



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

June 13, 2023

Thomas O'Rourke
O'Rourke Excavating, Inc.
140 Daniel Lane
South Fork, CO 81154

RE: O'Rourke South Fork Pit, Permit No. M-2014-005, Estimated Reclamation Costs Update

Dear Mr. O'Rourke:

In an effort to ensure the Financial Warranty for the above referenced site adequately reflects the actual current costs of fulfilling the requirements of the approved reclamation plan, the Colorado Division of Reclamation, Mining and Safety (Division) has updated the reclamation cost estimate (copy enclosed).

Division calculations estimate the cost to reclaim the above referenced site to be \$17,202. This is an increase of \$6,794 over the \$10,408 currently held by the Division. This estimate is based on conditions observed during the April 12, 2023 inspection. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

The estimated reclamation cost was last calculated in April of 2014. Per rule 4.2.1(2) the estimation is periodically updated to ensure that the Division holds a sufficient sum to cover the cost of reclamation. The increase in the financial warranty is due to increases in the cost of fuel, equipment, and labor since the last adjustment.

If no comments are received by August 14, 2023 then it is the Divisions understanding that the operator has no objections to the bond calculated on June 13, 2023 for the amount of \$17,202. At that time a Notice for Surety Increase will be issued for the above amount as required by the Act and Rules.

If you require additional information, or have questions or concerns, please feel free to contact me.

Sincerely,

Todd Jesse
Environmental Protection Specialist
Department of Natural Resources

Cc:
Travis Marshall, Senior EPS, Grand Junction DRMS

Enc: Financial Warranty Cost Estimate



COST SUMMARY WORK

Task description: Summary

Site: O'Rourke South Fork Pit

Permit Action: SI 2023

Permit/Job#: M2014005

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 6/13/2023

County: Rio Grande

Filename: M005-000

User: TJ1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Dispose of debris	DEMOLISH	1	8.00	\$82
002	Reduce slope to 3:1	DOZER	1	6.00	\$1,661
003	Rip compaction	RIPPER	1	6.02	\$1,713
004	Replace topsoil on graded areas	DOZER	1	4.02	\$1,113
005	Revegetate disturbed area	REVEGE	1	16.00	\$7,096
006	Haul reclamation equipment to and from site	MOBILIZE	1	4.00	\$1,073
<u>SUBTOTALS:</u>				44.04	\$12,738

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$257
Performance bond:	1.05	Total =	\$134
Job superintendent:	20.01	Total =	\$1,503
Profit:	10.00	Total =	\$1,274
		TOTAL O & P =	\$3,168
		CONTRACT AMOUNT (direct + O & P) =	\$15,906

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	0.00	Total =	\$0
Reclamation management and/or administration:	5.00		\$795

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$4,464

TOTAL BOND AMOUNT (direct + indirect) = \$17,202

DEMOLITION WORK

Task description: Dispose of debris

Site: O'Rourke, South Fork pit

Permit Action: SI 2023

Permit/Job#: M2014005

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 6/13/2023

County: Rio Grande

Filename: M005-001

User: TJ1

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 91.60 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Push inert debris into pit	30 cy	Push demolished materials/rubble/debris into pit - Max. 100 ft. push	30.00	CY	\$1.06	\$31.77
Excavate disposal pit for debris	30 cy	Excavate disposal pit with dozer (includes completed pit backfilling/grading)	30.00	CY	\$1.92	\$57.60

Job Hours: 8.00

Subtotal
(unadjusted): \$89.37

Total Cost
(adjusted for location): \$81.86

BULLDOZER WORKTask description: **Reduce slope to 3:1**Site: **O'Rourke, South Fork pit**Permit Action: **SI 2023**Permit/Job#: **M2014005****PROJECT IDENTIFICATION**Task #: **002**State: **Colorado**Abbreviation: **None**Date: **6/13/2023**County: **Rio Grande**Filename: **M005-002**User: **TJ1**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:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own.	\$13.10	NA
Cost/Hour:		
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$276.88**Total Fleet Cost/Hour: **\$276.88****MATERIAL QUANTITIES**Initial Volume: **2,500**Swell factor: **1.330**Loose volume: **3,325 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **70 feet**Unadjusted hourly production: **1,093.7 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **-20 %**Average site altitude: **8,200 feet**Material weight: **2,900 lbs/LCY**Weight description: **Decomposed rock - 50% Rock, 50% Earth****Job Condition Correction Factor****Source**

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:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5068

Adjusted unit
production: 554.29 LCY/hr
Adjusted fleet
production: **554.29** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.500/LCY

Total job time: **6.00** Hours
Total job cost: **\$1,661**

BULLDOZER RIPPING WORK

Task description: Rip compaction

Site: O'Rourke, South Fork pit

Permit Action: SI 2023

Permit/Job#: M2014005

PROJECT IDENTIFICATION

Task #: 003

State: Colorado

Abbreviation: None

Date: 6/13/2023

County: Rio Grande

Filename: M005-003

User: TJ1

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU

Horsepower: 310

Ripper Attachment: 3-Shank Ripper

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper Ownership Cost/Hour:	\$13.10	NA
Ripper Operating Cost/Hour:	\$7.30	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$284.18	
Total Fleet Cost/Hour:	\$284.18	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA

Bank Volume: NA

BCY NA

Area: 4.00 acres

Rip Depth (ft): 1.00

Volume: 6,453 BCY or CCY

Source of estimated quantity: 4 acres disturbed area

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.56</u>	feet/pass
Average Ripping Width:	<u>7.08</u>	feet/pass
Average Ripping Length:	<u>300.00</u>	feet/pass
Average Dozer Speed:	<u>88.00</u>	feet/minute
Average Maneuver Time:	<u>0.25</u>	minutes/pass
Production per unit area:	<u>0.800</u>	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.800 Acres/hr

Site Altitude: 8,200 feet

Altitude Adj: 1.00 (CAT HB)

Job Efficiency: 0.83 (1 shift/day)

Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.66 Acres/hr

Adjusted Hourly Fleet Production: 0.66 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 6.03 Hours

Unit cost: \$428.224 Per acre Total job cost: \$1,713

BULLDOZER WORKTask description: **Replace topsoil on graded areas**Site: **O'Rourke, South Fork pit**Permit Action: SI 2023Permit/Job#: M2014005**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 6/13/2023County: Rio GrandeFilename: M005-004User: TJ1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own.	\$13.10	NA
Cost/Hour:		
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$276.88Total Fleet Cost/Hour: **\$276.88****MATERIAL QUANTITIES**Initial Volume: 1,613Swell factor: 1.125Loose volume: **1,815 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 852.6 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: -10 %Average site altitude: 8,200 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packedJob Condition Correction FactorSource

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:	0.700	(FND-MF)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5296

Adjusted unit
production: 451.54 LCY/hr
Adjusted fleet
production: **451.54** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.613/LCY

Total job time: **4.02** Hours
Total job cost: **\$1,113**

REVEGETATION WORKTask description: Revegetate disturbed areaSite: O'Rourke, South Fork pitPermit Action: SI 2023Permit/Job#: M2014005**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 6/13/2023County: Rio GrandeFilename: M005-005User: TJ1Agency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$407.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Nespar	2.50	8.09	\$22.19
Crested Wheatgrass - Fairway	3.00	13.77	\$12.08
Russian Wildrye - Bozoisky	1.50	6.03	\$9.72
Western Wheatgrass - Arriba	4.00	10.10	\$26.00
Totals Seed Mix	11.00	37.99	\$69.98

Application

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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
			\$	\$
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
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	8	Cost /Acre:	\$709.56
Estimated Failure Rate:	25%	Cost /Acre*:	\$709.56
*Selected Replanting Work Items:	TILLING,SEEDING,MULCHING		
Initial Job Cost:	\$5,676.48		
Reseeding Job Cost:	\$1,419.12		
Total Job Cost:	\$7,096		
Job Hours:	16.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Haul reclamation equipment to and from siteSite: O'Rourke, South Fork pitPermit Action: SI 2023Permit/Job#: M2014005**PROJECT IDENTIFICATION**Task #: 006State: ColoradoAbbreviation: NoneDate: 6/13/2023County: Rio GrandeFilename: M005-006User: TJ1Agency 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
Cat D8T - 8SU	47.71	\$124.85	\$101.82	1	\$226.67	\$101.82	\$0.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.25	\$68.22	1	\$74.47	\$68.22	\$0.00

Subtotals: **\$301.14** **\$170.04** **\$0.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
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Subtotals: **\$0.00** **\$0.00**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>MONTE VISTA</u>	
Total one-way travel distance:	<u>25.00</u>	miles
Average Travel Speed:	<u>50.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,073.46</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$0.00</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.50	0.50
Return Time (Hours):	0.50	0.50
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	2.00	1.00

JOB TIME AND COST

Total job time: 4.00 Hours

Total job cost: \$1,073