

COST SUMMARY WORK

Task description: Cost Summary

Site: Amazonites

Permit Action: 2017 Cost Estimate

Permit/Job#: M2014042

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 10/5/2017

County: Teller

Filename: M042-000

User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill Dig Area	DOZER	1	4.48	\$578.00
002	Replace Topsoil on Dig Area	DOZER	1	0.10	\$13.00
003	Rip Access Roads	RIPPER	1	1.41	\$183.00
004	Replace Topsoil on Access Roads	DOZER	1	1.50	\$193.00
005	Revegetate the Site	REVEGE	1	2.00	\$1,465.00
006	Two Laborers for Reveg and Demolish Tasks	MISCTRUK	1	3.00	\$226.00
007	Remove Gates and Cables	DEMOLISH	1	1.50	\$190.76
008	Mob/Demob	MOBILIZE	1	5.53	\$1,480.00
<u>SUBTOTALS:</u>				19.52	\$4,329

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$87.45

Performance bond: 1.05

Total = \$45.45

Job superintendent: 0.00

Total = \$0.00

Profit: 10.00

Total = \$432.90

TOTAL O & P = \$565.80

CONTRACT AMOUNT (direct + O & P) = \$4,894.80

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 5.00

\$244.74

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$810.54

TOTAL BOND AMOUNT (direct + indirect) = \$5,139.54

BULLDOZER WORKTask description: **Backfill Dig Area**Site: **Amazonites**Permit Action: **2017 Cost Estimate**Permit/Job#: **M2014042****PROJECT IDENTIFICATION**Task #: **001**State: **Colorado**Abbreviation: **None**Date: **10/5/2017**County: **Teller**Filename: **M042-001**User: **ERR**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D6T LGP**Horsepower: **200**Blade Type: **Straight**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$43.25	NA
Operating Cost/Hour:	\$35.17	100
Ripper own. Cost/Hour:	\$5.33	NA
Ripper op. Cost/Hour:	\$3.57	100
Operator Cost/Hour:	\$41.85	NA

Total unit Cost/Hour: **\$129.17**Total Fleet Cost/Hour: **\$129.17****MATERIAL QUANTITIES**Initial Volume: **709**Swell factor: **1.330**Loose volume: **943 LCY**Source of estimated volume: **Application: 20' x 60' x 15' plus 15' x 15' x 5'**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly
production: **444.6 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push
gradient: **0 %**Average site altitude: **8,900 feet**Material weight: **2,900 lbs/LCY**Weight description: **Decomposed rock - 50% Rock, 50% Earth****Job Condition Correction Factor**Operator Skill: **0.750**Source
(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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4739

Adjusted unit
production: 210.70 LCY/hr

Adjusted fleet
production: **210.7** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.613/LCY

Total job time: **4.48** Hours

Total job cost: **\$578**

BULLDOZER WORKTask description: **Replace Topsoil on Dig Area**Site: **Amazonites**Permit Action: **2017 Cost Estimate**Permit/Job#: **M2014042****PROJECT IDENTIFICATION**Task #: **002**State: **Colorado**Abbreviation: **None**Date: **10/5/2017**County: **Teller**Filename: **M042-002**User: **ERR**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D6T LGP**Horsepower: **200**Blade Type: **Straight**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$43.25	NA
Operating Cost/Hour:	\$35.17	100
Ripper own.	\$5.33	NA
Cost/Hour:		
Ripper op. Cost/Hour:	\$3.57	100
Operator Cost/Hour:	\$41.85	NA

Total unit Cost/Hour: **\$129.17**Total Fleet Cost/Hour: **\$129.17****MATERIAL QUANTITIES**Initial Volume: **27**Swell factor: **1.429**Loose volume: **39 LCY**Source of estimated volume: **Application: 6" on 713 sqft**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **444.6 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **8,900 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**Operator Skill: **0.750**Source
(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:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit
production: 382.04 LCY/hr

Adjusted fleet
production: **382.04** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.338/LCY

Total job time: **0.10** Hours

Total job cost: **\$13**

BULLDOZER RIPPING WORK

Task description: Rip Access Roads

Site: Amazonites

Permit Action: 2017 Cost Estimate

Permit/Job#: M2014042

PROJECT IDENTIFICATION

Task #: 003

State: Colorado

Abbreviation: None

Date: 10/5/2017

County: Teller

Filename: M042-003

User: ERR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D6T LGP

Horsepower: 200

Ripper Attachment: 3-Shank Ripper

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$43.25	NA
Operating Cost/Hour:	\$35.17	100
Ripper Ownership Cost/Hour:	\$5.33	NA
Ripper Operating Cost/Hour:	\$3.57	100
Operator Cost/Hour:	\$41.85	NA
Total Unit Cost/Hour:	\$129.17	
Total Fleet Cost/Hour:	\$129.17	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA

Bank Volume: NA

BCY NA

Area: 0.50 acres

Rip Depth (ft): 1.50

Volume: 1,210

BCY or CCY

Source of estimated quantity: DRMS Approximation

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 1.64 mph
Average Ripping Width: 6.58 degrees
Average Ripping Length: 25.00 feet
Average Dozer Speed: 88.00 feet
Average Maneuver Time: 0.25 feet
Production per unit area: 0.424 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.424 Acres/hr

Site Altitude: 8,900 feet

Altitude Adj: 1.00 (CAT HB)

Job Efficiency: 0.83 (1 shift/day)

Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.35 Acres/hr

Adjusted Hourly Fleet Production: **0.35** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **1.42** Hours

Unit cost: \$366.834 Per acre Total job cost: **\$183**

BULLDOZER WORKTask description: **Replace Topsoil on Access Roads**Site: **Amazonites**Permit Action: 2017 Cost EstimatePermit/Job#: M2014042**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 10/5/2017County: TellerFilename: M042-004User: ERRAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D6T LGPHorsepower: 200Blade Type: StraightAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$43.25	NA
Operating Cost/Hour:	\$35.17	100
Ripper own. Cost/Hour:	\$5.33	NA
Ripper op. Cost/Hour:	\$3.57	100
Operator Cost/Hour:	\$41.85	NA

Total unit Cost/Hour: \$129.17Total Fleet Cost/Hour: **\$129.17****MATERIAL QUANTITIES**Initial Volume: 400Swell factor: 1.429Loose volume: **571 LCY**Source of estimated volume: Application: 6" on .5 acresSource of estimated swell
factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly
production: 444.6 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push
gradient: 0 %Average site altitude: 8,900 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**Operator Skill: 0.750Source
(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:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 382.04 LCY/hr

Adjusted fleet production: **382.04** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.338/LCY

Total job time: **1.50** Hours

Total job cost: **\$193**

REVEGETATION WORKTask description: Revegetate the SiteSite: AmazonitesPermit Action: 2017 Cost EstimatePermit/Job#: M2014042**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 10/5/2017County: TellerFilename: M042-005User: 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	\$16.79
Sandberg Bluegrass - VNS	0.74	15.71	\$5.96
Idaho Fescue	1.58	19.95	\$14.22
Prairie Junegrass	0.30	15.95	\$9.10
Yarrow, Western	0.50	30.40	\$20.90
Bluebunch Wheatgrass - Goldar	7.42	23.85	\$40.81
Totals Seed Mix	14.40	112.06	\$107.78

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	16	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.22	\$0.00	\$35.52
Totals Nursery Stock Cost / Acre					\$35.52

JOB TIME AND COST

No. of Acres: 2 Cost /Acre: \$585.83
 Estimated Failure Rate: 25% Cost /Acre*: \$585.83
 *Selected Replanting Work Items: TILLING,SEEDING,NURSERY

Initial Job Cost: **\$1,171.66**
 Reseeding Job Cost: **\$292.92**
 Total Job Cost: **\$1,465**
 Job Hours: **2.00**

MISCELLANEOUS TRUCK WORK

Task description: Two Laborers for Reveg and Demolish Tasks

Site: Amazonites

Permit Action: 2017 Cost Estimate

Permit/Job#: M2014042

PROJECT IDENTIFICATION

Task #: 006

State: Colorado

Abbreviation: None

Date: 10/5/2017

County: Teller

Filename: M042-006

User: ERR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Make and Model: Light Duty Pickup, 4x4, 1 T. Crew

Horsepower: 340

Attachment 1: _____

Shift Basis: 1 per day

Attachment 2: _____

Weight: 2.45

Labor Unit 1: General Laborer

(US Tons)

Labor Unit 2: General Laborer

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$6.57</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$12.86</u>	<u>100</u>
Operator Cost/Hour:	<u>\$55.95</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$75.38</u>	
Total Fleet Cost/Hour:	<u>\$75.38</u>	

JOB TIME AND COST

Fleet size: 1 Truck(s)

Total job time: 3.00 Hours

Unit cost: \$75.38 /Hour

Total job cost: \$226

DEMOLITION WORK

Task description: Remove Gates and Cables

Site: Amazonites

Permit Action: 2017 Cost Estimate

Permit/Job#: M2014042

PROJECT IDENTIFICATION

Task #: 007

State: Colorado

Abbreviation: None

Date: 10/5/2017

County: Teller

Filename: M042-007

User: ERR

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 93.10 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
2 gates and 4 cables	NA	Railing, roadside guiderail posts only	6.00	EA	\$34.15	\$204.90

Job Hours: 1.50

Subtotal
(unadjusted): \$204.90

Total Cost
(adjusted for location): \$190.76

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob**Site: **Amazonite #VIII**Permit Action: 2017 Cost EstimatePermit/Job#: M2014042**PROJECT IDENTIFICATION**Task #: 008State: ColoradoAbbreviation: NoneDate: 10/5/2017County: TellerFilename: M042-008User: 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:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

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 D6T LGP	28.63	\$48.58	\$117.55	1	\$166.13	\$117.55	\$250.00
Subtotals:					\$166.13	\$117.55	\$250.00

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	\$75.38	1	\$75.38	\$75.38
Subtotals:			\$75.38	\$75.38

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>COLORADO SPRINGS</u>	
Total one-way travel distance:	<u>51.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,309.14</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$170.86</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.13</u>	<u>1.13</u>
Return Time (Hours):	<u>1.13</u>	<u>1.13</u>
Loading Time (Hours):	<u>0.25</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.25</u>	<u>NA</u>
Subtotals:	<u>2.77</u>	<u>2.27</u>

JOB TIME AND COST

Total job time:	<u>5.53</u>	Hours
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Total job cost:	<u>\$1,480</u>
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