

COST SUMMARY WORK

Task description: Cost Summary of Reclamation Tasks

Site: London Borrow Pit

Permit Action: New 110c M2024016

Permit/Job#: M2024016

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 7/9/2024

County: Park

Filename: M016-000

User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	General site grading	DOZER	1	11.12	\$3,759
002	Replace Growth Medium (substitute topsoil and fines)	DOZER	1	3.67	\$1,233
003	Revegetate the Site	REVEGE	1	10.65	\$14,856
004	Mob/Demob of Reclamation Equipment	MOBILIZE	1	4.11	\$4,729
<u>SUBTOTALS:</u>				29.55	\$24,577

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$496

Performance bond: 1.05

Total = \$258

Job superintendent: 14.78

Total = \$1,171

Profit: 10.00

Total = \$2,458

TOTAL O & P = \$4,383

CONTRACT AMOUNT (direct + O & P) = \$28,960

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

\$1,448

CONTINGENCY: 3.00

Total = \$737

TOTAL INDIRECT COST = \$6,569

TOTAL (direct + indirect) = \$31,146

TOTAL BOND AMOUNT (rounded) = \$31,150

BULLDOZER WORKTask description: **General site grading**Site: **London Borrow Pit** Permit Action: **New 110c M2024016** Permit/Job#: **M2024016****PROJECT IDENTIFICATION**

Task #: **001** State: **Colorado** Abbreviation: **None**
 Date: **7/9/2024** County: **Park** Filename: **M016-001**
 User: **ERR**

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

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **3-shank ripper**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$14.53	NA
Ripper op. Cost/Hour:	\$1.99	25
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$338.13**
 Total Fleet Cost/Hour: **\$338.13**

MATERIAL QUANTITIES

Initial Volume: **5,728**
 Swell factor: **1.000**
 Loose volume: **5,728 LCY**

Source of estimated volume: **DRMS- 6" avg. over 7.1 acres**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **50 feet**
 Unadjusted hourly production: **1,400.0 LCY/hr**

Materials consistency description: **Compacted fill or embankment 0.9**

Average push gradient: **0 %**
 Average site altitude: **11,375 feet**

Material weight: **2,800 lbs/LCY**Weight description: **Granite - Broken****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3680

Adjusted unit production: 515.20 LCY/hr

Adjusted fleet production: **515.2** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.656/LCY

Total job time: **11.12** Hours

Total job cost: **\$3,759**

BULLDOZER WORKTask description: Replace Growth Medium (substitute topsoil and fines)Site: London Borrow Pit Permit Action: New 110c M2024016 Permit/Job#: M2024016**PROJECT IDENTIFICATION**

Task #:	<u>002</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>7/9/2024</u>	County:	<u>Park</u>	Filename:	<u>M016-002</u>
User:	<u>ERR</u>				

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

Basic Machine:	<u>Cat D8T - 8SU</u>
Horsepower:	<u>310</u>
Blade Type:	<u>Semi-Universal</u>
Attachment:	<u>3-shank ripper</u>
Shift Basis:	<u>1 per day</u>
Data Source:	<u>(CRG)</u>

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$14.53</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour:	<u>\$336.15</u>
Total Fleet Cost/Hour:	<u>\$336.15</u>

MATERIAL QUANTITIES

Initial Volume:	<u>1,700</u>
Swell factor:	<u>1.230</u>
Loose volume:	<u>2,091 LCY</u>

Source of estimated volume:	<u>Application</u>
Source of estimated swell factor:	<u>Cat Handbook</u>

HOURLY PRODUCTION

Average push distance:	<u>100 feet</u>
Unadjusted hourly production:	<u>852.6 LCY/hr</u>

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient:	<u>-5 %</u>
Average site altitude:	<u>11,375 feet</u>

Material weight: 2,100 lbs/LCYWeight description: Earth - Loam

<u>Job Condition Correction Factor</u>		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.100</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6688

Adjusted unit production: 570.22 LCY/hr

Adjusted fleet production: **570.22** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.590/LCY

Total job time: **3.67** Hours

Total job cost: **\$1,233**

REVEGETATION WORKTask description: Revegetate the SiteSite: London Borrow PitPermit Action: New 110c M2024016Permit/Job#: M2024016**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 7/9/2024County: ParkFilename: M016-003User: 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
Chisel plowing {DMG}	\$102.41
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$441.21

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Fringed Brome grass - Native	4.00	7.35	\$68.83
Arizona Fescue - Redondo	1.80	20.66	\$27.11
Lupine, Silver	0.80	0.47	\$95.65
Slender Wheatgrass - Native	4.40	16.06	\$31.08
Muttongrass	0.50	10.33	\$23.83
Needlegrass, Green - Lodorm	3.30	13.71	\$28.53
Sagebrush, Louisiana or Prairie	0.20	20.16	\$36.98
Sagebrush, Silver	0.40	7.77	\$27.25
Yarrow, Western	0.20	12.16	\$9.65

Totals Seed Mix	15.60	108.67	\$348.91
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Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Total Mulch Materials Cost/Acre				\$492.78

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

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: 7.1 Cost /Acre: \$1,762.17
 Estimated Failure Rate: 25% Cost /Acre*: \$1,320.96
 *Selected Replanting Work Items: SEEDING,MULCHING

Initial Job Cost: **\$12,511.41**
 Reseeding Job Cost: **\$2,344.70**
 Total Job Cost: **\$14,856**
 Job Hours: **10.65**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob of Reclamation Equipment**Site: **London Borrow Pit**Permit Action: **New 110c M2024016**Permit/Job#: **M2024016****PROJECT IDENTIFICATION**Task #: **004**State: **Colorado**Abbreviation: **None**Date: **7/9/2024**County: **Park**Filename: **M016-004**User: **ERR**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:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

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
Cat D8T - 8SU	53.08	\$187.85	\$125.64	1	\$313.49	\$125.64	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	2	\$200.92	\$118.88	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$27.21	\$59.44	2	\$173.30	\$118.88	\$500.00

Subtotals: **\$687.71** **\$363.40** **\$1,000.00****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	\$130.54	2	\$261.08	\$261.08

Subtotals: **\$261.08** **\$261.08**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>SILVERTHORNE</u>	
Total one-way travel distance:	<u>35.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$4,322.77</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$406.12</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.78</u>	<u>0.78</u>
Return Time (Hours):	<u>0.78</u>	<u>0.78</u>
Loading Time (Hours):	<u>0.25</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.25</u>	<u>NA</u>
Subtotals:	<u>2.06</u>	<u>1.56</u>

JOB TIME AND COST

Total job time:	<u>4.11</u>	Hours
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Total job cost:	<u>\$4,729</u>
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