



April 4, 2023

Jason Burkey
Oldcastle SW Group, Inc.
2273 River Road
Grand Junction, CO 81505

RE: Otter Creek, Permit No. M-2012-050, Proposed Surety Increase (SI-1), Draft Estimate

Dear Mr. Burkey:

Attached is the proposed Surety Increase (SI-1). This draft reclamation cost update was in response to the Divisions' March 29, 2023 site inspection. The Division is mandated to recalculate the reclamation cost estimate to ensure that the Financial Warranty adequately reflects the actual current cost of fulfilling the requirements of the approved reclamation plan.

Below is a table summarizing input values that have been updated with calculation as compared to previous revision (AM-1) calculation. This table does not account for price changes resulting from inflation or other RS Means cost changes

Task	Form Used	Change	Justification
01a	Demo	-	Removal of temporary features
02a	Loader	-	Update volume hauled 1000 LF of 2H: 1V to 3H: 1V @ 17'H is 5,352 CY. Previously 5,350
03a	Dozer	+	Updated volume 5,967 CY. Previously 5,965 CY
03b	Dozer	+	Added task for grading of internal pit slopes 1000LF of 1H:1V to 3H:1V @ 17'H is 2,676 CY
04a	Dozer	+	Previously 12.5 ac @ 1 ft = 18,518 cy, uphill push Per inspection 26 ac affected @ 1 ft = 41,946 cy, flat push
05a	Truck		No change
06a	Ripper	+	Previously 12.5 ac, Per inspection 26 ac affected
07a	Reveg	+	Previously 12.5 ac, Per inspection 24.8 ac upland affected



			*internal seed cost have gone up significantly
08a	Reveg		No Change
09a	Mob		No Change
09b	Mob		No Change

Per policy I wanted to send this out for review prior to issuance. Please look it over and provide feedback and make corrections if/where necessary. If no feedback is provided by Friday, April 28, 2023 then I'll issued you have no objections SI-1 as calculated and the increase will be issued the following Monday.

Please feel free to contact me with any further questions.

Sincerely,



Amy Yeldell
Environmental Protection Specialist

Enclosures- 2022 Mesa County Assessors website map with notes

COST SUMMARY WORK

Task description: _____

Site: Otter Creek Pit

Permit Action: 2023

Permit/Job#: M2012050

PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 4/4/2023

County: Mesa

Filename: M050-ACY

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Equipment Removal	DEMOLISH	1	16.00	\$4,000
02a	Backfill Perimeter Highwall	LOADER	1	46.09	\$6,623
03a	Grade backfilled perimeter slopes	DOZER	1	6.86	\$2,427
03b	Grade interior slopes	DOZER	1	2.13	\$755
04a	Grade Topsoil	DOZER	1	68.65	\$24,276
05a	Move topsoil to 6 acre overburden storage area	TRUCK1	1	17.39	\$18,895
06a	Topsoil Compaction Relief	RIPPER	1	36.65	\$12,963
07a	Revegetate 24.8 acres + Trees	REVEGE	1	35.00	\$71,745
08a	Revegetate 1.2 Acres Wetland Area	REVEGE	1	8.00	\$9,005
09a	Initial Mobilization	MOBILIZE	1	2.57	\$7,248
09b	Secondary Mobilization	MOBILIZE	1	2.57	\$1,460
<u>SUBTOTALS:</u>				241.91	\$159,397

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$3,220

Performance bond: 1.05

Total = \$1,674

Job superintendent: 120.96

Total = \$9,087

Profit: 10.00

Total = \$15,940

TOTAL O & P = \$29,921

CONTRACT AMOUNT (direct + O & P) = \$189,318

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$8,046

Reclamation management and/or administration: 5.00

\$9,466

CONTINGENCY: 3.00

Total = \$4,782

TOTAL INDIRECT COST = \$52,714

TOTAL BOND AMOUNT (direct + indirect) = \$212,111

DEMOLITION WORK

Task description: Equipment Removal

Site: Otter Creek Pit

Permit Action: 2023

Permit/Job#: M2012050

PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 4/4/2023

County: Mesa

Filename: M050-01a

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 100.00 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Removal of Buried Truck Scale	15' x 60'	USER PROVIDED ITEM	1.00	1	\$3,500.00	\$3,500.00

Job Hours: 16.00

Subtotal
(unadjusted): \$3,500.00

Total Cost
(adjusted for location): \$3,500.00

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Backfill Perimeter Highwall**Site: **Otter Creek Pit**Permit Action: **2023**Permit/Job#: **M2012050****PROJECT IDENTIFICATION**Task #: **02A**State: **Colorado**Abbreviation: **None**Date: **4/4/2023**County: **Mesa**Filename: **M050-02a**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **CAT 980H high lift**Attachment 1: **ROPS Cab**Horsepower: **315**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$54.58	NA
Operating Cost/Hour:	\$53.14	100
Operator Cost/Hour:	\$35.97	NA
Total Unit Cost/Hour:	\$143.69	
Total Fleet Cost/Hour:	\$143.69	

MATERIAL QUANTITIESInitial volume: **5,352**

CCY

Swell factor: **1.115**Loose volume: **5,967**

LCY

Source of estimated volume: **1000 LF @ 17'H 2:1 to 3:1 backfill**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION****Loader Cycle Time:** Unadjusted Basic Cycle Time (load, dump, maneuver): **0.550** minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.070	minutes
Adjusted Basic Cycle Time:		0.480	minutes

Rolling Resistance – Road ConditionsHaul: **Rutted dirt, little maintenance, no water, 2" tire penetration 5.0**Return: **Rutted dirt, little maintenance, no water, 2" tire penetration 5.0****Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	1300	0.00	5.00	5.00	1.1492	(Cat HB)
Return Route:	1300	0.00	5.00	5.00	1.0392	(Cat HB)

Total Travel Time: 2.1884 minutes
 Total Cycle Time: 2.6684 minutes

Load Bucket Capacity

Rated Capacity: 7.50 LCY (heaped)
 Bucket Fill Factor: 0.925 Loose material - 1/8" to 3/8" (90 - 95%) 0.925
 Adjusted Capacity: 6.94 LCY

Job Condition Correction Factors

Site Altitude: 4630 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: 155.99 LCY/Hour
 Adjusted Hourly Unit Production: 129.47 LCY/Hour
 Adjusted Hourly Fleet Production: 129.47 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 46.09 Hours
 Unit cost: \$1.110 /LCY Total job cost: \$6,623

BULLDOZER WORKTask description: Grade backfilled perimeter slopesSite: Otter Creek PitPermit Action: 2023Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 4/4/2023County: MesaFilename: M050-03aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$146.30	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$17.01	NA
Ripper op. Cost/Hour:	\$8.85	100
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$353.61Total Fleet Cost/Hour: \$353.61**MATERIAL QUANTITIES**Initial Volume: 5,967Swell factor: 1.000Loose volume: 5,967 LCYSource of estimated volume: Transported Volume from 02aSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 15 %Average site altitude: 4,630 feetMaterial weight: 2,500 lbs/LCYWeight description: Clay - Dry**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:	0.900	(SSD-FC)
Push gradient:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.920	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4119

Adjusted unit production: 869.31 LCY/hr

Adjusted fleet production: **869.31** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.407/LCY

Total job time: **6.86** Hours

Total job cost: **\$2,427**

BULLDOZER WORKTask description: Grade interior slopesSite: Otter Creek PitPermit Action: 2023Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 03BState: ColoradoAbbreviation: NoneDate: 4/4/2023County: MesaFilename: M050-03bUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$146.30	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$17.01	NA
Ripper op. Cost/Hour:	\$8.85	100
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$353.61Total Fleet Cost/Hour: \$353.61**MATERIAL QUANTITIES**Initial Volume: 2,676Swell factor: 1.230Loose volume: 3,291 LCYSource of estimated volume: 1000 LF of 1:1V to 3H:1V @ 17'HSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push gradient: -15 %Average site altitude: 4,630 feetMaterial weight: 2,500 lbs/LCYWeight description: Clay - Dry**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.920	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7307

Adjusted unit production: 1,542.14 LCY/hr

Adjusted fleet production: **1542.14** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.229/LCY

Total job time: **2.13** Hours

Total job cost: **\$755**

BULLDOZER WORKTask description: Grade TopsoilSite: Otter Creek PitPermit Action: 2023Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 4/4/2023County: MesaFilename: M050-04aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$146.30	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$17.01	NA
Ripper op. Cost/Hour:	\$8.85	100
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$353.61Total Fleet Cost/Hour: **\$353.61****MATERIAL QUANTITIES**Initial Volume: 41,946Swell factor: 1.115Loose volume: **46,770 LCY**Source of estimated volume: 26 ac affected @ 12" DSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 90 feetUnadjusted hourly production: 1,351.7 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 4,630 feetMaterial weight: 2,500 lbs/LCYWeight description: Clay - Dry**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(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:	0.920	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5040

Adjusted unit production: 681.26 LCY/hr

Adjusted fleet production: **681.26** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.519/LCY

Total job time: **68.65** Hours

Total job cost: **\$24,276**

TRUCK/LOADER TEAM WORKTask description: Move topsoil to 6 acre overburden storage areaSite: Otter Creek PitPermit Action: 2023Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 4/4/2023County: MesaFilename: M050-05aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 980H high lift
Support Equipment -Load Area:	NA
-Dump Area:	Cat D9T - 9SU
Road Maintenance -Motor Grader:	CAT 140M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	NA	100	100	100
Ownership cost/hour:	\$79.42	\$54.58	NA	\$146.30	\$75.87	\$37.19
Operating cost/hour:	\$70.82	\$53.14	NA	\$141.41	\$53.81	\$51.30
% Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$24.82	\$35.97	NA	\$40.04	\$46.87	\$0.00
Unit Subtotals:	\$175.06	\$143.69	NA	\$327.75	\$176.55	\$88.49
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work: \$493.81		Support: \$327.75		Maint: \$265.04	

Total work team cost/hour: **\$1,086.60****MATERIAL QUANTITIES**Initial volume: 9,680

CCY

Swell factor: 1.115Loose volume: **10,793**

LCY

Source of estimated volume: 6ac @12" DSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 2,500

Pounds/LCY

Description: Clay - DryRated Payload: 82,000

Pounds

Payload Capacity: 32.80

LCY

Truck Bed (volume) Basis:

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	31.70	LCY

Final Truck Volume Based on Number of Loader Passes: 27.75 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	0.925	Loose material - 1/8" to 3/8" (90 - 95%) 0.925
Adjusted Capacity:	6.938	LCY

Job Condition Corrections:

Site Altitude (ft.): 4630 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 4 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 1/8" to 3/4" diameter -0.02	-0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.090	minutes
Adjusted Loader Cycle Time:		0.460	minutes
Net Load Time per Truck:		1.480	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.480	Minutes	Adjusted for site altitude:	1.480	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time:
penetration 4.0

Road Condition: Rutted dirt, little maintenance, no water, 1" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	4.00	4.00	2051	0.735

Haul Time: **0.735** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	4.00	4.00	3891	0.638

Return Time: **0.638** minutesTotal Truck Cycle Time: **4.453** minutes

Loading Tool unit

Production	<u>800.48</u>	LCY/Hour	Adjusted for job efficiency:	<u>664.40</u>	LCY/Hour
Truck Unit Production	<u>373.91</u>	LCY/Hour	Adjusted for job efficiency:	<u>310.34</u>	LCY/Hour

Optimal No. of Trucks:	<u>2</u>	Truck(s)	Selected Number of Trucks:	<u>2</u>	Truck(s)
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Adjusted hourly truck team production:	<u>620.68</u>	LCY/Hour
Adjusted single truck/loader team production:	<u>620.68</u>	LCY/Hour
Adjusted multiple truck/loader team production:	<u>620.68</u>	LCY/Hour

JOB TIME AND COST

Fleet size:	<u>1</u>	Team(s)	Total job time:	<u>17.39</u>	Hours
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Unit cost:	<u>\$1.751</u>	/LCY	Total job cost:	<u>\$18,895</u>
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BULLDOZER RIPPING WORK

Task description: Topsoil Compaction Relief

Site: Otter Creek Pit Permit Action: 2023 Permit/Job#: M2012050

PROJECT IDENTIFICATION

Task #: 06A State: Colorado Abbreviation: None
Date: 4/4/2023 County: Mesa Filename: M050-06a
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$146.30</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$141.41</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$17.01</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$8.85</u>	<u>100</u>
Operator Cost/Hour:	<u>\$40.04</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$353.61</u>	
Total Fleet Cost/Hour:	<u>\$353.61</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 26.00 acres Rip Depth (ft): 1.00 Volume: 41,947 BCY or CCY

Source of estimated quantity: Staff estimates

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.63 feet/pass
Average Ripping Width: 7.67 feet/pass
Average Ripping Length: 250.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.855 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.855 Acres/hr
Site Altitude: 4,630 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.71 Acres/hr
Adjusted Hourly Fleet Production: **0.71** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **36.66** Hours

Unit cost: \$498.579 Per acre Total job cost: **\$12,963**

REVEGETATION WORKTask description: Revegetate 24.8 acres + TreesSite: Otter Creek PitPermit Action: 2023Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 07AState: ColoradoAbbreviation: NoneDate: 4/4/2023County: MesaFilename: M050-07aUser: ACYAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
12--4--8	100.00	pound	\$0.47	\$47.00
			Total Fertilizer Materials Cost/Acre	\$47.00

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$39.64
Total Fertilizer Application Cost/Acre	\$39.64

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
Total Tilling Cost/Acre	\$117.18

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	1.90	226.81	\$18.53
Sandberg Bluegrass - VNS	1.50	31.85	\$12.60
Galleta	1.90	6.94	\$42.47
Rabbitbrush, Rubber	0.20	2.98	\$12.86
Winter Fat	1.13	2.87	\$23.06
Yarrow, Western	0.40	24.32	\$16.72
Kochia, Forage (Prostrate)	0.20	28.09	\$1.80
Globemallow, Munro	0.40	4.53	\$35.00
Totals Seed Mix	7.63	328.39	\$163.03

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
Herbicide - 2,4D @ 1.0 pt/ac	100.00	ACRE	\$3.04	\$304.00
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$1,146.72

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$277.29

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood, Narrowleaf	9	Container, 1 gallon (MEANS)	\$15.83	\$0.00	\$142.47
Totals Nursery Stock Cost / Acre					\$142.47

JOB TIME AND COST

No. of Acres: 24.8 Cost /Acre: \$2,165.33
 Estimated Failure Rate: 40% Cost /Acre*: \$1,819.04
 *Selected Replanting Work Items: SEEDING,MULCHING

Initial Job Cost: **\$53,700.18**
 Reseeding Job Cost: **\$18,044.88**
 Total Job Cost: **\$71,745**
 Job Hours: **35.00**

REVEGETATION WORKTask description: Revegetate 1.2 Acres Wetland AreaSite: Otter Creek PitPermit Action: 2023Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 08AState: ColoradoAbbreviation: NoneDate: 4/4/2023County: MesaFilename: M050-08aUser: ACYAgency 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
Alkali Sacaton	2.00	78.05	\$56.95
Aquatic Sedge	0.20	5.29	\$35.00
Orchardgrass - Paiute	2.00	24.79	\$8.15
Slender Wheatgrass - Native	6.00	21.90	\$27.75
Western Wheatgrass - Native	0.20	0.51	\$1.20
Red Top	2.00	229.11	\$15.75
Reedgrass, Canadian (or Blue Joint)	0.40	41.14	\$81.30
Reedgrass, Northern - Native	1.00	102.85	\$136.65
Saltgrass, Inland	2.00	27.72	\$85.60

Snowberry, Western	2.00	3.44	\$127.00
Sumac, Skunkbrush	0.80	0.37	\$16.80
Timothy - Climax	2.00	57.39	\$3.20
Basin Wildrye - Trailhead	3.00	12.19	\$46.23
Greasewood, Black	2.00	280.90	\$38.00
Totals Seed Mix	25.60	885.66	\$679.58

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
Herbicide - 2,4D @ 1.0 pt/ac	100.00	ACRE	\$3.04	\$304.00
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$1,146.72

Application

Description	Cost /Acre
Hand spread, 1" deep (MEANS 32 91 13.16 0200)	\$3,726.80
Weed spray, hand, aquatic area, nox. [DMG]	\$183.16
Total Mulch Application Cost/Acre	\$3,909.96

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:	1.2	Cost /Acre:	\$6,003.48
Estimated Failure Rate:	25%	Cost /Acre*:	\$6,003.48
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$7,204.18		
Reseeding Job Cost:	\$1,801.04		
Total Job Cost:	\$9,005		
Job Hours:	8.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial Mobilization**Site: **Otter Creek Pit**Permit Action: **2023**Permit/Job#: **M2012050****PROJECT IDENTIFICATION**

Task #: **09A** State: **Colorado** Abbreviation: **None**
 Date: **4/4/2023** County: **Mesa** Filename: **M050-09a**
 User: **ACY**

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:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

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 D9T - 9SU	60.01	\$146.30	\$136.92	1	\$283.22	\$136.92	\$250.00
Cat D6T LGP	28.63	\$84.20	\$101.82	1	\$186.02	\$101.82	\$250.00
CAT 980H high lift	33.12	\$54.58	\$101.82	1	\$156.40	\$101.82	\$250.00
Cat 770D	37.54	\$79.42	\$101.82	2	\$362.48	\$203.64	\$500.00
CAT 140M	16.68	\$75.87	\$68.22	1	\$144.09	\$68.22	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.25	\$68.22	1	\$74.47	\$68.22	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$14.79	\$68.22	1	\$83.01	\$68.22	\$250.00

Subtotals: **\$1,289.69** **\$748.86** **\$2,000.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 5,000 Gal.	\$88.49	1	\$88.49	\$88.49
Light Duty Pickup, 4x4, 3/4 T.	\$70.69	3	\$212.07	\$212.07

Subtotals: **\$300.56** **\$300.56**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>GRAND JUNCTION</u>	
Total one-way travel distance:	<u>5.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$7,161.82</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$85.87</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.14</u>	<u>0.14</u>
Return Time (Hours):	<u>0.14</u>	<u>0.14</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.29</u>	<u>0.29</u>

JOB TIME AND COST

Total job time:	<u>2.57</u>	Hours
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Total job cost:	<u>\$7,248</u>
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EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Secondary MobilizationSite: Otter Creek PitPermit Action: 2023Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 09BState: ColoradoAbbreviation: NoneDate: 4/4/2023County: MesaFilename: M050-09bUser: ACYAgency 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:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

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
Drill/Broadcast Seeder with Tractor	25.00	\$6.25	\$68.22	1	\$74.47	\$68.22	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$14.79	\$68.22	1	\$83.01	\$68.22	\$250.00
Subtotals:					\$157.48	\$136.44	\$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, 3/4 T.	\$70.69	3	\$212.07	\$212.07
Subtotals:			\$212.07	\$212.07

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>GRAND JUNCTION</u>	
Total one-way travel distance:	<u>5.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,398.94</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$60.59</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

JOB TIME AND COST

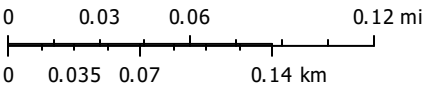
Total job time: 2.57 Hours

Total job cost: \$1,460



Mesa County Map

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Mesa County, Colorado

GIS/IT Department

gis.mesacounty.us