

COST SUMMARY WORK

Task description: Cost Summary for New 110(1)

Site: Robert Michael #1-A

Permit Action: New 110(1)

Permit/Job#: M2019050

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 12/27/2019

County: Park

Filename: M050-000

User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill and Grade	LOADER	1	1.58	\$105
002	Revegetate the Site	REVEGE	1	1.00	\$196
003	Mob/Demob	MOBILIZE	1	3.56	\$320
<u>SUBTOTALS:</u>				6.14	\$621

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$13

Performance bond: 1.05

Total = \$7

Job superintendent: 3.43

Total = \$238

Profit: 10.00

Total = \$62

TOTAL O & P = \$319

CONTRACT AMOUNT (direct + O & P) = \$940

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$0

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$47

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$366

TOTAL (direct + indirect) = \$987

TOTAL BOND AMOUNT (rounded) = \$1,000

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Backfill and Grade**Site: **Robert Michael #1-A** Permit Action: **New 110(1)** Permit/Job#: **M2019050****PROJECT IDENTIFICATION**

Task #: **001** State: **Colorado** Abbreviation: **None**
 Date: **12/27/2019** County: **Park** Filename: **M050-001**
 User: **ERR**

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

Basic Machine: **CAT 246C** Horsepower: **73**
 Attachment 1: **ROPS Cab** Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$11.27	NA
Operating Cost/Hour:	\$14.69	100
Operator Cost/Hour:	\$40.65	NA
Total Unit Cost/Hour:	\$66.61	
Total Fleet Cost/Hour:	\$66.61	

MATERIAL QUANTITIES

Initial volume: **73** CCY Swell factor: **1.330**
 Loose volume: **97** LCY

Source of estimated volume: **5'x5'x4' open hole + ~18" grading on 50'x25' site**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTIONLoader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): **0.425** minutes

Cycle Time Factors		Factor (min.)	Source
Material:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	No adjustment - factor not applicable 0.00	0.000	(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:		0.425	minutes

Rolling Resistance – Road Conditions

Haul: **Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0**
 Return: **Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0**

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	25	0.00	8.00	8.00	0.0238	(Cat HB)
Return Route:	25	0.00	8.00	8.00	0.0238	(Cat HB)

Total Travel Time: 0.0476 minutes
 Total Cycle Time: **0.4726** minutes

Load Bucket Capacity

Rated Capacity: 0.53 LCY (heaped)
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
 Adjusted Capacity: **0.58** LCY

Job Condition Correction Factors

Site Altitude: 6500 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: 74.02 LCY/Hour
 Adjusted Hourly Unit Production: 61.44 LCY/Hour
 Adjusted Hourly Fleet Production: **61.44** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: **1.58** Hours
 Unit cost: \$1.084 /LCY Total job cost: **\$105**

REVEGETATION WORKTask description: Revegetate the SiteSite: Robert Michael #1-APermit Action: New 110(1)Permit/Job#: M2019050**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 12/27/2019County: ParkFilename: M050-002User: ERRAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
Hand raking (MEANS 32 91 13.23 0250)	\$1,437.48
Total Tilling Cost/Acre	\$1,437.48

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Elk Sedge	5.80	13.31	\$2,499.80
Idaho Fescue	1.60	20.20	\$15.16
Locoweed, Showy	0.50	1.44	\$34.75
Parry's Oatgrass	4.00	8.26	\$88.00
Prairie Junegrass	0.30	15.95	\$7.80
Spike Muhly	0.46	16.90	\$4.46
Totals Seed Mix	12.66	76.06	\$2,649.97

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
Total Mulch Materials Cost/Acre				\$0.00

Application

Description	Cost /Acre
	\$
Total Mulch Application Cost/Acre	\$0.00

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	0.03	Cost /Acre:	\$4,354.67
Estimated Failure Rate:	50%	Cost /Acre*:	\$4,354.67
*Selected Replanting Work Items:	TILLING,SEEDING		
Initial Job Cost:	\$130.64		
Reseeding Job Cost:	\$65.32		
Total Job Cost:	\$196		
Job Hours:	1.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob**Site: **Robert Michael #1-A**Permit Action: New 110(1)Permit/Job#: M2019050**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 12/27/2019County: ParkFilename: M050-003User: ERRAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

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
Subtotals:					\$0.00	\$0.00	\$0.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$89.74	1	\$89.74	\$89.74
Subtotals:			\$89.74	\$89.74

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>COLORADO SPRINGS</u>	
Total one-way travel distance:	<u>107.00</u>	miles
Average Travel Speed:	<u>60.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$0.00</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$320.07</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.78</u>	<u>1.78</u>
Return Time (Hours):	<u>1.78</u>	<u>1.78</u>
Loading Time (Hours):	<u>0.15</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.15</u>	<u>NA</u>
Subtotals:	<u>3.87</u>	<u>3.57</u>

JOB TIME AND COST

Total job time:	<u>3.57</u>	Hours
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Total job cost:	<u>\$320</u>
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