

# **LANDSCAPE AND IRRIGATION ITEMS**

This chapter contains the following sections:

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

- Turn in ALL Landscape and Irrigation Item calculation sheets to the Office Engineer.

## DAILY WORK REPORT (DWR) – MOBILE INSPECTOR

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 – item(s) and quantity(s)
  - Equipment – type, number and hours used
  - Personnel – title and hours
2. Record the following required information in the Report Details window (Figure 7-2):
  - **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.

Figure 7-2: DWR Report Detail Window

3. Record the following required information in the New 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.

NOTES for Landscape and Irrigation Item postings:

- If an each item has a specific location/station callout in the plans, then a separate posting will be done. It should NOT be grouped in a posting.
- If each items do NOT have a location/station callout but are grouped in a table or structure list, then they can be combined in one posting.
- Refer to Figure 7-3 through Figure 7-13 for examples of landscape and irrigation item postings with different UOM.

**New Item Posting**

**Item:** SITE PREPARATION

**Contractor:** Q&D CONSTRUCTION INC

**Qty:** .15 ACRE

Authorized: 50.000 ACRE

Total Posted: 0.000 ACRE

**Location:** "BW"

**Station From:** 354 + 10

**Offset Type:** RT.

**Offset Dist:**

**Station To:** 362 + 22

**Offset Type:** RT

**Offset Dist:**

**Measured:**

**Comments:**

100' X 65' / 43560 = .15

3975 remaining

**Figure 7-3: DWR Item Posting - Landscape ACRE**

NOTES for Landscape ACRE (Figure 7-3):

- Payment for ACRE item will be based on field measure and Calculations.
- Calculation for ACRE =  $L \times W \div 43560$  (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

NOTES for Landscape ACRE (Figure 7-4):

- Payment for ACRE item will be based on field measure and Calculations.
- Calculation for ACRE =  $L \times W \div 43560$  (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
- NOTE: Collect seed tag and keep in the office until Plant Establishment has been achieved.

| New Item Posting |                          |
|------------------|--------------------------|
| Item:            | SEEDING                  |
| Contractor:      | Q&D CONSTRUCTION INC     |
| Qty:             | 0.19 ACRE                |
| Authorized:      | 2.150 ACRE               |
| Total Posted:    | 0.000 ACRE               |
| Location:        | "CW"                     |
| Station From:    | 6 + 00                   |
| Offset Type:     | RT                       |
| Offset Dist:     |                          |
| Station To:      | 8 + 00                   |
| Offset Type:     | RT                       |
| Offset Dist:     |                          |
| Measured:        | <input type="checkbox"/> |
| Comments:        | 200 x 41 / 43560 = .19   |
| 3977 remaining   |                          |

Figure 7-4: DWR Item Posting - Landscape ACRE

| New Item Posting |  |
|------------------|--|
| Item:            | MULCH (WOOD CHIPS)                                 |
| Contractor:      | Q&D CONSTRUCTION INC                               |
| Qty:             | 18.12 CUYD   |
| Authorized:      | 235.000 CUYD                                       |
| Total Posted:    | 216.880 CUYD                                       |
| Location:        | "BW"   |
| Station From:    | 354 + 10   |
| Offset Type:     | LT   |
| Offset Dist:     |  |
| Station To:      | 362 + 22   |
| Offset Type:     | LT   |
| Offset Dist:     |  |
| Measured:        | <input type="checkbox"/>                           |
| Comments:        | Paid Plan qty. per plan sheet L10<br>100% Complete |
| 3951 remaining   |  |

Figure 7-5: DWR Item Posting - Landscape CUYD

## NOTES for Landscape CUYD (Figure 7-5):

- Payment for CUYD item will be based on plan quantity or field measure and calculations if different than plan.
- Calculation for CUYD if different than plan =  $L \times W \times D \div 27$ .
- 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

## NOTES for Landscape CUYD by Truck (Figure 7-6):

- Payment for CUYD delivered by a truck that isn't weighed over a scale will be based on field measure and calculations.
- State the Truck Number and Number of Loads.
- Calculation for CUYD delivered by a truck that isn't weighed over a scale =  $L \times W \times D \div 27 \times \text{the}$

**New Item Posting**

**Item:** TOP SOIL

**Contractor:** Q&D CONSTRUCTION INC

**Qty:** 72.00 CUYD  
 Authorized: 224.000 CUYD  
 Total Posted: 0.000 CUYD

**Location:** "BW"

**Station From:** 354 + 30  
**Offset Type:** RT.

**Offset Dist:** "BW"

**Station To:** 358 + 00  
**Offset Type:** RT

**Offset Dist:**

**Measured:**

**Comments:**  
 Number of loads = 8 Truck # 35  
 $9 \times 4.5 \times 6 / 27 = 9$   
 $8 \times 9 = 72.00 \text{ CUYD}$

3926 remaining

**Figure 7-6: DWR Item Posting – Landscape CUYD by Truck**

- # of loads.
- The calculations show the capacity for each truck. Multiply the number of loads by the truck capacity to get CUYD's.
- 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

**New Item Posting**

**Item:** PLANTS (GROUP A-5)

**Contractor:** Q&D CONSTRUCTION INC

**Qty:** 95.00 EACH  
 Authorized: 100.000 EACH  
 Total Posted: 0.000 EACH

**Location:** "BW"

**Station From:** 354 + 10  
**Offset Type:** RT.

**Offset Dist:** "BW"

**Station To:** 358 + 50  
**Offset Type:** RT

**Offset Dist:**

**Measured:**

**Comments:**  
 Counted

3992 remaining

**Figure 7-7: DWR Posting - Landscape EACH Combined**

- NOTES for Landscape EACH Combined (Figure 7-7)
- Payment for EACH item will be based on field count.
  - This shows an EACH item combined.
  - 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

- NOTES for Landscape GAL (Figure 7-8):
- Payment for GAL items will be based on field measurements and calculations.
  - Calculations will consist of counting the drums used or measuring the container and calculating the quantity when a full drum is not used. If measured by another device show the calculations on how gallons were derived.

| New Item Posting    |   |
|---------------------|---|
| Item:               | FERTILIZER  |
| Contractor:         | Q&D CONSTRUCTION INC  |
| Qty:                | 110.00 GAL  |
| Authorized:         | 300.000 GAL   |
| Total Posted:       | 0.000 GAL   |
| Location:           | "BW"  |
| Station From:       | 354 + 10  |
| Offset Type:        | RT.   |
| Offset Dist:        | "BW"  |
| Station To:         | 355 + 20  |
| Offset Type:        | RT  |
| Offset Dist:        |   |
| Measured:           | <input type="checkbox"/>  |
| Comments:           | 2 Drums @ 55 gal. = 110gal.<br><br>3969 remaining                     |
| Attention:          | <input checked="" type="checkbox"/>                                   |
| Attention Comments: | See email: DWR 2019-6-7 KMM for container label.<br><br>208 remaining |

Figure 7-8: DWR Item Posting - Landscape GAL

| New Item Posting |                                      |
|------------------|--------------------------------------|
| Item:            | 1/2-INCH POLYVINYL CH...             |
| Contractor:      | Q&D CONSTRUCTION INC                 |
| Qty:             | 1910.00 LFT                          |
| Authorized:      | 2,000.000 LFT                        |
| Total Posted:    | 0.000 LFT                            |
| Location:        | "BW"                                 |
| Station From:    | 354 + 10                             |
| Offset Type:     | RT.                                  |
| Offset Dist:     | "BW"                                 |
| Station To:      | 360 + 10                             |
| Offset Type:     | RT                                   |
| Offset Dist:     |                                      |
| Measured:        | <input checked="" type="checkbox"/>  |
| Comments:        | Item completed<br><br>3985 remaining |

Figure 7-9: DWR Item Posting – Landscape LFT

- A photo of a label must be taken and emailed to the Office Engineer for backup to confirm the quantity of the container. This photo is saved to the appropriate Contract Files\Contract\07 Estimates directory.
- 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
- Check the Attention Flag to notify the Office Engineer there's an email regarding this Item Posting.

## NOTES for Landscape LFT (Figure 7-9):

- Payment for LFT items will be based on field measurements.
- 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

## NOTES for Landscape LB (Figure 7-10):



**New Item Posting**

**Item:** FERTILIZER (COMMERC...  
**Contractor:** Q&D CONSTRUCTION INC  
**Qty:** 100.00 LB  
 Authorized: 200.000 LB  
 Total Posted: 0.000 LB  
**Location:** "BW"  
**Station From:** 354 + 10  
**Offset Type:** RT.  
**Offset Dist:** "BW"  
**Station To:** 359 + 50  
**Offset Type:** RT  
**Offset Dist:**  
**Measured:**  
**Comments:**  
 4 bags @ 25 lbs. ea. = 100 lbs.  
 3966 remaining  
**Attention:**   
**Attention Comments:**  
 See email: DWR 2019-3-18 KMM for label.  
 217 remaining

Figure 7-10: DWR Item Posting – Landscape LB

- Payment for POUND (LB) items will be based on plan quantity or field measurements and calculations if different than plan.
- A photo of a label must be taken and emailed to the Office Engineer for backup to confirm the quantity of the container. This photo is saved to the appropriate Contract Files\Contract\07 Estimates directory.
- 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
- Check the Attention Flag to notify the Office Engineer there's an email regarding this Item Posting.

**New Item Posting**

**Item:** ROCK WALL  
**Contractor:** Q&D CONSTRUCTION INC  
**Qty:** 4480.00 SQFT  
 Authorized: 6,543.000 SQFT  
 Total Posted: 951.100 SQFT  
**Location:** "BW"  
**Station From:** 355 + 45  
**Offset Type:** RT.  
**Offset Dist:** "BW"  
**Station To:** 358 + 65  
**Offset Type:** RT  
**Offset Dist:**  
**Measured:**  
**Comments:**  
 320L x 14W = 4480.00 SQFT  
 3974 remaining

Figure 7-11: DWR Item Posting – Landscape SQFT

- NOTES for Landscape SQFT (Figure 7-11):
- Payment for SQFT item will be based on field measure and Calculations.
  - Calculation for SQFT = L x W
  - 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

NOTES for Landscape SQFT (Figure 7-12):

| New Item Posting |   |
|------------------|---|
| Item:            | DETAIL PAINTING                             |
| Contractor:      | Q&D CONSTRUCTION INC                        |
| Qty:             | 380.00 SQFT                                 |
| Authorized:      | 6,586.350 SQFT                              |
| Total Posted:    | 0.000 SQFT                                  |
| Location:        | Str. I-1951 East Stem Wall                  |
| Station From:    | <input type="text"/> + <input type="text"/> |
| Offset Type:     | <input type="text"/>                        |
| Offset Dist:     | <input type="text"/>                        |
| Station To:      | <input type="text"/> + <input type="text"/> |
| Offset Type:     | <input type="text"/>                        |
| Offset Dist:     | <input type="text"/>                        |
| Measured:        | <input type="checkbox"/>                    |
| Comments:        | Paid plan qty. per plan sheet L607          |
| 3965 remaining   |   |

Figure 7-12: DWR Item Posting – Landscape SQFT

- Detail Painting is the ONLY SQFT item that can be paid per plan. Refer to the plan sheet where it identifies the paid qty.
- Location: Refer to Contract plans
- Sig. Fig. = .01

| New Item Posting |                                |
|------------------|--------------------------------|
| Item:            | PAINTING                       |
| Contractor:      | Q&D CONSTRUCTION INC           |
| Qty:             | 881.67 SQYD                    |
| Authorized:      | 1,000.000 SQYD                 |
| Total Posted:    | 97.700 SQYD                    |
| Location:        | "BW"                           |
| Station From:    | 354 + 90                       |
| Offset Type:     | RT                             |
| Offset Dist:     | <input type="text"/>           |
| Station To:      | 360 + 10                       |
| Offset Type:     | RT                             |
| Offset Dist:     | <input type="text"/>           |
| Measured:        | <input type="checkbox"/>       |
| Comments:        | 529 L x 15 W / 9 = 881.67 SQYD |
| 3969 remaining   |                                |

Figure 7-13: DWR Item Posting – Landscape SQYD

NOTES for Landscape SQYD (Figure 7-13):

- Payment for SQYD item will be based on field measure and Calculations.
- Calculation for SQYD =  $L \times W \div 9$
- 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

- Record the following required information in the New Equipment window (Figure 7-14 and Figure 7-15):
  - **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:** 1

**On Site:**

**Hours Used:** 8

**Hours Idle:**

**Comments:**

Bobcat 256C, Skid Steer, Diesel, 82HP, 1350lbs with an Auger Loader, attachment, 15C w/12" bit

506 remaining

✓
✗

**Figure 7-14: 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

✎
🗑

**Figure 7-15: DWR Equipment List**

5. Record the following required information in the New Personnel window (Figure 7-16 and Figure 7-17):
  - **Contractor:** Actual contractor performing the work (include subs).
  - **Type:** Select from the Personnel list.
  - **Number:** How many of each title.
  - **Total Hours:** Total hours worked.
  - **Comments:** Details of personnel type (e.g., foreman w/name, laborer, truck driver).

| 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                                    |                          |
| <input type="checkbox"/> <input type="checkbox"/> |                          |

Figure 7-16: DWR Personnel Entry

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

Figure 7-17: DWR Personnel List

- 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.

## OFFICE ENGINEER'S RESPONSIBILITIES – LANDSCAPE AND IRRIGATION ITEMS

- Collect all Material Certifications. Scan and save them 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 - CERT (e.g., 03094 M6050001 Plastic Pipe - 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 Landscape and Irrigation items general information photos in the appropriate Contract Files\Contract\ 03 Multimedia\3.# Photos directory.
- Save Landscape and Irrigation items Gallon and Pound label photos to the appropriate Contract Files\Contract\07 Estimates directory to confirm the quantity of the container.
- Review Landscape and Irrigation 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 2017-03-19 KMM).
- Distribute executed copies of Change Orders to Inspectors.

## DAILY WORK REPORT (DWR) – AWP

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.

