

COST SUMMARY WORK

Task description: Cost Summary of Reclamation Work

Site: Project P.J.

Permit Action: 2022 AM1

Permit/Job#: M2018007

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 3/18/2022

County: Teller

Filename: M007-000

User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill 10,000 CY Into Open Excavations	DOZER	1	33.79	\$8,585
002	Replace Topsoil (1 acre)	DOZER	1	4.56	\$1,158
003	Reclaim All Access Roads	DOZER	1	5.04	\$1,319
004	Revegetate the Site	REVEGE	1	10.00	\$7,052
005	Mob/Demob	MOBILIZE	1	5.34	\$2,853
<u>SUBTOTALS:</u>				58.73	\$20,967

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$424

Performance bond: 1.05

Total = \$220

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$2,097

TOTAL O & P = \$2,740

CONTRACT AMOUNT (direct + O & P) = \$23,707

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

\$1,185

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$3,926

TOTAL (direct + indirect) = \$24,893

TOTAL BOND AMOUNT (rounded) = \$24,900

BULLDOZER WORKTask description: **Backfill 10,000 CY Into Open Excavations**Site: **Project P.J.** Permit Action: **2022 AM1** Permit/Job#: **M2018007****PROJECT IDENTIFICATION**

Task #: **001** State: **Colorado** Abbreviation: **None**
 Date: **3/18/2022** County: **Teller** Filename: **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:	\$97.46	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$15.19	NA
Ripper op. Cost/Hour:	\$2.49	25
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$254.07**
 Total Fleet Cost/Hour: **\$254.07**

MATERIAL QUANTITIES

Initial Volume: **10,000**
 Swell factor: **1.000**
 Loose volume: **10,000 LCY**

Source of estimated volume: **Application.**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **100 feet**
 Unadjusted hourly production: **852.6 LCY/hr**

Materials consistency description: **Consolidated stockpile 1.0**

Average push gradient: **0 %**
 Average site altitude: **9,100 feet**

Material weight: **3,300 lbs/LCY**Weight description: **Decomposed rock - 75% Rock, 25% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(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:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3471

Adjusted unit production: 295.94 LCY/hr

Adjusted fleet production: **295.94** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.859/LCY

Total job time: **33.79** Hours

Total job cost: **\$8,585**

BULLDOZER WORKTask description: **Replace Topsoil (1 acre)**Site: **Project P.J.** Permit Action: **2022 AM1** Permit/Job#: **M2018007****PROJECT IDENTIFICATION**

Task #: **002** State: **Colorado** Abbreviation: **None**
 Date: **3/18/2022** County: **Teller** Filename: **002**
 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:	\$97.46	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$15.19	NA
Ripper op. Cost/Hour:	\$2.49	25
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$254.07**
 Total Fleet Cost/Hour: **\$254.07**

MATERIAL QUANTITIES

Initial Volume: **1,613**
 Swell factor: **1.250**
 Loose volume: **2,016 LCY**

Source of estimated volume: **Application: 12" on 1 acre**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **100 feet**
 Unadjusted hourly production: **852.6 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **9,100 feet**

Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5187

Adjusted unit production: 442.24 LCY/hr

Adjusted fleet production: **442.24** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.575/LCY

Total job time: **4.56** Hours

Total job cost: **\$1,158**

BULLDOZER WORKTask description: **Reclaim All Access Roads**Site: **Project P.J.** Permit Action: **2022 AM1** Permit/Job#: **M2018007****PROJECT IDENTIFICATION**

Task #: **003** State: **Colorado** Abbreviation: **None**
 Date: **3/18/2022** County: **Teller** Filename: **003**
 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:	\$97.46	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$15.19	NA
Ripper op. Cost/Hour:	\$9.94	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$261.52**
 Total Fleet Cost/Hour: **\$261.52**

MATERIAL QUANTITIES

Initial Volume: **1,157**
 Swell factor: **1.430**
 Loose volume: **1,655 LCY**

Source of estimated volume: **AM1 Application: 3904' long x 8' wide**
 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: **9,100 feet**

Material weight: **3,300 lbs/LCY**Weight description: **Decomposed rock - 75% Rock, 25% Earth****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:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2343

Adjusted unit production: 328.02 LCY/hr

Adjusted fleet production: **328.02** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.797/LCY

Total job time: **5.04** Hours

Total job cost: **\$1,319**

REVEGETATION WORKTask description: Revegetate the SiteSite: Project P.J.Permit Action: 2022 AM1Permit/Job#: M2018007**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 3/18/2022County: TellerFilename: 004User: 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
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	1.50	17.22	\$13.88
Blue Grama - Native	0.75	12.24	\$10.29
Slender Wheatgrass - Native	4.50	16.43	\$20.81
Thickspike Wheatgrass - Critana	2.25	7.95	\$15.47
Western Wheatgrass - Native	3.75	9.47	\$22.50
Prairie Junegrass	0.75	39.87	\$19.50
Totals Seed Mix	13.50	103.17	\$102.45

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$71.57
Total Mulch Application Cost/Acre	\$71.57

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Fir, Douglas	129	Tubling, 3 cu. in. container (MEANS)	\$1.20	\$0.00	\$154.80
Pine, Lodgepole	129	Tubling, 3 cu. in. container (MEANS)	\$1.20	\$0.00	\$154.80
Totals Nursery Stock Cost / Acre					\$309.60

JOB TIME AND COST

No. of Acres:	4.99	Cost /Acre:	\$1,329.66
Estimated Failure Rate:	25%	Cost /Acre*:	\$334.45
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$6,635.00
Reseeding Job Cost:	\$417.23
Total Job Cost:	\$7,052
Job Hours:	10.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob**Site: **Project P.J.**Permit Action: 2022 AM1Permit/Job#: M2018007**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 3/18/2022County: TellerFilename: 005User: 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:	\$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
Cat D8T - 8SU	53.08	\$112.65	\$147.95	1	\$260.60	\$147.95	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$7.98	\$68.37	1	\$76.35	\$68.37	\$250.00
Subtotals:					\$336.95	\$216.32	\$500.00

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	\$75.87	2	\$151.74	\$151.74
Subtotals:			\$151.74	\$151.74

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>COLORADO SPRINGS</u>	
Total one-way travel distance:	<u>46.00</u>	miles
Average Travel Speed:	<u>55.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$2,599.37</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$253.82</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.84</u>	<u>0.84</u>
Return Time (Hours):	<u>0.84</u>	<u>0.84</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>2.67</u>	<u>1.67</u>

JOB TIME AND COST

Total job time: 5.35 Hours

Total job cost: \$2,853