

COST SUMMARY WORK

Task description: Permit Bond Estimate Summary

Site: Gladstone Toll Mill

Permit Action: Permit Bond Estimate

Permit/Job#: M2021007

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 7/19/2021

County: Clear Creek

Filename: M007-000

User: PSH

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Remove Mill Equipment	DEMOLISH	1	8.00	\$229
002	Grade Interior Haul Road	LOADER	1	12.71	\$1,473
003	Gravel Interior Road	LOADER	1	3.17	\$368
004	Mob / Demob	MOBILIZE	1	4.22	\$3,341
005	Purchase Gravel	SITEMAINT ENANCE	1	0.00	\$2,160
<u>SUBTOTALS:</u>				28.1	\$7,571

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$153

Performance bond: 1.05

Total = \$79

Job superintendent: 14.05

Total = \$1,012

Profit: 10.00

Total = \$757

TOTAL O & P = \$2,002

CONTRACT AMOUNT (direct + O & P) = \$9,573

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0

Total = \$0

Engineering work and/or contract/bid preparation: 4.25

Total = \$407

Reclamation management and/or administration: 5.00

\$479

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$2,887

TOTAL BOND AMOUNT (direct + indirect) = \$10,500 (Rounded)

DEMOLITION WORK

Task description: Remove Mill Equipment

Site: Gladstone Toll Mill

Permit Action: Permit Bond Estimate

Permit/Job#: M2021007

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 7/19/2021

County: Clear Creek

Filename: M007-001

User: PSH

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 90.00 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Ball Mill and Shaker Tables	60' x 30'	Grove GMK3055, 141', 54.4 MT	1.00	EA	\$254.90	\$254.90

Job Hours: 8.00

Subtotal
(unadjusted): \$254.90

Total Cost
(adjusted for location): \$229.41

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Grade Interior Haul Road**Site: **Gladstone Toll Mill** Permit Action: **Permit Bond Estimate** Permit/Job#: **M2021007****PROJECT IDENTIFICATION**

Task #: **002** State: **Colorado** Abbreviation: **None**
 Date: **7/19/2021** County: **Clear Creek** Filename: **M007-002**
 User: **PSH**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **CAT 950H** Horsepower: **197**
 Attachment 1: **ROPS Cab** Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$38.59	NA
Operating Cost/Hour:	\$36.56	100
Operator Cost/Hour:	\$40.71	NA
Total Unit Cost/Hour:	\$115.86	
Total Fleet Cost/Hour:	\$115.86	

MATERIAL QUANTITIES

Initial volume: **1,613** CCY Swell factor: **1.000**
 Loose volume: **1,613** LCY

Source of estimated volume: **Division of Reclamation, Mining & Safety**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTIONLoader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): **0.500** minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material up to 1/8" diameter 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Small target 0.04	0.040	(Cat HB)
Net Cycle Time Adjustment:		0.000	minutes
Adjusted Basic Cycle Time:		0.500	minutes

Rolling Resistance – Road Conditions

Haul: **Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0**
 Return: **Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0**

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	675	0.00	3.00	3.00	0.5486	(Cat HB)
Return Route:	675	0.00	3.00	3.00	0.5128	(Cat HB)

Total Travel Time: 1.0614 minutes
 Total Cycle Time: 1.5614 minutes

Load Bucket Capacity

Rated Capacity: 4.30 LCY (heaped)
 Bucket Fill Factor: 0.925 Loose material - 1/8" to 3/8" (90 - 95%) 0.925
 Adjusted Capacity: 3.98 LCY

Job Condition Correction Factors

Site Altitude: 7680 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 152.85 LCY/Hour
 Adjusted Hourly Unit Production: 126.86 LCY/Hour
 Adjusted Hourly Fleet Production: 126.86 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 12.71 Hours
 Unit cost: \$0.913 /LCY Total job cost: \$1,473

WHEEL LOADER – LOAD AND CARRY WORKTask description: Gravel Interior RoadSite: Gladstone Toll MillPermit Action: Permit Bond EstimatePermit/Job#: M2021007**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 7/19/2021County: Clear CreekFilename: M007-003User: PSHAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 950HAttachment 1: ROPS CabHorsepower: 197Shift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$38.59	NA
Operating Cost/Hour:	\$36.56	100
Operator Cost/Hour:	\$40.71	NA
Total Unit Cost/Hour:	\$115.86	
Total Fleet Cost/Hour:	\$115.86	

MATERIAL QUANTITIESInitial volume: 403

CCY

Swell factor: 1.000Loose volume: 403

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Loader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 1/8" to 3/4" diameter -0.02	-0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Small target 0.04	0.040	(Cat HB)
Net Cycle Time Adjustment:		-0.040	minutes
Adjusted Basic Cycle Time:		0.460	minutes

Rolling Resistance – Road ConditionsHaul: Firm, smooth, rolling, dirt/lit. surfaced, watered, maintained 3.0Return: Firm, smooth, rolling, dirt/lit. surfaced, watered, maintained 3.0**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	675	0.00	3.00	3.00	0.5486	(Cat HB)
Return Route:	675	0.00	3.00	3.00	0.5128	(Cat HB)

Total Travel Time: 1.0614 minutes
 Total Cycle Time: 1.5214 minutes

Load Bucket Capacity

Rated Capacity: 4.30 LCY (heaped)
 Bucket Fill Factor: 0.925 Loose material - 1/8" to 3/8" (90 - 95%) 0.925
 Adjusted Capacity: 3.98 LCY

Job Condition Correction Factors

Site Altitude: 7680 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 156.87 LCY/Hour
 Adjusted Hourly Unit Production: 130.20 LCY/Hour
 Adjusted Hourly Fleet Production: 130.20 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 3.10 Hours
 Unit cost: \$0.890 /LCY Total job cost: \$359

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob / Demob**Site: **Gladstone Toll Mill**Permit Action: **Permit Bond Estimate**Permit/Job#: **M2021007****PROJECT IDENTIFICATION**Task #: **004**State: **Colorado**Abbreviation: **None**Date: **7/19/2021**County: **Clear Creek**Filename: **M007-004**User: **PSH**Agency or organization name: **DRMS****EQUIPMENT TRANSPORT RIG COST**Shift basis: **1 per day**Cost Data Source: **CRG Data**Truck Tractor Description: **GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)**Truck Trailer Description: **GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT
TRAILER (25T, 50T, AND 100T)****Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$21.28	\$37.94	\$47.67
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Grove GMK3055, 141', 54.4 MT	39.30	\$113.95	\$132.49	1	\$246.44	\$132.49	\$250.00
CAT 950H	20.13	\$38.59	\$68.37	1	\$106.96	\$68.37	\$250.00
Flatbed Truck, 6x4, 45K GVW	7.50	\$18.23	\$68.37	1	\$86.60	\$68.37	\$250.00
Subtotals:					\$440.00	\$269.23	\$750.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Subtotals:			\$0.00	\$0.00

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	IDAHO SPRINGS	
Total one-way travel distance:	2.00	miles
Average Travel Speed:	35.00	mph

Total Non-Roadable Mob/Demob Cost *	\$3,341.05
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$0.00
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.06	0.06
Return Time (Hours):	0.06	0.06
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	1.00	NA
Subtotals:	2.11	0.11

JOB TIME AND COST

Total job time: 4.23 Hours

Total job cost: \$3,341

SITE MAINTENANCE

Task description: **Purchase Gravel**

Site: **Gladstone Toll Mill**

Permit Action: Permit Bond Estimate

Permit/Job#: M2021007

PROJECT IDENTIFICATION

Task #: 005

State: Colorado

Abbreviation: None

Date: 7/19/2021

County: Clear Creek

Filename: M007-005

User: PSH

Agency or organization name: DRMS

UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
3/4" Gravel, 240CY @ \$9.00/CY	1.00	USER PROVIDED ITEM	240.00	1	\$9.00	\$2,160.00

Job Hours: 0.00

Total Cost: **\$2,160.00**