

# GUARDRAIL ITEMS

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## OVERVIEW

Guardrail Items have different documentation requirements for each unit of measure (UOM). All Guardrail Items must be counted or measured and calculated. Documentation examples for a few selected Guardrail Items are illustrated in this chapter. 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.

## SURVEY CREW CHIEF'S RESPONSIBILITIES – GUARDRAIL ITEMS

- When survey data is used as support for payment, any survey data output/reports from Trimble Business Center (TBC) should be formatted to accurately represent the points (data) collected and a description of what the data represents.
- Email ALL TBC survey data output/reports to the Office Engineer. Use the naming convention: Stakeout Data YYYY-MM-DD Inspectors Initials, (e.g. Stakeout Data 2017-03-19 BLF) in the email subject line.

## INSPECTOR DAILY REPORT (IDR) – FIELDMANAGER

1. Create an IDR in FieldManager daily to document the survey activity. Refer to Chapter 7, Inspector Daily Report, in the [FieldManager User Guide](#) for details.
2. Record the following required information in the General tab (Figure 17-1).
  - IDR Date
  - Inspector
  - Weather
  - Low and high temperature
  - Comments – Overview of survey activities for the day

General	Contractors	Site Times	Postings	Attachments	View
Date/Time Entered: 02/01/2017		Revised By:			
Entered By: Brett Favre		Revision Date:			
Sequence Number: 1		Revision Number:			
Generated: No		Origin: FieldManager			
IDR Date: 01/18/2017					
Inspector: BLF Brett L Favre					
Weather: cold / windy					
Low Temperature: 38 ° F 3° C					
High Temperature: 42 ° F 6° C					
Comments: "BD" 45+29.66 to "BD" 61+79.66 Install Galvanized Guardrail with Trailing End Anchor (Lt.) For Stakeout data see e-mail: stakeout data 2017-01-18 BLF					

Figure 17-1: Survey Crew Chief IDR General Tab

3. Complete a final review of the IDR and Generate it.



2. Record the following required information in the Report Details window (Figure 17-3):
  - Date
  - Weather
  - Low and high temperature
  - Attachments (N/A) – Send ALL photos via email.
  - Remarks – Verify with the Resident Engineer on what information is required.

**Figure 17-3: IDR Report Detail Window**

3. Record the following required information in the New Item Postings window:
  - Item
  - Proj/Catg – Refer to the AEB report.
  - Contractor – ALWAYS the Prime Contractor (Subs are not allowed)
  - Qty – Based on measurements, calculations, counts and/or plan
  - Location – Must show line designation, LT, RT or CL and offset if known.
  - Station From/To – Refer to Contract plans.
  - Attention Flag – Use to bring attention to Resident Engineer and Office Engineer for overruns and plan errors.
  - Remarks – 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.

**NOTES for Guardrail Item postings:**

- If there are questions on whether an EACH item can be listed separately or combined, contact the Construction Admin Services Section for assistance.
- The Design Division’s Standards and Compliance Section shall review the guardrail once it is staked and prior to the Contractor ordering the material and starting the installation. This will allow changes to be made to the guardrail if the Contract plans are incorrect for the actual field conditions. On current and future contracts, contact the Standards and Compliance Section to schedule a review.
- The Resident Engineer will contact the Maintenance and Asset Division at the completion of every contract to see if a Guardrail Inventory Data sheet is required. If the data sheet is required, it will be completed by the Resident Engineer and sent to the Safety Division, with a copy sent to the Construction Admin Services Section. If there are any questions, contact Maintenance and Asset Division for assistance.

- Per subsection 109.06, (*Measurement and Payment*) *Partial Payment*, of the Standard Specifications, partial payment may be made for guardrail when only the posts have been put in. Therefore, when the guardrail posts are installed, 50% of the guardrail quantity shall be allowed for payment. The remaining 50% will be paid when the guardrail is complete.
- After each section of guardrail has been completed the final in-place measurement will be documented.
- Refer to Figure 17-4 through Figure 17-8 for examples of guardrail item postings with different UOM.

**New Item Posting**

**Item:** TRAILING END ANCHOR

**Proj/Catg:** 60638C2C, 07, Construct Ret...

**Contractor:** LAS VEGAS PAVING CORP...

**Qty:** 2 EACH

**Location:** "BD" LT

**Station From:** 45 + 29.66

**Station To:** 61 + 79.66

**Attention Flag:**

**Remarks:**

Item complete for this installation

219 remaining

NOTES for Guardrail EACH (Figure 17-4):

- Payment for EACH items will be based on field count.
- In Location, enter the Line Designation and LT, RT, or CL.
- Sig. Fig. = 1

Figure 17-4: IDR Item Posting - Guardrail EACH

**New Item Posting**

**Item:** GALVANIZED GUARDRAIL

**Proj/Catg:** 60638C2C, 07, Construct Ret...

**Contractor:** LAS VEGAS PAVING CORP...

**Qty:** 525 LFT

**Location:** "BD" LT

**Station From:** 45 + 29.66

**Station To:** 61 + 79.66

**Attention Flag:**

**Remarks:**

Measurement = 1050 LFT  
 Paid 50% for Posts only = 525

201 remaining

NOTES for Guardrail LFT (Figure 17-5):

- Payment for LFT items will be based on field measurements.
- Pay 50% of the measured length (section) when the Posts are complete.
- In Location, enter the Line Designation and LT, RT, or CL.
- Sig. Fig. = 1

Figure 17-5: IDR Item Posting - Guardrail LFT

**New Item Posting**

Item: GALVANIZED GUARDRAIL

Proj/Catg: 60638C2C, 07, Construct Ret...

Contractor: LAS VEGAS PAVING CORP...

Qty: 525 LFT

Location: "BD" LT

Station From: 45 + 29.66

Station To: 61 + 79.66

Attention Flag:

Remarks:  
Final in place Measurement = 1050 LFT  
Paid 50% for Rail only = 525

187 remaining

Figure 17-6: IDR Item Posting - Guardrail LFT

NOTES for Guardrail LFT (Figure 17-6):

- Payment for LFT items will be based on field measurements
- Pay 50% of the measured length (section) when the Rail are complete
- After each length (section) of guardrail has been completed, the final in-place measurement shall be documented
- In Location, enter the Line Designation and LT, RT or CL.
- Sig. Fig. = 1

**New Item Posting**

Item: REMOVE AND RESET G...

Proj/Catg: 60638C2C, 05, Install New Li...

Contractor: LAS VEGAS PAVING CORP...

Qty: 300 LFT

Location: "W" LT

Station From: 370 + 50

Station To: 376 + 50

Attention Flag:

Remarks:  
Measurement = 600 LFT  
Paid 50% for removal only.

205 remaining

Figure 17-7: IDR Item Posting – Guardrail Remove and Reset LFT

NOTES for Guardrail Remove and Reset LFT (Figure 17-7):

- Payment for LFT items will be based on field measurements.
- Guardrail must be Measured before removed
- Pay 50% for removal of the measured length (section) when completed.
- In Location, enter the Line Designation and LT, RT, or CL.
- Sig. Fig. = 1

**New Item Posting**

Item: REMOVE AND RESET G...  
 Proj/Catg: 60638C2C, 05, Install New Li...  
 Contractor: LAS VEGAS PAVING CORP...  
 Qty: 300 LFT  
 Location: "W" LT  
 Station From: 370 + 50  
 Station To: 376 + 50  
 Attention Flag:   
 Remarks:  
 Measurement = 600 LFT  
 Paid 50% for reset only.

207 remaining

NOTES for Guardrail Remove and Reset LFT (Figure 17-8):

- Payment for LFT items will be based on field measurements.
- Pay 50% for reset of the measured length (section) when completed.
- In Location, enter the Line Designation and LT, RT, or CL.
- Sig. Fig. = 1

Figure 17-8: Item Posting – Guardrail Remove and Reset LFT

- Record the following required information in the New Equipment window (Figure 17-9 and Figure 17-10):
  - Contractor – Actual contractor performing the work (include subs).
  - Type – Detailed description of the equipment (e.g., diesel, HP, model, make).
  - Number – How many of each type.
  - Hours – Total hours in use.

**Note:** An attachment to an equipment's base configuration must have its own record.

**New Equipment**

Contractor: LAS VEGAS PAVI...  
 Type: Bobcat 256C Skid ...  
 Number: 1  
 Hours: 8

Figure 17-9: IDR Equipment Entry

Add Equipment	
LAS VEGAS PAVING CORPORATION	
Bobcat 256C Skid Steer, Diesel, 82HP, 2350lbs	
Number: 1.00	Hours: 8.00
<input type="checkbox"/> <input type="checkbox"/>	
LAS VEGAS PAVING CORPORATION	
Bobcat Auger Loader, Attachment, 15C w/12" bit	
Number: 1.00	Hours: 8.00
<input type="checkbox"/> <input type="checkbox"/>	

Figure 17-10: IDR Equipment List

5. Record the following required information in the New Personnel window (Figure 17-11 and Figure 17-12):
  - 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.

**Figure 17-11: IDR Personnel Entry**

Add Personnel	
LAS VEGAS PAVING CORPORATION Foreman - Donald Driver Number: 1.00      Hours: 8.00	
LAS VEGAS PAVING CORPORATION Laborer Number: 3.00      Hours: 8.00	
LAS VEGAS PAVING CORPORATION Operator Number: 2.00      Hours: 8.00	

**Figure 17-12: IDR Personnel List**

6. Complete a final review of the IDR and lock it.

**Note:** When a Mobile Inspector IDR is completed and locked the information is uploaded into a FieldManager IDR, where it is reviewed and generated for processing progress payments.

## OFFICE ENGINEER'S RESPONSIBILITIES – GUARDRAIL ITEMS

- Collect all Material Certifications. Scan and save them to the appropriate EDOC Contract Files\Material and Testing Files\Division No. 4 – Materials Division Certs and Test Reports\4.# directory. Send original certifications to the Materials Division for approval.
- Save emails containing survey stakeout data in the EDOC Contract Files\Contract Files\Division No 12 - Miscellaneous\12.8 Stakeout Data directory.
- Save Guardrail Items photos in the appropriate EDOC Contract Files\Contract Files\Division No. 3 - Multimedia Records\3.# Photographs with Descriptions directory.
- Review guardrail item calculation sheets for accuracy and save electronically in the appropriate EDOC Contract Files\Contract Files\Division No. 7 - Construction Pay Estimate and Related Data\7.# IDR Calculation Sheets directory using this naming convention: IDR YYYY-MM-DD Inspectors Initials, (e.g. IDR 2017-03-19 KMM).
- Approve materials in FieldManager when the approved material certifications are received from the Materials Division. Refer

to Chapter 6, Working with Materials, in the [FieldManager User Guide](#), for details.

- Distribute executed copies of Contract Modifications to Inspectors.

## INSPECTOR DAILY REPORT (IDR) – FIELDMANAGER

When a Mobile Inspector IDR is locked by an Inspector, the information is uploaded into a FieldManager IDR. Refer to Chapter 7, Inspector Daily Report, in the [FieldManager User Guide](#) for details.

1. Verify the following:
  - Information in Comments and Remarks
  - Information in the Contractor tab (Personnel and Equipment)
  - Items are paid correctly according to the contract documents (e.g., plans, supplemental notices, Contract Modifications).
  - Item quantities
  - Quantities in postings are documented to the correct Significant Figure.
  - Stations and Line Designations in the Locations
  - Calculations are correct.
  - Remarks 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.

2. Generate the IDR.