# HAUL & TRENCH CALCULATORS



## HAUL CALCULATOR – CALCULATE QUANTITY OF TRUCKS

- 1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
- 2. Open a cost item and select the **Detail tab**.
- 3. Right click on an equipment resource and select **Open Haul Calculator**.



- 4. On the Haul Calculator, select the Calculate quantity of ETDT required to complete haul in duration entered below radio button.
  - Calculate quantity of ETDT required to complete haul in duration entered below
    Calculate total duration of haul using quantity of ETDT entered below
- 5. Enter values for:

Quantity (Ton)	35000
Haul Distance - One Way (Mile)	10.00
Average Payload (Ton)	15.00
	2 222 22
Total Loads	2,333.33
Load Time (Minutes)	4.00
Travel Speed Full (Mile/Hour)	35.00
Dump Time (Minutes)	3.00
Travel Speed Empty (Mile/Hour)	45.00
Cycle Time (Minutes)	37.48
Work Efficiency (%)	85.00

6. Click **OK**.

### HAUL CALCULATOR – CALCULATE TOTAL DURATION

- 1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
- 2. Open a cost item and select the **Detail tab**.
- Right click on the row header and select Open Haul Calculator.



 On the Haul Calculator, select the Calculate total duration of haul using quantity of ETDT entered below radio button.

Calculate quantity of ETDT required to complete haul in duration entered below	w
Calculate total duration of haul using quantity of ETDT entered below	

5. Click OK.

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#### TRENCH CALCULATOR – TRENCH

- 1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
- 2. Create a new cost item from the bottom row of your CBS for your trench activity.
- 3. Open the cost item's record.
- 4. Right-click on the cost item to Insert Resource for the material being excavated
- 5. On the Actions tab, select **Trench Calculator**.



6. On the Trench tab, enter the trench Variables.

Trench length:	0.00	feet
Trench width (at bottom):	0.00	feet
Trench depth:	0.00	feet
Hinge elevation:	0.00	feet
Backslope:	0.00	degrees
Material swell/shrinkage factor:	0.00	(decimal)

7. Check the box for either a neat-line result or one that includes swell/shrinkage.

Total excavation volume (neat-line):	0.00	Total excavated volume (including swell/shrinkage):	0.00
Use this volume as the quantity on this cost item		Use this volume as the quantity on this cost item	

8. Click **Save Configuration to Library** and name your configuration, then click **OK**.

Save Configuration to Library

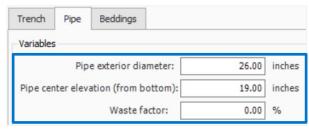
## HAUL & TRENCH CALCULATORS



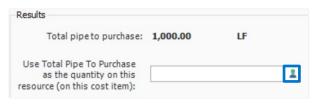
These steps assume you already created a configuration for trench.

#### TRENCH CALCULATOR – PIPE

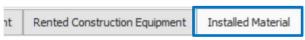
- 1. Open your pipe-related Cost Item Record.
- 2. On the Actions tab, select **Trench Calculator**.
- Select Load Configuration from Library.
  Load Configuration from Library
- 4. Select the configuration you created for trench.
- 5. Click OK.
- 6. On the Trench Calculator, select the **Pipe** tab and enter your pipe variables.



7. Click on the resource icon to pull up the Resource Rate Register.



8. From the Installed Material tab, select your pipe resource, then click OK.



Click Save Configuration to Library and save the configuration, changing the name if needed.

Save Configuration to Library

10. Click **OK** to close the Trench Calculator.

#### TRENCH CALCULATOR – BEDDINGS

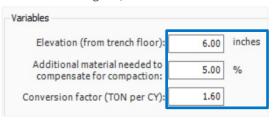
- 1. Open your cost item for backfilling trench.
- From the Cost Item Record's Actions tab, select Trench Calculator.
- 3. Select Load Configuration from Library.
- 4. Select the configuration you created for trench, then click **OK**.
- 5. On the Trench Calculator, select the **Beddings** tab.



6. On the Beddings tab, you can define up to four beddings to backfill the trench.



7. For each Bedding Lift, enter variables.



8. Under Results, select resource icon to add a bedding material resource based on either volume or weight.



9. After adding variables and bedding resources for each bedding lift, click **OK**.

