

COST SUMMARY WORK

Task description: Cost Summary

Site: D Family Jewels

Permit Action: New Permit

Permit/Job#: M2019055

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 2/26/2020

County: Teller

Filename: M055-000

User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill Pit, Replace Topsoil, and Grade the Site	LOADER	1	9.85	\$656
002	Revegetate the Site	REVEGE	1	2.00	\$836
003	Mob/Demob	MOBILIZE	1	1.96	\$352
<u>SUBTOTALS:</u>				13.81	\$1,844

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$37

Performance bond: 1.05

Total = \$19

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$184

TOTAL O & P = \$241

CONTRACT AMOUNT (direct + O & P) = \$2,085

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$0

Engineering work and/or contract/bid preparation: 4.25

Total = \$89

Reclamation management and/or administration: 5.00

\$104

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$434

TOTAL (direct + indirect) = \$2,278

TOTAL BOND AMOUNT (rounded) = \$2,300

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Backfill Pit, Replace Topsoil, and Grade the Site**Site: **D Family Jewels**Permit Action: **New Permit**Permit/Job#: **M2019055****PROJECT IDENTIFICATION**Task #: **001**State: **Colorado**Abbreviation: **None**Date: **2/26/2020**County: **Teller**Filename: **M055-001**User: **ERR**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **CAT 246C**Attachment 1: **ROPS Cab**Horsepower: **73**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 QUANTITIESInitial volume: **403**

CCY

Swell factor: **1.330**Loose volume: **536**

LCY

Source of estimated volume: **Permit Application**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION****Loader 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 ConditionsHaul: **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: 1.025 Rock - Earth Mixture (100%-105%) 1.025
 Adjusted Capacity: 0.54 LCY

Job Condition Correction Factors

Site Altitude: 9150 feet

		Source
Altitude Adj:	<u>0.95</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.79</u>	multiplier

Unadjusted Hourly Unit Production: 68.98 LCY/Hour
 Adjusted Hourly Unit Production: 54.39 LCY/Hour
 Adjusted Hourly Fleet Production: 54.39 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 9.85 Hours
 Unit cost: \$1.225 /LCY Total job cost: \$656

REVEGETATION WORKTask description: Revegetate the SiteSite: D Family JewelsPermit Action: New PermitPermit/Job#: M2019055**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 2/26/2020County: TellerFilename: M055-002User: 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
Subsoiling, light {(DMG)}	\$175.31
Total Tilling Cost/Acre	\$175.31

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Mountain Brome - Bromar	3.86	6.20	\$14.67
Sandberg Bluegrass - VNS	0.74	15.71	\$6.22
Idaho Fescue	1.58	19.95	\$14.97
Prairie Junegrass	0.30	15.95	\$7.80
Yarrow, Western	0.50	30.40	\$20.90
Bluebunch Wheatgrass - Goldar	7.42	23.85	\$34.13
Totals Seed Mix	14.40	112.06	\$98.69

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
Pine, Ponderosa	25	Tubling, 10 cu. in. container { (MEANS)	\$2.00	\$0.00	\$50.00
Totals Nursery Stock Cost / Acre					\$50.00

JOB TIME AND COST

No. of Acres: 1.15
 Estimated Failure Rate: 25%
 *Selected Replanting Work Items: TILLING,SEEDING

Cost /Acre: \$591.22
 Cost /Acre*: \$541.22

Initial Job Cost: **\$679.90**
 Reseeding Job Cost: **\$155.60**
 Total Job Cost: **\$836**
 Job Hours: **2.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob**Site: **D Family Jewels**Permit Action: New PermitPermit/Job#: M2019055**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 2/26/2020County: TellerFilename: M055-003User: 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	2	\$179.48	\$179.48
Subtotals:			\$179.48	\$179.48

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>COLORADO SPRINGS</u>	
Total one-way travel distance:	<u>49.00</u>	miles
Average Travel Speed:	<u>50.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$0.00</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$351.78</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.98</u>	<u>0.98</u>
Return Time (Hours):	<u>0.98</u>	<u>0.98</u>
Loading Time (Hours):	<u>0.15</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.15</u>	<u>NA</u>
Subtotals:	<u>2.26</u>	<u>1.96</u>

JOB TIME AND COST

Total job time:	<u>1.96</u>	Hours
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Total job cost:	<u>\$352</u>
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