

ROADWAY AGGREGATES AND ROADBED MODIFICATION ITEMS

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OVERVIEW

Roadway Aggregate and Roadbed Modification (Mod) Items have different documentation requirements for each unit of measure (UOM). All Roadway Aggregate and Roadbed Mod Item quantities must be measured and calculated. Some minor modifications may be required to show the unusual circumstances that may occur with different items, but the general format should be followed. If there are items which cannot be documented according to the following examples, contact the Construction Admin Services Section for assistance.

When material samples are taken for the Materials Division labs, refer to the [AWP Sample Records](#) document for details.

Note: Forms change periodically, go to the [NDOT Website Construction Forms](#) area for the latest version.

Screenings (paid by the ton) shall be documented in the same manner as described and illustrated in this chapter. The type and grade of bituminous material used with the screening will be specified in the contract's Special Provisions and documentation will depend on the type specified.

INSPECTOR'S RESPONSIBILITIES – AGGREGATE AND ROADBED MOD ITEMS

- Use the Agreement Estimate report as a reference to ensure that items and quantities are paid in the correct category (AEB).
- Use the Typical Sections (the 2 sheet) and the Summary of Base and Surface Quantities (the 3 sheet) in the contract plans, for location and quantity information.
- Review the following for accuracy:
 - Special Provisions
 - Supplemental Notices
 - Change Orders

Note: When any changes are made to an item, reference the Change Order number in the DWR item posting remarks.

AGGREGATE TON ITEMS

- Retrieve all computerized load tickets and review for the following information:
 - Date
 - Material source
 - Material type
 - Gross, tare, net weights, and tons
 - Cumulative total tons
 - Time
 - Contract Number
- Turn in ALL computerized load tickets into the Office Engineer.

Note: In situations where computerized load tickets are not available (i.e., cold milled material for base) use volume calculations converted to weights. Refer to Appendix B, Calculation Formulas, in this Manual for details.

RECORD OF DELIVERY – AGGREGATE BASE SPREADSHEET

The Record of Delivery – Aggregate Base spreadsheet (Figure 9-1) is used to track the daily material delivered to the job site. The spreadsheet is used as part of the source documents for payment.

1. Open the Record of Delivery – Aggregate Base spreadsheet received in an email from the Office Engineer. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Record the following information from the computerized load tickets into the appropriate day tab in the spreadsheet:
 - **Date**
 - **Contract Number**
 - **Item Number**
 - **Description:** Item
 - **Tickets Taken By:** Initials or name
 - **Ticket Number**
 - **Truck Number**
 - **Time:** Every fifth load (Optional)
 - **Station:** Beginning and Ending Station for the day and every change in Line Designations. Each station listed must have a line designation and LT, RT, or CL.
 - **Tons Delivered:** From computerized load ticket, indicate any waste at the end of the day.
 - **Remarks:** Explanations of changes in Line Designations and waste. State the total tons per AEB (category)*.
3. Save and email the completed spreadsheet to the Office Engineer.

Record of Delivery -- Aggregate Base, Sand Blotter, Shoulder Material

Date: (mm/dd/yyyy) Total Tons:

Contract No.:

Item No.:

Description:

Tickets taken by: (initials) Optimum Moisture: %

Checked against scale sheet: (initials) Actual Moisture: %

Ticket No.	Truck No.	Time	Station	Tons Delivered	Cumulative Tons	Remarks
0234	6	6:20 AM	"A" 1+00 RT	26.90	26.90	
0235	43			25.22	52.12	
0236	47			27.71	79.83	
0237	50			26.85	106.68	
0238	6	7:10 AM	"A" 9+75 RT	27.00	133.68	AEB #1 = 133.68
0239	43		"X" 10+15 RT	27.29	160.97	Change in line designation
0240	47			26.25	187.22	
0241	50	8:05 AM	"X" 18+15 RT	25.55	212.77	AEB #2 = 79.09
						0 Waste

Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 | Day 11 | Day 12 | Day 13

***NOTE:** The inspector must indicate the ton amount to be paid to each AEB (category) in the Remarks.

In this example, there was a total of 212.77 tons delivered to the job with 133.68* of those tons being paid in AEB #1. Therefore, 212.77 - 33.68 = 79.09* tons that remain to be paid in AEB #2.

Figure 9-1: Record of Delivery – Aggregate Base (Inspector’s Entries)

DAILY WORK REPORT (DWR) – MOBILE INSPECTOR (AGGREGATE TON ITEMS)

1. Create a DWR in Mobile Inspector daily to document the activity being monitored. Refer to the [Mobile Inspector User Guide](#) for details on using this application.
 - Report Details – daily activities
 - Item Postings – N/A for ton Items. These posting will be completed by the Office Engineer.

- Equipment – type, number and hours used
 - Personnel – title and hours
2. Record the following required information in the Report Details window (Figure 9-2):
- **Date**
 - **Weather**
 - **Low Temp and High Temp**
 - **Attachments:** (N/A) Send ALL photos via email.
 - **Remarks:** Select the appropriate Remark Type. Verify with the Resident Engineer on what information is required.

Report Details

Date:	<input type="text" value="Tue, 11/19/2019"/>
Weather:	<input type="text" value="10"/>
Low Temp:	<input type="text" value="22"/>
High Temp:	<input type="text" value="38"/>
Rainfall Amt:	<input type="text"/>

Attachments:

Remarks:

Contractor placed Type 1B Aggregate from "A" 1+00 to "A" 9+75 RT. (AEB#1) and "X" 10+15 to "X" 18+15 RT. (AEB#2) Type 1B Aggregate Base - Repair cattle guard from "X" 75+90 to "X" 97+54 RT. Due to bad soil, extra excavation had to be done which resulted in the need for more Type 1B than the plans called for.

3689 remaining

Figure 9-2: DWR Report Detail Window

3. Record the following required information in the New Equipment window (Figure 9-3 and Figure 9-4):
- **Contractor:** Actual contractor performing the work (include subs).
 - **Type:** Select from the Equipment list
 - **Used:** How many of each type.
 - **Hours Used:** Total hours in use.
 - **Comments:** Details of the type of equipment (e.g., diesel, HP, model, make). Include equipment attachment information if applicable.

New Equipment	
Contractor:	LAS VEGAS PAVING C... ▾
Type:	LOADER / BACKHOE /... ▾
Used:	<input type="text" value="1"/>
On Site:	<input type="text"/>
Hours Used:	<input type="text" value="8"/>
Hours Idle:	<input type="text"/>
Comments:	<div style="border: 1px solid black; padding: 5px;"> Bobcat 256C, Skid Steer, Diesel, 82HP, 1350lbs with an Auger Loader, attachment, 15C w/12" bit </div>
506 remaining	
<input type="checkbox"/> <input checked="" type="checkbox"/>	

Figure 9-3: DWR Equipment Entry

Add Equipment
Contractor: LAS VEGAS PAVING CORPORATION Type: LOADER / BACKHOE / WHEEL LOADER / SKID STEER Used: 1 Hours Used: 8.000 Comments: Bobcat 256C, Skid Steer, Diesel, 82HP, 1350lbs with an Auger Loader, attachment, 15C w/12" bit
<input type="checkbox"/> <input type="checkbox"/>

Figure 9-4: DWR Equipment List

4. Record the following required information in the New Personnel window (Figure 9-5 and Figure 9-6):
- **Contractor:** Actual contractor performing the work (include subs).
 - **Type:** Details of personnel type (e.g., foreman, laborer, truck driver).
 - **Number:** How many of each title.
 - **Hours:** Total hours worked.

New Personnel

Contractor: LAS VEGAS PAVING C... ▾

Personnel: LABORER FOREMAN ▾

Employee: N/A

Decision Class: Select ▾

Number: 1

Total Hours: 8

Comments:

Foreman - Cody Bellinger

3975 remaining

Figure 9-5: DWR Personnel Entry

Add Personnel	
Contractor: LAS VEGAS PAVING CORPORATION Description: LABORER Number: 3 Total Hours: 8.000	<input type="checkbox"/> <input type="checkbox"/>
Contractor: LAS VEGAS PAVING CORPORATION Description: OPERATING ENGINEER Number: 2 Total Hours: 8.000	<input type="checkbox"/> <input type="checkbox"/>
Contractor: LAS VEGAS PAVING CORPORATION Description: LABORER FOREMAN Number: 1 Total Hours: 8.000 Comments: Foreman - Cody Bellinger	<input type="checkbox"/> <input type="checkbox"/>

Figure 9-6: DWR Personnel List

5. Complete a final review of the DWR, lock the report, and Sync Data.

Note: When the Sync Data process has completed, the information is uploaded into an AWP DWR, where it is reviewed and Approved for processing progress payments.

DAILY WORK REPORT (DWR) – AWP EDITS

The Officer Engineer reviews each Inspector's DWRs for required entries and accuracy. If edits are needed on a DWR, the Inspector who created it may be required to log into the AWP program on a computer (not the iPad) and complete the edits. Refer to Chapter 5, Daily Work Reports, Section, Editing a Mobile Inspector DWR, in the [AWP User Guide With Materials](#) for details.

AGGREGATE CUYD ITEMS

- Turn in ALL roadway aggregate item calculation sheets to the Office Engineer.

DAILY WORK REPORT (DWR) – MOBILE INSPECTOR (AGGREGATE CUYD ITEMS)

- Create a DWR in Mobile Inspector daily to document the activity being monitored. Refer to the [Mobile Inspector User Guide](#) for details on using this application.

Note: Refer to Steps 1 - 4 in the Daily Work Report (DWR) – Mobile Inspector (Aggregate Ton Items) Section for details on completing the Report Details, Equipment and Personnel for the aggregate CUYD item(s).

- Record the following required information in the Item Postings window:
 - Item:** Select the appropriate Project/Catg., if item is in more than one Project/Catg. – Refer to the AEB report.
 - Contractor:** ALWAYS the Prime Contractor (Subs are not allowed).
 - Qty:** Based on plan, measurements and calculations
 - Material Set:** Select appropriate value (if applicable)
 - Location:** Line Designation
 - Station From/To:** Refer to Contract plans.
 - Offset Type:** Enter the LT, RT, or CL.
 - Offset Dist.** Enter if known.
 - Comments:** Must show calculations when appropriate, refer to Calculation Sheet when appropriate (refer to Appendix B, Calculation Formulas, in this Manual for a Calculation Sheet example), other information relevant to item posting, and explanations when Attention Flag is checked.
 - Attention Flag:** Use to bring attention to Resident Engineer and Office Engineer for overruns and plan errors. Must enter Attention Comments.

Refer to Figure 9-7 for an example of an Inspector's roadway aggregate CUYD item posting.

New Item Posting	
Item:	TYPE 1 CLASS B AGGREGATE...
Contractor:	SIERRA NEVADA CONSTRUC...
Qty:	438.81 CUYD
Authorized:	715.000 CUYD
Total Posted:	0.000 CUYD
Location:	"X"
Station From:	75 + 90
Offset Type:	RT.
Offset Dist:	
Station To:	97 + 54
Offset Type:	RT.
Offset Dist:	
Measured:	
Comments:	(2164 x 7.3 x .75) / 27 = 438.81 cuyd.
	3957 remaining
Attention:	<input checked="" type="checkbox"/>
Attention Comments:	Over plan quantity by 38.81 cuyd. in this location due to field conditions.
	178 remaining

NOTES for Roadway Aggregate CUYD (Figure 9-7):

- Payment for CUYD items shall be based on plan quantity or field measured and calculations if different than plan.
- Calculations for CUYD
= L x W x D ÷ 27
- Location: Enter the Line Designation
- Station From/To: Refer to Contract plans
- Offset Type: Enter the LT, RT, or CL.
- Offset Dist: Enter if known
- Sig. Fig. = .01

Figure 9-7: DWR Item Posting – Roadway Aggregate CUYD

- Complete a final review of the DWR, lock the report, and Sync Data.

Note: When a Mobile Inspector DWR is completed, locked and Synd Data is completed, the information is uploaded into an AWP DWR, where it is reviewed and Approved for processing progress payments.

DAILY WORK REPORT (DWR) – AWP EDITS

The Officer Engineer reviews each Inspector's DWRs for required entries and accuracy. If edits are needed on a DWR, the Inspector who created it may be required to log into the AWP program on a computer (not the iPad) and complete the edits. Refer to Chapter 5, Daily Work Reports, Section, Editing a Mobile Inspector DWR, in the [AWP User Guide With Materials](#) for details.

ROADBED MODIFICATION TON ITEMS

- Collect a Bill of Lading (B/L) for each delivery of Portland Cement.
 - Record the contract ID in the upper right-hand corner.
 - Check and initial all weight calculations.
 - Turn into the Office Engineer each day.
- Collect a Material Certification for each delivery of Portland Cement.
 - Record the contract ID in the upper right-hand corner.
 - Turn into the Office Engineer each day.

RECORD OF DELIVERY AND PAYMENT – PORTLAND CEMENT, LIME (COLD RECYCLE) SPREADSHEET

The Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet (Figure 9-8) is used to track the Bill of Ladings (B/Ls) for daily material delivered to the job site. The spreadsheet is used as part of the source documents for payment.

- Open the Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet received in an email from the Office Engineer. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
- Record the following:
 - **Contract Number**
 - **Item Number**
 - **Description** : Item
 - **Plan Qty.**: (tons)
 - **Inspector**: Initials or name
 - **Date**
 - **Truck No.**
 - **Trailer No.**
 - **Bill of Lading No.**
 - **Tons Delivered**
 - **Tons Waste**
 - **Tons Left in Storage**: What is left at the end of the day

Note: The amounts in Tons Left in Storage will automatically be added to the next day's Tons Used value. If there are any Tons Left in Storage at the end of the contract, they are considered waste and will be subtracted from the total Tons Used.

- **AEB No.:** AWP category
- **Remarks:** leave blank for Office Engineer comments for payment.

- Save the spreadsheet and email to the Office Engineer.

Record of Delivery & Payment -- Portland Cement, Lime (Cold Recycle)										
Contract No.:		3585			Total Tons Delivered:		149.87			
Item No.:		3050220								
Item Description:		Portland Cement								
Plan Qty. (tons):		800.00			Total Tons Used:		147.87			
Inspector	Date	Truck No.	Trailer No.	Bill of Lading No.	Tons Delivered	Tons Wasted	Tons Left in Storage	Tons Used & Paid	AEB No.	Remarks
M. Muncy	09/10/2016	122	122A	10101	26.10		3.00	23.10	01	
M. Muncy	09/12/2016	110	110A	10102	25.89			28.89	01	
M. Muncy	09/13/2016	113	113A	10104	25.10			25.10	01	
Gavin Lux	09/15/2016	111	111A	10201	24.00			24.00	03	
Chris Taylor	09/29/2016	112	112A	10242	23.98	2.00		21.98	03	
Chris Taylor	09/30/2016	124	124A	10250	24.80			24.80	03	

Figure 9-8: Record of Delivery and Payment - Portland Cement (Inspector's Entries)

DAILY WORK REPORT (DWR) – MOBILE INSPECTOR (ROADBED MOD TON ITEMS)

- Create a DWR in Mobile Inspector daily to document the activity being monitored. Refer to the [Mobile Inspector User Guide](#) for details on using this application.

Note: Refer to Steps 1 - 5 in the Daily Work Report (DWR) – Mobile Inspector (Aggregate Ton Items) Section for details on completing the Report Details, Equipment and Personnel for the roadbed mod ton item(s). The Office Engineer will complete the item postings for ton items.

- Complete a final review of the DWR, lock the report, and Sync Data.

Note: When the Sync Data process has completed, the information is uploaded into an AWP DWR, where it is reviewed and Approved for processing progress payments.

DAILY WORK REPORT (DWR) – AWP EDITS

The Officer Engineer reviews each Inspector's DWRs for required entries and accuracy. If edits are needed on a DWR, the Inspector who created it may be required to log into the AWP program on a computer (not the iPad) and complete the edits. Refer to Chapter 5, Daily Work Reports, Section, Editing a Mobile Inspector DWR, in the [AWP User Guide With Materials](#) for details.

ROADBED MOD SQYD AND MILE ITEMS

DAILY WORK REPORT (DWR) – MOBILE INSPECTOR (ROADBED MOD SQYD & MILE ITEMS)

- Create a DWR in Mobile Inspector daily to document the activity being monitored. Refer to the [Mobile Inspector User Guide](#) for details on using this application.

Note: Refer to Steps 1 - 4 in the Daily Work Report (DWR) – Mobile Inspector (Aggregate Ton Items) Section for details on completing the Report Details, Equipment and Personnel for the roadbed mod SQYD and MILE item(s).

- Record the following required information in the Item Postings window:

- **Item:** Select the appropriate Project/Catg. if item is in more than one Project/Catg. – Refer to the AEB report.
- **Contractor:** ALWAYS the Prime Contractor (Subs are not allowed).
- **Qty:** Based on plan, measurements and calculations
- **Material Set:** Select appropriate value (if applicable)
- **Location:** Line Designation
- **Station From/To:** Refer to Contract plans.
- **Offset Type:** Enter the LT, RT, or CL.
- **Offset Dist.:** Enter if known.
- **Comments:** Must show calculations when appropriate, refer to Calculation Sheet when appropriate (refer to Appendix B, Calculation Formulas, in this Manual for a Calculation Sheet example), other information relevant to item posting, and explanations when Attention Flag is checked.
- **Attention Flag:** Use to bring attention to Resident Engineer and Office Engineer for overruns and plan errors. Must enter Attention Comments.

Refer to Figure 9-9 and Figure 9-10 for examples of an Inspector's roadbed mod SQYD and MILE item postings.

New Item Posting

Item:	PROCESSING FOR... ▾
Contractor:	SIERRA NEVADA C... ▾
Qty:	7466.70 SQYD
Authorized:	12,543.000 SQYD
Total Posted:	0.000 SQYD
Location:	"RW"
Station From:	452 + 00
Offset Type:	RT
Offset Dist:	
Station To:	500 + 00
Offset Type:	RT
Offset Dist:	
Measured:	
Comments:	4800 X 14 / 9 = 7466.70 SQYD

3971 remaining

NOTES for Roadbed Mod SQYD (Figure 9-9):

- Payment for SQYD items will be based on field measurements and calculations.
- Calculation for SQYD = L x W ÷ 9
- Location: Enter the Line Designation
- Station From/To: Refer to Contract plans
- Offset Type: Enter the LT, RT, or CL.
- Offset Dist: Enter if known
- Sig. Fig. = .01

Figure 9-9: DWR Item Posting – Roadbed Mod SQYD

New Item Posting	
Item:	PULVERIZE EXISTI...
Contractor:	SIERRA NEVADA C...
Qty:	.83 MILE
Authorized:	350.000 MILE
Total Posted:	0.000 MILE
Location:	"CW"
Station From:	451 + 00
Offset Type:	RT
Offset Dist:	
Station To:	495 + 00
Offset Type:	RT
Offset Dist:	
Measured:	<input type="checkbox"/>
Comments:	4400 / 5280 = .83
	3982 remaining

NOTES for Roadbed Mod MILE (Figure 9-10):

- Payment for MILE items will be based on field measure.
- Calculation for MILE = LFT ÷ 5280 (Always use this number)
- Location: Enter the Line Designation
- Station From/To: Refer to Contract plans
- Offset Type: Enter the LT, RT, or CL.
- Offset Dist: Enter if known
- Sig. Fig. = .01

Figure 9-10: DWR Item Posting – Roadbed Mod MILE

3. Complete a final review of the DWR, lock the report, and Sync Data.

Note: When a Mobile Inspector DWR is completed, locked and Synd Data is completed, the information is uploaded into an AWP DWR, where it is reviewed and Approved for processing progress payments.

DAILY WORK REPORT (DWR) – AWP EDITS

The Officer Engineer reviews each Inspector's DWRs for required entries and accuracy. If edits are needed on a DWR, the Inspector who created it may be required to log into the AWP program on a computer (not the iPad) and complete the edits. Refer to Chapter 5, Daily Work Reports, Section, Editing a Mobile Inspector DWR, in the [AWP User Guide With Materials](#) for details.

OFFICE ENGINEER'S RESPONSIBILITIES – AGGREGATE AND ROADBED MOD ITEMS

- Collect all computerized load tickets from the Inspector(s). Only the last ticket is required for documentation.
- Collect all Bill of Ladings. Scan and save them to the appropriate Contract Files\Contract\08 Scale Weights\8.# BL directory. In the case of Portland Cement the delivery ticket is a combination of the Material Certification and the Bill of Lading. Scan a copy to the appropriate Contract Files\Contract\08 Scale Weights\8.# BL directory.
- Collect all Material Certifications. Scan a copy of the Bill of Lading and the Material Certification and save them to the appropriate Contract Files\Materials\03 Cert & Test Reports\3.# directory. In the case of Portland Cement the delivery ticket is a combination of the Material Certification and the Bill of Lading. Scan a copy to the appropriate Contract Files\Materials\03 Cert & Test Reports\3.# directory. Each Material

Certification must have the contract ID, bid item and represented quantity entered. Hand-written entries are acceptable for the contract ID, bid item and quantity.

- Name the scanned certificate file(s) with the contract ID, Material Code Name and description, load number (if applicable) - CERT (e.g., 03904 M3020130 Type 1 Class B Aggregate Base (ton) Load 1 - 25 - CERT.pdf). The Material Code Name and description is found in the NDOT Power BI, AWP Reports, Certification Tracking report.
- Create an AWP Materials Cert Sample Record for each Material Certification received. Refer to the [AWP Cert Sample Record Creation](#) document and Chapter 24, Progress Payments, in this Manual for details.
- Save photos in the appropriate Contract Files\Contract\03 Multimedia\3.# Photos directory.
- Review item calculation sheets for accuracy and save electronically in the appropriate Contract Files\Contract\07 Estimates\7.# Calc Sheets directory using this naming convention: DWR YYYY-MM-DD Inspectors Initials, (e.g. DWR 2016-03-19 KMM).
- Distribute executed copies of Change Orders to Inspectors.

AGGREGATE TON ITEMS

RECORD OF DELIVERY – AGGREGATE BASE SPREADSHEET

The Record of Delivery – Aggregate Base spreadsheet (Figure 9-11) is used to track the daily material delivered to the job site. The completed daily spreadsheets are used as the source documents for payment.

1. Email the Record of Delivery – Aggregate Base spreadsheet to the Inspector daily. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Save the updated Record of Delivery – Aggregate Base spreadsheet, received in an email from the Inspector, to the appropriate Contract Files\Contract\08 Scale Weights\8.# directory.
3. Verify and update the spreadsheet in the appropriate day tab:
 - Entries match the information on the computerized load tickets.
 - Beginning and ending stations with line designations and LT, RT, or CL.
 - Totals posted to each AEB (category) add up to the total delivered for the day.
 - A time is listed every fifth entry. (Optional)
 - Waste was recorded.
 - The Remarks are appropriate and clear.
 - If the Total Tons box on the spreadsheet does not match the total tons on the final computerized load ticket enter a line through the total tons on the final ticket and record the number from the Total Tons box.
 - Record the Optimum Moisture (located on the Compaction Report Form – No. 040-069) and Actual Moisture (located on the Field Material Sieve Worksheet – Form No. 040-013) for the day.
 - Enter initials in the 'Checked against scale sheet.' box.
 - Show the calculations for moisture deductions, if applicable, in the Remarks.
4. Indicate the Dry Aggregate Pay Totals for each AEB (category). These totals will be entered in an DWR item posting in AWP.
5. Save the completed the spreadsheet to the appropriate Contract Files\Contract\08 Scale Weights\8.# directory.

Record of Delivery -- Aggregate Base, Sand Blotter, Shoulder Material						
Date:	11/12/2015	(mm/dd/yyyy)	Total Tons	212.77		
Contract No.:	3585					
Item No.:	302 0130					
Description:	Type 1B Agg Base					
Tickets taken by:	TH	(initials)	Optimum Moisture:	5.2	%	
Checked against scale sheet:	BLF	(initials)	Actual Moisture:	6.4	%	

Ticket No.	Truck No.	Time	Station	Tons Delivered	Cumulative Tons	Remarks
0234	6	6:20 AM	"A" 1+00 RT	26.90	26.90	
0235	43			25.22	52.12	
0236	47			27.71	79.83	
0237	50			26.85	106.68	
0238	6	7:10 AM	"A" 9+75 RT	27.00	133.68	AEB #1 = 133.68
0239	43		"X" 10+15 RT	27.29	160.97	Change in line designation
0240	47			26.25	187.22	
0241	50	8:05 AM	"X" 18+15 RT	25.55	212.77	AEB #2 = 79.09
						0 Waste
						133.68 / [1 + (6.4% / 100)] *
						133.68 / 1.0640 = 125.64 Dry Agg
						125.64 x [1 + ((5.2% + 1%) / 100)]
						125.64 x 1.0620 = 133.43 Pay Tons AEB #1
						79.09 / [1 + (6.4% / 100)] *
						79.09 / 1.0640 = 74.33 Dry Agg
						74.33 x [1 + ((5.2% + 1%) / 100)]
						74.33 x 1.0620 = 78.94 Pay Tons AEB #2

Figure 9-11: Record of Delivery – Aggregate Base (Office Engineer Entries)

NOTES for Moisture Deduction calculations:

- Moisture tests are required per Section 304, *Portland Cement Treated Base*, of the Standard Specifications.
- If moisture was not weighed, a note explaining why will be placed on the last computerized load ticket and in the remarks on the Record of Delivery – Aggregate Base spreadsheet relaying this information.
- Moisture deduction calculations are only completed when the Actual Moisture content of aggregate base is plus one percent of the Optimum Moisture.
- If a Compaction Report is not run daily, use a Compaction Report that was completed before the date being processed.
- Moisture deductions apply to both Type A and Type B Aggregate.
- Calculations for moisture deductions are shown in Figure 9-11. The following formulas shall be used to arrive at the daily pay total of aggregate base material when a deduction is necessary.
 - Total aggregate = Dry Agg / [1 + (actual moisture% / 100)]
 - Dry Agg x [1 + ((optimum % + 1 %) / 100)] = Dry Aggregate Pay Total
 - For instance, the daily total for AEB (category) #1 is 133.68 tons. Actual Moisture is 6.4% and optimum moisture is 5.2%. The calculated quantity for payment would be: 125.64 x 1.062 = 133.43 Dry Aggregate Pay Total AEB (category) #1.
- If calculations are needed and there are more than one AEB (category) numbers involved, make sure to adjust for the water in each AEB# as shown in Figure 9-11.
- If a calculation for water deduction is needed, the total tons WILL NOT match the total tons delivered.

LAST COMPUTERIZED LOAD TICKET OF THE DAY

The last computerized load ticket is part of the official contract documentation record for payment.

1. Copy the following information from the appropriate day tab in the Record of Delivery – Aggregate Base spreadsheet (Figure 9-11) onto the last computerized load ticket of the day:
 - Beginning and Ending stations, making sure all stations are represented and match the spreadsheet.
 - Indicate line designation left, right or center line.
 - AEB (category) number and total tonnage.
 - Cumulative total is circled.
 - Waste, even if it is zero, is circled in red.
2. Have the Resident Engineer sign the ticket.
3. Scan and save the ticket into the appropriate Contract Files\Contract\08 Scale Weights\8.# directory.

DAILY WORK REPORT (DWR) – AWP (AGGREGATE TON ITEMS)

When a Mobile Inspector DWR is locked by an Inspector, the information is uploaded into an AWP DWR. Refer to Chapter 5, Daily Work Reports, in the [AWP User Guide With Materials](#) for details.

INSPECTOR'S DWR

- Verify the following:
 - Information in the Remarks
 - Information in the Contractor On Site tab
 - Information in the Contractor Equipment tab
 - Information in the Contractor Personnel tab
- Approve the DWR if everything is correct.
- If there are edits required, the Office Engineer may complete them and add a DWR Note with their name, date, and details of the correction. The DWR can then be Approved.
- If there are edits which need to be completed by the Inspector who created the DWR, the Inspector will be required to log into the AWP program on a computer (not the iPad) to complete the edits.
- Review the edited DWR and Approve.

ITEM POSTING DWR

1. Create a DWR in AWP to document the item postings for aggregate ton items:
 - In the General tab, enter a Comment related to the item posting.
 - Enter an item posting (Figure 9-12) for the aggregate ton item based on the Dry Aggregate Pay Totals for each AEB (category) from the appropriate day tab(s) in the Record of Delivery – Aggregate Base spreadsheet.

Note: These DWRs can be completed daily, weekly or bi-weekly within the two-week pay period.

Item ID	Item Description	Current Quan...	Project	Category
3020130	TYPE 1 CLASS B AGGREGATE BASE	30,480.000	UG136C1C	01
Supplemental Description	Attention	Tot Qty Posted	Tot Qty Posted to Dt	Records
No		133.430	266.860	1

Item Posting Num	Contractor	Station/Location	Quantity Posted
1	PUR0003792 - SIERRA NEVADA CONSTRUC1	Sta "A" 10 + 00 to Sta "A" 9 + 75	133.430

Contractor ▼

SIERRA NEVADA CONSTRUCTION INC (Prime) ▼

Quantity Posted ▼

133.430

Station From ▼

"A" 10

Station From Plus ▼

00

Offset Type ▼

RT.

Offset Distance ▼

Station To ▼

"A" 9

Station To Plus ▼

75

Offset Type ▼

RT.

Offset Distance ▼

Attention

0

Units

TON

Agency Views

None

Location ▼

Measured ▼

Material Set ▼

Base ▼

Plan Sheet Page Number ▼

Comments ▼

See Record of Delivery on 11/12/15

Figure 9-12: Office Engineer's DWR Item Posting (Agg TON)

NOTES for Aggregate TON (Figure 9-12):

- **Station From/To:** Refer to Contract plans
- **Offset Type:** Enter the LT, RT, or CL.
- **Offset Dist:** Enter if known
- **Material Set:** Select appropriate value
- **Comments:** Reference the Record of Delivery spreadsheet.
- Sig. Fig. = .01

2. Approve the DWR.

TONNAGE ITEM SPREADSHEET BY CUTOFF DATE

The Tonnage Item Spreadsheet by Cutoff Date spreadsheet (Figure 9-13) was created as a useful tool to aid in the tracking and payment of ton items. The use of this spreadsheet is not required for ton item documentation. The spreadsheet is found in the NDOT Website [Construction Forms](#) area. Refer to the [Tonnage Items Spreadsheet by Cutoff Date Instructions](#) for details on using this spreadsheet.

1. Open the Tonnage Item Spreadsheet by Cutoff Date spreadsheet.
2. Complete the spreadsheet information for the two-week period prior to the cutoff date.
3. Save the spreadsheet to the appropriate Contract Files\Contract\07 - Estimates directory.

CONTRACT NO:		
BID ITEM NO:		
PLAN QTY:		
Accum Daily Total Placed/Paid - CATG #	0	0.00
Accum Daily Total Placed/Paid - CATG #	0	0.00
Accum Daily Total Placed/Paid - CATG #	0	0.00
Accum Total PAID ALL CATG's =		0.00
Accum Daily Total WASTE ALL CATG's =		0.00
Accum Daily Total DELIVERED ALL CATG's =		0.00

CUTOFF DATE	CATG #	CATG #	CATG #	Daily Total Waste (all catg)	DAILY TOTAL PLACED/PAID	ACCUM. TOTAL PLACED/PAID	PMT #	DAILY TOTAL DELIVERED	MIX DESIGN #	COMMENTS
	TOTAL PLACED/PAID	TOTAL PLACED/PAID	TOTAL PLACED/PAID							
#####					0.00	0.00		0.00		
#####					0.00	0.00		0.00		
#####					0.00	0.00		0.00		
#####					0.00	0.00		0.00		
#####					0.00	0.00		0.00		
#####					0.00	0.00		0.00		

Figure 9-13: Tonnage Item Spreadsheet by Cutoff Date Spreadsheet

AGGREGATE CUYD ITEMS

DAILY WORK REPORT (DWR) – AWP (AGGREGATE CUYD ITEMS)

When a Mobile Inspector DWR is locked by an Inspector, the information is uploaded into an AWP DWR. Refer to Chapter 5, Daily Work Reports, in the [AWP User Guide With Materials](#) for details.

- Verify the following:
 - Information in the Remarks
 - Information in the Contractor On Site tab
 - Information in the Contractor Equipment tab
 - Information in the Contractor Personnel tab
 - Items are paid correctly according to the contract documents (e.g., plans, supplemental notices, Change Orders).
 - Item quantities
 - Quantities in postings are documented to the correct Significant Figure (.01)
 - Material Set is correct.
 - Stations and Line Designations in the Locations
 - Calculations are correct.
 - Comments reference calculation sheets, if applicable.

Note: Length does not always equal the difference between the beginning and ending station. Sometimes there is a curve or an obstacle that will affect the distance. Always check with the Inspector before assuming the calculations are incorrect.

- Approve the DWR if everything is correct.
- If there are edits required, the Office Engineer may complete them and add a DWR Note with their name, date, and details of the correction. The DWR can then be Approved.
- If there are edits which need to be completed by the Inspector who created the DWR, the Inspector will be required to log into the AWP program on a computer (not the iPad) to complete the edits.
- Review the edited DWR and Approve.

ROADBED MOD TON ITEM

RECORD OF DELIVERY AND PAYMENT – PORTLAND CEMENT, LIME (COLD RECYCLE) SPREADSHEET

The Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet (Figure 9-14) is used to track the Bill of Ladings (B/Ls) for daily material delivered to the job site. The spreadsheet is used as part of the source documents for payment.

1. Email the Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet to the Inspector daily. Refer to the [How to Manage Load Sheets](#) document located on SharePoint under Construction Administrative Services Documents, Manuals and Guides, EDOC for details on maintaining the spreadsheet.
2. Save the updated Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet, received in an email from the Inspector, to the appropriate Contract Files\Contract\08 Scale Weights\8.# directory.
3. Verify the following:
 - Entries match the information on the Bill of Ladings (B/Ls).
 - Plan Qty. (tons)
 - Waste and storage was recorded.
 - Correct AEB (category)
4. Enter the total Tons Used for each AEB (category) and the payment number in the Remarks section.
5. Save the completed the Record of Delivery and Payment – Portland Cement, Lime (Cold Recycle) spreadsheet, to the appropriate Contract Files\Contract\08 Daily Scale Weights\8.# directory.

Record of Delivery & Payment -- Portland Cement, Lime (Cold Recycle)										
Contract No.:	3585			Total Tons Delivered:	149.87					
Item No.:	3050220									
Item Description:	Portland Cement									
Plan Qty. (tons):	800.00			Total Tons Used:	147.87					
Inspector	Date	Truck No.	Trailer No.	Bill of Lading No.	Tons Delivered	Tons Wasted	Tons Left in Storage	Tons Used & Paid	AEB No.	Remarks
M. Muncy	09/10/2016	122	122A	10101	26.10		3.00	23.10	01	
M. Muncy	09/12/2016	110	110A	10102	25.89			28.89	01	
M. Muncy	09/13/2016	113	113A	10104	25.10			25.10	01	AEB # 1=77.09, AEB # 3=24.00
Gavin Lux	09/15/2016	111	111A	10201	24.00			24.00	03	PMT. #6
Chris Taylor	09/29/2016	112	112A	10242	23.98	2.00		21.98	03	
Chris Taylor	09/30/2016	124	124A	10250	24.80			24.80	03	AEB # 3=46.78 PMT. #6

Figure 9-14: Record of Delivery & Payment – Portland Cement (Office Engineer's Entries)

DAILY WORK REPORT (DWR) – AWP (PORTLAND CEMENT TON ITEMS)

When a Mobile Inspector DWR is locked by an Inspector, the information is uploaded into an AWP DWR. Refer to Chapter 5, Daily Work Reports, in the [AWP User Guide With Materials](#) for details.

INSPECTOR'S DWR

- Verify the following:
 - Information in the Remarks
 - Information in the Contractor On Site tab
 - Information in the Contractor Equipment tab
 - Information in the Contractor Personnel tab
- Approve the DWR if everything is correct.
- If there are edits required, the Office Engineer may complete them and add a DWR Note with their name, date, and details of the correction. The DWR can then be Approved.
- If there are edits which need to be completed by the Inspector who created the DWR, the Inspector will be required to log into the AWP program on a computer (not the iPad) to complete the edits.
- Review the edited DWR and Approve.

ITEM POSTING DWR

1. Create a DWR in AWP to document the item postings for aggregate ton items:
 - In the General tab, enter a Comment related to the item posting.
 - Enter an item posting (Figure 9-15) for the Portland Cement item based on the Tons Used for each AEB (category) from the Record of Delivery & Payment – Portland Cement, Lime (Cold Recycle) spreadsheet.

Note: These DWRs can be completed daily, weekly or bi-weekly within the two-week pay period.

Item ID	Item Description	Current Qu...	Project	Category
3050220	PORTLAND CEMENT	350.000	90644C1C	01

Supplemental Description	Attention	Tot Qty Posted	Tot Qty Posted to Dt	Records
No		133.430	133.430	1

Item Posting Num	Contractor	Station/Location	Quantity Posted
1	T81009604 - Q&D CONSTRUCTION IN	Sta "A" 10 + 00 to Sta "A" 9 + 75	133.430

Figure 9-15: Office Engineer's DWR Item Posting (Portland Cement TON)

NOTES for Portland Cement TON (Figure 9-15):

- **Station From/To:** Refer to Contract plans
 - **Offset Type:** Enter the LT, RT, or CL.
 - **Offset Dist:** Enter if known
 - **Material Set:** Select appropriate value
 - **Comments:** Reference the Record of Delivery spreadsheet.
 - Sig. Fig. = .01
2. Approve the DWR.

