



July 22, 2025

Alan Parkerson  
Parkerson Construction, Inc.  
710 S. 15th St  
Grand Junction, CO 81501

***RE: 32 Road Pit, Permit No. M-1985-219, Proposed Surety Increase (SI-4)***

Dear Mr. Parkerson:

This reclamation cost update was in response to the site inspection conducted on July 8, 2025. It is Division policy to periodically update its costs to ensure that the Financial Warranty adequately, reflects the actual current cost of fulfilling the requirements of the approved reclamation plan.

The bond was last recalculated in 2022 with SI-3 which used 2021 costs. Below is a table summarizing input values that have been updated based on site conditions, **changes are in red**. This table does not account for price changes resulting from inflation or other RS Means cost changes. Bond calculations are based on a combination of field observations and worst case scenario based on the approved reclamation plan.

Task	Form Used	Description
01a	Demo	Remove scale house (on-site disposal) and scale
02a	Scraper	Transport backfill material for ag field highwall 330 LF @ 15 ft. high vertical to 3H:1V = 3988 CCY, transported 1200LF <b>Increased support Dozer dump area 100% since no separate grading task for transported material placement</b> <b>Added Grader @30%, adjusted water to 30% and adjusted Rolling Resistance to 3.0</b>
02b	Scraper	Topsoil graded ag field highwall 50'x330' = 0.38 @ 3" = 160 CY, transported 1200 LF



		<p>Increased support Dozer dump area 100% since no separate grading task for transported material placement</p> <p>Added Grader @30%, adjusted water to 30% and adjusted Rolling Resistance to 3.0</p>
02c	Reveg	Reveg w/dryland mix graded area and transport path ½ ac
03a	Scraper	<p>Regrade all highwalls slopes to 3H:1V</p> <p>Total 146,936 cy of material transported avg of 400 LF</p> <p>15'H x 1400LF vert =16917 CY overburden stripped areas needs backfill,</p> <p>20'H x 1400LF vert=7519CY gravel bench areas cut fill,</p> <p>35'H x 3600LF 1:1 to 2:1=122,500 misc. unreclaimed slopes need additional backfill placement</p> <p>Increased support Dozer dump area 100% since no separate grading task for transported material placement</p> <p>Added Grader @30%, adjusted water to 30% and adjusted Rolling Resistance to 3.0</p>
03b	Dozer	<p>Topsoil slopes</p> <p>5000LF x 115ft = 13.20 ac @ 3" = 5324 CY</p>
03c	Reveg	Reveg all slopes with dryland mix
04a	Scraper	<p>Apply overburden to pit floor</p> <p>20 ac @ 20" = 56, 446 ac transported 400 LF</p> <p>Increased support Dozer dump area 100% since no separate grading task for transported material placement</p> <p>Added Grader @30%, adjusted water to 30% and adjusted Rolling Resistance to 3.0</p>
04b	Scraper	<p>Apply topsoil to pit floor</p> <p>20 ac @ 3" = 8067 cy transported 400 LF</p> <p>Increased support Dozer dump area 100% w ripper</p> <p>Removed water truck</p>
04c	Reveg	Reveg pit floor w/ alfalfa
05a	Mob	<p>Initial Mobilization</p> <p>Removed Loader 972 and Dump truck (use dozer for demo), add motor grader</p>

05b	Mob	Secondary Mobilization
Indirect		<b>Adding Engineering -Bid Prep per Division Policy 4.5% or contract amount</b>

Per policy I wanted to send this out for review prior to issuance. Please look it over and let me know if there are errors or concerns. If no response is received by **Friday, August 8, 2025** then I'll issue SI-4 the following Monday as is. SI-4 will result in a total required bond amount of **\$535,645**, which is an increase of \$184,607 over the \$351,038 currently held.

Please feel free to contact me with any further questions. Amy Yeldell at the Division of Reclamation, Mining and Safety, Rm 215, 1001 E 62<sup>nd</sup> Ave, Denver CO 80216. Direct contact can be made by phone at 970-210-1272 or via email at amy.yeldell@ state.co.us

Sincerely,



**Amy Yeldell**  
Environmental Protection Specialist

Ec:  
Travis Marshall, Senior EPS, Grand Junction DRMS

## COST SUMMARY WORK

Task description: Post Inspection Update

Site: 32 Road Pit

Permit Action: 2025

Permit/Job#: M1985219

### PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 7/22/2025

County: Mesa

Filename: M219-ACY

User: ACY

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Remove site debris	DEMOLISH	1	4.00	\$109
02a	Regrade Ag field slope	SCRAPER1	2	2.53	\$8,577
02b	Topsoil Ag field slope	SCRAPER1	2	0.11	\$371
02c	Reveg of ag feild slope w/ dryland mix	REVEGE	1	4.00	\$1,554
03a	Regrade pit slope to 3H:1V	SCRAPER1	2	63.24	\$214,238
03b	Push topsoil over highwall slopes	DOZER	2	3.71	\$2,579
03c	Reveg of slopes w dryland mix	REVEGE	1	20.00	\$41,035
04a	Apply overburden to pit floor	SCRAPER1	2	25.28	\$85,652
04b	Apply topsoil to pit floor	SCRAPER1	2	3.78	\$12,340
04c	Reveg of pit floor w/ alfalfa	REVEGE	1	24.00	\$49,471
05a	Initial mobilization to site	MOBILIZE	1	2.53	\$10,590
05b	Secondary mobilization to site	MOBILIZE	1	2.53	\$1,525
<b><u>SUBTOTALS:</u></b>				<b>155.71</b>	<b>\$428,041</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$8,646

Performance bond: 1.05

Total = \$4,494

Job superintendent: 77.86

Total = \$5,849

Profit: 10.00

Total = \$42,804

TOTAL O & P = \$61,794

CONTRACT AMOUNT (direct + O & P) = \$489,835

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$20,818

Reclamation management and/or administration: 5.00

\$24,492

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$107,604

**TOTAL BOND AMOUNT (direct + indirect) = \$535,645**

## DEMOLITION WORK

Task description: Remove site debris

Site: 32 Road Pit

Permit Action: 2025

Permit/Job#: M1985219

### PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 7/22/2025

County: Mesa

Filename: M219-01a

User: ACY

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 90.70 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Scale house	8x8x8	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	512.00	CF	\$0.24	\$120.58

Job Hours: 4.00

Subtotal  
(unadjusted): \$120.58

Total Cost  
(adjusted for location): \$109.37

**SCRAPER TEAM WORK**Task description: **Regrade Ag field slope**Site: **32 Road Pit**Permit Action: 2025Permit/Job#: M1985219**PROJECT IDENTIFICATION**Task #: 02AState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M219-02aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	CAT 140M
-Water Truck:	Water Tanker, 3,500 Gal.

**Cost Breakdown:****Scraper Work Team****Support Equipment****Maintenance Equipment**

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	100	30	30
Ownership cost/hour:	\$285.51	NA	\$179.60	\$179.60	\$51.45	\$17.97
Operating cost/hour:	\$313.00	NA	\$55.23	\$110.45	\$12.79	\$10.52
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$59.78	NA	\$39.46	\$39.46	\$58.07	\$0.00
Unit Subtotals:	\$658.29	NA	\$274.28	\$329.51	\$122.31	\$28.49
Number of Units:	4	0	1	1	1	1
Group Subtotals:	Work: \$2,633.16		Support: \$603.79		Maint: \$150.80	

Total work team cost/hour: **\$3,387.75****MATERIAL QUANTITIES**Initial volume: 3,988

CCY

Swell factor: 1.125Loose volume: **4,487**

LCY

Source of estimated volume: 330' of 15'H vert slopeSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Earth - Dry packed</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>32.00 LCY</u>	Adjusted Capacity:	<b><u>29.00</u></b>	LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 4700 feet

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

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	1200.00	6.00	3.00	9.00	1042	1.19

Haul Time: 1.19 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	-6.00	3.00	-3.00	2972	0.47

Return Time: 0.47 minutesTotal Scraper team cycle time: 3.26 minutesAdjusted for job conditions: 886.01 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 886.01 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,772.02 LCY/HourUnadjusted unit production/hour: 1,067.48 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 2 Team(s)Total job time: 2.53 HoursUnit cost: \$1.912 /LCYTotal job cost: \$8,577

**SCRAPER TEAM WORK**Task description: Topsoil Ag field slopeSite: 32 Road PitPermit Action: 2025Permit/Job#: M1985219**PROJECT IDENTIFICATION**Task #: 02BState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M0219-02bUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	CAT 140M
-Water Truck:	Water Tanker, 3,500 Gal.

**Cost Breakdown:**

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	100	30	30
Ownership cost/hour:	\$285.51	NA	\$179.60	\$179.60	\$51.45	\$17.97
Operating cost/hour:	\$313.00	NA	\$55.23	\$110.45	\$12.79	\$10.52
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$59.78	NA	\$39.46	\$39.46	\$58.07	\$0.00
Unit Subtotals:	\$658.29	NA	\$274.28	\$329.51	\$122.31	\$28.49
Number of Units:	4	0	1	1	1	1
Group Subtotals:	Work:	\$2,633.16	Support:	\$603.79	Maint:	\$150.80

Total work team cost/hour: \$3,387.75**MATERIAL QUANTITIES**Initial volume: 160

CCY

Swell factor: 1.215Loose volume: 194

LCY

Source of estimated volume: 330' x 50' graded slopeSource 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: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 4700 feet

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

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	1200.00	6.00	3.00	9.00	1042	1.18

Haul Time: 1.18 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	-6.00	3.00	-3.00	2972	0.47

Return Time: 0.47 minutesTotal Scraper team cycle time: 3.25 minutesAdjusted for job conditions: 888.74 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 888.74 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,777.48 LCY/HourUnadjusted unit production/hour: 1,070.77 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

JOB TIME AND COSTFleet size: 2 Team(s)Total job time: 0.11 HoursUnit cost: \$1.906 /LCYTotal job cost: \$371

REVEGETATION WORKTask description: Reveg of ag feild slope w/ dryland mixSite: 32 Road PitPermit Action: 2025Permit/Job#: M1985219PROJECT IDENTIFICATIONTask #: 02CState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M219-02cUser: ACYAgency or organization name: DRMSFERTILIZING**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.13
<b>Total Tilling Cost/Acre</b>	<b>\$114.13</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Crested Wheatgrass - Ephraim	8.00	36.73	\$44.98
Yellow Sweet Clover - Madrid	2.00	11.94	\$9.27
Tall Wheatgrass - Jose	22.00	39.90	\$129.47
<b>Totals Seed Mix</b>	<b>32.00</b>	<b>88.57</b>	<b>\$183.73</b>

**Application**

Description	Cost /Acre
Broadcast seeding [DMG]	\$279.08

<b>Total Seed Application Cost/Acre</b>	<b>\$279.08</b>
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**MULCHING and MISCELLANEOUS****Materials**

<b>Description</b>	<b>Units / Acre</b>	<b>Unit</b>	<b>Cost / Unit</b>	<b>Cost /Acre</b>
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.44	\$4.44
Straw, delivered	2.00	TON	\$504.56	\$1,009.12
<b>Total Mulch Materials Cost/Acre</b>				<b>\$1,013.56</b>

**Application**

<b>Description</b>	<b>Cost /Acre</b>
Crimping, with tractor {DMG survey data}	\$239.35
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, non-aquatic area, nox. [DMG]	\$249.08
<b>Total Mulch Application Cost/Acre</b>	<b>\$630.00</b>

**NURSERY STOCK PLANTING**

<b>Common Name</b>	<b>No / Acre</b>	<b>Type and Size</b>	<b>Planting Cost</b>	<b>Fertilizer Pellet Cost</b>	<b>Cost /Acre</b>
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres: 0.5 Cost /Acre: \$2,220.50  
 Estimated Failure Rate: 40% Cost /Acre\*: \$2,220.50  
 \*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$1,110.25**  
 Reseeding Job Cost: **\$444.10**  
 Total Job Cost: **\$1,554**  
 Job Hours: **4.00**

**SCRAPER TEAM WORK**Task description: Regrade pit slope to 3H:1VSite: 32 Road PitPermit Action: 2025Permit/Job#: M1985219**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M219-03aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	CAT 140M
-Water Truck:	Water Tanker, 3,500 Gal.

**Cost Breakdown:****Scraper Work Team****Support Equipment****Maintenance Equipment**

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	100	30	30
Ownership cost/hour:	\$285.51	NA	\$179.60	\$179.60	\$51.45	\$17.97
Operating cost/hour:	\$313.00	NA	\$55.23	\$110.45	\$12.79	\$10.52
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$59.78	NA	\$39.46	\$39.46	\$58.07	\$0.00
Unit Subtotals:	\$658.29	NA	\$274.28	\$329.51	\$122.31	\$28.49
Number of Units:	4	0	1	1	1	1
Group Subtotals:	Work: \$2,633.16		Support: \$603.79		Maint: \$150.80	

Total work team cost/hour: \$3,387.75**MATERIAL QUANTITIES**Initial volume: 146,936

CCY

Swell factor: 1.125Loose volume: 165,303

LCY

Source of estimated volume: 5000LF of varying slope to 3:1-see attachedSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Earth - Dry packed</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>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 4700 feet

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

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	400.00	6.00	3.00	9.00	1042	0.42

Haul Time: 0.42 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	-6.00	3.00	-3.00	2972	0.19

Return Time: 0.19 minutesTotal Scraper team cycle time: 2.21 minutesAdjusted for job conditions: 1,306.97 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,306.97 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 2,613.94 LCY/HourUnadjusted unit production/hour: 1,574.66 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 2 Team(s)Total job time: 63.24 HoursUnit cost: \$1.296 /LCYTotal job cost: \$214,238

**BULLDOZER WORK**Task description: Push topsoil over highwall slopesSite: 32 Road PitPermit Action: 2025Permit/Job#: M1985219**PROJECT IDENTIFICATION**Task #: 03BState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M219-03bUser: ACYAgency 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:	\$179.60	NA
Operating Cost/Hour:	\$110.45	100
Ripper own. Cost/Hour:	\$15.28	NA
Ripper op. Cost/Hour:	\$2.29	25
Operator Cost/Hour:	\$39.46	NA

Total unit Cost/Hour: \$347.07Total Fleet Cost/Hour: \$694.15**MATERIAL QUANTITIES**Initial Volume: 5,324Swell factor: 1.215Loose volume: 6,469 LCYSource of estimated volume: 5000LF x 115'=13.20ac @ 3"Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 852.6 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push gradient: -20 %Average site altitude: 4,700 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**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:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.0212

Adjusted unit production: 870.68 LCY/hr

Adjusted fleet production: **1741.36** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.399/LCY

Total job time: **3.71** Hours

Total job cost: **\$2,579**

REVEGETATION WORKTask description: Reveg of slopes w dryland mixSite: 32 Road PitPermit Action: 2025Permit/Job#: M1985219PROJECT IDENTIFICATIONTask #: 03CState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M219-03cUser: ACYAgency or organization name: DRMSFERTILIZING**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.13
<b>Total Tilling Cost/Acre</b>	<b>\$114.13</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Crested Wheatgrass - Ephraim	8.00	36.73	\$44.98
Yellow Sweet Clover - Madrid	2.00	11.94	\$9.27
Tall Wheatgrass - Jose	22.00	39.90	\$129.47
<b>Totals Seed Mix</b>	<b>32.00</b>	<b>88.57</b>	<b>\$183.73</b>

**Application**

Description	Cost /Acre
Broadcast seeding [DMG]	\$279.08



<b>Total Seed Application Cost/Acre</b>	<b>\$279.08</b>
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**MULCHING and MISCELLANEOUS****Materials**

<b>Description</b>	<b>Units / Acre</b>	<b>Unit</b>	<b>Cost / Unit</b>	<b>Cost / Acre</b>
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.44	\$4.44
Straw, delivered	2.00	TON	\$504.56	\$1,009.12
<b>Total Mulch Materials Cost/Acre</b>				<b>\$1,013.56</b>

**Application**

<b>Description</b>	<b>Cost / Acre</b>
Crimping, with tractor {DMG survey data}	\$239.35
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, non-aquatic area, nox. [DMG]	\$249.08
<b>Total Mulch Application Cost/Acre</b>	<b>\$630.00</b>

**NURSERY STOCK PLANTING**

<b>Common Name</b>	<b>No / Acre</b>	<b>Type and Size</b>	<b>Planting Cost</b>	<b>Fertilizer Pellet Cost</b>	<b>Cost / Acre</b>
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres: 13.2 Cost /Acre: \$2,220.50  
 Estimated Failure Rate: 40% Cost /Acre\*: \$2,220.50  
 \*Selected Replanting Work Items: TILLING,SEEDING,MULCHING  
 Initial Job Cost: \$29,310.60  
 Reseeding Job Cost: \$11,724.24  
 Total Job Cost: \$41,035  
 Job Hours: 20.00

**SCRAPER TEAM WORK**Task description: Apply overburden to pit floorSite: 32 Road PitPermit Action: 2025Permit/Job#: M1985219**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M219-04aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	CAT 140M
-Water Truck:	Water Tanker, 3,500 Gal.

**Cost Breakdown:**

## Scraper Work Team

## Support Equipment

## Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	100	30	30
Ownership cost/hour:	\$285.51	NA	\$179.60	\$179.60	\$51.45	\$17.97
Operating cost/hour:	\$313.00	NA	\$55.23	\$110.45	\$12.79	\$10.52
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$59.78	NA	\$39.46	\$39.46	\$58.07	\$0.00
Unit Subtotals:	\$658.29	NA	\$274.28	\$329.51	\$122.31	\$28.49
Number of Units:	4	0	1	1	1	1
Group Subtotals:	Work: \$2,633.16		Support: \$603.79		Maint: \$150.80	

Total work team cost/hour: \$3,387.75**MATERIAL QUANTITIES**Initial volume: 56,446

CCY

Swell factor: 1.125Loose volume: 63,502

LCY

Source of estimated volume: 20ac @ 20"Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Scraper Bowl (volume) Basis:

Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Earth - Dry packed</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>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 4700 feet

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

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	400.00	0.00	3.00	3.00	2800	0.42

Haul Time: 0.42 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	0.00	3.00	3.00	2949	0.28

Return Time: 0.28 minutesTotal Scraper team cycle time: 2.30 minutesAdjusted for job conditions: 1,255.83 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,255.83 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 2,511.65 LCY/HourUnadjusted unit production/hour: 1,513.04 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 2 Team(s)Total job time: 25.28 HoursUnit cost: \$1.349 /LCYTotal job cost: \$85,652

**SCRAPER TEAM WORK**Task description: Apply topsoil to pit floorSite: 32 Road PitPermit Action: 2025Permit/Job#: M1985219**PROJECT IDENTIFICATION**Task #: 04BState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M219-04bUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

**Cost Breakdown:**

## Scraper Work Team

## Support Equipment

## Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	100	NA	NA
Ownership cost/hour:	\$285.51	NA	\$179.60	\$179.60	NA	NA
Operating cost/hour:	\$313.00	NA	\$55.23	\$110.45	NA	NA
%Utilization-ripper:	NA	NA	NA	100	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$15.28	NA	NA
Ripper op. cost/hour:	NA	NA	\$0.00	\$9.14	NA	NA
Operator cost/hour:	\$59.78	NA	\$39.46	\$39.46	NA	NA
Unit Subtotals:	\$658.29	NA	\$274.28	\$353.93	NA	NA
Number of Units:	4	0	1	1	0	0
Group Subtotals:	Work: \$2,633.16		Support: \$628.21		Maint:	\$0.00

Total work team cost/hour: \$3,261.37**MATERIAL QUANTITIES**Initial volume: 8,067

CCY

Swell factor: 1.215Loose volume: 9,801

LCY

Source of estimated volume: 20ac @ 3"Source 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: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 4700 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	0.00	5.00	5.00	1867	0.31

Haul Time: 0.31 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	0.00	5.00	5.00	2795	0.32

Return Time: 0.32 minutesTotal Scraper team cycle time: 2.23 minutesAdjusted for job conditions: 1,295.25 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,295.25 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 2,590.49 LCY/HourUnadjusted unit production/hour: 1,560.54 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 2 Team(s)Total job time: 3.78 HoursUnit cost: \$1.259 /LCYTotal job cost: \$12,340

**REVEGETATION WORK**Task description: Reveg of pit floor w/ alfalfaSite: 32 Road PitPermit Action: 2025Permit/Job#: M1985219**PROJECT IDENTIFICATION**Task #: 04CState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M219-04cUser: ACYAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.13
<b>Total Tilling Cost/Acre</b>	<b>\$114.13</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	15.00	72.31	\$61.30
<b>Totals Seed Mix</b>	<b>15.00</b>	<b>72.31</b>	<b>\$61.30</b>

**Application**

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$242.30
	<b>\$242.30</b>

<b>Total Seed Application Cost/Acre</b>	
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**MULCHING and MISCELLANEOUS****Materials**

<b>Description</b>	<b>Units / Acre</b>	<b>Unit</b>	<b>Cost / Unit</b>	<b>Cost / Acre</b>
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.44	\$4.44
Straw, delivered	2.00	TON	\$504.56	\$1,009.12
<b>Total Mulch Materials Cost/Acre</b>				<b>\$1,013.56</b>

**Application**

<b>Description</b>	<b>Cost / Acre</b>
Crimping, with tractor {DMG survey data}	\$239.35
Power mulcher (MEANS 32 91 13.16 0350)	\$141.57
Weed spray, truck, non-aquatic area, nox. [DMG]	\$249.08
<b>Total Mulch Application Cost/Acre</b>	<b>\$630.00</b>

**NURSERY STOCK PLANTING**

<b>Common Name</b>	<b>No / Acre</b>	<b>Type and Size</b>	<b>Planting Cost</b>	<b>Fertilizer Pellet Cost</b>	<b>Cost / Acre</b>
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres:	20	Cost /Acre:	\$2,061.29
Estimated Failure Rate:	20%	Cost /Acre*:	\$2,061.29
*Selected Replanting Work Items:	TILLING,SEEDING,MULCHING		
Initial Job Cost:	<b>\$41,225.80</b>		
Reseeding Job Cost:	<b>\$8,245.16</b>		
Total Job Cost:	<b>\$49,471</b>		
Job Hours:	<b>24.00</b>		

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Initial mobilization to site**Site: **32 Road Pit**Permit Action: 2025Permit/Job#: M1985219**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M219-05aUser: 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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
Ownership Cost/Hour:	\$21.47	\$38.32	\$48.96
Operating Cost/Hour:	\$31.47	\$60.11	\$65.86
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$22.25	\$22.25
Total Unit Cost/Hour:	\$75.46	\$143.20	\$159.59

**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 637G w/push-pull	59.59	\$285.51	\$159.59	4	\$1,780.40	\$638.36	\$500.00
Cat D8T - 8SU	53.08	\$194.88	\$159.59	3	\$1,063.41	\$478.77	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$5.99	\$75.46	1	\$81.45	\$75.46	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$29.91	\$75.46	1	\$105.37	\$75.46	\$250.00
CAT 140M	16.68	\$51.45	\$75.46	1	\$126.91	\$75.46	\$250.00

Subtotals: **\$3,157.54** **\$1,343.51** **\$1,500.00****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	\$86.86	1	\$86.86	\$86.86
Water Tanker, 3,500 Gal.	\$53.04	1	\$53.04	\$53.04
Light Duty Pickup, 4x4, 1 T. Crew	\$141.71	1	\$141.71	\$141.71



Subtotals: 

<b>\$281.61</b>	<b>\$281.61</b>
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**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: GRAND JUNCTION  
 Total one-way travel distance: 4.00 miles  
 Average Travel Speed: 30.00 mph

Total Non-Roadable Mob/Demob Cost \* \$10,515.36  
 '\* two round trips with haul rig:  
 Total Roadable Mob/Demob Cost \*\* \$75.10  
 '\*\* one round trip, no haul rig:

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.13	0.13
Return Time (Hours):	0.13	0.13
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.27	0.27

**JOB TIME AND COST**

Total job time: 2.53 Hours

Total job cost: \$10,590

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: Secondary mobilization to siteSite: 32 Road PitPermit Action: 2025Permit/Job#: M1985219**PROJECT IDENTIFICATION**Task #: 05BState: ColoradoAbbreviation: NoneDate: 7/22/2025County: MesaFilename: M219-02bUser: 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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
Ownership Cost/Hour:	\$21.47	\$38.32	\$48.96
Operating Cost/Hour:	\$31.47	\$60.11	\$65.86
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$22.25	\$22.25
Total Unit Cost/Hour:	\$75.46	\$143.20	\$159.59

**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	\$5.99	\$75.46	1	\$81.45	\$75.46	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$29.91	\$75.46	1	\$105.37	\$75.46	\$250.00

Subtotals: **\$186.82** **\$150.92** **\$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	\$86.86	1	\$86.86	\$86.86
Light Duty Pickup, 4x4, 1 T. Crew	\$141.71	1	\$141.71	\$141.71

Subtotals: **\$228.57** **\$228.57**

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>GRAND JUNCTION</u>	
Total one-way travel distance:	<u>4.00</u>	miles
Average Travel Speed:	<u>30.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,463.70</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$60.95</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.13</u>	<u>0.13</u>
Return Time (Hours):	<u>0.13</u>	<u>0.13</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.27</u>	<u>0.27</u>

**JOB TIME AND COST**

Total job time: 2.53 Hours

Total job cost: \$1,525