

December 13, 2021

Mr. David Bieber Front Range Aggregates, LLC c/o Martin Marrietta Materials 1627 Cole Boulevard, Suite 200 Lakewood, CO 80401

Re: Parkdale Quarry, Permit No. M-1997-054; Amendment 2 (AM-2) Reclamation Cost Estimate

Dear Mr. Bieber,

The Division has completed its reclamation cost estimate for the AM-2 proposed revision. The tasks presented in the attached Cost Summary Work document are based on the AM-2 application and subsequent responses to our adequacy letters received through December 11, 2021. Please review the attached document and let me know if you have any concerns. I have copied Stephanie Carter (BLM) as per our MOU, we coordinate bond estimates on lands managed by the BLM. Note the tasks related to the expansion of the mine into the BLM managed lands is a phased bond which addresses only phase 1 at this time (see tasks E100 through E120).

The current decision date is December 17, 2021. As such, please provide notice of any concerns in this estimate no later than December 15th, as I will be in the field on December 16th.

We are reviewing your latest adequacy responses sent via email on December 10th.

If you have any questions, please contact me at (303) 328-5229.

Sincerely,

Timothy A. Cazier, P.E. Environmental Protection Specialist

ec: Michael Cunningham, DRMS DRMS file Stephanie Carter, BLM



COST SUMMARY WORK

te: Parkdale Quarry		Pe	rmit Action:	Permit/Job#: <u>M1997054</u>		
PROJ	IECT IDENTIFIC	CATION				
Та	ask #: 0000	State:	Colorado		Abbreviation:	None
	Date: 12/13/2021	County:	Fremont		Filename:	M054-0000
	10:49:15 AN	N				

TASK LIST (DIRECT COSTS)

Task (1)		Form	Fleet	Task	
	Description	Used	Size	Hours	Cost
A010	Backfill alluvial pit (Source A: overburden/waste)	SCRAPER1	1	818.79	\$1,503,131
A011	Backfill alluvial pit (Source B: blasted from private	TRUCK1	1	1,127.85	\$2,435,205
	granit				
A012	Place topsoil on 131 acres @ 9" depth	TRUCK1	1	414.02	\$405,387
A013	Reveg 131-Ac Alluvial Pit Area	REVEGE	1	268.00	\$169,858
A014	Soil Testing for fertilizer assessment (LS)	NA	1	2.00	\$1,500
AR10	Rip pit floor for 90% of liner	RIPPER	1	160.53	\$55,103
AR15	Recompact ripped reservoir floor	COMPACT	1	23.27	\$9,614
AR20	Transport/place 90% reservoir liner from alluvial	SCRAPER1	1	189.09	\$274,078
	pit floor				
AR21	Purchase, deliver FOB offsite 6,600 CY clay	NA	1	0.00	\$83,160
	(\$7/ton @ 1.8T/C				
AR22	Transport/place 10% reservoir liner from onsite	SCRAPER1	1	12.96	\$15,911
	stockpile				
E100	Backfill 4,000 ft of benches not concurrently	TRUCK1	1	138.65	\$139,109
	reclaimed				_
E105	Hydroseed 4,000 ft of benches not concurrently	REVEGE	1	8.00	\$5,760
	reclaimed		-		
E110	Rip pit floor of Phase 1	RIPPER	1	34.32	\$11,653
E111	Construct drainage channels - Blasting (LS: 9,778	NA	1	80.00	\$13,689
	CY @ \$1.4		-		<u> </u>
E112	Construct drainage channels - Remove blasted	TRUCK1	1	24.82	\$27,597
	material				
E115	Topsoil pit floor of Phase 1 (9 inches)	TRUCK1	1	70.97	\$69,486
E120	Reveg pit floor of Phase 1	REVEGE	1	50.00	\$32,001
G100	Backfill 1,000 ft of benches not concurrently	TRUCK1	1	35.66	\$41,113
	reclaimed				
G105	Hydroseed 1,000 ft of benches not concurrently	REVEGE	1	4.00	\$1,554
G 110	reclaimed	DIDDED		22.10	
GIIO	Rip existing granite pit floor	RIPPER		32.18	\$10,926
G115	Topsoil existing pit floor (9 inches x 23.14 Ac)	TRUCK1	1	75.20	\$87,710
G120	Reveg existing granite pit floor	REVEGE	1	50.00	\$30,004
SW01	Sitewide cleanup - 151 hrs of Compactor work	COMPACT	1	151.18	\$13,607
SW02	Sitewide cleanup ~\$150/hr grader	GRADER	1	150.31	\$22,507
SW03	Sitewide cleanup D7 dozer	DOZERGRA	1	151.00	\$30,449
		DER	4		
SW04	Sitewide cleanup Water Truck	MISCTRUK	1	151.00	\$22,685
SW99	Mob/Demob equipment	MOBILIZE] 1	6.15	\$35,751

WG02	Demo plant concrete support structures & conveyor	DEMOLISH	1	0.00	\$11,283
WG04	Scarify compacted ground	RIPPER	1	36.16	\$12,277
WG05	Replace topsoil (6 in x 26 Ac)	TRUCK1	1	42.95	\$48,922
WG06	Seed and Mulch plant area	REVEGE	1	50.00	\$33,712
		<u>SUBTC</u>	DTALS:	4359.06	\$5,654,742

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02		Total =	\$114,226
Performance bond:	1.05		Total =	\$59,375
Job superintendent:	2,181.19		Total =	\$157,111
Profit:	10.00		Total =	\$565,474
			TOTAL O & P =	\$896,186
	CONT	RACT AMOUNT	(direct + O & P) =	\$6,550,928
LEGAL - ENGINEERING - PRO	OJECT MANAGEMENT	:		
Financial warranty processi	ing (legal/related costs):	\$0	Total =	\$0
Engineering work and/or c	contract/bid preparation:	4.25	Total =	\$278,414
Reclamation management	nt and/or administration:	5.00		\$327,546
	CONTINGENCY:	0.00	Total =	\$0

TOTAL INDIRECT COST = \$1,502,147

(1) Task Outline

- Task Task Description
- Axxx Alluvial pit area tasks
- ARxx Alluvial pit reservoir tasks
- E1xx Expansion area tasks (Phase 1)
- Gxxx Granite Pit (Private) area tasks
- SWxx Sitewide cleanup
- WGxx Wash Plant Removal (AM-1, Exh L, Aspect G)

Page 1 of 2

SCRAPER TEAM WORK

Site: Parkdale Quarry		Permit Actio	n: AM-02	F	Permit/Job#: <u>M1</u>	997054
PROIECT IDENT	IFICATION					
	<u>Internor</u>					
Task #: A010	Stat	te: Colorad	0	Abbre	viation: None	
Date: $12/8/20$	021 Count	y: Fremont		Fil	ename: M054-	A010
User: ICI						
Agency or o	rganization name: _	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: <u>1 per</u>	day	
		Equipn	nent Description			
	-Scra	aper: Cat 63	37G			
Suppor	t Equipment -Load A	Area: NA	91 - 950			
~	-Dump A	Area: Cat D	9T - 9SU			
Road Mai	ntenance –Motor Gra	ader: CAT	14M			
	-Water Tr	uck: Water	Tanker, 7,000 Ga	al.		
Cost Breakdown:	Scraper Work	Геат	Support Equ	ipment	Maintenanc	e Equipment
<u></u>	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Tru
%Utilization-machine:	100	100	NA	100	100	1
Ownership cost/hour:	\$218.34	\$126.01	NA	\$126.01	\$85.80	\$53.
Operating cost/hour:	\$208.00	\$141.41	NA	\$141.41	\$60.40	\$75.
%Utilization-ripper:	NA	NA	NA	NA	NA	N
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.
Operator cost/hour:	\$30.90	\$41.30	NA	\$41.30	\$28.56	\$0.
Unit Subtotals:	\$457.24	\$308.72	NA	\$308.72	\$174.76	\$129.
Number of Units:	2	1	0	1	1	
Group Subtotals:	Work:	\$1,223.20	Support:	\$308.72	Maint:	\$303.87
Total work team cost/	hour: <u>\$1,835.79</u>					
MATERIAL QUA	NTITIES					
Initial volume:	550,000	CCY	Swell fac	tor: 1.250		
Loose volume:	687,500	LCY				
Sour	ce of estimated volu	me:AM-2,	Exh L, p. 7			
Source of	f estimated swell fact	tor: Cat Ha	ndbook			
HOURLY PRODU	UCTION					
			Scraper H	Bowl (volume) Ba	<u>isis:</u>	
Material weight	2.650 lbs/LCY		Struck	Volume: 24.00) I.	СҮ
Material description:	Decomposed rock - 75% Earth	25% Rock,	Heaped	Volume: 34.00		CY
Rated Payload:	81,600 pounds		Average	Volume: 29.00		CY
Payload Capacity:	30.79 LCY		Adjusted (Capacity: 29.00	L	CY

<u>0.60</u> Minutes

0.60 Minutes

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

Site Altitude: 5800 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: <u>Rutted dirt, little maintenance, no water, 2" tire penetration 5.0</u>

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	-5.00	5.00	0.00	2965	0.84

Haul Time: **0.84** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	5.00	5.00	10.00	1476	1.40

Return Time:	1.40	minutes
Total Scraper team cycle time:	3.44	minutes
Adjusted for job conditions:	419.83	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	839.65	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	839.65	LCY/Hour
Has i've to i've to i've to 505.01 LOV/H		

Unadjusted unit production/hour: 505.81 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	818.79	Hours
Unit cost:	\$2.186	/LCY	Total job cost:	\$1,503,131	

TRUCK/LOADER TEAM WORK

ite: Parkdale Quarry Pern			ion: <u>AM-02</u>		Permit/Job#:	M1997054
PROJECT IDENT	TIFICATION					
Task #: A011 Date: 12/8/2 User: TC1	2021	State: <u>Color</u> County: Fremo	ado ont	Abl	breviation: Nor Filename: M0	ne 54-A011
Agency or o	organization nan	ne: DRMS				
HOURLY EQUIP	MENT COST			Shift ba	sis: <u>1 per day</u>	
 	uck Loader Tea	n -Truck: Cat	Equipment Descri	iption		
11	uck Loader Tea	-Loader: CA	Т 990Н			
Suppo	rt Equipment -L	oad Area: NA				
	-Du	mp Area: Cat	D9T - 9SU			
Road Ma	intenance – Moto	or Grader: CA	1 160M ter Tanker - 7 000	Gal		
	- vv a	CI IIUCK. Wa	ui 1 alikel, 7,000	Ual.		
<u>Cost Breakdown</u> :	Truck/Loa Truck	der Team Loader	Support Load Area	Equipment Dump Area	Maintenar Motor Grader	nce Equipment Water Truck
Utilization-machine:	100	100	NA	100	100	100
Ownership cost/hour:	\$121.36	\$116.41	NA	\$126.01	\$66.63	\$53.88
Operating cost/hour:	\$93.48	\$110.53	NA	\$141.41	\$54.54	\$75.23
%Utilization-riper:	NA	0	NA	NA	NA	NA
pper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.71	\$40.71	NA	\$41.30	\$28.56	\$0.00
Unit Subtotals:	\$248.55	\$267.65	NA	\$308.72	\$149.73	\$129.11
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work:	\$764.75	Support:	\$308.72	Maint:	\$278.84
Total work team cost	/hour: <u>\$1,352.3</u>	1				
<u>MATERIAL QUA</u>	<u>NTITIES</u>					
Initial volume:	650,000	CCY	Swell	factor: <u>1.000</u>		
Loose volume:	650,00	00 LCY				
Sou	rce of estimated	volume: <u>AM-</u>	2, Exh L, p. 7/ M Handbook	aterial cost is for	blasting (\$1.40/C	Y)

Truck Capacity:
Truck Payload (weight) Basis:Material weight:3,250Pounds/LCYDescription:Gravel - PitrunRated Payload:141,220PoundsPayload Capacity:43.45LCY

Truck Bed (volume) Basis:

Struck Volume:	43.30	LCY				
Heaped Volume:	55.60	LCY				
Average Volume:	49.45	LCY				
Adjusted Volume:	43.45	LCY				
Final Tr	ruck Volume I	Based on Number of I	Loader Passes:	37.13	LCY	
oading Tool Capacity						
			Buck	et Size Class: <u>N</u>	A	
Rated Capacity:	11.250	LCY (heaped)				_
Bucket Fill Factor:	0.825	Blasted rock - a	vg. blasted (75	- 90%) 0.825		_
Adjusted Capacity:	9.281					
ob Condition Corrections:		Sit	e Altitude (ft.):	<u>5800</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE	3)		
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.830	0.830				
		X 1 CX 1: T		1. 1.		
Loading Tool Cycle Time:	ſ	Number of Loading T	ool Passes Requ	urred to Fill Truck	4	passes
Excavators and Front Shovels	<u>:</u>					
Machine Cycle Time vs.	Job Condition	n Rating: NA				
Selected Value w	ithin this Basio	c Rating: <u>NA</u>				
Track Loaders – N	Aaterial Descri	iption:				
ycle Time Elements (min.):						
Load: NA	М	aneuver: NA		Dump: 0.10	0	
	-			F		
Wheel and Track	Loaders - Una	djusted Basic Loader	Cycle Time (lo	oad, dump, 0	.600 mir	utes
			n	naneuver):		
Cycle Time Factors				Factor (min.)	Source	
Material:	Bank or brok	en material 0.04		0.040	(Cat HB)	
Stockpile:	No adjustme	nt - factor not applica	ible 0.00	0.000	(Cat HB)	
Truck Ownership:	0.04	nership of trucks and	loaders -	-0.040	(Cat HB)	
Operation:	Constant ope	eration -0.04		-0.040	(Cat HB)	
Dump Target:	Nominal targ	get 0.00		0.000	(Cat HB)	
		Net Cycle Time	e Adjustment:	-0.040	minutes	
		Adjusted Loader	r Cycle Time:	0.560	minutes	
		Net Load Tir	ne per Truck:	1.780	minutes	
ruck Cycle Time:						
Truck Exchange Time:	0.80	Minutes	Adjusted	for site altitude:	0.800	Minutes
Truck Load Time:	1.780	Minutes	Adjusted	for site altitude:	1.780	Minutes
Truck Maneuver and Dump	1.20	Minutes	Adjusted	for site altitude:	1.200	Minutes
1 ime:		_		_		_
ruck Travel (Haul & Return)	Time:	Road Condition: <u>R</u>	Rutted dirt, little	maintenance, no w	vater, 1" tire	
enetration 4.0						

U	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)			(%)	(%)	(fpm)	Time		
	` ´			~ /	、 <i>,</i>	×1 /	(min)		
1	3000.	00	-3.00	4.00	1.00	3550	1.284		
					Haul Time:	1.284	1	minutes	
Return Ro	ute:				-1				
Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)			(%)	(%)	(fpm)	(min)		
1	3000.	00	3.00	4.00	7.00	2453	1.352		
					Return Time:	1.352		minutes	
				Total True	ck Cycle Time:	6.416	,	minutes	
Loading Too	Junit								
Produ	unit	863.37	LCY/Hour		Adjusted for jo	b efficiency:	71	6.60	LCY/Hour
ck Unit Produ	uction					-			
	-	347.18	LCY/Hour		Adjusted for jo	b efficiency:	28	8.16	LCY/Hour
mal No. of T	rucks:	2	Truck(s)		Selected Numb	er of Trucks:		2	Truck(s)
mal No. of T	rucks:	2	Truck(s) Adjusted	l hourly truck	Selected Number team production	er of Trucks: on: 576	.32	2 LCY/H	Truck(s) our
mal No. of T	rucks: _	2	Truck(s) Adjusted Adjusted single	l hourly truck e truck/loader	Selected Number team production team production	er of Trucks: on: <u>576</u> on: 576	.32 .32	2 LCY/H LCY/H	Truck(s) our our
mal No. of T	rucks: _	2 A	Truck(s) Adjusted Adjusted single adjusted multiple	l hourly truck e truck/loader e truck/loader	Selected Numb team productio team productio team productio	er of Trucks: on: 576 on: 576 on: 576	.32 .32 .32	2 LCY/H LCY/H LCY/H	Truck(s) our our our
mal No. of Tr JOB TIM	rucks: _	2 A D COST	Truck(s) Adjusted Adjusted single Adjusted multiple	l hourly truck e truck/loader e truck/loader	Selected Numb team productio team productio team productio	er of Trucks: on: <u>576</u> on: <u>576</u> on: 576	32 32 32 32	2 LCY/H LCY/H LCY/H	Truck(s) our our our
mal No. of Tr JOB TIM Fleet	rucks: _ IE ANI size:	2 A D COST 1	Truck(s) Adjusted Adjusted single Adjusted multiple Team(s)	l hourly truck e truck/loader e truck/loader Ta	Selected Numb team productio team productio team productio	er of Trucks: on: 576 on: 576 576 576 1,127.	32 32 32 32 32	2 LCY/H LCY/H LCY/H	Truck(s) our our our

TRUCK/LOADER TEAM WORK

PROJECT IDENTIFTask #:A012Date:12/8/202User:TC1	<u>TCATION</u>		tion: AM-02		Permit/Job#:	M1997054
Task #: A012 Date: 12/8/202 User: TC1						
Date: $12/8/202$ User: TC1		State: Color	ado	Abl	previation: No	ne
User: TC1	1 (County: Fremo	ont		Filename: M0	54-A012
Agency or orga	anization nan	ne: DRMS				
HOURLY EQUIPMI	ENT COST	-		Shift ba	sis: <u>1 per day</u>	
			Equipment Descr	iption		
Truck	c Loader Tea	m -Truck: Cat	: 740 T 08011			
Support F	Equipment -L	-Loader: CA	1 980H			
Support	-Du	imp Area: CA	T 160M			
Road Mainte	enance – Moto	or Grader: CA	T 160M			
	-Wa	ter Truck: Wa	ter Tanker, 7,000	Gal.		
Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Maintena	nce Equipment
<u>eost Brundown</u> .	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
Utilization-machine:	100	100	NA	100	100	100
Ownership cost/hour:	\$88.53	\$67.72	NA	\$66.63	\$66.63	\$53.88
Operating cost/hour:	\$65.75	\$67.62	NA	\$54.54	\$54.54	\$75.23
	NI A	0	NA	NA	NΔ	NA
%Utilization-riper:	NA				1421	117
%Utilization-riper: ipper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
%Utilization-riper: hipper own. cost/hour: Ripper op. cost/hour:	NA NA NA	\$0.00 \$0.00	NA NA	\$0.00 \$0.00	\$0.00 \$0.00	\$0.00 \$0.00
%Utilization-riper: tipper own. cost/hour: Ripper op. cost/hour: Operator cost/hour:	NA NA NA \$32.98	\$0.00 \$0.00 \$40.71	NA NA NA	\$0.00 \$0.00 \$28.56	\$0.00 \$0.00 \$28.56	\$0.00 \$0.00 \$0.00
%Utilization-riper: Lipper own. cost/hour: Ripper op. cost/hour: Operator cost/hour: Unit Subtotals:	NA NA \$32.98 \$187.26	\$0.00 \$0.00 \$40.71 \$176.05	NA NA NA NA	\$0.00 \$0.00 \$28.56 \$149.73	\$0.00 \$0.00 \$28.56 \$149.73	\$0.00 \$0.00 \$0.00 \$129.11
%Utilization-riper: ipper own. cost/hour: Ripper op. cost/hour: Operator cost/hour: Unit Subtotals: Number of Units:	NA NA \$32.98 \$187.26 2	\$0.00 \$0.00 \$40.71 \$176.05 1	NA NA NA NA 0	\$0.00 \$0.00 \$28.56 \$149.73 1	\$0.00 \$0.00 \$28.56 \$149.73 1	\$0.00 \$0.00 \$0.00 \$129.11

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:						
Material weight:	1,600	Pounds/LCY				
Description:	Top Soil					
Rated Payload:	87,000	Pounds				
Payload Capacity:	54.38	LCY				

Truck Bed (volume) Basis:						
Struck Volume:	24.20	LCY				
Heaped Volume:	31.40	LCY				
Average Volume:	27.80	LCY				
Adjusted Volume:	31.40	LCY				
Final Tr	ruck Volume I	Based on Number of L	oader Passes:	30.75	LCY	
Loading Tool Capacity						
			Buck	tet Size Class: <u>N</u>	А	
Rated Capacity:	7.500	LCY (heaped)				_
Bucket Fill Factor:	1.025	Rock - Earth Miz	xture (100%-10	05%) 1.025		_
Adjusted Capacity:	7.688	LCY				
Job Condition Corrections:		Site	e Altitude (ft.):	<u>5800</u> feet		
	Truck	Loader	Source			
Altitude Adj:	0.960	1.000	(CAT HE	3)		
Job Efficiency:	0.830	0.830	(CAT HI	3)		
Net Correction:	0.797	0.830				
Loading Tool Cycle Time:	1	Number of Loading To	ool Passes Requ	uired to Fill		passes
Excavators and Eront Shovels			1	Truck:	4	P
	<u>.</u>					
Machine Cycle Time vs.	Job Condition	n Rating: <u>NA</u>				
Treal Looders	Initial Deser					
Track Loaders – N	Taterial Descri					
Cycle Time Elements (min.):						
Load: NA	М	laneuver: NA		Dump: 0.100)	
	_					
Wheel and Track	Loaders - Una	idjusted Basic Loader	Cycle Time (lo	bad, dump, 0. naneuver):	550 min	utes
Cycle Time Factors				Factor (min.)	Source	
Material:	Mixed mater	ial 0.02		0.020	(Cat HB)	
Stockpile:	No adjustme	nt - factor not applicat	ble 0.00	0.000	(Cat HB)	
Truck Ownership:	Common ow	mership of trucks and	loaders -	-0.040	(Cat HB)	
Operation:	Constant one	eration -0.04		-0.040	(Cat HB)	
Dump Target:	Nominal targ	get 0.00		0.000	(Cat HB)	_
		Net Cycle Time	Adjustment:	-0.060	minutes	_
		Adjusted Loader	Cycle Time:	0.490	minutes	
		Net Load Tin	he per Truck:	1.570	minutes	
Truck Cycle Time:						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.625	Minutes
Truck Load Time:	1.570	Minutes	Adjusted	for site altitude:	1.570	Minutes
Truck Maneuver and Dump	1.00	Minutes	Adjusted	for site altitude:	1.042	Minutes
Time:	1.00	1. mater	2 Iujusicu	ior one unitado.	1.012	muuus
						_
Truck Travel (Haul & Return)	Time:	Road Condition: R	utted dirt, little	maintenance, no w	ater, 1" tire	
penetration 4.0						

Haul Route:

	Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
		(Ft)			(%)	(%)	(fpm)	Time (min)		
_	2	2000	.00	-1.00	4.00	3.00	3005	1.458		
_						Haul Time:	1.458	1	ninutes	
I	Return Rot	ute:								
	Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
		(Ft)			(%)	(%)	(fpm)	Time (min)		
	1	2000	.00	1.00	4.00	5.00	3005	0.905		
						Return Time:	0.905	;	minutes	
					Total Tru	ck Cycle Time:	5.600)	minutes	
Lo	oading Too	ol unit								
	Produ	uction	840.55	LCY/Hour		Adjusted for jo	b efficiency:	69	7.65	LCY/Hour
Truck	Unit Produ	uction	329.48	LCY/Hour		Adjusted for jo	b efficiency:	27	3.47	_ LCY/Hour
Optima	l No. of Ti	rucks:	3	Truck(s)		Selected Numb	er of Trucks:		2	Truck(s)
				Adjusted	hourly truck	team production	on: 546	.94	LCY/I	Hour
				Adjusted single	e truck/loader	team production	on: 546	.94	LCY/I	Hour
			A	djusted multiple	e truck/loader	team production	on: 546	.94	LCY/I	Hour
<u>•</u>	JOB TIM	1E AN	D COST							
	Fleet	size:	1	Team(s)	Т	otal job time:	414.0	2	Hou	rs
	Unit	cost:	\$1.790	/LCY	Т	otal job cost: _	\$405,3	87		

REVEGETATION WORK

Task description:		tion:	Reveg 131-Ac Alluvial Pit A	Irea		
Site: P	Parkdale	Quarry	Permit Action:	AM-02	Permit/Jol	o#: <u>M1997054</u>
<u>PRC</u>)JECT	IDENTIFIC	ATION			
	Task #:	A013	State: Colorado		Abbreviation:	None
	Date:	12/8/2021	County: Fremont		Filename:	M054-A013
	User:	TC1				
	Age	ncy or organiz	zation name: DRMS			

FERTILIZING

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	125.00	pound	\$0.36	\$45.00
Superphosphate, 0-20-0 with 12% S	125.00	pound	\$0.26	\$32.50
			Total Fertilizer Materials	
			Cost/Acre	\$77.50

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$38.77
	Total Fertilizer Application Cost/Acre	\$38.77

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.56
Total Tilling Cost/Acre	\$114.56

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	0.20	0.96	\$0.51
Blue Grama - Native	1.10	17.95	\$15.10
Indian Ricegrass - Native	2.10	6.80	\$13.65
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Sand Dropseed	0.05	5.97	\$0.49
Sideoats Grama - Vaughn	1.80	5.91	\$15.08
Sheep Fescue - Bighorn	0.40	6.24	\$1.76
Thickspike Wheatgrass - Critana	1.60	5.66	\$11.00
Western Wheatgrass - Native	2.00	5.05	\$12.00
Sage, Fringed	0.03	2.51	\$1.23

Sagebrush, Louisiana or Prairie	0.03	3.02	\$4.01
Saltbush, Four Wing	0.10	0.14	\$1.25
Spike Muhly	0.20	7.35	\$1.94
Sumac, Skunkbrush	0.10	0.05	\$2.10
Purple Three-Awn	0.10	1.15	\$2.66
Totals Seed Mix	10.01	73.01	\$84.82

Application

Description		Cost /Acre
Drill Seeding (DRMS Survey Cost)		\$232.00
	Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$71.57
	Total Mulch Application Cost/Acre	\$71.57

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres:	131	Cost /Acre:	\$1,233.26
Estimated Failure Rate:	20%	Cost /Acre*:	\$316.82
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$161,557.06
Reseeding Job Cost:	\$8,300.68
Total Job Cost:	\$169,858
Job Hours:	268.00

BULLDOZER RIPPING WORK

Task description:	Rip p	it floor for 90% of line	er			
Site: Parkdale Quar	rry	Permit Action:	AM-02	Per	mit/Job#:	M1997054
PROJECT IDEN	NTIFICATIO	N				
Task #: AR	10	State: Colorado		Abbrevia	ation: <u>No</u>	one
Date: 12/9 User: TC1	0/2021	County: Fremont		Filen	ame: M	054-AR10
Agency o	r organization n	ame: DRMS				
HOURLY EQU	PMENT COS	<u>ST</u>				
Basic M	Iachine: Cat	D9T - 9SU		Horsepower:	405	
Ripper Atta	chment: <u>1-Sh</u>	ank Ripper		Shift Basis: Data Source:	1 per d (CRG	ay
Cost Breakdown:						/
	0 11 0		¢126.01	Utilization %		
	Ownership Cos	t/Hour:	\$126.01 \$141.41	<u>NA</u> 100		
Ripper	Ownership Cos	t/Hour:	\$22.17	NA		
Rippe	r Operating Cos	t/Hour:	\$12.36	100		
11	Operator Cos	st/Hour:	\$41.30	NA		
	Total Unit Cos	t/Hour:	\$343.25			
	Total Fleet Cos	st/Hour: \$343	3.25			
Alternate Methods: nic: 59,400	ВСҮ	Bank Volume:	59,400	BCY	Ad	verse
rea: NA	acres	Rip Depth (ft):	NA	Volume: N	A	BCY o
HOURLY PROI	DUCTION	ated quantity. <u>AM-2</u>	<u>EXII E - 90% 01</u>		June	
<u>Seismic:</u>	Se	vismic Velocity.	5 000	feet/second		
Area:	50		5,000			
	Average	Ripping Depth:	NA	feet/pass		
	Average	Ripping Width:	NA	feet/pass		
	Average I	Ripping Length:	NA NA	feet/pass		
	Average N	Janeuver Time	NA	ieet/illilute minutes/pas	25	
	Productio	on per unit area:	NA	acres/hour	,5	
Job Condition Corr	ection Factors					
Unac	ljusted Hourly U	Unit Production:	445.80	Cu. yds./hr		
		Site Altitude:	6,800	feet		
		Altitude Adj:	1.00	(CAT HB)		
		Job Efficiency:	0.83	(1 shift/day)	
		Net Correction:	0.83	multiplier		
	Adjusted H Adjusted He	ourly Unit Production: ourly Fleet Production:	370.01 370.01	Cu. yds./hr Cu. yds./hr		
JOB TIME AND	O COST					
Fleet size:	1	Grader(s)	Total job time	e: <u>160.5</u>	3	Hours
Unit cost:	\$0.928	Per cu_vd	Total job cos	t· \$55.1(13	

COMPACTION WORK

Task description:	Recompact ripped reserve	oir floor			
e: Parkdale Quarry	Permit Action	n: <u>AM-02</u>]	Permit/Job#:	M1997054
PROJECT IDENTIFI	<u>CATION</u>				
Task #: AR15	State: Colorad	0	Abbre	eviation: N	one
Date: 12/9/2021	County: Fremont	;	Fi	lename: M	054-AR15
User: TC1					
Agency or organ	ization name: DRMS				
HOURLY EQUIPME	<u>NT COST</u>				
Basic Machine	: CAT 836H		Horsepower:	499	
Compactor Type	: Sanitation - chopper foot		Shift Basis:	1 per c	lay
			Data Source:	(CRC	6
Cost Breakdown					
<u>cost Break of the</u>			Utilization %		
Owner	ship Cost/Hour: \$2	23.80	NA		
Opera	ating Cost/Hour:\$1	63.25	100		
Oper	rator Cost/Hour: \$2	26.02	NA		
Total	Unit Cost/Hour: \$4	13.07			
Total I	Fleet Cost/Hour: \$4	13.07			
MATERIAL QUANTI	TIES				
Loose volum	e: 7,911	LCY	Shrij	nkage factor:	0.875
Compacted volum	e: 6,922	CCY		C	
Sou	rce of estimated volume: Ex	h F 981 Ac flo	or x 6" denth		
Source of est	imated shrinkage factor: Ca	it Handbook			
HOURLY PRODUCT	ION	Unadius	ted hourly product	$ion = (W \times S)$	x L x C) / P
		0.16	led <u>nourry product</u>		<u>ALACJ/I</u>
Com	pacted width per pass (W):	9.16	feet		
Compacted	thickness of each lift (L):	6.00	inches		
Compacted	Conversion Constant (C):	16.3	(5.280ft.	/12in./27cu.ft	.)
Required num	ber of machine passes (P):	5	passes		-)
Unadjuste	d Hourly Unit Production:	358.34	CCY/ho	ur	
Job Condition Correction	Factors	Site Alti	tude: <u>6,800</u> feet		
	Source	ce			
Altitude Adj:	1.00 (CAT H	HB)			
Job Efficiency:	0.83 (1 shift/	day)			
Net Correction:	0.8300 multipli	er			
Ad	ljusted Hourly Unit Production	n: <u>297.42</u>	CCY/Hour		
Ad	Justed Hourly Fleet Production	1: 297.42	CCY/Hour		
JOB TIME AND COS	<u>T</u>				
Fleet size: 1	Compactor(s)	То	otal job time:	23.27	Hours
Unit cost: \$1.3	389 per CCY	Te	otal job cost:	\$9,614	

Page 1 of 2

SCRAPER TEAM WORK

Site: Parkdale Quarry	!	Perm	it Action	: <u>AM-02</u>	P	ermit/Job#:	M199	7054
PROJECT IDENT	IFICATION							
Tools #1 AD20	State		Colorado		Abbuoy	vistion. N	Jona	
Date: $12/9/2($		7	Fremont	1	Abbrev	ename: N	моне Л054-А1	R20
User: TC1		•	Temont				100 1 11	
Agency or of	rganization name:	DRM	IS					
HOURLY EQUIPM	MENT_			COSTS	Shift basis: <u>1 per</u>	<u>day</u>		
			Equipme	ent Description				
	-Scrap	per:	Cat 62	7G				
Suppor	-Doz t Equipment I god A	zer:	Cat D9	T - 9SU				
Suppor	-Dump A	rea:	CAT 8	15F				
Road Main	ntenance – Motor Grad	der:	CAT 1	60M				
. <u> </u>	-Water Tru	ick:	Water	Tanker, 7,000 Ga	1.			
Cost Brookdown.	Scraper Work T	aam		Support Equi	nment	Maint	ananca	Fauinment
<u>Cost Dicardown</u> .	Scraper	Doz	zer	Load Area	Dump Area	Motor Gra	ader	Water Tru
%Utilization-machine:	100		100	NA	100		100	1
Ownership cost/hour:	\$154.27	\$	126.01	NA	\$91.25	\$6	6.63	\$53
Operating cost/hour:	\$153.83	\$	141.41	NA	\$66.66	\$54	4.54	\$75
%Utilization-ripper:	NA		NA	NA	NA		NA	1
Ripper own. cost/hour:	NA		\$0.00	NA	\$0.00	\$0	0.00	\$0
Ripper op. cost/hour:	NA		\$0.00	NA	\$0.00	\$0	0.00	\$0
Operator cost/hour:	\$30.90	9	\$41.30	NA	\$26.02	\$2	8.56	\$0
Unit Subtotals:	\$339.00	\$3	308.72	NA	\$183.93	\$14	9.73	\$129
Number of Units:	2		1	0	1		1	
Group Subtotals:	Work:	\$986	5.72	Support:	\$183.93	Ma	aint:	\$278.84
Total work team cost/h	10ur: \$1,449.49	_						
MATERIAL OUA	NTITIES							
Initial volume:	59,400		CCY	Swell fact	tor: 1.165			
Loose volume:	69,201		LCY					
Sour	ce of estimated volum	ne:	AM-2, I	Exh L, p. 4				
Source of	festimated swell facto	or:	Cat Han	dbook				
	CTION							
HOURLY PRODU	<u>CTION</u>							
				<u>Scraper B</u>	owl (volume) Ba	<u>sis:</u>		
Material weight:	2,100 lbs/LCY			Struck	Volume: <u>15.70</u>		LC	Y
Material weight: Material description:	2,100 lbs/LCY Shale			Struck Heaped	Volume: <u>15.70</u> Volume: <u>22.00</u>		$\frac{LC}{LC}$	Y Y

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time: 0.40 Minutes 0.60 Minutes

Job Condition Correction:

Site Altitude: 5800 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: Soft, rutted dirt, no maintenance or water, 8" tire penetration 14

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1800.00	5.00	14.00	19.00	578	3.12

Haul Time: **3.12** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade	Roll. Res	Total Res	Velocity	Travel Time
		(%)	(%)	(%)	(Ipm)	(1111)
1	1800.00	-5.00	14.00	9.00	1930	1.01
				Return Time:	1.01	minutes
			Total Scraper	team cycle time:	5.13	minutes
			Adjusted for	or job conditions:	182.99	LCY/Hour
			Selected Nun	nber of Scrapers:	2	Scraper(s)
	Adjusted	single scrape	er team (unit) ho	ourly production:	365.98	LCY/Hour
	Adjusted mu	ltiple scrape	r team (fleet) ho	ourly production:	365.98	LCY/Hour
Optimal	Unadjusted unit proc Number of Scrapers per	luction/hour: push dozer:	220.47	LCY/Hour		
JOB TIN	<u>IE AND COST</u>					

Fleet size:	1	Team(s)	Total job time:	189.09	Hours
Unit cost:	\$3.961	/LCY	Total job cost:	\$274,078	

Page 1 of 2

SCRAPER TEAM WORK

Site: Parkdale Quarry	7	Permit Actio	n: <u>AM-02</u>	F	Permit/Job#: <u>M1</u>	997054
PROJECT IDENI	TIFICATION					
Task #: AR22	S	tate: Colorad	0	Abbre	viation: None	
Date: <u>12/9/2</u> User: TC1	021 Cou	inty: Fremon	t	Fil	lename: M054-	AR22
Agency or o	organization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	Shift basis: <u>1 per</u>	<u>day</u>	
		Equipr	nent Description			
	-Se	craper: Cat 6	27G			
Suppor	rt Equipment -Load	Area: NA				
	-Dump	Area: CAT	815F			
Road Mar	intenance –Motor C -Water	brader: NA Truck: Wate	r Tanker 7 000 G	a1		
	vi ator	Truck. Wate	1 1 uniter, 7,000 Gt			
<u>Cost Breakdown</u> :	Scraper Worl	k Team	Support Equ	ipment	Maintenanc	e Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truc
%Utilization-machine:	100	100	NA	100	NA	10
Ownership cost/hour:	\$154.27	\$97.46	NA	\$91.25	NA	\$53.8
Operating cost/hour:	\$153.83	\$97.63	NA	\$66.66	NA	\$75.2
%Utilization-ripper:	NA	NA	NA	NA	NA	N
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	NA	\$0.0
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	NA	\$0.0
Operator cost/hour:	\$30.90	\$41.30	NA	\$26.02	NA	\$0.0
Unit Subtotals:	\$339.00	\$236.39	NA	\$183.93	NA	\$129.1
Number of Units:	2	1	0	1	0	
Group Subtotals:	Work:	\$914.39	Support:	\$183.93	Maint:	\$129.11
Total work team cost/	hour: <u>\$1,227.43</u>					
MATERIAL QUA	NTITIES					
Initial volume: Loose volume:	6,600 8,250	CCY LCY	Swell fac	etor: <u>1.250</u>		
Source of	rce of estimated voi of estimated swell f	lume: DRMS actor: Cat Ha	(place materialfrondbook	om Task AR21)		
HOURLY PRODU	JCTION					
			Scraper H	Bowl (volume) Ba	<u>asis:</u>	
Material weight:	2,800 lbs/LCY		Struck	Volume: 15.70	L	CY
Material description:	Clay - Wet		Heaped	Volume: 22.00		CY
Rated Payload:	52,800 pounds		Average	Volume: 18.85	L	CY
Payload Capacity:	18.86 LCY		Adjusted (Capacity: 18.85	L	.CY

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time: $\frac{0.50}{0.60}$ Minutes

Job Condition Correction:

Site Altitude: 5800 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: Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	-3.00	8.00	5.00	2218	0.85

Haul Time: **0.85** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	3.00	8.00	11.00	1584	1.00
				Return Time:	1.00	minutes
			Total Scrape	team cycle time:	2.95	minutes
			Adjusted f	or job conditions:	318.21	LCY/Hour
			Selected Nu	mber of Scrapers:	2	Scraper(s)
	Adjusted	single scrape	er team (unit) h	ourly production:	636.43	LCY/Hour
	Adjusted mu	ltiple scrape	r team (fleet) h	ourly production:	636.43	LCY/Hour
Optimal	Unadjusted unit proc Number of Scrapers per	luction/hour: r push dozer:	383.39	LCY/Hour		
JOB TIN	ME AND COST					

Fleet size:	1	Team(s)	Total job time:	12.96	Hours
Unit cost:	\$1.929	/LCY	Total job cost:	\$15,911	

TRUCK/LOADER TEAM WORK

Task description:	Backfill	4,000 ft of benc	hes not concurre	ently reclaimed	Permit/Joh#:	M1007054
She. <u>I al Kuale Qual</u>	y	I clinit Act				111797034
PROJECT IDEN	TIFICATION					
Task #· E100		State: Color:	obe	Abl	previation. No	ne
Date: $\frac{12/9}{12/9}$	2021	County: Fremo	ont		Filename: MC)54-E100
User: TC1		-				
Agency or	organization nan	ne: DRMS				
HOURLY EQUI	PMENT COST			Shift ba	sis: <u>1 per day</u>	
		I	Equipment Descr	iption		
Т	ruck Loader Tea	m -Truck: Cat	740			
	ant Danie and T	-Loader: CA	Т 980Н			
Supp	ort Equipment -L	oad Area: NA	DATICP			
Road Ma	aintenance – Moto	or Grader: CA	T 160M			
1000	-Wa	ter Truck: Wat	ter Tanker, 7,000	Gal.		
Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Maintena	nce Equipment
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
Utilization-machine:	100	100	NA	100	100	100
Ownership cost/hour:	\$88.53	\$67.72	NA	\$66.27	\$66.63	\$53.88
Operating cost/hour:	\$65.75	\$67.62	NA	\$66.34	\$54.54	\$75.23
%Utilization-riper:	NA	0	NA	NA	NA	NA
ipper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.71	NA	\$41.30	\$28.56	\$0.00
Unit Subtotals:	\$187.26	\$176.05	NA	\$173.91	\$149.73	\$129.11
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work:	\$550.57	Support:	\$173.91	Maint:	\$278.84
Total work team cos	t/hour: <u>\$1,003.3</u>	2				
MATERIAL QUA	ANTITIES					
Initial volume	: <u>66,680</u>		Swell	factor: <u>1.250</u>		
Loose volume	. 00,00					
Sou	urce of estimated	volume: AM2	2, Exh L, p. 2 - PA	AR resp.; Tsk E10	00.1	
Source	of estimated swe	II factor: Cat H	Handbook			
		$\frac{1}{10000000000000000000000000000000000$)			
	10	+ 5100				

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis	<u>s:</u>		
Material weight:	2,650	Pounds/LCY	
Description:	Decomposed roc	k - 25% Rock, 75% Earth	
Rated Payload:	87,000	Pounds	
Payload Capacity:	32.83	LCY	

Cturnale V-1						
Struck volume:	24.20	LCY				
Heaped Volume:	31.40	LCY				
Average Volume:	27.80	LCY				
Adjusted Volume:	31.40	LCY				
Final T	ruck Volume F	Based on Number of	Loader Passes:	30.75	LCY	
Loading Tool Canacity						
Loading 1001 Capacity			D 1		XT 4	
			Buck	ket Size Class:	NA	
Rated Capacity:	7.500	LCY (heaped)	(1000/ 1/	050() 1.005		_
Bucket Fill Factor:	1.025	KOCK - Earth M	1xture (100%-10	05%) 1.025		_
Adjusted Capacity:	/.088					
Job Condition Corrections:		Si	te Altitude (ft.):	<u>5800</u> feet		
	Truck	Loader	Source	•		
Altitude Adj:	0.960	1.000	(CAT HI	B)		
Job Efficiency:	0.830	0.830	(CAT HI	B)		
Net Correction:	0.797	0.830				
I and in a Tabl Crude Times		Jumban of Loo ding 7	Ca al Dasara Dasa	ning d to Till		
Loading 1001 Cycle 11me:	ľ	Number of Loading	l ool Passes Req	Truck:	4	passes
Excavators and Front Shovels	<u>;:</u>			11uck.		
Machine Cycle Time vs.	. Job Conditior	n Rating: <u>NA</u>				
Selected Value w	ithin this Basic	c Rating: <u>NA</u>				
Track Loaders – N	Material Descri	iption:				
Cycle Time Elements (min.):						
				-		
Load: NA	Μ	aneuver: NA		Dump: 0.10	00	
Wheel and Treat	I and and I land	directo d Desilo I an de	n Carala Tima (l	J. J		
Wheel and Track	Loaders - Una	djusted Basic Loade	r Cycle Time (le	oad, dump,	0.550 min	utes
Wheel and Track	Loaders - Una	djusted Basic Loade	r Cycle Time (le 1	oad, dump, maneuver):	0.550 min	utes
Wheel and Track Cycle Time Factors	Loaders - Una	djusted Basic Loade	r Cycle Time (lo	oad, dump, maneuver): Factor (min.)	0.550 min	utes
Wheel and Track Cycle Time Factors Material:	Loaders - Una Mixed materi	djusted Basic Loade	r Cycle Time (lo	oad, dump, maneuver): Factor (min.) 0.020	0.550 min Source (Cat HB) (Cat HB)	utes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership:	Loaders - Una Mixed materi No adjustmer	djusted Basic Loade ial 0.02 nt - factor not applica nership of trucks and	r Cycle Time (le 1 able 0.00	oad, dump, maneuver): Factor (min.) 0.020 0.000	0.550 min Source (Cat HB) (Cat HB)	utes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership:	Loaders - Una Mixed materi No adjustmer Common owr 0.04	djusted Basic Loade ial 0.02 nt - factor not applica nership of trucks and	r Cycle Time (le 1 able 0.00 1 loaders -	oad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040	0.550 min Source (Cat HB) (Cat HB) (Cat HB)	utes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Loaders - Una Mixed materi No adjustmer Common ow 0.04 Constant ope	djusted Basic Loade ial 0.02 nt - factor not applica nership of trucks and eration -0.04	r Cycle Time (lo 1 able 0.00 1 loaders -	oad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 -0.040	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)	utes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	Loaders - Una Mixed mater No adjustmer Common ow 0.04 Constant ope Nominal targ	ial 0.02 nt - factor not applica nership of trucks and ration -0.04 get 0.00	r Cycle Time (lo 1 able 0.00 1 loaders -	oad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 -0.040 0.000	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	Loaders - Una Mixed mater No adjustmer Common ow 0.04 Constant ope Nominal targ	djusted Basic Loade ial 0.02 nt - factor not applica nership of trucks and gration -0.04 get 0.00 Net Cycle Tim	r Cycle Time (lo 1 able 0.00 1 loaders - e Adjustment:	bad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	utes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	Loaders - Una Mixed mater No adjustmer Common ow 0.04 Constant ope Nominal targ	ial 0.02 nt - factor not applica nership of trucks and ration -0.04 get 0.00 Net Cycle Tim Adjusted Loade	r Cycle Time (le 1 able 0.00 1 loaders - e Adjustment: r Cycle Time:	bad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 0.000 -0.040 0.000 -0.060 0.490	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	utes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	Loaders - Una Mixed mater No adjustmer Common ow 0.04 Constant ope Nominal targ	djusted Basic Loade ial 0.02 nt - factor not applica nership of trucks and tration -0.04 get 0.00 Net Cycle Tim Adjusted Loade Net Load Ti	r Cycle Time (le able 0.00 1 loaders - e Adjustment: r Cycle Time: me per Truck:	bad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 0.000 -0.040 0.000 -0.060 0.490 1.570	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	utes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time:	Loaders - Una Mixed mater No adjustmer Common ow 0.04 Constant ope Nominal targ	djusted Basic Loade ial 0.02 nt - factor not applica nership of trucks and ration -0.04 get 0.00 Net Cycle Tim Adjusted Loade Net Load Ti	r Cycle Time (le able 0.00 1 loaders - e Adjustment: r Cycle Time: me per Truck:	bad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 0.000 -0.060 0.490 1.570	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	utes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time: Truck Exchange Time:	Loaders - Una Mixed mater No adjustmer Common ow 0.04 Constant ope Nominal targ	djusted Basic Loade ial 0.02 nt - factor not applica nership of trucks and ration -0.04 yet 0.00 Net Cycle Tim Adjusted Loade Net Load Ti Minutes	r Cycle Time (le able 0.00 1 loaders - e Adjustment: r Cycle Time: me per Truck:	bad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 0.000 -0.060 0.490 1.570	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	utes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time: Truck Exchange Time:	Loaders - Una Mixed mater No adjustmer Common ow 0.04 Constant ope Nominal targ	djusted Basic Loade ial 0.02 nt - factor not applica nership of trucks and ration -0.04 get 0.00 Net Cycle Tim Adjusted Loade Net Load Ti Minutes	r Cycle Time (le able 0.00 1 loaders - e Adjustment: r Cycle Time: me per Truck: Adjusted	bad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes 0.625	Minutes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time: Truck Exchange Time: Truck Load Time:	Loaders - Una Mixed mater No adjustmer Common ow 0.04 Constant ope Nominal targ 0.60 1.570	ial 0.02 nt - factor not applica nership of trucks and ration -0.04 et 0.00 Net Cycle Tim Adjusted Loade Net Load Ti Minutes Minutes	r Cycle Time (le able 0.00 1 loaders - e Adjustment: r Cycle Time: me per Truck: Adjusted Adjusted	bad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 -0.040 -0.060 0.490 1.570	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) 0.625 1.570	Minutes Minutes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time: Truck Load Time: Truck Maneuver and Dump Time:	Loaders - Una Mixed mater No adjustmer Common ow 0.04 Constant ope Nominal targ 0.60 1.570 1.00	djusted Basic Loade ial 0.02 nt - factor not applica nership of trucks and ration -0.04 tet 0.00 Net Cycle Tim Adjusted Loade Net Load Ti Minutes Minutes Minutes Minutes	r Cycle Time (le able 0.00 1 loaders - e Adjustment: r Cycle Time: me per Truck: Adjusted Adjusted Adjusted	bad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes 0.625 1.570 1.042	utes — — — Minutes — Minutes — — — Minutes
Wheel and Track Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time: Truck Load Time: Truck Maneuver and Dump Time: Truck Travel (Haul & Pature)	Loaders - Una Mixed mater No adjustmer Common ow 0.04 Constant ope Nominal targ 0.60 1.570 1.00	ial 0.02 nt - factor not applica nership of trucks and ration -0.04 get 0.00 Net Cycle Tim Adjusted Loade Net Load Ti Minutes Minutes Minutes Minutes	r Cycle Time (le able 0.00 1 loaders - e Adjustment: r Cycle Time: me per Truck: Adjusted Adjusted Adjusted	bad, dump, maneuver): Factor (min.) 0.020 0.000 -0.040 -0.040 -0.060 0.490 1.570	0.550 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) 0.625 1.570 1.042 vatar 1" tire	utes

Haul Rout	e:							
Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time	
1	1500	00	2.00	4.00	6.00	1566	1 213	
1	1500.	00	2.00	4.00	0.00	1500	1.215	
					Haul Time:	1.213	minute	s
Return Ro	ute:		1		1 1			
Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	(min)	
1	1500.	00	-2.00	4.00	2.00	3005	0.645	
					Return Time:	0.645	i minut	es
				Total Tru	ck Cycle Time:	5.095	i minut	es
Londing To	olunit							
Prod	uction	840.55	LCY/Hour		Adjusted for jo	b efficiency:	697.65	LCY/Hour
uck Unit Prod	uction				5 5	5		
	-	362.14	LCY/Hour		Adjusted for jo	b efficiency:	300.58	LCY/Hour
timal No. of T	rucks:	2	Truck(s)		C.1. (.1.N)	or of Trucks	2	Truck(s)
	-	4			Selected Numb	el of flucks.		
	-	2	Adjusted	l hourly truck	team production	on: 601.	.16 LCY	/Hour
	-	2	Adjusted	l hourly truck e truck/loader	team productions team productions	on: <u>601</u>	. <u>16</u> LCY .16 LCY	//Hour
	_		Adjusted Adjusted single	l hourly truck e truck/loader e truck/loader	team production team production team production	on: 601 on: 601 on: 601	.16 LCY .16 LCY .16 LCY	/Hour //Hour //Hour
	_	A	Adjusted Adjusted single Adjusted multiple	l hourly truck e truck/loader e truck/loader	team productic team productic team productic	on: <u>601</u> on: <u>601</u> on: <u>601</u>	.16 LCY .16 LCY .16 LCY	//Hour //Hour //Hour
JOB TIM	/IE ANI	A D COST	Adjusted Adjusted single Adjusted multiple	l hourly truck e truck/loader e truck/loader	team production team production team production team production	on: <u>601</u> on: <u>601</u> on: <u>601</u>	.16 LCY .16 LCY .16 LCY	//Hour //Hour //Hour
JOB TIM Fleet		2 P COST 1	Adjusted Adjusted single Adjusted multiple Team(s)	l hourly truck e truck/loader e truck/loader T	team production team production team production team production	on: <u>601</u> on: <u>601</u> on: <u>601</u>	<u>.16</u> LCY <u>.16</u> LCY <u>.16</u> LCY <u>.16</u> LCY	//Hour //Hour //Hour



Task # E100.1 Highwall Backfill Volume Estimate

REVEGETATION WORK

Task description: Hydros		Hydroseed 4,000 f	t of benche	s not concurrer	ntly reclaimed	
ite: Parkdale	Quarry	Pern	it Action:	AM-02	Permit/Jo	b#: <u>M1997054</u>
PROJECT	<u>IDENTIFIC</u>	CATION				
Task #:	E105	State:	Colorado		Abbreviation:	None
Date:	12/9/2021	County:	Fremont		Filename:	M054-E105
User:	TC1					

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	125.00	pound	\$0.36	\$45.00
Superphosphate, 0-20-0 with 12% S	125.00	pound	\$0.26	\$32.50
			Total Fertilizer Materials	
			Cost/Acre	\$77.50

Application

Description		Cost /Acre
		\$
	Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	0.40	1.93	\$1.02
Blue Grama - Native	2.20	35.91	\$30.20
Indian Ricegrass - Native	4.20	13.60	\$27.30
Canby Bluegrass - Canbar	0.40	8.50	\$4.10
Sand Dropseed	0.10	11.94	\$0.98
Sideoats Grama - Vaughn	3.60	11.82	\$30.15
Sheep Fescue - Bighorn	0.80	12.49	\$3.52
Thickspike Wheatgrass - Critana	3.20	11.31	\$22.00
Western Wheatgrass - Native	4.00	10.10	\$24.00

Sage, Fringed	0.06	5.01	\$2.46
Sagebrush, Louisiana or Prairie	0.06	6.05	\$8.01
Saltbush, Four Wing	0.20	0.28	\$2.50
Spike Muhly	0.40	14.69	\$3.88
Sumac, Skunkbrush	0.20	0.09	\$4.20
Purple Three-Awn	0.20	2.30	\$5.32
Totals Seed Mix	20.02	146.01	\$169.63

Application

Description		Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)		\$965.73
	Total Seed Application Cost/Acre	\$965.73

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 Stoc	ek Cost / Acre	\$0.00

JOB TIME AND COST

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	4 20% SEEDING	Cost /Acre: Cost /Acre*:	\$1,212.86 \$1,135.36
Initial Job Cost:	\$4,851.44			
Reseeding Job Cost:	\$908.29		-	
Total Job Cost:	\$5,760			
Job Hours:	8.00			

BULLDOZER RIPPING WORK

Task description	on: Ri p	pit floor of Phase 1					
Site: Parkdale Q	uarry	Permit Action	: AM-02		Permit/Jo	b#: <u>M19970</u>	54
PROJECT ID	ENTIFICATI	ON					
Task #: I Date: 1 User: 7	E110 2/9/2021 CC1	State: Colorado County: Fremont		Abbr	eviation: Filename:	None M054-E110	
Agenc	v or organization	n name: DRMS					
HOURIVEO	UIPMENT C	OST					-
<u>HOUKLI EQ</u>	Mashina:	ot DOT OSU		Uorconomor		405	
Ripper A	ttachment: 3-	Shank Ripper		Shift Basis:	1	per day	
		11		Data Source:	(CRG)	
Cost Breakdowr	<u>1:</u>			Utilization %			
	Ownership C	Cost/Hour:	\$126.01	NA			
	Operating C	Cost/Hour:	\$141.41	100			
Rip	per Ownership C	Cost/Hour:	\$19.26 \$11.48	<u>NA</u>			
KIJ	Operator C	Cost/Hour:	\$41.30	NA			
	Total Unit C	Cost/Hour:	\$339.46				
	Total Fleet C	Cost/Hour: \$33	39.46				
MATERIAL	QUANTITIES	Sele	ected estimating	g method: Area	ι		
Alternate Metho	<u>ds:</u>						
eismic: NA		Bank Volume	: NA	BCY		NA	
Area: 24.68	acres	Rip Depth (ft):	1.00	Volume:	39,817		BCY or CC
	Source of esti	mated quantity: AM-2	2, Exh D2 Map				
HOURLY PR	ODUCTION	· ·	*				
Seismier							
<u>Seisinic.</u>		Seismic Velocity:	NA	feet/sec	ond		
Area:		J					
	Averag	ge Ripping Depth:	2.63	feet/pas	S		
	Averag	e Ripping Width:	300.00	feet/pas	S S		
	Aver	rage Dozer Speed:	88.00	feet/min	nute		
	Average	e Maneuver Time:	0.25	minutes	s/pass		
	Produc	ction per unit area:	0.866	acres/he	our		
Job Condition C	orrection Factors	<u>s</u>					
U	nadjusted Hourly	y Unit Production:	0.866	Acres/h	r		
		Site Altitude:	6,800	feet			
		Altitude Adj:	1.00	(CAT H	IB)		
		Job Efficiency:	0.83	(1 shift/	(day)		
			0.05				
	Adjusted Adjusted	Hourly Unit Production: Hourly Fleet Production:	0.72	Acres/hr			
IOR TIME A	ND COST						
Floot size:	1	Grader(s)	Total ich tin	ne: 1	4 33	Hours	
	1		1 0tai joo tii	uc. <u> </u>	-1. JJ	110018	
Unit cost:	\$472.176	Per acre	Total job co	ost: \$1	1,653		

TRUCK/LOADER TEAM WORK

Site: Parkdale Quarry	y	Permit Act	ion: <u>AM-02</u>		Permit/Job#: <u>M1997054</u>		
PROJECT IDENT	TIFICATION						
Task #: E112		State: Colora	ado	Abl	previation: Not	ne	
Date: 12/10/	/2021	County: Freme	ont		Filename: M0	54-E112	
User: <u>TCI</u>	<u> </u>						
Agency or o	organization nan	ne: DRMS					
HOURI V FOUIP	MENT COST	,		Shift ba	sis: 1 per day		
HOURET EQUIT		-		Shint da	sis. <u>1 per day</u>		
Tr	uck Loader Tea	n -Truck: Cat	Equipment Descr 740	iption			
11	uen Louder reu	-Loader: CA	Т 980Н				
Suppo	rt Equipment -L	oad Area: Cat	D7R DS XR Ser	ies II			
Dood Ma	-Du	imp Area: CA	T 928Hz				
Koau Ma	-Wa	ter Truck: Wat	ter Tanker. 7.000	Gal.			
Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Maintena	nce Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck	
Utilization-machine:	100	100	75	100	100	100	
Ownership cost/hour:	\$88.53	\$67.72	\$81.02	\$30.09	\$66.63	\$53.88	
Operating cost/hour:	\$65.75	\$67.62	\$59.50	\$29.87	\$54.54	\$75.23	
%Utilization-riper:	NA	0	NA	NA	NA	NA to or	
Ripper own. cost/hour:	NA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Ripper op. cost/hour:	NA #22.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Operator cost/hour:	\$32.98	\$40.71	\$41.30	\$40.71	\$28.56	\$0.00	
Unit Subtotals:	\$187.26	\$176.05	\$181.82	\$100.67	\$149.73	\$129.11	
Number of Units:	2	1	l		1	\$27 0.04	
Group Subtotals:	Work:	\$550.57	Support:	\$282.49	Maint:	\$278.84	
Total work team cost	/hour: <u>\$1,111.9</u>	0					
<u>MATERIAL QUA</u>	<u>NTITIES</u>						
Initial volume:	9,778	ССҮ	Swell	factor: <u>1.320</u>			
Loose volume:	12,90	T LCY					
Sou	rce of estimated	volume: AM2	2, Exh L, p. 2 - P.	AR resp. (assume	trucked to convey	yor)	
Source of	of estimated swe	ll factor: Cat H	Handbook				
	Material Purcha	ase Cost: $\frac{$0.00}{$0.00}$)				
	10	uai C0st. <u>→0.00</u>	5				
HOURLY PROF	DUCTION						
Truck Canacity							

2,800	I ounds/ LC I
Granite - Broken	
87,000	Pounds
31.07	LCY
	Granite - Broken 87,000 31.07

Truck Bed (volume) Basis:						
Struck Volume:	24.20	LCY				
Heaped Volume:	31.40	LCY				
Average Volume:	27.80	LCY				
Adjusted Volume:	31.07	LCY				
Final T	ruck Volume E	Based on Number of I	Loader Passes:	26.25	LCY	
Loading Tool Canacity						
Loading 1001 Capacity					T 4	
			Buck	tet Size Class: <u>N</u>	A	_
Rated Capacity:	7.500	LCY (heaped)	11.1.1 () (0)	0.50() 0.075		-
Bucket Fill Factor:	0.875	Blasted rock - w	ell blasted (80) - 95%) 0.875		-
Adjusted Capacity:	0.503					
Job Condition Corrections:		Sit	e Altitude (ft.):	<u>5800</u> feet		
	Truck	Loader	Source			
Altitude Adi:	0.960	1.000	(CAT HI	3)		
Job Efficiency:	0.830	0.830	(CAT HI	3)		
Net Correction:	0.797	0.830				
Loading Tool Cycle Time:	Ν	Number of Loading T	ool Passes Req	uired to Fill	4	passes
Excavators and Front Shovels	<u>:</u>			писк.		
Machine Cycle Time vs. Selected Value w	Job Condition	n Rating: <u>NA</u> c Rating: NA				
Track Loaders – M	Aaterial Descri	ption:				
Cycle Time Elements (min.):						
Load: NA	Μ	aneuver: NA		Dump: 0.10	0	
Wheel and Track	– Loaders - Una	djusted Basic Loader	Cycle Time (lo	bad, dump,	min	utes
		5	, I	naneuver):	1.550	
Cycle Time Factors				Factor (min.)	Source	
Material:	Bank or brok	en material 0.04		0.040	(Cat HB)	_
Stockpile:	No adjustmer	nt - factor not applica	ble 0.00	0.000	(Cat HB)	_
Truck Ownership:	Common ow	nership of trucks and	loaders -	-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)	_
	<u> </u>	Net Cycle Time	e Adjustment:	-0.040	minutes	_
		Adjusted Loader	r Cycle Time:	0.510	minutes	
		Net Load Tir	me per Truck:	1.630	minutes	
Truck Cycle Time:						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.625	Minutes
Truck I oad Time	1 630	 Minutes	Adjusted	for site altitude:	1 630	- Minutes
T. I.M. ID	1.030		Aujusieu		1.030	
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted	for site altitude:	1.042	Minutes
Truck Travel (Haul & Return)	Time:	Road Condition: <u>R</u>	Rutted dirt, little	maintenance, no v	vater, 1" tire	
penetration 4.0						

Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time	
	(1)			(,,,)	(,,,,)	(1)	(min)	
1	1500.	.00	-2.00	4.00	2.00	3005	0.962	
					Haul Time:	0.962	minutes	5
Return Ro	ute:				1			
Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	(min)	
1	1500.	.00	2.00	4.00	6.00	2742	0.769	
					Return Time:	0.769	minute	es
				Total True	ck Cycle Time:	5.028	s minute	es
Loading Too	ol unit							
Produ	uction	698.45	LCY/Hour		Adjusted for jo	b efficiency:	579.71	LCY/Hour
uck Unit Produ	uction							
		313.27	LCY/Hour		Adjusted for jo	b efficiency:	260.01	LCY/Hour
imal No. of T	rucks:	2	Truck(s)		Selected Numb	er of Trucks:	2	Truck(s)
			Adjusted	hourly truck	team productio	on: 520.	.02 LCY	/Hour
			-	-	-			
			Adjusted single	e truck/loader	team productio	on: 520.	.02 LCY	/Hour
		A	Adjusted single djusted multiple	e truck/loader e truck/loader	team productio team productio	on: 520.	.02 LCY .02 LCY	/Hour /Hour
JOB TIN	IE AN	A D COST	Adjusted single djusted multiple	e truck/loader e truck/loader	team productio team productio	n: 520.	. <u>02</u> LCY . 02 LCY	/Hour /Hour
JOB TIM Fleet	IE AN	A <u>D COST</u> 1	Adjusted single adjusted multiple Team(s)	e truck/loader e truck/loader Ta	team productio team productio	24.82	.02 LCY .02 LCY 2 Ho	/Hour /Hour urs

TRUCK/LOADER TEAM WORK

Site: Parkdale Quarry	7	Permit Ac	tion: <u>AM-02</u>		Permit/Job#:	M1997054
ΡΡΟΙΕ<u>Ο</u>Τ ΙΝΕΝΊ	THEATION					
Task #: E115 Date: 12/10/ User: TC1	2021 (State: Color County: Frem	rado ont	Abl	breviation: <u>No</u> Filename: <u>M0</u>	ne 154-E115
Agency or o	organization nan	ne: DRMS				
HOURLY EQUIP	MENT COST	• -		Shift ba	sis: <u>1 per day</u>	
			Equipment Descri	iption		
Tr	uck Loader Tea	m -Truck: Ca	t 740			
Suppor	rt Fauinment I	-Loader: CA	AT 980H			
Road Mai	-Du intenance –Moto -Wa	or Grader: CA ter Truck: Wa	T 160M T 160M AT 160M Ater Tanker, 7,000	Gal.		
Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Maintena	nce Equipment
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
6Utilization-machine:	100	100	NA	100	100	100
Ownership cost/hour:	\$88.53	\$67.72	NA	\$66.63	\$66.63	\$53.88
Operating cost/hour:	\$65.75	\$67.62	NA	\$54.54	\$54.54	\$75.23
%Utilization-riper:	NA	0	NA	NA	NA	NA
Lipper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.71	NA	\$28.56	\$28.56	\$0.00
Unit Subtotals:	\$187.26	\$176.05	NA	\$149.73	\$149.73	\$129.11
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work:	\$550.57	Support:	\$149.73	Maint:	\$278.84
Total work team cost/	hour: <u>\$979.14</u> NTITIES					
Initial volume:	29,863	CC	Y Swell:	factor: <u>1.429</u>		
Loose volume:	42,66	2 LCY	ľ			
Sou	rce of estimated	volume: AM	-2, Exh L, p. 3			
Source of	of estimated swe	ll factor: Cat	Handbook			
	Matarial Durch	se Cost: \$0.0	0			

Truck Capacity:

Truck Payload (weight) Basis	<u>s:</u>	
Material weight:	1,600	Pounds/LCY
Description:	Top Soil	_
Rated Payload:	87,000	Pounds
Payload Capacity:	54.38	LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY				
Heaped Volume:	31.40	LCY				
Average Volume:	27.80	LCY				
Adjusted Volume:	31.40	LCY				
Final Tr	ruck Volume !	Based on Number of	Loader Passes:	30.75	LCY	
oading Tool Capacity						
			Buck	et Size Class:	NA	
Rated Capacity:	7.500	LCY (heaped)		-		
Bucket Fill Factor:	1.025	Rock - Earth M	lixture (100%-10	05%) 1.025		
Adjusted Capacity:	7.688	LCY				
ob Condition Corrections:		Si	te Altitude (ft.):	<u>5800</u> feet		
	Truck	Loader	Source			
Altitude Adj:	0.960	1.000	(CAT HI	3)		
Job Efficiency:	0.830	0.830	(CAT HI	3)		
Net Correction:	0.797	0.830				
Looding Tool Cycle Times		Number of Looding 7		vigad to Fill		-
Loading 1001 Cycle 11ine:	1	Number of Loading	1001 Passes Req	Truck:	4	passes
Excavators and Front Shovels	<u>:</u>					_
Machine Cycle Time vs.	Job Conditio	n Rating: <u>NA</u>				
Selected Value w	ithin this Basi	ic Rating: NA				
Track Loaders – N	Iaterial Descr	ription:				
Cycle Time Elements (min.):						
Load: NA	Ν	Ianeuver: NA		Dump: 0.	100	
	-			I		
Wheel and Track	Loaders - Una	adjusted Basic Loade	er Cycle Time (lo	oad, dump,	0.550 mi	nutes
			I	naneuver):		
Cycle Time Factors				Factor (min.)	Source	
Material:	Mixed mater	rial 0.02		0.020	(Cat HB)	
Stockpile:	No adjustme	ent - factor not applic	able 0.00	0.000	(Cat HB)	
i ruck Ownersnip:	0.04	vitership of trucks and	u loaders -	-0.040	(Cat HB)	
Operation:	Constant ope	eration -0.04		-0.040	(Cat HB)	
Dump Target:	Nominal targ	get 0.00		0.000	(Cat HB)	
		Net Cycle Tim	e Adjustment:	-0.060	minutes	
		Adjusted Loade	er Cycle Time:	0.490	minutes	
		Net Load Ti	me per Truck:	1.570	minutes	
ruck Cycle Time:						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.625	Minutes
Truck Load Time:	1.570	Minutes	Adjusted	for site altitude:	1.570	Minutes
Truck Maneuver and Dump	1.00	Minutes	Adjusted	for site altitude:	1.042	Minutes
Time:	1.00		1 10/05/00	site and add.	1.0.12	
ruck Travel (Haul & Return)	Time:	Road Condition: I	Rutted dirt, little	maintenance, no	o water, 1" tire	
enetration 4.0						

Seg #	Haul D	istance	Grade (%)	Roll. Res	Total Res	Velocity	Travel Time		
	(Ft)			(%)	(%)	(fpm)	(min)		
2	1500.0	0	2.00	4.00	6.00	1566	1.213		
Peturn Pout	.				Haul Time:	1.213	n	ninutes	
Seg #	.c. Haul D	istance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)			(%)	(%)	(fpm)	Time (min)		
1	1500.0	0	-2.00	4.00	2.00	3005	0.645		
				Total Tru	Return Time: ck Cycle Time:	0.645	; ;	minutes minutes	
Loading Tool Produc	unit ction	840.55	LCY/Hour		Adjusted for jo	b efficiency:	697	7.65	LCY/Hour
k Unit Produc	ction	362.14	LCY/Hour		Adjusted for jo	b efficiency:	300).58	LCY/Hou
nal No. of Tru	icks:	2	Truck(s)		Selected Numb	er of Trucks:		2	Truck(s)
			Adjusted	l hourly truck	team production	on: 601	.16	LCY/H	our
			Adjusted single	e truck/loader	team production	on: 601	.16	LCY/H	our
		A	Adjusted multiple	e truck/loader	team production	on: 601	.16	LCY/H	our
JOB TIMI	E AND	<u>COST</u>							
JOB TIMI Fleet si	<u>E AND</u> ize:	<u>COST</u>	Team(s)	Т	otal job time: _	70.9	7	Hours	S

REVEGETATION WORK

Task descrip	ption:	Reveg pit floor of Phas	se 1		
: Parkdale	Quarry	Permit A	ction: <u>AM-02</u>	Permit/Jol	o#: <u>M1997054</u>
PROJECT Task #:	IDENTIFIC	CATION State: Colo	rado	Abbreviation:	None
Date:	12/10/2021	County: Fren	iont	Filename:	M054-E120

FERTILIZING

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	125.00	pound	\$0.36	\$45.00
Superphosphate, 0-20-0 with 12% S	125.00	pound	\$0.26	\$32.50
			Total Fertilizer Materials	
			Cost/Acre	\$77.50

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$38.77
	Total Fertilizer Application Cost/Acre	\$38.77

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.56
Total Tilling Cost/Acre	\$114.56

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	0.20	0.96	\$0.51
Blue Grama - Native	1.10	17.95	\$15.10
Indian Ricegrass - Native	2.10	6.80	\$13.65
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Sand Dropseed	0.05	5.97	\$0.49
Sideoats Grama - Vaughn	1.80	5.91	\$15.08
Sheep Fescue - Bighorn	0.40	6.24	\$1.76
Thickspike Wheatgrass - Critana	1.60	5.66	\$11.00
Western Wheatgrass - Native	2.00	5.05	\$12.00
Sage, Fringed	0.03	2.51	\$1.23

Sagebrush, Louisiana or Prairie	0.03	3.02	\$4.01
Saltbush, Four Wing	0.10	0.14	\$1.25
Spike Muhly	0.20	7.35	\$1.94
Sumac, Skunkbrush	0.10	0.05	\$2.10
Purple Three-Awn	0.10	1.15	\$2.66
Totals Seed Mix	10.01	73.01	\$84.82

Application

	Cost /Acre
	\$232.00
Total Seed Application Cost/Acre	¢222.00
]	Fotal Seed Application Cost/Acre

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$71.57
	Total Mulch Application Cost/Acre	\$71.57

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

No. of Acres:	24.68	Cost /Acre:	\$1,233.26
Estimated Failure Rate:	20%	Cost /Acre*:	\$316.82
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost: \$30,436,86			

Initial Job Cost:	\$30,436.86
Reseeding Job Cost:	\$1,563.82
Total Job Cost:	\$32,001
Job Hours:	50.00

TRUCK/LOADER TEAM WORK

Task description:	Backfill	1,000 ft of be	enches not concurr	ently reclaimed		N/1007054
Site: Parkdale Quarry	y	Permit A	Action: <u>AM-02</u>		Permit/Job#:	M1997054
PROJECT IDENT	TIFICATION					
Task # G100		State: Co	lorado	Ab	breviation: No	ne
Date: $12/10/$	/2021	County: Fre	mont		Filename: M	054-G100
User: TC1						
Agency or o	organization nan	ne: DRMS				
HOURLY EQUIP	MENT COST	-		Shift ba	sis: <u>1 per day</u>	
			Equipment Descr	iption		
Tr	uck Loader Tea	m -Truck: (Cat 740			
Sunna	rt Equipmont I	-Loader: (CAT 980H			
Suppo	-Du	ump Area: (ra Cat D6T LGP			
Road Mai	intenance – Moto	or Grader: (CAT 160M			
	-Wa	ter Truck: V	Vater Tanker, 7,000	Gal.		
~			_			. .
<u>Cost Breakdown</u> :	Truck/Loa	der Team	Support	Equipment	Mainten	Water Truck
	Iruck	Loader	Load Area	Dump Area	Grader	water Truck
Utilization-machine:	100	10	0 NA	100	100	50
Ownership cost/hour:	\$88.53	\$67.7	2 NA	\$66.27	\$66.63	\$53.88
Operating cost/hour:	\$65.75	\$67.6	2 NA	\$66.34	\$54.54	\$37.62
%Utilization-riper:	NA		0 NA	NA	NA	NA
ipper own. cost/hour:	NA	\$0.0	0 NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.0	0 NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.7	1 NA	\$41.30	\$28.56	\$0.00
Unit Subtotals:	\$187.26	\$176.0	5 NA	\$173.91	\$149.73	\$91.50
Number of Units:	3		1 0	1	1	1
Group Subtotals:	Work:	\$737.83	Support:	\$173.91	Maint:	\$241.23
Total work team cost/	/hour: <u>\$1,152.9</u>	7				
MATERIAL QUA	NTITIES					
Initial volume:	16,670	С	CY Swell	factor: 1.250		
Loose volume:	20,83	8 L	CY			
Sou	rce of estimated	volume: A	ssume 1.000 ft benc	hes; Tsk E100.1		
Source of	of estimated swe	ll factor: C	at Handbook	,		
	Material Purcha	ase Cost: \$0	0.00			
	То	tal Cost: \$0	0.00			
HOURLY PROF)IICTTON					

Truck Capacity:

Truck Payload (weight) Basis	<u>s:</u>	
Material weight:	2,650	Pounds/LCY
Description:	Decomposed rock - 25%	6 Rock, 75% Earth
Rated Payload:	87,000	Pounds
Payload Capacity:	32.83	LCY

Truck Bed (volume) Basis:						
Struck Volume:	24.20	LCY				
Heaped Volume:	31.40	LCY				
Average Volume:	27.80	LCY				
Adjusted Volume:	31.40	LCY				
Final Tr	ruck Volume F	Based on Number of	Loader Passes:	30.75	LCY	
Loading Tool Capacity						
			Buck	et Size Class: N	ΝA	
Rated Capacity:	7 500	LCY (heaped)	2001			
Bucket Fill Factor:	1.025	Rock - Earth M	ixture (100%-10)5%) 1.025		_
Adjusted Capacity:	7.688	LCY	(,		
				5000 6 ·		
Job Condition Corrections:		Sit	te Altitude (ft.):	<u>5800</u> feet		
	Truck	Loader	Source			
Altitude Adj:	0.960	1.000	(CAT HE	3)		
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.797	0.830				
Looding Tool Cycle Time	N	Jumber of Loading 7		virad to Fill		200000
Loading Tool Cycle Thile:	ľ	Number of Loading 1	OUT Fasses Req	Truck:	4	passes
Excavators and Front Shovers	<u>.</u>					
Machine Cycle Time vs. Selected Value w	Job Condition ithin this Basic	n Rating: <u>NA</u> c Rating: NA				
Track Loaders – N	Aaterial Descri	iption:				
Cycle Time Flements (min):		·				
cycle Time Elements (mm.).						
Load: NA	M	aneuver: NA		Dump: 0.10	0	
Wheel and Track	Loaders - Una	diusted Basic Loade	r Cvcle Time (lo	ad, dump.	n an an min	utes
			r	naneuver):).550	
Cycle Time Factors				Factor (min.)	Source	
Material:	Mixed mater	ial 0.02		0.020	(Cat HB)	
Stockpile:	No adjustmer	nt - factor not applica	able 0.00	0.000	(Cat HB)	
Truck Ownership:	Common ow	nership of trucks and	l loaders -	-0.040	(Cat HB)	
	0.04			0.010		_
Operation:	Constant ope	eration -0.04		-0.040	(Cat HB)	
Dump Target:	Nominal targ	set 0.00 Not Cycle Time	Adjustment	0.000	(Cat HB)	
		Adjusted Loade	r Cycle Time:	-0.060	minutes	
		Net Load Ti	me per Truck	1.570		
				11070		
<u> Truck Cycle Time:</u>						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.625	Minutes
Truck Load Time:	1.570	Minutes	Adjusted	for site altitude:	1.570	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted	for site altitude:	1.042	Minutes
Truck Travel (Haul & Return)	Time:	Road Condition: <u>F</u>	Rutted dirt, little	maintenance, no v	vater, 1" tire	
penetration 4.0						

Seg #	Haul D	istance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
_	(Ft)			(%)	(%)	(fpm)	Time		
1	3500.0	<u>ן</u>	5.00	4.00	0.00	083	(min)		
1	3300.0)	3.00	4.00	9.00	983	5.051		
					Haul Time:	3.651	n	ninutes	
Return Rout	te:		1 1		1				
Seg #	Haul D	istance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)			(%)	(%)	(fpm)	(min)		
1	3500.0)	-5.00	4.00	-1.00	3706	0.974		
					Return Time:	0.974	Ļ	minutes	
				Total True	ck Cycle Time:	7.862	;	minutes	
Loading Tool	unit								
Produc	ction	840.55	LCY/Hour		Adjusted for jo	b efficiency:	69′	7.65	LCY/Hou
k Unit Produc	ction				5 5	·			
	_	234.68	LCY/Hour		Adjusted for jo	b efficiency:	194	4.79	LCY/Hour
nal No. of Tru	ıcks:	4	Truck(a)		Colooted Numb	on of Travalsa		3	Truck(s)
		4			Selected Nullib	er of Trucks:		-	. ,
		4	Adjusted	l hourly truck	team productio	on: 584	.36	LCY/H	our
		4	Adjusted	l hourly truck e truck/loader	team productio team productio	on: <u>584</u> on: 584	.36	LCY/H LCY/H	our
		4	Adjusted Adjusted single djusted multiple	l hourly truck e truck/loader e truck/loader	team productio team productio team productio	on: 584 on: 584 on: 584	.36 .36 .36	LCY/H LCY/H LCY/H	our our our
JOB TIM	E AND	4 A COST	Adjusted single	l hourly truck e truck/loader e truck/loader	team productio team productio team productio	on: 584 on: 584 on: 584 on: 584	.36 .36 . 36	LCY/H LCY/H LCY/H	our our our
JOB TIM	E AND	4 A COST	Adjusted Adjusted single Adjusted multiple	l hourly truck e truck/loader e truck/loader	team productio team productio team productio	$\begin{array}{c} \text{pr:} & 584 \\ \text{pr:} & 584 \\ \text{pr:} & 584 \\ \text{pr:} & 584 \\ \end{array}$.36 .36 .36 .36	LCY/H LCY/H LCY/H	our our our
JOB TIM Fleet s	E AND ize:	4 <u>COST</u> 1	Adjusted Adjusted single Adjusted multiple Team(s)	l hourly truck e truck/loader e truck/loader To	team productio team productio team productio	on: 584 on: 584 on: 584 on: 584 35.60	.36 .36 . 36 . 36	LCY/H LCY/H LCY/H LCY/H	our our our

REVEGETATION WORK

	tes not concurrency reclamed	
Permit Action:	AM-02 Permit/Jo	o#: M1997054
IFICATION Statu Calarada	Abbroviction	None
2021 County: Fremont	Abbreviation: Filename:	M054-G105
у Г /2	y Permit Action: TIFICATION State: Colorado /2021 County: Fremont	y Permit Action: AM-02 Permit/Jol TIFICATION Z021 State: Colorado Abbreviation: Z021 Fremont Filename:

FERTILIZING

Materials

	Units /			G
Description	Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	125.00	pound	\$0.36	\$45.00
Superphosphate, 0-20-0 with 12% S	125.00	pound	\$0.26	\$32.50
			Total Fertilizer	
			Materials	
			Cost/Acre	\$77.50

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)	\$114.56
Total Tilling Cost/Acre	\$114.56

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	0.40	1.93	\$1.02
Blue Grama - Native	2.20	35.91	\$30.20
Indian Ricegrass - Native	4.20	13.60	\$27.30
Canby Bluegrass - Canbar	0.40	8.50	\$4.10
Sand Dropseed	0.10	11.94	\$0.98
Sideoats Grama - Vaughn	3.60	11.82	\$30.15
Sheep Fescue - Bighorn	0.80	12.49	\$3.52
Thickspike Wheatgrass - Critana	3.20	11.31	\$22.00
Western Wheatgrass - Native	4.00	10.10	\$24.00

Sage, Fringed	0.06	5.01	\$2.46
Sagebrush, Louisiana or Prairie	0.06	6.05	\$8.01
Saltbush, Four Wing	0.20	0.28	\$2.50
Spike Muhly	0.40	14.69	\$3.88
Sumac, Skunkbrush	0.20	0.09	\$4.20
Purple Three-Awn	0.20	2.30	\$5.32
Totals Seed Mix	20.02	146.01	\$169.63

Application

Description		Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)		\$965.73
	Total Seed Application Cost/Acre	\$965.73

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 Stoc	k Cost / Acre	\$0.00

JOB TIME AND COST

No. of Acres: Estimated Failure Rate: *Selected Replanting Work Items:	1 20% SEEDING	Cost /Acre: Cost /Acre*:	\$1,327.42 \$1,135.36
Initial Job Cost: \$1,327.42 Reseeding Job Cost: \$227.07 Total Job Cost: \$1,554 Job Hours: 4.00		-	

BULLDOZER RIPPING WORK

		p existing granite p	it moor						
ite: Parkdale Quar	rry	Permit A	ction:	AM-02		Perm	nit/Job	o#: <u>M199</u>	97054
PROJECT IDEN	NTIFICAT	ION							
Task #: G11 Date: 12/1 User: TC1	10 10/2021 1	State: Cold County: Free	orado nont			Abbreviat Filena	ion: me:	None M054-G	110
Agency of	or organizatio	on name: DRMS							
HOURLY EQU	IPMENT C	COST							
Basic N	Aachine: C	Cat D9T - 9SU			Horsepo	ower:	4	405	
Ripper Atta	chment: 3	-Shank Ripper		_	Shift E	Basis:	1 p	er day	
Cost Breakdown:					Data So	urce:	((LKG)	
	Our anchin (Cost/Hours		¢126.01	Utilizatio	on %			
	Ownership (Operating (Cost/Hour:		\$126.01	100 INA				
Ripper	Ownership (Cost/Hour:		\$19.26	NA				
Rippe	er Operating (Cost/Hour:		\$11.48	100				
	Operator (Total Unit (Cost/Hour:		\$41.30	NA				
			#22 0	φ <u></u> σσ <u>σ</u> σ <u>σ</u>					
	Total Fleet (Cost/Hour:	\$339.	46					
MATERIAL QU	J ANTITIE S	<u>S</u>	Select	ed estimating	method:	Area			
Internate methous.									
ic: NA	<u>-</u>	Bank Vo	lume:	NA	E	BCY		NA	
ic: NA ea: 23.14	acres	Bank Vo Rip Deptl	lume: h (ft):	NA 1.00	EE	BCY lume: 37,	333	NA	BCY o
ic: NA ea: 23.14	acres	Bank Vo Rip Deptl	lume: h (ft): AM-2, F	NA 1.00 Exh D2 Map	E Vol	3CY lume: <u>37</u> ,	333	NA	BCY o
ic: <u>NA</u> ea: <u>23.14</u> HOURLY PROI	acres Source of est	Bank Vo Rip Deptl	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map	E Vol	3CY lume: <u>37</u> ,	333	NA	BCY o
ic: <u>NA</u> ea: <u>23.14</u> HOURLY PROI Seismic:	acres <u>acres</u> Source of est	Bank Vo Rip Deptl timated quantity:	lume: h (ft): AM-2, F	NA 1.00 Exh D2 Map	E Vol	BCY lume: 37,	333	NA	BCY o
ic: NA ea: 23.14 HOURLY PROI	acres Source of est DUCTION	Bank Vo Rip Dept timated quantity: Seismic Velocity:	lume: h (ft): AM-2, F	NA 1.00 Exh D2 Map NA	E Vol	BCY lume: 37,	333	NA	BCY o
ic: <u>NA</u> ea: <u>23.14</u> <u>HOURLY PROI</u> <u>Seismic:</u> <u>Area:</u>	acres acres Source of est DUCTION	Bank Vo Rip Deptl timated quantity: <u>4</u> Seismic Velocity:	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map NA	E Vol	BCY lume: 37,	333	NA	BCY o
ic: NA ea: 23.14 HOURLY PROI Seismic: Area:	acres Source of est DUCTION Avera Avera	Bank Vo Rip Deptl timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Width:	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map NA 2.63 7.67	E Vol	BCY lume: 37, eet/second eet/pass eet/pass	333	NA	BCY o
ic: <u>NA</u> ea: <u>23.14</u> HOURLY PROI Seismic: <u>Area:</u>	acres Source of est DUCTION Avera Avera Avera	Bank Vo Rip Deptl timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Width: ge Ripping Length:	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass	333	NA	BCY o
ic: NA ea: 23.14 HOURLY PROI Seismic: <u>Area:</u>	acres Source of est DUCTION Avera Avera Avera	Bank Vo Rip Deptl timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Width: ge Ripping Length: erage Dozer Speed:	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass eet/minute	333	NA	BCY o
ic: <u>NA</u> ea: <u>23.14</u> HOURLY PROI Seismic: <u>Area:</u>	acres Source of est DUCTION Avera Avera Avera Averag Drodu	Bank Vo Rip Depth timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Width: ge Ripping Length: erage Dozer Speed: ge Maneuver Time:	lume: h (ft): AM-2, F	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass eet/minute ninutes/pass	333	NA	BCY o
Internate intentious. ic: NA ea: 23.14 HOURLY PROI Seismic: Area:	acres Source of est DUCTION Avera Avera Avera Avera Produ	Bank Vo Rip Deptl timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Length: ge Ripping Length: erage Dozer Speed: ge Maneuver Time: action per unit area:	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866	E E	BCY lume: 37, feet/second feet/pass feet/feet/feet/feet/feet/feet/feet/feet	333	NA	BCY o
ic: <u>NA</u> ea: <u>23.14</u> HOURLY PROJ Seismic: <u>Area:</u> Job Condition Corr	acres Source of est DUCTION Avera Avera Averag Averag Produ	Bank Vo Rip Depth timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Width: ge Ripping Length: erage Dozer Speed: ge Maneuver Time: action per unit area:	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass eet/pass eet/minute ninutes/pass cres/hour	333	NA	BCY o
ic: NA ea: 23.14 HOURLY PROD Seismic: Area: Job Condition Corr Unac	acres Source of est DUCTION Avera Avera Avera Produ rection Factor djusted Hourl	Bank Vo Rip Depth timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Length: ge Ripping Length: erage Dozer Speed: ge Maneuver Time: action per unit area: ses	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866 0.866	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass eet/minute ninutes/pass acres/hour	333	NA	BCY o
ic: NA ea: 23.14 HOURLY PROD Seismic: Area: Job Condition Corr Unac	acres Source of est DUCTION Avera Avera Averag Produ rection Factor djusted Hourl	Bank Vo Rip Deptl timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Length: erage Dozer Speed: ge Maneuver Time: action per unit area: as by Unit Production: Site Altitude:	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866 0.866 6,800	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass eet/pass eet/minute ninutes/pass icres/hour	333	NA	BCY o
Internate intentious. ic: NA ea: 23.14 HOURLY PROD Seismic: Area:	acres Source of est DUCTION Avera Avera Avera Avera Produ rection Factor	Bank Vo Rip Deptl timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Length: age Ripping Length: age Dozer Speed: age Maneuver Time: action per unit area: as by Unit Production: Site Altitude: Altitude Adj:	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866 6,800 1.00 0.92	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass eet/pass eet/minute ninutes/pass acres/hour Acres/hr eet CAT HB)	333	NA	BCY o
Internate infentious. ic: NA ea: 23.14 HOURLY PROI Seismic: Area: Job Condition Corr Unaction	acres Source of est DUCTION Avera Avera Averag Produ rection Factor djusted Hourl	Bank Vo Rip Deptl timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Depth: age Ripping Length: erage Dozer Speed: ge Maneuver Time: action per unit area: <u>rs</u> ly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction:	lume: h (ft): AM-2, F	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866 0.866 6,800 1.00 0.83 0.83	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass eet/pass eet/pass eet/minute ninutes/pass eet/hour Acres/hr eet CAT HB) 1 shift/day) pultiplier	333	NA	BCY o
Internate infentious. ic: NA ea: 23.14 HOURLY PROD Seismic: Area:	acres Source of est DUCTION Avera Avera Averag Produ rection Factor djusted Hourl	Bank Vo Rip Depti- timated quantity:	lume: h (ft): AM-2, F	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866 0.866 6,800 1.00 0.83 0.83 0.72 0.72 0.72	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/nute nutes/pass eet/bur Acres/hr eet CAT HB) 1 shift/day) nultiplier es/hr	333	NA	BCY o
Internate intentious. ic: NA ea: 23.14 HOURLY PROI Seismic: Area:	acres Source of est DUCTION Avera Avera Avera Avera Produ rection Factor djusted Hourl	Bank Vo Rip Depth timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Depth: age Ripping Length: ge Ripping Length: age Dozer Speed: ge Maneuver Time: action per unit area: as by Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: d Hourly Unit Production:	lume: h (ft): AM-2, F	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866 6,800 1.00 0.83 0.83 0.72 0.72 0.72	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/nute ninutes/pass acres/hour Acres/hr eet CAT HB) 1 shift/day) nultiplier es/hr	333	NA	BCY o
Internate infentious. ic: NA ea: 23.14 HOURLY PROI Seismic: Area: Job Condition Corr Unact	acres Source of est DUCTION Avera Avera Avera Avera Produ rection Factor djusted Hourl djusted Hourl	Bank Vo Rip Depth timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Depth: age Ripping Length: erage Dozer Speed: ge Maneuver Time: action per unit area: as by Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: d Hourly Unit Production:	lume: h (ft): AM-2, F	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866 6,800 1.00 0.83 0.83 0.72 0.72 0.72	E Vol	BCY lume: 37, eet/second eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/pass eet/ninute ninutes/pass eet/hour Acres/hr eet CAT HB) 1 shift/day) nultiplier es/hr	333	NA	BCY o
Internate infentious. ic: NA ea: 23.14 HOURLY PROI Seismic: Area: Job Condition Corr Unact Job Condition Corr Unact Fleet size:	acres Source of est DUCTION Avera Avera Avera Produ rection Factor djusted Hourl djusted Hourl Adjusted Adjusted	Bank Vo Rip Depti timated quantity: Seismic Velocity: age Ripping Depth: age Ripping Depth: age Ripping Length: erage Dozer Speed: ge Maneuver Time: action per unit area: set Altitude Altitude Adj: Job Efficiency: Net Correction: d Hourly Unit Product Hourly Fleet Product	lume: h (ft): AM-2, E	NA 1.00 Exh D2 Map NA 2.63 7.67 300.00 88.00 0.25 0.866 6,800 1.00 0.83 0.83 0.72 0.72 0.72 1.00 tim	E Vol	acres/hr eet/second eet/pass es/hr es/hr es/hr es/hr	333	<u>NA</u>	BCY o

TRUCK/LOADER TEAM WORK

Site: Parkdale Quarry		Permit Act	ion: <u>AM-02</u>		Permit/Job#:	M1997054
PROJECT IDENT	IFICATION					
Task #· G115		State: Color:	obe	Abl	previation: No	ne
Date: $12/10/2$	2021 0	21County:FremontRobot Mation:Robot Mation:Filename:M054-G115			54-G115	
User: TC1		-				
Agency or o	rganization nan	ne: DRMS				
HOURLY EQUIPM	MENT COST			Shift ba	sis: <u>1 per day</u>	
]	Equipment Descr	iption		
Tru	ick Loader Tear	n -Truck: Cat	740	-		
		-Loader: CA	Т 980Н			
Suppor	t Equipment -L	bad Area: NA	т 160М			
Road Main	ntenance –Moto	or Grader: CA	T 160M			
	-Wat	er Truck: Wa	ter Tanker, 7,000	Gal.		
Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Maintena	nce Equipment
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
6Utilization-machine:	100	100	NA	100	100	100
Ownership cost/hour:	\$88.53	\$67.72	NA	\$66.63	\$66.63	\$53.88
Operating cost/hour:	\$65.75	\$67.62	NA	\$54.54	\$54.54	\$75.23
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.71	NA	\$28.56	\$28.56	\$0.00
Unit Subtotals:	\$187.26	\$176.05	NA	\$149.73	\$149.73	\$129.11
Number of Units:	3	1	0	1	1	1
Group Subtotals:	Work:	\$737.83	Support:	\$149.73	Maint:	\$278.84
Total work team cost/l	nour: <u>\$1,166.4</u> <u>NTITIES</u>	0				
Initial volume	27 999	CCY	Swell	factor: 1 429		
Loose volume:	39,99	9 LCY	, Swell			
ç	no of actimated	volumo: AM	2 Exh D2 Mar			
Source of	f estimated swe	ll factor: Cat F	2, EXILD2 Map			
	Material Purcha	se Cost: $\$0.00$)			
		, , , , , ,				

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis	<u>s:</u>	
Material weight:	1,600	Pounds/LCY
Description:	Top Soil	
Rated Payload:	87,000	Pounds
Payload Capacity:	54.38	LCY

Truck Bed (volume) Basis:						
Struck Volume:	24.20	LCY				
Heaped Volume:	31.40	LCY				
Average Volume:	27.80	LCY				
Adjusted Volume:	31.40	LCY				
Final Tr	ruck Volume I	Based on Number of L	oader Passes:	30.75	LCY	
Loading Tool Capacity						
			Buck	tet Size Class: <u>N</u>	А	
Rated Capacity:	7.500	LCY (heaped)				_
Bucket Fill Factor:	1.025	Rock - Earth Miz	xture (100%-10	05%) 1.025		_
Adjusted Capacity:	7.688	LCY				
Job Condition Corrections:		Site	e Altitude (ft.):	<u>5800</u> feet		
	Truck	Loader	Source			
Altitude Adj:	0.960	1.000	(CAT HE	3)		
Job Efficiency:	0.830	0.830	(CAT HI	3)		
Net Correction:	0.797	0.830				
Loading Tool Cycle Time:	1	Number of Loading To	ool Passes Requ	uired to Fill		passes
Excavators and Eront Shovels			1	Truck:	4	P
	<u>.</u>					
Machine Cycle Time vs.	Job Condition	n Rating: <u>NA</u>				
Treal Looders	Initial Deser					
Track Loaders – N	Taterial Descri					
Cycle Time Elements (min.):						
Load: NA	М	laneuver: NA		Dump: 0.100)	
	_					
Wheel and Track	Loaders - Una	idjusted Basic Loader	Cycle Time (lo	bad, dump, 0. naneuver):	550 min	utes
Cycle Time Factors				Factor (min.)	Source	
Material:	Mixed mater	ial 0.02		0.020	(Cat HB)	
Stockpile:	No adjustme	nt - factor not applicat	ble 0.00	0.000	(Cat HB)	
Truck Ownership:	Common ow	mership of trucks and	loaders -	-0.040	(Cat HB)	
Operation:	Constant one	eration -0.04		-0.040	(Cat HB)	
Dump Target:	Nominal targ	get 0.00		0.000	(Cat HB)	_
		Net Cycle Time	Adjustment:	-0.060	minutes	_
		Adjusted Loader	Cycle Time:	0.490	minutes	
		Net Load Tin	he per Truck:	1.570	minutes	
Truck Cycle Time:						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.625	Minutes
Truck Load Time:	1.570	Minutes	Adjusted	for site altitude:	1.570	Minutes
Truck Maneuver and Dump	1.00	Minutes	Adjusted	for site altitude:	1.042	Minutes
Time:	1.00	1. mater	2 Iujusicu	ior one unitado.	1.012	muuus
						_
Truck Travel (Haul & Return)	Time:	Road Condition: R	utted dirt, little	maintenance, no w	ater, 1" tire	
penetration 4.0						

Seg #	Haul I	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)			(%)	(%)	(fpm)	Time (min)		
2	4800.0	00	3.00	4.00	7.00	1281	3.901		
					Haul Time:	3.901	mi	nutes	
Return Rou	ite:								
Seg #	Haul I	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)			(%)	(%)	(fpm)	(min)		
1	4800.0	00	-3.00	4.00	1.00	3706	1.499		
				Total Tru	Return Time:	<u> </u>	m m	inutes	
Loading Too	1			Total IIu	ek eyele Time.	0.007	111	mates	
Produ	iction	840.55	LCY/Hour		Adjusted for jo	b efficiency:	697.6	55	LCY/Hour
ick Unit Produ		213.62	LCY/Hour		Adjusted for jo	b efficiency:	177.3	31	LCY/Hour
mal No. of Tr	ucks:	4	Truck(s)		Selected Numb	er of Trucks:	3		Truck(s)
			Adjusted	l hourly truck	team production	on: 531	.92 1	LCY/H	lour
			Adjusted single	e truck/loader	team production	on: 531	.92 1	LCY/H	our
			1 1 1 1	1 /1 1					[
		F	Adjusted multiple	e truck/loader	team production	on: 531	.92	LCY/H	lour
JOB TIM	IE AND	<u>COST</u>	Adjusted multiple	e truck/loader	team productio	on: <u>531</u>	.92	LC Y/H	lour
JOB TIM	IE AND size:	P COST 1	Team(s)	e truck/loader	otal job time:	on: <u>531</u> 75.20	0	Hour:	s

REVEGETATION WORK

Task description:		otion:	Reveg existing granite pit flo	or		
Site: _]	Site: Parkdale Quarry		Permit Action:	AM-02	Permit/Job	o#: <u>M1997054</u>
<u>PR</u>	OJECT	IDENTIFIC	ATION			
	Task #:	G120	State: Colorado		Abbreviation:	None
	Date:	12/10/2021	County: Fremont		Filename:	M054-G120
	User:	TC1				

FERTILIZING

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	125.00	pound	\$0.36	\$45.00
Superphosphate, 0-20-0 with 12% S	125.00	pound	\$0.26	\$32.50
			Total Fertilizer	
			Materials	
			Cost/Acre	\$77.50

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$38.77
	Total Fertilizer Application Cost/Acre	\$38.77

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.56
Total Tilling Cost/Acre	\$114.56

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	0.20	0.96	\$0.51
Blue Grama - Native	1.10	17.95	\$15.10
Indian Ricegrass - Native	2.10	6.80	\$13.65
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Sand Dropseed	0.05	5.97	\$0.49
Sideoats Grama - Vaughn	1.80	5.91	\$15.08
Sheep Fescue - Bighorn	0.40	6.24	\$1.76
Thickspike Wheatgrass - Critana	1.60	5.66	\$11.00
Western Wheatgrass - Native	2.00	5.05	\$12.00
Sage, Fringed	0.03	2.51	\$1.23

Sagebrush, Louisiana or Prairie	0.03	3.02	\$4.01
Saltbush, Four Wing	0.10	0.14	\$1.25
Spike Muhly	0.20	7.35	\$1.94
Sumac, Skunkbrush	0.10	0.05	\$2.10
Purple Three-Awn	0.10	1.15	\$2.66
Totals Seed Mix	10.01	73.01	\$84.82

Application

Description		Cost /Acre
Drill Seeding (DRMS Survey Cost)		\$232.00
	Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$71.57
	Total Mulch Application Cost/Acre	\$71.57

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

No. of Acres:	23.14	Cost /Acre:	\$1,233.26
Estimated Failure Rate:	20%	Cost /Acre*:	\$316.82
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost: \$28,537.64			

Initial Job Cost:	\$28,537.64
Reseeding Job Cost:	\$1,466.24
Total Job Cost:	\$30,004
Job Hours:	50.00

COMPACTION WORK

	Sitewide cleanup - 15	i ms or Compa	ctor work		
te: Parkdale Quarry	Permit A	ction: <u>AM-02</u>		Permit/Job#:	M1997054
PROJECT IDENTIFI	CATION				
Task #: SW01	State: Col	orado	Al	obreviation: N	lone
Date: 12/10/202	1 County: Fre	nont	,	Filename: N	4054-SW01
User: TC1					
Agency or organ	nization name: DRMS				
HOURLY EQUIPME	NT COST				
Basic Machine	e: CAT PS-150C (2004)	Horsepower		
Compactor Type	e: Pneumatic static (asp	halt)	Shift Basis	: 1 per	day
	` ` *		Data Source	: (CR	G)
Cost Breakdown:			1		
Ouma	rahin Cost/Hour	\$15 27	Utilization %)	
Owne	ating Cost/Hour	۹43.37 \$18.61	100		
Ope	erator Cost/Hour:	\$26.02	NA		
Total	Unit Cost/Hour:	\$90.00			
Total	Fleet Cost/Hour:	\$90.00			
1000		φ, στο σ			
MATERIAL OUANT	ITIES				
Loose volum		LCN	,	hrinkage factor:	0.900
Compacted volum	ne: 150.300		7	minikage factor.	0.900
1			1 1 1.71	1 / 1 /1	、 、
Source of es	timeted shrinkage factor:	Material vol.	adjusted to get 151	hrs (1/hr per acre	e)
Source of es	unnated shi nikage factor.		<u> </u>		
HOURLY PRODUCT	TON	Una	diusted hourly prod		
Com			ujusted <u>nouny proc</u>	$luction = (W \times S)$	<u>x L x C) / P</u>
A 1/2	pacted width per pass (W)	: 5.0	57 feet	$luction = (W \times S)$	<u>x L x C) / P</u>
Ave	rage Compactor Speed (S)	: 5.0	57 feet 00 mph	$luction = (W \times S)$	<u>x L x C) / P</u>
Compacte	rage Compactor Speed (S) thickness of each lift (L)	$\begin{array}{c} \vdots \\ 5.0 \\ \vdots \\ 4.0 \\ 8.0 \end{array}$	57 feet 00 mph 100 inche	$\frac{ uction = (w \times S)}{ s }$	<u>x L x C) / P</u>
Compacte	rage Compactor Speed (S) d thickness of each lift (L) Conversion Constant (C)	$ \begin{array}{c} $	67 feet 00 mph 00 inche .3 (5,28)	uction = (W x S es 00ft./12in./27cu.f	<u>x L x C) / P</u>)
Compacte Required num	apacted width per pass (W) rage Compactor Speed (S) d thickness of each lift (L) Conversion Constant (C) nber of machine passes (P)	$\begin{array}{c} : & 5.0 \\ : & 4.0 \\ : & 8.0 \\ : & 166 \\ : & 2 \end{array}$	67 feet 00 mph 00 inche .3 (5,28 .2 passe	es 30ft./12in./27cu.f	<u>x L x C) / P</u> t.)
Compacte Required num Unadjust	pacted width per pass (W) erage Compactor Speed (S) ed thickness of each lift (L) Conversion Constant (C) nber of machine passes (P) ed Hourly Unit Production	$\begin{array}{c} : & 5.0 \\ : & 4.0 \\ : & 8.0 \\ : & 16 \\ : & 2 \\ : & 1,47 \\ \end{array}$	67 feet 00 mph 00 inche .3 (5,28) 8.74 CCY	es 30ft./12in./27cu.f /hour	<u>x L x C) / P</u> t.)
Compacte Compacte Required num Unadjust Job Condition Correction	apacted width per pass (W) erage Compactor Speed (S) ed thickness of each lift (L) Conversion Constant (C) nber of machine passes (P) ed Hourly Unit Production <u>Factors</u>	$\begin{array}{c} : & 5.0 \\ : & 4.0 \\ : & 8.0 \\ : & 16 \\ : & 2 \\ : & 1,47 \\ \\ Site \\ \end{array}$	67 feet 00 mph 00 inche .3 (5,28) 8.74 CCY Altitude: 6,800 fee	<u>luction = (W x S</u> es 80ft./12in./27cu.f es 7/hour t	<u>x L x C) / P</u> ř.)
Compacte Required num Unadjust Job Condition Correction	apacted width per pass (W) erage Compactor Speed (S) ed thickness of each lift (L) Conversion Constant (C) nber of machine passes (P) ed Hourly Unit Production <u>Factors</u>	: 5.0 : 4.0 : 8.0 : 16 : 2 : 1,47 Site Source	67 feet 00 mph 00 inche .3 (5,28) 8.74 CCY Altitude: 6,800	<u>luction = (W x S</u> 80ft./12in./27cu.f es //hour t	<u>x L x C) / P</u> t.)
Compacte Required num Unadjust Job Condition Correction Altitude Adj:	pacted width per pass (W) erage Compactor Speed (S) ed thickness of each lift (L) Conversion Constant (C) nber of machine passes (P) ed Hourly Unit Production <u>Factors</u>	:	67 feet 00 inche 00 inche .3 (5,28) 8.74 CCY Altitude: 6,800	<u>luction = (W x S</u> es 30ft./12in./27cu.f es /hour t	<u>x L x C) / P</u> t.)
Compacte Compacte Required num Unadjust Job Condition Correction Altitude Adj: Job Efficiency:	pacted width per pass (W) erage Compactor Speed (S) ed thickness of each lift (L) Conversion Constant (C) nber of machine passes (P) ed Hourly Unit Productior <u>Factors</u>	: 5.0 : 4.0 : 8.0 : 16 : 16 : 2 : 1,47 Site Source AT HB) hift/day)	67 feet 00 mph 00 inche .3 (5,28) 8.74 CCY Altitude: 6,800	<u>luction = (W x S</u> 80ft./12in./27cu.f es /hour t	<u>x L x C) / P</u>)
Compacte Required num Unadjust Job Condition Correction Altitude Adj: Job Efficiency: Net Correction:	pacted width per pass (W) erage Compactor Speed (S) ed thickness of each lift (L) Conversion Constant (C) nber of machine passes (P) ed Hourly Unit Production <u>Factors</u> 0.81 (C) 0.83 (1 s) 0.6723 mu	: 5.0 : 4.0 : 8.0 : 16 : 2 : 1,47 Site Source <u>AT HB</u>) <u>hift/day)</u> Itiplier	67 feet 00 inche .3 (5,28) 8.74 CCY Altitude: 6,800	<u>luction = (W x S</u> 80ft./12in./27cu.f es //hour t	<u>x L x C) / P</u> ř.)
Compacte Required num Unadjust Job Condition Correction Altitude Adj: Job Efficiency: Net Correction:	pacted width per pass (W) erage Compactor Speed (S) ed thickness of each lift (L) Conversion Constant (C) nber of machine passes (P) ed Hourly Unit Production <u>Factors</u> 0.81 (C) 0.83 (1 s) 0.6723 mu djusted Hourly Unit Produ	: 5.0 : 4.0 : 4.0 : 8.0 : 16 : 2 : 1,47 Site Source AT HB) hift/day) Itiplier ction: 994	67 feet 00 mph 00 inche .3 (5,28 2 passe 8.74 CCY Altitude: 6,800 4.15 CCY/Ho	uction = (W x S 00ft./12in./27cu.f es //hour t	<u>x L x C) / P</u> t.)
Compacte Compacte Required num Unadjust Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: Add Add	pacted width per pass (W) erage Compactor Speed (S) ed thickness of each lift (L) Conversion Constant (C) nber of machine passes (P) ed Hourly Unit Productior <u>Factors</u> 0.81 (C) 0.83 (1 s) 0.6723 mu djusted Hourly Unit Produ	:	67 feet 50 mph 00 inche .3 (5,28) 2 passe 8.74 CCY Altitude: 6,800 fee 4.15 CCY/Ho	uction <u>= (W x S</u> 80ft./12in./27cu.f 88 /hour t t	<u>x L x C) / P</u> t.)
Compacte Compacte Required num Unadjust Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: Add Add JOB TIME AND COS	pacted width per pass (W) erage Compactor Speed (S) ed thickness of each lift (L) Conversion Constant (C) nber of machine passes (P) ed Hourly Unit Productior <u>Factors</u> 0.81 (C) 0.83 (1 s) 0.6723 mu djusted Hourly Unit Produ ljusted Hourly Fleet Produ	: 5.0 : 4.0 : 8.0 : 16 : 2 : 1,47 Site Source AT HB) hift/day) hift/day) tiplier ction: 994	67 feet 60 mph 00 inche .3 (5,28 2 passe 8.74 CCY Altitude: 6,800 4.15 CCY/Ho	uction <u>= (W x S</u> 80ft./12in./27cu.f es 7/hour t t	<u>x L x C) / P</u> ř.)
Compacte Compacte Required num Unadjust Job Condition Correction Altitude Adj: Job Efficiency: Net Correction: Add Add JOB TIME AND COS Fleet size:	pacted width per pass (W) erage Compactor Speed (S) ed thickness of each lift (L) Conversion Constant (C) nber of machine passes (P) ed Hourly Unit Productior <u>Factors</u> 0.81 (C) 0.83 (1 s) 0.6723 mu djusted Hourly Unit Produ ljusted Hourly Fleet Produ ST 1 Compactor(s)	: 5.0 : 4.0 : 4.0 : 8.0 : 16 : 2 : 1,47 Site Source AT HB) hift/day) Itiplier ction: 994 ction: 994	67 feet 00 mph 00 inche .3 (5,28 2 passe 8.74 CCY Altitude: 6,800 4.15 CCY/Ho I.15 CCY/Ho Total job time:	uction = (W x S 80ft./12in./27cu.f es 7/hour t t bur bur 151.18	<u>x L x C) / P</u> (t.) Hours

MOTOR GRADER WORK

Task description:	Sitewide cleanu	ıp ~\$150/hr g	grader			
Parkdale Quarry	Pe	ermit Action:	AM-02	Pe	rmit/Job#:	M1997054
PROJECT IDENTI	FICATION					
Task #: SW02	State:	Colorado		Abbrev	iation: No	ne
Date: $12/10/20$	21 County:	Fremont		File	name: M)54-SW02
User: $TC1$	<u></u> County!					
Agency or org	anization name: D	RMS				
HOURLY EQUIPM	<u>ENT COST</u>					
Basic Machi	ne: CAT 160M			Horsepower:	213	
Ripper Attachme	ent:			Shift Basis:	1 per da	ıy
				Data Source:	(CRG))
Cost Breakdown:						
Cost Divando (III)				Utilization %		
Owr	ership Cost/Hour:		\$66.63	NA		
Ope	erating Cost/Hour:		\$54.54	100		
Ripper Owr	hership Cost/Hour:		\$0.00	NA		
Ripper Op	erating Cost/Hour:		\$0.00			
OI OI	perator Cost/Hour:		\$28.56	NA		
Tot	al Unit Cost/Hour:		\$149.73			
Tota	1 Elect Cost/Hours	¢1 <i>1</i> (72			
1018	II Fleet Cost/Hour.	φ14 2	./3			
Total Area	a to be graded or ripp	ed: <u>151.00</u>			acr	res
Sour	ce of estimated acrea	ge: AM2 E	Exh L, p. 8			
HOURLY PRODUC	TION					
	Average Grader S	peed:	1.50	mph		
	Selected Applica	ation:	Finish	grading (0-2.5 mph)) - 1.5	
	Selected Blade A	ngle:	45	degrees		
	Effective Blade Le	ngth:	8.50	feet		
Width	of blade overlap per	pass:	2.00	feet		
Net grading	or ripping width per	pass:	6.50	feet		
Unadjuste	d Hourly Unit Produc	ction:	1.1818	acres/hour		
Job Condition Correctio	n Factors		S	ite Altitude: <u>6800</u> fe	eet	
		Source				
Altitude Adi:	1.00	(CAT HE	3)			
Job Efficiency:	0.85	(1sh/d, mo	d.)			
Net Correction:	0.8500	multiplier				
	Adjusted Hours Init	Droduction	1 0045	acros/Uour		
	Adjusted Hourly Unit	Production:	1.0045			
F	ajusted Hourly Fleet	Production:	1.0045	acres/Hour		
JOB TIME AND CC	<u>DST</u>					
Fleet size:	1 Grader(s)	Total job time	e: 150.32	Но	urs
Unit cost: \$1	49.05 per acre		Total job cos	t· \$22.507		
ψ_1	per delle		1000000			

Page 1 of 1

DOZERGRADER WORK

Task description:	Sitewide cleanup D7 dozer			
Site: Parkdale Quarry	Permit Action:	AM-02	Permit/Jo	b#: <u>M1997054</u>
PROJECT IDENTIFI	CATION			
Task #: SW03 Date: 12/10/2021 User: TC1	State: Colorado County: Fremont		Abbreviation: Filename:	None M054-SW03
Agency or organ	nization name: DRMS			
HOURLY EQUIPME	NT COST			
Basic Machine: Cat Horsepower: Blade Type: Attachment: NA Shift Basis: 1 p Data Source:	t D7R DS Series II LGP			
Cost Breakdown:				
Ownership Cost/Hour:	\$81.02	<u>NA</u>		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$41.30	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$201.65 \$201.65			
JOB TIME AND COS	<u>T</u>			
Fleet size: Unit cost:	1 Dozer(s) \$201.65/LCY			

Total job time:	151.00 Hours
Total job cost:	\$30,449

MISCELLANEOUS TRUCK WORK

1 a	ask description:	Sitewide cleanup Water T	ruck		
: _	Parkdale Quarry	Permit Action	n: <u>AM-02</u>	Permit/Job	o#: M1997054
<u>PR</u>	OJECT IDENTIFIC	CATION			
	Task #: SW04	State: Colorado	0	Abbreviation:	None
	Date: <u>12/10/2021</u> User: TC1	County: Fremont	;	Filename:	M054-SW04
	Agency or organi	zation name: DRMS			
HO	OURLY EQUIPMEN	T COST			
	Make and Model:	Water Tanker, 7,000 Gal.		Horsepow	ver: <u>330</u>
	Attachment 1:			Shift Bas	sis: 1 per day
	Attachment 2:			Weig	ht: 29.65
	Labor Unit 1:	Tanker Driver - 1 rear axle			(US Tons)
<u>Cos</u>	st Breakdown:				
			Utilization %		
	Ownership Cost/H	our: \$53.88	NA		
	Operating Cost/H	our: $\frac{$/5.23}{0.000}$	100		
	Operator Cost/H	our: \$21.12	NA		
	Total Unit Cost/H	our: \$150.23	-		
	Total Fleet Cost/H	Iour: \$150.23	-		
<u>JO</u>	B TIME AND CO	<u>ST</u>			
	Fleet size: 1	Truck(s)	Total job time:	151.00	Hours

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Parkdale Qua	rry	Permit	Action: <u>AM-0</u>	2	<u></u>	Permit/Job#: M	1997054
ROJECT IDE	NTIFICATI	<u>ON</u>					
Task #: SW Date: 12/ 10:: 10:: User: TC	799 13/2021 39:56 AM 1	State: <u>Co</u> County: Fr	emont		Abbr F	eviation: <u>None</u> ilename: M054	4-SW99
Agency	or organization	n name: DRMS					
OUIPMENT 1	RANSPOR	T RIG COST					
Truck	Tractor Desc	ription: GENE	RIC ON-HIGHY	VAV TR	Shift ba Cost Data Sou	asis: 1 per da rce: CRG Da	ita
Truck	k Trailer Desc	ription: G	ENERIC FOLD	400 HF	2 (2ND HALF, DSENECK, DI (25T, 50T, A)	2006) ROP DECK EQU ND 100T)	IPMENT
Cost Breakdown:					× , , ,	,	
Available Rig C	apacities	0-25 Tons	26-50 Tons	51	+ Tons		
Ownership	Cost/Hour:	\$21.28	\$37.94	\$	47.67		
Operating	Cost/Hour:	\$26.55	\$50.48	\$	56.21		
Operator	Cost/Hour:	\$20.54	\$20.54	\$	20.54		
Helper	Cost/Hour:	\$0.00	\$23.53	¢ \$	23.53		
Total Unit	Cost/Hour:	\$68.37	\$132.49	\$1	147.95		
NON ROADAB Machine Description	LE EQUIPN Weight/ Unit	MENT: Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
L	(TONS)				fleet		
Cat 627G	41.80	\$154.27	\$132.49	2	\$573.52	\$264.98	\$500.00
Cat 637G	57.28	\$218.34	\$147.95	2	\$732.58	\$295.90	\$500.00
Cat D6T LGP	26.87	\$66.27	\$132.49	1	\$198.76	\$132.49	\$250.00
Cat D7R DS Series II LGP	34.57	\$81.02	\$132.49	1	\$213.51	\$132.49	\$250.00
Cat D8T - 8SU	47.71	\$97.46	\$132.49	1	\$229.95	\$132.49	\$250.00
Cat D9T - 9SU	60.01	\$126.01	\$147.95	1	\$273.96	\$147.95	\$250.00
Cat 740	36.49	\$88.53	\$132.49	3	\$663.06	\$397.47	\$750.00
Cat 775F	50.39	\$121.36	\$132.49	2	\$507.70	\$264.98	\$500.00
CAT 160M	17.53	\$66.63	\$68.37	2	\$270.00	\$136.74	\$500.00
Water Tanker, 7,000 Gal.	29.65	\$53.88	\$132.49	1	\$186.37	\$132.49	\$250.00
CAT 928Hz	13.91	\$30.09	\$68.37	1	\$98.46	\$68.37	\$250.00
CAT 980H	33.12	\$67.72	\$132.49	1	\$200.21	\$132.49	\$250.00
C I T OOOTI	02.24	011641	¢1.45.05	1.4	#05105	ф1 47 О <i>Г</i>	****

Drill/Broadcast

Seeder with Tractor CAT PS-150C

(2004) CAT 836H 25.00

5.39

54.88

\$7.98

\$45.37

\$223.80

\$68.37

\$68.37

\$147.95

Subtotals: \$4,974.28 \$2,671.48 \$5,500.00

\$68.37

\$68.37

\$147.95

\$76.35

\$113.74

\$371.75

1

1

1

\$250.00

\$250.00

\$250.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Hydroseeder with Tractor	\$26.18	1	\$26.18	\$26.18
		Subtotals:	\$26.18	\$26.18

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	COLORADO SPRINGS	_
Total one-way travel distance:	58.00	miles
Average Travel Speed:	45.00	mph
Total Non-Roadable Mob/Demob Cost *	\$35,683.35	
** one round trip, no haul rig:	\$67.49	_

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	1.29	1.29
Return Time (Hours):	1.29	1.29
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	3.08	2.58

JOB TIME AND COST

Total job time:	6.16	Hours

Total job cost: \$35,751

DEMOLITION WORK

ite: Pa	arkdale Quarry	Permit Action: AM-02	Permit/Job#: M1997054
OJECT	<u>IDENTIFICATI</u>	<u>ON</u>	
Task #:	WG02	State: Colorado	Abbreviation: None
D	12/10/2021	County: Fremont	Filename: M054-WG02
Date:	/ - 0/ _ 0		

UNIT COSTS

Location adjustment: 88.00 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Concrete support structures	2' x 3'	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 50 ft. push	90.00	LF	\$12.25	\$1,102.50
Conveyor	232'	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	3.75	EA	\$3,125.00	\$11,718.75

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	0.00	(unadjusted):	\$12,821.25	location):	\$11,282.70

BULLDOZER RIPPING WORK

r	Task description	n: Sca	rify compacte	d ground					
Site:	Parkdale Qu	larry	Per	mit Action:	AM-02		Permit/Jo	b#: <u>M19970</u> :	54
<u>P</u>	ROJECT ID	ENTIFICATI	ON						
	Task #:W Date:1 User:T	/G04 2/10/2021 C1	State: County:	Colorado Fremont		A	bbreviation: Filename:	None M054-WG0	4
	Agency	y or organization	n name: DR	MS					
н	IOURLY EO	UIPMENT C	OST						-
	Basic	Machine: Ca	at D9T - 9SU			Horsepowe	er:	405	
	Ripper A	ttachment: 3-	Shank Ripper			Shift Basi	s: 1	per day	
С	ost Breakdown	:				Data Sourc	e:(CRG)	
		- Ownership C	Cost/Hour:		\$126.01	Utilization 9 NA	%		
	D .	Operating C	Cost/Hour:		\$141.41	100			
	Ripp	per Ownership C	Cost/Hour:		\$19.26 \$11.48	NA 100			
	Кір	Operator C	Cost/Hour:		\$41.30	NA			
		Total Unit C	Cost/Hour:		\$339.46	-			
		Total Fleet C	Cost/Hour:	\$339	.46	_			
<u>A</u> smic: Area:	Iternate Method NA 26.00	<u>ls:</u> acres	Ban Rip	k Volume: Depth (ft):	NA 1.00	BCY Volum	<i>(</i> e: 41,947	NA	BCY or CO
		Source of esti	mated quantity	: AM-1,	Exh L, Aspec	et G			
H	IOURLY PR	DUCTION							
Se	eismic:								
			Seismic Veloc	ity:	NA	feet/	second		
<u>A</u>	<u>rea:</u>	Avera	e Rinning De	oth	2.63	feet	nass		
		Averag	ge Ripping Wi	dth:	7.67	feet/	pass		
		Averag	e Ripping Leng	gth:	300.00	feet/	pass		
		Avei	rage Dozer Spe	ed:	88.00	feet/	minute		
		Produc	tion per unit a	rea:	0.23	acre	s/hour		
Jo	ob Condition Co	orrection Factors	S						
	Ur	adjusted Hourly	Unit Producti	on:	0.866	Acre	es/hr		
			Site Altitu	ıde:	6,800	feet			
			Altitude A	Adj:	1.00	(CA	T HB)		
			Job Efficier	icy:	0.83	(1 sl 	nift/day) tiplier		
		Adjusted	Hourly Unit P	roduction:	0.72	Acres/h	r		
-		Adjusted	nourly Fleet F	roduction:	0.72	Acres/h	ſ		
<u>J</u> (OB TIME AN	ND COST							
	Fleet size:	1	_ Grader(s)		Total job tir	me:	36.16	Hours	
	Unit cost:	\$472.176	Per acre		Total job co	ost:	\$12,277		

TRUCK/LOADER TEAM WORK

Site: Parkdale Quarry		Permit Ac	tion: <u>AM-02</u>		Permit/Job#:	M1997054
PROJECT IDENT	IFICATION					
Task #· WG05		State: Color	ado	Abl	breviation No	ne
Date: $12/10/2$	2021 0	County: Frem	ont		Filename: MO)54-WG05
User: TC1		<u> </u>				
Agency or o	rganization nam	e: DRMS				
HOURLY EQUIPM	MENT COST			Shift ba	sis: <u>1 per day</u>	
			Equipment Descr	iption		
Tru	ick Loader Tear	n -Truck: Cat	t 740			
Suppor	t Equipment I	-Loader: CA	T 980H			
Suppor	Du-Du	mp Area: CA	T 160M			
Road Main	ntenance – Moto	r Grader: CA	T 160M			
	-Wat	er Truck: Wa	ter Tanker, 7,000	Gal.		
Cost Breakdown•	Truck/Loa	ler Team	Support	Equipment	Maintena	ance Equipment
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
6Utilization-machine:	100	100	NA	50	100	100
Ownership cost/hour:	\$88.53	\$67.72	NA	\$66.63	\$66.63	\$53.88
Operating cost/hour:	\$65.75	\$67.62	NA	\$27.27	\$54.54	\$75.23
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.71	NA	\$28.56	\$28.56	\$0.00
Unit Subtotals:	\$187.26	\$176.05	NA	\$122.46	\$149.73	\$129.11
Number of Units:	3	1	0	1	1	1
Group Subtotals:	Work:	\$737.83	Support:	\$122.46	Maint:	\$278.84
Total work team cost/h	nour: <u>\$1,139.1</u>	3				
MATERIAI OUA	VTITIES					
MATERIAL QUA	NIIIES					
Initial volume:	20,973	CCY	K Swell	factor: <u>1.429</u>		
Loose volume:	29,96	2 LCY	Z			
Sour	ce of estimated	volume: AM	-1, Exh L, Aspect	G		
Source of	estimated swel	l factor: Cat	Handbook			
1	Matarial Duraha	co Cost: \$0.0	(A)			

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basi	<u>s:</u>	
Material weight:	1,600	Pounds/LCY
Description:	Top Soil	
Rated Payload:	87,000	Pounds
Payload Capacity:	54.38	LCY

Truck Bed (volume) Basis:						
Struck Volume:	24.20	LCY				
Heaped Volume:	31.40	LCY				
Average Volume:	27.80	LCY				
Adjusted Volume:	31.40	LCY				
Final Tr	ruck Volume F	Based on Number of	Loader Passes:	30.75	LCY	
Loading Tool Capacity						
			Buck	et Size Class: N	ΝA	
Rated Capacity:	7 500	LCY (heaped)	2001			_
Bucket Fill Factor:	1.025	Rock - Earth M	ixture (100%-10)5%) 1.025		_
Adjusted Capacity:	7.688	LCY	(,		
				5000 6 .		
Job Condition Corrections:		Sit	te Altitude (ft.):	<u>5800</u> feet		
	Truck	Loader	Source			
Altitude Adj:	0.960	1.000	(CAT HE	3)		
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.797	0.830				
Looding Tool Cycle Time	N	Jumber of Loading 7		virad to Fill		200000
Loading Tool Cycle Thile:	ľ	Number of Loading 1	OUT Fasses Req	Truck:	4	passes
Excavators and Front Shovers	<u>.</u>					
Machine Cycle Time vs. Selected Value w	Job Condition ithin this Basic	n Rating: <u>NA</u> c Rating: NA				
Track Loaders – N	Aaterial Descri	iption:				
Cycle Time Flements (min):		·				
cycle Time Elements (mm.).						
Load: NA	M	aneuver: NA		Dump: 0.10	0	
Wheel and Track	Loaders - Una	diusted Basic Loade	r Cvcle Time (lo	ad, dump.	n an an min	utes
			r	naneuver):).550	
Cycle Time Factors				Factor (min.)	Source	
Material:	Mixed mater	ial 0.02		0.020	(Cat HB)	
Stockpile:	No adjustmer	nt - factor not applica	able 0.00	0.000	(Cat HB)	
Truck Ownership:	Common ow	nership of trucks and	l loaders -	-0.040	(Cat HB)	
	0.04			0.010		_
Operation:	Constant ope	eration -0.04		-0.040	(Cat HB)	
Dump Target:	Nominal targ	set 0.00 Not Cycle Time	Adjustment	0.000	(Cat HB)	
		Adjusted Loade	r Cycle Time:	-0.060	minutes	
		Net Load Ti	me per Truck	1.570		
				11070		
<u> Truck Cycle Time:</u>						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.625	Minutes
Truck Load Time:	1.570	Minutes	Adjusted	for site altitude:	1.570	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted	for site altitude:	1.042	Minutes
Truck Travel (Haul & Return)	Time:	Road Condition: <u>F</u>	Rutted dirt, little	maintenance, no v	vater, 1" tire	
penetration 4.0						

Haul Rout	<u>e:</u>							
Seg #	Haul (Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time	
2	3000	0.00	0.00	4.00	4.00	2421	(min) 1.865	
					Haul Time:	1.865	min	utes
Return Ro	ute:							
Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	3000	0.00	0.00	4.00	4.00	3005	1.195	
				Total Tru	Return Time: ick Cycle Time:	<u> </u>	mi mi	inutes
Loading To	alunit							
Prodi Prodi	uction	840.55	LCY/Hour		Adjusted for jo	b efficiency:	697.6	5 LCY/Hour
	uction	293.01	LCY/Hour		Adjusted for jo	b efficiency:	243.2	0 LCY/Hour
timal No. of T	rucks:	3	Truck(s)		Selected Numb	er of Trucks:	3	Truck(s)
			Adjusted	l hourly truck	k team production	on: 729.	.60 L	.CY/Hour
			Adjusted single	e truck/loade	r team productio	on: 697.	.65 L	.CY/Hour
		A	djusted multiple	e truck/loade	r team productio	on: 697 .	.65 L	.CY/Hour
JOB TIN	1E AN	D COST						
Fleet	size:	1	Team(s)	Т	otal job time:	42.9	5	Hours
Unit	cost:	\$1.633	/LCY	7	Fotal job cost:	\$48,92	22	

REVEGETATION WORK

Task description:		Seed and Mulch plant area					
Site: Parkdale	e Quarry	Permit Action: <u>AM-02</u>		Permit/Job#: M199705			
PROJECT	IDENTIFIC	CATION State: Colorado		Abbraviation	None		
Date: User:	12/10/2021 TC1	County: Fremont		Filename:	M054-WG06		
User: Ag	ency or organi	zation name: DRMS					

FERTILIZING

Materials

Description	Units /	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate 33-0-0	Acre	pound	\$0.36	\$45.00
Superphosphate 0-20-0 with 12% S	125.00	pound	\$0.36	\$32.50
	125.00	pound	φ 0.2 0	φ32.30
			Total Fertilizer	
			Materials	
			Cost/Acre	\$77.50

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$38.77
	Total Fertilizer Application Cost/Acre	\$38.77

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.56
Total Tilling Cost/Acre	\$114.56

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	0.20	0.96	\$0.51
Blue Grama - Native	1.10	17.95	\$15.10
Indian Ricegrass - Native	2.10	6.80	\$13.65
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Sand Dropseed	0.05	5.97	\$0.49
Sideoats Grama - Vaughn	1.80	5.91	\$15.08
Sheep Fescue - Bighorn	0.40	6.24	\$1.76
Thickspike Wheatgrass - Critana	1.60	5.66	\$11.00
Western Wheatgrass - Native	2.00	5.05	\$12.00
Sage, Fringed	0.03	2.51	\$1.23

Sagebrush, Louisiana or Prairie	0.03	3.02	\$4.01
Saltbush, Four Wing	0.10	0.14	\$1.25
Spike Muhly	0.20	7.35	\$1.94
Sumac, Skunkbrush	0.10	0.05	\$2.10
Purple Three-Awn	0.10	1.15	\$2.66
Totals Seed Mix	10.01	73.01	\$84.82

Application

Description		Cost /Acre
Drill Seeding (DRMS Survey Cost)		\$232.00
	Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$71.57
	Total Mulch Application Cost/Acre	\$71.57

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:	26	Cost /Acre:	\$1,233.26
Estimated Failure Rate:	20%	Cost /Acre*:	\$316.82
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$32,064.76
Reseeding Job Cost:	\$1,647.46
Total Job Cost:	\$33,712
Job Hours:	50.00