

Project Status Selection Report

You may also choose to print the Project Status Selection report. This report summarizes all projects that have not been submitted for final payment. The information summarized can be customized to view any one of the eight Districts or to view information for all Districts. You then have the option to display the information sorted by District, Contractor, Bid Opening Date, or by Time.

To generate the Project Status Selection Report:

1. From the Main Menu, click on the Project Status Selection link. The Project Status Selection page is displayed.
2. Choose the Project Status Search Criteria from the drop down box. Choose either one district or all to display all information for all districts.
3. Choose the report sort order by clicking in the radio button by the choice of District, Contractor, Bid Opening Date or Time.
4. Click on the Search button and the Project Status Selection report will be generated.

Other Reports

The reports side of the Main Menu also shows reports for the following:

1. Quantity Book
2. Explanation of Change in Plan
3. Final Acceptance Letter
4. Diary Reports

These reports are explained in other sections of this manual.

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PROJECT COMPLETION

When all work is completed on a project, the Department begins a process to reconcile the project records. The records are collected, the pay item quantities are checked, the documentation is reviewed, and a final estimate and other final documents are prepared. The "final" is a summary of project records including pay item quantities, costs and other data relating to the performance of work on the project. The engineer must compile the final documents and records in accordance with this manual, the Field Sampling and Testing Manual and the Construction Automated Records System (CARS).

Semi-Final Estimate

A semi-final estimate may be created when the Contractor has completed more than 90 percent of the work and has met the requirements of 109.04 C. The retainage on the semi-final estimate may be reduced to not less than 1 and not more than 2 percent of the estimated total work done to date.

When the Engineer determines that the Contractor has completed 100 percent of the original work not including contract revisions, and the Contractor has met all of the conditions listed in 109.04 C., the Engineer may prepare additional semi-final estimates.

Final Inspection

A final inspection will be requested by the contractor and conducted for each project. Before final inspection, the highway, borrow pits and all areas occupied by the contractor in connection with the work will be cleaned of all rubbish, excess materials, temporary structures and equipment in accordance with Specification 105.15.

These parties should be invited to the final inspection:

1. The Engineer
2. The Contractor
3. The owner (DOT, City, or County or their authorized representative)

If the inspection discloses any unsatisfactory work, the contractor will be given the necessary instructions in writing (or email) for correcting the work. Another inspection is requested by the Contractor after the corrections have been completed.

Project Acceptance

After a satisfactory final inspection, the contractor will be notified of the date the field work on the project was inspected and accepted in accordance with Specification 105.15 C. The owner or authorized representative will notify the contractor (example) with copies to the district office. This final acceptance letter should have no stipulations or conditions of acceptance and is to be written immediately after work is inspected and accepted.

A copy of this letter should be uploaded to the Final Checklist.

Create Final Acceptance Letter in CARS.

It is possible to create the final acceptance letter template in CARS. This template can be modified by the Engineer as needed.

1. On the Main Menu, click on the Final Acceptance Letter link. The Final Acceptance Letter page is displayed.
2. Enter the date the project was inspected and the project owner in the text boxes provided.
3. Click on the Submit button. A file download dialog box will appear and you have the option of opening the file or saving it to your computer.
    a. Picking the Save option will open the Save As dialog box on your computer allowing you to save the file at a location of your choice.
    b. Picking the Open option will generate the letter in a Word document. The date completed and the acceptance date will be filled. You will also have the option of editing and saving the letter.

FINAL PAPERWORK

Final Checklist

Upon completion of project work, the Project Engineer should use the Final Checklist in CARS to report the status of the project final. The top portion has basic information about the project such as the prime contractor, the original contract amount, the final contract amount, the start and completion dates. The Project Engineer will be required to fill in the text boxes provided for owner, the percent of the final process completed and the tentative final submission date.

The Remarks section should be used to note what work remains before the final can be submitted such as checking quantities or missing documents. This portion of the Final Checklist enables Construction Services to schedule workloads and relay information to the contractor regarding status of the project final. It is also imported into the Finals Tracking Report which is provided monthly to the Districts and Executive Office.

The second half of the Final Checklist Maintenance page contains a list of items commonly submitted with a final along with check boxes. The Project Engineer should use the list to keep track of these items when preparing the final records.

The Project Engineer should use the browse button at the bottom of the page to upload required documents as they are completed. Once the file has been selected, use the drop-down menu to select the corresponding title and click save.

Submission of Final Records

When the project is accepted, all project records and documents are gathered for submission of the final. The Project Engineer will inform the contractor of any missing documentation (pit releases, receipts of payments, certifications, etc.) that must be submitted before final payment is made.

Pay Quantities

1. All quantities must be entered in Quantity Manager and reference must be made to the source documentation.
2. All necessary measurements and calculations are shown on the source document and paid according to the plans and specifications.
3. All computations on the source documents should be checked for accuracy.

Final Estimate

Once all quantities have been checked and all required project documents have been collected, the Project Engineer prepares and approves the final estimate.

Project Engineer's Report on Materials Acceptance SFN 10110

All materials used on the project will be listed on SFN 10110 by contract bid item in spec and code order. The appropriate approval numbers for certifications, shop drawings, testing, etc. are filled in. The report is then uploaded to the Final Checklist.

The completed report is forwarded to the District Materials Coordinator and used to produce the Combined Materials and Project Acceptance Letter (example).

Contract Time for Completion SFN 5660

This form is used to show the time used to complete the contract by working days, calendar days, completion date or completion date with guaranteed working days. The lower portion is designed to show days charged when there are liquidated damages assessed on working day or completion date with guaranteed working day contracts.

The completed Contract Time for Completion is uploaded to the Final Checklist.

Narrative Report

The project narrative is a summary of work elements on the project. The narrative is not required on county projects, seal coat projects, thin lift overlay projects, or contract patching projects.

Use the following format for the narrative:

PROJECT NARRATIVE:
PROJECT NUMBER:
DISTRICT:
ENGINEER:
DATE:
TYPE OF WORK:
LOCATION:
CONTRACTOR:
SUBCONTRACTOR:

The summary can be in narrative format but must be in the following order:

1. Pre-job and job scheduling comments
2. General explanation of work elements involved

3. Items of work performed by the contractor and each subcontractor
4. The narrative summary should include but not be limited to the following:
    a. Were there project notes or design changes that should or should not be used on similar projects in the future?
    b. What changes are needed in the existing design and why?
    c. Were the project notes adequate or inadequate for the construction and contract administration of the project?
    d. Were there traffic control problems?
    e. Were the methods of measurement clearly defined?
    f. Were the responsibilities and duties of the contractor clear?
    g. Were problems encountered with the contractor's work force?
    h. Make final recommendations for future projects of a similar nature
5. Attach a copy of the Explanation of Change in Plan

Statement of Materials Taken from Pits SFN 10061

The Statement of Materials Taken from Pits, SFN 10061, is used to inform the Materials Division of the material quantities removed from pits and used on a project. These quantities are used to determine how much material may be available for future projects.

Aggregate material will be listed separately by type and include quantities for waste and private use. Aggregates used in bituminous pavements will be calculated by subtracting the tons of oil used from the total mix tonnage. Quantities from all pits used to produce material for the project must be listed and the statement will be submitted with the final records.

Each item is entered in the applicable column depending on whether material was taken from a state owned, state optioned, private or commercial pit. A commercial pit is defined as one where material is sold on a regular basis not just for the time of the project.

Summary of Aggregate Quality Tests SFN 10072

A summary is submitted on SFN 10072 for each type of aggregate used on the project and includes test results of all field samples, project record samples and those samples tested in the Central Lab. One copy is submitted to the District Materials Coordinator and the other copy is filed in the materials file with the individual test results for the type of aggregate.

Explanation of Change in Plan

All quantities that overrun or underrun the original contract amount by 5% AND $10,000 will be explained. CARS assembles all contract items that meet these criteria and displays them in the Explanation of Change in Plan report. To use this list, you will have to copy and paste it into a Word document.

1. Place the mouse pointer directly above the project number on the Explanation of Change in Plan list.
2. Hold down the left mouse button and drag it to the end of the list of contract bid items.
3. When all the items are highlighted, click on the right mouse button and click on the copy command.

4. Open a blank Word document. Paste the Explanation of Change in Plan into the blank document.
5. The list appears in a table format with space under each bid item to type the explanation of change. The lines of the table are hidden and will not show when the Explanation of Change in Plan list is printed.
6. The list also indicates if an explanation was included on the original change order. If so, you will not have to make further explanation of change order items.

DBE Participation Certification

This is no longer submitted by hard copy. The dollar amount paid to DBE's is tracked in B2GNow. The Subcontractor and the Prime sign off on the final participation within that system.

Haul Road Release SFN 14458

The contractor is responsible for maintaining public roads and streets used as haul roads during project construction. When hauling is complete, the contractor will leave the haul roads in as good a condition as they were before hauling began. Standard Specification 107.08 describes the responsibilities and payment for haul road restoration.

The condition of the haul road should be well documented in the pre-haul inspection. The Project Engineer will communicate with the county or township officials before making a final decision about what restoration will be performed.

The haul road restoration should be performed by the contractor as specified in the contract and the haul road release should be obtained as soon as possible. The Haul Road Release must be signed by an authorized representative of the county or township where the haul road is located.

The contractor will submit the haul road releases on SFN 14458 to the Project Engineer. The release will be submitted as part of the final records. If no haul roads were used, it should be noted in the transmittal letter submitted with the final records.

Pit Release Statement and Receipt of Payment for Materials SFN 14486

The pit release and receipt of payment, SFN 14486, shows that payment has been made to a pit owner and that the contractor has restored the pit area to the satisfaction of the pit owner. Proof of payment and the release from the owner are part of the requirements for reduction of retainage on the semi-final progressive estimate. The form must be signed and witnessed for the release section and also for the receipt section.

The pit release/receipt of payment is required for state owned, state optioned and privately owned pits. The following procedure is generally followed.

1. After all material has been removed from a pit, the Project Engineer will check the pit quantities. The Project Engineer will notify the landowner and the contractor in writing of the quantities removed from the pit. The total amount removed from the pit will include any quantities for waste, private use, etc. Copies of the letter are sent to the Materials Division.

The Project Engineer may partially fill out the pit release/receipt before mailing it to the contractor which ensures the correct form and quantities are used. It is the contractor's responsibility to complete and return the form.

2. A separate pit release/receipt is required for each pit except when material is supplied by a commercial supplier. A pit release/receipt is not required for a commercial pit. The pit release/receipt must be dated, signed by the pit owner or legal representative and witnessed.
3. State option pit - Special instructions regarding conditions of the pit option maybe shown on the pit plat and should be checked to ensure the contractor has fulfilled the requirements of the option.
4. State owned pit - shall be left in a condition satisfactory to the district engineer. The district engineer is responsible for signing the pit release/receipt for the Department.

The pit release/receipt forms will be submitted with the final records.

TERO Proof of Payment

When a portion or all of the project limits are within an Indian reservation, the Tribal Employment Rights Ordinance (TERO) Requirements special provision may be part of the contract documents. Part of the TERO special provision provides a fee to be paid to the Tribal Authority. The contractor will provide the Project Engineer with documentation from the proper tribal authority that the TERO payments have been made before final acceptance of the project.

As Built Plans

The Project Engineer will keep an accurate list of construction changes for the development of as-built plan sheets. The as-built plan sheets will be used to update the original master plan sheets and roadway information databases such as Highway Components and RIMS Inventory.

As-builts must be uploaded to Filenet using the CARS Finals Checklist. There are two upload options in the Finals Checklist. The two upload options are:

a. Full As-Built Plan Set – Minor
    i. These projects are defined as preventative maintenance projects.
b. Full As-Built Plan Set – Major
    i. This option should be used for New Construction, Reconstruction, and Rehab projects.

CARS is set up this way because ‘Minor’ and ‘Major’ as-builts are saved to Filenet with different retention periods.

Additional Guidance:

1. As-builts can be hand drawn and scanned to pdf or created electronically. If as-built plans are created electronically, see the NDDOT CADD Standards Manual for recommended procedures.
2. Any plan sheet changes created by change order must be included in the as- built plans.

The following is a list of changes to be noted and revised by the Project Engineer in the as-built plans. This list is not intended to be inclusive. Anything that could ultimately have an effect on a future project should be included in the as-builts.

1. Changes to the beginning and ending project stations should be noted on the title sheet. Also document station changes to skip or exception areas such as bridges.
2. Changes to horizontal and vertical alignments (profile/grade).
    a. Ties to reference points pertaining to horizontal alignment.
    b. Changes in horizontal alignments should be redrawn.
    c. Changes in profiles are not typically redrawn. The changes in the design vertical curve table are struck out and the actual curve information is written next to the table.
    d. Changes in ditch grades should be documented similar to roadway profiles.
3. Changes to typical sections including base or surfacing thickness, width of lanes and shoulders, super elevation, in-slope, etc.
4. Changes to topographical features such as:
    a. Pavement tapers and transitions.
    b. Driveway locations and sizes.
    c. Sidewalk width and location.
    d. Curb size and location.
    e. Fencing.
    f. Striping and pavement marking.
    g. Location, length, etc. of safety appurtenances and shoulder rumble strips.
    h. Location of signal and lighting standards.
5. Changes to the location, elevation or size of pipes and drainage structures.
6. Changes to soil conditions such as: Locations and depth of subcuts Geotextile fabric.
7. Changes to right-of-way and borrow easement.
8. Changes to the location, elevations, dimensions, etc. of box culverts and bridges.
9. Changes to permanent bench marks.
10. Changes in removal items.
11. Changes in the placement of trees, shrubs, planters, and retaining walls.

Changes to cross sections are not required in the as-built plans. If the project owner is the NDDOT, the electronic files used to calculate final earthwork quantities must be saved in the project as-built folder on the Central Office CADD server (R: drive). If earthwork was calculated from cross sections, the working cross section drawing, earthwork input file or project manager run, and the earthwork log file must be included. If earthwork was calculated directly from a DTM, the as-built TIN file and the drawing that shows the clip boundaries and earthwork reports must be included.

Changes to the following sheets are not typically documented in an as-built set of plans:

1. Changes do not need to be made on the quantity sheets
2. Temporary items such as construction signing, detours and bypasses are not required

Test Hole Pit Plat Records

When gravel pits with pit plats are used on a project, the pit plat shall be updated to indicate areas of the pit that have been mined. The areas used shall be marked with cross hatching and the quantity used documented. Copies of the plats will also be sent to the Materials and Research Division.

Project Files and Books

As stated in Section 1 & 2 of this manual, the majority of project records are now maintained in CARS/Filenet. Any project records not maintained electronically must be submitted to Construction Services Division. This includes:

1. Materials Documents, if not uploaded into CARS Materials Dropbox
2. All field books used to document and measure quantities

Transmittal Letter

An email or letter must be sent to Construction Services Division which notifies the Records Section that that project is ready for review. Any missing documents should be listed along with measures taken to obtain them.

Include a statement "All records are electronic, there will be no hard copies submitted", if applicable. If hard copies are submitted,

FINAL RECORD REVIEW

District Review

All final records and documents are submitted to the district office for review. The district will review all records and documents for accuracy and that they conform to accepted procedures.

When the district is satisfied that all records and documents comply with all DOT policies and procedures, the district engineer will approve the final estimate and write the Combined Project/Materials Acceptance Letter to the Construction Engineer.

A copy of the combined letter is entered into the Final Checklist in CARS. Copies will also be sent to:

1. DOT - Construction Services
2. DOT - Materials & Research
3. Political Subdivision
4. Project Engineer
5. District Materials Coordinator

Review by Construction Services

Notify Construction Services after the district review is complete. Construction Services will conduct a final review. Most, if not all, final records should now be in CARS/Filenet. Any remaining physical documents should be sent to Construction Services.

The Records Section will review records for accuracy and conformance to accepted policies and procedures. When checking is complete, a final checklist and memo listing any discrepancies found, missing documents, etc., will be sent to the Project Engineer with a copy sent to the district engineer.

For projects with no missing records, documents or other unresolved issues, the following will be sent to the contractor:

1. A copy of the final estimate
2. A stamped copy of the final voucher for the contractor's signature

After the contractor signs and returns the final voucher, it will be forwarded to Finance and final payment will be made.

For projects that have missing records or documents or have other unresolved issues the following will be sent to the contractor:

1. A copy of the final estimate
2. A letter listing missing items

For projects where the contractor disputes quantities, liquidated damages, payments for extra work, materials failure deductions, etc., the final estimate should be complete and will reflect the owner's position for these items.

The estimate will be held until the missing documents are received and/or the disputes have been resolved. After these conditions are met, a copy of the estimate and the stamped final voucher will be sent to the contractor.

When the signed final voucher has been returned, it will be forwarded to Finance and the final payment will be made.

For city or county projects, the letter to the contractor will be sent by the Project Engineer, not from Construction Services.

LOCAL AGENCY PROJECT FINAL RECORDS

After final payment has been made to the contractor for city or county projects and the FHWA has processed the final voucher, Construction Services will return project records to the city or county for storage. The city or county will retain these records for three years after the final voucher is issued by FHWA.

EXAMPLE FINAL ACCEPTANCE LETTER

MM/DD/YYYY

CONTRACTOR NAME
CONTRACTOR ADDRESS
CONTRACTOR ADDRESS

PROJECT #, PROJECT TYPE
PCN
County

You are hereby notified that the above-referenced project was completed on MM/DD/YYYY. The project was inspected and accepted by North Dakota Department of Transportation (NDDOT) on MM/DD/YYYY. This acceptance does not, however, waive the Owner's legal rights outlined in Section 105.16 of the NDDOT Standard Specifications. Acceptance of the field work does not constitute completion of the Contract.

The NDDOT will begin the process of preparing a final progressive estimate in accordance with NDDOT Standard Specification Sections 105.15 C. and 109.06. This process may require the Contractor to provide additional documentation or to assist with reconciling the project records.

Final payment under the terms of the Contract, including release of retainage, will occur upon the Department's receipt and approval of the signed final payment voucher from the Contractor.

PROJECT ENGINEER

c: NDDOT/District
NDDOT

EXAMPLE COMBINED PROJECT/MATERIALS ACCEPTANCE LETTER

MM/DD/YYYY

Construction Engineer Name
Construction Services Engineer
North Dakota Department of Transportation
608 East Boulevard Ave
Bismarck, ND 58501

SUBJ:	PROJECT:	*PROJECT NUMBER*
	COUNTY:	*COUNTY*
	TYPE OF WORK:	*TYPE OF WORK*
	CONTRACTOR:	*CONTRACTOR NAME*

This is to certify that:

The Contractor was notified by the Project Engineer on *MM/DD/YYYY* that field work on this project was completed on *MM/DD/YYYY*. On *MM/DD/YYYY*, the NDDOT reviewed the project with Project Engineer *NAME* and *NAME*, NDDOT. The Owner has reserved their legal rights outlined in the NDDOT Standard Specifications.

Materials were tested and accepted by the Project Engineer and assurance testing was completed and approved by NDDOT in accordance with the NDDOT Field Testing and Sampling Manual. Minor exceptions to this certification are explained on the back hereof.

No significant exceptions to the plans and specifications were noted, therefore, I recommend acceptance of this project.

NAME, Assistant District Engineer, *NAME* District

att: Engr's Acceptance Ltr.
c: District File
Project File

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NOTICE OF INTENT TO FILE A CLAIM/CONTRACTOR CLAIMS

This section provides guidance for dealing with the receipt of a "Notice of Intent to File a Claim" (NOI) from a contractor and subsequent contractor claims. This section also provides guidance in the review, analysis, resolution and defense of contractor claims as well as the use of CARS to track and document claims.

The procedures outlined in this section are intended to be used by North Dakota Department of Transportation (NDDOT) personnel and consultants responsible for handling and processing NOI's and contractor claims on NDDOT construction projects. These are meant to be general guidelines only. Each NOI and contractor claim is unique and may require variations of these procedures.

This section is not part of any NDDOT contract. In the case of a discrepancy between contract documents and this section, the contract documents shall govern.

Refer to the 2014 Standard Specifications for Road and Bridge Construction for additional information regarding NOI's and Claims. Any questions should be referred to Construction Services Division at (328-2568).

GETTING STARTED

Purpose

The purpose of the NOI/Claims module in CARS is to provide users a method of storing and retrieving NOI's and Claims information for construction projects. All NOI and Claims received must be tracked using the CARS module. Project, District, and NDDOT Central Office personnel will be able to readily retrieve information to view and create reports to assist in tracking NOI's and Claims. In addition, users will have the ability to retrieve historical information which may assist in identifying District and Statewide trends.

Definitions

- Claimant: A claimant may be either the Prime Contractor or a Subcontractor. However, if notice is provided by a Subcontractor it must be submitted through the Prime Contractor.
- NOI: Notice of Intention to File a Claim (SFN 16743) must be submitted in accordance with Section 104.04 of the Standard Specifications.
- Claim: Claims must be submitted in accordance with Section 104.05 of the Standard Specifications.
- Filing - A Filing refers to an unresolved issue or dispute for which Verbal Notice, Written Notice, and/or a Claim has been submitted. A Filing may be in the Verbal, Written, or Claim Stage.
- Filing Group - A Filing Group is synonymous with a Filing and is used to describe a Filing and the Stages that the Filing will proceed through until resolution. The Filing Group can be seen on the right hand side of the screen and is used in creating a new Filing (See Figure 1.06 below). Each dispute or project issue will have its own Filing Group. Separate disputes or issues are numbered sequentially. i.e. Filing #:1, Filing #2, etc., on the Claim Filings screen (See Figure 1.03 below).
- Stage: Refers to the Stage that a Filing is in (See Figure 1.03 below).
- Status: Refers to the Status that the Stage of the Filing is in. For example, if an NOI has been submitted, all work has been completed as included in the NOI, and all documentation has been received within 30 calendar days of completing the work, as outlined in Section 104.04 B of the

Standard Specifications, then the Status would be displayed as shown in Figure 1.02 below. The intent is for the user to be able to identify the current Status of each Filing on the Claim Filings screen (See Figure 1.03 below).

The available Statuses for each Stage are as follows:

- Stage 1: Verbal
    1. Status: Receipt (Open)
    2. Status: Receipt (Closed)
    3. Status: Receipt (Withdrawn)
- Stage 2: Written
    1. Status: Receipt (Open)
    2. Status: Receipt (Withdrawn)
    3. Status: Pending Issues (Open)
    4. Status: Pending Issues (Withdrawn)
    5. Status: Pending Documentation (Open)
    6. Status: Pending Documentation (Withdrawn)
    7. Status: Pending Review (Open)
    8. Status: Pending Review (Withdrawn)
    9. Status: Pending Engineer Decision (Open)
    10. Status: Pending Engineer Decision (Withdrawn)
    11. Status: Pending Contractor Decision (Open)
    12. Status: Pending Contractor Decision (Withdrawn)
    13. Status: Contractor Decision (Open)
    14. Status: Contractor Decision (Withdrawn)
    15. Status: Contractor Decision (Closed)
- Stage 3: Claim
    1. Status: Receipt (Open)
    2. Status: Receipt (Withdrawn)
    3. Status: Pending Review (Open)
    4. Status: Pending Review (Withdrawn)
    5. Status: Pending Engineer Decision (Open)
    6. Status: Pending Engineer Decision (Withdrawn)
    7. Status: Pending Contractor Decision (Open)
    8. Status: Pending Contractor Decision (Withdrawn)
    9. Status: Pending Arbitration/Mediation (Open)
    10. Status: Pending Arbitration/Mediation (Withdrawn)
    11. Status: Arbitration/Mediation (Open)
    12. Status: Arbitration/Mediation (Withdrawn)
    13. Status: Arbitration/Mediation (Closed)

Figure 1.02

Filing #: 11 **Claimant: Dot Test Contractor**

Projects linked to this filing: 19201,19321

Stage: Written Date Received: 04/15/2015 Status: Pending Review (Open)

Individual Filing from the Claim Filings screen

Figure 1.03

Construction Automated Records System

Project: DOT TEST PROJECT

SubProject: 1 - WIDENING, MINE & BLEND, SELECT REGRADE, HOT BITUMI

Claim Filings «

Prime Contractor: Dot Test Contractor

Contractor Filings

Filing #: 1 **Claimant: Dot Test Contractor**

Projects linked to this filing: 19201,19321

Stage: Verbal Date Received: 02/10/2015 Status: Receipt (Closed)

Stage: Written Date Received: 02/18/2015 Status: Contractor Decision (Closed)

Stage: Claim Date Received: 02/19/2015 Status: Pending Contractor Decision (Open)

Filing #: 2 **Claimant: Dot Test Contractor**

Projects linked to this filing: 19201,19321

Stage: Verbal Date Received: 02/10/2015 Status: Receipt (Closed)

Stage: Written Date Received: 02/25/2015 Status: Contractor Decision (Closed)

Stage: Claim Date Received: 03/13/2015 Status: Arbitration/Mediation (Open)

Claim Filings screen with two Filing Groups

NOTICE OF INTENT

North Dakota Century Code Title 24 and Section 104.04 A of the Standard Specifications requires submission of a written NOI if the contractor contends that additional compensation is due for work and/or material not clearly covered in the contract. Prior to beginning the work on which the claim will be based, the contractor must immediately notify the engineer in writing of the intent to make a claim for additional compensation.

Verbal Notice

If the basis of the claim is not apparent until the contractor has started the work and it is not practical to stop the work, the contractor will immediately verbally notify the engineer that the work is continuing. A Written Notice must be submitted within 10 calendar days of Verbal Notice. Refer to Section 104.03 in the NDDOT Standard Specifications for more information regarding notice.

NDDOT specifications require that the NOI be submitted on SFN 16743 Notice of Intent to File a Claim.

Reasons for requiring an NOI include, but are not limited to, the following:

- Allows the Engineer the opportunity to keep strict account of the actual costs of any alleged extra work. North Dakota Century Code requires that the contractor ". . . afford the engineer facilities and assistance in keeping strict account of actual costs. . ." on the work performed.
- Permits early investigation by the owner into the conditions identified in the notice while evidence is still readily available.
- Allows the owner to consider construction alternatives to limit, or altogether eliminate, additional costs.

A Contractor may also withdraw a Verbal Notice at any time. The Engineer should request that the Contractor provide a letter stating the Contractor's intention to waive their right to any additional compensation and/or time regarding the issue.

Receipt of a Notice of Intent to File a Claim

Initial Response

Upon receipt of an NOI, the Engineer will notify and send an electronic copy of the submitted paperwork to the Construction Services Division. The Engineer will use CARS to track the NOI. The Engineer will review the NOI to ensure it is complete and the notice items are clearly defined. The Engineer should acknowledge receipt of the NOI in writing to the Contractor and indicate the date it was received.

In some cases the claim items in the NOI may not be clearly defined or the NOI may be incomplete. This makes it difficult if not impossible for the Engineer to monitor and investigate the situation. The NOI should then be returned to the Contractor with a cover letter from the Engineer indicating the date of receipt and requesting that the NOI be properly submitted with, if applicable, additional information. If appropriate, the Engineer may want to address such issues as timeliness of filing the NOI, agreement, partial agreement or disagreement with the issues outlined in the NOI.

Field Documentation

Subsequent to an NOI being received from the contractor additional documentation of field conditions may be required to measure any possible impacts. Project personnel should be aware when conditions on the project have changed, are different from conditions anticipated in the plans, or are different from what would be expected in the normal course of performing a type of work. Project supervisors should keep the district administration informed about issues arising on the project.

Pictures and videos are important record keeping methods and should be utilized by project personnel whenever a claim or potential claim situation arises on a project. Sufficient photos and video footage should be taken of the area in question to completely describe the situation pictorially. The photos and videos may also include other work being performed by the contractor.

The date, time and location of pictures or video footage taken should be logged in the project records. The printed name, title and signature of the person taking the pictures or video footage should also be included in the applicable project records. A description of what each photo is showing, the date, time and project number should be noted on the back of each photo. Video footage should be narrated and should include the project number, date, time, location, a brief description of the situation and the name of the person taking the video. If the still and/or video camera have a date/time stamp, it should be set and incorporated into the media.

Thorough documentation of a claim includes a list of all the contractor's equipment, material and manpower. After notice is received, whether verbally or in writing, field personnel must immediately begin recording all aspects of the contractor's operation as detailed in 104.03 A.2. At a minimum, these records should document exact working hours of contractor staff and equipment and the execution of the work by the contractor including any down time and should note any inefficiencies.

In addition to the normal diary entries, keeping a daily equipment list is recommended for documentation of the contractor's equipment and manpower. Important items in documentation of the contractor's equipment are:

- An accurate record of working hours
- The item of work performed during those hours by each piece of equipment
- The location of the work performed
- Any down time hours for idled equipment.
- Detailed information on the equipment to include type, year, make, and model.

Attachment 1 at the end of this section is a "Contractor Daily Equipment and Labor" worksheet. This worksheet may be used by project personnel to record the contractor's daily equipment usage and labor hours. An Excel version of the worksheet is available on the Department's website.

Claims that involve state optioned pits require extra documentation. If it becomes apparent that a state optioned pit may not yield the quality and/or quantity shown in the pit plats, field personnel should notify the Materials and Research Engineer and the Construction Services Division. In addition to keeping track of the contractor's operation as outlined previously, the District Materials Coordinator will immediately go to the pit and take samples of the material produced. If the problem in the pit continues, additional samples will be taken in order to document the quality of unprocessed and processed material. Attachment 2 at the end of this section, "Contractor Daily Equipment, Labor, and Materials – Crushing / Aggregate Production", can be used for recording the crushing operation.

Documentation Submittal

Within 30 calendar days of the completion of work included in the NOI, the Contractor is required to submit the total amount of additional compensation requested and a detailed explanation of the requested compensation. For an NOI involving time, the Contractor must also submit specific days requested and an analysis of the construction schedules as a basis for the request. The contractor may request a meeting to discuss the NOI. This meeting must be held within 30 days of the Department receiving the request.

Review of the NOI

The NOI and documentation should be reviewed using the 4 steps outlined in section Review and Analysis of the Claim

Time limits may be extended, as defined under the Dispute Resolution process outlined in Section 104.04 B, if mutually agreed upon.

Engineer's Response to the NOI

The Engineer will issue written response to the Contractor no more than 30 days after receiving documentation or holding a meeting.

Draft Response Letter Disclaimer

It is likely that multiple draft versions of an NOI or Claim response letter will be shared between the Engineer, the District, and Construction Services Division prior to the written response being sent to the Contractor. The draft response must contain the following disclaimer language until the letter is in its final version:

"The draft response or analysis included herein does not represent an endorsement of the merit of the Contractor's claim(s) or an officially approved position of the North Dakota Department of Transportation. The North Dakota Department of Transportation reserves the right to invoke any and all applicable defenses to Contractor's claim(s), and the exclusion or omission of any applicable Contract provision, Standard Specification, Supplemental Specification or provision of state or federal law herein shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or any provision of the Contract."

The draft letter should also contain a "DRAFT" watermark. The disclaimer and "DRAFT" watermark are removed before sending the final version of the written response to the Contractor.

Authority to settle

The authority to settle an NOI issue or contractor's claim is as follows:

- Project Engineer – Less than or equal to $10,000
- Team Leader – Less than or equal to $20,000
- District Engineer – Less than or equal to $100,000
- Office of Operations Director – Greater than $100,000*

*Resolutions over $500,000 will be signed by the Office of Operations Director but will require verbal approval from the Deputy Director for Engineering.

These authorities may be revised by a higher authority on a specific issue. Items that fall within the administrative authority of the Project Engineer, District Engineer or Director of Operations will be referred to higher levels when the proposed resolution is rejected by the contractor.

Approval of the NOI Issue

If the Engineer has reviewed the NOI and approves granting the requested additional compensation and/or time related to the NOI, a change order is prepared detailing the terms of the settlement. Documentation for the change order must include sufficient detail to justify the amount of the settlement and at a minimum, must include the analysis used to assign and determine damages. The change order should include a release clause to protect the NDDOT from any further liability or claims regarding the issues outlined in the NOI. Attachments 3-5 at the end of this section show examples of different types of release clauses which have been used on NDDOT projects. These may be used by project personnel as a basic template but the wording may need to be modified to fit the given situation.

Partial Approval of the NOI Issue

The Engineer has reviewed the NOI and believes granting additional compensation and/or time is partially justified. A change order is processed as detailed in the above paragraph.

Disapproval of the NOI Issue

After the issues outlined are reviewed and analyzed and it is determined that the contractor's NOI does not have merit, the engineer will respond appropriately to the contractor. The response should list each item in the NOI and the reason the NDDOT does not agree that additional compensation is due. This should be done by using the contract documents to justify the department's position. If the issues in the NOI are ongoing and NDDOT personnel must continue keeping strict account of the contractor's work to protect the state's interests, the engineer should request that the NOI be formally rescinded in writing by the contractor. If the contractor refuses to rescind the NOI, then the issues are not resolved and project personnel should continue keeping strict account of the contractor's work until all work related to the issues outlined in the NOI are complete.

Contractor Response

If the Contractor agrees with the Engineer's decision he should sign the change order and withdraw the NOI in writing.

If the Contractor disagrees with the Engineer's decision, he may pursue a claim in accordance with Section 104.05.

If an NOI remains unresolved, it is critical that project personnel continue keeping strict account of the

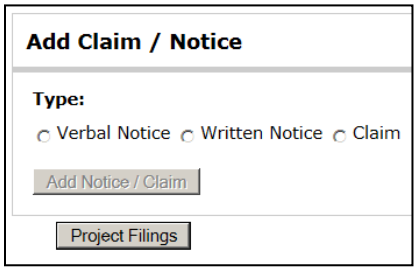
contractor's work until all NOI related items of work are complete. Once this is done, the records should be filed and categorized so they are easily retrievable later. The file should also include copies of any previous correspondence, evaluation, analysis, or any other work done in connection with the NOI. If the contractor does file a claim related to the NOI, these records will be key in evaluating the contractor's claim, formulating the Department's position in response to the claim, and ultimately in preparing and executing the defense should the claim go to arbitration.

CREATING AN NOI OR CLAIM IN CARS

Create a new Filing in the NOI/Claims tracking module in CARS each time a notice or Claim is received from the Contractor. All known information should be promptly entered into CARS and the Filing must be updated as the notice or Claim progresses.

1. The first step, upon receiving a Verbal or Written Notice, is to create a new Filing Group. The 'Create New Filing Group' option is found on the right-hand side of the Claim Filings screen (See Figure 1.06 below).
2. The Prime Contractor and approved Subcontractors are listed in the 'Claimant Name:' drop-down menu (See Figure 1.06 below). Select the Claimant's name from the menu and click 'Create'.
3. You will then be prompted to select one of three Types or Stages for the Filing (See Figure 1.04 below). Select the applicable Stage and click 'Add Notice/Claim'. Each Stage is explained in further detail later in this manual.

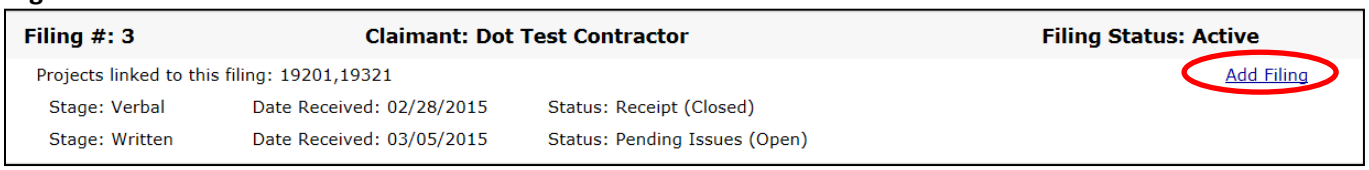
Figure 1.04



The 'Add Filing' link

The 'Add Filing' link, located under the Filing Status toward the right of the Claim Filings screen, is used to add the next Stage to the Filing Group. For example: If a Verbal Notice has been created and a Written Notice is received, the 'Add Filing' link is used to advance the Verbal Notice to the Written Notice Stage and add it to the Filing Group.

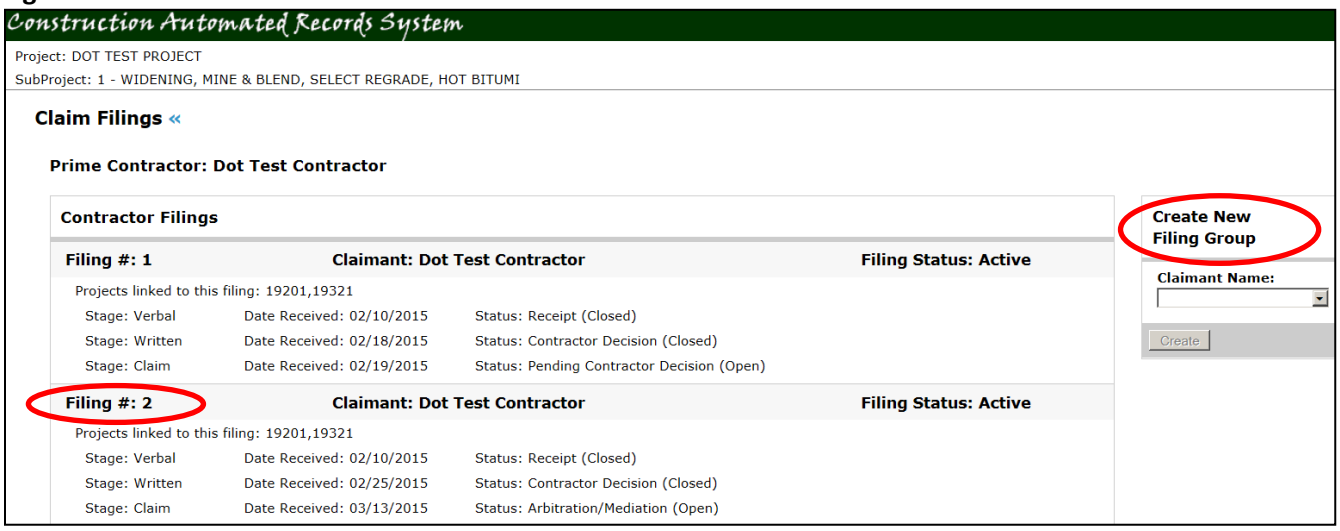
Figure 1.05



The Add Filing button is used to add the next Stage to the Filing Group

A new Filing is created for each separate issue or dispute. To create a new Filing, select the Contractor's name from the 'Create New Filing Group' drop-down menu and click 'Create'. Filing #2 will now be visible on the Claim Filings screen (See Figure 1.06 below).

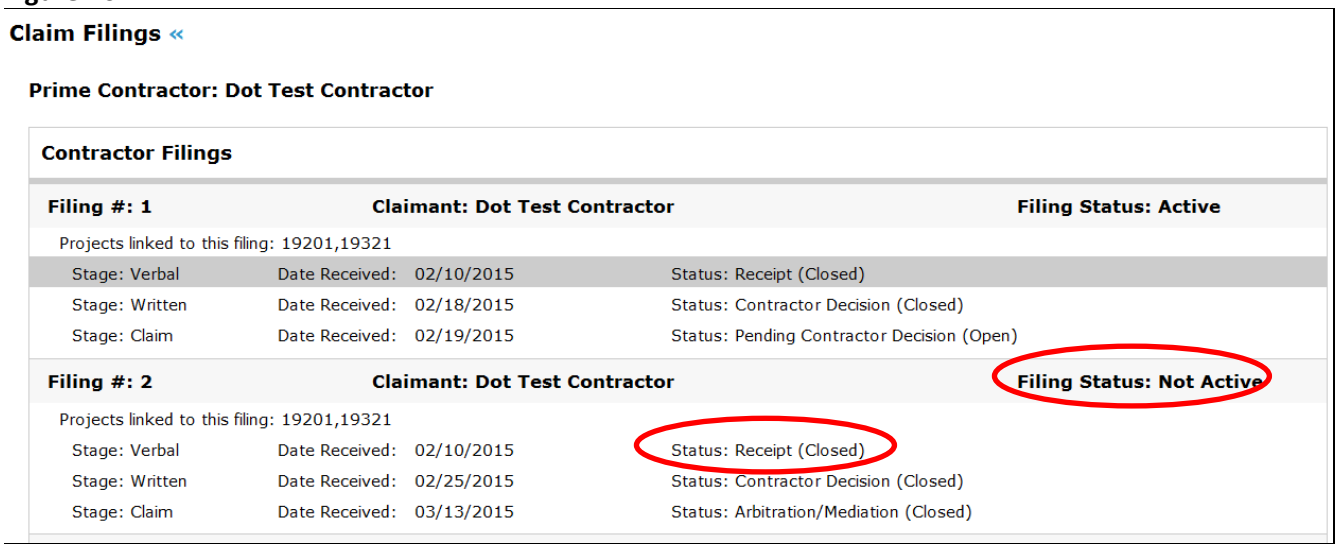
Figure 1.06



Two Filing Groups have been created for this example project

A Filing whose Status is shown as (Open) can be edited by clicking anywhere on the row of the Stage of the Filing to be edited. A Filing whose Status is complete will be shown as (Closed). Once an issue or dispute has been resolved, the Filing Status will be shown as 'Filing Status: Not Active' (See Figure 1.07 below).

Figure1.07



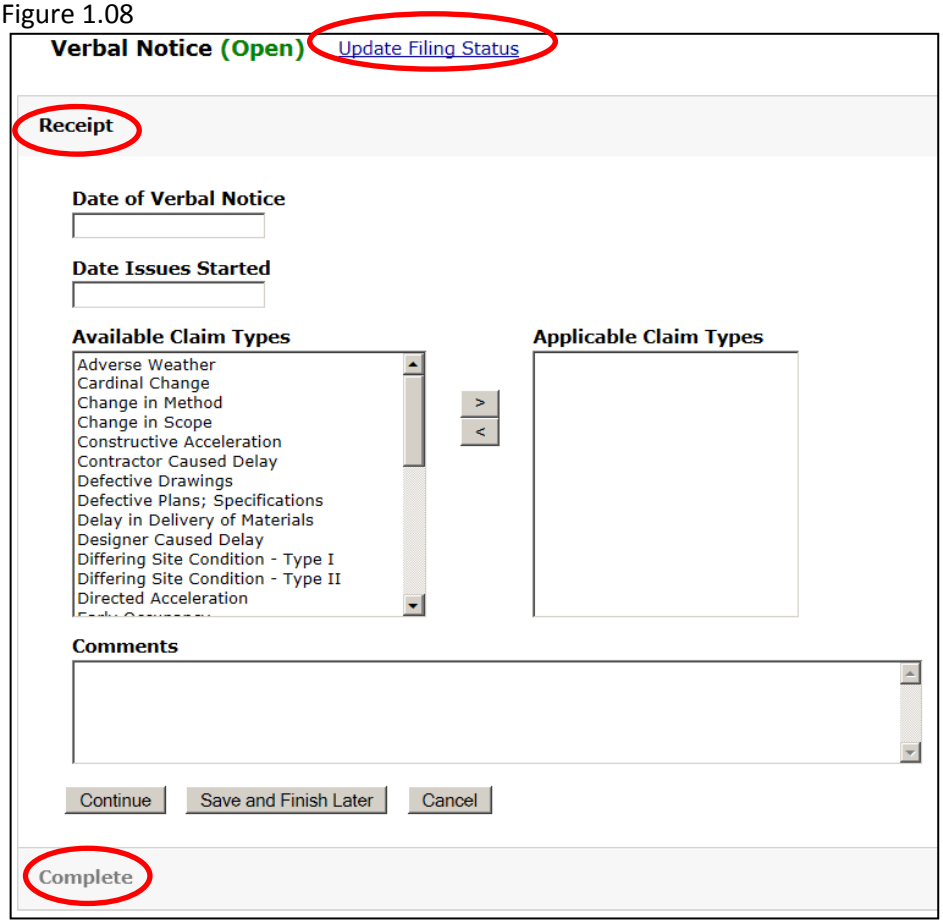
Verbal Notice in CARS

If a Verbal Notice is not received prior to receiving a Written Notice, the Verbal Notice Stage of the CARS module can be skipped.

The Verbal Notice Stage is broken up into two steps or sections as follows (See Figure 1.08 below):

1. Receipt
2. Complete

Figure 1.08



The Verbal Notice Stage

Receipt

The Receipt section is used to enter information related to the Verbal Notice. Enter the information required in the section, but only click 'Continue' if the entered dates are correct. After clicking 'Continue', the dates contained in the Receipt section will be locked. Clicking 'Save & Finish Later' will save the information, but allow the user to return to edit the information if needed. In the Receipt section, the user must enter all information and click 'Continue' in order to advance to the Complete section.

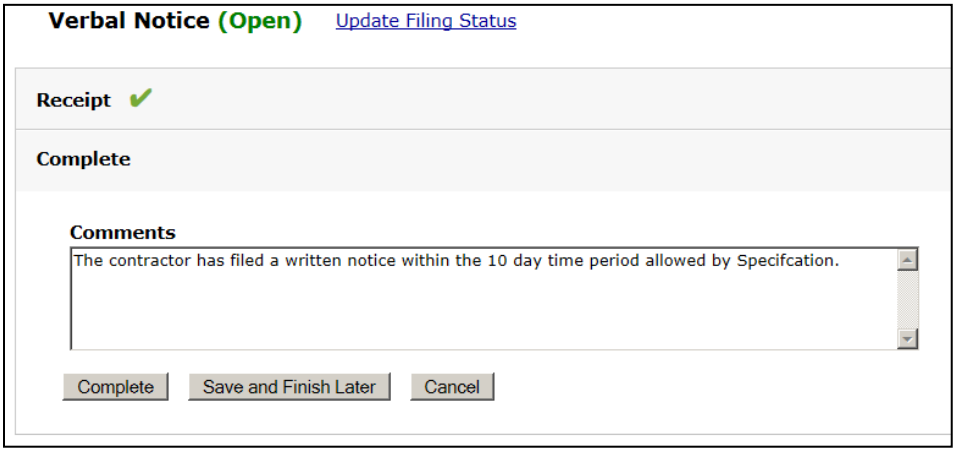
Complete

The purpose of the Complete section is to convert the Status of the Verbal Notice in the Claim Filings screen from (Open) to (Closed) (See Figure 1.09 below). The Verbal Notice should be converted to (Closed) when:

1. Ten days pass without the issuance of a Written Notice or
2. A Written Notice is received; in which case the Verbal Notice is closed and a Written Notice is opened.

Once received, the Verbal Notice can be withdrawn by clicking on 'Update Filing Status' as shown in Figure 1.08 above if the contractor decides to withdraw it. The user is then prompted to enter the date withdrawn and to provide any comments such as how it was withdrawn. The Filing Status will then be displayed as 'Receipt (Withdrawn)' on the Claim Filings screen.

Figure 1.09

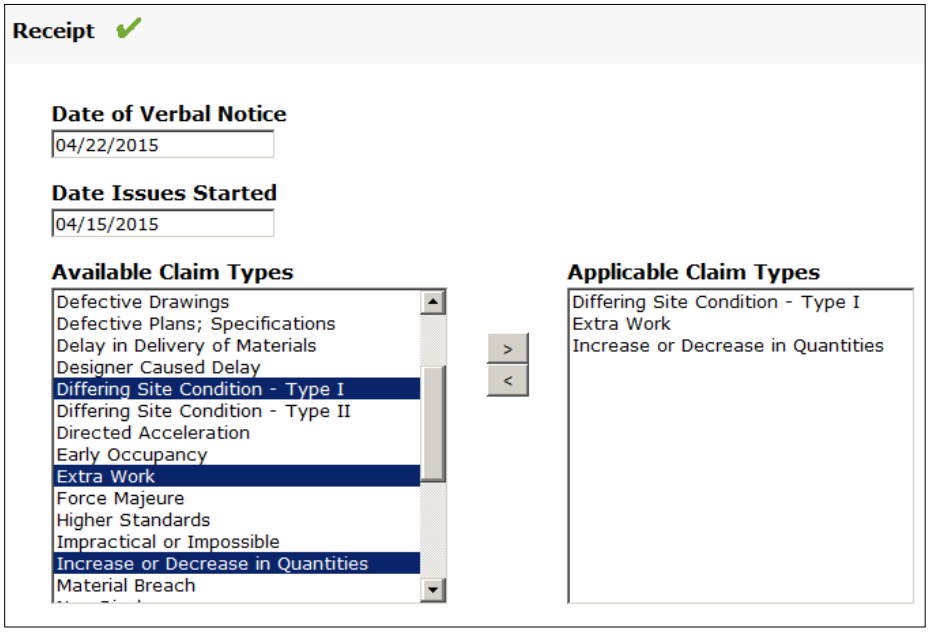


The comments field can be used to explain why the Verbal Notice is being closed.

Helpful Hints:

1. 'Date of Verbal Notice' refers to the date a Verbal Notice was received. A Contractor may claim that the 'Date Issues Started' was earlier than the 'Date of Verbal Notice', but the Contractor may only be entitled to additional compensation beginning from the date of Verbal Notice, unless the Contractor can prove that constructive notice was given or should have been evident earlier on.
2. Users can select multiple Claim types under the 'Available Claim Types' by selecting a Claim type and holding down the 'Ctrl' button on the keyboard while selecting additional Claim types or by selecting one at a time and clicking the '>' symbol. Conversely, the user can highlight claim types under the 'Applicable Claim Types' and remove them from the list by clicking the '<' symbol (See Figure 1.10 below).

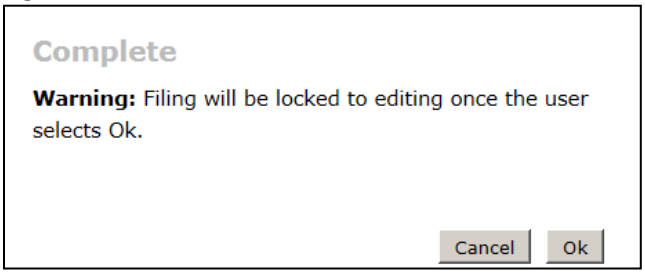
Figure 1.10



Clicking 'Save and Finish Later' saves the work, but allows the user to return to the Filing to edit information later. The 'Save and Finish Later' button should be used in place of the 'Continue' or 'Complete' button until the user is sure that the information is accurate (See Figure 1.08 & Figure 1.09 above).

3. Clicking 'Continue' locks the dates to editing but 'Available Claim Types' and 'Comments' can still be edited after clicking 'Continue'.
4. The NDDOT Help Desk (701-328-4357) must be contacted to unlock fields which have been locked to editing.
5. After clicking 'Complete', a dialog box will pop up to remind the user that the following action cannot be undone without contacting the NDDOT Help Desk (See Figure 1.11 below). The purpose of completing the notice is to convert the Status of the Verbal Notice from (Open) to (Closed) for tracking purposes. The Status is shown on the Claim Filings screen (See Figure 1.07 above).

Figure 1.11



Written Notice in CARS

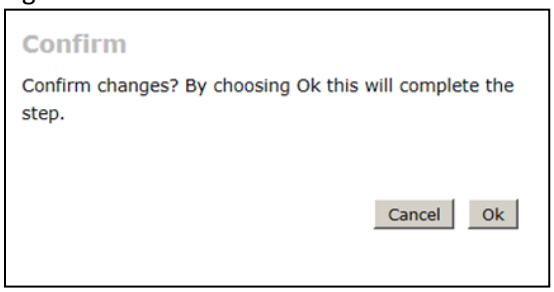
Background

The Written Notice Stage is divided into 7 steps or sections. The sections were designed to correspond with the progression of the NOI process:

1. Receipt
2. Issues
3. Documentation
4. Review
5. Engineer Decision
6. Contractor Decision
7. Complete

As with the Verbal Notice Stage, the bottom of each section contains options for 'Continue', 'Save and Finish Later', and 'Cancel.' Clicking 'Continue' will advance the user to the next section, but will also cause some items (such as dates) to be locked to editing (See Figure 1.12 below). If dates are unclear while entering information into the Filing, click 'Save and Finish Later' until dates are firmly established. Some information, such as the comment box, can still be edited after clicking 'Continue' and advancing to the next section.

Figure 1.12



Dates will lock upon completion of the step

Receipt

The Receipt section is used to enter general information about the NOI.

- Date of Verbal Notice: Enter the date that the Verbal Notice was received. If a Verbal Notice has been previously entered for the Filing, the date will be populated automatically.
- Date of Written Notice: Enter the date that the Written Notice was received.
- Contract Adjustment Requested: This information may be left blank if unknown at the time the Written Notice is first entered. The user can still edit this information after clicking 'Continue' and moving onto the next section.

Issues

Date Issues Ended: The date of the completion of work included in the NOI as described in Section 104.04 B of the Standard Specifications. The 'Date Issues Ended' cannot be edited after clicking 'Continue' (See Figure 1.14 below).

Figure 1.14

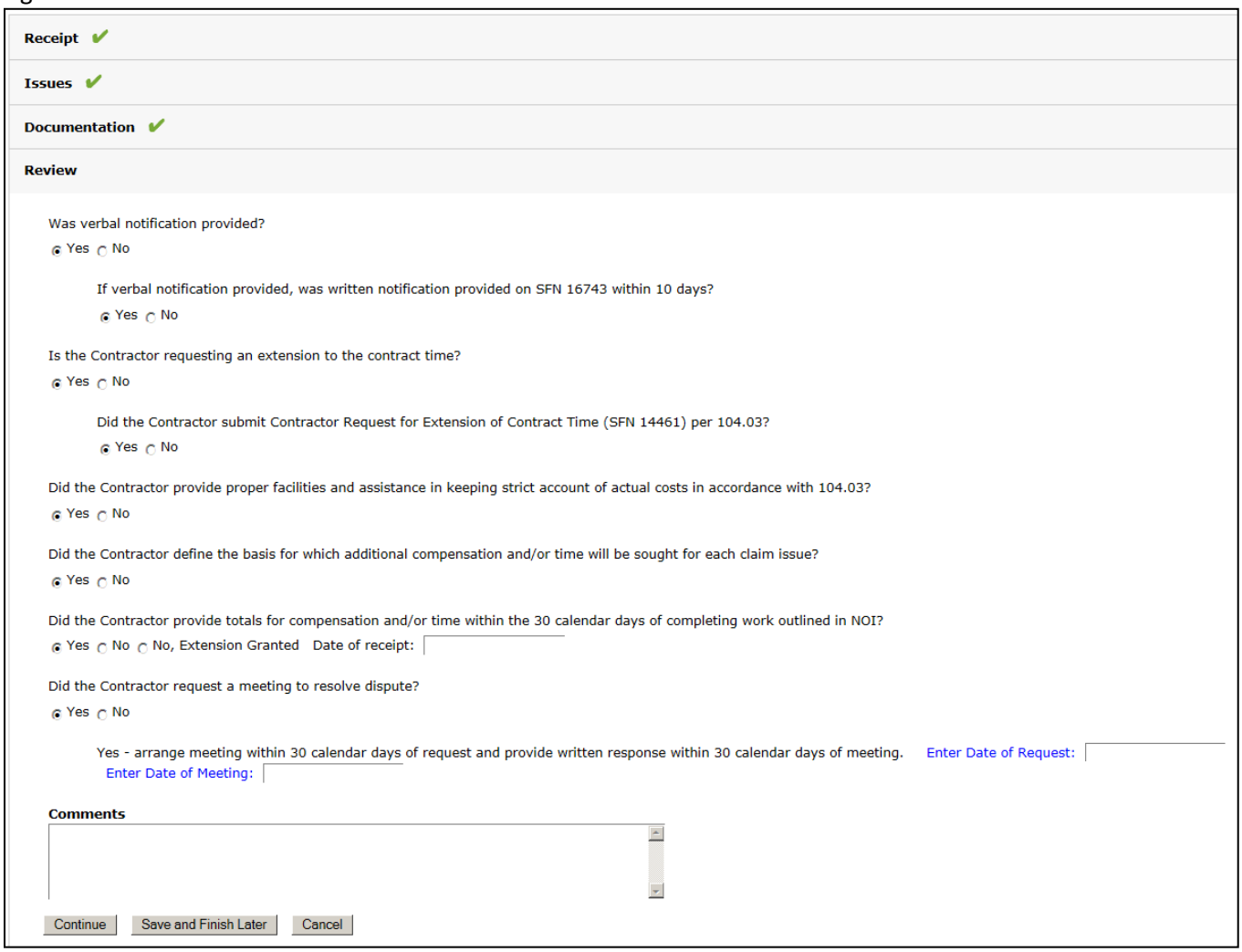
Documentation

This section refers to the documentation described in Section 104.04 B of the Standard Specifications. The 'Documentation Due Date' is automatically calculated based on the 'Date Issues Ended' entered in the preceding section (See Figure 1.14 above). If documentation is not received before the documentation due date, this does not end the NOI reporting process. Click 'Not Received' and 'Continue' to proceed to the next section.

Review

The Review section contains a series of questions to assist the Engineer in determining whether all requirements for a properly submitted NOI have been met (See Figure 1.16 below).

Figure 1.16



Written Notice Review section

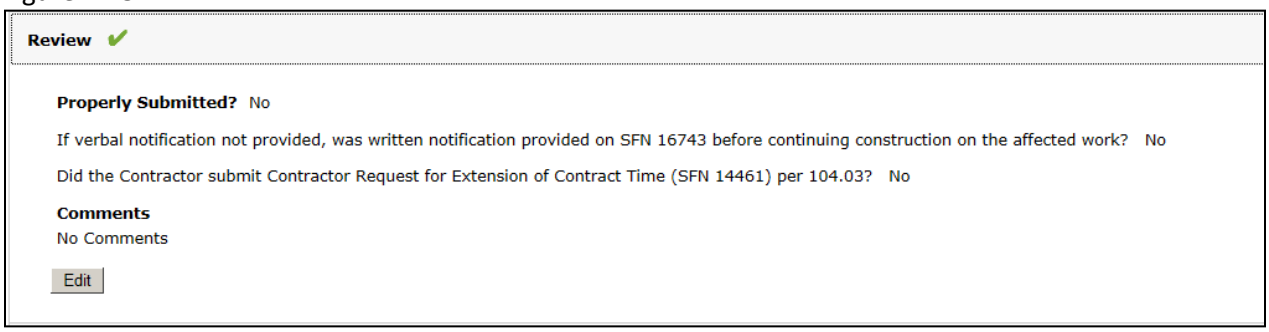
After clicking 'Continue' the Review section can be expanded to show whether the requirements of a properly submitted notice have been met. If all required information has been received, the following information will be displayed if the Review section is expanded (See Figure 1.17 below).

Figure 1.17

Review section showing properly submitted Written Notice

If the NOI was not properly submitted, the Review section can be expanded to display the reasons the NOI was not properly submitted (See Figure 1.18 below).

Figure 1.18



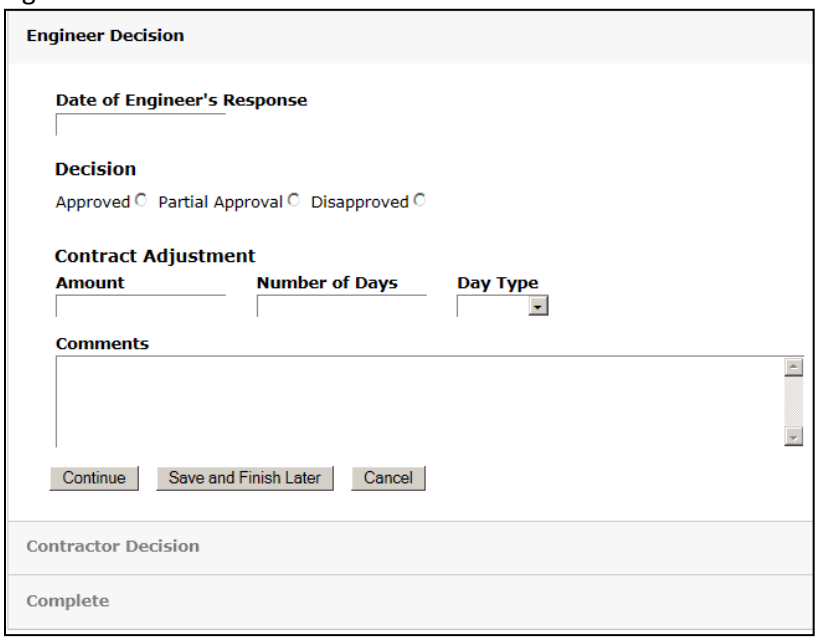
Review section showings an incorrectly submitted Written Notice.

The fields of the Review section can be edited, if needed, by clicking the 'Edit' button to return to the previously answered questions in the Review section (See Figure 1.16 above). The user may also use the 'Edit' button to view answers to the previously answered questions when formulating a response to the Contractor.

Engineer Decision

The Engineer Decision section is used to record the date of the Engineer's response to the NOI. The Engineer will respond with a letter to the Contractor stating the reasons for approval, partial approval, or disapproval of the NOI.

Figure 1.19



Engineer's Decision Section

The fields in the Engineer Decision section can be edited, if needed, after continuing to the next section.

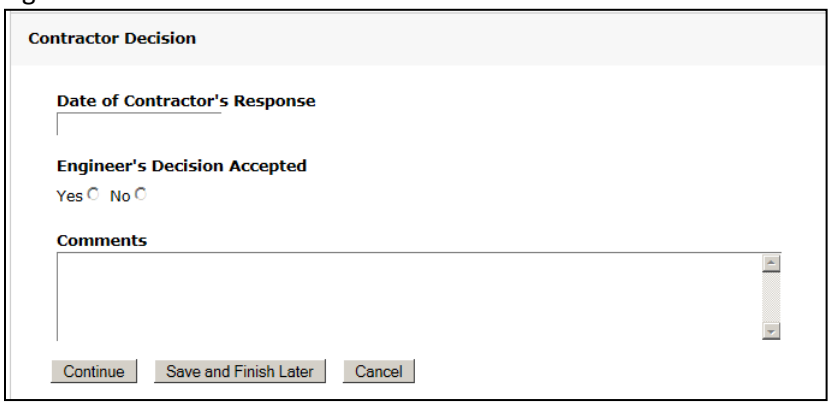
Contractor Decision

Three things can happen after the Engineer responds to a Written Notice (NOI):

1. The Engineer's decision is accepted by the Contractor
2. The Engineer's decision is formally rejected by the Contractor or
3. The Contractor does not respond

1. Engineer's Decision is Accepted:
   If the Engineer approves granting additional time and/or compensation, a change order and settlement agreement is created for the Contractor's signature. Once the Contractor signs the change order and settlement agreement, enter the date of the Contractor's response under the 'Date of the Contractor's Response' and select 'Yes' for 'Engineer's Decision Accepted' (See Figure 1.20 below).

Figure 1.20



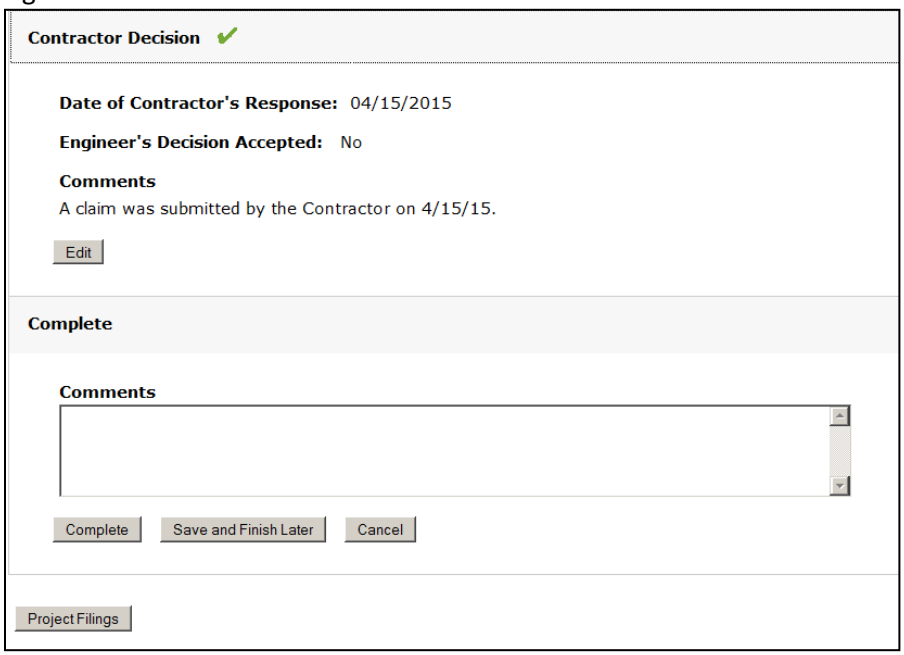
Contractor Decision Section

The user then clicks 'Continue', advances to the Complete section, enters any comments, and completes the section to change the Status of the Filing to 'Contractor Decision (Closed)'.

If the Engineer's response denies additional compensation and the Contractor accepts this decision, then the NOI should be rescinded by the Contractor in writing. Once received, the Engineer should withdraw the Filing Instead of clicking 'Complete' in the Complete section.

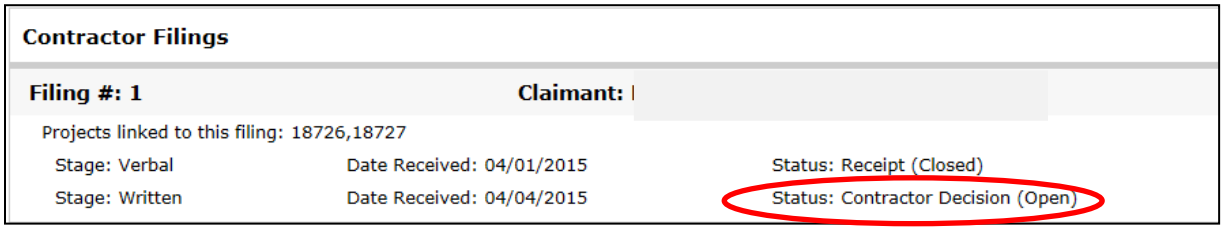
2. Engineer's Decision is Rejected:
   If the Engineer's response is formally rejected by the Contractor, the user will enter the 'Date of the Contractor's Response' and select 'No' under 'Engineer's Decision Accepted'. Upon completing the Contractor Decision section, the user will click 'Continue' to advance to the Complete section (See Figure 1.21 below). Do not click 'Complete' until either a Claim is filed or 90 days has expired from the submittal of the Final Estimate. The Claim Filings screen will appear as shown in Figure 1.22 below until the user clicks 'Complete'. Clicking 'Complete' will show on the Claim Filings screen a Status of 'Contractor Decision (Closed). If a Claim is filed, the Engineer should go to the Claim Filings screen and click 'Add Filing' to advance the Filing to the Claim Stage (See Figure 1.23 below).

Figure 1.21



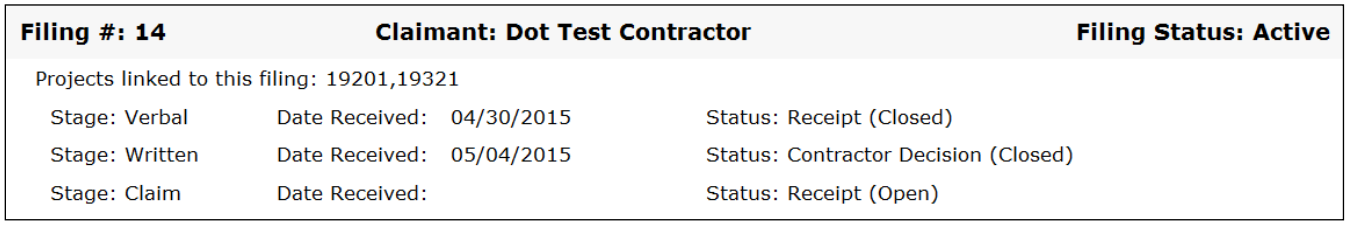
Contractor Decision and Complete Sections

Figure 1.22



The Status of the Written Notice should remain open until a Claim is filed or time limit expires

Figure 1.23



3. Contractor Does Not Respond:
   If the Engineer's response to the NOI is not responded to by the Contractor, then the Contractor Decision section should be left blank. The Claim Filings screen will show the Status of the Written Notice as 'Pending Contractor Decision (Open)'. The Filing will remain in this Status until the Written Notice has been rescinded, 90 days expire after submittal of the final estimate, or a Contractor submits a Claim.

If a Claim is filed by the Contractor, complete the Contractor Decision section by entering the date of the Claim under 'Date of Contractor's Response' and check 'No' for 'Engineer's Decision Accepted'. Proceed to the Complete section, enter any comments and select complete. This will convert the Status to 'Contractor Decision (Closed)' on the Claim Filings screen for the Written Notice Stage. The Engineer should then go to the Claim Filings screen and click 'Add Filing' to advance to the Claim Stage (See Figure 1.23 above).

Complete

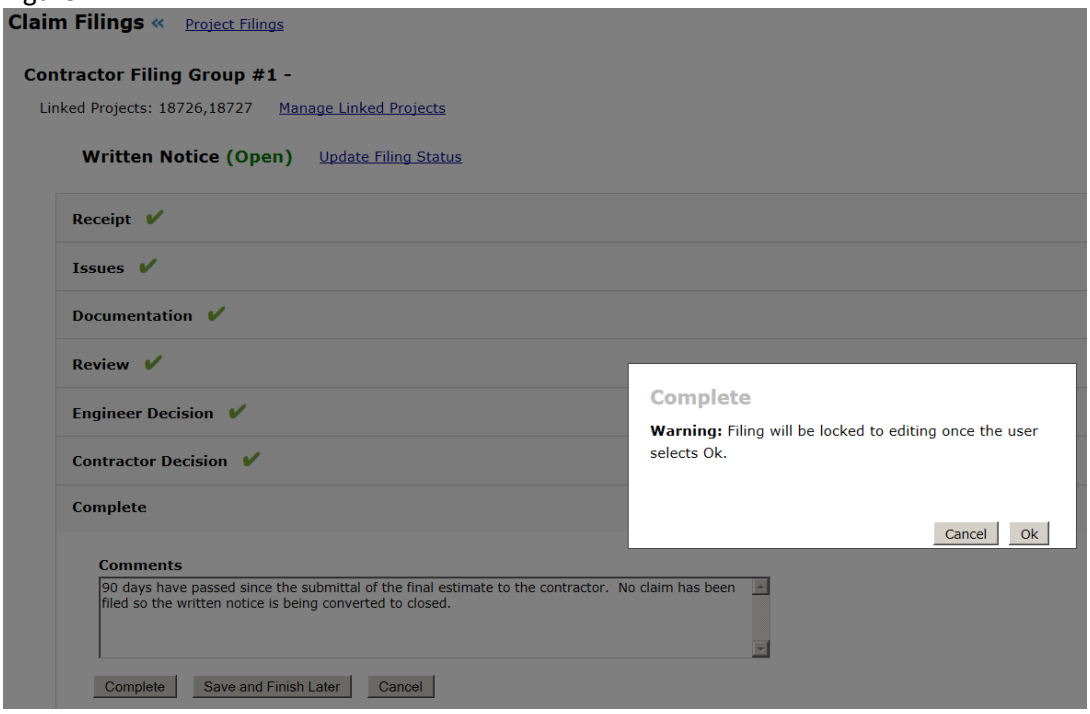
The purpose of the Complete section is to change the Status of the Written Notice from (Open) to (Closed). The Status is displayed on the Claim Filings screen to assist the Engineer in tracking unresolved issues or disputes.

A Written Notice displays a Status of (Closed) when:

- An NOI is resolved by Change Order
- 90 calendar days pass after submittal of the final estimate or
- A Contractor files a Claim

Upon clicking 'Complete', a dialog box will pop up to warn the user that the Filing will be locked to editing. Locked notices can only be unlocked by calling the NDDOT Help Desk at 701-328-4357 (See Figure 1.24 below)

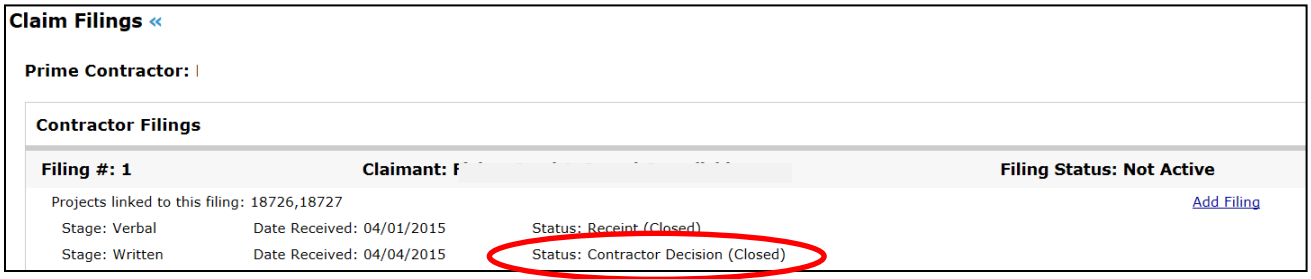
Figure 1.24



Complete is the final section in the Written Notice Stage. Clicking 'Ok' will close the Filing and lock it to editing.

Clicking 'Ok' will convert the Status to (Closed) on the Claim Filings screen (See Figure 1.25 below).

Figure 1.25



The completion of the Complete section converts the filing to (Closed) on the CARS NOI/Claim home screen and in tracking reports.

A Contractor may also withdraw a Written Notice at any time. If this is done, the Engineer should request that the Contractor provide a letter stating the Contractor's intention to waive their right to any additional compensation and/or time regarding the issue. The Written Notice is then withdrawn by clicking on 'Update Filing Status' and selecting 'Withdraw' (See Figure 1.26 below). The user is prompted to enter the date withdrawn and to provide any comments. For example, if the Engineer has made a decision and the Contractor responds with a letter of withdrawal, the Status of the Filing would be changed to 'Pending Contractor Decision (Withdrawn)' (See Figure 1.27 below).

Figure 1.26

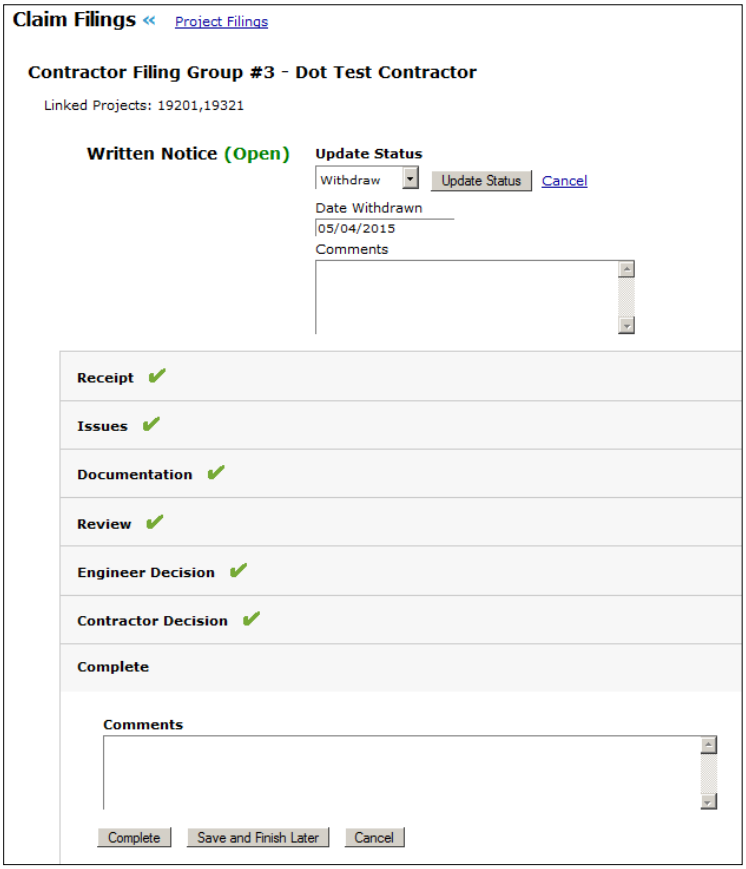


Figure 1.27

Filing #: 7	**Claimant: Dot Test Contractor**	
Projects linked to this filing: 19201,19321		
Stage: Verbal	Date Received: 02/23/2015	Status: Receipt (Open)
Stage: Written	Date Received:	Status: Pending Contractor Decision (Withdrawn)

Shows NOI that was in the Pending Contractor Decision Status before it was withdrawn

CLAIMS

Section 104.05 of the Standard Specifications is the governing specification for a contractor who submits a claim to the NDDOT. A contractor submitting a claim must do so no later than 90 days after receiving the final estimate from the department.

Receipt of a Claim

Upon receipt of a contractor claim the engineer should ask the following questions to assure that the contract provisions regarding a claim submittal have been met:

- Was a proper and timely NOI filed by the contractor which covered the issues outlined in the claim?
- Was the claim properly submitted in writing no later than 90 days after the final estimate was submitted to the contractor?
- Does the claim meet the requirements of a properly submitted claim as outlined in Section 104.05 of the Standard Specifications?
- Were the bid documents submitted with the claim as required by Section 104.05 of the Standard Specifications?

If a claim is not properly submitted, the project engineer will respond immediately to the contractor stating that the claim has not been properly submitted and the reasons for that determination. The contractor should also be informed that the 60 day time period for claims < $3M and 180 day time period for claims ≥ $3M for the Department to respond will not begin until a claim is properly submitted. If the claim is properly submitted, the department must respond with its position within the above stated time periods upon receipt of the claim. The Construction Services Division should be notified when an NOI or claim has been submitted by a contractor.

Review and Analysis of the Claim

There are four basic steps to use in the review, analysis and resolution of a contractor claim. These steps should be used for all levels of review beginning with the project engineer. The four steps are:

1. Determine whether or not a change has occurred. Is there a difference between what was required by the contract and what was required during the course of construction? If the answer is no, then that is the owner's position. Go to step 2 if the potential answer is yes.
2. Determine who caused the change or who has liability for the change, the owner or the contractor. If it is determined that the owner caused or is liable for the change, go to step 3.
3. Determine the impacts of the change. Impacts include but are not limited to the following: extra work, delays, reduced efficiency, increase costs of material, unused material, etc.

4. Determine damages (dollar amount, increased contract time, etc.) to which the contractor may be entitled. If the impacts are clearly defined, determination of damages is much easier to do.

These four steps should always be followed in sequence. The contract documents (plans, proposal, and specifications) should always be used in conjunction with the four step review. The decision on whether or not the contractor is due additional compensation or contract time depends on the deviation, or lack of deviation, between the work and requirements outlined in the contract documents and the work actually performed by the contractor.

The contractor's claim submittal should match the items that were identified in the original NOI for the claim. The claim is reviewed to check merit, validity and adherence to the contract documents. Any NOI related records kept during the project should be retrieved and used to facilitate the review.

Response to the Claim

In formulating a response to, and conducting negotiations of the claim the Construction Services Division should be kept informed of all details. Additionally, the Construction Services Division is available to provide guidance to the district in these matters.

It is likely that multiple draft versions of a Claim response letter will be shared between the Engineer, the District, and Construction Services Division prior to the written response being sent to the Contractor. The draft response must contain the following disclaimer language until the letter is in its final version:

"The draft response or analysis included herein does not represent an endorsement of the merit of the Contractor's claim(s) or an officially approved position of the North Dakota Department of Transportation. The North Dakota Department of Transportation reserves the right to invoke any and all applicable defenses to Contractor's claim(s), and the exclusion or omission of any applicable Contract provision, Standard Specification, Supplemental Specification or provision of state or federal law herein shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or any provision of the Contract."

The draft letter should also contain a "DRAFT" watermark. The disclaimer and "DRAFT" watermark are removed before sending the final version of the written response to the Contractor.

Agree/Partially Agree With the Claim

If, after the review and analysis of the supplemental information submitted by the contractor, it is determined that the claim has merit, the NDDOT may choose to meet with the contractor to attempt negotiation of a settlement. The intent is to negotiate the claim at the project or district level, if possible.

The authority to settle a claim is the same as that for an NOI. However, due to the statewide significance of any claim settlement and the importance of uniformity in decisions, all settlement agreements over $50,000.00 must be made in consultation with the Construction Services Division.

Claims referred to the Construction Services Division for review and action must be accompanied by

the pertinent data, reports and findings. Additional meetings with the contractor, either with or without legal counsel, may be arranged. District personnel will be asked to attend these meetings and furnish any supporting data that may be needed. Any audits of the contractor's r e c o r d s necessary to verify submitted data will be arranged by the Construction Services Division.

Claims that cannot be resolved by the Director of Operations may be forwarded to the Deputy Director for Engineering or to the Director for a final attempt at resolution. If a claim that cannot be resolved, the contractor's next step is to file for arbitration in accordance with North Dakota law.

Settlement of a Claim

If negotiations are successful and a settlement is reached and extra compensation and/or time are granted for an approved or partially approved Claim, then a change order and a Release and Settlement Agreement are created to resolve the Claim and absolve the NDDOT of further liability. A statement should be included in the change order stating that the change order resolves the Claim. As with an NOI, documentation for the change order must contain sufficient detail to justify the amount of the settlement. Upon signing of the change order and the Release and Settlement Agreement, the Contractor agrees to the terms of the settlement and any additional compensation regarding this issue will be denied.

Disapproval of a Claim

When the issues outlined in the contractor's claim are found to be without merit, the NDDOT must respond in writing within 60 days of receipt of the claim for claims < $3M and 180 days for claims ≥ $3M and inform the contractor that the department disagrees with the items outlined in the claim. The response may include an itemized list of the issues contained in the claim and the department's justification for rejecting the contractor's request for additional compensation. The contractor's next option is to file for arbitration.

Arbitration

If the contractor does not accept the response by the department on the issues presented in the claim, a demand for arbitration may be filed by the contractor.

James Acret in the *"Construction Arbitration Handbook", Shepard's/McGraw-Hill, © 1985*, defines arbitration as:

"Arbitration is a system, voluntarily adopted by parties to decide their disputes, in which an impartial arbitrator, after hearings, issues a legally enforceable award."

Arbitration is required by North Dakota Century Code for:

"All controversies arising out of any contract for the construction or repair of highways entered into by the director (of the NDDOT)..."

North Dakota Century Code requires that in cases less than $100,000 dollars, one arbitrator will be appointed to hear the case. In cases of $100,000 or more, three arbitrators will comprise a panel to hear the case. If the contractor does choose to file for arbitration and legal counsel has not already been employed by either party, it is likely that both sides will now hire attorneys to assist in their case.

Claims Against Contractors – External Claims

External claims are defined as those made against a contractor by parties other than the NDDOT.

Claims made against a contractor by third parties for materials, supplies, services, equipment or labor shall be referred to the Construction Services Division. Other than informing the claimant that these claims should be submitted to Construction Services, district employees should not provide any advice.

When the Construction Services Division receives the written claim, a letter will be sent to the claimant citing the requirements of law which must be followed in filing a claim against the contractor. The letter shall provide the claimant with the name of the contractor's bonding company and the resident agent. Copies of the NDDOT"s letter to the claimant along with a copy of the written claim shall be sent by the Construction Services Division to the contractor and the bonding company.

LIST OF CLASSIFICATIONS OF CONSTRUCTION CLAIMS

The following is a list of the classifications of construction claims as shown in the "Construction Claims Guide" published by Wagner, Hohns, Inglis, Inc.

Constructive Changes

Changes resulting from acts attributable to the owner which cause more work or more time on the job than planned, but for which the owner refuses to execute formal change orders.

1. Work out of Sequence
   Work in a different order than originally planned.
2. Change in Method
   A change in the way of doing the work on a project.
3. Over Inspection
   Inspector demands work quality higher than normal industry standard or requires special operations.
4. Defective Drawings
   Errors, omissions, or ambiguities occurring in the drawings.
5. Higher Standards
   Requires higher quality work than called for in the specifications.
6. Non-Disclosure
   Failure to provide all available information. Ususally relates to information known by the designers but not made a part of the contract documents.
7. Impractical or Impossible
   Work physically impossible to perform or economically impractical.

Acceleration

When the owner orders completion of the project sooner than required by the contract or orders work finished on the original completion date failing to grant time extensions which are due.

1. Directed Acceleration
   Order to complete prior to contract completion date.
2. Constructive Acceleration
   Insistence on the original schedule despite entitlement to time extension.

Changed Conditions

Conditions other than what a prudent person would have expected.

1. Type I
   Subsurface of latent physical conditions differing materially from those indicated in the contract.
2. Type II
   Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered in work of the character provided for in the contract.

Schedule Change

A change in the time or sequence of the schedule to complete a project.

1. Suspension
   Work stoppage for one party's benefit.
2. Termination
   Defaulted for bad work or failure to perform. If for Owner's convenience, profits on work completed and cost of demobilization permitted.

Delays

There are three types of delays: delays which are the responsibility of the owner, delays which are the responsibility of the other party, and delays which are beyond the control of either party.

1. Owner Caused
   a. Lack of access
   b. Owner interference
   c. Directed reduction in manpower
   d. Directed slowdown
2. Designer Caused
   a. Late shop drawing approval
   b. Design error
   c. Failure to accept
3. Contractor Caused
   a. Rework
   b. Lack of productivity
   c. Procurement failures
4. Force Majeure
   a. Hurricanes
   b. Tornadoes
   c. War

Miscellaneous

Claims which do not fall into any of the above categories.

1. Material Breach
   Violation of an important contract obligation
2. Refusal to Accept Completed Work
   Owner refuses to takeover completed work and Contractor is forced to maintain and protect the work.
3. Early Occupancy
   Owner moves into facility and interferes with the Contractor.
4. Change in Scope
   Project's purpose is altered or increased significantly.
5. Cardinal Change
   Owner alters a project radically.

It is important to become familiar with the different types of claims to better recognize a claim situation as it is happening.

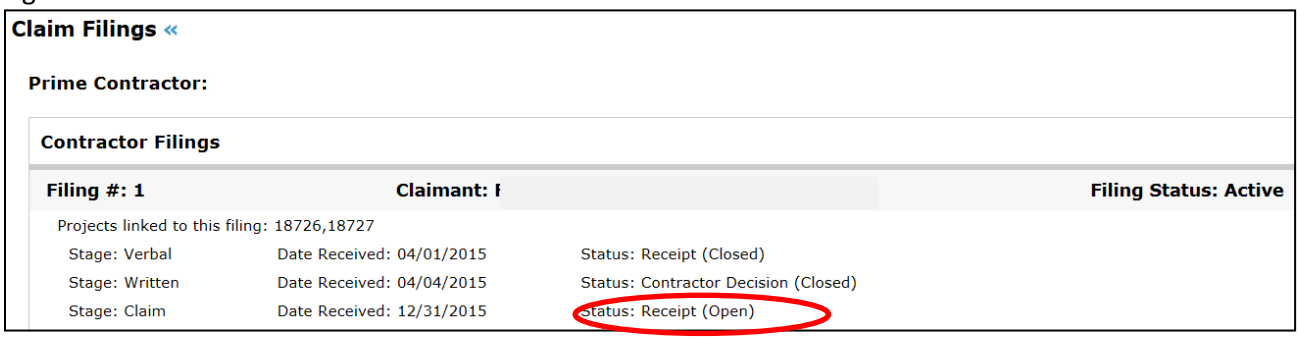
TRACKING CLAIMS IN CARS

The Claim Stage is divided into 5 steps or sections. The sections were designed to correspond with the progression of the Claim process:

1. Receipt
2. Review
3. Engineer Decision
4. Contractor Decision
5. Complete

As with the Written Notice Stage, the bottom of each section contains options for 'Continue', 'Save and Finish Later', and 'Cancel.' Clicking 'Continue' will advance the user to the next section, but will also cause some items (such as dates) to be locked to editing. If dates are unknown when entering information into the Filing, click 'Save and Finish Later' until dates are firmly established. Some information, such as the comment box, can still be edited after clicking 'Continue' and advancing to the next section. Figure 1.28 below shows a Filing that is in the Claim Stage with a Receipt (Open) Status.

Figure 1.28



The Claim Filings screen showing an open Claim

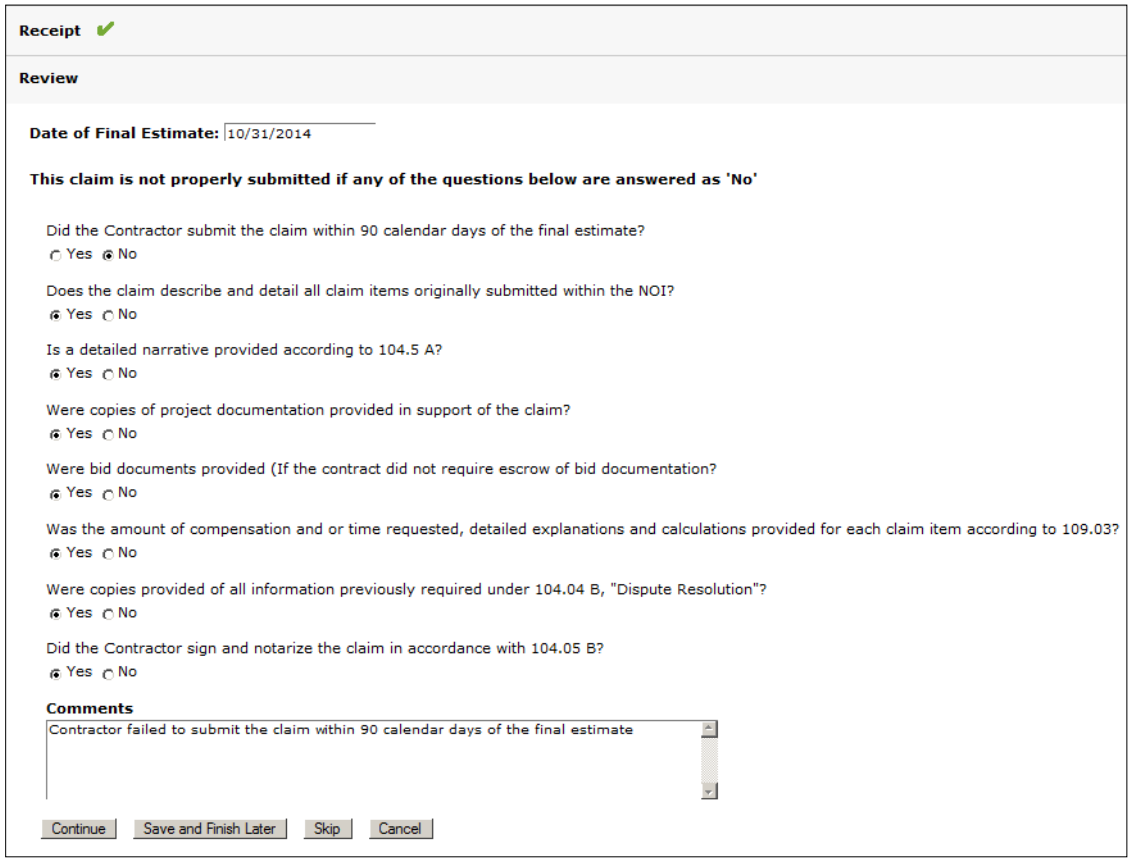
Receipt

Similar to the Written Notice Stage, the Receipt section is used to enter general information about the Claim.

Review

The Review section contains a series of questions to assist the Engineer during the review process to determine whether all requirements for a properly submitted Claim have been met (See Figure 1.29 below).

Figure 1.29



Engineer Decision

Similar to the Written Notice Stage, the Engineer Decision section is used to record the date of the Engineer's response to the Contractor's Claim. The letter will state the approval, partial approval, or disapproval of the Claim

The fields in the Engineer Decision section can be edited, if needed, after continuing to the next section.

Contractor's Decision

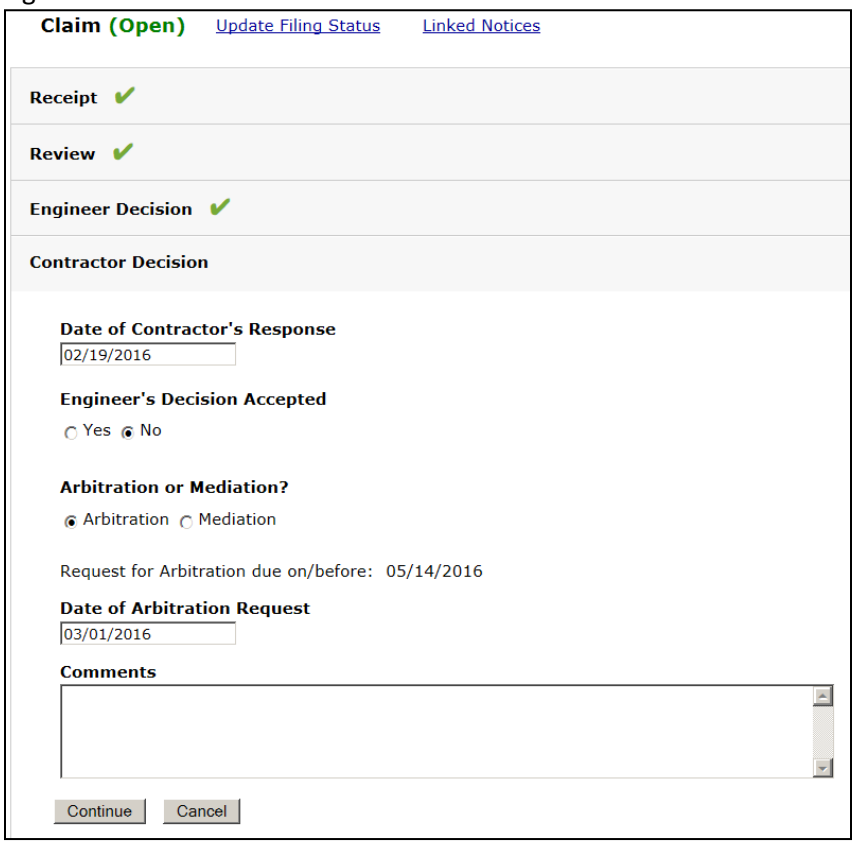
Three things can happen after the Engineer responds to a Claim:

1. The Engineer's decision is accepted by the Contractor
2. The Engineer's decision is rejected by the Contractor or
3. The Contractor does not respond

1. Engineer's Decision is Accepted:
   If the Contractor accepts the Engineer's decision, the Engineer selects 'Yes' under 'Engineer's Decision Accepted'. This signifies that the Claim has been resolved and the Complete section can then be completed in order to show a Status of 'Contractor Decision (Closed)' on the Claim Filings screen.

2. Engineer's Decision is Rejected:
   If the Contractor disagrees with the Engineer's decision, the Engineer will enter the date of the Contractor's response and select 'No' under 'Engineer's Decision Accepted'. The section will then prompt the Engineer whether arbitration or mediation has been requested by the Contractor.
   a) If 'Arbitration' is selected, the CARS program will automatically calculate the deadline by which the Contractor can request arbitration, which is 90 days after the Engineer's response to the Claim (See NDCC Chapter 24-02-26.1). The Engineer is then asked to enter the date of the request under 'Date of Arbitration Request' and any comments before continuing to the Complete section (See Figure 1.30 below).

Figure 1.30



The Contractor Decision section in the Claim Stage

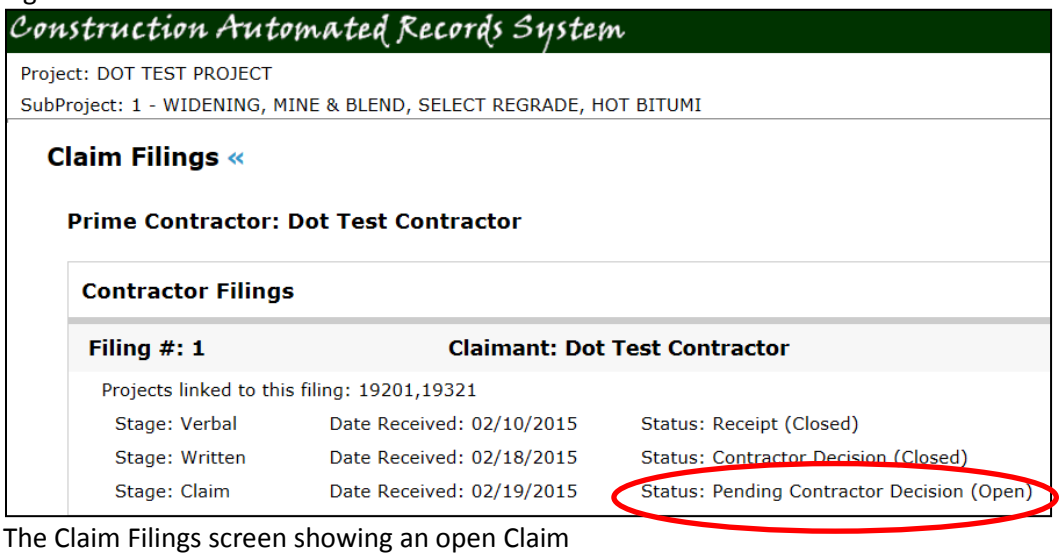
If the Contractor doesn't respond to the Engineer's letter denying the Claim, then the Contractor Decision section should remain in an (Open) Status until the Claim is either rescinded, 90 days expire from the date of the Engineer's response, the Claim is resolved, or the Contractor signs the final payment statement. The Claim Filings screen should show the Status of the Claim as 'Pending Contractor Decision (Open) (See Figure 1.31 Below).

If 90 days pass after the Engineer's response without the Contractor requesting arbitration, the Claim is resolved, or the Contractor signs the final payment statement, the user should continue to the Complete section and the Claim should be (Closed).

b) If 'Mediation' is selected, there is no deadline for the Contractor's request to mediate, except that which is stated in Section 104.05 of the Standard Specifications. Section 104.05 states that by signing the final payment, the Contractor accepts the amount stated as full and final payment on the contract and waives all rights to any further payments to the contract. After selecting 'Mediation', the Engineer should enter any comments before advancing to the Complete section.

If the Contractor doesn't respond to the Engineer's letter denying the Claim, then the Contractor Decision section should remain in an (Open) Status until the Claim is either rescinded, the Claim is resolved, or the Contractor signs the final payment statement. The Claim Filings screen should show the Status of the Claim as 'Pending Contractor Decision (Open) (See Figure 1.31 Below).

Figure 1.31

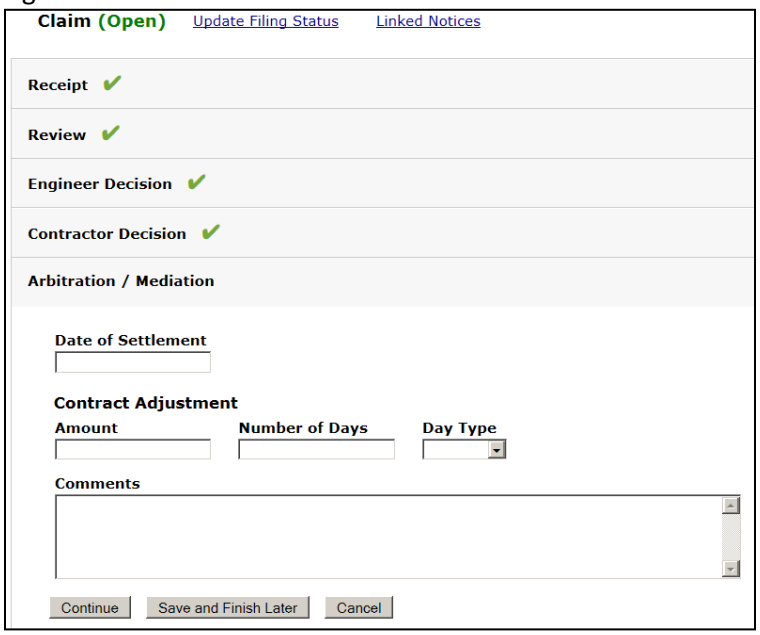


The Claim Filings screen showing an open Claim

Arbitration/Mediation

If a Contractor rejects the Engineer's decision, the Engineer will complete the Contractor Decision section as outlined above before advancing to the Arbitration/Mediation section. This section will only be visible if the Contractor rejects the Engineer's decision. This section is used to enter the details of the settlement (See Figure 1.32 below). The settlement reached during arbitration is legally binding. However, the decision reached during mediation is not. In the event of mediation, the Contractor may choose to pursue the Claim further.

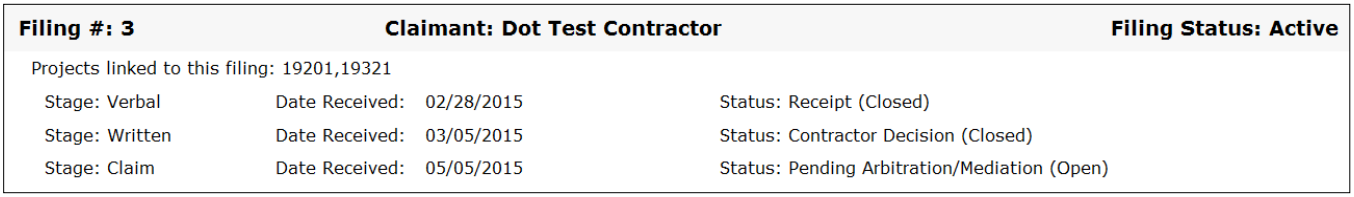
Figure 1.32



The Arbitration/Mediation section is unlocked if selected in the Contractor Decision section

Prior to clicking 'Continue' in the Arbitration/Mediation section, the Claim Filings screen will display the Status of the Claim as 'Pending Arbitration/Mediation (Open)' (See Figure1.33 below).

Figure 1.33

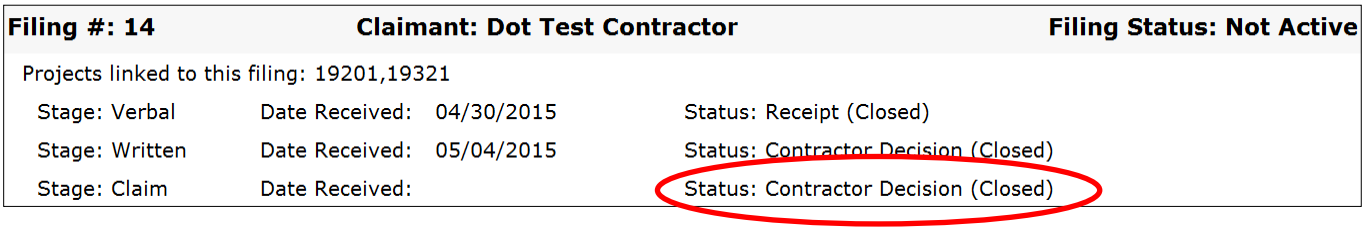


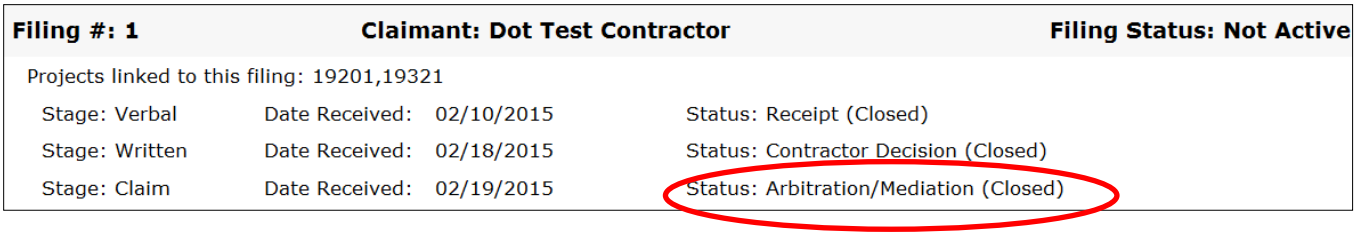
A Filing Group pending arbitration

Complete

Once a Claim has been either resolved in the Contractor Decision section or the Arbitration/Mediation section, the Engineer can advance to the Complete section. The Engineer will be prompted to enter in any comments before clicking 'Complete'. After clicking 'Complete', the Status will then be shown as either Contractor Decision (Closed) or 'Arbitration/Mediation (Closed)' and the Filing Status will be shown as 'Filing Status: Not Active' (See Figure 1.34 Below).

Figure 1.34





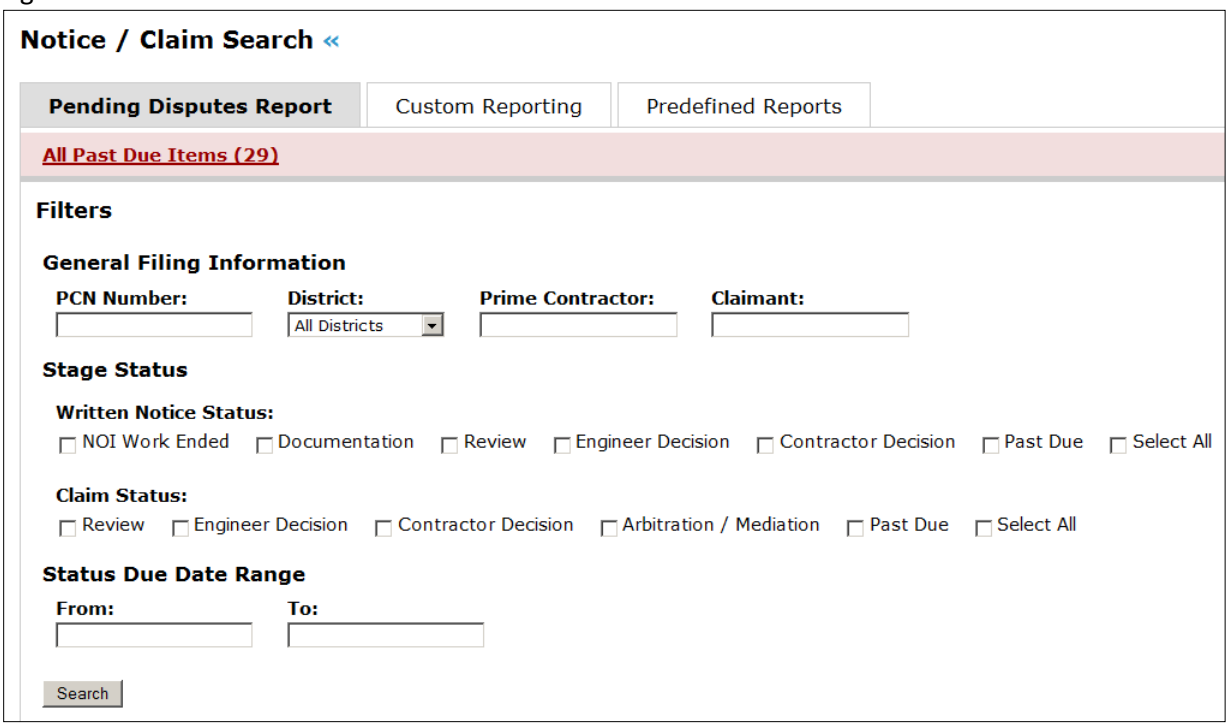
REPORTS

Reports can be created by clicking on 'NOI/Claims Reports' found on the Main Menu.

After clicking on the NOI/Claims Reports heading, the user will be directed to a screen with three reporting options as follows:

1. Pending Disputes Report
2. Custom Reporting
3. Predefined Reports

Figure 1.36



NOI/Claims Search Menu

Pending Disputes Report

The Pending Disputes Report shows past due items for the entire state, but it also allows the user to select different filters to create a list of past due items which are more specific to the user's needs. For example, if the user wants to know what items are past due in the Williston District, then the user would click on the dropdown arrow under the 'District:' heading, select Williston, and then the 'Search' button at the bottom of the screen.

APPENDIX 1 – EXAMPLE OF CONTRACTOR DAILY EQUIPMENT AND LABOR SUMMARY

Contractor Daily Equipment and Labor

Project Number:
Contractor:

Date	Equipment							Labor				Remarks
	Type	Hours		Total Hours	Item of Work	Location	Standby Hours	Name	Hours		Total Hours	
		Begin	End						Begin	End		

APPENDIX 2 – EXAMPLE OF CRUSHING/AGGREGATE PRODUCTION SUMMARY

Contractor Daily Equipment, Labor, and Materials – Crushing / Aggregate Production

Project Number:
Contractor:

Date	Equipment							Labor				Remarks
	Type	Hours		Total Hours	Item of Work	Standby Hours	Down Hours	Name	Hours		Total Hours	
		Begin	End						Begin	End		

Samples Taken (Y/N) _____ Sample Reference Number _____

Amount of Product Produced In 24 Hours _____

Amount of Waste Produced In 24 Hours _____

Inspector:

APPENDIX 3-5 EXAMPLES OF NOTICE OF INTENT TO FILE A CLAIM SETTLEMENT AGREEMENT

NOTICE OF INTENT TO FILE A CLAIM SETTLEMENT AGREEMENT

The Contractor,_____, by the signing of this agreement certifies that:

Upon execution of Change Order Number_____any and all claims in any manner arising out of, or pertaining to, the attached Notice of Intent dated_____, filed on Project No._____, including but not limited to such issues as;

have been satisfied in full and the State of North Dakota is released and discharged from any claims or extra compensation in any manner arising out of the referenced Notice of Intent.

NDDOT Representative	Date	Contractor Representative	Date
Printed Name		Printed Name	

NOTICE OF INTENT TO FILE A CLAIM SETTLEMENT AGREEMENT

The Contractor,_____, by the signing of this agreement certifies that:

Upon execution of Change Order Number_____ in the amount of $_____ any and all claims in any manner arising out of, or pertaining to, Project No._____, including but not limited to the Notice of the Intent to file a claim in regards to;

have been satisfied in full and the State of North Dakota is released and discharged from any claims or extra compensation in any manner arising out of Project No._____.

NDDOT Representative	Date	Contractor Representative	Date
Printed Name		Printed Name	

NOTICE OF INTENT TO FILE A CLAIM SETTLEMENT AGREEMENT

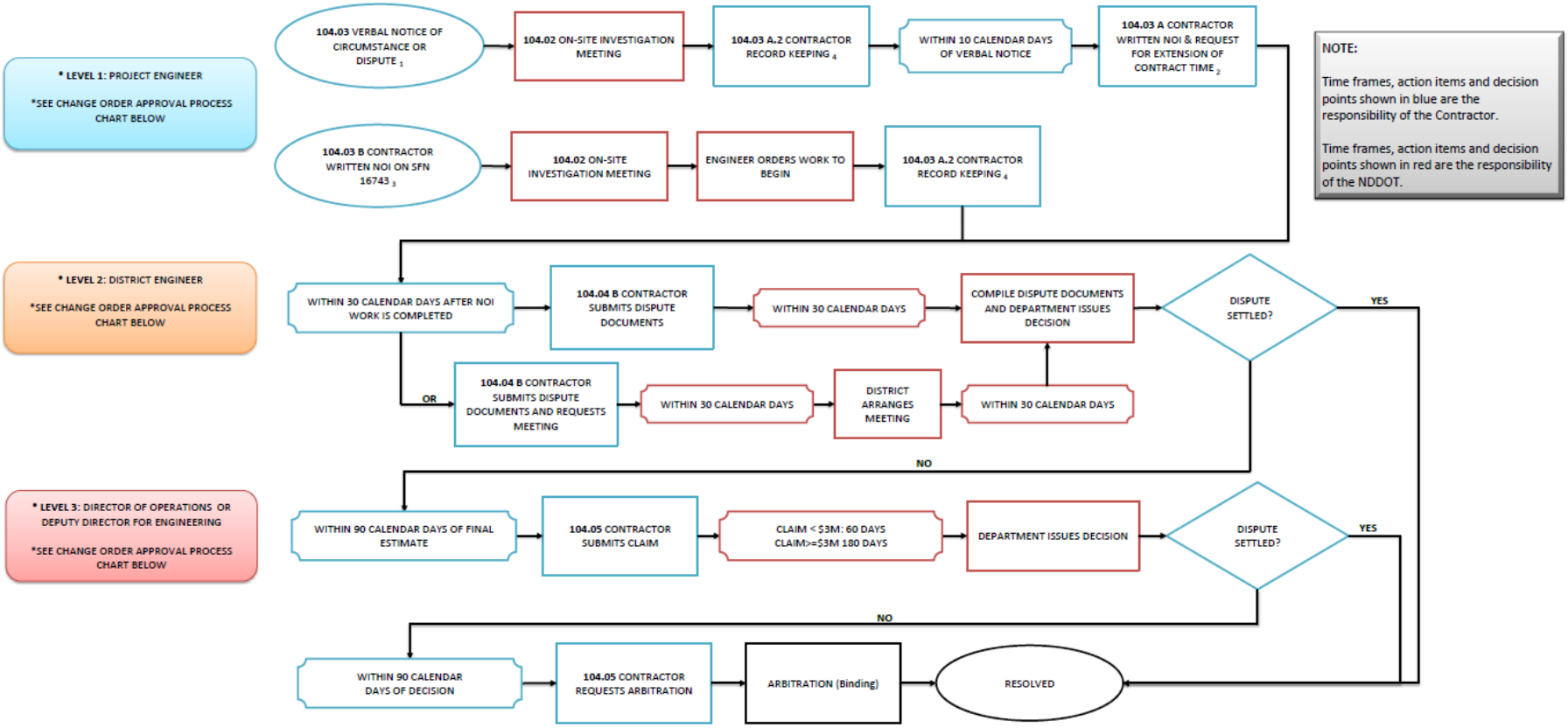
The Contractor,_____, by the signing of this agreement certifies that:

Upon execution of Change Order Number_____ reducing the total of days of liquidated damages to days, any and all claims in any manner arising out of, or pertaining to, Project No._____, including but not limited to the Notice of the Intent to file a claim and time extension in regards to;

have been satisfied in full and the State of North Dakota is released and discharged from any claims or extra compensation in any manner arising out of Project No._____.

_____	_____	_____	_____
NDDOT Representative	Date	Contractor Representative	Date
_____		_____	
Printed Name		Printed Name	

APPENDIX 6 NDDOT CONSTRUCTION CLAIMS FLOWCHART



AUTHORITY TO SETTLE NOI OR CLAIM

Approval Level	Amount	Time
Project Engineer:	<= $10,000	Up to 5 WD
District Engineer:	> $10,000, but <= $50,000	>5 to 15 WD
Director of Operations or Deptuy Director of Engineering:	> $50,000, but < $500,000	>15 WD
Director:	>= $500,000	

1 Begin here for work already started and is continuing.
2 For NOI involving time, Contractor must submit SFN 14461 Contractor Request for Extension of Contract Time along with SFN 16743 Notice of Intention to File a Claim
3 Begin here for work that hasn't yet started.
4 Contractor must reconcile records with Engineer in accordance with 109.03 E and 109.03 F.
5 Time may be extended if mutually agreed upon.