

May 23, 2025

Michael Golliher Pete Lien & Sons, Inc. P.O. Box 440 Rapid City, SD 57709

### RE: St. Barbara Sand and Gravel Mine, Permit No. M-2004-013; Technical Revision (TR-4), Adequacy Review

Dear Mr. Golliher,

On May 19, 2025, the Division of Reclamation, Mining, and Safety (Division/DRMS) received the Technical Revision (TR-4) application requesting to increase the maximum disturbed area from 96 acres to 115 acres on the St. Barbara Sand and Gravel Mine, Permit No. M-2004-013, in Pueblo County. A review of the TR-4 application was completed by the Division and there are some items that require additional information/clarification. Please provide a response to the following item in a cover letter along with any supplemental items that may be required.

1. With the purposed increase of 19 acres to the maximum disturbed area, the required financial warranty was re-calculated by the Division. The proposed increase in disturbance would require a financial warranty of \$947,575.00, this is an increase of \$121,077.00 to the currently held bond for the permit. A copy of the Division's calculation for the reclamation cost estimate (RCE) is attached with this letter. Review the Division's calculated RCE and provide comments.

This concludes the Division's adequacy review of the TR-4 application for the St. Barbara Sand and Gravel Mine. The decision date for the TR-4 application is <u>June 18, 2025</u>. Please provide a response to the Division five (5) days prior to the decision date, June 13, 2025, to allow time for a review of the response. If more time is needed to address the item above, a written request to extend the decision date should be submitted to the Division before the decision date.

If you have any questions or concerns, please contact me by email at <u>Jocelyn.carter@state.co.us</u> or by phone at (720) 666-1065.

Sincerely,



May 23, 2025 Michael Golliher Pete Lien & Sons, Inc. Page **2** of **2** 

Jocelyn Carter Environmental Protection Specialist Division of Reclamation, Mining, and Safety

Enclosure: Division's Reclamation Cost Estimate

Ec: Amy Eschberger, DRMS Dakota DeBoer, Pete Lien & Sons, Inc.

### COST SUMMARY WORK

Permit Action:			
_	2025 TR04	Permit/Job#: M200401	3
Ī			
State: <u>Colorado</u> County: <u>Pueblo</u>		Abbreviation: None Filename: M013-000	
	State: <u>Colorado</u> County: <u>Pueblo</u>	State: <u>Colorado</u> County: <u>Pueblo</u>	State:       Colorado       Abbreviation:       None         County:       Pueblo       Filename:       M013-000

### TASK LIST (DIRECT COSTS)

Teek		Form	Fleet	Task	
1 ask	Description	Used	Size	Hours	Cost
001	Fill settling pond, 0.51 acres and 7.5' deep	DOZER	4	3.23	\$6,710
002	Fill processing ponds, 8.75 acres, avg 11.25' deep	TRUCK1	3	118.00	\$230,778
003	Topsoil 7-in on 96.3 acres	SCRAPER1	1	39.18	\$191,152
004	Reveg 96.3 Acres	REVEGE	1	48.00	\$302,616
005	Mob/Demob	MOBILIZE	1	3.33	\$28,004
		<u>SUBTO</u>	TALS:	211.74	\$759,260

# **INDIRECT COSTS**

### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$15,337
Performance bond:	1.05	Total =	\$7,972
Job superintendent:	105.87	Total =	\$8,392
Profit:	10.00	Total =	\$75,926
		TOTAL O & P =	\$107,628
		CONTRACT AMOUNT (direct + O & P) =	\$866,888

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.25	Total =	\$36,843
Reclamation management and/or administration:	5.00		\$43,344
CONTINGENCY:	0.00	Total =	\$0
		TOTAL INDIRECT COST =	\$188,315

TOTAL BOND AMOUNT (direct + indirect) = \$947,575

### Task # 001

# BULLDOZER WORK

St Raphana Sand and C-	aval Dama	ait Action.			
Si. Darbara Sand and Gr Mine	avei Pern	int Action:	2025 TR04	Permit/Job#:	M2004013
ROJECT IDENTIFICA	<b>ATION</b>				
Task #: 001	State:	Colorado		Abbreviation:	None
Date: 5/23/2025	County:	Pueblo		Filename:	M013-001
User: JLC					
Agency or organizat	tion name: <u>DR</u>	MS			
IOURLY EQUIPMENT	COST				
Basic Machine Cat D1	0T - 10SU				
Horsepower: 574	01 1050				
Blade Type: Semi-U	Iniversal				
Attachment: 3-shank	k ripper				
Shift Basis: 1 per da	ay				
Data Source: (CRG)					
ost Breakdown:					
USI DICANUOWII.			Utilization %		
Ownership Cost/Hour		\$257 39	NA		
Operating Cost/Hour:		\$196.93	100		
lipper own. Cost/Hour:		\$25.02	NA		
Ripper op. Cost/Hour:		\$0.59	5		
Operator Cost/Hour:		\$40.04	NA		
Initial Volume: 6,171 Swell factor: 1.125	ES	_			
Loose volume: 6.942 L0	CY				
	D' ' '				
ource of estimated volume:	Division of Lond	of Reclamati	on, Mining & Safety		
ource of estimated swell fac		DOOK			
ΙΛΙΙΒΙ Υ ΒΡΑΝΙΙΟΤΙΑ	N				
IOUKLY PRODUCTIO	<u> 11 </u>				
verage push distance:	250 feet				
Inadjusted hourly productior	n: 754.3 LCY/	nr			
Iaterials consistency descrip	tion: <u>Partly c</u>	onsolidated	stockpile 1.1		
verage push gradient: <u>0</u> verage site altitude: <u>4</u> ,	% 500 feet				
faterial weight: 2.	650 lbs/LCY				
Veight description: D	ecomposed rock	- 25% Rock	. 75% Earth		
			~ ~		
ab Condition Correction Fac	tor		Source		
	1	750	(1170)		
Operator Skill	l: <u>0.'</u>	750	(AVG.)		
Operator Skill Material consistency	l: 0.' . 1.'	750	(AVG.) (CAT HB)		

1.000	(AVG.)
0.830	(1 SHIFT/DAY)
1.000	(DOZ-OC)
1.000	(CAT HB)
1.000	(CAT HB)
0.868	(CAT HB)
1.000	(PAT)
0.7132	
	1.000 0.830 1.000 1.000 0.868 1.000 0.7132

Aujusteu unit production.	557.97 LC 1/III
Adjusted fleet production:	2151.88 LCY/hr

# JOB TIME AND COST

Fleet size:	4 Dozer(s)
Unit cost:	\$0.967/LCY

Total job time:	<b>3.23</b> Hours
Total job cost:	\$6,710

### Page 1 of 3

# TRUCK/LOADER TEAM WORK

PROJECT IDENTIFICATION         Task #:       002       State:       Colorado         Date:       5/23/2025       County:       Pueblo         User:       JLC       Agency or organization name:       DRMS         Equipment Descrip         Truck Loader Team -Truck:       Cat 730         -Loader:       CAT 972H         Support Equipment -Load Area:       NA         -Dump Area:       NA         Road Maintenance -Motor Grader:       CAT 14M         -Water Truck:       Water Tanker, 2,500 C         Cost Breakdown:       Truck/Loader Team       Support E         Wutilization-machine:       100       100       NA	Abb Shift basi otion Gal. Cquipment Dump Area	previation: <u>Nor</u> Filename: <u>M0</u> is: <u>1 per day</u> is: <u>1 mer day</u> Maintenan	ne 13-002
Task #:       002       State:       Colorado         Date:       5/23/2025       County:       Pueblo         User:       JLC       Agency or organization name:       DRMS         Equipment Descrip         Truck Loader Team -Truck:       Cat 730         -Loader:       CAT 972H         Support Equipment -Load Area:       NA         -Dump Area:       NA         Road Maintenance -Motor Grader:       CAT 14M         -Water Truck:       Water Tanker, 2,500 C         Cost Breakdown:       Truck/Loader Team       Support E         Wutilization-machine:       100       100       NA	Abb Shift basi otion Gal. Equipment Dump Area	maintenan Maintenan	ne 13-002
Date:       5/23/2025       County:       Pueblo         User:       JLC	Shift basi otion Gal. Cquipment Dump Area	Filename: <u>M0</u> is: <u>1 per day</u> Maintenan	
Agency or organization name:       DRMS         Equipment Descrip         Truck Loader Team -Truck:         Cat 730       -Loader:         CAT 972H       Support Equipment -Load Area:         NA       -Dump Area:         NA       -Dump Area:         Road Maintenance –Motor Grader:       CAT 14M         -Water Truck:       Water Tanker, 2,500 C         Cost Breakdown:       Truck/Loader Team       Support E         Multilization-machine:       100       100       NA	Shift basi otion Gal. Cquipment Dump Area	is: <u>1 per day</u> Maintenan	
HOURLY EQUIPMENT COST         Equipment Descrip         Truck Loader Team -Truck:       Cat 730         -Loader:       CAT 972H         Support Equipment -Load Area:       NA         -Dump Area:       NA         Road Maintenance –Motor Grader:       CAT 14M         -Water Truck:       Water Tanker, 2,500 C         Cost Breakdown:       Truck/Loader Team       Support E         Wutilization-machine:       100       100       NA	Shift basi otion Gal. Cquipment Dump Area	is: <u>1 per day</u> Maintenan	
HOURLY EQUIPMENT COST         Equipment Descrip         Truck Loader Team -Truck:       Cat 730         -Loader:       CAT 972H         Support Equipment -Load Area:       NA         -Dump Area:       NA         Road Maintenance –Motor Grader:       CAT 14M         -Water Truck:       Water Tanker, 2,500 C         Cost Breakdown:       Truck/Loader Team       Support E         Wutilization-machine:       100       100       NA	Shift basi otion Gal. Cquipment Dump Area	is: <u>1 per day</u> Maintenan	
Equipment Descrip         Truck Loader Team -Truck:       Cat 730         -Loader:       CAT 972H         Support Equipment -Load Area:       NA         -Dump Area:       NA         Road Maintenance –Motor Grader:       CAT 14M         -Water Truck:       Water Tanker, 2,500 C         Cost Breakdown:       Truck/Loader Team       Support E         Wutilization-machine:       100       100       NA	Gal. Cquipment Dump Area	Maintenan Motor Grader	
Iruck Loader Team - Truck:       Cat 730         -Loader:       CAT 972H         Support Equipment -Load Area:       NA         -Dump Area:       NA         Road Maintenance – Motor Grader:       CAT 14M         -Water Truck:       Water Tanker, 2,500 C         Cost Breakdown:       Truck/Loader Team       Support E         Multilization-machine:       100       100       NA	Gal. Equipment Dump Area	Maintenan Motor Grader	
Support Equipment -Load Area:       NA         -Dump Area:       NA         Road Maintenance –Motor Grader:       CAT 14M         -Water Truck:       Water Tanker, 2,500 C         Cost Breakdown:       Truck/Loader Team       Support E         Truck       Load Area         %Utilization-machine:       100       100       NA	Gal. Equipment Dump Area	Maintenan Motor Grader	
-Dump Area:     NA       Road Maintenance –Motor Grader:     CAT 14M       -Water Truck:     Water Tanker, 2,500 C       Cost Breakdown:     Truck/Loader Team     Support E       Truck     Loader     Load Area       %Utilization-machine:     100     100     NA	Gal. Equipment Dump Area	Maintenan Motor Grader	
Cost Breakdown:     Truck/Loader Team     Support E       Witilization-machine:     100     100     NA	Gal. Equipment Dump Area	Maintenan Motor Grader	
Cost Breakdown:     Truck/Loader Team     Support E       Truck     Loader     Load Area       %Utilization-machine:     100     100     NA	Equipment Dump Area	Maintenan Motor Grader	г ·
Cost Breakdown:         Truck/Loader Team         Support E           Truck         Loader         Load Area           %Utilization-machine:         100         100         NA	Dump Area	Maintenan Motor Grader	
%Utilization-machine: 100 100 NA			Water Truck
	ΝA	25	24
Ownership cost/hour: $\$108.67$ $\$62.43$ NA	NA	\$129.81	\$11.6
Operating cost/hour:         \$66.26         \$57.98         NA	NA	\$22.28	\$5.6
%Utilization-riper: NA 0 NA	NA	NA	NA
Ripper own. cost/hour:         NA         \$0.00         NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:     NA     \$0.00     NA	NA	\$0.00	\$0.00
Operator cost/hour:     \$24.82     \$56.64     NA       Linit Subtotola:     \$100.75     \$177.05     NA	NA	\$56.70	\$0.00
Offil Sublotals: $$199.75$ $$177.05$ NANumber of Units:630		\$208.79	\$17.20
Group Subtotals: Work: \$1 729.65 Support:	\$0.00	Maint:	\$226.05
T-4-1	<b>\$0.00</b>		<i><b>Q220.00</b></i>
Total work team cost/nour: $\underline{51,955.70}$			
MATERIAL QUANTITIES			
Initial volume: 158,813 CCY Swell f	factor: 1.125		
Loose volume: <b>178,665</b> LCY			
Source of estimated volume: Division of Reclamation	n, Mining & Safe	ty	
Source of estimated swell factor: Cat Handbook			
Total Cost: \$0.00			
HOUKLY PRODUCTION			
Truck Capacity:			
<u>Iruck Payload (weight) Basis:</u> Material weight: 2.650 Pounds/LCY			

Truck/Loader Worksheet Con	nt'd	Task # 002			Page 2 of 3	
Payload Capacity:	23.40	LCY				
Truck Bed (volume) Basis:						
Struck Volume:	17.10	LCY				
Heaped Volume:	22.10	LCY				
Average Volume:	19.60	LCY				
Adjusted Volume:	22.10	LCY				
Final	Truck Volume	Based on Number of I	Loader Passes:	18.48	LCY	
Loading Tool Capacity						
			Buck	tet Size Class: <u>N</u>	A	_
Rated Capacity:	5.600	LCY (heaped)				_
Bucket Fill Factor:	1.100	Other - rock/dirt r	nixtures (100	-120%) 1.100		_
Adjusted Capacity:	6.160	LCY				
Job Condition Corrections:	_	Site	Altitude (ft.): 4	500 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				
Leeder Teel Code There	NT 1				2	
Loading Tool Cycle Time:	Numbe	r of Loading Tool Pass	es Required to I	Fill Truck:	<u> </u>	asses
Excavators and Front Shove	ls:					
Machine Cycle Time v Selected Value v	s. Job Conditio vithin this Basi	n Rating: <u>NA</u> c Rating: NA				
Track Loaders –	Material Descr	iption:				
Cycle Time Elements (min.):		- <b>F</b>				
Load NA	λ	faneuver: NA		Dump: 0.100	)	
					,	
Wheel and Track Loaders -	Unadjusted Ba	asic Loader Cycle Time	e (load, dump, n	naneuver): 0	.525 minu	ites
Cycle Time Factors				Factor (min.)	Source	_
Material:	Mixed mater	ial 0.02		0.020	(Cat HB)	_
Stockpile:	Conveyor or	dozer piled 10 ft. high	and up 0.00	0.000	(Cat HB)	_
Truck Ownership:	Common ow	nership of trucks and lo	baders -0.04	-0.040	(Cat HB)	_
Operation:	Constant ope	ration -0.04		-0.040	(Cat HB)	_
Dump Target:	Nominal targ	et 0.00		0.000	(Cat HB)	_
		Net Cycle Time	Adjustment:	-0.060	minutes	
		Adjusted Loader	Cycle Time:	0.465	_ minutes	
		INEL LOAD 111	ie per Truck:	1.030	ininutes	
Truck Cycle Time:						
Truck Exchange Time	. 0.60	Minutes	Adjusted	for site altitude:	0.600	Minute
Truck Load Time	1.030	Minutes	Adjusted	for site altitude:	1.030	Minute
ck Maneuver and Dump Time	1.00	Minutes	Adjusted	for site altitude:	1.000	Minute
Truck Travel (Haul & Return maintained 3.0	<u>) Time:</u>	Road Condition: <u>Fi</u>	rm, smooth, roll	ling, dirt/lt. surface	d, watered,	

Seg #	Haul D	istance	Grade (%)	Roll Res	Total Res	Velocity	Travel	
Seg #	(E4)	istallee	Olade (70)	(0/)	(0/)	(fame)	Time	
	(Fl)			(%)	(%)	(Ipm)	(min)	
1	750.00		0.00	3.00	3.00	2183	0.607	
					Haul Time:	0.607	minutes	
Return R	Route:				_			
Seg #	Haul D	istance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	750.00		0.00	3.00	3.00	2936	0.410	
					Return Time.	0.410	minute	S
				Total Tru	ck Cycle Time:	3 647	minute	
				I Utal IIIu	CK CYCIC I IIIIC.	<b>J.UT</b> /	mmuu	s
I I' T	1 .				ek Cycle Tillie.	5.047	IIIIIuu	-8
Loading To	ool unit	(90.25	L CV/II		A dimete d formi	-1 -66	minut	LCV/II
Loading To Prod	ool unit luction	680.25	LCY/Hour	Total IIu	Adjusted for j	ob efficiency:	564.60	LCY/Hour
Loading To Proc Fruck Unit Proc	ool unit luction luction	680.25	LCY/Hour	Total Hu	Adjusted for j	ob efficiency:	564.60 252.35	LCY/Hour
Loading To Proc Fruck Unit Proc	ool unit luction luction	680.25 304.03	LCY/Hour LCY/Hour	Total Thu	Adjusted for j Adjusted for j	ob efficiency:	111144 564.60 252.35	LCY/Hour LCY/Hour
Loading To Proc Fruck Unit Proc ptimal No. of T	ool unit luction luction Frucks:	<u>680.25</u> <u>304.03</u> 2	LCY/Hour LCY/Hour Truck(s)	Total Thu	Adjusted for j Adjusted for j Selected Numl	ob efficiency: ob efficiency: ber of Trucks:	1111444 	LCY/Hour LCY/Hour Truck(s)
Loading To Proc Fruck Unit Proc ptimal No. of T	ool unit luction luction frucks:	680.25 304.03 2	LCY/Hour LCY/Hour Truck(s) Adjuste	ed hourly true	Adjusted for j Adjusted for j Selected Numl k team productio	ob efficiency: ob efficiency: ber of Trucks: on: 504	minux 564.60 252.35 2 69 LCY	LCY/Hour LCY/Hour Truck(s) //Hour
Loading To Proc Fruck Unit Proc ptimal No. of T	ool unit luction luction frucks:	680.25 304.03 2	LCY/Hour LCY/Hour Truck(s) Adjusted sing	ed hourly truc le truck/loade	Adjusted for j Adjusted for j Selected Numl k team production er team production	ob efficiency: ob efficiency: ber of Trucks: on: 504 on: 504	minux 564.60 252.35 2 .69 LCY .69 LCY	LCY/Hour LCY/Hour Truck(s) Z/Hour Z/Hour
Loading To Proc Fruck Unit Proc ptimal No. of T	ool unit luction luction frucks:	680.25 304.03 2	LCY/Hour LCY/Hour Truck(s) Adjusted Adjusted sing Adjusted multip	rd hourly truc le truck/loade le truck/loade	Adjusted for j Adjusted for j Selected Numl k team production r team production	ob efficiency: ob efficiency: ber of Trucks: on: 504 on: 504 on: 1,514		LCY/Hour LCY/Hour Truck(s) 7/Hour 7/Hour 7/Hour
Loading To Proc Fruck Unit Proc ptimal No. of T	ool unit duction duction Frucks:	680.25 304.03 2	LCY/Hour LCY/Hour Truck(s) Adjusted sing Adjusted multip	ed hourly truc le truck/loade le truck/loade	Adjusted for j Adjusted for j Selected Numl k team production er team production er team production	ob efficiency: ob efficiency: ber of Trucks: on: 504 on: 504 on: 1,514	111144 	LCY/Hour LCY/Hour Truck(s) 7/Hour 7/Hour 7/Hour
Loading To Proc Fruck Unit Proc ptimal No. of T	ool unit luction luction frucks: IME ANI	680.25 304.03 2 D COST	LCY/Hour LCY/Hour Truck(s) Adjusted sing Adjusted multip	ed hourly true le truck/loade le truck/loade	Adjusted for j Adjusted for j Selected Numl k team productio er team productio	ob efficiency:           ob efficiency:           ob efficiency:           ber of Trucks:           on:         504           on:         504           on:         1,514	<u>564.60</u> <u>252.35</u> <u>2</u> .69 LCY .69 LCY <b>4.07</b> LCY	LCY/Hour LCY/Hour Truck(s) 7/Hour 7/Hour 7/Hour
Loading To Proc Fruck Unit Proc ptimal No. of T JOB TI Flee	ool unit luction luction frucks: [ <u>ME ANI</u> t size:	680.25 304.03 2 D COST 3	<pre> LCY/Hour LCY/Hour Truck(s)</pre>	ed hourly truc le truck/loade le truck/loade	Adjusted for j Adjusted for j Selected Numl k team productio er team productio er team productio	0b efficiency:           ob efficiency:           ob efficiency:           ber of Trucks:           on:         504           on:         504           on:         118.0	<u>564.60</u> <u>252.35</u> <u>2</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u> <u>.69</u> <u>LCY</u>	LCY/Hour LCY/Hour Truck(s) //Hour //Hour //Hour

# SCRAPER TEAM WORK

	l'ask description:	Topsoil 7	-in on 96.3 acres				
Site:	St. Barbara Sand Mine	and Gravel	Permit Action:	2025 TR04	Perr	nit/Job#: <u>M200</u>	4013
]	PROJECT IDEN	<b>CIFICATION</b>					
	Task #: 003		State: Colorado		Abbrev	viation: None	
	Date: 5/23/20	25 C	ounty: Pueblo		Fil	ename: 003	
	User: JLC						
	Agency or c	rganization name	e: DRMS				
1	HOURLY FOUIP	MENT		COSTS	hift basis: 1 per d	av	
-				00010	init basis. <u>1 per u</u>	<u>ay</u>	
			Equipme	ent Description			
		-	-Dozer: Cat 03	0T - 10SU			
	Suppor	rt Equipment -Lo	ad Area: NA				
	D. 1M	-Dur	mp Area: NA	43.4			
	Road Ma	ntenance – Motor -Wate	er Truck: Water	<u>4M</u> Fanker, 2.500 Gal			
				<u>, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	-		
	Cost Breakdown:	Scraper W	ork Team	Support Equip	oment	Maintenance	Equipment
		Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water 1
%U	tilization-machine:	100	50	NA	NA	50	
Ov	vnership cost/hour:	\$329.66	\$257.39	NA	NA	\$129.81	\$
0	perating cost/hour:	\$347.48	\$98.47	NA	NA	\$44.57	\$
%	6Utilization-ripper:	NA	5	NA	NA	NA	
Rip	per own. cost/hour:	NA	\$25.02	NA	NA	\$0.00	
Ri	pper op. cost/hour:	NA	\$0.59	NA	NA	\$0.00	
(	Operator cost/hour:	\$57.52	\$40.04	NA	NA	\$56.70	
	Unit Subtotals:	\$734.66	\$421.50	NA	NA	\$231.07	\$
	Number of Units:	4	4	0	0	1	
	Group Subtotals:	Work:	\$4,624.64	Support:	\$0.00	Maint:	\$253.
-	Total work team cost	hour: <b>\$4,878.59</b>					
1	MATEDIAL OUA	NTITIES					
1	WATERIAL QUA	NIIIES					
	Initial volume:	90,629	$\frac{\text{CCY}}{\text{ICY}}$	Swell fact	tor: <u>1.125</u>		
		101,950					
	Source of	ree of estimated well	Volume: <u>TR-4 Ap</u>	plication			
	Source			GUUUK			
]	HOURLY PRODU	JCTION					
-				Scraper Bo	owl (volume) Basi	is:	
	Material weight	2 650 lbs/I CV		Struck 1	Volume: 24.00	т	CY
Ν	faterial description:	Decomposed ro	ck - 25% Rock,	Heaped	Volume: 34.00	L L	CY
	1	75% Earth	,	1 -			
		01 (00 1				-	

0.50 Minutes

0.60 Minutes

Payload Capacity: 30.79 LCY

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

Site Altitude: 4500 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 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	2.00	3.00	5.00	1867	0.67

Haul Time: **0.67** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	-2.00	3.00	1.00	2963	0.45
				Return Time:	0.45	minutes

Total Scraper team cycle time:	<b>2.22</b> 650.54	minutes LCY/Hour
Selected Number of Scrapers:	4	Scraper(s)
Adjusted single scraper team (unit) hourly production:	2,602.16	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	2,602.16	LCY/Hour
	· · · · ·	

Unadjusted unit production/hour: 783.78 LCY/Hour Optimal Number of Scrapers per push dozer:

#### JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	39.18	Hours
Unit cost:	\$1.875	/LCY	Total job cost:	\$191,152	

# **REVEGETATION WORK**

	Fask descrip	otion:	Reveg 96.3 Acr	es			
Site:	St. Barba Mine	ara Sand and	Gravel Pe	ermit Action:	2025 TR04	Permit/Jol	b#: M2004013
<u>P</u>	ROJECT	IDENTIFIC	CATION				
	Task #:	004	State:	Colorado		Abbreviation:	None
	Task #: Date:	004 5/23/2025	State: County:	Colorado Pueblo		_ Abbreviation: Filename:	None 004

### **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)	\$117.61
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$456.41

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	1.50	58.54	\$43.63
Switchgrass - Blackwell	4.00	35.72	\$52.88
Galleta	11.00	40.15	\$609.81
Western Wheatgrass - Barton	16.00	40.40	\$150.33
Totals Seed Mix	32.50	174.82	\$856.65

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
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Herbicide - 2,4D @ 1.0 pt/ac	2.00	ACRE	\$4.13	\$8.25
Total Mulch Materials Cost/Acre				\$993.81

### Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$85.37
Power mulcher (MEANS 32 91 13.16 0350)		\$157.25
Weed spray, truck, non-aquatic area, nox. [DMG]		\$83.26
	<b>Total Mulch Application Cost/Acre</b>	\$325.89

### **NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	ek Cost / Acre	\$0.00

### JOB TIME AND COST

Estimate	No. of Acres: ed Failure Rate:	96.3 15%	Cost /Acre: Cost /Acre*:	\$2,869.40 \$1,093.29
*Selected Replanti	ng Work Items:	SEEDING		
Initial Job Cost:	\$276,323.22		_	
Reseeding Job Cost:	\$15,792.57			
Total Job Cost:	\$292,116			
Job Hours:	48.00		-	

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Mine	nd and Grav	rel Permit	Action:2025	TR04	]	Permit/Job#: <u>M</u>	2004013
PROJECT IDEN	NTIFICATI	<u>ON</u>					
Task #: 005		State: Co	olorado		Abbre	eviation: None	
Date: 5/23	/2025	County: Pu	eblo		Fi	lename: 005	
User: JLC							
Agency of	r organizatior	n name: DRMS					
EOUIPMENT T	RANSPOR	T RIG COST					
					CL:AL.		
				C	Snill ba	sis. I per da $CPC Da$	<u>y</u>
				C	Jost Data Soul		la
Truck	Tractor Desc	ription: GENE	RIC ON-HIGH	WAY TRU	JCK TRACTO	DR, 6X4, DIESEI	POWERED,
				400 HP	(2ND HALF,	2006)	
Truck	Trailer Desc	ription: G	ENERIC FOLD	ING GOO	SENECK, DF	ROP DECK EQU	IPMENT
		1	7	<b>FRAILER</b>	(25T, 50T, AN	VD 100T)	
					3	· · · · · · · · · · · · · · · · · · ·	
Cost Breakdown:							
Available Rig Ca	pacities	0-25 Tons	26-50 Tons	51+	Tons		
Ownership	Cost/Hour:	\$10.44	\$22.18	\$2	3.94		
Operating	Cost/Hour:	\$26.48	\$54.55	\$5	5.65		
Operator	Cost/Hour:	\$22.52	\$22.52	\$2	2.52		
					2 52		
Helper	Cost/Hour:	\$0.00	\$23.53	\$2	.3.33		
Helper Total Unit	Cost/Hour: Cost/Hour:	\$0.00 \$59.44	\$23.53 \$122.78	\$2 \$12	25.64		
Helper Total Unit	Cost/Hour: Cost/Hour:	\$0.00 \$59.44	\$23.53 \$122.78	\$2 \$12	25.64		
Helper Total Unit	Cost/Hour: Cost/Hour: LE EQUIPN Weight/	\$0.00 \$59.44 MENT: Owner ship	\$23.53 \$122.78	\$2 \$12	5.55 25.64 Haul Trip	Return Trip	DOT Permi
Helper Total Unit NON ROADABI Machine Description	Cost/Hour: Cost/Hour: LE EQUIPN Weight/ Unit	\$0.00 \$59.44 <b>MENT:</b> Owner ship Cost/hr/ unit	\$23.53 \$122.78 Haul Rig	Fleet	Haul Trip	Return Trip Cost/hr/ fleet	DOT Permi Cost/ fleet
Helper Total Unit NON ROADABI Machine Description	Cost/Hour: Cost/Hour: LE EQUIPN Weight/ Unit (TONS)	\$0.00 \$59.44 <b>MENT:</b> Owner ship Cost/hr/ unit	\$23.53 \$122.78 Haul Rig Cost/hr/uni	\$2     \$12     Fleet     Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permi Cost/ fleet
Helper Total Unit NON ROADABI Machine Description	Cost/Hour: Cost/Hour: LE EQUIPN Weight/ Unit (TONS) 93.31	\$0.00 \$59.44 MENT: Owner ship Cost/hr/ unit \$282.41	\$23.53 \$122.78 Haul Rig Cost/hr/uni t \$125.64	Size 4	Haul Trip Cost/hr/ fleet \$1 632 20	Return Trip Cost/hr/ fleet	DOT Permi Cost/ fleet
Helper Total Unit NON ROADABI Machine Description Cat D10T - 10SU Cat 637G	Cost/Hour: Cost/Hour: <b>LE EQUIPN</b> Weight/ Unit (TONS) 93.31 57.28	\$0.00 \$59.44 <b>MENT:</b> Owner ship Cost/hr/ unit \$282.41 \$329.66	\$23.53 \$122.78 Haul Rig Cost/hr/uni t \$125.64 \$125.64	\$2 \$12 Fleet Size 4 4	Haul Trip Cost/hr/ fleet \$1,632.20 \$1 821 20	Return Trip Cost/hr/ fleet \$502.56 \$502.56	DOT Permi Cost/ fleet \$250.00 \$500.00
Helper Total Unit NON ROADABI Machine Description Cat D10T - 10SU Cat 637G CAT 14M	Cost/Hour: Cost/Hour: <b>E EQUIPN</b> Weight/ Unit (TONS) 93.31 57.28 23.57	\$0.00 \$59.44 <b>MENT:</b> Owner ship Cost/hr/ unit \$282.41 \$329.66 \$129.81	\$23.53 \$122.78 Haul Rig Cost/hr/uni t \$125.64 \$125.64 \$59.44	\$2           Fleet           Size           4           4           1	Haul Trip Cost/hr/ fleet \$1,632.20 \$1,821.20 \$189.25	Return Trip Cost/hr/ fleet \$502.56 \$502.56 \$59.44	DOT Permi Cost/ fleet \$250.00 \$500.00 \$250.00
Helper Total Unit NON ROADABI Machine Description Cat D10T - 10SU Cat 637G CAT 14M Hydroseeder with Tractor	Cost/Hour: Cost/Hour: <b>E EQUIPN</b> Weight/ Unit (TONS) 93.31 57.28 23.57 28.00	\$0.00 \$59.44 <b>MENT:</b> Owner ship Cost/hr/ unit \$282.41 \$329.66 \$129.81 \$45.21	\$23.53 \$122.78 Haul Rig Cost/hr/uni t \$125.64 \$125.64 \$59.44 \$122.78	\$2 \$12 Fleet Size 4 4 1 2	Haul Trip Cost/hr/ fleet \$1,632.20 \$1,821.20 \$189.25 \$335.98	Return Trip Cost/hr/ fleet \$502.56 \$502.56 \$59.44 \$245.56	DOT Permi Cost/ fleet \$250.00 \$500.00 \$500.00
Helper Total Unit NON ROADABI Machine Description Cat D10T - 10SU Cat 637G CAT 14M Hydroseeder with Tractor CAT 972H	Cost/Hour: Cost/Hour: <b>E EQUIPN</b> Weight/ Unit (TONS) 93.31 57.28 23.57 28.00 28.00	\$0.00 \$59.44 <b>MENT:</b> Owner ship Cost/hr/ unit \$282.41 \$329.66 \$129.81 \$45.21 \$62.43	\$23.53 \$122.78 Haul Rig Cost/hr/uni t \$125.64 \$125.64 \$59.44 \$122.78 \$122.78	\$2 \$12 Fleet Size 4 4 1 2	Haul Trip Cost/hr/ fleet \$1,632.20 \$1,821.20 \$189.25 \$335.98	Return Trip Cost/hr/ fleet \$502.56 \$502.56 \$59.44 \$245.56 \$368.34	DOT Permi Cost/ fleet \$250.00 \$500.00 \$500.00 \$250.00
Helper Total Unit NON ROADABI Machine Description Cat D10T - 10SU Cat 637G CAT 14M Hydroseeder with Tractor CAT 972H Cat 730	Cost/Hour: Cost/Hour: <b>E EQUIPN</b> Weight/ Unit (TONS) 93.31 57.28 23.57 28.00 28.00 25.19	\$0.00 \$59.44 <b>MENT:</b> Owner ship Cost/hr/ unit \$282.41 \$329.66 \$129.81 \$45.21 \$62.43 \$108.67	\$23.53 \$122.78 Haul Rig Cost/hr/uni t \$125.64 \$125.64 \$59.44 \$122.78 \$122.78 \$122.78 \$122.78	\$2           Fleet           Size           4           1           2           3           6	Haul Trip Cost/hr/ fleet \$1,632.20 \$1,821.20 \$189.25 \$335.98 \$555.63 \$1,008.66	Return Trip Cost/hr/ fleet \$502.56 \$502.56 \$59.44 \$245.56 \$368.34 \$356.64	DOT Permi Cost/ fleet \$250.00 \$500.00 \$250.00 \$2,000.00 \$2,000.00
Helper Total Unit NON ROADABI Machine Description Cat D10T - 10SU Cat 637G CAT 14M Hydroseeder with Tractor CAT 972H Cat 730 Power Mulcher (Bowie LD-90)	Cost/Hour: Cost/Hour: <b>E EQUIPN</b> Weight/ Unit (TONS) 93.31 57.28 23.57 28.00 25.19 6.00	\$0.00 \$59.44 <b>MENT:</b> Owner ship Cost/hr/ unit \$282.41 \$329.66 \$129.81 \$45.21 \$62.43 \$108.67 \$27.21	\$23.53 \$122.78 Haul Rig Cost/hr/uni t \$125.64 \$125.64 \$59.44 \$122.78 \$122.78 \$122.78 \$59.44 \$59.44	\$2           Fleet           Size           4           1           2           3           6           1	Haul Trip Cost/hr/ fleet \$1,632.20 \$1,821.20 \$189.25 \$335.98 \$555.63 \$1,008.66 \$86.65	Return Trip Cost/hr/ fleet \$502.56 \$502.56 \$59.44 \$245.56 \$368.34 \$356.64 \$59.44	DOT Permi Cost/ fleet \$250.00 \$500.00 \$250.00 \$2,000.00 \$2,000.00 \$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
Light Duty Pickup, 4x4, 1 T.	\$108.47	1	\$108.47	\$108.47
Crew				
		Subtotals:	\$142.57	\$142.57

Subtotals: \$142.57

## **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	PUEBLO	
Total one-way travel distance:	15.00	miles
Average Travel Speed:	45.00	mph
Total Non-Roadable Mob/Demob Cost *	\$27,908.55	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$95.05	

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.33	0.33
Return Time (Hours):	0.33	0.33
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.67	0.67

### JOB TIME AND COST

Total job time: **3.33** Hours

Total job cost: **\$28,004**