



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

March 28, 2025

Roger Hageman
Glacier Rock Company
1806 S CR 5
Fort Collins, CO 80525

Re: Glacier Rock - File No. M-1994-096
Glacier Rock Company
Technical Revision (TR-2)
Request for Technical Revision

Dear Roger Hageman:

On March 28, 2025 the Division of Reclamation, Mining and Safety concluded its review of the Technical Revision application submitted to the Division on February 26, 2025, addressing the following:

Update to the mining and reclamation plan.

The decision reached by the Division is: awaiting warranty.

The terms of Technical Revision No. 2 approved by the Division are hereby incorporated into Permit No. M-1994-096. All other conditions and requirements of Permit No. M-1994-096 remain in full force and effect.

The revised liability amount exceeds the financial warranty currently held (see below), please submit additional bond or a rider to your existing bond that equals or exceeds the Revised Liability by **May 27, 2025**. The revision will not be final until the bond is approved by the Division.

Bond Held:	\$52,475.00
Prior Liability:	\$52,475.00
Change in Liability:	\$37,958.00
Revised Liability:	\$90,433.00
Prior Permit Acreage:	49.00
Change in Permit Acreage:	0.00
Revised Permit Acreage:	49.00
Prior Affected Acreage:	43.00



Change in Affected Acreage:	0.00
Revised Affected Acreage:	43.00

If you have any questions, please contact me by telephone at (720) 812-2002, or by email at Joel.renfro@state.co.us.

Sincerely,



Joel Renfro
Environmental Protection Specialist

cc: Karen Horner, Glacier Rock Company
Kyle Regen, Civil Resources, LLC
Amy Eschberger, DRMS
Sara Stevenson-Benn, DRMS

COST SUMMARY WORK

Task description: Cost Summary

Site: Glacier Rock

Permit Action: TR2

Permit/Job#: M1994096

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 3/24/2025

County: Larimer

Filename: M096-000

User: JR2

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Grade pit wall to 3H:1V	DOZER	1	6.16	\$1,289
002	Rip pit floor	RIPPER	1	15.77	\$3,528
003	Rip topsoil/overburden stockpiling areas	RIPPER	1	2.21	\$496
004	Retopsoil 12.35 acres at 9 inch depth	SCRAPER1	1	14.90	\$30,271
005	Revegetate 12.35 acres	REVEGE	1	12.35	\$19,203
006	Rip recycling yard	RIPPER	1	4.57	\$1,023
007	Retopsoil 2.9 acres at 6 inch depth - recycling yard	SCRAPER1	1	2.33	\$4,738
008	Revegetate 2.9 acres - recycling yard	REVEGE	1	5.00	\$4,509
009	Mobilization/Demobilization	MOBILIZE	1	6.16	\$10,053
<u>SUBTOTALS:</u>				69.45	\$75,110

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,517

Performance bond: 1.05

Total = \$789

Job superintendent: 34.73

Total = \$2,753

Profit: 10.00

Total = \$7,511

TOTAL O & P = \$12,570

CONTRACT AMOUNT (direct + O & P) = \$87,680

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: 0.00

\$0

CONTINGENCY: 3.00

Total = \$2,253

TOTAL INDIRECT COST = \$15,323

TOTAL BOND AMOUNT (direct + indirect) = \$90,433

BULLDOZER WORKTask description: **Grade pit wall to 3H:1V**Site: **Glacier Rock**Permit Action: **TR2**Permit/Job#: **M1994096****PROJECT IDENTIFICATION**Task #: **001**State: **Colorado**Abbreviation: **None**Date: **3/24/2025**County: **Larimer**Filename: **M096-001**User: **JR2**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**Horsepower: **240**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: **\$209.23**Total Fleet Cost/Hour: **\$209.23****MATERIAL QUANTITIES**Initial Volume: **4,375**Swell factor: **1.250**Loose volume: **5,469 LCY**Source of estimated volume: **Approx 1,400' L x 15' H with nr vertical slopes**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **1,022.9 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **-5 %**Average site altitude: **5,430 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	1.000	(EXCL.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8676

Adjusted unit production: 887.47 LCY/hr

Adjusted fleet production: **887.47** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.236/LCY

Total job time: **6.16** Hours

Total job cost: **\$1,289**

BULLDOZER RIPPING WORK

Task description: Rip pit floor

Site: Glacier Rock Permit Action: TR2 Permit/Job#: M1994096

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 3/24/2025 County: Larimer Filename: M096-002
User: JR2

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS XR Series II Horsepower: 240
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$90.24</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$78.95</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$9.25</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$5.20</u>	<u>100</u>
Operator Cost/Hour:	<u>\$40.04</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$223.68</u>	
Total Fleet Cost/Hour:	<u>\$223.68</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 10.00 acres Rip Depth (ft): 1.50 Volume: 24,200 BCY or CCY

Source of estimated quantity: DRMS

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.45</u>	<u>feet/pass</u>
Average Ripping Width:	<u>6.50</u>	<u>feet/pass</u>
Average Ripping Length:	<u>700.00</u>	<u>feet/pass</u>
Average Dozer Speed:	<u>88.00</u>	<u>feet/minute</u>
Average Maneuver Time:	<u>0.25</u>	<u>minutes/pass</u>
Production per unit area:	<u>0.764</u>	<u>acres/hour</u>

Job Condition Correction Factors

Unadjusted Hourly Unit Production:	<u>0.764</u>	<u>Acres/hr</u>
Site Altitude:	<u>5,430</u>	<u>feet</u>
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.83</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 0.63 Acres/hr
Adjusted Hourly Fleet Production: 0.63 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 15.77 Hours

Unit cost: \$352.800 Per acre Total job cost: \$3,528

BULLDOZER RIPPING WORK

Task description: Rip topsoil/overburden stockpiling areas

Site: Glacier Rock Permit Action: TR2 Permit/Job#: M1994096

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 3/24/2025 County: Larimer Filename: M096-003
User: JR2

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS XR Series II Horsepower: 240
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$90.24</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$78.95</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$9.25</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$5.20</u>	<u>100</u>
Operator Cost/Hour:	<u>\$40.04</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$223.68</u>	
Total Fleet Cost/Hour:	<u>\$223.68</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 1.35 acres Rip Depth (ft): 1.50 Volume: 3,267 BCY or CCY

Source of estimated quantity: DRMS

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.45</u>	<u>feet/pass</u>
Average Ripping Width:	<u>6.50</u>	<u>feet/pass</u>
Average Ripping Length:	<u>300.00</u>	<u>feet/pass</u>
Average Dozer Speed:	<u>88.00</u>	<u>feet/minute</u>
Average Maneuver Time:	<u>0.25</u>	<u>minutes/pass</u>
Production per unit area:	<u>0.734</u>	<u>acres/hour</u>

Job Condition Correction Factors

Unadjusted Hourly Unit Production:	<u>0.734</u>	<u>Acres/hr</u>
Site Altitude:	<u>5,430</u>	<u>feet</u>
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.83</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 0.61 Acres/hr
Adjusted Hourly Fleet Production: 0.61 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 2.22 Hours

Unit cost: \$367.134 Per acre Total job cost: \$496

SCRAPER TEAM WORKTask description: Retopsoil 12.35 acres at 9 inch depthSite: Glacier RockPermit Action: TR2Permit/Job#: M1994096**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 3/24/2025County: LarimerFilename: M096-004User: JR2Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 631G
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	Cat D7R DS XR Series II
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown:

Scraper Work Team

Support Equipment

Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	100	100	100
Ownership cost/hour:	\$442.19	NA	NA	\$90.24	\$129.81	\$11.65
Operating cost/hour:	\$252.89	NA	NA	\$78.95	\$89.13	\$22.45
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	NA	NA	\$0.00	\$5.75	\$0.00
Ripper op. cost/hour:	NA	NA	NA	\$0.00	\$2.09	\$0.00
Operator cost/hour:	\$57.52	NA	NA	\$40.04	\$56.70	\$0.00
Unit Subtotals:	\$752.60	NA	NA	\$209.23	\$283.48	\$34.10
Number of Units:	2	0	0	1	1	1
Group Subtotals:	Work:	\$1,505.20	Support:	\$209.23	Maint:	\$317.58

Total work team cost/hour: \$2,032.01**MATERIAL QUANTITIES**Initial volume: 14,943

CCY

Swell factor: 1.215Loose volume: 18,156

LCY

Source of estimated volume: 12.35 acres x 9 inch depthSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Scraper Bowl (volume) Basis:

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 0.80 MinutesManeuver and Spread Time: 0.70 MinutesJob Condition Correction:

Site Altitude: 5430 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	1.50	3.00	4.50	1667	0.49

Haul Time: 0.49 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-1.50	3.00	1.50	2914	0.38

Return Time: 0.38 minutesTotal Scraper team cycle time: 2.37 minutesAdjusted for job conditions: 609.37 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,218.73 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,218.73 LCY/HourUnadjusted unit production/hour: 734.18 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 14.90 HoursUnit cost: \$1.667 /LCYTotal job cost: \$30,271

REVEGETATION WORKTask description: Revegetate 12.35 acresSite: Glacier RockPermit Action: TR2Permit/Job#: M1994096**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 3/24/2025County: LarimerFilename: M096-005User: JR2Agency 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
Total Tilling Cost/Acre	\$102.41

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Big Bluestem - Kaw	0.44	1.31	\$6.90
Indiangrass - Cheyenne	0.35	1.07	\$4.31
Switchgrass - Blackwell	0.25	2.23	\$3.30
Blue Grama - Lovington	0.15	2.45	\$4.16
Sideoats Grama - Vaughn	0.68	2.23	\$16.72
Western Wheatgrass - Arriba	3.20	8.08	\$28.91
Needlegrass, Green - Lodorm	0.50	2.08	\$4.32
Totals Seed Mix	5.57	19.45	\$68.63

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}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Total Mulch Application Cost/Acre	\$85.37

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: 12.35 Cost /Acre: \$1,478.61
 Estimated Failure Rate: 25% Cost /Acre*: \$305.27
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$18,260.83**
 Reseeding Job Cost: **\$942.52**
 Total Job Cost: **\$19,203**
 Job Hours: **12.35**

BULLDOZER RIPPING WORK

Task description: Rip recycling yard

Site: Glacier Rock Permit Action: TR2 Permit/Job#: M1994096

PROJECT IDENTIFICATION

Task #: 006 State: Colorado Abbreviation: None
Date: 3/24/2025 County: Larimer Filename: M096-006
User: JR2

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS XR Series II Horsepower: 240
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$90.24</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$78.95</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$9.25</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$5.20</u>	<u>100</u>
Operator Cost/Hour:	<u>\$40.04</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$223.68</u>	
Total Fleet Cost/Hour:	<u>\$223.68</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 2.90 acres Rip Depth (ft): 1.50 Volume: 7,018 BCY or CCY

Source of estimated quantity: DRMS

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.45</u>	<u>feet/pass</u>
Average Ripping Width:	<u>6.50</u>	<u>feet/pass</u>
Average Ripping Length:	<u>700.00</u>	<u>feet/pass</u>
Average Dozer Speed:	<u>88.00</u>	<u>feet/minute</u>
Average Maneuver Time:	<u>0.25</u>	<u>minutes/pass</u>
Production per unit area:	<u>0.764</u>	<u>acres/hour</u>

Job Condition Correction Factors

Unadjusted Hourly Unit Production:	<u>0.764</u>	<u>Acres/hr</u>
Site Altitude:	<u>5,430</u>	<u>feet</u>
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.83</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 0.63 Acres/hr
Adjusted Hourly Fleet Production: 0.63 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 4.57 Hours

Unit cost: \$352.800 Per acre Total job cost: \$1,023

SCRAPER TEAM WORKTask description: Retopsoil 2.9 acres at 6 inch depth - recycling yardSite: Glacier RockPermit Action: TR2Permit/Job#: M1994096**PROJECT IDENTIFICATION**Task #: 007State: ColoradoAbbreviation: NoneDate: 3/24/2025County: LarimerFilename: M096-007User: JR2Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 631G
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	Cat D7R DS XR Series II
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown:

Scraper Work Team

Support Equipment

Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	100	100	100
Ownership cost/hour:	\$442.19	NA	NA	\$90.24	\$129.81	\$11.65
Operating cost/hour:	\$252.89	NA	NA	\$78.95	\$89.13	\$22.45
%Utilization-ripper:	NA	NA	NA	NA	50	NA
Ripper own. cost/hour:	NA	NA	NA	\$0.00	\$5.75	\$0.00
Ripper op. cost/hour:	NA	NA	NA	\$0.00	\$2.09	\$0.00
Operator cost/hour:	\$57.52	NA	NA	\$40.04	\$56.70	\$0.00
Unit Subtotals:	\$752.60	NA	NA	\$209.23	\$283.48	\$34.10
Number of Units:	2	0	0	1	1	1
Group Subtotals:	Work:	\$1,505.20	Support:	\$209.23	Maint:	\$317.58

Total work team cost/hour: \$2,032.01**MATERIAL QUANTITIES**Initial volume: 2,339

CCY

Swell factor: 1.215Loose volume: 2,842

LCY

Source of estimated volume: 2.9 acres x 6 inch depthSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Scraper Bowl (volume) Basis:

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 0.80 MinutesManeuver and Spread Time: 0.70 MinutesJob Condition Correction:

Site Altitude: 5430 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	1.50	3.00	4.50	1667	0.49

Haul Time: 0.49 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-1.50	3.00	1.50	2914	0.38

Return Time: 0.38 minutesTotal Scraper team cycle time: 2.37 minutesAdjusted for job conditions: 609.37 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,218.73 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,218.73 LCY/HourUnadjusted unit production/hour: 734.18 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 2.33 HoursUnit cost: \$1.667 /LCYTotal job cost: \$4,738

REVEGETATION WORKTask description: Revegetate 2.9 acres - recycling yardSite: Glacier RockPermit Action: TR2Permit/Job#: M1994096**PROJECT IDENTIFICATION**Task #: 008State: ColoradoAbbreviation: NoneDate: 3/24/2025County: LarimerFilename: M096-008User: JR2Agency 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
Total Tilling Cost/Acre	\$102.41

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Big Bluestem - Kaw	0.44	1.31	\$6.90
Indiangrass - Cheyenne	0.35	1.07	\$4.31
Switchgrass - Blackwell	0.25	2.23	\$3.30
Blue Grama - Lovington	0.15	2.45	\$4.16
Sideoats Grama - Vaughn	0.68	2.23	\$16.72
Western Wheatgrass - Arriba	3.20	8.08	\$28.91
Needlegrass, Green - Lodorm	0.50	2.08	\$4.32
Totals Seed Mix	5.57	19.45	\$68.63

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}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Total Mulch Application Cost/Acre	\$85.37

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: 2.9 Cost /Acre: \$1,478.61
 Estimated Failure Rate: 25% Cost /Acre*: \$305.27
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$4,287.97**
 Reseeding Job Cost: **\$221.32**
 Total Job Cost: **\$4,509**
 Job Hours: **5.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Mobilization/DemobilizationSite: Glacier RockPermit Action: TR2Permit/Job#: M1994096**PROJECT IDENTIFICATION**Task #: 009State: ColoradoAbbreviation: NoneDate: 3/24/2025County: LarimerFilename: M096-009User: JR2Agency 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:	\$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 D7R DS XR Series II	32.01	\$90.24	\$122.78	1	\$213.02	\$122.78	\$250.00
Cat D7R DS XR Series II	35.93	\$99.49	\$122.78	1	\$222.27	\$122.78	\$250.00
CAT 14M	23.57	\$135.56	\$59.44	1	\$195.00	\$59.44	\$250.00
Cat 631G	52.50	\$442.19	\$125.64	1	\$567.83	\$125.64	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00

Subtotals: **\$1,298.58** **\$490.08** **\$1,250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 2,500 Gal.	\$34.10	1	\$34.10	\$34.10

Subtotals: **\$34.10** **\$34.10**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: FORT COLLINS
 Total one-way travel distance: 16.00 miles
 Average Travel Speed: 55.00 mph

Total Non-Roadable Mob/Demob Cost * \$10,033.57
 ** two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$19.84
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.29	0.29
Return Time (Hours):	0.29	0.29
Loading Time (Hours):	1.25	NA
Unloading Time (Hours):	1.25	NA
Subtotals:	3.08	0.58

JOB TIME AND COST

Total job time: 6.16 Hours

Total job cost: \$10,053