Section 5.14

FIELD RECORDS AND CONTRACTOR'S CERTIFICATIONS

5.14.1 Purpose

This procedure describes the methods of maintaining the various field records required by the Department to substantiate final estimates quantities. The methods outlined are generally applicable to any field notes, but they are particularly pertinent to those used by the Resident Office in the calculation or verification of final measure pay quantities.

The Contractor's Certification of Quantities forms are also described herein. These Certification forms are completed by the Contractor and required by the Department to document and certify the quantities of specific installed items prior to payment on a monthly estimate.

5.14.2 Authority

Sections 20.23(3)(a) and 334.048(3), Florida Statutes (F.S.)

5.14.3 References

Standard Specifications for Road and Bridge Construction

Basis of Estimates Manual (BOE)

Construction Training and Qualification Manual (CTQM)

Materials Acceptance Certification (MAC) System

National Institute of Standards and Technology (NIST) Handbook-44

5.14.4 Field Records

Field Records should be prepared assuming that the user has no familiarity with the work being recorded. ***Field Records*** are important site source records for establishing pay quantities. They may be required as evidence in any arbitration or lawsuit. All ***Field Records*** must be recorded while in the field and be submitted as part of the ***Final Estimates Documentation***. Below are the allowed types of ***Field Records***:

NOTE: Ensure that Plan Quantity Pay Items are not field measured. Only measure field changes or plan errors for Plan Quantity Pay Items.

(A) Types of Field Records

(1) Standard Bound Field Book

A Surveying/Engineering field book typically has a hard cover and is bright orange or yellow in color. Most have gridlines, tables, or graph paper, and its pages are waxed or specially coated to withstand moisture to protect its contents.

(2) Site Source Records/Forms/Electronic Output

Any supporting documentation (spreadsheet, electronic tabulation, etc.) or Department form used to substantiate final quantities.

Electronic output and reports from Global Navigation Satellite System (GNSS) rovers are also acceptable to document final measurement and quantities. GNSS output and reports must include accuracy and precision information.

(3) Form 700-050-61, Final Measurements "Miscellaneous"

This form simulates a ***Field Book*** page and is preferred over standard bound field books, since it can be maintained electronically therefore resulting in savings to the Department.

(B) General Instructions

(1) Identify the front cover of each ***Standard Field Book*** used by including the Federal Aid Project Number, Financial Project Identification Number, Contract Number, Field Book Number, State Road Number, and the general contents of the book in bold letters. On the back binding (spine) of each Field Book, show the Field Book Number and the Financial Project Identification Number. (See Attachment 5.14-1 for Sample Field Book Identification.)

(2) When the ***Final Measurements "Miscellaneous" Form*** is used, list the same project information required on the cover of the ***Standard Field Book*** at the top of each form used. It is recommended to maintain these forms electronically; therefore, it is unnecessary to bind these forms together or provide Field Book Numbers.

(3) Each ***Field Book*** must be clearly indexed with a complete list of the contents beginning on the first lined page, and numbered page one. The

following pages used to record notes must be numbered sequentially in the upper right corner of each page.

(4) The date, weather conditions, and the name(s) of the field party must be shown on the ***Field Records*** and at the beginning of each day's notes. Well documented ***Field Records*** are indispensable in the event of litigation.

(5) Corrections must be made by striking through the incorrect data and inserting the correct data. All corrections must be initialed and dated by the person making the correction.

(6) Do not cut or otherwise remove pages from any ***Field Book***. If an entire page is found in error, mark the original page as **VOID**, initial, date, and make a note referring to the page where that item of work was corrected.

(7) Keeping notes on loose-leaf or scratch pads and transferring them to field records is prohibited. Field notes must be entered directly into the field book, spreadsheet, or Department form as the site source document.

(8) ***Field Records*** must be legible, and include sufficient sketches and explanatory notes to convey the intent to a person who is not familiar with the project. Pay item numbers, original/final cross-sections, and other relevant information must be included.

(9) Good sketches are imperative when recording final measurements. The details of the sketches must be sufficient to clearly show the extent of the work as well as any exceptions.

(10) Use standard symbols and abbreviations. Keep the notes simple and avoid making ambiguous statements.

(11) Show all pertinent measurements and observations. Use a degree of accuracy consistent with operations. If there is any doubt about the need for data, record it. Review the data for accuracy and completeness **before leaving the field**.

(12) A complete summary must be made for each item at the end of its field notes. The personnel compiling the final estimate will check the summary total for each item and ensure appropriate payment. The summary and the ***Field Record*** EDMS number(s) must be properly referenced in the ***Final Estimates Documentation***.

(13) Calculations and measurements for Federal Aid participating and non-participating items must be separated. This also applies to ***Utility Work by Highway Contractor Agreements (UWHCA)*** and ***Locally Funded Agreements (LFAs)***.

(14) When more than one project (state or federal) is constructed under the same Contract, ***Field Records,*** **measurements, and** other **data** must be kept separate for each project.

(15) ***Field Records*** for projects let under separate contracts must never be recorded in the same ***Final Measurements "Miscellaneous" Form*** or ***Field Book***.

(16) All ***Field Books*** must be scanned into EDMS for submittal with the ***Final Estimates Documentation***. The original ***Field Book*** may be destroyed.

(17) When documenting any data on grid sheets, neatness and legibility give credence to the accuracy of field notes and the calculations which they support.

(18) ***Field Records*** containing alignment data must contain all the necessary information for horizontal control for new construction projects and major widening projects.

(19) ***From 700-010-60***, ***Pile Driving Record***: Individual pile record data is entered on the ***Pile Driving Record*** forms by bent or pier numbers. Data for alignment and pile driving must be entered on the ***Pile Driving Record*** forms. These are permanent records and must be retained until the structure is removed.

(20) ***From 700-050-53***, ***Final Measurements Site Source Record***: This form is used to document quantities using the Latitude and Departure method. A Technician may use as many pages as needed for individual pay items.

5.14.5 Tabulation Forms

Tabulation Forms are site source records for establishing pay quantities for certain materials.

(A) Resident Office Responsibility

The material quantities represented on the forms must be reconciled. Multiple trucks may be recorded on one form if each individual truck is identified by number and company name.

Department forms must be cross-checked with the Contractor or subcontractor's records on a regular basis (daily or weekly). Any existing differences in pay quantities must be reconciled immediately. This systematic comparison of site source records will avoid misinterpretations concerning final pay quantities.

The form totals must be summarized and cross-referenced within the *Final Estimates Documentation.*

(B) Form 700-050-54, Daily Report of Truck-Measured Material Site Source Record

Using the trucks' unique identification numbers and capacity, this form is used to record the quantity for each truck as it delivers a load of the material to the project. This form is used to record truck quantities. Typical materials paid for by volume and recorded on this form include: borrow material; stabilizing material; and cover material for prime coat, asphalt membrane interlayer, or spread footings.

All trucks must have an assigned unique number, along with the manufacturer's certification, or permanent decal, showing the truck capacity rounded to the nearest tenth of a cubic yard and placed on both sides of the truck. This includes the truck body capacity only, and any sideboards added will not be included in the certified truck body capacity provided by the contractor

When the final quantities are determined by certification/measurements of loose volume in truck bodies, the following procedures will satisfy the requirements for final pay records:

(1) The PA will request, at the ***Preconstruction Conference***, that the Contractor provide a list of trucks to be used on Department's projects, along with their assigned numbers and their certified capacities. This list must be submitted with the ***Final Estimates Documentation***.

(2) The Project Administrator (PA) will randomly check the certified capacity on a selective number of trucks for accuracy by ***using Form 700-050-54A***, ***Truck Measured Sketch (Regular Bed)*** and/or ***Form 700-050-54B***, ***Truck Measured Sketch (Irregular Shape Bed)***. This does not require the field personnel to climb into the body of the truck. When applicable, sideboard measurements will be transposed on these sheets and added to the certified capacity.

(3) The volume of borrow material entered on ***Form 700-050-54*** must reflect the struck measured volume (the dry measure having the contents leveled off and not heaped). The use of the struck-measured capacity

will apply to trucks, pans, or any other means of transport used. Documentation on loose volume bases, as measured in other hauling equipment, must be made at the point of dumping on the construction site. See ***CPAM 5.16.10.2*** for more information on borrow material

(4) A separate line on the form will be used for each truck showing:

(a) Hauling company

(b) Truck number

(c) Capacity certified

(d) Load count & time recorded

(e) Total volume for that truck that day

(f) Inspector's signature and title at the bottom of the page

(C) Form 700-050-56(A), Daily Log Sheet - Miscellaneous Tabulation Form Weight Site Source Record and 700-050-56(B), Daily Log Sheet - Miscellaneous Tabulation Form Bag Count Site Source Record

These forms are provided in the ***FDOT Excel Forms Manager*** plugin which can be installed from the Department's **Construction Downloads** webpage. These forms are used when material is paid by weight. ***Field Records*** are also kept for each truckload of material hauled each day and signed by the Inspector. This form is only used for Riprap and Sand-Cement Riprap. The Department's Engineering Quantities Program is available to verify quantities for tracking documentation and payment.

(1) Riprap: Quantities used and approved in each day's operation must be recorded on this form. In the Remarks column, include the station, offset, and structure number of the placement location.

(a) Measure in tons, in surface dry natural state, by railroad scales, truck scales, or barge displacement. See **Attachment 5.14-2** for Barge Displacement Calculation example.

(b) Provide weight certificates when weights are not measured by the Engineer as described in ***Specification 530-4.2.***

(c) Ensure concrete removed from an existing structure and subsequently used as rip rap (per plans) is paid for as Removal

of Existing Structures and not paid for again as Riprap per ***Specification 530-5.2***.

(d) For a toe wall, only include the volume of sand-cement riprap, concrete blocks, or poured-in-place concrete placed within the neat lines shown in the plans in the volume calculation of the final toe-wall quantities. See **Attachment 5.14-3** for Toe Wall Calculations example.

(2) Bulk-Weight Final Pay Records: Certified weight tickets for certain bulk weight shipments are acceptable as final payment records under the following conditions:

(a) All weighing is done on state certified scales. The ticket must indicate gross, tare, and net weight.

(b) The State of Florida will recognize any scale that has been certified by a state agency outside Florida using traceable standards. All 50 states have adopted and use the same laws as **Florida NIST Handbook-44**.

(c) Project personnel will record each truck number and time of loading, on ***Form 700-050-56***, ***Daily Log Sheet Miscellaneous Tabulation Form Site Source Record*** at the rail head site.

(d) All rail cars are visually inspected to ensure all material has been unloaded.

(e) Material remaining in cars after job completion is to be hauled by truck to state certified scales and determine gross, tare, and net weights to make appropriate deductions from the car weights.

(f) Hauling will be done in covered trucks to minimize loss of material. The single car weight is more accurate than weighing numerous trucks (use the ***Form 700-050-56***, ***Miscellaneous Tabulation*** system as outlined above).

(g) When box beam scales are used, and the net weight is given automatically, only the net weight is required to be recorded.

(3) Sand-Cement Riprap: Document the volume (in cubic yards) of sand-cement bags placed.

(a) Submit the Approved Product Listing (APL) Number information per **CPAM 5.14.9**.

(b) Calculate the total cubic yards of prepackaged Sand-Cement Bags by multiplying the bag quantity (total bags placed) by the cubic yards per bag.

(c) The volume in cubic yards satisfactorily placed and accepted within the minimum dimensions in the Plans or Standard Plans will be paid per ***Specification 530-4.1***.

(d) Submit delivery tickets showing the batch weights of sand and cement used. See **Attachment 5.14-4** for a Delivery Ticket sample.

Payment for riprap must not be made solely on the quantity delivered by truck and placed by the Contractor. No compensation will be made for material placed beyond the neat lines shown in the plans. See ***Specification 530-3.2***. For example, the quantity of riprap for an 84” diameter triple-concrete pipe is 31.1 CY, and this is the maximum quantity applicable for payment.

If the PA determines the Contractor is placing the material too thick or beyond required limits, the PA must submit written notification to the Contractor. In addition, the Inspector must include the station, offset structure, and the words "**Partial Pay**" or "**No Pay**" on the ***Form 700-050-56*** for materials which are either partially or completely placed outside the limits authorized by the PA. A sketch of the riprap structure must be submitted with authorized dimensions and volume calculations if not constructed according to Plans. This sketch must be included in the ***Field Records***. See **Attachments 5.14-5** and **5.14-6** for an example of a Riprap Sketch and Sand Cement Riprap Pay Analysis.

5.14.6 Contractor's Certification of Quantities

(A) Form 700-050-62, Contractor's Certification of Quantities - (MOT, Signs, etc.)

This form is provided in the ***FDOT Excel Forms Manager*** plugin which can be installed from the Department’s **Construction Downloads** webpage. Once generated, the form will list all the MOT pay items within a contract. The Contractor will document and certify all 102 pay items. This form is not required on Lump Sum and Design Build contracts.

The form must be signed by both the Contractor’s Authorized Agent and the Worksite Traffic Supervisor (WTS), then submitted monthly to the PA for payment. The intent is to

have two different individuals sign this form for checks and balances. The Contractor's Authorized Agent must be an employee of the Prime, and the WTS must be Advanced MOT Certified per ***Specification Section 105-8.3, Specification Section 102-3.2***, and the ***Construction Training and Qualification Manual (CTQM), Chapter 10***. If the same individual signs for both the Contractor's Authorized Agent and the WTS, the PA must verify this individual holds both positions and is Advanced MOT Certified. The PA will submit these certifications with the ***Final Estimates Documentation***.

NOTE 1: Cones are paid for under the MOT LS pay item 102-1.

NOTE 2: MOT LS pay item 102-1 is NOT adjusted by construction for overruns/underruns using the secondary units of days, see Item 102-1 of the **Basis of Estimates Manual Pay Item Database**.

NOTE 3: MOT Certifications approved and paid on a previous progress estimate should not be retracted and revised if errors are discovered. Corrections may be made on the current/next progress estimate with a note in the remarks column explaining the correction. If backup documentation is available, submit it with the certification as well.

(B) Form 700-050-67/68, MOT – Traffic Stripes and Markings Daily Worksheet and Contractor's Monthly Certifications of Quantities

These forms are to be used by the Contractor for all the Traffic Striping and Marking pay items. These forms include the following pay items: 701, 705, 706, 709, 710, 711, 713, and 102 striping items. The 102 striping pay items are also listed in this worksheet to eliminate the need for filling out two different forms. This form is not used on Lump Sum and Design-Build contracts. See ***CPAM Section 6.2*** for more information.

Class B Raised Pavement Markers (RPMs) (706-1 pay item) used for temporary or permanent application are now final measure. Class D RPMs are certified and paid under pay item 102-78. Object Markers and Delineators (705 pay items) are now final measure.

For projects let July 2021, and after, pay items 701, 709, 711, and 713 will be paid as plan quantity, regardless of their inclusion on the Contractor's Certification. Ensure the Contractor is aware of the appropriate basis of payment for striping items.

The Contractor is responsible for the measurements/counts for these items, and payment for the certified quantities must be approved by the Engineer. If the Engineer disputes a quantity certified by the Contractor, the Engineer must request justification for the disputed quantity from the Contractor. The Engineer must provide detailed documentation for the unapproved quantity.

The form must be signed by both the Contractor's Authorized Agent and the Worksite Traffic Supervisor, then submitted monthly to the PA for payment. The intent is to have two different individuals sign this form for checks and balances. The Contractor's Authorized Agent must be an employee of the Prime, and the WTS must be Advanced MOT Certified per ***Specification Section 105-8.3, Specification Section 102-3.2***, and the ***Construction Training and Qualification Manual (CTQM), Chapter 10***. If the same individual signs for both the Contractor's Authorized Agent and the WTS, the PA must verify this individual holds both positions and is Advanced MOT Certified. The PA will submit these certifications with the ***Final Estimates Documentation***.

NOTE 4: For the Lump Sum Pay Item 710-90, the Contractor should reflect the quantity as a percentage (in decimal form) on the daily worksheet, to report the cumulative quantity when the monthly certified sheet is tabulated. The total quantity should be 1 Lump Sum (LS) once the Contractor completes this pay item.

NOTE 5: Payment under the Lump Sum Pay Item 710-90 will only be made when the final lift of asphalt placement is complete. All intermediate stages of asphalt placement requiring striping are paid under the appropriate pay items.

NOTE 6: The Department's representative is not required to check or record MOT Signs and Striping quantities daily. During the estimate period, randomly spot check and document these quantities. These checks can be achieved in a combined effort with the Contractor to minimize disputed quantities. The Contractor is responsible for supplying the Department with accurate documentation of quantities.

NOTE 7: For Class B RPMs (706-1 pay item), it is not intended for the Resident Offices to count individual RPMs. A visual inspection and calculation shown on a site source record using the Station-to-Station length divided by the RPM spacing will suffice.

(C) Form 700-050-70, Traffic Marking Certification (Worksheet)

This form is used for recording Initial Retroreflectivity Reading of White/Yellow Pavement Markings, Thickness, and Wet Weather in accordance with ***Florida Method FM 5-541***, per ***Specifications Section 710***. This form will also be utilized on Lump Sum and Design-Build Projects. See ***CPAM Section 6.2*** for more information.

It is the Contractor's responsibility to measure, record, and certify the Retroreflectivity on the Department's approved form and to submit it to the PA. This form is signed by both the Contractor's Authorized Agent and the Worksite Traffic Supervisor as stated in section **5.15.6(B)** above.

The Department reserves the right to test the markings after three (3) days of receipt of the ***Contractor's Certification***. Failure to allow the Department to complete this task will result in non-payment to the Contractor.

5.14.7 Fuel Adjustments

Applicable Contracts with an original Contract Time exceeding 120 calendar days, will receive price adjustments on the portion of the Current Fuel Price (CFP) that varies by more than 5% of the Base Fuel Price (BFP). The adjustment will be made on each applicable progress estimate to reflect increases or decreases in the price of fuel from those in effect for the month in which bids were received (BFP) per ***Specifications Section 9-2.1.1***. When an estimate is generated, fuel adjustments automatically calculate per the Specifications using pre-determined fuel factors for applicable pay items and the Price Index Tables.

A complete list of items eligible for fuel adjustments, according to contract letting date, can be found on the Department's Construction Web site at **Fuel and Bituminous Forms (fdot.gov)**. Fuel adjustments for this list of pay items will generate ***automatically*** in AASHTOware Project Construction (PrC) for conventional Contracts.

Fuel adjustments for the following pay items will be calculated in the ***Fuel Adjustment Report*** and will need to be entered ***manually*** into PrC as a line item adjustment.

- Clearing and grubbing
- Structural Steel
- Black base option
- Composite base option

NOTE 1: To calculate manual fuel adjustments corresponding to thickness or 105%/110% pay quantity adjustments utilize the Contractor's Lump Sum & Design Build **Fuel Adjustment Certification**. See ***CPAM 11.4*** for examples.

NOTE 2: Effective for contracts let January 2022 and forward, fuel adjustments will only be made on diesel fuel.

NOTE 3: Contracts let in April 2021 and after are not eligible to receive fuel adjustments for clearing and grubbing.

(A) Fuel Adjustment Report

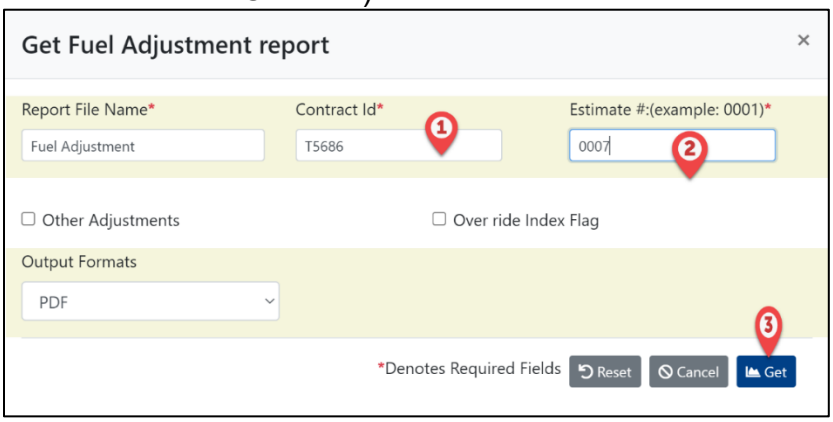
To access the *Fuel Adjustment Report*, follow the steps below:

(1) Access the **State Construction Office application**
(2) Login

(3) Select *Reports*, then select *Central Office (StateWide Reports)*
(4) Select the *Estimate* tab, then click *Fuel Adjustment*

To create a *Fuel Adjustment Report*, follow the steps below:

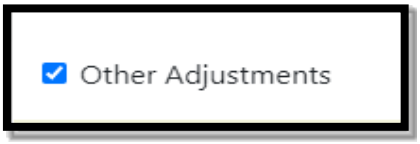
(1) Enter the Contract ID
(2) Enter the estimate number the Adjustment Report is being created for. The estimate number is a four-digit field and only one estimate can be run at a time.
(3) Click "Get" to generate the report (if there is no Black Base Option or Composite Base Option included in the Contract).



(B) Fuel Adjustment Report (Black Base or Composite Base Option)

To create a *Fuel Adjustment Report* for Black Base or Composite Base, follow the steps below:

(1) Enter the Contract ID and estimate number the Adjustment Report is being created for.
(2) Select the "*Other Adjustments*" check box.
The FIN Project ID and the Base Items fields will populate with any associated pay items to the contract.

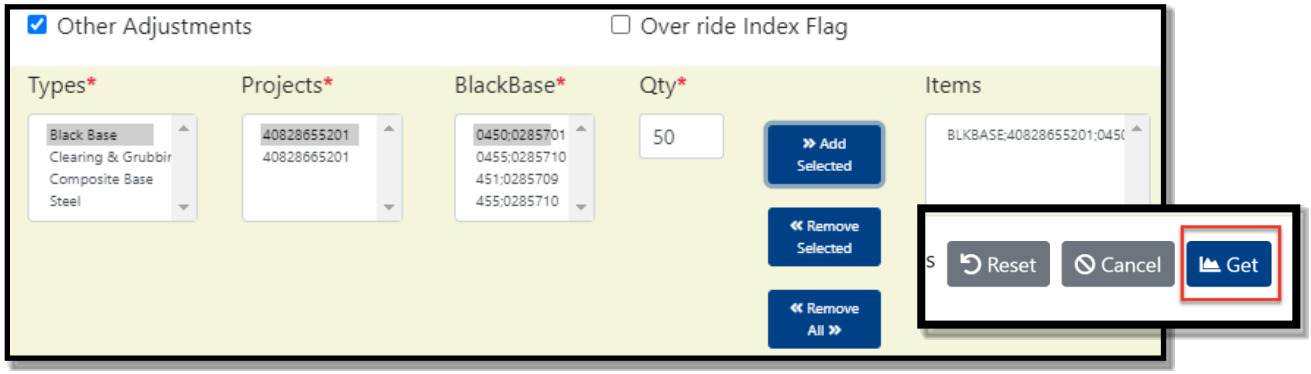


(3) Select the Optional Base Item.
(4) Select the FIN Project ID to calculate the fuel adjustment for the Optional Base quantity.
(5) Only enter the quantity of Black Base (or Composite Base) and select "Add Selected" to add the quantities to the "Items" Field.
(6) Repeat as needed, then select "Get" to generate the report.

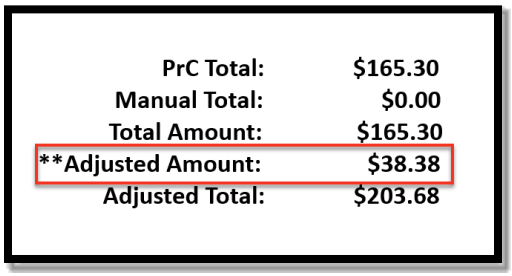
NOTE 4: If paying for a mixture of optional bases on this estimate, the Daily Work Report (DWR) quantity will be the total of Asphalt and Limerock pay areas.

Fuel Adjustment Report for Asphalt Base Example

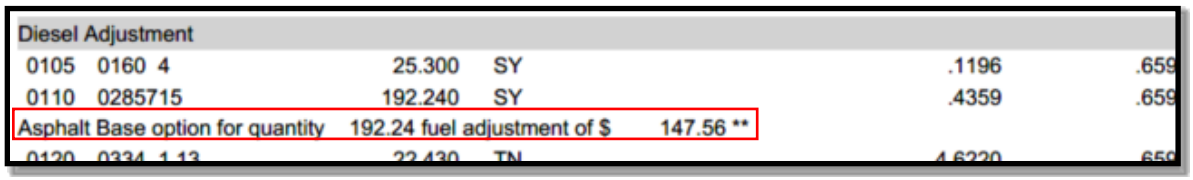
In this example, the DWR quantity is 192.24 SY, of which only 50.0 SY is Asphalt Base.



After adding the report parameters (shown above) and generating the report, the adjustment amount for diesel for the Asphalt Base will be shown. The adjustment amount generated in this report ($38.38) will need to be added to PrC as a manual line item adjustment.



However, if all the DWR quantity (192.24 SY) is Asphalt Base, enter this amount into the quantity field. This will make the adjustment on the entire DWR quantity and generate the adjustment amount ($147.56) shown below.



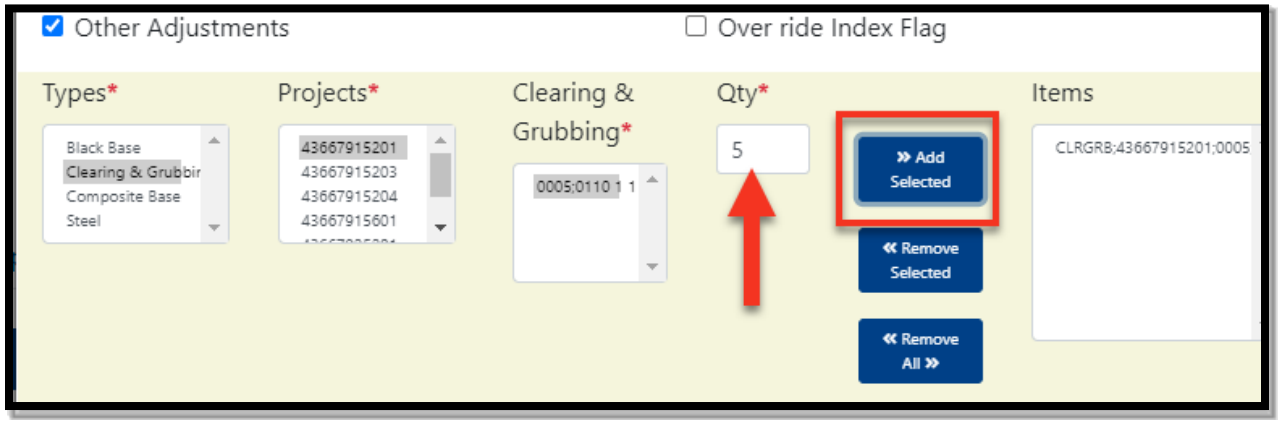
(C) Fuel Adjustment Report for Clearing and Grubbing or Steel LS Overrun

To create a *Fuel Adjustment Report* for Clearing and Grubbing or Steel LS Overrun, follow the steps below:

(1) Enter the Contract ID and estimate number for the Adjustment Report which is being created.
(2) Select the “Other Adjustments” check box.
(3) Select the adjustment type.
(4) The FIN Project ID list and pay item will automatically populate.
(5) Select the FIN Project ID to calculate the fuel adjustment.
(6) Enter the quantity of the overrun adjustment and select “Add Selected” to add the quantity to the “Items” Field.
(7) Select “Get” to generate the report.

Fuel Adjustment Report for Clearing & Grubbing or Steel LS overrun Example

In this example, the Clearing and Grubbing quantity being adjusted is 5 Acres (the acres this LS pay item is being adjusted by must be known). The overrun of Clearing and Grubbing can be found under the Diesel and Gasoline adjustment for this pay item.



Project personnel will need to make individual line item adjustments in PrC for each dollar amount associated with Clearing and Grubbing, if applicable.

Ln #	Item Code	Est Qty	Unit	Qty	Unit	Adjustment Factor	Index Difference	Adjustment Amount
Diesel Adjustment								
0005	0110 1 1	.100	LS	12.470	AC	251.4787	.4355	$136.57 **
Item 0110 1 1 Over Run		5.000 AC adjustment of $		$547.59 **				
0010	0120 1	5400.000	CY			.5512	.4355	$1,296.22 *
0015	0160 4	2483.800	SY			.4727	.4355	$511.29 *
0450	0120 6	1106.000	CY			.5172	.4355	$249.10 *

The report will automatically add the total dollar amount for all Diesel adjustments.

Example:

$136.57
+ $547.59
684.16

PrC Total:	$2,056.61
Manual Total:	$136.57
Total Amount:	$2,056.61
** Adjusted Amount:	$684.16
Adjusted Total:	$2,740.77

5.14.8 Bituminous Adjustment

Applicable contracts will receive monthly bituminous adjustments if the Contract has an original contract time of more than 365 calendar days or more than 5,000 tons of asphalt concrete. The Department will adjust the price for bituminous material, excluding cutback and emulsified asphalt, to reflect increases or decreases in the ***Asphalt Price Index (API)*** of bituminous material from that in effect during the month in which the bid was received. (See ***Specifications Section 9-2.1.2***.) The Department will determine the API for each month and post it on the Construction website.

http://www.fdot.gov/construction/fuel&bit/Fuel&Bit.shtm

Bituminous adjustments will be made only when the current API (CAPI) varies by more than 5% of the base API (BAPI) and only on the portion that exceeds 5%. The Contractor will not be given the option to accept or reject the adjustment.

It is the Contractor's responsibility to provide a ***Contractor's Certification of Quantities*** to the PA, using the Department's current approved ***Form 700-050-66***, which can be found at https://www.fdot.gov/construction/fuel-bit/fuelforms.shtm or generated from ***Form 675-030-20A, Asphalt Roadway - Daily Report of Quality Control - Automated Version (Required for use on projects let July 2015 and after)***. The form will include the tonnage placed and accepted for the asphalt items applicable to receive a bituminous adjustment during the estimate cutoff period. Adjustments will only be made for work accepted by the Department. If an adjustment is made and the work is later determined to be unacceptable, a deduction to the adjustment will be made on the next progress estimate. The asphalt items will be reported on the lead FIN Project ID to receive payment. (See Attachment 5.14-6 for a sample Contractor's Certification of Quantities.)

NOTE 1: The Department will make a Bituminous Adjustment for Polymer PG76-22 Binder on all Contracts. The Criteria for Polymer PG76-22 will be as stated above. When

a Composite Base item is specified in the Plans, a price adjustment for bituminous material will apply to the asphalt portion only per ***Specifications Section 9-2.1.2***.

(A) Resident Office Responsibility

The Resident Office (RO) personnel will ensure the appropriate fuel and bituminous adjustments are applied to each monthly progress estimate. It is the RO's responsibility to obtain bituminous certifications from the Contractor monthly and spot check the forms for quantity errors, indexes, dates, etc. to ensure the criteria in ***Specifications Section 9*** is met. Fuel and bituminous adjustments will be based on the index of the estimate period the work was completed, not the estimate period of payment. This is particularly important for adjustments made after final acceptance.

When an estimate is generated, Bituminous Adjustments must be calculated per the ***Specifications*** using the ***Asphalt Price Index*** and the PA must add a manual line-item adjustment to the estimate. ***Asphalt Price Indexes*** can be found on the Department's Construction website at: **https://www.fdot.gov/construction/fuel-bit/fuel-bit.shtm**.

The PA will ensure the running total of each item's tonnage in the ***QCRR*** for the period represented and compare it to the ***Certification of Quantities*** submitted. Any discrepancies must be resolved with the Quality Control (QC) Manager before authorizing payment on the progress estimate. If a ***Certification of Quantities*** has been determined to show tonnage that wasn't accepted on the project, the QC Manager must be notified for justification and/or correction. The Certification of Quantities must be input into EDMS for reference as ***Final Estimates Documentation*** backup.

NOTE 2: Bituminous Certifications that have been approved and paid on a previous progress estimate should not be retracted and revised if errors are discovered. Bituminous corrections must be completed on the current/next progress estimate and the correction documented on the current/next certification. For the removal and replacement asphalt adjustment process, see Example 2 above and ***CPAM 11.4.***

NOTE 3: For Fuel and Bituminous Material Adjustments on Lump Sum, Design-Build, and other Alternative Contracts, refer to ***CPAM Section 6.2***.

(B) Examples

Example 1: After final acceptance, the project personnel found that fuel adjustments for black base were not applied during the contract. The project personnel will manually calculate the fuel adjustments based on the index for each estimate period the asphalt was completed, not the fuel index for the month of the final estimate. The Lump Sum &

Design Build **Fuel Adjustment Certification** can be used to generate the adjustment amount.

Example 2: Asphalt was placed on the mainline for payment during the May estimate period, but 50 feet required removal and replacement due to a material failure. The contractor performed the removal and replacement during the July estimate period. When the bituminous adjustment corrections are made, the removal correction will be made at the May index, and the placement will be at the July index. The Lump Sum & Design Build **Asphalt & Bituminous Adjustment Certification** can be used to generate the adjustment amount.

Example 3: Asphalt was incorrectly reported in the ***QCRR*** for an estimate period, and fuel & bituminous adjustments were paid on that amount. The following month the QCRR was corrected. Fuel and bit adjustments will be corrected for the corrected amounts. Adjustments will also be calculated for the amount placed in the new estimate period. The revised fuel and bit adjustments can be calculated using the Lump Sum & Design Build **Certifications,** and the difference between the corrected adjustment and the current adjustment will be entered as a line item adjustment on the pay item.

5.14.9 Approved Products List (APL) Item Records

(A) Contractor's Responsibilities

It is the Contractor's responsibility to provide APL numbers for pay items intended for use on the project. APL numbers are provided to the PA (or designee) for record and verification. This includes items incorporated in the project on a permanent basis and all MOT items.

On projects with a Non-Standard Job Guide Schedule (JGS), the Contractor must assign all MAC Materials for APL Tracking samples under the Materials tab in the Materials Acceptance and Certification system (MAC) for project personnel to enter the APL Tracking Samples. In addition, the Contractor must continue to include the APL Spec Categories used on the project under the APL Specs tab.

(B) Resident Office Responsibilities

The PA (or designee) will verify the APL information for specification conformance before the item is placed on the project. Verification is done by reviewing any comments, statuses, or limitations on the product in the Product Acceptance and Tracking History (PATH) application. The PA (or designee) will enter APL Tracking samples into MAC prior to payment on the monthly estimate. For instructions, see the **MAC website**.

PAs must confirm that all APL method of acceptance requirements are listed on the JGS on projects with a Standard JGS in MAC. On projects with a Non-Standard JGS, the PA will ensure the Contractor has included all MAC Materials under the Materials tab and APL Spec Categories used on the project under the APL Specs tab. Material Certification (MC) Reviewers will review the JGS and confirm that product(s) are entered in MAC for each MAC Material as part of the MC Review in MAC and coordinate with the PA if there are any questions about the use of APL products.

5.14.10 Cutoff Period

All ***Certifications of Quantities*** worksheets submitted by the Contractor must represent the amount of material placed on the project and accepted by the Department for the estimate cutoff period. The estimate cutoff dates are provided on the State Construction Office website at: **http://www.fdot.gov/construction/CONSTADM/EstimatesCutOff.shtm**

The Contractor must request payment by submitting a ***Certification of Quantities*** no later than twelve o'clock noon on Monday following the estimate cut-off or as directed by the PA. This is in accordance with ***Specifications***. The Contractor's submitted quantities must be approved by the PA. Any disputed quantities must be reconciled as soon as possible.

All digital signatures must be verified prior to acceptance by the Department. The RO must ensure each digital signature is from an approved digital signature authority and valid at the time the document was signed. The RO must also verify the document was not altered after the digital signature was applied.

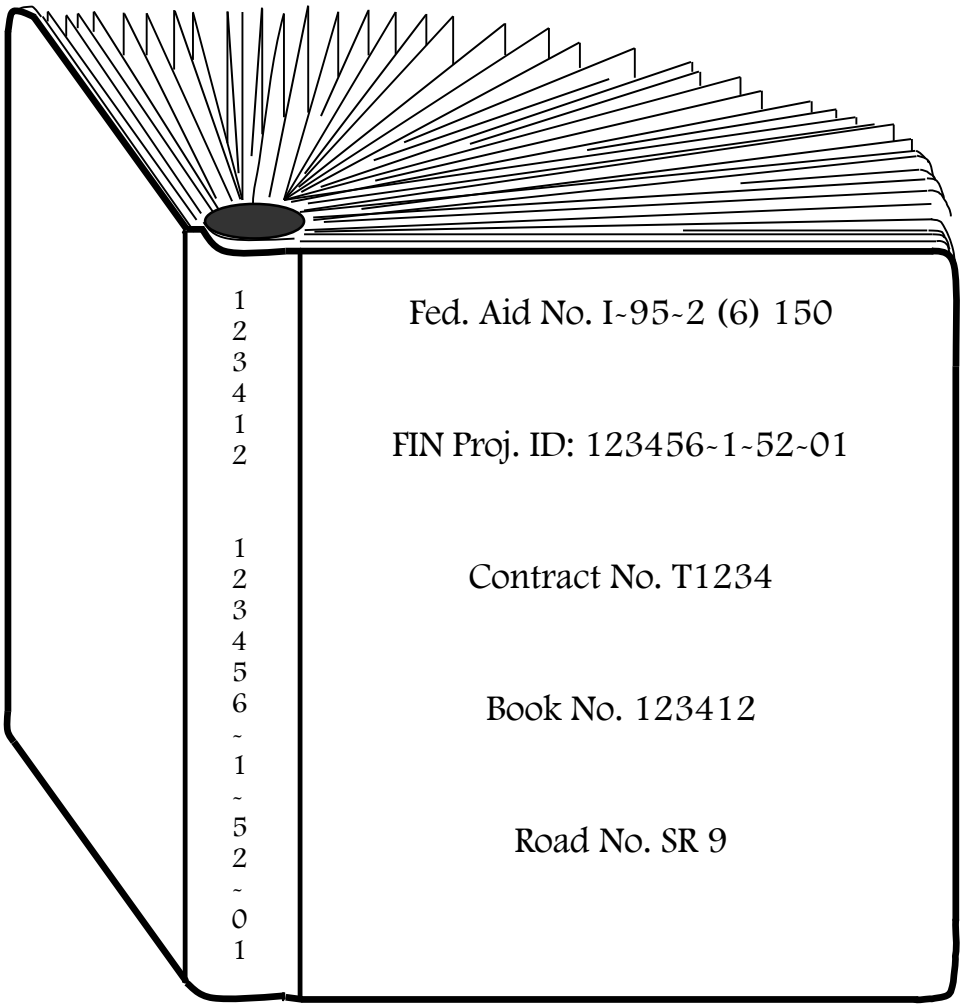
5.14.11 Forms

The forms referenced in this manual can be found on the Department's website: **https://pdl.fdot.gov/**. Official forms provided by the Department will be used without alteration or modification.

5.14.12 Attachments

Attachment 5.14-1 .....Field Book Identification
Attachment 5.14-2 .....Barge Displacement Calculation
Attachment 5.14-3 .....Toe Wall Calculation
Attachment 5.14-4 .....Delivery Ticket
Attachment 5.14-5 .....Sketch of Riprap Structure
Attachment 5.14-6 .....Contractor's Certification of Quantities

Attachment 5.14-1
FIELD BOOK IDENTIFICATION



Attachment 5.14-2
BARGE DISPLACEMENT CALCULATION

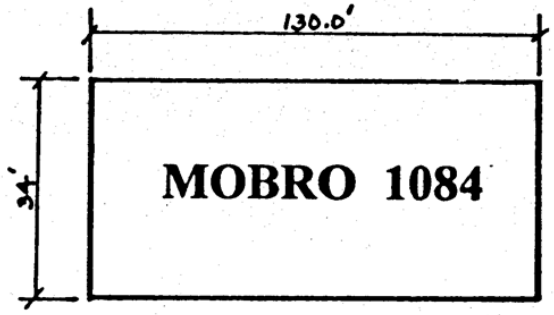
BARGE WEIGHT CALCULATION EXAMPLE

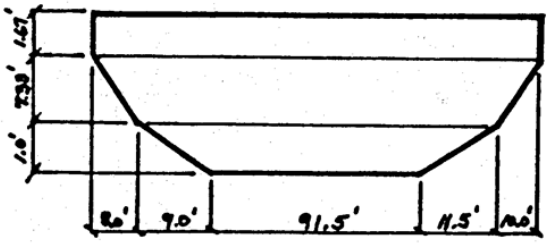
Barge Material Delivery

IN Dec. 11, 1989

OUT Dec. 12, 1989

MATERIAL 300 - 5000 rubble rip rap





LOADED DRAFT	
Port Forward	6.6
Port Aft	6.7
Starboard Forward	7.0
Starboard Aft	7.1
Average	6.85

LIGHT DRAFT	
Port Forward	2.3
Port Aft	2.6
Starboard Forward	2.3
Starboard Aft	2.5
Average	2.43

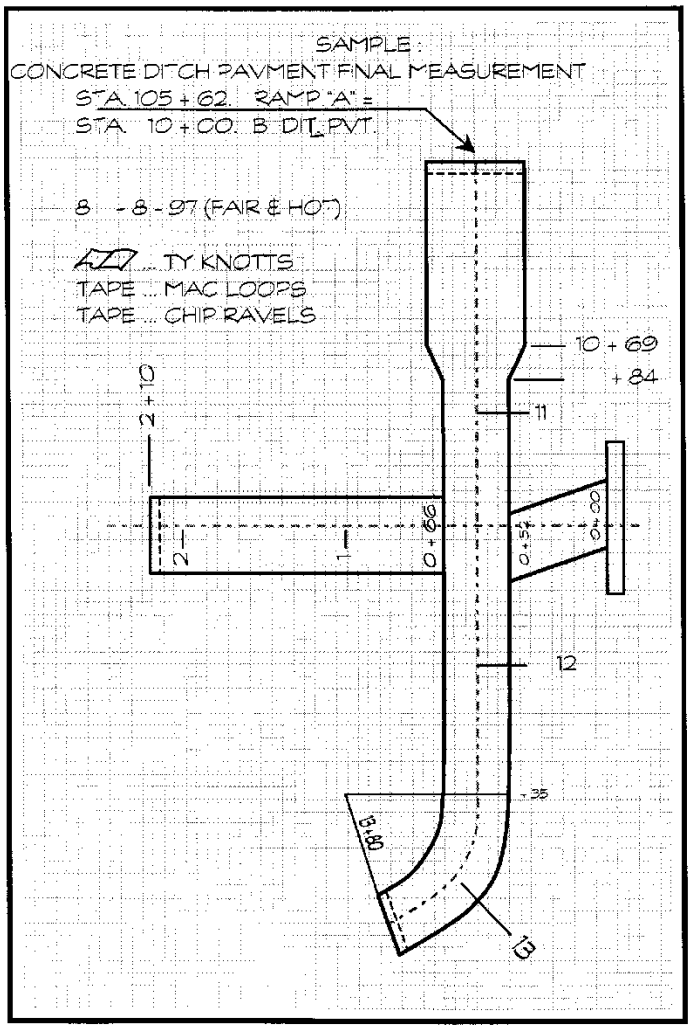
Water line length at average loaded draft	126.36
Water line length at average light draft	115.51
Net average water line length	120.94
Shape correction	-0-
Average water line length	120.94

Bilge Correction	-0-
Average	2.43
Average Difference in Light and Loaded Draft	4.42

Tonnage Computations: = 120.94' x 34' x 4.42' x [64(lb/cf)/2000(lb/ton)] =
= 581.6 Tons

Note for unit weight of water: Sea Water = 64.0 lb/cf and Fresh Water = 62.4 lb/cf

Attachment 5.14-3
TOE WALL CALCULATION



DITCH PAVT. LT. 105 + 62

STA.	MEAS. "M"
0 + 00	39.2
- 20	39.4
+ 40	42.3
+ 52	42.2 BK
	EXCEPTION
+ 66	42.5 AH
+ 80	40.8
1 + 00	41.0
+ 50	41.0
+ 75	40.7
2 + 00	40.5
+ 10	40.3 "W" = 38.7

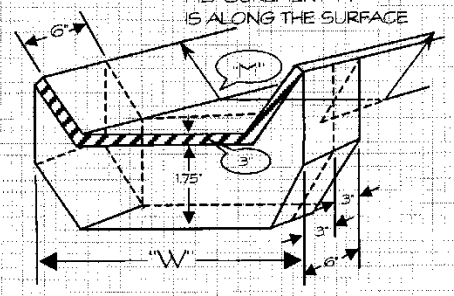
8,001.35 S.F.
3.5 * 38.7 = + 135.45 S.F.
8,136.80 S.F.

DITCH PAVT. LT. RAMP "A"

STA.	MEAS. "M"
10 + 00	20.2 "W" = 8.5
+ 50	20.0
+ 69	20.1
+ 84	16.3
11 + 00	16.1
+ 50	16.2
12 + 00	16.3
+ 35	16.9
+ 50	17.0
13 + 00	17.3
+ 50	17.2
+ 80	17.4 "W" = 16.7

6,612.4 S.F.
+ 123.2 S.F.
6,735.6 S.F.

18.5
+ 16.7
3.5 * x 35.2 = 123.2 S.F. (Toewalls)



VOLUME OF CONCRETE IN TOEWALLS ARE COMPUTED AS EQUIVALENT SQUARE FEET. IE; 6" thick + 3" increments = 2 x Height of toewall. (2 x 1.75' = 3.5" x "W") = Equivalent S. F.

Attachment 5.14-4
DELIVERY TICKET

FLORIDA MINING & MATERIALS
CONCRETE PRODUCTS
LEE DIVISION
P.O. BOX 2376, 2858 FORD STREET, FT. MYERS, FLORIDA 33902, PHONE (813)334-4521

Plant No. 03-004

Del. Ticket _____
Serial No. _____
Date: _____ 19 _____

Delivered To: _____

Address _____

F.D.O.T. Fin. Proj. ID. _____

Truck No.	DOT Class	DOT Mix NO.	Cubic Yards This Load
Time Loaded	Arrived	Discharged	Cubic Yards Total Today
Allowable Jobsite Water Addition gals./cu. yd.		Mixing Revolutions: At Plant: At Jobsite:	

FILL OUT ON FIRST DELIVERY AND ON EACH CHANGE OF AGGREGATE WEIGHTS

Cement _____ Brand Amount	Air MBVR _____ oz. Amount
Course Agg. _____ % Moisture Amount	Retarder MBL-80 _____ oz. Amount
Fine Agg. _____ % Moisture Amount	Fly Ash _____ Source _____ Amount
Batch Water (Gals.) _____ Amount	Cousr Agg. DOT Pit # _____ S.C. _____ Fine Agg. DOT Pit # _____ S.C. _____

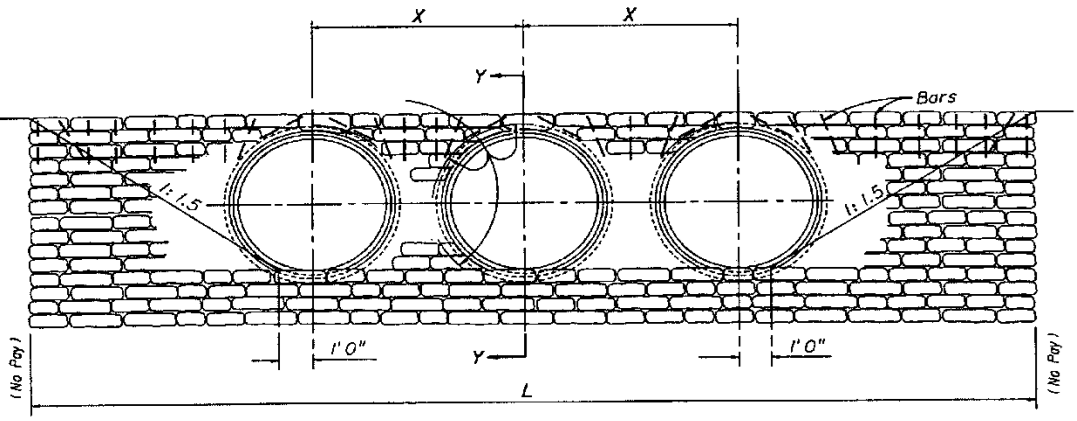
Issuance of this ticket constitutes certification to the accuracy of the above recorded information

_____
Signature of Plant Operator or Company Rep.

WATER ADDED ON JOBSITE _____ GALLONS

ADDITIONAL MIXING REVOLUTIONS _____

Attachment 5.14-5
SAMPLE SKETCH OF RIPRAP STRUCTURE



Note: Sketches must be submitted when pay is authorized outside limits as shown on the indexes. (No sketches will be required if built as per index).

Example: (1) Index No. 258 shows 31.1 cubic yards.
Delivery Tickets show 36.0 cubic yards.
We will pay _____ 31.1 cubic yards.

(2) Index No. 258 shows 31.1 cubic yards.
Delivery Tickets show 25.0 cubic yards.
We will pay _____ 25.0 cubic yards.

Attachment 5.14-6
CONTRACTOR'S CERTIFICATIONS OF QUANTITIES
(FORM 700-050-66)

Contractor's Certification of Quantities
Asphalt Mixes with Modified and Unmodified Binders
(Conventional Projects)
Certification No. 9

Financial Project ID:	654321-52-01		
Contractor:	We Got Asphalt, Inc.		
Contract Number:	X1234		
From (Mo/Day/Yr):	01/16/17	**To (Mo/Day/Yr):**	02/19/17

Asphalt Mixes with Unmodified Binders (PG 67 & Lower)

Pay Item Number:	334-1-13	**Tonnage Placed:**	341.4
Pay Item Number:		**Tonnage Placed:**	
Pay Item Number:		**Tonnage Placed:**	
Additional Gallons (ARMI*):			
Base Index Month:	May-15	**Base Asphalt Price Index:**	1.9365
Current Index Month:	Feb-17	**Current Asphalt Price Index:**	1.8230
		Asphalt Index Difference:	-0.0167

Asphalt Mixes with Modified Binders (PG 76 & Higher)

Pay Item Number:		**Tonnage Placed:**	
Pay Item Number:		**Tonnage Placed:**	
Pay Item Number:		**Tonnage Placed:**	
Base Index Month:		**Base Polymer Price Index:**	
Current Index Month:		**Current Polymer Price Index:**	
		Polymer Index Difference:	

Asphalt Material
(ASPHALT TREATED PERMEABLE BASE)

Pay Item Number:		**Tonnage Placed:**	
Base Index Month:		**Base Asphalt Price Index:**	
Current Index Month:		**Current Asphalt Price Index:**	
		Asphalt Index Difference:	

Navigation and Printing Functions

Go To Main Sheet | Go To Last Month Sheet
Save As Month Sheet | Remove Last Month Sheet

Effective January 2007 Letting
FORM: 700-050-66 (7/21/2015)

EXAMPLE OF A CONTRACTOR'S CERTIFICATION OF QUANTITIES (FORM 700-050-66) Continued

STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION

FORM 700-050-66
CONSTRUCTION
02/17

CONTRACTOR'S CERTIFICATION OF QUANTITIES
ASPHALT MIXES WITH MODIFIED AND UNMODIFIED BINDERS
(CONVENTIONAL PROJECTS)

CERTIFICATION NO. 9

FINANCIAL PROJECT ID. 654321-52-01
CONTRACTOR We Got Asphalt, Inc.
CONTRACT NO. X1234

PERIOD REPRESENTED BY CERTIFICATION:
FROM (MO/DAY/YR 01/16/17 TO (MO/DAY/YR) 02/19/17

ASPHALT MIXES WITH UNMODIFIED BINDERS (PG 67 & LOWER)

BASE PRICE INDEX 1.9365 CURRENT PRICE INDEX: 1.8230 INDEX DIFFERENCE: -0.0167

	TONNAGE	GALLONS	MONTHLY PAYMENT
PAY ITEM NUMBER 334-1-13	341.4	4,974	-$83.07
PAY ITEM NUMBER			
PAY ITEM NUMBER			
GALLONS OF ASPHALT CEMENT USED IN MIX: *		4,974	-$83.07
ADDITIONAL GALLONS (ARMI):			
TOTAL GALLONS:		4,974	
TOTAL MONTHLY PAYMENT:			-$83.07

ASPHALT MIXES WITH MODIFIED BINDERS (PG 76 & HIGHER)

BASE PRICE INDEX _____ CURRENT PRICE INDEX: _____ INDEX DIFFERENCE: _____

	TONNAGE	GALLONS	MONTHLY PAYMENT
PAY ITEM NUMBER			
PAY ITEM NUMBER			
PAY ITEM NUMBER			
TOTAL GALLONS OF POLYMER USED IN MIX: *			
TOTAL MONTHLY PAYMENT:			

ASPHALT MATERIAL (ASPHALT TREATED PERMEABLE BASE)

BASE PRICE INDEX _____ CURRENT PRICE INDEX: _____ INDEX DIFFERENCE: _____

	TONNAGE	GALLONS	MONTHLY PAYMENT
PAY ITEM NUMBER			
TOTAL MONTHLY PAYMENT:			

I certify that, based on my personal knowledge and well-founded belief following my own reasonable investigation, the tons and gallons (metric tons and liters) represented by this Certification are true and correct.

X _____
Contractor's Authorized Agent

_____
Name of Company and email address